

**THE INFLUENCE OF INSTITUTIONAL AND SOCIO-ECONOMIC FACTORS  
ON GROWTH OF WOMEN OWNED SMALL-SCALE FISH BUSINESS IN  
NAKURU MUNICIPALITY, KENYA**

**BY**

**ALICE EMILY OSORO**

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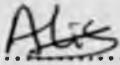
**A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL  
FULFILLMENT FOR THE REQUIREMENTS OF MASTER OF ARTS DEGREE  
IN PROJECT PLANNING AND MANAGEMENT OF UNIVERSITY OF  
NAIROBI**

**2012**

## **DECLARATION**

This research project is my original work and has not been published or presented for the award of any degree or diploma at the University of Nairobi or in any other university.

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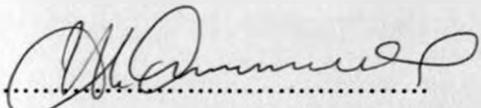
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## **DEDICATION**

This project is dedicated to the following people who are the pillars of inspiration in my life. My husband. Mr. Samuel Mogeni, my children Osoro, Osao, George and Tabitha Mogotu. My sister Leah Sarange Osoro, my late parents Mzee Aliphonce Osoro Machogu and Mama Tabitha Mogotu and all those who value and impact knowledge and education.

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## **ABSTRACT**

Many Small and Micro-Enterprises or small scale business in Kenya face a host of challenges when it comes to expanding their operations, this is despite their official recognition as a significant contributor to the economy- about 50% of the jobs created in Kenya in 2005 was attributed to this (Economic Survey, 2006). The situation is compounded when we consider women-owned-and run small scale business and more so in the fish industry. Research shows that apart from the high probability of failure standing at three out of five within the first few months, women-owned small-scale businesses in Kenya still face slower growth prospects as compared to those of their male counterparts. This study sought to understand the growth related challenges they face as traders and how they manage them. It also appreciates the fact that these challenges could be situational, individual and do 'evolve' according to the changing socio-economic matrix. The research design employed was descriptive survey. Data was collected from a target population of 114 women owned and-run small scale fish businesses. Stratified random sampling technique was used together with interview schedules and questionnaires as the preferred research instruments which were pilot tested on 20 non-respondent women for validity and reliability. Quantitative data was analyzed descriptively by computing mean, median and mode and the significance of relationships measured using CHI-Square. Qualitative data was analyzed using narrative methods. 90 out of the 114 target respondents responded. Concerning the first objective access to capital was still identified as a major constraint with but not as compounded with gender bias as assumed. The second objective demonstrated that Lake Victoria was still the traditional fish source although fish from aquaculture had only a nominal impact in the markets in the area. Strategic business partnerships and cooperatives were identified in objective three as a viable business arrangement due to their growth and stability prospects in the future. There was need to encourage the fish mongers to register their businesses in order to foster relations with the municipal authorities and avoid being constantly harassed by the Council *askaris*. Minimal stakeholders' participation especially from the government was also seen as a major impediment to growth. Hence, there is need to address these factors in time to better the prospects of the fish industry in the area. It is hoped that the findings will be instrumental in providing valuable insight into the challenges to all relevant stakeholders and give a new dimension to the social feminist theory in terms of the emerging developments of small scale women enterprises in the developing countries

## **ABBREVIATIONS AND ACRONYMS**

<b>Ag GDP</b>	Agriculture Gross Domestic Product
<b>ESP-</b>	Economic Stimulus Package
<b>G.A.D</b>	Gender and development
<b>G.D.P</b>	Gross domestic Product as applied to National Economic Planning
<b>I.W.T.C</b>	International women's tribune centre
<b>IFC</b>	International Finance Corporation
<b>M.D.Gs</b>	Millennium development goals
<b>M.F.I</b>	Micro finance Institutions
<b>MOA</b>	Ministry of Agriculture
<b>MSME</b>	Micro-Small and Medium enterprises
<b>NES</b>	National Economic Survey
<b>VWK</b>	Voices of Women Kenya
<b>WB</b>	World Bank
<b>WEF</b>	World Economic Forum

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background of the Study**

Majority of Small and Micro Enterprises (SMEs) face an uphill task when it comes to the expansion of their businesses; this is despite their viability of the business idea, the will to take it to the next level and the significant roles they play in many Countries. Recent research suggest that majority of the SME'S barely make it past the first year of their operations (Banking Finance Journal, 2008), with (Bowen,Morara and Mureithi, 2009) putting the failure rate within the first few months at 60%. Some of the more common challenges the small businesses face include, unequal access to credit, insecurity, debt collection, negative perception of SMEs, and a prominent type particularly experienced in the fish industry being the growing competition among themselves and with large firms in this case Kenyan firms linked to the export market (Schuurhuizen, Tilburg and Kambewa, 2006). The challenges are more pronounced when it comes to women owned SMEs competing in a male dominated product industry like the fish industry where the export market phenomenon has occasioned the gradual extinction of the-often female-fishmongers (Abila and Jansen, 1997). However, interventions sought and sourced from relevant stakeholders are now returning positive postings like easing up credit constraints.

Women have been particularly targeted in this initiative to boost the performance of SMEs by various local and international organizations. In Kenya, for instance, banks are already developing and disbursing women-friendly products intended to assist women-owned existing legal businesses which sought operating and investment capital. The finance products specifically target women from disadvantaged backgrounds who show promise (Equity Bank, 2010). Business literacy is positively related to the success of these enterprises and would be integral to the mix of strategies to be embraced by the businesses for success (Bowen et al).

The domestic fish industry in Kenya remains a relatively unexploited economic subsector despite the significant economic prospects it offers, Reports indicate that fish contributes significantly to the economy, above 0.5% of the G.D.P (National Economic Survey, 2006) and it is also a recognized industry with a well established value chain. (Mwangi, 2008) notes that a business

shift towards this direction could lead to poverty reduction, job creation and reduced levels of dependency among communities.

This study, the design of which was descriptive, employing questionnaires and interviews as its research instruments, therefore, sought to establish from the women involved in the fish business in Nakuru Municipality which is an interior domestic fish market and diverse enough, the challenges they face in expanding their businesses given the drive towards empowering women economically and the potential growth prospects in the fish industry.

## **1.2 Statement of the Problem**

The fish industry in Kenya as in other fish exporting countries is characterized by the export and domestic markets respectively. While the export end of this market dichotomy is well supported and its performance documented, the domestic markets of which the interior or markets recessed internally at a considerable distance from the fish landing areas like Nakuru Municipality have received little attention in research. Their performance needs to be analyzed and documented especially in terms of their growth prospects and also in relation to their principal actors who are women. This is important because as the various reports and studies suggest, the industry still has a large and relatively unexploited growth potential (ASDS 2010; and Mbugua 2008). This commercial exploitation could improve employment prospects, reduce poverty and improve the nutritional profile of the residents in the town in the long term. This is also in line with the Millennium Development Goals (Kenya MDGs Progress Report, 2003).

It has been observed by that despite the significant developments which have been taking place within Nakuru Municipality up to the present date e.g. the accelerated growth rate currently at 13% per annum and the fastest growing in the region, increasing population and the rise of aquaculture, the fish industry in the town has remained virtually stagnant and with no signs of growth over the years. This could be attributed to a host underlying institutional and socio-economic factors noted by various researchers like Selvamanar (2006). This study therefore sought to establish the influence of these institutional and socio-economic factors on the growth of women owned small scale fish businesses in Nakuru municipality which is a typical interior

fish market, that is, a market displaced considerably from the main fish catchment areas . The outcome will hopefully contribute to the fund of knowledge in this area and other related areas.

### **1.3 Purpose of the Study**

The main purpose of this study was to investigate and acquire an in-depth understanding of the institutional and socioeconomic factors influencing the growth of women run fish businesses in Nakuru municipality.

### **1.4 Research Objectives**

The overall objective of this study was to investigate the institutional and socioeconomic factors influencing the growth of women run fish businesses in Nakuru municipality. In order to achieve this, the study narrowed the objectives to the following specific objectives.

1. To establish the influence of the rise in aquaculture on the growth of women owned fish businesses.
2. To examine the influence of Municipal council regulations on growth of women owned fish businesses.
3. To analyze the influence of business organization strategies and operational structures on growth of women owned fish businesses.
4. To assess the influence of capital requirements needed for the expansion on growth of women owned fish businesses.

### **1.5 Research Questions**

The following research questions were formulated to guide this study

1. To what extent does the rise in aquaculture impact the fish supply and the consequent growth of women owned fish businesses?
2. To what extent do the Municipal regulations e.g. on location, public health, revenue collection etc. affect the growth of women owned fish businesses?
3. To what extent do business organization strategies and operational structures affect the growth of the women owned fish businesses?
4. To what extent does the capital requirement needed for expansion affect the existing

women owned fish businesses?

### 1.6 Research Hypothesis

- i) Being female is not a limiting factor in credit access for business expansion in the women owned small scale fish business in Nakuru municipality.
- ii) There is no significant relationship between the rise in aquaculture and growth of women owned fish businesses in Nakuru municipality.
- iii) There is no close correlation between business organization strategies and operational structures and the expansion of women owned small scale fish business in Nakuru municipality.
- iv) There is no significant relationship between municipal council regulations and the growth of women owned small scale fish business in Nakuru municipality.

### 1.7 Significance of the Study

The role of women in the modern economy has long been considered nominal. This is so because in many developing countries their potential has been suppressed by many limiting socio-economic factors like little access to formal education, early marriages, and constrained property rights due to culturally discriminative inheritance laws and practices which in turn leads to privation of economic capital for the aspiring businesswoman. Of late there has been a sustained drive to empower women and gradually free them from the debilitating poverty bracket of which they constitute the greater majority in developing Countries (IDRC, 2009). This would ensure that they have increased levels of fair play in the various economic sectors and improve the household income and raise the standards of living. At the same time the domestic fish industry is a promising business destination with better growth prospects if well exploited. This could absorb the women in good numbers although the research points out that increased competition with the export market is gradually pushing out the traditional fishmongers from business, hence, there was need to change their actor positions in the industry's network if they are to add value to their products and make realizable gains. (Schuurhuizen et al, 2006)

Thus, this study examined the fish business dynamics in this light and advances the development of strategies to promote growth in this industry.

### **1.8 Delimitation of the Study**

Fish is a food item that offers a lot of convenience in its preparation, that is, it requires less time and ingredients to prepare. It is also a cheap source of proteins accessible by many therefore contributing significantly to the nutritional balance of the consumers. However it poses serious health concerns when quality measures are not adhered to like proper storage, hygienic market conditions etc. These could combine to compromise the value of the fish in the market.

Nakuru municipality was chosen because it is a fairly cosmopolitan and also an interior fish market. The diverse populations also indicate broad tastes for the fish. The growth rate of the town is also impressive standing at 13% p.a, the fastest in East and Central Africa (Urban Survey 2010).

The study also sought to debunk the notion that particularizes fish consumption to certain 'designated' communities.

### **1.9 Limitations of the Study**

Challenges of co-operation and communication were anticipated in the work especially in obtaining information considered privileged by the stakeholders. This was addressed by demonstrating the innocuous and beneficial nature of the project both for academic purposes and for the business community at large.

The language barrier and other communication constraints e.g. illiteracy were addressed by structuring the interviews and questionnaires in the most effective manner.

### **1.10 Assumptions of the Study**

The study assumed that there was a strong influence of institutional and socioeconomic factors on the growth of women owned small scale fish businesses in Nakuru municipality. It also assumed the population distribution in the town is even and that consumption of fish among the residents of the town is not influenced by attitudes and stereotypes, that is, there was no preponderant fish eating community in the town. Hence, the sample drawn from the population was representative enough and that the respondents will give accurate information.

## **1.11 Definition of Significant Terms as used in the Study**

- Businesswoman** - a person of the female gender who identifies a business opportunity harnesses it and obtains resources that are necessary to initiate a successful activity
- Enterprise** - a bold undertaking industry, usually a business activity.
- Fish Industry** - is the industry as a whole with fish as its main product and with its respective supply chains which includes the producers the markets and the various actors.
- Fishmonger** - is the female fish retailer mainly found in the upper end of the domestic market operating from stalls in the various markets.
- Stakeholder** - any person or organization that is involved in the small scale fish business targeting women for this case.

## **1.12 Organization of the Study**

This study consists of five chapters. Chapter one comprises: the background of the study; statement of the problem; study objectives, questions and hypothesis; purpose of the study all which are intended to provide a clear sense of objectivity in the study. Chapter two contains the literature review which deals with the scope and challenges of the research problem as encountered in previous studies leading to the assumptions of this study. It also looks at the theoretical framework and consequently the conceptual framework that underpins the study. In the third chapter, the study methodology used in conducting the study is discussed; comprising the design, site, study population, sample size, sampling methods and procedures, and the research instruments. It also contains the operational definition of variables. Chapter four discusses the findings as obtained and presented from the data analyzed. The last chapter gives the summary, discussions, conclusions, and recommendations

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter provides a critical look into studies done on the subject of women owned small scale fish business in Kenya and particularly in the interior fish market in order to provide valuable insights regarding the role and development of this sector in the economy. It focuses on the developments in the fish industry and also the role of women in socio-economic development. Women in business and specifically those involved in the fish industry together with their motivations and challenges are then discussed under the feminist ideology and social entrepreneurship theoretical frameworks which underpins their roles and positions in the industry. Information gaps left in the studies could prove beneficial to this and other related works in further exploring the subject. The study material is sourced from various publications like books, journals, academic papers and websites.

### **2.2 Dynamics of the fish industry**

Globally today the fish industry is a well established and competitive enterprise with value and supply chains running deep into the hinterlands of many counties with adequate water resources. This is perhaps due to the fact that fish is regarded as a very important, cheap and readily available source of cheap proteins to man with its cholesterol free white meat offering the best nutritional profile for mankind (ASDS, 2010) while at the same time attracting commercial prospects for the producers, thus, obtaining sustainable livelihoods for their families and communities at large. In fact the commercial exploitation of fish has been with us from antiquity and man has predominantly relied on capture fisheries to meet or supplement his nutritional requirements and income.

Its economic contribution and the attendant benefits like poverty reduction job creation and supporting food security (Mwangi, 2008) has spurred the interest of many capable nations into recognizing and investing in the industry. For instance the sub-sector contributed a remarkable 0.5% to the Kenya G.D.P in the year 2006 (National Economic survey, 2006) notwithstanding the losses incurred due to poor value addition and post harvest losses. A 2005 estimate by the

same survey put the potential growth for the sector at 4.1% for the same year and with a dependency ratio of 1:10 the fisheries industry provides economic support to about 80,000 people directly who are mainly artisanal fishers, fishmongers and fish farmers, processors and exports. A further 800, 000 derive their livelihoods indirectly from this industry (ASDS, 2010). This translated into revenues of almost Kshs 10 billion with exports contributing over 60% (Mwangi 2008). This together with revenue generated from the sister livestock sector contributed to about 17% of the agricultural Gross Domestic Product (Ag GDP) and 7% of exports, (ASDS-2010).

However, the reports unanimously lament the fact that the potential growth margin in the subsector has been largely underexploited despite its economic viability. In other words the optimal margin for growth is wide with enough room for development if significant investments are made in this sector.

A report by von Tilburg *et al*, (2006) presents another dimension to this situation by characterizing the Kenyan fish industry in terms of the export market and domestic market dichotomy. The report indicates that the introduction of large-scale fish-processing plants in Lake Victoria, Kenya, with the intention of meeting the export market demands for quality and processed fish has changed the structure of the actor network considerably. The net effect has been to increasingly marginalize the domestic chain characterized by small-scale fishermen, it has also resulted in reduced local availability of fish due to unequal competition for fish between the domestic and export market with the latter being the more dominant in the industry. Nevertheless, the scope of the various reports are limited to only partial solutions mainly of the macroeconomic scale and full characterization of the domestic markets and their actors particularly the interior fish markets like Nakuru is lacking, thus warranting studies in this area.

Women are the predominant operators of these markets mainly due to first, their peripheral position in the fish industry and also the SME nature of the fish business in these markets (Voices of Women 2007). The understanding of these markets and their female actors is critical to the filling of the development gaps left and also taking into consideration that a significant

portion of small scale entrepreneurs would derive their livelihoods from the industry and contribute substantially to the economic grid.

### **2.3 Challenges of the fish industry**

The fish industry like many other industries has to contend with many challenges in all its dimensions. Some of these challenges are longstanding while others are ephemeral and in the same vein, there are those which are currently being addressed and those which was surmounted in the future. We now look at some of the major challenges in the fish industry in the light of the current developments some of which are mentioned above.

#### **2.3.1 The Export market phenomenon**

The fish industry has been depicted as very competitive globally by various reports. Fish at the international fish markets fetch good prices based on their quality precipitating a largely export oriented fish industry in Kenya. The report by von Tilburg *et al*, (2006) cites this as a major game changer in the fish industry in Kenya which until 1979 remained largely domestic and in the hands of mostly women (fishmongers) operating on the communal beach and other interior markets. The technological developments it attracted like mobile refrigerated containers and other large scale processing facilities changed the structure of the actor network considerably resulting in loss of traditional jobs and limited value addition for the local population. (Schuurzheizen, 2006). The net effect was to push the small scale enterprises dominating the upper part of the value chain gradually out of the business. Abila and Jensen (1997) argue in support of this fact by noting the vagrant nature of factory jobs offered by the large scale fish processors made it untenable for the displaced entrepreneurs to opt for formal employment in the fish industry.

This export market phenomenon whose effects were observed by the study in Lake Victoria fishing communities was noted to result in reduced local availability of fish. Similar effects but of a different dimension have been observed in other interior capture fisheries where increasing numbers of artisanal fisheries overexploit and overfish the fresh inland waters to unsustainable proportions leading to diminishing fish stocks (ASDS, 2010), a fact that could well degenerate into the tragedy of the commons (Varian, 1999) if this state of affairs is not reversed, and the fishery as we know it could easily slide into a collapse (ASDS, 2010). It is worth noting at this

point that Kenya relies predominantly on capture fisheries with the bulk, that is, 94% coming from inland fresh water sources and another 5% from the marine landings the latter being about 8000 metric tonnes per year. Aquaculture contributes only 1% or roughly 1000 tonnes of the total fish catch per year despite its vibrancy and commercial viability (Mwangi, 2008).

### **2.3.2 Post harvest losses and loss of biodiversity**

Additionally other processing requirements lead post harvest losses resulting from the discarding of fish which do not meet entry-level conditions like size, weight, etc, and, hence, wastage (Schuurhwizen, 2006). This has severe nutritional security implications for the fishing communities as their cheap protein supply from the fish is gradually disappearing due to scarcity of fish brought about by the export phenomenon (LVFO, 2004). The commercial availability of only low quality fish coupled with the lack of alternative sources of cheap proteins ( Abila and Jensen, 1997) causes a caloric deficiency for locals. An estimate puts it near 50% around the lake area. This nutritional deficiency poses a serious developmental challenge one that the Millennium Development Goals would need to address (Kenya MDGs Progress Report, 2003) if well highlighted.

Another crucial challenge being encountered in the fish industry in Kenya today is the loss of biodiversity. Underhand fishing methods e.g. using nets with narrow mesh sizes (ANOVA, 2004) are contributing to this problem by occasioning the harvest of juveniles which have no commercial value hence leading to further fish wastage. These losses are significant in that they heavily impact the marine ecosystem leading to diminishing stock levels (Schuurhuizen et al, 2006).

### **2.3.3 Access to finance for small scale fish businesses**

Although Bowen et al. (2009) posit that credit constraints for small businesses are gradually easing up, it is yet to be seen if this has been effected in the fish industry where the report by Schuurhuizen et al, (2006) notes that the absence of banks and credit institutions has increased the dependencies of fishermen on other parties in the supply chain who characteristically advance them loans and demand their fish catch in repayment at their own terms hence denying

the fishermen negotiating power and access to market information. This impacts the interior market fish supply by encouraging single sourcing or supply monopolies prevalent in the industry. Improved financial systems customized to the industry will enlarge the ability of fishermen to acquire proper loans on better terms, improve catch standards and increase their access to market information.

Women play a very important role in this industry domestically despite their displacement at the periphery of the industry. In most cases, they are the ones who interface directly with the local consumers and this underscores their significance in the industry and makes them indispensable in the domestic fish industry. However, they will still have to contend with gender discrimination and other associated forms of bias typical in this male dominated industry. Presently measures are being undertaken to address and correct some of these biases. The success of this address will without doubt change their actor position in the fish industry for the better in the future (Schuurhuizen et al, 2006). Hence, before we probe further into their challenges in the fish industry we need to highlight their socioeconomic roles and importance in the light of current developments.

#### **2.4 The Role of Women in Socio-economic Development**

Women all over the world play a very critical role in undergirding the socioeconomic well being of the society. From domestic roles to economic participation and politics women are becoming more influential in the economic development of many countries today (GEM, 2006). However, in spite of their growing contribution to the well being of many nations globally, women still have to contend with issues related to gender disparity. These issues were first highlighted on the international stage in the later half of the twentieth century by gender activists who began sending delegations of women from newly independent states to agitate their legal and development agenda (Boserup, 1970). Succeeding developments in the international arena stemming from UN deliberations and strategic ten year plans culminated into the Millennium Declaration in September 2000 by all 191 member states of the United Nations. This millennium declaration was reinforced by a roadmap of implementation which involved the enlisting of International Organizations like the UN, OECD/DAC, World Bank and the International

Monetary Fund (IMF) into supporting inter-connected and mutually reinforcing goals into the global agenda. These goals came to be known as the Millennium Development Goals (MDGs).

Goal three of the MDGs sought to promote gender equality and empower women (UN-MDG, 2000) by first eliminating gender disparity in the access of primary and secondary education, increase the share of women in wage employment in non-agricultural sector and also increase the proportion of seats held by women in parliament.

Gender disparities in accessing education have been on the decline in recent years. However, there are still marked disparities in the transition rates to higher levels of education (Kenya MDGs Progress Report, 2003). This low progression has been attributed to a host of factors at the household levels such as premarital pregnancy and early marriage. In terms of engagement in the job market, the choice of subjects and poor performance at the end of the secondary school cycle plays an influential role. Selvamanar (2006) posits that this could be the result of their 'gendered' education which in definitive terms is the socially constructed patterns of education that the females are expected to subscribe to (Porter and Sweetman, 2005). This has invariably determined the choice of subjects and by extension careers for women.

Over fifty percent of the world food production in agriculture is as a result of women's engagement in the agricultural labor market. These are characterized by both low income and value – addition to the products. This coupled with other factors like gender stereotyping, wage inequalities, and comparatively low levels of education have continually disadvantaged the women hence consigning them to perennial poverty with some conservative estimates putting the women proportion of the world's poor at 70% (UNIFEM, 2008). Further, the proportion of women currently engaged in non-agricultural jobs is dismally low with Economic Survey data putting it at 30%. In the civil service, for instance, women comprise a mere 24.3% with the majority being job holders in the lower job groups. Higher job groups which are the decision – making positions are dominated by men.

This state of affairs has led to affirmative steps being taken to address this imbalance especially as enshrined in the MDGs goal number 3, target 4 (Kenya MDGs Progress Report, 2003).

Kenya has already taken a bold step in strategically instituting gender equity through the enactment of the National Commission on Gender and Development act in 2003 and the subsequent establishment of the National Commission on Gender and Development in November 2003. Other key developments in tandem with this include the introduction of gender desks in parastatals and police stations, the introduction of the women's enterprise fund the passing of the National Policy on Gender and Development in 2006 and the 30% presidential decree on affirmative action in public appointments, alongside others.

Women banks and other financial institutions with specially designed products geared to assist the women entrepreneurs' access capital have come up recently e.g. Kenya Women Finance Trust that assists women obtain capital to start-up or run their businesses and at the same time provide them with some business literacy. This is a major milestone in enterprise development and would prove handy to women engaged in the fish business. That is, it will enhance their operating capabilities and possibly lead to expansion of their businesses by increasing their negotiation power.

## **2.5 Women in the fish industry**

As already noted in the preceding discussion, the role of women in the domestic fish industry is indispensable. However, while the women entrepreneurs at the catchment areas like the shores of Lake Victoria are being driven out of business by the export market phenomenon, the women fish businesses at the interior markets are more or less stable due to their diverse sources of fish supply albeit the fact the supply volumes are small in comparison. Typically but with very few exceptions, the women operate small scale businesses in this industry which are in essence similar to other SMEs in other sectors run by women, hence, it is also important that the study looks into the characteristics of small scale women owned businesses.

### **2.5.1 Women in Small Scale Fish Businesses**

Many developing countries around the world are beginning to reap from the input of women in their economies. A report by global entrepreneurship monitor (GEM) says that women entrepreneurs were behind the creation of wealth, jobs and innovation in about 37 countries in their survey. According to Reynolds et al, (2002), the number of women entrepreneurs taking initiative to set up business in these countries is on the rise as opposed to their male counterparts. This is a remarkable paradigm shift especially given that in the majority of these countries women rights are not yet fully entrenched in their societies.

In Kenya, 48% of all micro-small and medium sized enterprises (MSMES) are owned by women. For over a decade now these MSMES have yielded a turnover of almost half a million jobs annually and in addition contribute up to 20% of the GDP in Kenya. (Voices of Women Entrepreneurs, 2008). In spite of all these significant gains, their entrepreneurial capability and business initiative suffers several limiting factors e.g. culture, financial background, lack of adequate education etc. According to the World Bank (2006), countries that fail to address the gender gap risk losing out on economic growth. Kenya, for instance, stands to gain over 4.3% in terms of economic growth if gender inequality is addressed improving access to education and agricultural inputs (GEM, 2006). Guigale (2011) says this gain could be a one-off followed by a sustained 2.1% yearly and this could significantly improve the quality of life in the country. The net effect of this is to push the country into the brink of or well into the double digit economic growth. He, however, warns that this projection could only become reality if the raft of issues facing women in business were first addressed.

One of the major issues that need to be addressed in the SMEs sector and especially among women entrepreneurs is literacy (Ngatia 2011). A number of women operating small scale fish businesses, for instance, are either illiterate or semi-literate. This makes them culpable to the schemes of unscrupulous dealers in the fish industry. It also lowers the risk tolerance of the women hence confining them to operate at the same level indefinitely.

### **2.5.2 Factors Motivating Women in the Fish Business**

Despite their actor position in the fish industry, the factors that motivate women to pursue the business are similar to those driving women to pursue business in other industries, although in this industry there was some modifications of the motivating factors.

Bitange and Fides (2006) cite some of these factors as the main drivers for women in business as: the desire to be the ultimate decision maker in your place of employment; opportunity to earn a living and increase income; correlating business ownership with familial responsibility; and opening up of business space in the corporate world. Another salient motivating factor characteristic to the fish industry is the gender division of labor.

A growing number of women frustrated with their work conditions e.g. need to schedule work hours to afford them time to attend to pressing family matters often opt to quit and formal employment and go into business (Thacker, 2004). This is even more so due to the sandwich generation phenomenon created by increased life expectancy and as Dodge (1990) puts it, it literally means that women, 75% of whom are caregivers in the family, now have a duplicated role, to care for the young ones and to care for the elderly. 60% of women in the work place another report says would prefer flexible working arrangements in their work stations.

The opportunity to get a better income from business prompts women to take up business. This is because women despite the much touted gender reforms still face sexual discrimination in the workplace hence reading their glass ceiling very early and at the same given the rising levels of familial responsibilities, more and more women including the employed operate businesses on the sides to augment their income. The desire to become ones boss-this is a fact particularly common among better educated working class women who see better potential in business and after having acquired capital from savings and investments and some entrepreneurial skills decided to venture fully into the business world. These women in particular have already reached or realize that they are approaching the grass ceiling in their careers and hence opt to quit and start their own businesses (Thacker, 2004).

Corporate worlds are also beginning to open up to women hence promising more opportunity for aspiring business women to rise in business. However, these are just some of the documented motivators driving women to do business. Another more pertinent factor that is generally observable in the developing world today including Kenya is the need for economic stability (Selvamalar, 2006) and the growing number of single parents. In the latter case women are forced to assume the sole bread winning roles in their families due to either loss of husbands, employment, incapacitation or death of the husband. Others come from polygamous house holds where little attention is focused on them and their children hence the need to start business in order to afford the necessities of life. Nevertheless what is yet to be established is if there could be some motivation for them to establish or at least at least attempt to establish their businesses for posterity.

The gender division of labor in essence puts the woman at a disadvantage when it comes to seeking formal employment either in the fish processing plants or other non agricultural labor markets. In most cases their perceived incompetence makes many a potential employer to ignore this vital labor force. And in the cases where they do have these jobs, they have to contend with wage disparities in comparison to their male counterparts.

## **2.6 Challenges Facing Women Owned Small Scale Fish Business**

Women in business all over the world face typical challenges. But as Bowen et al. (2007) observes, these challenges are more localized and would be dictated by the local cultural dynamics in unique regions. The common challenges include capital constraints, culture, tax and customs regimes, subordination to their significant others, limited mobility, competition from well established male businesses, lack of accurate information, domestic commitments, lower education levels, stereotyping and poor access to justice. Other studies like Selvamalar (2006) cite poor business networks as another common challenge while Richardson, Howarth and Finnegan (2004) identify capacity as a constraining factor with specific emphasis on the lack of business expertise for the women.

In the domestic fish Industry, some of the challenges typical women owned small scale fish businesses both at the catchment areas and the interior markets are: access to capital; the rise of aquaculture; business organization strategies and operational structures; municipal council regulations; and negative perception of the small businesses. These combine to influence growth and extent of these businesses. A detailed discussion of these challenges follows below.

### **2.6.1 Access to Capital**

Earlier on the studies had mentioned the issues of access to finance as an inhibiting factor to artisanal fishermen. These often exposed the fishermen to unscrupulous dealers who mortgaged their catch on the loans advanced to them. Its relative importance to this discussion was the effect it had on the fish supply to the domestic markets. However, capital constraints seem to be universal limiting factor for most businesses and particularly women owned businesses, as most studies reveal. This is an issue experienced even in developed countries like the United States and South Korea where access to capital still remain a critical issue to women owned SMEs. The story is the same when it comes to the developing world Africa included where Miyasami et al (1999) generalizes the problem as prevalent across board. It is also important to note that the dynamics of capital access play out differently in different regions. For instance in the developing world, property rights e.g. land rights which is a key factor in obtaining finance by providing collateral, are not well entrenched in the legal frameworks and much less in the cultural practices of the societies.

In Kenya, Voices of Women (2007) estimates conservatively that only 1% of land titles are owned by women and another 5 to 6 percent owned in joint names. What is even interesting is that the land titles are of land bought not communal land, hence, the women partly or wholly contributed financially to the acquisition of the land. This puts them at a disadvantage when it comes to securing loans from financial institutions. In the developed world, property and inheritance rights are firmly anchored in law. However, most studies do concur that lack of confidence in female business owners' abilities on the part of the banks, suppliers, and clients alike, together with family issues limited access to capital (Selvamalar, 2006).

Lack of confidence is closely related to the education levels and the risk tolerance of women. It has been observed that access to education for most women especially in developing countries is disproportionate and the women progress in education is gender learned (Selvamalar, 2006). This in turn leads to less exposure to the business world. Bowen et al (2009) argument that small business face negative perception from clients could also be particularized to women in this case as suppliers and clients alike are not willing to do big business with them, hence, they don't easily get contracts for supply of items which the financiers would be willing to advance credit for. At the same time business women due to their limited capacity were only willing to operate low risk businesses and this includes low interest loans and of a smaller magnitude and semi-informal businesses.

Another critical factor to the acquisition of capital is the legality of the businesses. Studies suggest that most small scale businesses are not registered and particularly women owned businesses of which 85% are informal. This has been attributed to the hassle of getting permits (Hookimsing and Essoo, 2003) and the fear that legalizing the businesses would attract taxes on their businesses (World Bank, 2006).

In the course of their operations, the SMEs just like the larger business obtain credit and other liabilities. Their nature and scales of operations makes it hard to possess reserve cash to offset some of their debts in time. Thus, depending on the creditor, the debts could either accrue interest, or the services withdrawn, or even the goods and other business assets repossessed. Finally, the lack of practical marketing strategies especially by owner-operations makes them fertile grounds for exploitative money lenders and middle men (Abila and Jansen, 1997). Thus, we can see that capital constraints are interwoven with other limiting factors which make them necessarily complex. This could be the reason why despite the constitutional leverage women in many countries now enjoy, access to capital may still be a long standing issue for years to come.

Pertinent to this is also the issue of lack of information. Many authors point out to this as a limiting factor to SME's and especially those owned and operated by women. In the fish industry for instance Kambewa et al (2006) posit that the relatively remote position of the SME's

in the supply chain denies them access to market information. In addition, the low mobility of women and their inability, to form robust business networks would also work against their access to information.

Their literacy levels are also comparatively low hence information received can be understandably distorted or misinterpreted leading to poor decisions (Ngatia 2011). Moreover, as Voices of Women (2007) contend, predominantly male government officials concerned with legalizing businesses always demand bribes of which women are not always given to part with. Additionally, the business registration process can be time and financial resource consuming hence discouraging the women from registering their businesses and preferring to remain in the informal sector (Voices of Women Entrepreneurs, 2007).

#### **2.6.2 The Rise of Aquaculture**

Aquaculture is the artificial rearing of fish and other marine creatures for commercial, nutritional, ornamental and other purposes in specially constructed ponds and aquariums. It is fast gaining acceptance in many countries world wide and attracting significant investments due to its economic and nutritional potential. In addition it reduces pressure on capture fisheries and creates gainful employment.

Aquaculture is rapidly becoming an important practice in the fisheries sector of the Kenya economy and currently contributes to 1% of the total fish production in the country that is about 1000 metric tonnes harvested annually from 7,477 small ponds owned by 4742 fish farmers (Mwangi, 2008). This translates to about 5.84 metric tonnes per hectare per year - and this after meeting the household consumption requirements of the farmers and also without accounting for the bait and ornamental fish produced. Further, it reduces pressure on the capture fisheries already mentioned and thus it has been identified as a core activity for funding through the medium term expenditure framework (MTEF) (Mwangi, 2008). This has resulted in its prioritization making it one of the four core functions of the fisheries department.

Aquaculture could grow by up to 15 times its current production to yield 15000 tonnes annually if it is fully exploited. This has a value of about KES 11 billion and could translate into 10,000 large and small scale fish farming jobs (ASDS, 2010). This could substantially stem the tide of employment losses rising in the fishing communities due to the unequal export versus domestic market competition as Kambewa et al. (2006) contend, and could also secure jobs and sustainable income for the small scale entrepreneurs (ANF, 2004). In effect it could put control again of the fish industry in the upper part of the supply chain, that is, into the hands of the small scale entrepreneurs leading to less marginalization for them.

It is noted that current processing requirements aimed at meeting export market conditions lead to the discarding of fish which do not meet entry-level conditions like size, weight, etc, that lead to wastage of fish (Schuurhuizen et al., 2006). This has severe nutritional security implications for the fishing communities as their cheap protein supply from the fish is gradually disappearing due to scarcity of fish brought about by the export phenomenon (LVFO, 2004). The commercial availability of only low quality fish coupled with the lack of alternative sources of cheap proteins (Abila and Jensen, 1997) causes a caloric deficiency for locals. An estimate puts it near 50% around the lake area. In the same vein, underhand fishing methods e.g. using nets with narrow mesh sizes (ANOVA, 2004) are contributing to the loss of biodiversity leading to the harvest of juveniles which have no commercial value hence increasing fish wastage. These losses are significant in that they heavily impact the marine ecosystem leading to diminishing stock levels (Schuurhuizen et al., 2006)

Based on the above considerations namely the supply chain dynamics leading to diminishing fish stocks, inordinate market competition that dislocates small scale enterprises and threatens their survival, the loss of biodiversity, and the need to ensure all round nutritional security among other things has led to the aggressive adoption of Aqua fishery practice in Kenya . This it is anticipated will have the effect of ensuring regular fish supply to the interior fish markets at maturity.

In the last 10 years, aquaculture has become a very important market phenomenon in the fish industry. It not only stabilizes the fish supply in the internal markets, but also promises to change the actor positions in the domestic fish markets. This presents a new challenge to the interior fish markets which are structurally ill prepared to accommodate the products of aqua farming. There is also the possibility of increased competition with capture fisheries in the long run leading to market dominance of fish from the fish farms. This could threaten the supply of the fish from the traditional sources leading to the flooding of the markets with cheap fish from the capture fisheries, hence, destabilizing the commodity prices.

#### **2.6.2.1 Fish types used in Aqua Farming**

The predominant or preferred fish variety for aquaculture in Kenya is Tilapia which is also the fifth most important fish in fish farming worldwide, because they are sizeable, prolific breeders and highly palatable. 90% of the fish stocks in Aqua farms today are of the Tilapia species or Ngege as they are locally known. This fish type has also got very low mercury levels (USFDA 2001) and low in saturated fats, calories, carbohydrates and sodium. Nevertheless, its low level of Omega -3 fatty acids which is the essential reason why dieticians recommend fish consumption versus the high ratios of omega-6 fats have precipitated a controversial health debate with top international nutritionists intervening with a joint statement recommending fish consumption (William 2011). Another reason for the adoption of tilapia in most fish farms is that they thrive in warm tropical waters which constitute all Kenya's fish farms and more importantly is their vegetarian diet, rapid growth and their tolerance to high stocking density and poor water quality.

As a final note, tilapia fish have been noted to be very effective biological control agents because of their feeding habits. They consume plants and nutrients unused by other fish species such as the oxygen depleting detritus, hence, increasing the robustness of other fish species. In the United States for instance they have found their biological control use in water purification. Here in Kenya they are effective against malarial parasite vectors i.e. mosquitoes. They consume the mosquito larvae.

### **2.6.3. Business Organization Strategies and Operational Structures**

Majority of women owned businesses are of the SME type according to Gordon (2000) and Selvamalar (2006). Most of these businesses generally employ less than 20 people (UNIDO document, 2003), and this are usually members of the family. In the case of the single parents, the business would mostly of the sole proprietorship type but with the proprietor being assisted by family members to run the business. Family owned and run businesses are common in the fish industry supply chains and the retail market ends.

#### **2.6.3.1 Sole proprietorship**

Small scale fish businesses in most cases exist as owner-operator or sole proprietor entities. This implies that they solely depend on the owner capability to organize and mange resources needed for their establishment. This makes them overly reliant on the owner's character and initiative for their survival. The advantages of this arrangement includes modest capital requirements; both human and financial capital are easily set up or relocated especially when the licensing regime is flexible; they also take up small space when necessary and are expandable. Their client demands and nature of their products make it relatively easy to customize their services. In addition, they do attract numerous support and inducements from the government and other interested institutions.

However, the inadequacy of enough capital inhibits technological integration and intervention like the acquisition of cold storage facilities for the preservation of fish, and also restricts the expansion of these businesses. Quality control measures and perceived incapability to deliver volumetrically makes them to be bypassed by some customers. It's also noticeable that this perceived 'smallness' can be internalized by the proprietors leading them to shy away from bidding for big business. Their inability to hire professionals or invest in modern equipment also weakens their competitive edge although this is a debatable fact if we consider their level of operation, their potential market and their ability to competitively hire skilled labor. Nevertheless, some businesses do address this by outsourcing their services or subcontracting other businesses where necessary.

Owner-operator small businesses also enjoy the advantages of flexibility in opening and closing and negligible restrictions during operations but this depends on the market conditions and restrictions. Other advantages include quick and direct management decisions and control by the owner, better interface with customers, owner takes all the profits and low establishment expenses. Some if not most of these businesses incorporate family members in their operations.

#### **2.6.3.2 Family owned business**

A significant number of fish businesses are family owned. The woman still has a lot of say in these type of businesses but would be limited at some decision making levels e.g. when it comes to expansion. Nonetheless, businesses owned and operated along family lines face additional problems due to the emotional factors that limit their survival. Family business can take any dimension or scale depending on the owners. They are a predominant type of business averaging at about 75% of the businesses all over the world. The uniqueness of this kind of business ownership is that its challenges cut through all levels of business operations i.e. whether small, medium or large scale.

Family businesses in Kenya regardless of the scale can be classified into three categories: Owner-managed, which are managed actively by the original founder; Sibling partnership, which are common after the demise of parents; and cousin-syndicate type which taken over by the extended family in the event of the demise of the founder entire family. These types of businesses face additional challenges brought about by emotional issues right from start-up and also significantly during the succession stage. In fact statistics indicate that the presence of family members in a start up business with the associated problems would most likely lead to its failure to make it to the next generation with the figures suggesting that a mere 30% of the businesses are likely to carry on to the next generation. The statistics for second generation businesses is even worse with 65% failing, and still more aggravated in the third generation with only 10% being able to carry on. (Harris 1990).

This apparent sense of entitlement for both the proprietors and their family members in the business compound the already existing emotional problems that the businesses are

experiencing (Daniel, 2005). This as has been observed in many cases puts pressure on the establishment to incorporate grossly incompetent family members or 'morons' into the management of the businesses which in turn accelerates their failure. Among the reasons for failure of small businesses in Kenya, two issues stand out namely the social network enjoyed by the founder and the founder syndrome. While the former will greatly determine the supplier-customer orientation to the new or prospective owner with a radical shift experienced when the owner dies and the social networks he had built over the business either collapse or weaken, in the latter case many founders assume some form of immortality or expect the acumen to genetically transvere into the assumed heir, hence, they will not take time to groom or point to the heir apparent and in most cases they die with the business secrets. What is even more is their lack of record keeping, they prefer to keep most business secrets in their memory and go with them to their graves.

#### **2.6.3.3 Partnerships**

These kinds of arrangements are a common feature of small businesses due to their mode of operations and unlimited liabilities - the issue of unlimited liability is also a limiting factor to the formation of real partnerships. However, partnerships in the small scale fish businesses are rare. As opposed to the family business where their common background and shared values may serve to reinforce their higher risk tolerance, partnerships generally incorporate membership from diverse backgrounds hence lowering the risk tolerance. Also pertinent to this is the managerial structure which in most cases is not flexible and as direct as that enjoyed by sole proprietors.

Finally, we note that businesses structured along these lines in general face operational and managerial problems resulting in low productivity and competitiveness as Selvamalar (2006) argues. Business networks will also be determined by the structure of the business. For the women owned businesses, mobility, lack of information and culture have strong hand in influencing these networks. Other forms of ownership structures are not in general applicable to small businesses.

#### **2.6.3.4 Financial literacy**

In terms of financial literacy, most cases show that despite the academic background of the entrepreneur, what is noticeable is the lack of sound financial management practices. A quick inspection would reveal that the most SMEs can do is to keep *ad hoc* records or books from which it is not quite easy to deduce the exact nature of the business' operations. This makes it difficult to calculate the profit margin, operational costs and other fixed costs. In fact in pricing their commodities the businesses rarely factor in the fixed costs hence making them operate on a subliminal profit margin (Shim and Eastlick, 1998). Most small businesses do not enjoy the luxury of business planning and as a result many never break-even and in the cases where they do, they rarely take note and act appropriately to take their operations and, hence, their businesses to the next level.

#### **2.6.4 Municipal council regulations**

Municipal regulations are local interpretations of the Local Government Act 265 of the laws of the Republic of Kenya by the respective municipal councils into by-laws in order to regulate industry in areas within their jurisdiction.

In Nakuru municipality, the municipal council market operates under the Municipal Council of Nakuru (Public Markets) by-laws 2004. These laws confer the authority of establishing or operating within public markets on the Market Master or to persons to whom such powers may be conferred for the purposes of effectual control and supervision of the markets (MCN 2004). Further, the laws also stipulate the kinds of products allowable into the public markets which include perishable food stuffs, poultry and other items depending on the discretion of the council. They also prohibit any form of fire lighting or cooking and even artisanal work within their premises. Washing and cleaning of products or food items must be done at the designated areas as required by law. No mention is made of fish in these by laws in spite of its relative economic importance.

The same laws confer power to the council to determine opening and closing times for the markets, a fact which is limiting for the fish businesses for observation shows that most of these

businesses operate well in the early evening hours well past the official closing time of markets. In addition, they require all operators to have licenses or face confiscation of their products. Studies done on this like Selvamanar (2006) and Voices of Women Entrepreneurs (2007) point to the fact that procuring permits for operation is quite a hurdle for the small scale businesses and especially the women owned. This is mostly in terms off cost and time needed to process such applications. This results in low business registration and subsequent harassment by the council officials as is typical in the Kenyan case. There are also reported incidences of bribery.

Finally, the laws only provide for the establishment of markets by do not specifically address the kind and location of the markets and this cold make it difficult to plan ahead for significant investments to be made by the small businesses in improving their facilities and equipment. Hence, many of these businesses will prefer to operate from non gazette markets where fewer regulations are imposed and there is space for expansion. In such locations, the nature of their operations is haphazard since they are illegal and are not allowed to construct permanent premises.

#### **2.6.4.1 Infrastructure, Security and Mobility**

Fish is a very sensitive commodity in the market as a food item. Poor infrastructure can easily result into massive losses in the industry due to the perishability of the product. A study done in Uganda (UNIDO, 2003) identifies among other issues weak infrastructure as a limiting factor to the growth of business owned by women. It limits the performance of the business by creating a weak link between the markets, the sources and the suppliers. This does not necessarily involve roads alone but other items such as communications, networks, better operating facilities and security. Many of the markets in the developing countries do not enjoy adequate infrastructure. This disadvantages their competitiveness in that the valve addition is lowered and losses incurred during transportation and storage are also many. This eats into the working capital of the businesses resulting in stagnation or failure especially in bad weather.

The Municipal council by-laws ultimately influence the infrastructure states and networks which in turn determine the levels of security available. While security is a critical factor in business,

many small businesses cannot afford to operate from premises with adequate security due to the costs. For instance it is not uncommon to see the entrepreneurs or their employees retrieve their wares from a safe house before opening time and again return them after closing time. Small businesses are particularly vulnerable to theft because of the nature of their premises. Another critical insecurity issue is the volatility of public order i.e. when there are public protests e.g. by students, employees and general public, the businesses become easy prey to vandals and thieves. This means that a breach in security during such occasions is likely to lead to sure death for the enterprises affected (Bowen et al 2009).

Security is one of the determinant factors of mobility which is crucial to the success of businesses. Men unlike women enjoy high mobility while doing business than their female counterparts. Factors influencing mobility as in Kenya include security, family commitments, culture. Most men for instance would not be limited by security as compared to women when going on business and this gives them an advantage over their female competitors in the same business.

Hartman and Arora (1990) see tension in the work-home context as women in business are also expected to maintain their families which is a main stumbling block to their businesses. This means that they can only give partial devotion to their businesses. However, this could be unique in some regions as Selvamalar (2006) points out. In his study he says that women in North East Sri Lanka for example are not restricted in mobility or by family commitments including taking care of the young as other family members are assigned that responsibility to enable the woman to pursue business. This leads us to the other point, that is, the role of culture in mobility. Many studies done on women owned MSME's in developing countries cite culture as a major constraint in mobility. Many cultures especially in Africa frown or disapprove of the highly mobile business woman. This according to Richardson et al. (2004) consequently affects their access to essential abilities and business exposure. This could well translate to weak or small business networks that cannot suffice to sustain growth.

## **2.6.5 Negative Perception**

According to recent findings like Amyx (2005) some of the most significant challenges stem from the way SMEs are negatively perceived. That is to say small businesses are viewed by potential clients as lacking in capacity to deliver timely and quality services and as also incapable of satisfying more than one project simultaneously. This often results in larger companies being given big business by the clients due to their clout in the industry and name recognition alone (Bowen et al 2009). In other words, potential clients would indiscreetly bypass small business and give tenders to big business ostensibly due to their perceived size and name implying reliability. This puts the SMEs at an obvious disadvantage when competing with larger companies in the same field which in return enjoy increased value addition and volumetric sales by capitalizing on the factors of production.

For example according to the report by Von Tilburg et al (2009), large-scale fish processing export-oriented business are pushing small enterprises in the fish industry out of businesses and this oblivious of the economic consequences due to their perceived capabilities. The perceived lack of capacity to deliver the right product in the upper part of the value chain prompts the businesses to contract buying agents who end up subcontracting the fisherman and offer comparatively little in terms of prices for their produce. Interestingly the report does not visit any issue related to co-operatives which could change the actor positions of the fishermen in the network considerably giving rise to access to market and financial information and, hence, increase in negotiating power. This attitude puts the woman business person in the industry at a more disadvantage due to their perceived 'smallness' in the industry and relegates her to vendor status.

Access to credit facilities has been the perennial challenge for the small scale business persons for quite sometime now as many studies indicate. This has been the cause for failure for many businesses due to the imposed capital constraints leading to size and operational scope limitations. Bowen et al (2009) notes that this could have serious consequences because their small size cannot cope with a simple managerial mistake and this when encountered could lead

to sure death of the small enterprises, hence, ill affording them the much needed opportunity to learn from their past mistakes.

This coupled with the perceived economic backgrounds of many small scale business persons which offer relatively little in terms of collateral further puts them at odds when it come to accessing credit to restart their businesses. The most tenable resource in such a state of affairs for the would-be future entrepreneurs is to sought alternative employment in big companies in the hope of accruing capital or abandoning the project altogether.

In the fish industry's value chain for instance the inability of the artisan fishermen to obtain credit has made them fall prey to unscrupulous buying agents who give them product secured loans i.e. furnish them with unstructured loan packages which they are obliged to repay in terms of tendered fish catches to the buying agent at his own price. This is a kind of asset stripping that devise them essential negotiating power (Schuuruizen, 2006). Further the players at the international levels in the fish industry do not feel obliged to attend to the economic impact the export business has on the industry at the domestic level and mitigate by among other things providing access to credit. Instead they assume that there are local mechanisms dealing with such problems.

## **2.7 Theoretical Framework**

The theoretical framework attempts to clarify why things are the way they are based on theories (Kombo and Tramp, 2006). This study was guided by the social feminist ideology and the social entrepreneurship theory.

### **2.7.1 The Social Feminist Ideology**

The social feminist ideology attributes the social exploitation and suppression of women to its roots in the structure of patriarchal capitalism (Adamson et al 1988). Proponents of this ideology believe that sexism is so deeply ingrained in the social relationships of patriarchal capitalism that a fundamental transformation is necessary to bring about a social change. This calls for a

paradigm shift in the way we define gender today. According to Porter and Sweetman (2005), gender refers to socially constructed roles of relations between men and women. That is, they are figments of thought inculcated into both men and women to define their relationships towards each other. Inevitably, this has resulted into poor definitions of gender roles leading to social disparities that have pervaded the economic and social spectrums to date.

### **2.7.2 The Social Entrepreneurship Theory**

Another theory pertinent to this study is the social entrepreneurship theory which characterizes enterprise in the social context. This theory is cognizant of the fact that businesses do not in essence operate in isolation and are subject to influence both internally and externally. It has been observed that as the business grows, the role of the organization i.e. the collective behavior of people in the organization becomes critical to its success.

The four social contexts that this theory focuses on are the social networks, life course stage, context, ethnic identifications and population ecology (Reynolds, 1991). Social networks focus on building lasting business relationships and reputation which are critical to the survival of the business. The life course context stage involves an analysis of the motivating factors leading to the decision to create business enterprises. Ethnic identification is concerned with the underlying sociological dispositions that spur people to engage meaningfully in business. Population ecology, that is, the notion that an enabling environment is crucial to the survival of any business.

## 2.8 Conceptual Framework

A conceptual framework can be defined as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Riechel and Ramey, 1987). It can also be thought of as an abstract, simplified view of the world that we wish to represent for some purpose (Kombo and Tromp 2006). The conceptual framework for this study is as given below

Fig. 1 Conceptual Framework

### Independent variables

#### Access to Capital

- Availability of finance
- Expansion of premises
- Acquisition of better cold storage equipments

#### Rise of Aquaculture

- Regular fish supply
- Increased fish consumption
- Interest in fish farming by the fishmongers

#### Business organization strategies and operational structures

- Financial literacy
- Market- product knowledge
- Change of ownership styles
- Customer care -sales tactics

#### Municipal council regulations

- Municipal rates
- Determination of locations
- Security of premises
- Establishment of market infrastructure

### Dependent variable

#### Growth of women owned small scale fish businesses

- Increased profitability
- Increased sales volume
- Improved standards of living
- Increased access to loans
- Creation of employment
- Wealth maximization/ Expansion of businesses through opening of new branches.
- Value addition
- Improved social responsibility

### Intervening variables

#### Sensitization and awareness

#### Inflation and interest rates

#### Ministry of Fisheries policy

### Moderating Variables

The above conceptual framework seeks to demonstrate the relationship between the independent and dependent variables in the presence of moderating and intervening variables. The

significance of each variable is in turn manifested by the presence of indicators which are measurable attributes of the variables.

### **Summary of the Literature Review**

The preceding review highlighted the socioeconomic role of the woman in today's world and her position globally with respect to this. Steps are currently being undertaken to address the plight of the woman and gradually emancipate her from the poverty trap and increase her competitiveness in the job market through the realization of the Millennium Development Goals. However, the goals and their indicators are silent on the development of enterprise and this task is left to the development partners i.e. organizations willing to assist women to develop their entrepreneurial skills. We have seen the characterization of women in businesses and the challenges they face in running and expanding their businesses which include among other factors: the perennial capital constraints in which gender was identified as a limiting factor in the access to capital. This has also been identified as a major obstacle when it comes to mobility and, hence, the building and strengthening of business networks which are vital for the establishment and growth of the businesses and the nature of business organization.

Fish has been identified as a key nutritional element and also as a business commodity with a well established value and supply chain up to the international level. The unequal competition brought about by the export market phenomenon has gradually taken its toll on the small scale entrepreneurs in the fish industry causing loss of livelihoods among the fish dependent communities over time. This occasioned post harvest losses and the loss of bio-diversity with the attendant diminishing fish stocks with the latter impact pointing out to a possible tragedy of the commons in the near future. At the same time, the rise of aquaculture has been seen as a viable measure that could stem these trends in the future if well implemented.

The studies did not, however, reveal the impact of aquaculture on the interior fish markets and the infrastructural plans to accommodate these products in the market. Also they were not specific on the institutional support for the women owned small scale fish businesses in these interior markets

## **CHAPTER THREE: METHODOLOGY**

### **3.1 Introduction**

This chapter starts with a detailed description of the study area. It also contains the study design, unit of analysis, population to be studied, sampling procedure, methods of data collection, and finally information on how data was analyzed.

### **3.2 Research Design**

A research design refers to a laid down plan for collecting and utilizing data so that the desired information can be obtained with sufficient precision to allow the hypothesis or the research questions to be properly tested (Henon, 1998)

The study design was descriptive survey and targeted individuals that operate in the fish industry within the municipality. In this the study sought to identify the size of the businesses, the type of ownership, and the number of years the operator has been doing the business in the town. This design involves interviewing or administering questionnaires, and conducting focus group discussions. The choice of this research design was made possible based on its ability to obtain information from a large number of respondents, conducting personal interviews at a time convenient for respondents, acquiring data as inexpensively as possible and make predictions about the population being studied (Koul, 1984). It also had the ability to determine the amount of correlation between two or more variables. In the case of this study, the survey design was useful in examining the possibility of the relationship between type of ownership, fish supply including the contribution of aquaculture, municipal regulations, and financial literacy on the growth of the businesses.

### **3.3 The Study Area**

This current study was carried out in Nakuru Municipality which is situated in Nakuru County in Rift Valley Province, Kenya. It borders Bahati to the North, Gilgil to the South, and Njoro to the west and Nyandarua to the East. Nakuru Town is situated at the centre of the Municipality, is the main town within the area of Nakuru County and the fourth largest in Kenya. The town started as a railway station on Kenyan-Uganda railway at the turn of this century. The name 'Nakuru' is

derived from Nakurro, the Maasai word meaning a 'dusty place'. It hosts the Rift Valley Province Administration Headquarters and currently serves as the administrative headquarters of Nakuru County –the administrative area where the research was carried out is the western division of Nakuru municipality. Nakuru Municipality presently occupies an area of 290 Km<sup>2</sup>, extended from 262 Km<sup>2</sup> to accommodate the growing population. According to 2009 Population and Housing Censes (Republic of Kenya, 2010), Nakuru Municipality has a population of 674,229 with most of its populace occupying the South-Western part of the town, in the suburbs such as Kaptembwa, Langalanga, Ponda Mali and Mwariki. Administratively, Nakuru Municipality has five divisions namely Municipality, Kaptembwo, Bondeni, Mwariki and Viwanda and six sub-locations.

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In addition, Nakuru Municipality is a vibrant and cosmopolitan town, with a population originating from all the ethnic groups in the country. There is no preponderant ethnic community in the town. It is also the fastest growing urban centers in Africa (Fast in Africa Survey) growing at the rate of 13% per annum in terms of population and physical expansion (Urban Survey 2010). The economy of Nakuru Municipality relies on a strong vibrant manufacturing and service industry focused on the agriculture sector: There are large agro-chemicals and dairy processing plants, textile manufacturers, large-scale maize storage facilities, farm equipment dealers and workshops, veterinary services and much more. The town has also recently become a hub of education and commerce with all the public universities and some private universities opening their campuses there, and also leading commercial banks setting up their branches in the town. It also has attractive tourist destination like the world renown Lake Nakuru National Park.

Nakuru enjoys a diversity of geographical and ecological features: to the South and adjacent to the town, lies Lake Nakuru National Park, wetland of global significance; to the West is the Mau Escarpment, a water tower of national importance; to the North is the extinct 8-12 km wide Menengai Crater, one of the largest craters in the world.

### **3.4 Target Population of the Study**

A population or universe is defined as aggregate of all the elements in any field of inquiry Kothari (2004). The population must be defined in terms of elements. The target population was all the small scale fish businesses operating within Nakuru Town Municipality. These businesses mainly operate from three markets within the town namely: the Municipal market located in the central business district; the Ponda Mali market located along Kipanga Way in the southern part of the town and the Kaptembwo market located at the western end of the town. The last two markets are located in residential areas and are not officially gazetted markets but they have been operating for years under the auspices of the local authorities. The target population for the markets were municipal was 42, Ponda Mali 42 and Kaptembwo 77 respectively, totaling to 161 small scale fish businesses (Municipal Council of Nakuru, 2011). The unit of analysis for this study was individual owners of the businesses and family members who co-own the businesses.

### **3.5 Data Sampling Procedure**

Data refers to all the information a researcher collects for his /her study. There are two types of data, that is, primary and secondary data

Probability sampling was used where each sampling unit of the population has a known and specified probability of inclusion in the sample. It has the advantage of giving all elements in the universe an equal chance of being included in the sample. It also provides an efficient system of capturing the variations that exist in the target population.

The sampling frame which has details of women owned small-scale fish business was obtained using a headcount of the businesses within the markets in the Municipality. Frankel and Wallen (2000) recommend that for descriptive studies where a minimum of 114 subjects are needed, proportional sampling was used to select the respondents. In order to determine a representative sample size of the businesses the sample was to be drawn from the total population of 161, this study will adopt a formula proposed by Kothari and Pals (1993) for estimating a sample size,  $n$  from a known population size  $N$ .

$$n = \frac{x^2}{\sigma^2} NP(1-P)$$

$$\sigma^2 = (N-1) + x^2 P(1-P)$$

n= required sample size

N= the given number of women owned small-scale fish businesses in Nakuru town which is 161.

P= population proportion assumed to be 0.50

$\sigma^2$ = the degree of accuracy whose value is 0.05

$x^2$ = Table value for chi-square for one degree of freedom which is 3.841

Substituting these values in the equation, estimated sample size (n) is:

$$n = \frac{3.841 \times 161 \times 0.5(1-0.5)}{(0.05)^2 (160) + 3.841 \times 0.5 \times (1-0.5)}$$

n= 114.

After determining a representative sample of 114, the women owned small-scale fish businesses were stratified according to the years they have been in operation. This was done to ensure homogeneity in the sample (Kombo and Tromp 2006) and to codify the data during analysis to yield valuable information. Every five years of operation formed a stratum. Multi-stage sampling was used to distribute the 114 women owned small-scale fish businesses in the three strata. This ensured that the sample was proportionately and adequately distributed. Each stratum was allocated a portion of the sample by dividing the total number of women owned small-scale fish businesses in the stratum by the total population of women owned small-scale fish businesses and then multiplied by the sample size as shown in Table 3.1

**Table 3.1 Stratum Sample Size Determination**

Years in Operation	No. of businesses	Sampling Procedure	Sample Size
0 – 5 years	71	$71/161 \times 114$	50
6 – 10 years	55	$55/161 \times 114$	39
11 and above	35	$35/161 \times 114$	25
<b>TOTAL</b>	<b>161</b>		<b>114</b>

After determining the specific number of women owned small-scale fish businesses to be selected from each stratum, proportionate stratified sampling was conducted to distribute the sample size in homogenous groups among women owned small-scale fish businesses in strata (Kombo and Tromp 2006). This was done by dividing the total number of the businesses by the total number of women owned small-scale fish businesses in the stratum and then multiplied by the allocated stratum sample size and after taking into consideration the several factors associated with these types of businesses e.g. the scales. Due to the short-lived nature of some of these businesses the probability of finding them active during the actual survey was low hence it was not feasible to include all of them in the sampling. Some of these businesses are also operated by persons who are not the real owners. This disqualified them from being included in the sample as the study focuses on the business owners. This is as summarized in Table 3.2 (see Appendix 6)

Having determined the sample size for individual businesses, simple random sampling was then used to select the business owners that were to participate in the study. This gave every individual business an equal chance of being selected into the sample. This method was preferred due to its precision and the possibility of generalization.

### **3.6 Methods of Data Collection**

To collect primary data, the study mainly utilized quantitative and qualitative methods of data collection to give adequate insights into the topic. Interview Schedules which contained structured closed and open ended questions was used. Each individual business was approached separately at their convenience, interviewed and appropriate responses filled in the questionnaire.

The use of closed and open ended questions and the interviews generated both quantitative and qualitative data respectively. The interview schedule was pilot tested to identify and correct weaknesses, ambiguities and omissions so as to improve the quality of the questionnaire. This improved the quality of responses to be contained in the interview schedule.

Data was collected based on the perceptions and attitude of the business owners towards the subject of the items in the questionnaires, the interviews and the discussions. The items were of the ordinal and categorical types with range of between 1 to 5 with 1 signifying lowest value and 5 highest values. Significant deviation between observational characteristics, questionnaire response and interview responses were interrogated for consistency.

Secondary data was also collected to supplement the primary data. This included documented information on the businesses. Data was collected from government offices, internet, libraries (books, journals, periodicals, theses and government publications) and by observation.

### **3.7 Research Instruments**

The research instruments developed for this study were questionnaires and interview schedules. These were self-administered (Fowler, 1993) to facilitate physical touch on widely dispersed samples, ease of access and cost effectiveness.

#### **3.7.1 Questionnaires**

Questionnaires are used for obtaining important information about a given population. They are advantageous in that they save on time, are confidential, have increased access to populations and eliminate interviewer bias (Kombo and Tromp, 2006). This study used questionnaires after pilot testing them for effectiveness on a non – participatory respondent sample. The questionnaires were self administered.

#### **3.7.2 Interview Schedules**

An interview is an oral administration of a questionnaire or an interview schedule (Mugenda and Mugenda 2003). These are face to face encounters designed to extract accurate information from

the respondents by enlisting their cooperation. Interviews are usually structured, semi structured and unstructured (Kombo and Tromp 2006).

Unstructured interviews are generally flexible with the researcher exercising only minimal control. Its primary aim is to get the respondents to open up and is useful for observational purposes. However, its lack of focus and format makes it difficult to systemize and analyze the data, and it can also be a time consuming exercise especially due to its propensity to get out of control especially when the respondents get too emotional or personal (Kothari, 1993).

Semi-structured interviews are based on an interview guide which is a list of questions or topics that need to be covered by the researcher during the interview. They are of two types; the focused interviews and the case studies (Kombo and Tromp 2003). They have the advantage of being flexible i.e. by having and varying open ended and close ended questions with the former being used to gather in depth information, and also the researcher can get a complete and detailed understanding of the issue under research.

Structured interviews are very systematic and rigid in that they subject every respondent in a sample to the same stimuli. However, they are advantageous in that the data they yield is quantifiable and reliable. In addition it is time saving and comprehensive and also detailed.

This study employed both semi- structured and structured interviews. This study used the semi-structured interviews and structured interviews for collecting data and will administer them to individuals and in focus group discussions to control the discussions.

### **3.8 Reliability and Validity of the Research Instruments**

In research no two interviewers are alike and the same person (respondent) may provide different answers to different interviewers (Kombo and Tromp 2006). The manner in which a question is formulated can also result in inaccurate responses since individuals tend to furnish the interviewers with false answers to particular questions. This necessitates the need for reliable instruments to enable the researcher to extract accurate information from the respondent

(Mugenda and Mugenda 2003) in order to maximize the reliability and validity of the data collected.

### **Reliability**

Reliability is the measure of the consistency of the results from the tests. It is a measure of the degree to which a research instrument yields consistent results or data after repeated trials. It is influenced by random error. The technique used to address the reliability in this research was split half technique since it only requires one test session and it is more accurate and inexpensive than the other techniques (Mugenda and Mugenda, 2003). The results yielded a high reliability of up to 83% in terms of internal consistency therefore making the instruments reliable for the study after some adjustments recommended in the pilot study.

### **Validity**

Validity is the accuracy and meaningfulness of inferences, which are base on the results. It is a measure of how well a test measures what it is supposed to measure. It is concerned with the accurate representation of the variables under study. It is influenced by systematic error in data. This was addressed in the present study by proper instrument design to reflect the research objectives and pre-testing the instruments (Borg and Gall, 1998).

### **3.9 Ethical considerations**

Project research authorization was obtained from the Town Clerk Nakuru municipality prior to carrying out study. A copy of the letter of authorization was appended. Assurance was given to the respondents regarding confidentiality of the information to be obtained.

### **3.10 Data Analysis**

Analysis of data was done at the individual business level. Data editing and coding was done on the quantitative data generated on the years of operation, the location of the market, the type of ownership of the businesses and the sales volume per week as an important step towards data analysis. It was then entered into SPSS for analysis. These were summarized in frequency distribution Tables. Various Tables were used to display data for each of the objective. Data was further described by computing the mean median and mode to determine cohesiveness,

homogeneity/heterogeneity and leadership in the studied groups. Graphical representation of each of these variables against the growth prospects was projected. Correlational techniques were used to show the significance of the relationship between the variables and performance.

Qualitative data was generated from open ended responses. This was an on-going process which went hand in hand with data collection. Information was transcribed and coded based on established themes, sub-themes and patterns. Various successive steps and activities were followed in the analysis including writing field notes, writing session summaries, coding and interpretation of findings. Codes from transcripts, session summaries and field notes were available for report writing.

### **3.1.1 The Operational Definition of variables**

Is a table that shows the relationship between their indicators and the measuring instruments as they done in the research.

The functional relationships between the independent variables and dependent variables are also shown in a measurable way. The table 3.2 shows this in detail

### **Operational Definition of Variables**

Indicators were denoted by the main variables under the study in order to render them measurable.

**Table 3.2 Operational Definitions of Variables**

Objectives	Type of Variable	Indicators	Measures
Growth of women owned small scale fish businesses	Dependent	<ul style="list-style-type: none"> <li>• Increased profitability</li> <li>• Increased sales volume</li> <li>• Improved standards of living</li> <li>• Increased access to loans</li> <li>• Creation of employment</li> <li>• Wealth maximization/ Expansion of businesses through opening of new branches.</li> <li>• Value addition</li> <li>• Improved social responsibility</li> </ul>	Level of sustainability
Access to Capital	Independent	<ul style="list-style-type: none"> <li>• Availability of finance</li> <li>• Expansion of premises</li> <li>• Acquisition of better cold storage equipments</li> </ul>	Relationships between business with financiers
Rise of Aquaculture	Independent	<ul style="list-style-type: none"> <li>• Regular fish supply</li> <li>• Increased fish consumption</li> <li>• Interest in fish farming by the fishmonger</li> </ul>	Frequency of fish supply and establishment of aquaculture farms.
Business organization strategies and operational structures	Independent	<ul style="list-style-type: none"> <li>• Financial literacy</li> <li>• Market- product knowledge</li> <li>• Change of ownership styles</li> <li>• Customer care -sales tactics</li> </ul>	Uptake of business literacy programs
Municipal council regulations	Independent	<ul style="list-style-type: none"> <li>• Municipal rates</li> <li>• Determination of locations</li> <li>• Security of premises</li> <li>• Establishment of market infrastructure</li> </ul>	Efficiency and effectiveness of business structures

## **CHAPTER FOUR:**

### **DATA ANALYSIS, PRESENTATION AND INTERPRETATION**

#### **4.1 Introduction**

This chapter presents results arising from the analysis of data collected using descriptive statistics. The findings are presented in tabular summaries, and their implication discussed. The study sought to determine the Influence of Institutional and Socioeconomic Factors on the Growth of the Women-owned Small Scale Fish Businesses in Nakuru Municipality, Kenya. Data instruments were developed and distributed targeting three main markets which had fish available for sale with a population of 161. A sample of 114 respondents was drawn from the population and distributed accordingly in every market in order to participate in the survey. The data collected was analyzed and the results tabulated.

#### **4.2 Summary of Response Rate**

Table 4.1 gives the summary of respondents' participation in the study.

**Table 4.1: Summary of the Response Rate**

<b>Number of questionnaires issued</b>	<b>No. of questionnaires returned</b>	<b>Percentage</b>
114	90	79

Most of the respondents targeted in the study responded to the questionnaires giving a return rate of 79%. The others were not able to return the questionnaires due to unavailability as the nature of these businesses at the small scale level is vagrant; hence, the respondents had either stopped doing the business or relocated their businesses. Others were not able to return the questionnaires citing reasons such as misplacement, extensive damage and even forgetfulness. However, the 71% return rate was deemed sufficient for the study as it was statistically analyzable.

#### **4.2.1 Demographics of the respondents**

The study found it instructive to determine the demographic information of the respondents and it plays a role in characterizing the respondents. This was done in the three fish markets respectively. The information being sought here was the: age, marital status, number of dependants, and highest level of education, residence, and occupation of the spouse. In terms of age, the findings were as given in Table 4.2

**Table 4.2: AGE OF THE RESPONDENTS**

Age of Respondents(yrs)	Frequency	Percentage
18 – 30	15	17
31 – 40	45	50
41 – 50	25	28
51 and above	5	5
Total	90	100

The findings suggest that most of the fishmongers were in their prime age between 30 and 50 years with the majority lying between 31 and 40 years of age (50%) which suggests that the women were more active economically at this age due to increased family responsibilities. Those who were above fifty (5%) had probably retired from the business or relocated to other areas e.g. their ancestral homes while it can also be observed that younger women were not particularly keen in taking part in the fish industry here at an interior market. The large participation by middle – aged women in the fish industry also compared with the relatively small participation by younger and older women warranted further investigations to ascertain the state of other pertinent factors characteristic of women owned business like marital presented in Table 4.3.

**Table 4.3: Marital Status of the Respondents**

Marital Status	Frequency	Percentage
Married	50	56
Widowed	7	8
Divorced	3	3
Unmarried	8	9
Single	22	24
<b>Total</b>	<b>90</b>	<b>100</b>

The majority, that is, 56% of the fish mongers were married women most of them being in their 30's and 40's.

60% of the women with less than 30 years of age were married while 27% in the same age bracket were single. In generally, 2 out of three women in the fish industry were married and some had been widowed (8%). Only a small proportion (10%) of the women claimed to be single and had not been in a matrimonial relationship before. From the findings, 90% of the women either had children in marriage or were single having children. This means that most of the fish mongers had children or other dependents. 35% of the women single parents.

In terms of children; 12% had only one child regardless if the matrimonial relationships while 17% had two children two took after. The vast majority 51% had between 3 – 4 children while 20% had 5 or more children. This is also characteristic of women involved in small business, that is, one of their strongest motivations is to take care of their children.

#### **Highest Level of Education**

The level of education was also assessed and presented in the Table 4.4.

**Table 4.4: Highest Level of Education of the Respondents**

Highest Level of Education	Frequency	Percentage
Primary	43	48
Secondary	35	39
College	10	11
None	2	2
<b>Total</b>	<b>90</b>	<b>100</b>

The findings suggest that 98 percent of the fish mongers were literate with those in possession of more than basic education being 50% while the other half comprised 48% of respondents with only basic education and only 2% without any formal education. This shows the respondents had capacity to do business even at a much higher level. It also says the respondents were in a position to add value to their labour i.e. they were expected to use their knowledge skills to improve on their business products and services if trained.

#### **Occupation of Spouse**

The study sought to find out the occupation of the spouse i.e. husbands or significant others of the fish mongers. 10 of the respondents said they didn't have a significant other while 35 (39%) claimed their spouses were unemployed or dead. Majority of the women (67%) had their spouses working in the informal sector such as *jua kali* artisans, mechanics, construction workers, watchmen etc. Only 10% of the respondents had their spouses in formal employment.

**Table 4.4: Occupations of the Spouses of the Respondents**

Occupation	Frequency	Percentage
jua kali artisans	43	48
Mechanics	35	39
Construction workers	10	11
Drivers	2	2
Total	90	100

#### **4.3 Access to Capital**

Capital access is a very important aspect in the survival of a business. For most women owned business this is a limiting factor, the study sought to assess this factor in the fish industry by identifying sources of the capital and the constraints experienced by the women in accessing capital.

##### **4.3.1 Sources of capital of the respondents**

The Table 4.5 shows the capital sources of the fish mongers.

**Table 4.5: Source of Capital of the Respondents**

Capital Source	Frequency	Percentage
Personal savings	29	33
Family	7	8
Loans	40	44
Donations	3	3
Borrowing from friends	3	3
Merry go rounds	8	9
Total	90	100

Majority of the women surveyed used loans to finance their businesses, this group constituted 44% of the fish mongers in all the markets combined. 33% used personal savings while only 9% used money saved in merry-go-rounds. 8% of the women obtained capital from their families while 6% either borrowed money from friends or got donations. 33% of the married women used their savings to operate their businesses while a higher proportion (40%) of the single women did the same. This suggests that single women were able to conserve their financial resources than the married women. Most of the women felt that being a woman disadvantaged them when it came to obtaining capital with widows registering the highest proportion at 50%. This was followed by single women at 32% and married women at 28%. Divorcees and unmarried women did not register any significant gender bias in accessing capital.

#### **4.3.2 Business Training**

Lack of confidence often results from little or no formal business and financial management training, hence, the study sought this information from the respondents and tabulated the findings as shown in Table 4.6.

**Table 4.6: Need for Business Training**

Need for Business Training	Frequency	Percentage
Yes	81	90
No	9	10
Total	90	100

This shows that the majority of the women were of the opinion that formal financial management skills would make them better and enable them to access credit. Over 90% of the women also agreed that formal business skills will put them in a better position to access credit with most saying it would help them manage their liabilities better. Thus, there is need for the stakeholders

to identify methods and development partners to help in training the fish mongers in business and financial management.

#### **4.3.3 Capital Requirements**

The Table below shows the capital requirements of the women based on their estimation.

**Table 4.7: Amount Needed for Business Expansion (in thousands)**

Amount Needed for Business Expansion (in thousands)	Frequency	Percentage
0 – 10	6	7
11 – 20	10	11
21 – 30	16	18
31 – 40	9	10
<b>41 and above</b>	<b>49</b>	<b>54</b>
<b>Total</b>	<b>90</b>	<b>100</b>

Most of the fishmongers 54% were of the opinion that their businesses would require financial capital in excess of 41,000. This was a realistic estimation of the capital requirement as it would transform their businesses from Small Micro Enterprises (SMEs) to medium sized businesses. This was particularly observed in the Town (Municipal) and Ponda Mali markets respectively and was also an opinion held by most of the women with 6 – 10 years experience in the fish businesses. However, it is doubtful if given this cash they would be able to really expand their business due to the limited premises.

#### **4.3.4 Being a Woman as a Limiting Factor to Capital Access**

The study also sought to examine the effects that being a woman had as a limiting factor to capital access among the fish mongers. This was based on the literature review which had widely supported the claim that women were put at a disadvantage when accessing capital due to their

gender disposition. Therefore, the study collected data on this aspect of finance and tabulate the following results in Table 4.8

**Table 4.8: Being a Woman as a Limiting Factor to Capital Access**

Response	Frequency	Percentage
Very much	29	32
Much	7	8
Sometimes	18	20
Not so much nowadays	17	19
<u>Not at all</u>	<u>19</u>	<u>21</u>
Total	90	100

The above findings show that the majority of the women (60% cumulatively) still faced challenges in obtaining capital due to their gender disposition. However, a significant proportion posted an encouraging result that point to the improvement in access to capital for the women. This could be due to the stepped-up campaign for gender equity and the growing interest of the financial institutions to partner with women in small business.

#### **Test of Hypothesis 1:**

For objective 1 the following hypothesis was formulated and tested to establish whether being a Woman was still a limiting factor in credit access for business expansion in the women owned small scale fish business in Nakuru municipality

**Ho: Being a Woman is not a limiting factor in credit access for business expansion in the women owned small scale fish business in Nakuru municipality**

The hypothesis was tested to determine whether being a Woman was not a limiting factor in credit access for business expansion in the women owned small scale fish business in Nakuru municipality. This was done based on a contingency table that compared the sources of capital and the perceived gender limitation in accessing capital. The hypothesis was tested using the

Chi-square which was deemed convenient as the data was measured on nominal and ordinal scales. The results are presented in Table 4.9.

**Table 4.9: Test of Hypothesis 1**

Events	Observed N	Expected N	Residual
1	15	14.8	0.2
2	2	3.6	-1.6
3	26	24.3	1.5
4	1	1.5	-0.5
5	2	1.5	0.5
6	14	14.2	-0.2
7	6	3.4	1.5
8	22	23.5	-1.5
9	2	1.5	0.5
10	1	1.5	-0.5

This was tested at a 95% confidence level where  $\alpha = 5\% = 0.05$  and 9 degrees of freedom (9.d.f). The  $X^2_{\chi}$  value was = 16.919 at this level of significance. The findings established a critical – CHI statistic the value of  $\chi^2_{\alpha} = 2.27686$  which was much less than the  $\chi^2_{\alpha}$  value of 16.919 and hence it is significant and can be ascribed to the fluctuations of sampling. The result, thus, rejects the null hypothesis and accepts the alternative hypothesis. Therefore, we conclude that Gender is still a limiting factor in credit access for business expansion in the women owned small scale fish business in Nakuru municipality and as such much more needs to be done to address this matter in line with the national economic development visions and the Millennium Development Goals (MDGs).

#### **4.4 Rise in Aquaculture**

There is a government of Kenya initiative in place to improve the supply of fish in the domestic markets by encouraging fish farming. This is also intended in part to ease the pressure on capture fisheries both inland and at main fish sources like lakes so as to maintain sustainable fish stocks. In addition it will also improve the nutritional profile of its citizens by availing cheap protein sources. Hence, the study sought to establish the influence of this factor in the fish markets in Nakuru Municipality and the findings are as tabulated in Table 4.10.

##### **4.4.1 Fish Sources**

**Table 4.10: Fish sources**

Fish Sources	Frequency	Percentage
Lake Victoria	63	70
Lake Naivasha	4	5
Other sources	23	25
Total	90	100

Most of the fish (70%) originated from Lake Victoria which is the traditional source of fish in the area. Kaptembwo market posted the highest proportion of fish supplied from Lake Victoria at 82% of its total fish supply; this was followed by Ponda Mali market with 77% of its fish supply originating from the same lake. The Municipal market registered the lowest with only 48% of its fish originating from Lake Victoria.

Lake Naivasha as a fish source contributed dismally to the fish supply in the area despite its proximity to the fish market in Nakuru. This warranted further investigation which shall be explored at a different subsection later.

Surprisingly, fish from other interior sources like dams e.g. Masinga dam and also little from fish farms from as far away as Sagana were also finding their way into the markets. The rest were from other interior capture fisheries. On aggregate this constituted to 25% of the fish supplies in the markets. Individually the town market attracted proportionally high fish supply from these

sources that put it at par with the traditional source like Lake Victoria at 48%. This could be attributed to the less influence of oligopolists in the town market as opposed to the other markets the accessibility and the wide tastes of the consumers as it was located in the town Central Business District. Aquaculture is yet to make any substantial in roads into the urban fish markets as most of the respondents said the fish from the nearby fish farms were retailed directly to the consumers hence were not able to reach the consumers.

### **Test of hypothesis 2**

For objective 1 the following hypothesis was formulated and tested to establish the relationship between the rise in aquaculture and growth of women owned fish businesses in Nakuru municipality

**Ho: There was no significant relationship between the rise in aquaculture and growth of women owned fish businesses in Nakuru municipality**

The hypothesis was tested to determine whether there was indeed no significant relationship between the rise in aquaculture and growth of women owned fish businesses in Nakuru municipality. A contingency table cross tabulating the predictors of the Rise in Aquaculture namely its perceived impact on fish supply and the consumer response was used to test this hypothesis. The hypothesis was tested using the Chi-square which was deemed convenient as the data was measured on nominal and ordinal scales. The results are as presented in Table 4.11.

**Table 4.11: Test of Hypothesis 2 using Chi- Square**

Events	Observed N	Expected N	Residual
1	18	8.9	9.1
2	3	10.4	-7.5
3	2	3.6	-1.5
4	11	11.3	-0.3
5	17	13.2	3.8
6	1	4.5	-3.5
7	6	14.8	-8.8
8	21	17.3	3.7
9	11	5.9	5.1

This was tested at a 95% confidence level where  $\alpha = 5\% = 0.05$  and 8 degrees of freedom (8.d.f).

The value was  $\chi^2_{\alpha} = 15.507$  at this level of significance. The findings established a critical – CHI value of  $\chi^2_c = 29.4092$  which was much higher than the  $\chi^2_{\alpha}$  value of 15.507. This difference was significant and is not due to chance and thus led to the rejection of the hypothesis. It is, therefore, possible to conclude that there was indeed a significant relationship between the rise in aquaculture and growth of women owned fish businesses in Nakuru municipality. However, this could be attributed to the lack of incentive for fish consumption and aquaculture in the area which necessitated the town's populace to still source their fish from the traditional sources. Nevertheless this is bound to change when the socioeconomic benefits of the idea begin to be realized.

#### **4.4.2 Fish Supply**

The fish supply to the markets is as shown in Table 4.12.

**Table 4.12: State of Fish Supply**

<b>State of Fish Supply</b>	<b>Frequency</b>	<b>Percentage</b>
Very much regular	10	11
Much regular	42	47
Average	23	26
Less regular	5	5
Not regular	10	11
<b>Total</b>	<b>90</b>	<b>100</b>

47% of the respondents were in agreement that the fish supply to the markets was much regular while only 26% thought it was regular. Hence, it can be seen that 84% actually had no problem with fish supply.

When analyzed against the individual markets, the town (municipal) market registered the most stable supply at 92% and was followed by the Kaptembwo market at 73%. The supply was not as impressive in the Ponda Mali market which posted a 59% regular supply. This could be attributed to the oligopolistic and monopolistic tendencies rife in the market which denied the women essential power in negotiating fish supply.

#### **4.4.3 Fish Types Commonly Available in the Area**

The study also determined the types of fish available in the markets regularly and the customers' preferences. These results are as tabulated in Table 4.13.

**Table 4.13: Fish Types Commonly Available in the Area**

Availability		
Fish type	Frequency	Percentage
Nile Perch ( <i>mbuta</i> )	20	16
Tilapia ( <i>ngege</i> )	73	57
Sardines ( <i>omena</i> )	35	27
	128	100

From this it can be seen that the most common type of fish in the markets was Tilapia at 57%. This was followed by Sardines at 27% and the Nile Perch at 16%. In the individual markets, the breakdown is as follows in the Table below.

Fish Types	Markets			Total
	Kaptembwo	Ponda Mali	Town Municipal	
Nile Perch	1	14	5	20
Tilapia	14	37	22	73
Sardines	10	16	9	35
<b>Totals</b>	<b>25</b>	<b>67</b>	<b>36</b>	<b>128</b>

According to the Table above, Ponda Mali market received the highest supply of Nile Perch at 20% of the total fish supply to the market while the town's Municipal market registered 14% of its fish supply as the Nile Perch. Only four percent of the fish supply to Kaptembwo market constituted the Nile Perch.

It is possible that the low supply of Nile Perch was due to a combination of factors that could be summed up in terms of customers' preferences and this is discussed in the later in the adjacent subsection.

More than half the fish supply in all the markets was constituted of the Tilapia with the Municipal Market claiming the highest sport at 61% and the other two tying at 56%. The Sardines also constituted over one quarter of the fish supply to the markets. Individually, the Kaptembwo market posted the highest volume of the supply of Sardines at 40% and this was followed by the Town Municipal market at 25% and the Ponda Mali market at slightly less than one quarter of the total fish supply to the market. This study sought to establish the customer preferences as a possible attribute to the fish supply and the findings are as presented in the Table 4.14. Other fish types included fish meal (*ochonga*) and the trout.

**Table 4.14: Fish Type Preferred**

Fish Type Preferred	Frequency	Percentage
Nile Perch ( <i>Mbuta</i> )	8	8
Tilapia ( <i>Ngege</i> )	71	68
Sardines ( <i>Omena</i> )	26	24
<b>Totals</b>	<b>105</b>	<b>100</b>

From the Table above it can be seen that more than two thirds of the consumers 68% preferred the Tilapia. This was ostensibly due to its taste as most of the respondents said. About one quarter 24% of the respondents said their customers preferred the Sardines due to their ease preparation, economy, ready availability and its relative boneless nature that made it easy to consume. The Nile perch was preferred by only a small section of the population. However, its preference is likely to improve when it is processed as fillets and fish balls.

#### 4.4.4 Fish Processing

Fish dressing as part of processing plays a significant role in influencing the sales of fish in terms of the customer preferences. The statistics for fish processing in the fish markets in Nakuru Municipality are presented below.

**Table 4.15: Fish dressing as a part of Fish Processing**

<b>Fish dressing</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	68	74
No	22	26
<b>Totals</b>	<b>90</b>	<b>100</b>

Three quarters (74%) of the fish mongers dressed their fish for their customers while 23% did not. This shows that most of the consumers preferred to have their fish dressed for easy preparation. Those who did not dress the fish were probably selling their fish to consumers who were traditional fish eaters or to other small fish vendors like roadside fish mongers who could then dress and deep fry or cook the fish for their customers. This was particularly observed in Kaptembwo market where more than half, that is, 59% of the fish mongers did not dress their fish. Nearly one quarter (24%) of the fish in the Town's Municipality market was not dressed but over 90% of the fish in Ponda Mali market was dressed.

The study sought to find out if this could be as a result of both customer and product knowledge and, hence, compared this to the levels of education and tabulated in Table 4.16.

**Table 4.16: Effects on Level of Education in Fish Processing**

<b>Level of Education</b>	<b>Fish Dressing</b>			
	<b>Yes</b>	<b>No</b>	<b>Frequency</b>	<b>Percentage</b>
Primary	26	15	63	37
Secondary	30	7	81	19
College	10	0	100	0
None	2	0	100	0
<b>Total</b>	<b>68</b>	<b>22</b>		

Table 4.16 shows that the fish mongers with higher levels of education tended to dress their fish as a part of fish processing to attract customers. All the fish mongers with college level education dressed their fish while four out of five (81%) of those with high school level

education thought it wise to dress their fish for their customers. Product appreciation was lowest in the primary –level of education category where slightly less than two thirds of the fish mongers dressed their fish. This necessitates business training among the fish mongers in order to enhance product-consumer knowledge and consequently improve on value addition. This will likely increase the sales volume and the profit margin leading to growth of the business. This shows that formal education was significant to the growth of the fish business.

#### **4.4.5 Conversance with Aquaculture**

Aquaculture in the form of fish farming has of late captured the interest of the stakeholders in the fish industry with the government especially granting it high economic status to warrant it being funded by the Economic Stimulus Package. It has the potential to create more jobs and alleviate poverty while improving on the nutritional profile of the citizens of this country. The present study sought to find out whether part of the stakeholders namely the fish mongers had heard of the initiative and even supported it as shown in Table 4.17.

**Table 4.17: Fish farming Initiative Conversance**

<b>Fish farming Initiative Conversance</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	75	83
No	15	17
<b>Total</b>	<b>90</b>	<b>100</b>

From the above Table it can be seen that the greater majority (83%) of the fish mongers were conversant with the idea of fish farming while 175 were not. however, in terms of support for the initiative, only 58% of the fish mongers supported it which is quite impressive. 16% of the respondents did not support the initiative. About one quarter of the respondents were quite unsure about its prospects.

#### 4.4.6 Impact of Aquaculture on Fish Supply

The study sought to establish whether and how aquaculture impacted the fish supply in the area and presented the following findings based on the respondents views on fish supply and customer preferences in Table 4.18.

**Table 4.18: Impact of Aquaculture on Fish Supply**

Improved Fish Supply	Frequency	Percentage
Agree	35	39
Not Sure	41	46
Disagree	14	15
<b>Total</b>	<b>90</b>	<b>100</b>

From the above findings, only 39% of the respondents thought that aquaculture had an impact on the fish supply in the area. 61% of the fish mongers were either quite unsure or openly doubted whether fish farming would eventually have an impact in the fish supply in the area. Hence, despite the minimal fish supply into the markets, the fish mongers were quite optimistic that it would eventually gain its foothold in the area's markets. It was also imperative to investigate the aspect of consumer taste as a possible reason for the fish supply from the fish farms, that is, in terms of market readiness as in Table 4.19.

**Table 4.19: Customers Preference on Impact of Aquaculture on Fish Supply.**

Customers preference	Frequency	Percentage
Yes	23	26
No	38	42
Yes but with reservations	29	32
<b>Totals</b>	<b>90</b>	<b>100</b>

The above Table shows that one quarter of the consumers would actually buy fish sourced from the fish farms while 42% would not due to the taste resulting from unbalanced feeding and environmental control methods that don't compare with the fishes natural habitat. 32% or one third of the consumers did consume the fish but with reservations. This shows that fish sourced from the fish farms would eventually make an impact in the fish supply in the area if more effort is put in addressing the issue of quality in terms of taste, and here the assumption of the non-existence of traditional fish eating communities was contradicted

#### **4.5 Business Organization and Structure**

The study sought to establish the organization and structure of the businesses and their influence of on their performance of the women owned fish business. The performance parameters were identified from the literature review as ownership of the businesses, the operators involved in the daily running of the business and the possibility of engaging in partnerships. The findings are presented in Table 4.20.

##### **4.5.1 Business ownership**

The summary of the findings on business ownership is as given in Table 4.20.

**Table 4.20: Business Ownership**

<b>Business Ownership</b>	<b>Frequency</b>	<b>Percentage</b>
Myself	60	67
I and My Husband	25	28
Family	5	5
<b>Total</b>	<b>90</b>	<b>100</b>

Most of the fish businesses were owned by sole proprietors (67%). Joint business ownership between the husband and wife were also preferred at 28%. Family owned businesses were not preferred due to their inconsistencies and emotional involvement. This showed that most of the

women in the business wanted financial independence. The study also sought to determine how the businesses were operated on a daily basis and this is as presented in Table 4.21.

#### 4.5.2 Business operators

The findings on this aspect are presented in Table 4.21.

**Table 4.21 Preferred Mode of Operations on Business ownership**

Preferred Mode of Operations	Frequency	Percentage
Myself	6	7
I and my husband	2	2
Family members	14	16
<b>Employees</b>	<b>67</b>	<b>75</b>
Total	89	100
Spoilt	1	

75% of the businesses had employees and these were the majority 69% had less than two employees. This was particularly observed in sole proprietorship's while the majority of the businesses owned by both husband and wife had the two of them operating the business although the male spouse was not active in the market but was instrumental in negotiating for fish supply and security. Those businesses had the advantage of enjoying better mobility of the owners and improved business networks. The family businesses did not have any employees and were operated by more than three persons.

#### 4.5.3 Partnerships

The women were also asked about their opinion concerning the possibility of entering into formal business partnerships with others. The study, therefore, sought to highlight the beneficial aspect of partnerships form the fish mongers and other openness to future partnerships and co-operatives and the findings were given in Table 4.22.

**Table 4.22 Openness to Partnership as a form of Business Ownership**

<b>Openness to Partnership</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	60	67
No	30	33
Total	90	100

33% of the fish mongers were not open to the idea of business partnerships with other women in the trade. Most cited mistrust and lack of formal engagement in the businesses. Some referred to past experiences while others preferred partnership with only close family members like their spouses. However, most agreed that with better structures and legal enforcements, partnerships were the way to go. This could also be attributed to their level of understanding of cooperatives and partnerships resulting from their level of education.

91% of the respondents in Kaptembwo market were open to the idea of partnership while 75% of the fish mongers at the Town Municipal market were open to the idea. In Ponda Mali the ratio was 50 – 50. When asked about the prospects of forming a fish co-operative, 77% of the respondents were optimistic about it while 13% thought it was not likely to succeed. 10% of the respondents were not sure of its success. In the open ended interview, most of the women preferred cooperatives to partnerships.

#### **Test of Hypothesis 3:**

**Ho: There was no close correlation between business organization strategies and operational structures and the expansion of women owned small scale fish business in Nakuru municipality**

The hypothesis was tested to determine whether there was no close correlation between business organization strategies and operational structures and the expansion of women owned small scale fish business in Nakuru municipality. The predictors used from the questionnaires were form of ownership and the number of people who operate the business on a daily basis. They were also asked about their views about collaborating with each other as partners or cooperatives. The results are given in Table 4.23.

**Table 4.23: Test of Hypothesis 3**

<b>Study correlation</b>		<b>Business Ownership and operations</b>	<b>Expansion of women owned small scale fish business in Nakuru Municipality</b>
	Pearson Correlation	1	0.95*
Business ownership and Operations	Sig. (2-tailed)		0.025
	N	90	90
Expansion of women owned small scale fish business in Nakuru Municipality	Pearson Correlation	0.95*	1
	Sig. (2-tailed)	0.025	
	N	90	90

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

A high correlation coefficient of  $r = 0.9551$  and an  $r^2$  value of 0.9122 were meaning the results could be inferred up to a 91% level of accuracy. Therefore, we conclude that there is a close correlation between business organization strategies and operational structures and the expansion of women owned small scale fish business in Nakuru municipality and therefore the null hypothesis is rejected. Thus, more effort needs to be expended in training and educating the fish mongers the more improvement is realized overall in the fish business, hence, more effort should be put in business training for the women in the fish industry in Nakuru Municipality.

#### **4.6 Municipal Regulations**

Many businesses studied in the past in developing countries reportedly face hurdles when dealing with local authorities who set up the regulating environment.

The present study sought to determine the influence of this factor on the women owned fish businesses in Nakuru Municipality. This was determined in questions highlighting the charges levied by the council, the impact of business registration and the access to health permits, the stipulation that they only operate from certain areas, their relations with the agents of the

Municipal authorities the preservation methods for their products, and the security and suitability of their premises.

#### 4.6.1 Business licensing and health permits

The summary of the findings of access to health permits is shown in Table 4.24.

**Table 4.24: Access to Business licenses and health permits**

Access to Business licenses and health permits	Frequency	Percentage
Yes	65	72
No	25	28
Total	90	100

The findings above show that most of the fish mongers (72%) had little trouble obtaining business and health permits. However, this is not to say that the businesses are registered but that most operate on a temporary permit issued monthly at a small fee.

The Municipal authorities also required that the fish mongers operate from designated areas only and this also applied to areas within the designated markets. Formal registration of the businesses still remained a challenge due to the modalities stipulated and the fees charged. This didn't favor small businesses and hence most opted for the piecemeal arrangement in which they were able to operate on temporary (monthly) permits and others on a daily basis. Obviously, licensing business would be an advantage to the businesses and partnerships would provide collective strength to enable the businesses obtain necessary licenses and hence reduce harassment from the council *askaris*.

#### 4.6.2 Working Hours and Security

Most of the fish mongers (62%) reportedly got to their place of work daily from as early as 6 a.m to enable them connect with the fish suppliers who usually stop over the town's Ponda Mali and Municipal markets while enroute to other destinations like Nairobi and Mombasa.

Those who reported later to their work stations 38% either had pre-arrangements for fish supply so as to obtain the fish at their convenience or were to obtain the fish from fellow fish mongers. A part from the early risers, 26% of the fish mongers began business from 8 a.m. onwards and a further 12% reported to work in the late afternoon. For most the closing hours was 8 p.m. but this was only possible for the non-municipal market i.e. the open markets such as Ponda Mali and Kaptembwo while those operating from the Municipal market were confined to the official market opening and closing hours. Most of the women were not necessarily concerned about their level of security near their homes and the markets and attributed it to the security situation in their home areas and the market surroundings as presented in Table 4.25.

**Table 4.25: Insecurity Ratings**

Insecurity Ratings	Frequency	Percentage
Much	32	36
Neutral	16	18
Little	42	46
Total	90	100

#### **4.6.3 Fish Preservation Methods**

Fish preservation is an essential practice in the fish business. Fish is essentially preserved due to its high level of product degradation when exposed to heat and other environmental conditions. Usually, it degrades to an inconsumable state in less than thirty six hours if not properly preserved, hence, leading to losses.

The most common method of fish preservation observed in the study area was deep frying. The Table 4.26 compares the different methods of fish preservation practiced in Nakuru Municipality. There are various methods of fish preservation which depend on several factors such as location, facilities skill, and quantity expenses etc.

**Table 4.26: Method of Fish Preservation**

<b>Method of fish preservation</b>	<b>Frequency</b>	<b>Percentage</b>
Deep frying	29	32
Sun drying	19	21
Refrigeration	9	10
Smoking	9	10
Dry ice packing	8	9
Salting	3	3
Combination of methods	13	15
	<b>90</b>	<b>100</b>

The findings suggest that the majority (32%) of the fish mongers in the area preferred to deep fry their fish as a method of preservation. This was most probably borne out of necessity than convenience which could be afforded by the cold storage facilities. Cold storage accounted for 19% of the fish preservation and was split between refrigeration and dry ice packing 10% and 9% respectively. Sun drying and smoking also registered a strong presence in the markets although the latter was not permitted within the precincts of the Municipal market. Overall sun drying scored 21 percentage points in all the markets and especially at Ponda Mali market where it accounted for up to 31% of the fish preserved which was slightly higher than the 23% posted by deep frying. On the other hand smoking as a method of preservation contributed 10% overall to the preferred methods of preservation. Table 4.27 gives a breakdown of the individual markets preferred mode of fish preservation in terms of deep frying and other non deep frying methods.

**Table 4.27: Individual Markets Preferred Mode of Fish Preservation**

Market	Fish Preservation Methods							
	Deep Frying		Non deep Frying		Totals			
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage		
Municipal	4	16	21	84	25	100		
Kaptembwo	16	76	5	24	21	100		
Ponda Mali	9	20	35	80	44	100		
<b>Total</b>	<b>29</b>		<b>61</b>					

The percentages given in Table 4.27 are based on individual market proportion, hence, deep frying can be seen to have accounted for only 16% of the preferred fish preservation method in the Municipal market. However, it is not true to say that the fish mongers in the market actually preferred the method but rather attribute the method to the market restrictions put in place by the Municipal regulations that prohibit any form of cooking in the market. This serves to explain that the 16% of the fish recorded as deep fried was actually deep fried at home or elsewhere and then brought back into the market. We note here that deep frying itself is an expensive preservation method and that demands skill, hence, it is not itself a convenient fish preservation method but it is undertaken as a measure of necessity. Small fish like Sardines (*omene*) are not preserved by this method but the method is instead applied to fish sizes ranging from juveniles and above.

Again borne out of necessity was the combinational method of fish preservation all of which included dry ice packing. In this method, the fish was packed in dry ice and sold until the ice melted then other methods were used to preserve the remaining stock. A popular combination was ice packing and deep frying which accounted for 8% of the preferred method of fish preservation overall. Salting was also used as a method of preservation although limitedly and in small quantities.

#### Test of Hypothesis 4

**Ho: There was no significant relationship between municipal council regulations and the growth of women owned small scale fish business in Nakuru municipality**

The hypothesis was tested to determine whether there was no significant relationship between municipal council regulations and the growth of women owned small scale fish business in Nakuru municipality. The hypothesis was tested using the Chi-square which was deemed convenient as the data was measured on nominal and ordinal scales. Table 4.28 presents the results.

**Table 4.28: Test of Hypothesis 4**

Predictors	Observation N	Expectation N	Residual
Business growth	30	26.6	3.4
	17	20.4	-3.4
	21	24.4	-3.4
	22	18.6	3.4

The above was tested at a 99% confidence level where  $\alpha = 1\% = 0.01$  and 1 degrees of freedom (1 d.f). The value was  $\chi^2_u = 6.635$  at this level of significance. The findings established a critical - CHI value of  $\chi^2_c = 2.102$  which was less than the  $\chi^2_u$  value of 6.635 and was significant and thus led to the rejection of the null hypothesis.

It is, therefore, possible to conclude that municipal council regulations are significant to the growth of women owned small scale fish business in Nakuru municipality in the sense that the regulations necessarily affect the performance and growth of the fish businesses owned and operated by the fish mongers in the municipality. Hence, the Municipal authority need to factor in the existence and well being of the fish business in their strategic plans to help the industry grow in the area.

## **CHAPTER FIVE:**

### **SUMMARY, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter summarizes and concludes on the research findings as carried out. It presents the summary of the findings and the conclusions drawn from them, and lastly the recommendations. The implications of the research are discussed and suggestions made on areas of further study. Some useful recommendations for all the stakeholders are proposed by this study at the end of the chapter to enlighten and enable them to craft viable solutions with regard to the problem statement based on the research findings. In general the purpose of this study was to determine the Institutional and Socioeconomic Factors Influencing the Growth of Women Owned Small Scale Fish in Nakuru Municipality, Kenya. This purpose was to be actualized by meeting the following specific objectives which were; to assess the influence of capital requirements needed for the expansion on growth of women owned small scale fish businesses; to establish the influence of the rise in aquaculture on the growth of women owned small scale fish businesses; to analyze the influence of business organization strategies and operational structures on growth of women owned small scale fish businesses; to examine the influence of Municipal council regulations on growth of women owned small scale fish businesses.

The hypotheses were also formulated as per the objectives mentioned above, that is; being female was not alimiting factor in credit access for business expansion in the women owned small scale fish business in Nakuru municipality; there is no significant relationship between the rise in aquaculture and growth of women owned fish businesses in Nakuru municipality; there is no close correlation between business organization strategies and operational structures and the expansion of women owned small scale fish business in Nakuru municipality; there is no significant relationship between municipal council regulations and the growth of women owned small scale fish business in Nakuru municipality.

All these hypotheses were tested for significance using the CHI-square, linear regression and correlation methods as shown in chapter four. At the end of the chapter, some useful recommendations and suggestions for further research are proposed for the system under study and the stakeholders in order to resolve the research problem based on the findings.

## 5.2 Summary of the Findings

Table 5.1 presents the summary of the findings in terms of the objectives the types of analysis and the major findings of the research.

**Table 5. 1: Summary of the findings**

Objectives	Hypotheses	Type of Analysis	Major findings of the study
To assess the influence of capital requirements needed for the expansion on growth of women owned fish businesses.	Being female is a limiting factor in credit access for business expansion in the women owned small scale fish business in Nakuru municipality	Computation of: • Frequencies • Percentages • Chi-square tests	<ul style="list-style-type: none"> <li>Capital access was still a major hindrance for the small fish businesses.</li> <li>Financial capital was sourced from personal savings and informal groups 'Chamas'</li> <li>Most women aspired to operate at a higher entrepreneurial level and hence wanted formal business training and more capital.</li> <li>Capital access was a significant factor in the growth of the women owned fish business.</li> </ul>
To establish the influence of the rise in aquaculture on the growth of women owned fish businesses.	There is a significant relationship between the rise in aquaculture and growth of women owned fish businesses in Nakuru municipality	Computation of: • Frequencies • Percentages • Chi-square tests	<ul style="list-style-type: none"> <li>Lake Victoria was still the traditional source of fish in the area.</li> <li>Fish from other inland capture fisheries from as far away as Masinga dam were finding their way in the markets.</li> <li>Aquaculture was also present in the area although most of the respondents were doubtful if it would have any meaningful impact in the fish markets in the area.</li> <li>It was noted that most of these fish were sold directly to the consumers by the farmers at the point of capture; hence, most did not make it to the markets.</li> <li>Rise in aquaculture was a significant factor in the growth of the women owned fish business</li> </ul>
To analyze the influence of business organization strategies and operational structures on growth of women	There is a close correlation between business organization strategies and operational structures and the expansion of women owned small scale fish business in	Computation of: • Frequencies • Percentages • Chi-square tests	<ul style="list-style-type: none"> <li>The fish businesses were mostly self-owned, that is, sole proprietorships.</li> <li>The majority of the proprietors hired less than two employees due to their sizes.</li> <li>Partnership would be beneficial and rewarding arrangement if it had formal structures and enforcement mechanisms</li> <li>The idea of a cooperative was a surprisingly better</li> </ul>

ned fish inesses.	Nakuru municipality.		arrangement than partnerships. • Business organization and strategies were significant factors in the growth of the women owned fish business
examine the fluence of unicipal uncil ulations on rowth of women ned fish inesses.	There is a significant relationship between municipal council regulations and the growth of women owned small scale fish business in Nakuru municipality	Computation of: • Frequencies • Percentages • Chi-square tests	<ul style="list-style-type: none"> <li>Obtaining business and health permits was not a major challenge.</li> <li>There was need also for the fishmongers to cultivate better relationships with the municipal authorities.</li> <li>The levies charged by the Municipal council needed to be revised.</li> <li>Municipal council regulations were significant factors in the growth of the women owned fish business.</li> </ul>

### 5.3 Discussion on the Findings

This section contains a qualitative discussion of the findings presented in the preceding sections. Data was collected from the proprietors of women owned small scale fish businesses operating in the three main markets within Nakuru Municipality by use of questionnaires and interview schedules. The findings were analyzed and the hypotheses tested and the results presented in chapter four.

Majority of the fish mongers in the study area were aged between 30 – 50 years of age. Younger women aged between 18 and 30 years were not well represented in the business due to school and matrimonial obligations like raising children. This meant that the fish business in its current state was not attractive and, hence, the younger generation tended to shy away from it. More effort needs to be put by the stakeholders to make the business more attractive to the younger generation majority of who are married. This will ensure increased gender parity in employment and equity in earnings and reduce poverty among women in line with the Millennium Development Goals (MDGs). Both the married and single women had children with the majority having between three and four children.

In terms of formal education, the vast majorities of the women were literate and most had primary level of education high school and college level education was also in good proportions. However this did not necessarily translate to any form of the much needed value addition. This aspect of value addition was also impeded by the lack of a preponderant fish eating community which lowered the market competition for the fish. The fish mongers were not particularly resident near their business premises hence they had issues with security. Therefore, it was important that the overall insecurity in the municipality be addressed to improve the business environment to make it more enabling so as to facilitate growth. Finally, most of the women spouses or significant others' were employed in the informal sector mainly as watchmen, *jua kali* artisans and mechanics which means that in many cases the women were forced to be the main breadwinners for their families due to the low income and vagrant nature of their spouses occupations in the area.

The majority of the fish mongers claimed to have been in the business in the present market for over five years with many saying it was profitable however this did not translate necessarily to any substantial reinvestment and growth. Most of the businesses had not experienced any meaningful growth in the last 5 years but the families of the fish mongers claim to have had their standard of life improve as a result of the business. This is likely to be the result of or the combination of improving human development index in the area and the country at large where access to essential goods and services has increased and also could be attributed to the fact that most of the proceeds from the business which is about 60% from the findings is used to meet or supplement domestic obligations. Hence, the business was considered a worthwhile engagement by the fish mongers.

In terms of access to capital, the main source of capital was personal savings and loans. Many fish mongers sought loans for either maintaining their businesses or for expansion. However, the loans were appropriated informally from '*chamas*' which granted loans based on members affiliation and savings within the group. These were not collateral free loans as the members seeking loans had to secure them with their household goods. This was a challenge as not even

the household goods were accessible for business purposes as they were considered property of the family.

There was a general apprehension of institutional loans like those from banks and formal micro finance institutions. This was founded on misinformation and general mistrust of each other and the institutions. Many of those interviewed believed that their colleagues were capable of defaulting payments and, hence, giving them unwanted liabilities. This fears needed to be allayed as they were effectively forestalling business development in the area. This could also be partially addressed by better group dynamics to increase the level of cohesion and trust among the women. There was also need for mediation and arbitration mechanisms to enforce compliance with the set rules governing the groups and prevent potential problems from cropping up unnecessarily. Being female was not necessarily a disadvantage in obtaining credit for business as such nowadays as most of the women claimed although they favored having better education and formal business skills as attributes that could give them more leverage in accessing capital. Financial management training was thought to be important in helping to mitigate liabilities by many and to build capacity. From the expressed capital requirements, the women characteristically showed they were dissatisfied with operating at a much lower level of the SMEs and realistically stated that they needed to access more financial capital in the order of Kshs. 40,000 and above which would effectively put their businesses in the league of medium sized businesses.

The tests for significance show that being female was still significant in obtaining capital and accessing credit which is in line with studies done on women in enterprise like Voices of women Entrepreneurs –Kenya (2007). However, unlike the studies done by Schuurhuizen *et al.*, (2006), there is a significant improvement in accessing capital notably by informal methods like *Chamas* and merry-go-round banking system. Hence, we can conclude based on the findings of this particular study that women in the fish industry in Nakuru Municipality were not necessarily disadvantaged by gender perception *per se* when it came to obtaining credit and capital but they suffered inherent lack of information and financial management skills.

The findings from the study show that there was a significant relationship between rise in aquaculture and the growth of women owned fish businesses although this was not a product of chance. This supports Kambewa et al. (2006) observation that fish farming could stem the tide of job losses in the fish industry precipitated by the unequal export versus domestic market competition that was impacting on the fish availability locally.

Aquaculture has also registered its presence in the area although most of the respondents were doubtful if it would have any meaningful impact in the fish markets in the area contrary to the expectations in the policy documents like ASDS (2010). Although the government has in the last decade put forth an initiative to make aquaculture a sustainable enterprise, this is unlikely to pay off if the markets are not adequately prepared especially since the fish faces competition from capture fisheries which have better taste. It was noted that most of these fish were sold directly to the consumers by the farmers at the point of capture; hence, most did not make it to the markets. Although the presence of aquaculture in the area was not still low, the Ministry of Fisheries says that it is already at work implementing a grand project on fish farming country wide which will involve constructing 305 fish ponds in 160 constituencies (Nakuru Included). This is intended to boost fish production from the already existing fish farms and relieve pressure on the capture fisheries.

Lake Victoria was still the traditional source of fish in the area within fish from Lake Naivasha nearby failing to make substantial in roads into the towns fish markets due to the consumers preferences. This is despite the growing speculation that fish stocks are set to diminish and affect supplies (Schuurhuizen et al., 2006). Fish from other inland capture fisheries like Masinga dam were reportedly found in the markets although their supplies were low. The most preferred fish in the market were Tilapia (*ngege*) and Sardines (*omena*). The Nile perch was also preferred by some customers mainly in filleted form. Other species of fish available in the area although in rare quantities were the *Kamongo*, *Claurius*, *Propterus*, *Adel* and the Mud Fish . The main fish suppliers were individual traders mainly from western Kenya. The fish supply was inconsistent in markets where they largely depended on one or two suppliers like the *Ponda Mali* market. Apart from the open and municipal markets, the fish also had outlets like the town's leading

supermarkets, butcheries like *Gilanis* Butchery and also animal feed millers who mainly specialized in the sardines. Most consumers liked their fish dressed but not more processed since they were not traditional fish eaters and thus lacked the culinary skills needed for making a variety of fish dishes. As such, the Ministry of Fisheries in the area was embarking on a campaign dubbed 3K i.e. “*Kuza, Kula na Kuza samaki*” which is translated to mean “rear,eat and sell fish” in order to educate the communities in the area how to prepare and eat fish in order to encourage fish consumption. This was proving successful as fish consumption was increasing among the communities in the area (Ministry of Fisheries Nakuru, 2012). Unlike the fish catchment areas (LVFO, 2004) nutritional security implications in the area were not severe as fish was experiencing competition from other proteins in area like chicken which in some markets was retailed in parts. Hygiene was also critical to the sales of the fish as most of the conditions in the informal markets were deplorable. This made the fishmongers timid and hence lowered their sales appeal and potential.

Concerning access to cold storage facility, the results show that it was a very important factor in the fish business as it influenced better sales of the fish and reduced losses thus would enable the fish mongers to make significant purchases and expand their network. Hence, there was need to avail cold storage facilities if even possible those of the communal commercial types so as to enable the fish industry to thrive in the area. This the ministry said it was working on and aimed at constructing four cold storage facilities in the area in the first phase then upscale them to the next levels in the future to ensure constant fish supply in the area. This could be instrumental for also reliving pressure on the future fish farmers by enabling them to produce with the risk of post harvest losses that could be occasioned by market saturation that often lead to price fluctuations minimized, hence, making the enterprise sustainable. The government was also putting measures and policies in place to regulate sustainable fisheries by putting up management measures like closing seasons and controls of fishing methods notably the regulation of the types of fishing gears to be used in order to prevent the loss of biodiversity. The ministry was also restocking the number of fingerlings to allow stock regeneration.

The findings from the study show that there was indeed a close correlation between Business Organization and Structures to the Growth of Women-owned Fish Business in the Nakuru Municipality. The businesses were mostly self owned, that is, sole proprietorships with the majority of the proprietors hiring employees who were not normally more than two, a fact that is consistent with SMEs practices. Many women agreed that a partnership arrangement would be beneficial and rewarding but this was only subject to formal structures and enforcement mechanisms. The idea of forming a cooperative surprisingly attracted a lot of support from the women with the majority optimistic that the arrangement would succeed better than partnerships.

However, business training was cited by many women and ministry officials as a necessity so that they could improve their business prospects. This was also supported by the women themselves when subjected to the interviews. These they both agree would enable them acquire necessary skills in financial record management that includes bookkeeping to keep their business performance tractable. This training was to be provided by the stakeholders in collaboration with each other like ministry and financial institutions such as Kenya Women Trust Fund, Equity bank, K-rep and others with custom made products for Small and Micro Enterprises. This would go a long way in building their capacity and improve on their growth prospects. Enhanced capacity will also enable the women to reposition themselves as actor in the fish industry thus ensuring their survival as Schuurhuizen *et al.*,(2006) say. This would also fast-track the attainment of the MDGs in the area. Therefore, more needs to be done to improve the relationship and interaction between the stake holders of this industry especially at the upper end for sustainable development.

The findings from the study using tests for significance show that Municipal Council Regulations were significant to the Growth of Women-owned Fish Business in Nakuru Municipality. The subject of business licensing and appropriation of health permits was also visited and more than two thirds of the respondents didn't think it was a challenge to obtain the two documents authorizing them to operate their businesses. However, the licensing was in terms of temporary business permits issued and renewed on monthly basis. The main issue the respondents had with the Municipal council was business space as the spaces provided for within

the markets were limiting (MCN By-Laws, 2004) and lacked sanitation and cold storage facilities. This downgraded the prospects of the business by encouraging stereotype mentality that cast fish business to the rank of unhygienic businesses. There was need for more consultative engagement by the entire stakeholders of the fish industry in the area with the Local government specifically the Municipal council of Nakuru to come up with ways of improving the prospects of the industry in the area. This would mean negotiation of licensing terms allocation of improved market segments that are conducive for the growth of the fish business in the area. Familiarization of the fish mongers with the By-laws and better cooperation free of continual harassment by the council *askaris*. The government through its stakeholders is encouraging investors and donors on the priorities to be addressed in this area like water and power supply to be set up in areas where the cold storage facilities are to be constructed.

#### **5.4 Conclusions**

Fish still remains an important source of income and cheap proteins in the area. However, there is need for the stakeholders to engage more meaningfully in the industry to make it more attractive so it could attract more investments despite its displacement in the interior of the country. There is need for proper record keeping so as to have readily available quantitative information at the various line government departments like at the fisheries department at the local level in order to enable future work to be done more comprehensively.

According to the first objective, more needs to be done in terms of availing training for the women to improve on their businesses and capital access prospects. There is also need for the women to register their *chamas* in order to get better access to capital.

In the second objective, there is need to strengthen the aquaculture initiative in the area to create more jobs and increase access to cheap proteins. These will also augment the supply of fish in the markets. Objective three needs to be addressed in terms of encouraging and building lasting business relationships and structures.

Finally, there is need to encourage the fish mongers to seek more permanent registration for their businesses in order to increase their negotiation power and faster better relationships with the municipal authorities.

### **5.5 Recommendations**

The study recommends the following to be done to improve the fish business in the area and make it more competitive:

1. The stakeholders especially the government through the line ministries should increase their involvement from the largely nominal roles in the interior markets to more active roles in strengthen the fish businesses in the area through policy strengthening.
2. There is need to encourage the youth to engage in the business in order to get more gainful employment and spur value addition to the local fish industry as it could be a source of gainful employment if well exploited.
3. Women need to be enabled to obtain more access to property in order to secure business capital. Therefore, more financial institutions should be encouraged to come up with more friendly products to attract women entrepreneurs.
4. The existing legal regimes like the regulations of the municipal council of Nakuru need to be expanded in order to accommodate the growth of the fish businesses in the area.

### **5.6 Suggestions for further research**

The following areas were identified as good for further research in the same area and topic but could not be covered in this study due to the scope and various limitations.

1. More research should be done on the cultural aspects affecting the attitude of the consumers in the area and also prospective fish mongers of different cultures.
2. Research should also be done on the stakeholders' involvement in the fish industry in the area.
3. Research should be carried out on the same topic but at a different setting so that the findings can be compared especially on record keeping.

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## **APPENDICES**

### **APPENDIX I: LETTER OF TRANSMITTAL**

Alice E. Osoro,  
Box 17632,  
Nakuru.

25th April 2012

The Town Clerk,  
Nakuru Town Municipality,  
P.O. Box  
Nakuru.

Dear Sir/Madam,

#### **RE: REQUEST TO CARRY OUT RESEARCH WITHIN THE PUBLIC MARKETS**

I do request to be allowed to carry out the above research within the public markets in Nakuru town.

I am a post graduate student in Nairobi University -Student No. L50/65995/2010, and currently taking a course in Project Planning and Management. I am doing a research on The Influence of Institutional and Socio-Economic Factors on Growth of Women Owned Small-Scale Fish Business in Nakuru Municipality, Kenya. This research is to be conducted in the public markets in the municipality and is for purely academic purposes only; however, evaluation results may be made public after the completion of the study for future researchers and other relevant stakeholders to guide them in their work.

Every care was taken in the data collection procedure to ensure that it is within ethical limits.

Thank you in advance for your cooperation.

Yours faithfully

Alice E. Osoro

## APPENDIX 2 : ACKNOWLEDGEMENT LETTER FROM THE DISTRICT EDUCATION OFFICER MINISTRY OF EDUCATION

Telegrams: "LEARNING"  
Telephone: 2216529/2216563  
When replying please quote



DISTRICT EDUCATION OFFICE  
NAKURU DISTRICT  
P.O. BOX 1028  
**NAKURU**

NKU/ED/122/VOLII (210)

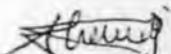
22<sup>ND</sup>, JUNE, 2012

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION-Alice OSORO  
UNIVERSITY OF NAIROBI

The above named student is authorized to carry out research on: "*The influence of institutional and socio-economic factors on growth of women owned small-scale fish business in Nakuru Municipality, Kenya,*"

Please accord her the necessary assistance to facilitate a successful research.

  
**SHEM OMBONYO**  
FOR: DISTRICT EDUCATION OFFICER  
**NAKURU**

ALL COMMUNICATIONS TO BE ADDRESSED TO THE MUNICIPAL TOWN CLERK

# THE MUNICIPAL COUNCIL OF NAKURU

Telephone (051) 2216380  
Fax (051) 2210037



MUNICIPAL OFFICES,  
P.O.Box 124,  
NAKURU  
KENYA

YOUR REF:

OUR REF MCN/S/10/A/1/2012/LE/mn

8<sup>th</sup> June, 2012

Alice Emily Osoro  
L50/65995/2010  
P.O Box 1120,  
**NAKURU**

Dear Madam,

**RE: RESEARCH PROJECT**

Reference is made to application letter UON/CEES/NKUEMC/1/12 dated 2<sup>nd</sup> June, 2012.

Permission is granted to conduct research (data) on "the influence of Institution Social – Economic factors on growth of women owned small scale fish business.

Yours faithfully,

**Lavusa Evans**  
**FOR: TOWN CLERK**

C.c Incharge Markets- Provide Necessary assistance ✓  
Paid vide HC1206-00165

APPENDIX 4:LETTER OF AUTHORIZATION FROM THE DISTRICT  
COMMISSIONER      **OFFICE OF THE PRESIDENT**  
                        **PROVINCIAL ADMINISTRATION**

Telegram: "DISTRICTER" Nakuru  
Telephone: Nakuru 051-2212515  
When replying please quote



THE DISTRICT COMMISSIONER  
NAKURU DISTRICT  
P.O. BOX 81  
NAKURU.

Ref No. ED.12/ 10 VOL VI/ 115

21<sup>st</sup> June 2012

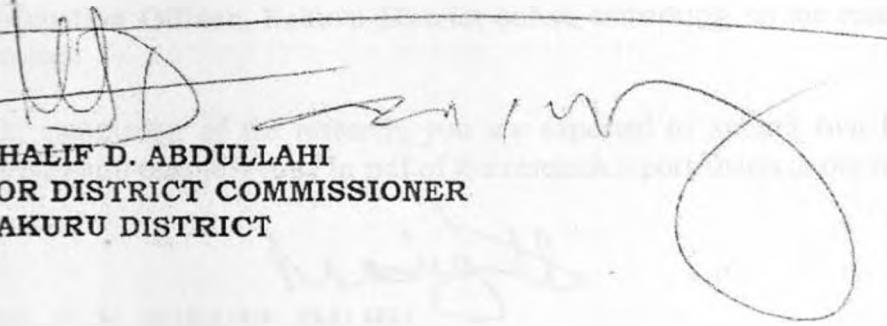
TO WHOM IT MAY CONCERN

**RESEARCH AUTHORIZATION**  
**ALICE OSORO – NCST/RCD/14/012/701**

This is to confirm that the above who is a student at University of Nairobi has been authorized by this office to carry out research on "**The influence of institutional and social-economic factors on growth of women owned small scale fish business**" in Nakuru Municipality, Kenya for a period ending 31<sup>st</sup> July 2012

Please accord her all the necessary support to facilitate the success of her research.

Kindly accord her the necessary assistance.

  
**KHALIF D. ABDULLAHI**  
**FOR DISTRICT COMMISSIONER**  
**NAKURU DISTRICT**

REPUBLIC OF KENYA

**APPENDIX 5: AUTHORIZATION LETTER FROM THE NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY**



**NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY**

Telephone: 254-020-2213471, 2241349

254-020-310571, 2213123, 2219420

Fax: 254-020-318245, 318249

When replying please quote

secretary@ncst.go.ke

P.O. Box 30623-00100

NAIROBI-KENYA

Website: [www.ncst.go.ke](http://www.ncst.go.ke)

**NCST/RCD/14/012/701**

**12<sup>th</sup> June 2012**

Date:

Alice Osoro  
University of Nairobi  
P.O.BOX 30197-00100  
Nairobi.

**RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on "*The influence of institutional and socio-economic factors on growth of women owned small-scale fish business in Nakuru Municipality, Kenya,*" I am pleased to inform you that you have been authorized to undertake research in Nakuru District for a period ending 31<sup>st</sup> July, 2012.

You are advised to report to the District Commissioner and the District Education Officer, Nakuru District before embarking on the research project.

On completion of the research, you are expected to submit two hard copies and one soft copy in pdf of the research report/thesis to our office.

**DR. M. K. RUGUTT, PhD HSC.**  
**DEPUTY COUNCIL SECRETARY**

Copy to:

The District Commissioner  
The District Education Officer  
Nakuru District.

**APPENDIX 6:INTRODUCTORY LETTER FROM THE UNIVERSITY**



**UNIVERSITY OF NAIROBI**  
**COLLEGE OF EDUCATION AND EXTERNAL STUDIES**  
**SCHOOL OF CONTINUING AND DISTANCE EDUCATION**  
**DEPARTMENT OF EXTRA - MURAL STUDIES**

Tel 051 - 2210863

P. O Box 1120, Nakuru  
2<sup>nd</sup> June -2012

*Our Ref: UoN/CEES/NKUEMC/1/12*

**To The Town Clerk  
Nakuru Municipality**

**RE: ALICE EMILY OSORO – L50/65995/2010**

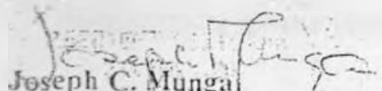
The above named is a student of the University of Nairobi at Nakuru Extra-Mural Centre Pursuing a masters degree in Project Planning and Management.

Part of the course requirement is that students must undertake a research project during their course of study. She has now been released to undertake the same and has identified your institution for the purpose of data collection on "The Influence of Institution Social -Economic Factors on Growth of Women Owned Small Scale Fish Business: a Case of Nakuru Municipality, Kenya.

The information obtained will strictly be used for the purpose of the study.

I am for that reason writing to request that you please assist her.

Yours Faithfully,

  
Joseph C. Munga  
Resident Lecturer, University of Nairobi  
Nakuru Extra-Mural Centre

## **APPENDIX 7: QUESTIONNAIRES FOR RESPONDENTS**

The questions below are for the purposes of finding out the influence of institutional and socio-economic factors on the growth of women-owned small - scale fish businesses in Nakuru Municipality. Your opinions as reflected in this questionnaire are important to this study and are held in confidentiality. Therefore you are requested to fill this questionnaire in the most free and honest way possible.

Please tick the appropriate answers in the boxes provided and also write down the appropriate answers in the spaces provided. Do not write your name on the questionnaire. Thank you in advance for your time and cooperation.

Respondent No.....

Market .....

### **Background information**

1. Age:

18 -30 yrs  31-40 yrs  41-50 yrs  51 and above

2. Marital status (optional).....

3. Number of children (if any).....

4. Highest Level of education

Primary  Secondary  College  None

5. Residence .....

6. Occupation of spouse (optional).....

## **SECTION A: Growth of the Fish Business**

7. How many years have you been in the fish business and in the present market?

0 - 5 years  6 - 10 years  11 years and above

8. In terms of quantity, what is the level of fish sold per week?

Very high  high  average  low  very low

9. Compared to the daily/weekly costs and sales volumes, is the business profitable?

Very profitable  profitable  average  less profitable  not profitable

10. Has your business grown in any way so far in last five years?

Very much  much  average  little  no growth

11. a) Has the standard of living for yourself and that of your family improved as a result of the earnings from the business?

Yes  No  somehow

b) If your answer to part (a) above is yes, how has the standard of living improved?

Very much  much  average  little  very little

12. a) Do you manage to reinvest the profits into the business?

Yes  No

b) If your answer to part (a) above is yes, what proportion of profits do you reinvest?

5- 20%

21- 40%

41- 60%

61-80%

81-100%

13. Do you anticipate further growth this year?

Very much  much  average  little  no growth

#### SECTION B: Access to Capital

14. What are your sources of capital?

Personal savings  family  Loans  donations   
borrowings from friends

If other, specify.....

15. Does being a woman disadvantage you when you need to obtain credit for running the business?

Very much  much  Sometimes   
Not so much nowadays  No

16. Do you think having better education and formal business skills would be an advantage to you in accessing credit?

Absolutely  To some extent  No

17. Do you think training in financial management would help you overcome some constraints like debts?

Yes  No

Explain.....

.....

18. In estimation, how much do you think you would require expand your business?

.....

.....

## **SECTION C: Rise in Aquaculture**

19. Where do you get your fish from? .....

20. Is the supply regular and does it satisfy the demand?

Very much regular       much regular       average

Less regular       not regular

21. What fish types do you normally get?

Nile perch (*mbuta*)       Tilapia (*Ngege*)       Sardines (*Omena*)

Other (specify) .....

22. Which of these do your customers prefer most?

Nile perch (*mbuta*)       Tilapia (*Ngege*)       Sardines (*Omena*)

Other (specify) .....

23. Do you process (dress) the fish for the customer?

Yes       No

24. Have you ever heard of fish farming?

Yes       No

25. Do you support the initiative?

Yes       Not so much       No

Explain .....

26. Has it improved supply of fish?

Yes

Not so much

No

27. Do the customers like the fish from fish farms?

Yes

Yes they notice the difference

Most don't

#### **SECTION D: Business Organization and Structure**

28. Who owns this business?

Myself

I and my husband

Our family

29. a) Who normally operates it

Myself

I and my husband

Our family

Employees

b) How many people operate the business on a daily basis?

Less than 2  between 2-4  more than 4

30. Would you be open to any partnership in the future if it could be beneficial?

Yes  No

Explain your answer .....

.....

31. Do you think if there was a women's cooperative intending to do fish business in the town

it could succeed? Yes  No  Maybe

Explain .....

#### **SECTION E: Municipal Regulations**

32. Are the rates being charged by the Municipal fair to the small scale businesses?

Very much  much  fair  less fair  not fair

33. Will registering your business be an advantage to you?

Yes  No

Specify .....

34. Is it easy to get a business license and a health permit for your business?

Yes  No

35. Do the municipal authorities require you to operate from certain areas only?

Yes  Not necessarily

36. How do you rate the municipal people? (Tick as appropriate)

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree

1            2            3            4            5

Very considerate					
Considerate					
Fair					
Corrupt					
Arrogant					

37. a) How do you preserve your fish, do you have any form of cold storage facility?

Yes  No

b) If your answer in (a) above is No, please explain how you preserve your fish?

.....

.....

38. To what extent does the preservation method affect the quality of the fish and the price?

Very much     much     neutral   
Little     does not

39. Does the market offer security for your business?

Very much     much     neutral   
Little     does not

40. Are the premises suitable?

Very much     much     neutral   
Little     No

41. When do you normally open and close the business daily? .....

.....

42. Is there insecurity where you live and around the market?

Very much     much     neutral   
Little     No

## **APPENDIX 8: INTERVIEW SCHEDULE**

### **SECTION F: Other Issues**

43. Can you suggest anything that you think can improve the operations of the businesses and that could lead to their growth?

## APPENDIX 9: SAMPLING FRAME OF THE RESPONDENTS

**Table 3.2 Women owned small scale fish businesses Sample Size Determination**

Markets	Businesses with 0 – 5 years	Sampling procedure	Sample size
Municipal	20	20/71 x 50	14
Kaptembwo	15	15/71 x 50	11
Ponda mali	36	36/71 x 50	25
Total	71		50

SOURCE MCN 2012

**Table 3.3 Women owned small scale fish businesses Sample Size Determination**

Markets	Businesses with 6 - 10 years	Sampling procedure	Sample size
Municipal	12	12/55 x 39	9
Kaptembwo	18	18/55 x 39	13
Ponda mali	25	25/55 x 39	17
Total	55		39

SOURCE MCN 2012

**Table 3.4 Women owned small scale fish businesses Sample Size Determination**

Markets	Businesses with 11 years and above	Sampling procedure	Sample size
Municipal	10	10/35 x 25	7
Kaptembwo	9	9/35 x 25	6
Ponda mali	16	16/35 x 25	12
Total	35		25

SOURCE MCN 2012

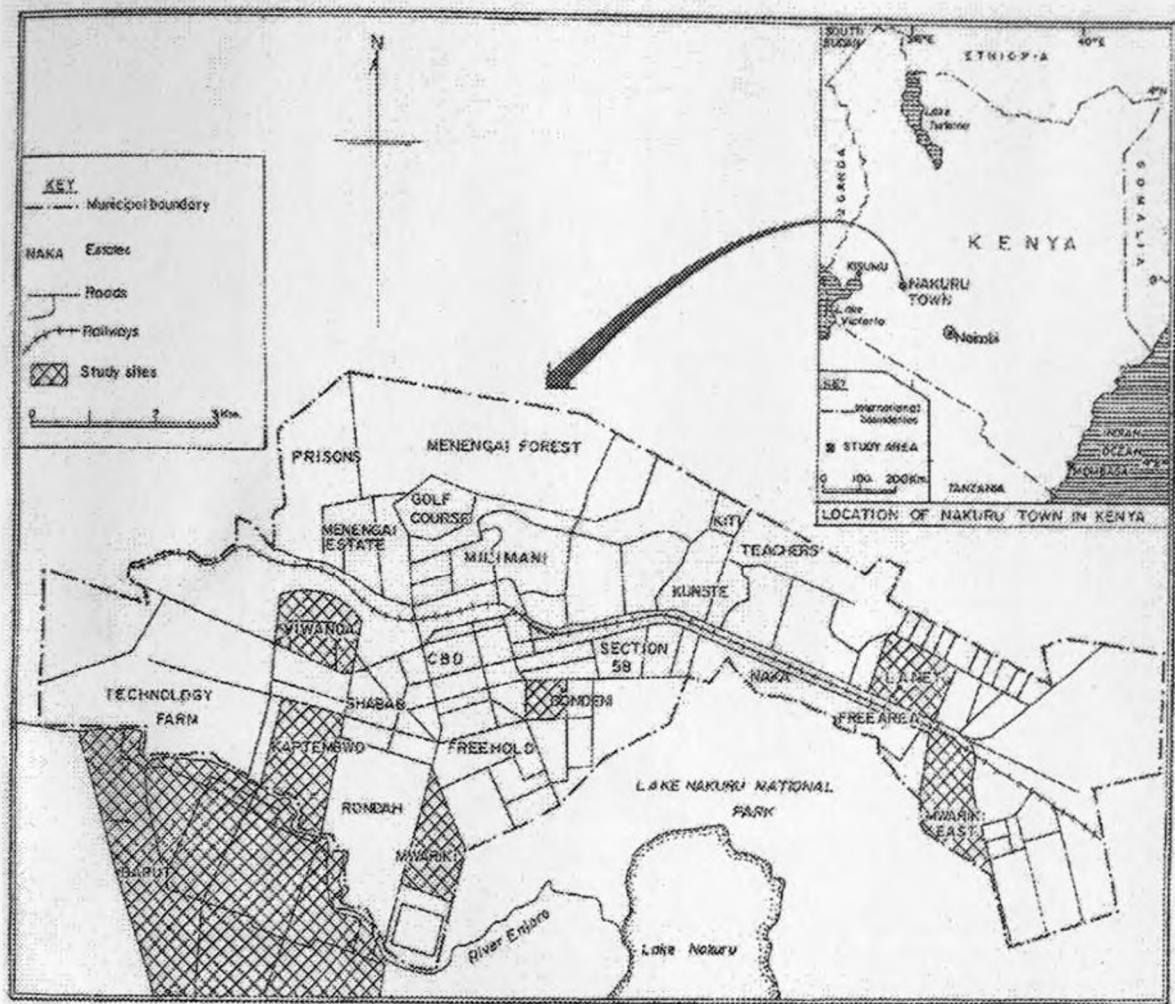


Figure 3.1: Map of Kenya showing Nakuru Municipality

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