

**DETERMINANTS OF LABOR PARTICIPATION
IN THE INFORMAL SECTOR, IN KENYA.**

BY
ELSIE GAKERE
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DECLARATION

This research paper is my original work and has not been presented for a degree in any other university.



Elsie Gakere

This research paper has been submitted with our approval as university supervisors.



Dr. Damiano Kulundu Manda



Dr. Jane Kabubo-Mariara

DEDICATION

This paper is dedicated to my family. Thank you for your love and support.

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ABSTRACT

The informal sector is a major employer of many Kenyans and should thus be considered capable of making important contributions to the national economy. Thus the informal sector should be designated as a development priority in Kenya to enable maximization of opportunities for all who work within the sector. This study was aimed at identifying and analyzing the determinants of informal sector participation in Kenya. The study applied logit regression model to estimate predictors of informal sector participation in Kenya.

The results indicated that the independent variables selected for the study were all statistically significant determinants of informal sector participation in Kenya. Mean household income and sexes of participants were found to have a negative relationship to informal sector participation. Marital status, education level, vocational qualifications, locations and ages of participants showed evidence of a positive relationship to informal sector participation. The study concluded that in Kenya, socio-economic characteristics of labor market participants continue to impact informal sector participation in significant and important ways.

CHAPTER ONE

1.1 BACKGROUND

The informal sector in Kenya plays an important role in employment creation. For workers who find themselves unable to secure work in formal employment, the need for subsistence and income-generation demands that they find work elsewhere. Millions of workers particularly in developing economies have turned to the informal sector for employment (GoK, 1998; GoK, 2000).

The informal sector contributes an important role in reducing the extent of poverty and income inequality in developing countries. People in poor households are often reported to participate in the informal labor force in relatively larger numbers, relative to the non-poor (King, 1990; Liebbrandt, 1998). They are more likely to participate in the informal sector and to earning low incomes. Previous research has shown a strong association between the female gender, informality and poverty (Chen, 2005; Chen, 2004). However, empirical evidence suggests that despite low incomes, these informal sector participants are able to tame the intensity of poverty and the relative share of poorest families is reported to diminish with participation in the informal sector (Sethuraman, 1998; Chen, 2005).

The International Labor Organization estimates that there are 550 million working poor and their numbers may double before 2015 (Chen, 2004; Kajuju, 2003; Njoka, 1998). If the Millennium Development Goal (MDG) relating to poverty is to be met, greater emphasis must be placed on improving both the quantity and the quality of informal participation, and on overcoming any hindrances to involvement in informal sector opportunities (Chen, 2004).

1.2 Brief History of the Informal sector in Kenya

Economic models of the 1950's and 1960's first identified and understood the informal sector as a 'poor traditional sector', which could be transformed and completely absorbed into the formal or modern sector using the right combination of policy and resources (Castells, 1989; Bivens, 2005). Having seen how Europe, North America and Japan had reconstructed mass production in their modern economies after 'World War II', the same model was endorsed as the blueprint for economic growth in developing countries (Castells, 1989).

However, the model did not yield similar results in Kenya and empirical evidence from Kenya in the early 1970's revealed that a significant proportion of the labor force was involved in the informal sector (ibid). The sector was by then better known as the traditional sector, and those

participating within it were classed as 'unemployed', thus leading to highly exaggerated unemployment ratios (Bivens, 2005; Chen, 2004). In response to this in 1972, the ILO launched a research mission to investigate the causes of unemployment. Findings of the ILO (1972) noted that the traditional sector was a vibrant economic arena and a significant labor force participation arena. Far from being unemployed, participants in the traditional sector had been able to cope with economic crises, and not only had they survived, they had also expanded and efficiently diversified (Chen, 2004).

ILO observed the increasingly important contributions of the informal sector to the economy, and adapted the term 'informal sector' to refer to the range of small-scale and unregistered economic activities within the country (ibid). The conceptual definition of the informal sector has since been continuously broadened by the ILO in a bid to consistently reflect the dynamic economic realities of the informal sector (ILO, 1986; ILO 2002).

1.3 Working conditions in the Informal Sector

In developing economies, informal employment tends to be a comparatively greater source of employment for women than for men, and according to ILO (1998), every African region except North Africa where the minority (43%) of informal workers are women, 60% or more of women workers in Africa are engaged in informal employment. In sub-Saharan Africa, 81% of women workers are informally employed compared to 63% of men; and in Latin America the figures are 58% of women in comparison to 48% of men (ILO, 1998). The growing informalization of the developing economies has caused a rise in the number of economically active women, thus raising participation rates of women in the informal sector.

Poverty is significant in discussing informal employment because in sub-Saharan Africa, strong associations are reported to exist between poverty and type of employment (Liebbrandt, 1998; Sethuraman, 1998; Kajuju, 2003). In several African cities, research has shown evidence that a large proportion of "marginal self employed" and "irregular workers" will tend to belong to poor households. In other words informality is more often than not, correlated with the incidence of poverty (Kajuju, 2003; Chen, 2004).

According to the ILO (1997), there is consensus that the informal sector is steadily growing in almost all developing countries. In Africa, the urban informal sector currently employs 60% of the urban labor force and will create more than 90% of all additional jobs in this region. A

substantial component of labor force participation in developing countries such as Kenya is categorized as informal because much of it is organized and performed outside of recognized institutional frameworks (Charmes, 2002; Chen, 2004; de Soto 1989). Consequently the quality of such employment in terms of income, conditions of work and gender equity tends to be below national and international standards (Sethuraman 1998). Being outside the recognized institutional framework, informal labor force participants have neither the obligation nor the means to create and gender-equitably distribute good quality jobs (ibid). The places where informal sector participants work can often be dirty and hazardous.

Among street vendors in countries such as India and Latin America, research has found that men are more likely to sell non-seasonal, non-perishable goods while women are more likely to sell seasonal, perishable goods (such as fruits and vegetables) (Chen, 2004; Sethuraman, 1998). This implies that women are more likely to participate in the volatile, irregular and seasonal informal markets, while men are more likely to participate in non-seasonal and steadier informal markets. The net effect is that women's informal sector participation tends to be more intermittent, while men's informal sector participation tends to be more regular and stable (Chen, 2005; Chen 2004; Sethuraman, 1998).

Depending on the regulatory environment, street vendors for example face great insecurity in regard to their place of work as they often are not entitled to a secure site from which to trade. Informal workers are often viewed as a nuisance or obstruction to other commerce and the free flow of traffic (Budlender, 2003; Kajuru, 2003). Since street vendors typically lack legal status and recognition, they may experience frequent harassment and evictions from their selling place by local authorities or competing shopkeepers. Historical patterns of urban settlement or current pressures on limited urban land force many people to trade in marginal locations that are not economically viable. Their goods may be confiscated and arrests are not uncommon (King, 1990; Sethuraman, 1998).

Sethuraman (1998) reports that even though there are between 30 - 45 thousand hawkers in Nairobi, the city authority issues only 5,000 licenses annually. This limit condemns the vast majority of informal sector participants to remaining illegal and to being continuously subjected to police threats (ibid). As a result, 61% of hawkers experience various forms of police harassment including demands for bribes, confiscation of goods, demolition of premises, and only

18% of informal workers belong to some hawker or business association, in the hope of increasing their voice through representation (ibid).

Besides being small in terms of output and employment, informal enterprises also tend to be labor intensive and to use little physical capital and low human capital. They often operate without proper business premises, work long hours, work from locations vulnerable to harassment by police, and often remain economically invisible (Charmes, 2000). These factors contribute to low productivity, low income and poor work conditions within the informal sector (Chen, 2004; Chen, 2005).

1.4 STATEMENT OF THE PROBLEM

The labor market is a critical arena for economic participation, poverty alleviation and gender equity. The informal labor market in particular has emerged in Kenya as a major source of employment for both men and women (H.O, 2001; CBS, 2003). However the determinants of labor participation in the informal sector are multi-faceted, and have not been fully understood. In Kenya, labor participation in the informal sector has not been sufficiently analyzed and explored.

In particular, the study will examine socio-economic determinants of labor participation in the informal sector, in Kenya. Thus the study will contribute a contemporary analysis of informal labor participation and fill knowledge gaps on socio-economic predictors of informal sector participation in Kenya.

1.5 OBJECTIVES OF THE STUDY

The objectives of this study are:

1. To identify factors affecting participation in the informal labor force in Kenya.
2. To analyze the determinants of labor participation in the informal sector in Kenya.
3. To suggest policy recommendations based on the findings.

1.6 JUSTIFICATION OF THE STUDY

The nature and quality of informal sector employment has a fundamental impact on the socio-economic experience and well-being of informal sector participants (ILO, 1998; Moghadam, 1999). The government of Kenya has identified the improvement of informal sector opportunities as an important development priority, in order to attract higher quality participants and higher productivity from informal sector participants (Nguli, 2001). This study will contribute a better understanding of the determinants of informal labor participation in Kenya.

The task force on the UN Millennium Project has recognized and given strategic priority to reducing poverty by empowering low-income earners, especially those in the informal sector, and to efforts to improve the economic security of this particularly vulnerable group (Chen, 2004). Reflecting this priority, the UN Task Force has highlighted the need to explore and study significant relationships at the core of informal labor participation, for use as policy planning and implementation tools in pursuit of the Millennium Development Goals (ibid).

An informed and comprehensive policy approach to labor participation in the informal economy needs to take as its point of departure the premise that, focusing on critical determinants of labor participation in the informal sectors is an essential pathway to understanding and reducing poverty, and to maximizing equitable distribution of opportunities for economic productivity in developing economies. (Chen, 2004)

CHAPTER TWO

LITERATURE REVIEW

The following literature review examines factors that affect labor participation in the informal sector. The literature draws on informal sector research based in developing economies, and discusses the impacts of selected determinants on informal sector participation.

The literature review explores how these determinants interact within the informal sector. The key determinants of informal labor participation reviewed below include gender, education levels, vocational qualifications, location of participants, incomes of participants and marital status.

2.1 DETERMINANTS OF LABOR PARTICIPATION IN THE INFORMAL SECTOR GENDER

Cunningham (2001) has reported that women of all age groups tend to depend on the informal sector more heavily than men, and to be over-represented in the informal sector in the sense that their share in the informal sector is higher than their share in the total labor force. Cunningham (2001) describes this trend as the 'feminization' of the informal sector. Feminization of the informal sector is said to exist when the number of women participating in the informal sector significantly and over time exceeds the number of men, or the number of women in the informal sector significantly and over time exceeds the number of women in the formal sector (ibid). Masculization of the informal sector exists when the reverse situation occurs.

Comparisons of labor force participation ratios have been used as important indicators of women's empowerment (World Bank, 2001). Some studies have found that higher labor force participation of women in the informal sector seems to be related to higher levels of nutrition for children and lower mortality rates for both female adults and children (Sadaf, 2002).

Gender discrimination in the formal labor market has been said to pressurize women into increasingly disproportionately participating in the informal sector. This explains in part the disproportionate concentration of women in informal sector, because it limits women's access to formal and wage employment (Kaifa, 2005; ILO, 2002). In addition the reduction in public sector jobs has been shown to affect women more than men, because of the latter's concentration in temporary and lower level formal public sector jobs. Thus the overall trend of decline in

formal and public sector employment has impacted on many women and compelled them to turn to the informal sector for work (ILO, 1998; Moghadam, 1998).

In Africa, research has established that most often men dominate the most lucrative informal sector opportunities, while women dominate the least lucrative opportunities. This trend has been observed in various studies such as Cunningham (2001), Sethuraman (1998), Chen (2004) and Chen (2005) and in World Bank studies (2004). In such situations, women in the informal sector are marginalized and increasingly disadvantaged.

Gender-based division of labor can be observed in the informal sector, and women in the informal sector tend to rely on the skills they have acquired through experiences in their socio-cultural / traditional roles as unpaid family workers, in domestic work (Bullock, 1994; UNFSCO (1995); Budlender (2003). Thus food processing, small-scale trading, sewing, domestic and personal services have become important areas of women's participation in the informal economy. In Kenya's informal sector as well as in Windhoek (Namibia), it was found that men were mainly in construction-related activities, garage, vehicle repair and maintenance, news paper vending, etc., while women were engaged in basket weaving and doll making, activities that are seen as an extension of 'traditional' domestic roles (Obilo, 1989).

Women in some countries for example cannot engage in an independent occupation or profession without the consent of their husband (Chen, 2004; Chen, 2005). According to one study in Tanzania, of 2000 men interviewed, 44% did not support the idea of women working. The other 56% stated that they would oppose the employment of their wives if their occupational positions and incomes were higher than those of their husbands (Chen, 2005). Men's attitudes however seem to vary based on ethnicity, geography and other factors (ibid). In Zimbabwe in 1990, 88% of women in the informal sector never attempted to secure credit, partly because many some had doubts about the ability to repay the loan amount and some did not seek credit because they needed permission from their husbands, and their access to credit was pegged on the husband's status (Hein, 1986; Charmes 2000).

Cotter (1999) used multi-level analysis to estimate gender differences in labor participation. In the study, Cotter utilized multilevel techniques to analyze the effects of demand for labor on gender differences in labor force participation across metropolitan areas. Labor markets were controlled for micro-level factors known to influence labor participation. Measures of gendered

labor participation were estimated by indexing the degree to which the labor market occupations are skewed toward usually male or female occupations. Logistic regression techniques were used to compute standard micro-level models of labor force participation of males and females.

Cotter et al. (2001) analyzed how structural demand for female labor impacted gender differences in labor force participation. Using a measure of the demand for labor by indexing, the degree to which the occupational structure was skewed toward usually male or female occupations was empirically determined. Using census data from 1910 through 1990 and National Longitudinal Sample of Youth (NLSY) data from 261 labor markets, Cotter et al. (2001) showed that gender differences in labor force participation co-vary across time and space.

Schrier (2000) compiled the 'British Columbia Labor Force Participation Rate Model (BCLFPRM). It was an attempt to combine economic, social and demographic factors that affect labor force participation in British Columbia. Participation rates were first modeled for specific age and gender groups to capture the purely demographic effects. For most age/gender groupings, statistical regression was employed to develop equations that could be solved in forecasting participation rates. The equation for each group had a unique structure distinct from the rest. The separate age/gender equations were then applied to a population projection to obtain the labor force figures for those groups. These figures were summed to derive the male component, female component and total labor force figures, from which the overall labor participation rates for British Columbia could be calculated.

Kabubo-Mariara (2003) analyzed determinants of wages and the decomposition of the gender gap across sectors in Kenya. The paper's hypothesis was that women participate less in the labor market owing partly to their characteristics, and partly to existence of gender discrimination in wage setting. Multinomial logit techniques and ordinary least squares (OLS) were applied to investigate participation and earnings. The paper concluded that education and other demographic factors are significant determinants of choice of sector of employment and earnings.

Anker and Knowles (1978) assessed determinants of female labor force participation in Kenya by carrying out an analysis on how social, economic and demographic micro and macro variables affect female labor force participation. Using OLS estimation technique, the study derived micro-level and macro-level variables which impacted on female labor participation. The study

concluded that macro urban labor market conditions seemed to have a favorable effect on urban female labor force participation.

EDUCATION AND VOCATIONAL QUALIFICATIONS

United Nations takes a lead rôle in promoting education and vocational training in developing countries, through conferences, seminars, policies and implementation programs for informal sector participants (Bravo, 2003). Because education is recognized as a major vehicle for promoting and improving the status of people, and especially of women, comprehensive action plans have emerged to address gaps in education and training (Okojie, 2002; Bravo, 2003).

Education is regarded as the corner stone of poverty eradication because it enables people to respond to economic opportunities, to challenge their environments, confront employment constraints. In addition, it has become widely acknowledged that genuine and sustainable human development is rendered incomplete for as long as many people remain ignorant, semi-literate and marginalized (Catagay, 2001). This was reiterated in the Human Development Report (UNDP, 1997), which stressed that an important strategy for empowerment is promotion of access to education. Previous studies have established strong negative correlations between higher education levels and poverty (Catagay, 2001; Budlender, 2001). Nevertheless studies have concluded that participation in the informal sector does not eliminate poverty, though it significantly reduces the depth and severity of poverty (Bivens, 2005).

UNESCO (1995) highlighted the need for adult education and vocational training programs for both men and women in the informal sector, and also developed such vocational courses targeted at improving informal sector productivity. UNESCO highlighted that one of the key challenges in this area was the task of devising meaningful training programs for the informal sector, owing to their consistently lower levels of literacy (UNESCO, 1995).

The highest level of education reached by a participant also seems to influence the decision to participate in informal work, as well the choice of activity to be engaged in (Chen, 2001; Sethuraman, 1998; Moghadam, 2001). Low levels of schooling prevent people from moving to modern type of activities. Research has however revealed that men tend to exploit formal employment opportunities more successfully than women. As a consequence, for example in Mali and Nigeria, it has been found that in the informal sector, older and less educated women

tend to be concentrated in traditional activities while the young and more educated are likely to participate in the formal economy (Sethuraman, 1998; Chen, 2004; H.O, 2002).

In South Africa, education levels of workers in the formal and informal economy differ dramatically. Approximately 16% of workers in the formal economy have completed less than a sixth-grade education while 37% of workers in the informal economy have less than a sixth grade education (Bivens, 2005). By contrast, nearly 22% of formal economy workers hold a diploma or higher degree, whereas fewer than 4% of informal economy workers have the equivalent level of education. It is estimated that 95% of all informal economy workers have less than secondary school qualifications (ibid). This study therefore provided evidence of an association between education completion and participation in the informal sector.

In a study of the informal sector by Sethuraman (1998), it was found that among women with no formal education, 90% of them worked in the informal sector; among those with incomplete primary education, 87% were in informal sector; among women with complete primary, 57% worked in informal sector; and in among those with higher education than secondary, only 12% worked in informal sector. Corresponding figures for men were respectively: 36%, 29%, 19% and 2% percent. Further, 86% of unskilled women were found working in the informal sector, compared to 36% among unskilled men. The study therefore establishes a relationship between education level and gender participation in the informal sector.

Notwithstanding, research has shown that not all educated persons find work in the formal economy. Empirical evidence shows that there are substantial numbers of workers with greater than average levels of formal education and vocational qualifications, who are working in informal employment. Given this, it seems hard to argue that these workers engage in the informal sector because they have inadequate education and/or low levels of productive skills. The existence of substantial numbers of educated workers in the informal economies studied provided compelling evidence that there are just not enough good jobs in these economies (Chen, 2004; Bivens, 2005; Anyonga, 2005). As such, these studies argue for the possibility that informal sector participation is not only related to low education levels, but also that in some situations, highly educated people may opt to participate in the informal sector if they can find better jobs than are available in the formal sector. For example, 5% of all workers in the informal economy had a university or post-graduate degree in Egypt. In Russia in 2002, almost half those informally employed had at least a high school education. Although only 19% of all workers in

the informal economy are categorized as "skilled workers" in the Russian Longitudinal Monitoring Survey, between 10% and 11% of all workers in the informal economy hold a higher degree (Bivens, 2005).

According to a World Bank study (2001), it was found that education and vocational training in the informal sector is often directly productivity enhancing. The skills demanded for work in the informal sector are directly linked to the activities to be undertaken. This contrasts the formal sector where to some extent, skill acquisition is demand-and-supply driven, with increasingly higher skill levels being used as a signal and a screening device for recruitment (ibid). The World Bank (2001), in underlining the different approaches to education in the formal and informal sector, warns against over-emphasizing higher formal education levels in the informal sector. Rather than try to merely "formalize" the informal sector, a more useful approach would involve targeting particular challenges faced by informal sector workers, and how these can be improved upon through education and or vocational training (ibid).

In a study based in Sri Lanka, Standing (1978) conducted a survey of determinants of female labor force participation. Using a household decision-making behavioral model, he used a linear function to estimate the impact of education, marriage and fertility on female labor force activity. Standing (1978) concluded that while education lead to increased labor participation by women, it still did not mean that given equal levels of education for men and women, that women would participate in equal proportions to men.

Pang (1978) noted in a study on labor supply in Singapore (1957 – 1974), that education, household income and number of children all had an effect on female labor force participation. Ndua and Ngethe (1984) studied the informal sector in Nakuru, and found that both work experience and investment are statistically significant in explaining changes in labor participation. Further, education had a negative correlation to participation in the informal sector. Rise in education level was found to be more consistent with working in formal sector rather than with the informal sector.

Atieno (2004) studied female labor market participation in the informal sector in Kenya. The study applied multinomial Logit model to estimate the determinants of participation in the labor market. It concluded that education was among the key factors that determine women's

participation in the labor market. Education was found to increase the chances of women being employed not only in the private and public sector, but also in the informal sector in Kenya

LOCATION

Location of an enterprise in the informal sector influences the conduct of business. As informality and informalization in each country follows its own trajectory, informal employment in each country can produce unique patterns of participation. Informalization experiences tend to emerge along location-specific and country-specific institutions, histories, cultures and even geography (World Bank, 2001).

It has been reported that women's choice of location in the informal sector is often influenced by a preference to work near their homes (ILO, 2002; Sethuraman, 1998; Kajuju 2003). Large shares of women who are home-based informal workers were found to be operating out of their residence or in their neighborhood (ILO, 2002; Kajuju 2003). For women, maintaining their role in the family including child care will often impose restrictions not only on the choice of informal sector activity, but also on the location of work (Oiro, 2002). In Dar es Salaam 89% of women in the informal sector located their work in the "same ward as residence" compared to 59% for men in the same category (Chen, 2004).

According to a study in India, besides 50% who are home-based, work within two kilometers from residence; only 14% traveled beyond 5 kilometers distance (Sethuraman, 1998). Over a third of the respondents cited "staying at home", and a quarter "flexible hours of work" as reasons for choosing their current activity. In Bombay (1979), 62% of the women in slum households who were not employed preferred work in the same slum; only 38% were ready to work further away from their homes (ibid). However the more educated women were more willing to work away from their homes.

Gender differences in access to physical capital in the informal sector include extent of investment including nature, type of business premises and location (Charmes, 2000). Indicators of physical capital such as the type of premises, whether they are exclusively used as business premises, whether they operate from variable locations, are important in the informal sector. Physical capital is a reliable proxy for measuring gender aspects of informalization (Sethuraman, 1998). One of the key indicators of investment in physical capital in the informal sector is the quality of business premises, as few possess any machinery and equipment. Though most

women, especially in trade operate in open markets, many are also located in the residential areas (ibid). Women owned enterprises tend to be much smaller, more often located in home, with few market linkages and network contacts (Charmes, 1998; Charmes, 2000; Sethuraman, 1998). In addition, men are found to be more likely to sell from push-carts and bicycles while women are more likely to sell from baskets on their heads, or on the ground, or simply from a cloth spread on the ground (Chen, 2004; Ngethe, 1984; Sethuraman, 1998)

The United Nations set up an Expert Group Meeting set up to examine the effects changing location through migration, on female participation in developing countries, and how it relates to the changing roles of women in society (United Nations, 1999). By examining the determinants and consequences of migration from a gender perspective, their objective was to elucidate under which circumstances migration led to improvement in the status of women, with reference to among other factors, women's participation in the informal sector (ibid).

Authors such as Mwatha (1990), Mazumdar (1976) and Hein (1986) have explored the role of rural and urban locations in the informal sector. Findings have demonstrated significant patterns of informal sector labor participation with reference to rural and urban locations.

Tiefenthaler's (1994) study also found that women who live in urban areas are significantly more likely to participate in the formal sector than women who live in rural areas. Furthermore, women who live far from main roads are less likely to participate in the formal sector and more likely to participate in informal work. These findings indicate that women's labor participation behavior in developing countries varies across formal, informal and other relevant sectors. The study also concluded that examining formal and informal labor participation sectors as a similar and homogeneous labor markets causes biased estimation and thereby creates misleading information for policy makers.

Graft-Johnson (1978) examined labor force participation in Ghana, and estimated a model whose findings established that migrant women often migrate to accompany husbands, and migrant women's labor participation rates in Ghana peaked at 50 to 54 years, when child care responsibilities had been completed and many women had become widows.

INCOME

Wage differentials have been found to exist in both the informal economy and the formal sector (Kaifa, 2005). However, in the informal economy where most women are employed, there is evidence that they are paid lower wages than men, because little legislation exists to prevent discrimination (Sethuraman, 1998; Chen 2004; Chen, 2005; Sadaf, 2002).

Different segments of the informal sector are associated with different earning potentials for both men and women. For example, a study of employment in the informal sector in Tunisia found that informal sector employers who hire others – the micro-entrepreneurs – are not poor. Indeed, the average income of micro-entrepreneurs was found to be four times as high as the legal minimum salary and 2.2 times the average salary in the formal sector (Chen, 2004).

Although micro-entrepreneurs may have relatively high earnings in Tunisia – and elsewhere – most workers in informal employment do not fare so well (Charmes, 2000). More broadly, data from 14 countries compiled by Jacques Charmes (*ibid*) show the disparities in earnings within informal employment. Charmes compared average monthly income to average salaries in the formal and informal economy. In every case, except Kenya, the average monthly income of micro-entrepreneurs in the informal economy is higher than the average monthly wages of the employees of micro-enterprises. Generally, the wages of employees tend to hover around the minimum wage – which in itself may be less than the minimum needed for survival (Charmes, 2000).

Neoclassical economic theory proposes that labor participation of women is a function of the woman's market wage offer (substitution effect) and her family's welfare (income effect). The family becomes an economic agent which maximizes its welfare subject to time and budget constraints, and the family chooses between labor participation and leisure to maximize its utility. Empirical studies on women's labor participation often use the substitution effect (her income), her husband's earnings (income effect), education, work experience and number of children as variables to explain labor participation, including participation in the informal sector. In many empirical studies where males earn higher incomes than women, higher male labor participation rates are found to exist while women register lower labor participation rates, and this creates a spill over effect into informal sector participation (Heckman, 1974 and Schultz, 1980 as cited in Mene 1998).

Tiefenthaler (1994) as cited in Meng (1998) used a similar methodology to analyze informal labor participation in the Philippines. The study predicted that expectation of higher wages correlates positively with the probability of participation for both genders, and correlates negatively to non-participation. When wage-offer effects are controlled, human capital variables, education and age correlate positively with the probability of participation in formal and informal sector.'

Standing (1978) studied female labor participation in the urban labor force in Jamaica. He identified the behavioral determinants of female participation in Kingston's metro area using two models. One model measured female participation in terms of the opportunity cost of inactivity. Opportunity cost was expressed as a function of women's human capital, objective need for income and taste for income. A second model measured opportunity cost of inactivity as a function of household income, age of children and availability of substitute domestic labor. Standing's (1978) revolved around the opportunity cost of activity and inactivity of women and concluded that various socio-economic characteristics of women influenced their labor participation in the formal economy.

MARITAL STATUS

While it has been widely reported that women have been gaining an increasing share of access to all types of formal and informal employment, this has happened in the context of decline in the social power of labor and growing unemployment particularly in developing economies, where women's labor-market participation has not been accompanied by a redistribution of domestic, household, and childcare responsibilities (Moghaden, 1999; ILO, 2002; World Bank, 2001).

Regarding women's choice of activities in the informal sector, it is believed that many informal sector roles are essentially an extension of women's domestic roles, and also the result of constraints imposed by society (Chen, 2001; Sethuraman, 1998; ILO, 2002). In order to participate in society's shared value systems in gender roles, working women make choices consistent with the social expectations demanded of them as wives and mothers. For example, a woman generally chooses work for its regular, predictable hours as well as for its benefits that will protect the health and well-being of her family (Sethuraman, 1998; ILO, 2002). Thus it has been argued that women's economic choices are more likely than men's to reflect their need to fulfill family-based, homemaking responsibilities rather than to enhance their professional aspirations. To ensure that the time required for performing informal work is predictable, women's business choices in the informal sector also tend to involve less risk (ibid).

Women continue to work longer hours than men in most countries of the world and often carry a disproportionate share of the burden of coping with poverty. This is clearly seen in studies regarding women's and men's use of time. This difference is often a result of women's reproductive and domestic roles (ibid). In low-income countries, more than 75% of women's work is in unpaid activities.

Sackey (2005) measured labor force participation of women using both the Probit and the multinomial logit techniques to find out what factors explain women's decision to participate in the labor market. This included the impact of marriage and family on the labor participation decisions made by women. The coefficients obtained in the probit estimation or results provided a sense of the direction of the effects of covariates on participation in the labor market, but were not to be used for impact analysis. To estimate the actual impact, a probit model was specified. A multinomial logit model was also used to estimate the probability of labor participation choice.

Heckman (1980) presented an empirical model to measure labor participation as a function of the life cycle of married women, in an environment of perfect certainty. Annual work hours spent at work and annual participation in the workforce were analyzed through integration into an intertemporal framework. The model was applied to estimate the labor participation responses of married women to changes in income. A fixed effect Tobit model was proposed for empirical analysis of panel data, and its statistical properties were discussed.

2.3 SUMMARY OF LITERATURE REVIEW

The literature review focused on determinants of informal labor participation, with a particular emphasis on gender, education levels, vocational qualifications, sex of individual, location, income and marital status. Within the contexts of developing economies, these factors have been shown to have important impacts and influences on the nature and characteristics of informal sector participation.

The emergence and growth of informal sector participation has been shown to follow different and unique patterns in developing countries. However there is need for more literature and research into specific impacts of the selected determinants on Kenya's informal sector. This study will fill knowledge gaps by analyzing determinants of informal sector participation in Kenya.

CHAPTER THREE

3.1. THEORETICAL FRAMEWORK

Relationships between informal sector participation and various socio-economic characteristics of individuals have been studied by many scholars as discussed in the literature review. It is generally acknowledged that socio-economic characteristics can and do impact informal sector participation in an economy.

The theoretical premise of this study is that socio-economic characteristics are useful determinants and predictors of informal sector participation in Kenya. The specific socio-economic characteristics examined in this study include marital status, highest education level attained, vocational qualifications of an individual, sex of the individual, location and mean household income of the individual. The study aims to establish how these characteristics are related to, and contribute to informal sector participation in Kenya.

Hypothesized Relationships

Higher levels of academic education are expected to lead to reduced informal sector participation as the highly educated may be more likely to seek employment in the formal sector. Having vocational qualifications is expected to increase the probability of informal sector participation, as there may be higher demand for vocational skills in the informal sector than in other sectors of the economy. In terms of gender, no significant gap between women's and men's participation in the informal sector is expected, because the barriers of entry into the informal sector are relatively low. It is hypothesized that persons in both monogamous and polygamous marriages are more likely to participate in the informal sector owing to issues such as need for flexible time for family care, and larger as well as extended families demanding more resources, thus causing married participants to seek more incomes from the informal sector. On the other hand, the divorced, separated, and those not yet married may be more likely to work in sectors outside the informal sector. Location is expected to increase the probability of informal sector participation in urban areas. This is because rapid urbanization is often attributed

to increased informal sector participation in Kenya. Household income is expected to be a significant determinant of informal sector participation. It is expected that owing to the often unpredictable nature of the informal sector, comparatively lower levels of mean household income are generated in the informal sector, than in other sectors of the labor market.

3.2 METHODOLOGY

In order to analyze the relationships between the particular socio-economic characteristics and informal sector participation, the study will use binary logistic regression. The independent variables will be regressed against the dependent variable, and regression results will be analyzed and interpreted. The independent variables selected for regression are: Marital status, highest education level attained, vocational qualifications, Sex, Location, age and mean household income.

Sector - The labor sector in which the participant works

Dummy: 1 - works in the informal sector
0 - works in 'other sectors'

('Other sectors' includes Modern private, Modern public, small scale farming and pastoralists)

Marital status - Whether participant is married or not

Dummy: 1 - if in a monogamous or polygamous marriage
0 - if has never married, is divorced or separated

Education - Highest level of education achieved

Dummy: 1 - if has had secondary education and/or post-secondary school education
0 - if has had no education, nursery education and up to primary education only

Vocational - Whether participant has acquired vocational qualifications or not

Dummy: 1 - if participant has acquired vocational qualifications
0 - if participant has no vocational qualifications

Sexes - If participant is male or female

Dummy: 1 - if participant is female

0 - if participant is male

Location - If participant is located in a rural or an urban area

Dummy: 1 - if located in urban area

0 - if located in rural area

Income - Mean household income of participant

Dummy: 1 - if earns above mean income

0 - if earns below mean income

Age - Age of participant

Dummy: 1 - if above retirement age (55 years)

0 - if below retirement age (55 years)

Analysis of the above data categories will include descriptive statistics, correlation analysis and logistic regression as well as analysis and interpretation of marginal effects. Policy recommendations will then be made.

3.3 MODEL SPECIFICATION

The probability of an event must lie between 0 and 1. This study seeks to analyze determinants of informal sector participation, and to derive the probability of participation in the informal sector.

The dependent variable is represented by Z_i .

$$Z_i = \log \left(\frac{PA_i}{1 - PA_i} \right)$$

PA_i is the probability that the individual participates in the informal sector

The model below assumes that Z_i is linearly related to the predictors.

$$Z_i = b_0 + b_1 \text{Vocational} + b_2 \text{Location} + b_3 \text{Income} + b_4 \text{Education} + b_5 \text{Marital} + b_6 \text{Sexes} + b_7 \text{Age} + u_i$$

Where:

b_j is the j th coefficient

u is the error term

Vocational is vocational qualifications attained by participant

Location is either the rural or urban location of the participant

Income is mean household income of participant

Education is highest level of Education reached by participant

Marital status is whether participant is married or not

Sexes is whether participant is male or female

Age is the age of the participant

3.4 DATA TYPES AND SOURCES

The data used in this study is drawn from the Integrated Labor Force Survey 1998/99. The 1998/99 Integrated Labor Force Survey (ILFS) was conducted in all administrative districts of Kenya as constituted in 1989, with the exclusion of Samburu, Turkana and Marsabit districts. The ILFS utilized the National Sample Survey and Evaluation Programme (NASSEP III) framework. The NASSEP III frame has 1,139 clusters from which 12,814 households were randomly selected for interview (CBS, 2003).

The NASSEP III frame is a two-stage stratified cluster design, and is multi-purpose for household based surveys. In NASSEP III, the Enumeration Areas (EA's) are the sampling Primary Sampling Units (PSU's), which were selected using the probability proportional to size (PPS) method. The PSU's were then further segmented into units of about 100 households, which constituted one Measure of Size (MOS). One segment from each PSU was randomly selected for the creation of a 'cluster'. The frame was further classified into urban and rural sub strata.

1,109 out of the 1,139 selected clusters gave a 94.7% response rate. At household level, 11,049 out of the selected 12,814 households participated in the survey, giving a response rate of 86.2%. Out of a total population of 29,603,500 people, 49.9% (or 14,777,230 people) were men, while 50.1% (or 14,826,270) were women. Out of the economically active population, the labor force participation rate of men was found to be relatively higher than that of women (CBS, 2003).

The data used in this study was based on responses of 52,016 participants, drawn from the Integrated Labor Force Survey. 50% of the ILFS dataset was randomly selected to comprise the data set for this study's purposes. Thus the study analyzed feedback from 26,008 participants.

CHAPTER FOUR

4.1 DESCRIPTIVE STATISTICS

The following section presents descriptive statistics and discusses cross tabulations between the sector an individual participated in, and each of the seven independent variables.

A participant either worked in the informal sector, or worked in "Other sectors" of the labor economy. "Other sectors" included the modern sector (both private sector and public sector), as well as small-scale farming, pastoralists and other income-earning activities outside of the informal sector.

Table 1: Sector one works in by Sexes of participants (Percent)

Sector One Works In	Total sample	Males	Females
Informal sector	19.5	13.6	10.8
Other sectors	50.5	86.4	89.2
Total	100	100	100

86.4% of all men in the sample worked in Other sectors outside the informal sector, while the remaining 13.6% worked in the informal sector. 89.2% of the women worked in Other sectors outside the informal sector, while 10.5% of women worked in the informal sector. Thus a larger proportion of men than women had chosen to work in the informal sector.

Table 2: Sector one works in by Marital status (Percent)

Sector One Works In	Unmarried	Married
Informal Sector	4.3	27.1
Other Sectors	95.7	72.9
Total	100	100

Table 2 shows the distribution of marital status among participants. Marital status was divided into two categories: the unmarried and the married participants. Unmarried participants included the 3 categories of those who had never married, the divorced and the separated. Married participants comprised both monogamous and polygamous marriages.

67.7% of participants were in the unmarried group, while 32.3% of all participants were either in monogamous or polygamous marriages. Among the unmarried, a 95.7% majority worked in Other sectors outside the informal sector, while only 4.3% of unmarried participants worked in the informal sector.

Among married participants, 72.9% worked in Other sectors, while 27.1% of married participants worked in the informal sector. Because only 4.3% of unmarried people worked in the informal sector, and 27.1% of married people worked in the informal sector, it appeared that the informal sector was more attractive to married people than it was to unmarried people.

Table 3: Sector one works in by Education Levels (Percent)

Sector One Works In	Lower Education Level	Higher Education Level
Informal Sector	18	11.1
Other Sectors	82	88.9
Total	100	100

Table 3 shows the education levels of participants. Participants who had either acquired no education, had only nursery education, or only completed up to primary school education, were grouped as having 'lower education'. Participants with secondary school and/or post-secondary school education were grouped as having 'higher education'.

Of the total participants, 84% had lower levels of education levels, while 16% had higher education levels. Among the highly educated participants, 82% worked in Other sectors, while the remaining 18% worked in the informal sector.

Among the lower educated participants, 88.9% worked in 'other sectors', while 11.1% worked in the informal sector. 18% of highly educated participants worked in the informal sector, compared to the 11.1% of lower educated people who worked in the informal sector. It therefore appeared that a larger proportion of people with higher education people were drawn to the informal sector than were those with lower levels of education.

Table 4: Sector one works in by Vocational Qualifications (Percent)

Sector One Works In	No vocational qualifications	Has vocational qualifications
Informal Sector	11.4	30.8
Other Sectors	88.6	69.2
Total	100	100

96.2% of all participants had no vocational qualifications, while 3.8% had acquired vocational qualifications.

Among participants who had no vocational qualifications, 88.6% worked in Other sectors, while 11.4% worked in the informal sector. Among those who had acquired vocational qualifications, 69.2% worked in Other sectors, while 30.8% worked in the informal sector.

11.4% of people without vocational qualifications worked in the informal sector while 30.8% of people with vocational qualifications worked in the informal sector. Thus it appeared that more people who acquired vocational qualifications tended to prefer informal sector work, than did those without vocational qualifications.

Table 5: Sector one works in by Location of participants (Percent)

Sector One Works in	Rural Locations	Urban Locations
Informal Sector	11.4	16.1
Other Sectors	88.6	83.9
Total	100	100

The locations of participants were categorized into two types – rural locations and urban locations. 84.2% of all respondents were from rural locations, while 15.8% were from urban locations.

Of the participants who lived in rural locations, 88.6% worked in Other sectors, while 11.4% of rural participants worked in the informal sector. Of those who lived in urban locations, 83.9% worked in Other sectors, while 16.1% worked in the informal sector.

A larger proportion of participants in urban locations (16.1%) worked in the informal sector than did participants in rural locations (11.4%).

Table 6: Sector one works in by Mean Household Income (Percent)

Sector One Works In	Above Mean Income	Below Mean Income
Informal Sector	12.2	12.2
Other Sectors	87.8	87.8
Total	100	100

The mean household income of all participants was found to be Ksh.7990. Table 6 shows that of the total participants, 72.9% earned below the mean income, while 27.1% earned above the mean income.

Among those who earned below mean income, 87.8% worked in Other sectors, while the remaining 12.2 % worked in the informal sector. Among those who earned above mean income, 87.8% worked in other sectors, while 12.2% worked in the informal sector.

Table 7: Sector one works in by Retirement Ages (Percent)

Sector One Works In	Above Retirement	Below Retirement
Informal Sector	10.8	28.8
Other Sectors	89.2	71.2
Total	100	100

Retirement age was set at 55 years. 92.3% of the participants were below retirement age, while 7.7% were above retirement age.

Of those participants below retirement age, 89.2% worked in Other sectors, while 10.8% worked in the informal sector. Among those above retirement age, 71.2% worked in Other sectors, while 28.8% worked in the informal sector.

It appeared that a larger proportion of people above retirement age were turning to informal sector work (28.8%), than were people who were below retirement age (10.8%).

4.2 CORRELATION ANALYSIS

This section discusses correlations between the variables.

The following correlation matrix was obtained to measure the correlations.

Table 8

	Sector	Income	Location	Ages	Sexes	Marital	Education	Vocational
Sector	1.0000							
Income	0.0057	1.0000						
Location	0.0510	0.2217	1.0000					
Ages	0.1517	0.0505	0.0660	1.0000				
Sexes	0.0189	0.0115	0.0075	-0.0235	1.0000			
Marital	0.3343	0.0155	0.0613	0.2656	0.0177	1.0000		
Education	0.0855	0.1947	0.2001	-0.0824	0.0531	0.1735	1.0000	
Vocational	0.1197	0.0925	0.1121	0.0018	0.0720	0.1646	0.2311	1.0000

Correlation coefficients are used to indicate presence of multi collinearity. Correlation coefficients of higher than 0.5 indicate that there are multi collinearity problems in the variables, which may require that the variables be changed.

In this study, a correlation coefficient of ≥ 0.5 was taken to indicate the presence of multi collinearity. From the correlation matrix in table 8, no multi collinearity problem was observed. Therefore the variables remained the same. The variables within the model specification were then applied to the logistic regression analysis below.

4.3 LOGIT REGRESSION RESULTS

This section discusses the logit regression results of factors that influence participation in the informal labor sector.

Table 9: Marginal Effects

Variable	dy/dx	z	P> z	X
Marital status*	.2430021	11.93	0.000	.336329
Education*	.0181185	2.81	0.005	.18228
Vocational*	.045866	3.00	0.003	.04409
Sexes*	-.0341871	-4.77	0.000	.496405
Location*	.0028991	1.17	0.243	.143582
Income*	-.0010435	-0.94	0.348	8128.76
Ages*	.0673277	7.72	0.000	.782405

(*) dy/dx is for discrete change of dummy variable from 0 to 1

DISCUSSION OF RESULTS

Education

Education displayed a positive and statistically significant relationship with informal sector participation. Individuals with secondary and post-secondary school education were 0.018 times more likely to participate in the informal sector than individuals with primary school education and less. This suggested that persons who advanced their education beyond completion of primary school had a higher probability of participating

in the informal sector, than persons whose education stagnated at/or below primary school level.

Other studies have also found that the level of education reached by a participant influences the sector one works in as well the choice of activity one engages in, and also that low levels of schooling prevent people from moving to modern types of activities both in the informal sector and in other sectors. (Chen, 2004; Kabubo, 2003 ; Sethuraman, 1998; Moghadam, 2001).

This study's findings imply that higher levels of education can lead to increased informal sector participation. Empirical evidence in this study shows that substantial numbers of Kenyan workers with higher levels of formal education are working in informal employment. While previously the highly educated almost always entered the formal sector for employment (Standing, 1978; Child (1973), this study confirms the current trend in Kenya that not all highly educated people are finding work in the formal economy. Bivens (2005), Buckley (1997) and Anyonga (2005) have noted that when the informal sector is able to generate economic opportunities that are comparable to those in other labor sectors, more participants with higher education levels may opt to participate in the informal sector. Also with retrenchments and redundancies causing shrinking of the formal sector (Sethuraman, 1998; Bivens, 2005), more highly educated people are turning to the informal sector for employment.

Vocational qualifications

Vocational qualifications had a positive and statistically significant relationship to informal sector participation. The probability that a person with vocational qualifications participated in the informal sector was 0.045 times greater than that of an individual with no vocational qualifications. This suggested that acquiring vocational qualifications can positively influence an individual's choice to participate in the informal sector.

These findings are corroborated by World Bank (2001) and United Nations studies such as (Nkinyangi, 1995; United Nations, 2000), which found that providing vocational training to informal sector participants empowered them to participate more productively in the informal sector.

A person's ability to acquire vocational qualifications is affected by one's literacy level and education level, as has been noted by authors who have found that low education levels can be a barrier to acquisition of vocational qualifications (Chen, 2004; ILO 2002).

However the World Bank (2001) has cautioned against over-emphasizing the role of education in vocational training, as this could lead to formalization of the informal sector.

The World Bank (2001) identified that the role of vocational qualifications in the informal sector was directly productivity enhancing. Thus the relevance of education to vocational training is not as an end in itself, but only to the extent that it provides an individual with the literacy level required to undertake vocational training.

Sexes

There was a negative, statistically significant relationship between being woman and participating in the Informal sector. The probability that a woman participated in the informal sector was 0.034 times less than that of a man. This implied that men were more likely to participate in the informal sector than women.

The findings can be partly explained by the findings of Atieno (2004) who used time-series data to demonstrate changes in women's informal sector participation between 1992 and 1997. Atieno (2004) found that while in 1992 land ownership was associated with significant increases in women's informal sector participation, in 1997 land ownership increased the chance of women's agricultural participation but simultaneously reduced women's participation in the informal sector. Fluctuations such as these can explain the current lower levels of female participation in the informal sector in Kenya.

Cotter et al. (2001) also analyzed how structural demand for female labor impacted gender differences in labor force participation. Using census data from labor markets, Cotter et al. (2001) showed that gender differences in labor force participation co-varies across time and space. Thus women's participation levels in the informal sector can rise and fall over time in response to prevailing conditions in the labor market.

Marital status

There was a positive and statistically significant relationship between informal sector participation and being in either a monogamous or polygamous marriage. The probability that a married person participated in the informal sector was 0.24 times greater than that of an unmarried individual. This suggested that comparatively more married people preferred working in the informal sector, than did the unmarried.

Heckman, (1980) and Hill (1983) have explained that married women tend to prefer working in the informal sector because of the flexibility it affords them to attend to domestic duties. Women's choices of activities in the informal sector have been found to be essentially an extension of women's domestic roles, and also the result of gender constraints imposed by society (Chen, 2004; Sethuraman, 1998; ILO; 2002). In order to participate in society's shared value systems in gender roles, married women tend to make choices consistent with the social expectations demanded of them as wives and mothers. (Sethuraman, 1998; ILO; 2002). Thus it has been argued that women's economic choices are more likely than men's to reflect their need to fulfill family-based, homemaking responsibilities rather than to enhance their professional aspirations (Sethuraman, 1998).

This would explain why more married than single women would tend to work in the informal sector, and why more single women seek work in other sectors of the economy. The tendency of married men to participate in the informal sector may perhaps arise from demand for additional resources with which to support his family and dependants.

times as unlikely for informal sector participants. This finding suggested that informal sector participants tend to earn less income than their counterparts in other sectors of the economy.

Similar trends have been observed in other African cities, and research has shown evidence that a large proportion of self employed and informal workers tend to belong to poor households. In other words informality is more often than not, correlated with the incidence of poverty (Kajuju, 2003; Chen, 2004; Charmes, 2000). Thus poverty is significant in discussing informal employment because in sub-Saharan Africa, strong associations are reported to exist between poverty and type of employment (Liebbrandt, 1998; Sethuraman, 1998). Bivens (2005) concluded that participation in the informal sector does not eliminate poverty, though it significantly reduces the depth and severity of poverty.

Location

There was a positive and significant relationship between being located in urban areas and participating in the informal sector. Participants located in urban areas were 0.003 times more likely to participate in the informal sector, than those who were located in the rural areas.

Other studies have found that people in urban locations are more likely to participate in the informal sector than people in rural sectors, owing to factors such as better infrastructure in urban areas than is available in rural areas (Mwatha, 1990; United Nations, 1999; Hein; 1986). Tiefenthaler's (1994) study also found that women who live

in urban areas are significantly more likely to participate in the formal sector than women who live in rural areas.

Ages

The relationship between age and informal sector participation was found to be positive and statistically significant. The probability of informal sector workers being above retirement age was 0.067 times greater than that of participants in other sectors. This meant that informal sector workers are more likely to work past retirement ages than people who work in other sectors. Some people retire from work in the formal sector and start businesses in the informal sector using their savings and retirement benefits (Sethuraman, 1998; Charmes, 2000). This trend can explain why more people in the informal sector can be found working past their retirement age.

The pseudo-r statistic for the logit model in this study is 0.2. This demonstrates that the level of variation in informal sector participation that is explained by the independent variables in the model is 0.2 out of a maximum of 1.

Thus the predictors included in this model explain 20% of variation in informal sector participation. This statistic suggests that the impact of socio-economic characteristics of an individual such as marital status, education, vocational education, and gender contribute 20% of variation in informal sector participation.

4.7 LIMITATIONS OF THE STUDY

The Integrated Labor Force Survey (ILFS) dataset used for this study was collected without cognizance to the specific objectives of this study. Therefore the data was not coded to accurately reflect the objectives of the research.

This limitation was corrected by applying binary coding to the variables. This helped to categorize data into relevant groups for purposes of empirical analysis in the study.

CHAPTER FIVE

5.1 SUMMARY

This section gives an overview of the findings of this study. The objectives of the study were to identify and analyze the determinants of labor participation in the informal sector in Kenya. After reviewing literature on the informal sector, the study used data from the Integrated Labor Force Survey (ILFS, 1998), to examine the determinants of informal sector participation in Kenya. The determinants selected for analysis included education level, vocational qualifications, marital status, location of participants, mean household income, age and sexes of participants. Descriptive statistics were analyzed and discussed, and logit regression results were used to estimate the predictors of informal sector participation.

The results showed positive and statistically significant relationships between informal sector participation and education level, vocational qualifications, marital status, locations and ages of participants. A negative and statistically significant relationship was found to exist between informal sector participation and mean household incomes, as well as sexes of participants.

Among the seven predictors, marital status was found to be the strongest predictor of informal sector participation, with married people being more likely to participate in the informal sector than unmarried people. The study concludes that socio-economic characteristics of individuals are important predictors of informal sector participation in Kenya.

5.2 POLICY IMPLICATIONS

The informal sector is an important source of economic sustenance, on which many Kenyans are economically dependent. This study found that advancement of education into secondary and post-secondary levels is associated with a higher probability of participating in the informal sector. With retrenchments and redundancies causing shrinking of the formal sector (Sethuraman, 1998; Bivens, 2005), more highly educated people are turning to the informal sector for employment. Therefore when the informal sector is able to generate economic opportunities comparable to those in other lucrative labor sectors, more participants with higher education levels may opt to participate in the informal sector. Therefore in keeping with the finding that the informal sector is becoming an employer to highly educated people, the government should invest in creating sufficiently sophisticated work opportunities in the informal sector, which the highly educated are skilled to take advantage of. This will help improve the overall productivity of the informal sector, and can over time contribute to poverty alleviation in Kenya.

The study also found that acquiring vocational training is associated with increases in informal sector participation. However, as low education levels can be a barrier to acquisition of vocational qualifications, the World Bank (2001) stated that relevance of education to vocational training is not as an end in itself, but only to the extent that it provides an individual with the literacy level required to undertake vocational training. The government policy of providing free primary school education for all Kenyans is a critical step in elimination of illiteracy, thus it will enable more Kenyans to acquire vocational training, and empowering them to respond to the economic challenges and opportunities not only in the formal labor market but also in the informal labor sector.

Further the realization that having vocational qualifications significantly contributes to higher informal sector participation suggests that government policies should aim at encouraging and supporting high quality vocational training, to the benefit of informal sector participants.

The study found that women are less likely to participate in the informal sector than men. Further, Cotter (1999) and Cotter et al. (2001) found that women's participation levels in the informal sector can rise and fall over time in response to prevailing conditions in the labor market. Therefore the government should implement policies aimed at encouraging and increasing female participation in the informal sector.

This finding that comparatively more married people preferred working in the informal sector than did the unmarried, suggested that the informal sector is a critical channel through which many Kenyan families can be assisted and empowered. Implementation of significant improvements in the informal sector, leads to uplifting the quality of life for many married participants who prefer informal sector work, and thereby for many children and dependants.

The study's finding that informal sector participants were less likely to earn above mean income than their counterparts in other sectors corroborates many studies which show that informality is more often than not, correlated with the incidence of poverty (Kajuku, 2003; Chen, 2004; Charmes, 2000). Thus poverty is significant in discussing informal employment because in sub-Saharan Africa, strong associations are reported to exist

between poverty and type of employment (Liebbrandt, 1998; Sethuraman, 1998). While informal sector participation does not eliminate poverty, it significantly reduces the depth and severity of poverty (Bivens, 2005). Thus the government should continue to strategically resource the informal sector as a means for poverty reduction in Kenya.

The study found that people living in urban locations were more likely to participate in the informal sector than were people in rural sectors. The higher quality of public services and infrastructure in urban areas compared to rural areas, can contribute to this trend. The government should prioritize enhancement of infrastructure in rural areas to encourage increased informal sector participation in the rural areas.

By strategically improving the quality of opportunities in the informal sector, the overall productivity of the informal sector in Kenya would be uplifted. A stronger informal sector in Kenya would impact the lives of many Kenyans who depend on the informal sector for their livelihoods.

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Appendix 1LOGIT REGRESSION RESULTS

Sector One Works	Coef.	Std. Err.	P>z
Income	-.0978127	.0496653	0.049
Location	.2362099	.0561831	0.000
Ages	.5409176	.0649646	0.000
Sexes	-.3656357	.0432979	0.000
Marital Status	1.983657	.0481962	0.000
Education	.1323873	.0557447	0.018
Vocational	.5210716	.081976	0.000

(*) dy/dx is for discrete change of dummy variable from 0 to 1, for marginal effects

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