DETERMINANTS OF FEMALE LABOUR FORCE PARTICIPATION IN SOUTH AFRICA IN 2008

By

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DECLARATION

I declare that this project write up; **Determinants of Female Labour Force Participation in South Africa in 2008** is my own work, that it has not been copied from anywhere, and that all sources I have used have been indicated and acknowledged by complete references.

YAKUBU A. YAKUBU Date: November 2009

Signed ……

DEDICATION

This work is dedicated to my mother **Ayishetu Yakubu Andani,** and to the **Andani's Royal family**.

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ABSTRACT

South Africa's female labour supply increased substantially over almost the past two decades. Female labour force participation is an imperative indication of the extent to which females participate in the economic activities of any country. Female Labour Force Participation (FLFP) rates have gained interest among researchers and development specialists worldwide due to their significant contribution in measuring progress related to gender disparities across various economic settings. Amsden (1980) further posits that there has been an increase in women contribution to modern sector activities. Despite the advances in female educational attainment and the expansion of the market economy, FLFP rates are still low in comparison with the rates of their male counterparts.

This study employs the Human Capital Theory (HCT), which postulates that the education of women is positively related to the likelihood of their labour force participation, in order to investigate quarterly dynamics in the labour force. This approach is an advancement of knowledge gained from previous studies such as Serumanga-Zake and Kotze (2004) and Ntuli (2004) who investigated the annual dynamics in FLFP. Investigating quarterly dynamics in FLFP is prudent as the market economy is very dynamic particularly at a point when the world economy is experiencing recession. Data for the study are extracted from the 2008 Quarterly Labour Force Survey conducted by Statistics South Africa. Logistic regression analysis modeling was employed with the dependent variable, FLFP, as a binary outcome. Other variables controlled in the analysis are gender, population group, age, marital status, education status, sector, main industry, main occupation and province. The results show that there is association between education status and FLFP status. Findings from this research are expected to contribute to the knowledge about trends in FLFP in South Africa and aid in planning of interventions aimed at improving the status of women as one of the critical steps in achieving the Millennium Development Goals.

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Key words: Labour market, Female labour force participation, Human Capital Theory, Employment, Economic sector, Socio-demographic, Logistic regression, South Africa.

ACRONYMS

FLFP: Female Labour Force Participation

FLF: Female Labour Force

LM: Labour Market

NEA: Not Economically Active

GDP: Gross Domestic Product

MDG: Millennium Development Goals

ILO: International Labour Organization

HCT: Human Capital Theory

HIV/AIDS: Human Immunovirus/Acquired Immune Deficiency Syndrome

EA: Enumeration Area

DU: Dwelling Unit

PSU: Primary Sampling Unit

PPS: Probability Proportional to Size

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QLFS: Quarterly Labour Force Survey

Q1: Quarter 1

Q2: Quarter 2

Q3: Quarter 3

Q4: Quarter 4

SADC: Southern Africa Development Community

SPSS: Statistical Package for Social Sciences

Stats SA: Statistics South Africa

UN: United Nations

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CHAPTER 1: INTRODUCTION

1.1 Introduction

South Africa's female labour supply has increased substantially over almost the past two decades Ntuli (2004). Female labour force participation is an imperative indication of the extent to which females participate in the economic activities of any country. Female Labour Force Participation (FLFP) rates have gained interest among researchers and development specialists worldwide due to their significant contribution in measuring progress related to gender disparities across various economic settings Amoateng *et. al* (2003). The literatures suggest that there have been increases in women contribution to modern sector activities Amsden (1980). Less developed countries are also experiencing increased trends in FLFP (ILO, 2005), statistical analyses from South Africa have shown a consistency with this trend (Ntuli, 2004). Despite the advances in female educational attainment and the expansion of the market economy, FLFP rates are still low in comparison with the rates of their male counterparts (Ntuli, 2004; Seumanga-Zake and Kotze, 2004). For instance, according to Ntuli (2004), in 2004, the labour force participation rate in South Africa, for males was 62% compared to 46% for females.

This study employs the Human Capital Theory (HCT), which postulates that the education of women is positively related to the likelihood of the labour force participation. This theory helps us to investigate quarterly dynamics in the labour force. This approach is an advancement of knowledge gained from previous studies such as Serumanga-Zake and Kotze (2004), and Ntuli (2004), both of who investigated the annual dynamics in FLFP. Investigating quarterly dynamics in FLFP is prudent, as the market economy is very dynamic particularly at a point when the world economy is experiencing recession. Data for the study were extracted from the 2008 Quarterly Labour Force Survey conducted by Statistics South Africa. Logistic regression analysis modeling is employed with the dependent variable, FLFP status, as a binary outcome. Other variables controlled in the analysis are gender, population group, age group, marital status, education status, sector, main industry, main occupation and province. The results show that there is an association between education status and FLFP status.

Findings from this research are expected to contribute to knowledge about trends in FLFP in South Africa, and aid in planning of interventions aimed at improving the status of women as one of the critical steps in achieving the Millennium Development Goals. This study investigates the differentials in female labour force participation (FLFP) in all the nine provinces of South Africa. The objectives of this study are to determine the participation rate of females in the labour market. It also seeks to investigate the effect of demographic characteristics on FLFP rates, and their potential implication in affecting their status.

This chapter begins with the socioeconomic background of South Africa in comparison with other SADC countries, followed by a discussion of the problem statement, purpose of the study [with a brief overview of the Millennium Development Goals (MDGs)], hypothesis, study significance, scope and limitations and lastly, definitions of key terms used in the study.

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1.2 Background

South Africa is the most dominant country in the Southern Africa Development Community (SADC), constituting about 20% of the population and contributing about 70% of Sub-Saharan Africa's Gross Domestic Product (GDP) (World Bank, 2006). SADC is a fourteen-member regional community, and South Africa's average per capita income is much higher than the average per capita income in Sub-Saharan Africa Solomon (2003). According to Solomon (2003), South Africa's average per capita income is nearly thirty six (36) times higher than the average per capita income in Mozambique. Thus, the South African economic position makes it attractive to immigrants from the SADC countries, and from all other African countries and beyond. This study will focus on FLFP rates for individuals aged 15 to 64 years inclusive (*potential labour force*).

The results of the analyses will be presented by women's socioeconomic characteristics such as age, gender, marital status, province of residence and educational level. Furthermore, the female participation in the labour force will be investigated by

examining socio-economic variables such as the type of activity, occupation, work status, economic sector, employment status, and activity rate.

1.3 Problem Statement

Female labour force participation is an imperative indicator of the extent of females' participation in the labour market. Interests in FLFP worldwide led to many discussions in a series of historical studies in both the developed and developing nations (Bowen and Finegan 1969; Boserup 1970; Smith 1980). According to Ntuli (2004), the early literature on FLFP suggests that the bulk of women's activities take place in the home or in the informal sector as a non-market activity. Amsden (1980) posits that there has been an increase in women contribution to modern sector activities. In less developed nations, an increasing trend of FLFP has also been documented (ILO, 2005), and in South Africa, statistical analyses have shown consistency with this trend. However, FLFP rates are still low in comparison with their male counterparts (Ntuli, 2004). For example, in 1999 it was 59.4% and 44.2% for males and females respectively. According to Moghadam (1998), the increase results from advances made in females' educational attainment and the expansion of the market economy.

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Despite the vast literature on FLFP rates, these studies mainly concentrated on studies that looked at short periods of usually one year to investigate determinants of FLFP. Other studies (e.g., Serumanga-Zake and Kotze, 2004; Bhorat and Leibbrandt, 2001) used the usual one year period and looked at married women. Other attempts also considered longer periods of usually a decade. For example, in the study of determinants of FLFP in South Korea, Nam (1991) used a ten-year period. Similar attempts have been made in South Africa to investigate and provide answers to FLFP, Ntuli (2004). All these works provide answers on factors of FLFP in the country, but these findings are inconclusive if shorter periods (quarterly dynamics) are left uninvestigated to inform policy-makers. Policy issues could be the bedrock of the immense interests in FLFP.

Investigating quarterly information on the labour market underscores the uniqueness of this research and significantly differs from earlier studies. The central questions of this study then are:

- What is the effect of education on FLFP?
- What are some of the demographic characteristic determinants of FLFP?
- Are there differentials in participation of females in the labour force across all nine provinces of South Africa?
- What are the economic sectors that are mostly attractive to females'?
- What are the age groups most common among female members of the labour force?
- Are there significant differentials in FLFP rates between the quarters of 2008?

1.4 Purpose of the study

This study investigates the socio-demographic determinants of FLFP in each quarter of the reference period, 2008. It also examines differentials in labour market (LM) participation of females across all the nine provinces of South Africa. Furthermore, the study seeks to contribute in providing information on the determinants of female labour force participation in the country needed by the government towards the attainment of the MDGs.

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The Millennium Development Goals (MDGs) are eight goals, set to be achieved by 2015 in response to the world's main development challenges. The MDGs are drawn from the actions and targets contained in the Millennium Declaration that was adopted by 189 nations-and signed by 147 Heads of State and Governments during the United Nations Millennium Summit in September 2000, http://www.undp.org/mdg/basics.shtml [25.05.09]

These eight MDGs are further broken down into 21 quantifiable targets that are measured by 60 indicators. The eight goals are:

- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health

- Goal 6: Combat HIV/AIDS, malaria and other diseases
- Goal 7: Ensure environmental sustainability
- Goal 8: Develop a Global Partnership for Development

The eradication of poverty is the number one goal in the United Nations' MDGs. The table below gives the indicators of achieving the poverty dimension of the eight goals.

Table 1.1: The MDGs targets

Target 1a: Reduce by half the proportion of people living on less than a dollar a day
1.1 Proportion of population below $1 (PPP) per day 1.2 Poverty gap ratio 1.3 Share of poorest quintile in national consumption
Target 1b: Achieve full and productive employment and decent work for all, including women and young people
1.4 Growth rate of GDP per person employed 1.5 Employment-to-population ratio 1.6 Proportion of employed people living below $1 (PPP) per day 1.7 Proportion of own-account and contributing family workers in total employment
Target 1c: Reduce by half the proportion of people who suffer from hunger
1.8 Prevalence of underweight children under-five years of age 1.9 Proportion of population below minimum level of dietary energy consumption

Source: htpp://undp.org/goal.shtml [25.05.09]

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1.5 Objectives of the study

In the reference period (2008), the six core objectives of this study are:

- To determine the rate of female labour market participation in South Africa in 2008.
- To highlight the demographic determinants of FLFP in 2008.
- To examine the relationship between education and female labour market participation rate in South Africa.
- To establish the differentials across the nine provinces with regards to FLFP in SA labour market.
- To investigate the effect of other demographic characteristics of females on their employment status such as age, marital status, number of children under six years.

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1.6 Hypothesis

- Female education is positively related to participation in the labour force.
  This hypothesis is quite consistent with human capital ideological postulation buttressing the imperativeness of education and training as this opens females' opportunity in the labour market.
- There are differentials in participation of females in the labour force across the nine provinces of South Africa.
- Females are more likely to participate in the informal sector than the formal sector. FLFP is highest among those in the age groups 24-29 and 30-34.

1.7 Significance of the study

The study will provide information that will help to clarify and enhance knowledge in the participation of FLFP in the labour force across all provinces in South Africa.

1.8 Scope and limitations of the study

The delimitations of the findings of this study is related to fertility, (number of respondents children under six years) income and. This negatively affects mother's labour force participation as they spend time on child bearing/rearing.

Income/wage levels also affect labour force participation. As buttressed by Fosu (1999), a woman's decision to participate in the labour force is mainly related to her market wage expectation and shadow price of time.

1.9 Definitions of key terms

Statistics South Africa in conducting the Quarterly Labour Force Survey, takes in account, all the operational definitions which are consistent with the United Nations and International Labour Organizations definitions (.Statistics South Africa, 2008). These terms include:

1.9.1 2001 Population Census

South African 2001 National Census was conducted on the 9th - 10th of October 2001. Information was collected from all persons and households throughout the country (Statistics South Africa, 2003).

1.9.2 Labour force

This refers to the total number of people aged 15-64 years, and categorized as employed or unemployed seeking for work (United Nations 2001).

1.9.3 Participant

A person is said to be a participant in the labour force if he/she is either employed, or unemployed but actively looking for employment (United Nations 2001).

1.9.4 Major labour market rates

Some of these labour market rates are defined and obtained by the relations below;

1.9.4.1 Participation rate

This is the number of people in the labour force expressed as a percentage of working age population (15-64),

$FLF\ \Pr ate = Female(empld + unempld) * 100 \big/ female(15-64)$, (Statistics South Africa, 2008)

1.9.4.2 Absorption rate

$Absorption.rate = Female.empld * 100 / Females(15-64)$, (Statistics South Africa, 2008)

1.9.4.3 Unemployment rate

$Unemployment.rate = unemployment * 100 / unemployed + employed$, (Statistics South Africa, 2008)

Where, empld = employed people

Unempld = unemployed people.

1.9.5 Household

This comprises of one or more people who live together and provide for themselves jointly with food and or other essentials for living. They must have stayed together for at least four nights a week on average within the previous four weeks. (Statistics South Africa, 2008)

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1.9.6 Educational status

Only qualifications already obtained were entered. That means the current level, whereby a person is still busy with is not applicable. Diplomas and certificates must be programmes of at least six months duration. (Statistics South Africa, 2008).

1.9.7 FLFP- Female labour force participation

Full/part time female workers, non-workers looking for work, or those who are temporarily not working.

1.9.8 Female participation

This is the process of females taking part in some kind of socio-economic, political or cultural activities with a reward motive.

1.9.9 Female labour force participation rate

This is the number of females' in the labour force expressed as a percentage of the female working age (15-64) population.

i.e., $FLF\ \Pr ate = Female(empld + unempld) * {}^{100}\!/_{female(15-64)}$

Where, empld = employed people

Unempld = unemployed people.

1.9.10 Population of working age

People aged 15–64 years (*Potential labour force*) (Statistics South Africa, 2008).

1.9.11 Not economically active population

This includes people who are not available for work, such as full-time scholars and students, full-time homemakers/housewives, those who are retired, and those who are unable or unwilling to work. (Statistics South Africa, 2008).

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1.9.12 Economically active population

This includes people aged 15–65 who are employed, and those not employed (Statistics South Africa, 2008).

1.9.13 Official and expanded definition of unemployment

Statistics South Africa (Stats SA) uses the following definition of unemployment as its official definition. The unemployed are those people within the economically active population who:

- did not work during the seven days prior to the interview,
- want to work and are available to start work within two weeks of the interview, and,
- have taken active steps to look for work or start some form of self-employment in the four weeks prior to the interview.

The expanded definition of unemployment excludes the last criterion.

1.9.14 Workers include the self-employed, employers and employees (Statistics South Africa)

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter provides a review of the literature on global FLFP patterns with emphasis on South Africa. This is then followed by a review of the human capital theory, the demographic variables, and a summary.

2.2 Review of FLFP in the world

In South Africa under the apartheid system, black women went through discrimination, and their integration into the labour market was hampered by the legacies of the protracted discrimination (Ntuli, 2004). With the demise of the apartheid system in 1994, the constitutional government brought in fundamental constitutional changes to bring about fairness in access and equity in the treatment of women in the labour market (Van der Berg *et. al*., 2001) such as the Employment Equity Act, 55 of 1998 and the Skills Development Act of 1998. As an example, the Skills Development Act of 1998 is intended to provide framework for institutions to devise and implement national, sector, and workplace strategies for the development and improvement in the skills of the South African workforce by providing "learnerships" for the young and unemployed (Malala, 2000,77). The Employment Equity Act was introduced to achieve equity in the workplace. These polices gave rise to important strides in absorbing females in the labour market of the post apartheid South Africa (Casale, 2003).

There is a huge literature like the first work on FLFP by Mincer (1962), the study of determinants of FLFP in South Korea by Nam (1991), and South African Human Capital in the 1990s by (Amoateng *et. al*, 2003), on the labour market worldwide and its related issues in general and the gender aspects of it in particular. The results of some of these studies on gender aspects of labour market have been insightful. To operationalize FLFP, Female Labour Force Participation indicates the extent of female involvement in the economic activities of a country. The concept of FLFP is quite immense, and has been growing ever since the first work by Mincer (1962). In this work he used husband's income as a proxy for wife's non-labour income to demonstrate the empirical importance

of income and substitution effect of female labour supply (FLS), and the value of treating the family as an economic decision-making entity.

FLFP has been discussed in many studies across the developed and developing countries (Smith 1980; Bowen and Finnegan, 1969). All of these indicating increase pattern of FLFP. As an example, according to Nam (1991), the FLFP rates between 1970 and 1980 increased substantially from fifteen to twenty three per cent (15% to 23%) respectively, a net increase of eight points. This increase means an increase in female participation in economic activities in the economy with a positive impact on economic development. The contribution of FLFP in the economic development of developing countries has been researched and documented by Boserup (1970). With the positive impact of FLFP on economic development, the decision of females to participate in the labour market or not is another area for future research.

In female labour market participation, the decision not to participate in the labour market does not necessarily reflect a woman's own choice nor does it always match the optimal use of resources of the household (World Bank 1995b). Discrimination in the household and in the labour market does not only carry private costs for households and individuals, but also social costs for the society (Harry, 2005). According to Addison (1993), FLFP is on the average lower compared to that of males because they have lower opportunity costs of non-participation when their wages are low. Rates of unemployment are often higher among females, as their opportunity costs of searching for jobs are low, and discrimination in hiring results in lower job-opening rate for them (Addison, 1993). There are gender issues in the labour market arising from discrimination against women. According to Serumanga-Zake and Naude (2000), gender discrimination exists in the labour market of South Africa.

Gender equality in the labour market would be a positive step in the fight against poverty, when female unemployment is reduced and gender wage gaps throughout the World is addressed. Achieving gender equality is considered as a very critical ingredient in the fight against poverty in the poverty reduction initiatives, and has thus become a

development objective. The United Nations Millennium Development Goals (MDGs) categorically states gender equality as one of the eight targets (Ntuli, 2004). The MDGs document in fact considers women empowerment as essential to achieving all its goals. According to Ntuli (2004), gender inequality has become both an economic and political issue and it has therefore been widely studied, particularly in the industrialized nations.

Studies on gender wage inequality and labour market discrimination in the labour market have shown that females generally get paid at rates lower than their male counterparts even after controlling for their differences in human capital like education and working experience (Psacharopoulos and Tzannatos, 1992). For instance in Malaysia, women earn about twenty percent (20%) less than men in the same occupation categories (Schafgan, 2000). Clearly, this form of discrimination against women will have a negative impact on FLFP in the labour market. At higher wages and better salaries, there is a higher female labour supply (Fosu, 1999). It is generally assumed that when the own-wage substitution effect (leisure vs. work) outweighs the related income effect, such that the higher the wage is, the more likely the individual will decide to increase the hours of work, or will choose to work (Joll et., al. 1983). This conforms to the neo-classical economists labour supply theories expectation that labour will prefer more hours of work to leisure. From this theory (Froyen, 2002), labour supply is dependent positively on real wage N^s given as:

N^s = g **(w/p)**

Where W = Money wage

P = Price level

(W/P) = Real wage

This formulation is based on the reasoning that individuals seek to maximize utility which is a function of real income and leisure. Any rise in real wage increases the income that could be gained from one hour of labour, or viewed in the reverse, increases the opportunity cost of taking one hour of labour. In fact, the assumption is that increases in real wage will increase labour supply (Froyen, 2002).

From above theoretical viewpoint, at lower wage rates, female labour supply will be lower than that of males. According to Fosu (1999), a woman's decision to participate in the labour force is mainly related to her market wage expectation and shadow price of time. Generally, women have lower participation rates than males because when some of them leave the labour force for reasons of marriage, childbearing and childrearing, their labour force participation rates tend to decline. Timing, although is not a unitary concept, age is the primary indicator of biological and social time life course (Amoateng et al., 2003).

2.3 Theoretical framework

There are many theories that discuss issues of FLFP. The significance of these theories is to help understand the dynamics of female labour in the LM. This section highlights some of these theories.

2.3.1 Theoretical review

Human capital models and related theories suggest that FLFP (L) is influenced by factors such as women's productive opportunities as reflected by their level of education (E), her non-human capital assets (A), child survival rate and the social environment (T) in which they live (Harry, 2005). Also, economic theories suggest that FLFP and fertility are decision variables that are jointly determined by some common set of exogenous variable (McCabe and Rosenzweig, 1976). Thus the model;

$$\mathbf{L = l\,(E, A, S, T),}$$

Where;

L = Female Labour Force Participation

E = Level of education

S = Child survival rate

T = Social environment.

In the labour market, there are other factors like technology, industrialization and urbanization that come with their effects on of FLFP.

According to Kuznets hypothesis (1950s), technology, industrialization and urbanization, lower the demands for unskilled labour (Williamson and Higgins 2003). This dimension is very much relevant to South Africa and compounded by the apartheid system (Amoateng *et al*. 2003). Modernization is usually characterized by industrialization that comes with changes in occupational structure and demands for skilled labour (Nam, 1991). From the modernization perspective, economic development increases FLFP through changes in the country's occupational structure (i.e., increasing jobs in service and white-color occupations) and increased educational opportunities. These changes are often accompanied by reduced fertility rates and household responsibilities (Collver and Langlois 1962; Wilensky 1968). These structural changes generate a greater demand for, as well as a greater supply of female workers.

According to Nam (1991), in the midst of mixed empirical findings, a strong research tradition supports Human Capital Theory (see section 2.3) as a theoretical framework to explain and predict the relationship between education and FLFP. Essentially, women with higher levels of education are more likely to be active in the labour market, and increased FLFP will be realised from increased educational levels of women.

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A different view is offered by the world system's perspective. This system explains rising FLFP in relation to the economic structure and labour processes associated with low-wage labour, which gives developing countries a comparative advantage in the world economy (Nam, 1991). Since females are usually employed at lower wages than males, labour-intensive industries look for female workers, particularly those who are young, single, and semiskilled (Cho and Koo 1983; Grossman 1979). Women who migrate from the rural areas to cities in search of jobs provide an inexpensive, docile work force that raises the profit level for both local and foreign capitalists (Nam, 1991).

Thus, from the world system point of view, according to Nam (1991), FLFP is a survival strategy of the lower working-class families as a supplement to the low family income. This underscores the postulation that females from lower working-class families are more likely to become active in the labour force Nam (1991). Furthermore, increasing industrialization raises FLFP, since developing world industrialization is based on low-

wage labour, and thus, exacerbates the already marginalized condition of working-class people caused by the increasing gap between the cost of living and inadequate income (Nam, 1991). The emancipation hypothesis by Shorter (1973), cited by William and Wazienski (1999), found a direct relationship between industrialization and increasing female employment and freedom. The argument put forward by Shorter (1973), was that of supremacy and patriarchy in the reindustrialized Europe when women submitted to their husbands and fathers as a result of patriarchal control of the household economy. According to Scott and Tilly (1975), a more complex relationship exists between industrialization, women's work and emancipation, than as the direct relationship posits by Shorter (1973). A curvilinear relationship between industrialization and FLFP was put forward by Scott and Tilly (1975). This means that FLFP declines during the early phase of industrialization, bottoms out in the middle phase, and then increases in the latter phase, thus giving negative, zero, or even positive correlation (Scott and Tilly 1975). The work of the entire processes by Scott and Tilly (1975) of FLFP's decline, bottoms out and then increase in the industrial transition is known as the U-hypothesis. (ref)

In the demographic transition, high birth rates and declining death rates resulted in rapid population growth (William and Robert, 1999). Seen in the industrial transition is an analogous dislocation, where work roles move from subsistence agriculture to modern and mechanized farms and factories. Women have highly visibly significant roles in the first setting but not in the second. This transition increases men work opportunities while decreasing that of women (William and Robert, 1999). The U-hypothesis is supported by William and Robert (1999), as they found that early industrialization decreases FLFP by removing females from agriculture and at the same time excludes them from manufacturing and management. Increase in female educational opportunities that boosts female human capital and access to the labour market may be associated with the increase in FLFP in the latter phase of the industrial transition. The effect of female education and demographic characteristics on FLFP is the core of this work. The theoretical paradigm of contestation is the Human Capital theory (HCT).

2.3.2 Human capital theory

The human capital stock concept according to Rhoda (1998) has been extensively used by labour economists since the 1960s. The individual's capital stock has an 'innate ability', and can be extended to (1) prior participation in the labour force by education, (2) during employment by on-the-job training and (3) experience. The theory postulates that those women with middle school education or higher are more economically active than those without formal education (Nam, 1999).

Rhoda (1998) posits that an individual's lifetime earnings usually shows a one-off return for formal education, and subsequent salary increases to reflect one's years of experience and job training on a specific area. According to Pierce-Brown (1998), in the study of male-female wage gap, the first distinctive approach from economics to analysis of the gap is based on Human Capital Theory (HCT). The theory lays emphasis on the voluntary choices in the lifetime of participants in the workforce as determinants of differences in occupation and remuneration. The early proponents of the HCT, Becker (1975) presented an explanation that over women's working life, they are on the average, less productive when compared to men because they tend to take break from employed jobs for maternity leave and child-care. Furthermore, they bear the responsibility of the unremunerated domestic chores.

Thus, the HCT emphasizes the importance of education and training in the development of human capital. Governments' poverty eradication strategies are consistent with HCT, and according to Serumanga-Zake and Kotze (2004), in order to tackle the problem of poverty, the SA government has adopted an economic development strategies focusing on developing human resources as reflected in the national budget of 2005, and in subsequent budgets.

2.4 Review of demographic variables

2.4.1 Age

The total population and the rate of population growth are important indicators of labour supply. In every country not all inhabitants physically avail themselves as workers or are part of the workforce at a particular time. Some are potential workers like scholars who may join the workforce in the future. According to Stats SA (2003b), children younger than 15 years and the aged people sixty five years and above who depend on the working parents or relatives and on other social welfare provisions for subsistence can be regarded as not economically active.

2.4.2 Educational status

In modern times, there has been an increase in women's participation in modern sector employment activities (Amden, 1980). This increase has been significant due to increase and advances made in female education attainment and the expansion of the market economy (Moghadam 1998; Maglad 1998). The education of women in general is expected to have a positive impact on the participation in the labour market, and also expected to reduce the number (control their fertility) of children born to a woman by producing the number of children in conformity to their desire (Mason 1986). This imperatively derives from the high opportunity cost of having many children and not participating in the labour market after acquiring a higher level of education. A growing empirical literature on gender equality suggest that gender equality in education raises social welfare through economic growth, reduced fertility, child mortality and under-nutrition (Coleman 2004).

It is a general view and consistent with the HCT that education and training increases women's opportunity in the labour market. With this view, there will be a general and legimate expectation that women who have attained higher education and offer their labour in the labour market would be employed. In addition, by virtue of the availability of better quality jobs and better wages to well-educated women, these women ought to decide to participate in the labour market instead of choosing to keep to housekeeping/domestic chores as alternative activities (Mlatsheni and Leibrandt 2001). The above view is supposed to hold except in instances where a gain from home productivity accruing from higher education attainment outweighs gains from labour

market productivity. This could occur in instances where significance is given to "Quality of Children" (Harry 2005).

Education is largely correlated with growth of the economy, which, in turn affects the pattern of FLFP. A general expansion of education though, tend to lower the overall level of labour market participation, since it raises the average age of labour force entry, education is postulated to have positive affect FLFP in the long run.

The relationship between education and FLFP on an individual level is summarized by Standing's three postulations (1981): the opportunity cost argument, the relative employment opportunity argument, and the aspiration argument (Nam 1991). Firstly, education provides people a positive incentive to look for employment, since education is an investment that is positively correlated with earning's potential. As a result, it raises the opportunity cost of economic inactivity (Bowen and Finnegan 1969). Secondly, raising educational levels of females equip them, particularly younger females, with good educational qualifications that meet the demands of the changing economy (Nam 1991). Employers will usually positively react to the availability of a qualified female work force, instead of older male workers whose educational qualifications accord them employment opportunities (Long 1958; Oppenheimer 1970). Thirdly, as educational levels determine income aspirations and expectation, well-educated females have a higher income aspiration over their less-educated counterparts, and tend to be more active in the labour market (Cain 1966; Morgan *et al*. 1962).

According to Nam (1991), while a positive correlation between levels of education and FLFP has been postulated theoretically, empirical studies in Third World countries present more complex patterns. Using simple literacy-illiteracy dichotomies, Nagi (1971) and Farooq (1972) found a positive relationship between education and FLFP. According to Pang (1974), other researchers, using more detailed educational measures, found that variables such as age, marital status, presence or number of children, and husband's education affect the relationship between education and FLFP. On the other hand, Maurer

et al. (1973), reported a negative association in the nonagricultural labour force in Thailand.

In the post-apartheid system, a series of educational reforms began with the National Educational Policy in 1995 (Amoateng *et. al*. 2003). According to Malala (2000), as cited by Serumanga-Zake and Kotze (2004), the "aim of the Higher Education Act is to ensure that tertiary institutions are more representative of the demographics of the country" The Presidential jobs summit in 1998, according to Luthuli and Gumede (1998) considered emerging graduate unemployment, especially amongst those graduates from Universities like University of Limpopo, traditionally seen as black universities to be high.

2.4.3 Marital status

According to Ntuli (2004), marital status shows the presence or absence of roles such as child bearing and rearing which competes with the work of women out of the home. Marriage and career are often incompatible since they bear a disproportionate task of housework and child care burden (Jungmin 2005). According to Jungmin (2005), marriage, particularly in the developing countries, is a strong deterrent to market activities among women. According to Becker (1973), the impact on LFP can be investigated with reference to the marriage market. Grossbard-Shechtman (1984), points out that spouses can be seen as providers of a type of domestic production such as cooking, childbearing and cleaning the house which have market substitutes. Labour market balance between male and female is expected to develop in favour of women.

2.4.4 Fertility

Female LM participation cannot be discussed in isolation of fertility. According to Glick and Sahn (1997), as cited by Ntuli (2004), generally, fertility can either have a positive or negative effect on females labour force participation. Married women have lower participation rates than males, because when some of them leave the labour force for reasons of marriage, childbearing and childrearing, their age-specific labour force participation rates tend to decline (Amoateng et. al. 2003).

The absence of fertility in the data could thus compromise the findings of the study.

2.4.5 Income

Income is also a missing variable in the QLFS questionnaire. This also has a potential compromising effect on the results. From theoretical point of view according to Fosu (1999), , at lower wage rates, female labour supply will be lower than that of males, and as buttressed by Fosu (1999), a woman's decision to be part of the labour force is mainly related to her market wage expectation and shadow price of time.

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CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter discusses the methods used in this study by focusing on the data, study design, research setting, participants, measurement tools, and procedures. The chapter ends with the statistical analytical methods used.

3.2 Data and Study Design

The Master Sample has been developed by Stats SA as a general-purpose household survey frame that can be used by all other household surveys irrespective of the sample size requirement of the survey. The sample size for the Quarterly Labour Force Survey (QLFS) is roughly 30 000 dwellings (ref). The sample is based on information collected during the 2001 Population Census conducted by Stats SA. In preparation for Census 2001, the country was divided into 80 787 enumeration areas (EAs). Some of these EAs are small in terms of the number of households that were enumerated in them at the time of Census 2001. Stats SA's household-based surveys use a Master Sample of Primary Sampling units (PSUs), which comprises EAs that are drawn from across the country. For the purposes of the Master Sample, the EAs that contained fewer than 25 households were excluded from the sampling frame, and those that contained between 25 and 99 households were combined with other EAs of the same geographic type to form Primary Sampling Units (PSUs). The number of EAs per PSU ranges between one and four. On the other hand, very large EAs represent two or more PSUs.

The sample is designed to be representative at provincial level and within provinces at the metro/non-metro level. Within the metros, the sample is further distributed by geography type. The four geography types are: urban formal, urban informal, farms, and tribal. Tribal areas are outside the city/town boundaries and commercial farm areas that are governed by tribal authority (chief, headman, etc). This implies that, for example, within a metropolitan area, the sample is designed to be representative at the different geography types that may exist within that metro.

The current sample size for the Master Sample is 3 080 PSUs. It is equally divided into four subgroups or panels called rotation groups. The rotation groups are designed in such a way that each of these groups has the same distribution pattern as that which is observed in the whole sample. They are numbered from one to four, and these numbers also correspond to the quarters of the year in which the sample will be rotated for the particular group. Therefore, the data are analyzed quarterly.

The sample for the redesigned Labour Force Survey is based on a stratified two-stage design with probability proportional to size (PPS) sampling of PSUs in the first stage, and sampling of dwelling units (DUs) with systematic sampling in the second stage.
The data obtained from household questionnaires relating to 2008 QLFS of South Africa was re-coded and analyzed, using the Statistical Package for Social Sciences (SPSS).

3.3 Study population

The study population includes households living in the selected dwellings sampled in South Africa. It also focuses on female participants who are economically active and aged between 15-64 years. Female participation in the labour force will be investigated by looking at the socio-economic variables such as the type of occupation, economic sector, income category, employment status, age specific activity rate, main economic activities and work status instruments. The instruments used in this study were based on the household questionnaire designed for the South Africa QLFS by the Household Labour Market Statistics Division.

3.4 Variables under study

The main variables used in this study were divided into three groups according to the following characteristics: demographic, socio-economic and place of residence.

3.4.1 Demographic characteristics

This section takes a look at the questionnaire, and indicates how the questions regarding the demographic variables were asked.

3.4.1.1 Age

The question used in the household questionnaire to determine the participants age is "what is (the person's) date of birth and age in completed years?". If the date of birth is unknown, the participants were asked about his age in completed years. This question was asked for each member of the household. The instruction was to write the age in completed years to the nearest whole numbers and not in words. Thus, if a person was two years and six months, the instruction was to write the two completed years. For children aged less than a year, the instruction was to write 000.

If age is still not known, an estimate of age will be used. Then, the age was transferred and re-coded into groups using SPSS as follows:

(1) 15-19, (2) 20-24, (3) 25-29, (4) 30-34, (5) 35-39, (6) 40-44,
(7) 45-49, (8) 50-54, (9) 55-59, (10) 60-64

3.4.1.2 Sex

The question used is "Is (person) a male or female?". If the person was absent at the time of interview, the enumerator had to ask other family members whether the person is male or female and not to decide on the person's gender based on name. The variable was coded as follows: (1) Male, and (2) Female. For the analyses, we controlled for females.

3.4.1.3 Population group

The question used is "What population group does (person) belong to?". The variable was coded as: (1) African/Black, (2) Coloured, (3) Indian/Asian, (4) White, and (5) Other.

3.4.1.4 Marital Status

The participant's marital status was determined with the question: "What is the (person's) present marital status?" This question has been divided into five categories as follows: (1) Married, (2) Living together like husband and wife, (3) Widower/widow, (4) Divorced or Separated, and (5) Never married.

3.4.1.5 Education Status

This is the variable used for analyses in the study and derived from Question 1.7 of the questionnaire: The question asked was "What is the highest level of education that the person has successfully completed"?

The final code list included:

1= No schooling
2= Less than primary completed
3= Primary completed
4= Secondary not completed
4= Secondary not completed
5= Secondary completed
6= Tertiary
7= Other

3.4.1.6 Province of residence

The respondent's usual place of residence, i.e. "Where does the person usually live?" This was re-coded according to the provinces in the country as follows: (1) WC: Western Cape; (2) EC: Eastern Cape; (3) NC: Northern Cape, (4) FS: Free State; (5) KN: KwaZulu-Natal; (6) NW: North West; (7) GP: Gauteng; (8) MP: Mpumalanga; and (9) NP: Northern Province (now Limpopo)

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3.4.2 Socio-economic characteristics

The socio-economic variables are discussed in details in this section. We looked at Main economic activities, work activities, reason for not working, major LM categories, and occupation occupation.

3.4.2.1 Economic activities

The question was "In the last week, did you: (a) Do any work for a wage, salary, commission or any payment in kind (excluding domestic work)?

(b) Operate or do any kind of business, big or small, for himself/herself, or with one or more partners?

(c) Help unpaid in a household business of any kind?

These questions were applicable to all household members aged 15 years and older, regarding their involvement in economic activities in the seven days prior to the

interview. This part of the questionnaire sought to bring a differentiation between the economically active population and those who are not economically active. The enumerators were instructed to consider those activities that lasted for at least an hour within the last seven days.

3. 4. 2. 2 Main economic activities

This is a derived variable and indicates the economic sector in which the person works. The variable has been grouped into the following twelve categories:

1 = Agriculture, hunting and forestry
2 = Mining
3 = Manufacturing
4 = Electricity, gas and water
5 = Construction
6 = Wholesale and retail trade
7 = Transport, storage and communication
8 = Finance and business services
9 = Community, social and personal services
10 = Private households
11 = Other
12 = Not applicable

3.4.2.3 Reasons for not working

Those aged 15 years and older who were not working were asked "what is the main reason why they (the person) did not have work in the seven days before the interview date" The question was grouped into seven categories as follows:

(1) Scholar or student,
(2) Home-maker or housewife,
(3) Pensioner or retired person/too old to work,
(4) Unable to work due to illness or disability,
(5) Seasonal worker not working presently,
(6) Does not choose to work, and
(7) Could not find work.

The operational definitions in chapter one was taken into consideration, and data was controlled for working age female population.

3.4.2.4 Major Labour Market Categories

This variable indicates the employment status of all persons in the household aged between 15 years and older (population of working age). An unemployed person is defined as "a person within the economically active population who: did not work during the seven days prior to census night, and would have liked to work, and was available to start work within a week before the interview and had taken active steps to look for work or to start some form of business in the four weeks prior to the interview" (United Nations 2001). The variable was grouped into four categories as follows: (1) Employed, (2) Unemployed, and (3) Not economically active and (4) discouraged job seekers. The variable Female Labour Force Participation status (FLFP status) was regrouped in SPSS with categories 1 and 2 = 1 and categories 3 and 4 = 0 and re-coded as Yes and No i.e., participate and not participate respectively.

3.4.2.5 Occupation

Occupation refers to the person's type of work, and only people who were employed aged 15 years and above were asked their occupation. Re-coding was done using SPSS into nine categories as follows: (1) Legislators, senior officials and managers, (2) Professionals, (3) Technicians and associate professionals, (4) Clerks, (5) Service workers, shop and market sales workers, (6) Skilled agricultural and fishery workers, (7) Craft and related trades workers, (8) Plant and machine operators and assemblers, and (9) Elementary occupations.

3.5 Methods

The Logistic regression model was used in the study. The model was employed for two reasons:

(1) The model is useful in understanding the relationship between the predictors or explanatory variables and the binary response variable or dependent variable.

(2) The choice of this technique is also based on the fact that the dependent variable is dichotomous (participate and not participate).

It is used in this study to examine female labour force participation status in the South African labour market.

The form of the logistic regression model is as follows:

Logit (p_i) = ln [p_i / (1- p_i] = b_i x_i

With p_i being the probability that a woman participates in the labour force, b^i stands for the regression coefficient, x_i being the independent covariates, and the ratio [p_i/(1- p_i] being the odds that a woman participate in the labour force .

By taking the exponent of each b_i, that is, exp (b_i), the result is interpreted as the relative odds of participating in the labour force for women with characteristics x_i relative to individuals in the reference group.

The model helps to investigate the effect of the demographic variables (x_i) on the female labour force participation status. These variables consist of age group, educational level, marital status, population group and province of residence. The dependent or response variable is FLFP status, which takes the value of 1 for participate and 0 for not participate.

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For the distributions by demographic characteristics, the mean of each category within variables were computed to obtain the mean as the annual rate. We also, compared Quarter 1 to Quarter 4 for the reason being that investigating quarterly dynamics in FLFP is prudent as the market economy is very dynamic, particularly at a point when the world economy is experiencing recession.

CHAPTER 4: FINDINGS OF THE STUDY

4.1 Introduction

This chapter looks at females' population of working age, economic sectors of females' activities, their labour market (LM) participation by demographic variables, and logistic regression analysis and results of the study.

4.2 Demographic characteristics

This section looks at participation in the LM according to demographic variables.

4.2.1 Population group

Table 4.1 shows the analysis of the racial composition of the population of working age. The analysis shows that for all quarters of 2008, female population of working age (15-64) was predominantly Black/African females, occupying 80% in quarters 1 and 2 (Q1 and Q2), which reduced by a percentage point to 79% in the last two quarters (Q3 and Q4). On the average, the Coloured, White and Indian/Asian groups were next in terms of proportion at 11%, 7% and 2% respectively across all quarters. This composition reflects the population structure of South Africa according to census 2001. However, while African and Coloured showed increases in their proportions and almost constant for the Indian race, it is shown that there is a reduction of about three points for Whites in 2008 from 2001.

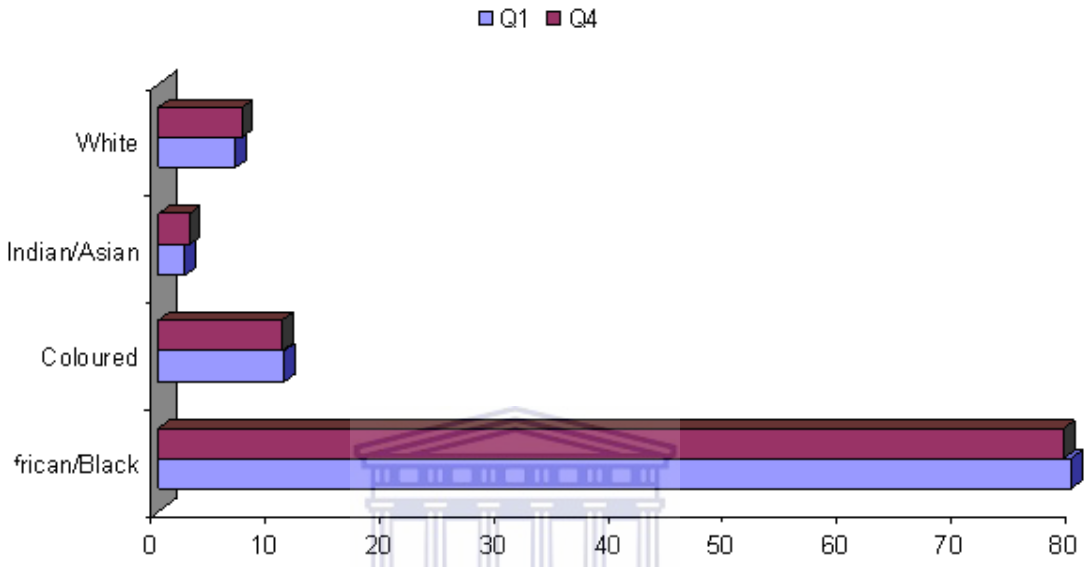
Table 4.1 Distribution of Female Population aged 15-64 by population group

Population group	Quarter 1 (%)	Quarter 2 (%)	Quarter 3 (%)	Quarter 4 (%)	2008 (%)	Census 2001 (%)
African/Black	79.9	79.5	79.1	79.2	79.4	77.6
Coloured	11.0	11.1	11.0	10.8	11.0	9.2
Indian/Asian	2.3	2.4	2.4	2.7	2.5	2.8
White	6.8	6.9	7.4	7.3	7.1	10.4
Total	**100**	**100**	**100**	**100**	**100**	**100**
Population group	***32077***	***31693***	***31399***	***31299***	***31617***	***14784218***

Source: QLFS 2008 and Census 2001, Stats SA.

From figure 4.1 below, there is a slight reduction in the last quarter compared to the first quarter for Blacks and Coloureds and slight increases for the Indian and White groups.

Figure 4.1: Distribution of Females aged 15-64 by Population Group.



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Source: QLFS 2008, Stats SA.

4.2.2 Age group

Table 4.2 shows the distribution of females' age group among the population of working age (15-64). It shows that most of the females were young, with 48% within the age group 15-29 years, while 37% and 15% are aged between 30-44 years and 45-64 years respectively. The table also shows that on the average for all quarters, 64% of females were aged less than or equal to 39 years old, while the proportion of females aged 40-64 is 36% of the female population of working age. The school going age group 15-19 is the highest proportion with an average of 17% across all quarters. There is a clear indication with these percentages that, the FLF is constituted by young people, with an average of 43% less than or equal to 29 years old overall quarters. This corresponds to South Africa population distribution.

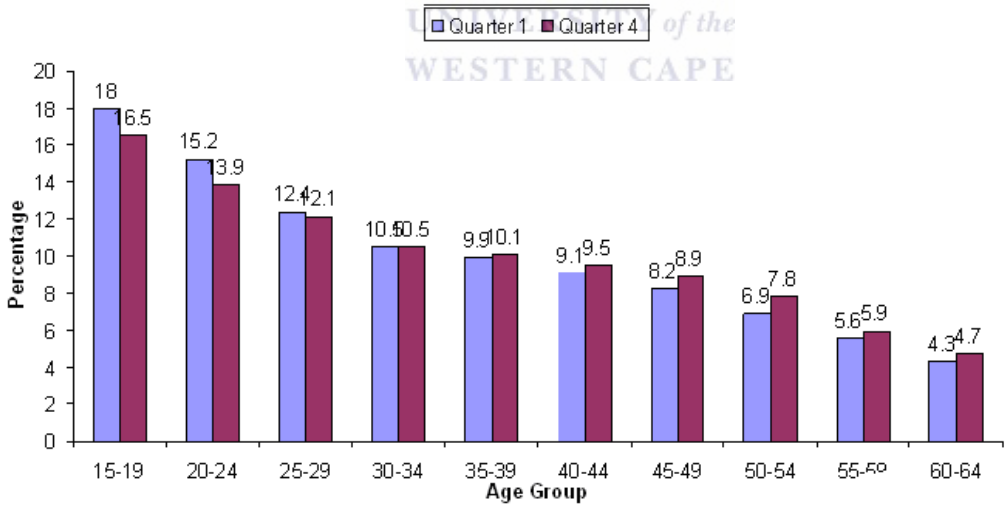
Table 4.2: Distribution of Female Population aged 15-64 by age group

Age group	Quarter1 (%)	Quarter 2 (%)	Quarter 3 (%)	Quarter 4 (%)	2008 (%)	Census 2001 (%)
15-19	18	16.7	16.6	16.5	17	17.1
20-24	15.2	14.1	14.1	13.9	14.3	14.8
25-29	12.4	12.5	12.1	12.1	12.3	13.8
30-34	10.5	10.6	10.5	10.5	10.5	11.8
35-39	9.9	10.2	10.2	10.1	10.1	11.0
40-44	9.1	9.4	9.5	9.5	9.4	9.4
45-49	8.2	8.6	8.8	8.9	8.6	7.6
50-54	6.9	7.4	7.5	7.8	7.4	5.9
55-59	5.6	5.8	6.0	5.9	5.8	4.4
60-64	4.3	4.6	4.6	4.7	4.6	4.2
Total	**100**	**100**	**100**	**100**	**100**	**100**
Sample size	***32077***	***31693***	***31399***	***31299***	***31617***	***14784218***

Source: QLFS 2008 and Census 2001, Stats SA

Figure 4.2 below indicates a decrease in LM participation for all age groups. It depicts low proportion with age progression with only small proportion in age group 15-64. Comparing Q1 to Q4, for the age group 20-29 there is a decrease in the participation, constant at 30-34 and increases for age group 35-64.

Figure 4.2: Distribution of Female population aged 15-64 by Age Group.



Source: QLFS 2008, Stats SA.

4.2.3 Marital Status

Table 4.3 presents the marital status of females in the female population of working age in the reference period (2008). It shows that overall 30% are married, while 8% living

together like husband and wife, 7% widowed/divorced, 4% are divorced, and 53% single/never married. These findings show that females in the working age are more likely to be single when compared to those married or living together.

Table 4.3: Distribution of Female Population aged 15-64 by marital Status

Marital status	Females population of working age (15 – 64)					
	Quarter 1 (%)	Quarter 2 (%)	Quarter 3 (%)	Quarter 4 (%)	2008 (%)	Census 2001 (%)
Married	29.5	28.5	28.8	28.9	28.9	33.7
Living together	7.9	7.8	7.6	7.7	7.7	8.2
Widow/Widower	6.5	6.5	6.9	6.9	6.7	5.3
Divorced/separated	3.8	3.7	3.8	3.7	3.8	3.5
Never married	52.2	53.5	52.9	52.8	52.9	49.3
Total	**100**	**100**	**100**	**100**	**100**	**100**
Sample size	***32077***	***31693***	***31399***	***31299***	***31617***	***14784218***

Source: QLFS 2008 and Census 2001, Stats SA.

Figure 4.3: indicates a constant FLFP in the two quarters for the Divorce category, increases for Never Married and Widow/Widower, and decreases for Married and those living together categories.

Between Q1 and Q4, participation is nearly constant, decreased for living together like husband and wife, and increased the singles and married categories.

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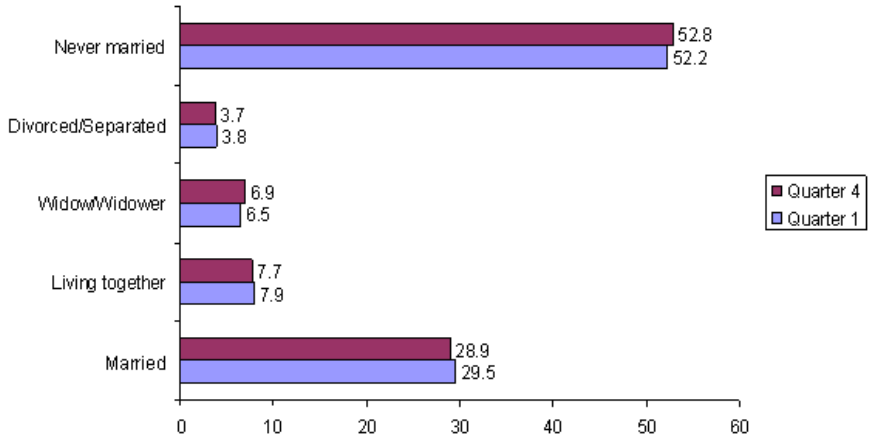
Figure 4.3: Distribution of Female Population aged 15-64 by marital Status.



Source: QLFS 2008, Stats SA.

4.2.4 Province

Table 4.4 shows the provincial distribution of the female labour force in 2008. The findings show that on the average for all quarters, KZN has the highest composition of the female working age population with 17%, followed by Gauteng 16%, while Northern Cape has the lowest with an average of 5%.

Table 4.4: Distribution of Female Population aged 15-64 by Province

Province	Quarter 1 (%)	Quarter 2 (%)	Quarter 3 (%)	Quarter 4 (%)	2008 (%)	Census 2001 (%)
Western Cape	11.1	11.8	11.3	11.0	11.3	10.7
Eastern Cape	11.6	11.1	11.2	11.4	11.3	13.7
Northern Cape	5.5	5.5	5.4	5.4	5.5	1.8
Free State	8.5	8.5	8.6	8.5	8.5	6.1
KwaZulu Natal	17.3	17.5	17.5	17.6	17.5	20.9
North West	8.2	8.3	8.3	8.3	8.3	7.9
Gauteng	16.3	16.0	16.5	16.7	16.4	21/2
Mpumalanga	9.7	9.6	9.4	9.4	9.5	6.7
Limpopo	11.9	11.8	11.7	11.6	11.8	11.0
Total	**100**	**100**	**100**	**100**	**100**	**100**
Sample size	***32077***	***31693***	***31399***	***31299***	***31617***	***14784218***

Source: QLFS 2008 and Census 2001 Stats SA.

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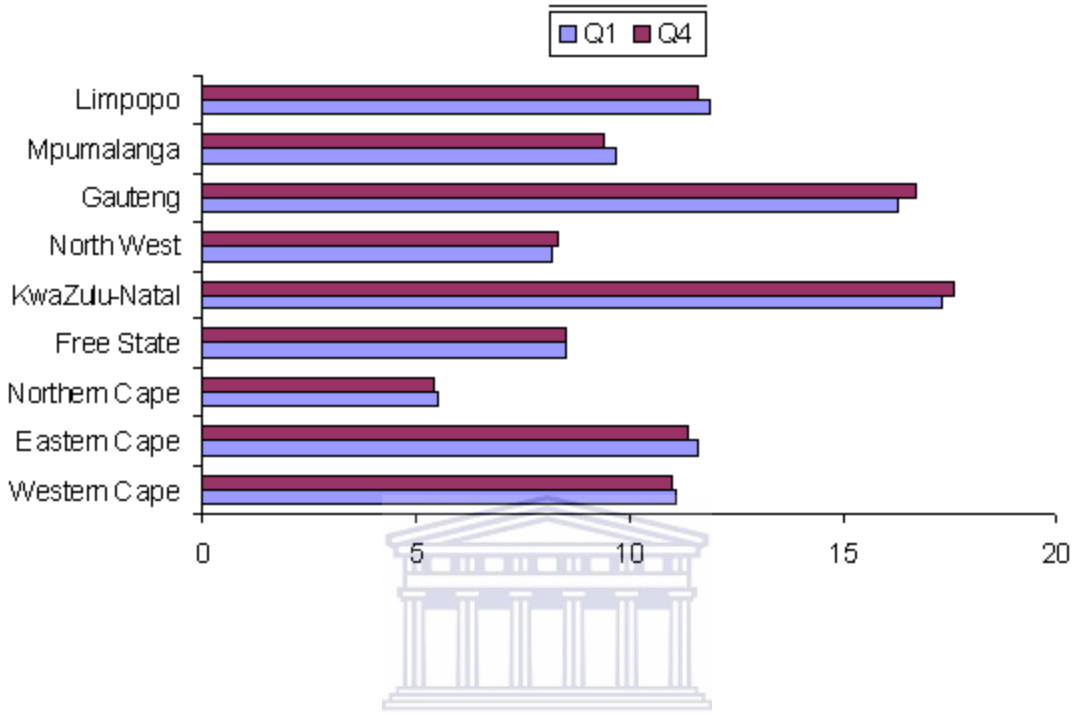
In the Provinces, when a comparison is made between Q1 and Q4, as shown in figure 4.4 below, there are reductions participation in the Eastern Cape, Mpumalanga, and Limpopo. KwaZulu Natal and Gauteng witnessed increases and Western Cape, Northern Cape, Free State and North West remain constant or slightly constant.

Figure 4.4: Distribution of Female Population aged 15-64 by Province.



Source: QLFS 2008, Stats SA.

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4.2.5 Educational Levels

Table 4.5 shows that on the average across all quarters, 20% of females in the female population of working age in 2008 were uneducated/did not complete primary education. The percentage of those who completed primary school was 7%, secondary not completed 43%, and Grade 12/Std10 completed 21%, tertiary 21%, and other education less than 1%. The findings show that a large proportion of females in the market are not educated. Lack of education is a serious setback in joining the labour market which could lead to high female unemployment rates in South Africa.

Table 4.5: Distribution of Female Population aged 15-64 by education status.

Education Status	Quarter 1 (%)	Quarter 2 (%)	Quarter 3 (%)	Quarter4 (%)	2008 (%)	Census 2001 (%)
No schooling	6.9	6.7	6.8	6.7	6.8	13.7
No primary completed	12.7	12.9	12.9	13.1	12.9	18.8
Primary completed	7.0	7.1	7.1	6.7	7.0	7.0
Secondary not completed	43.9	43.4	43.0	43.3	43.4	35.4
Secondary completed	20.6	21.0	20.8	20.8	20.8	22.9
Tertiary	8.2	8.1	8.7	8.7	8.4	2.2
Other	0.7	0.8	0.7	0.7	0.7	-
Total	**100**	**100**	**100**	**100**	**100**	**100**
Sample size	***32077***	***31693***	***31399***	***31299***	***31617***	***14784218***

Source: QLFS, Stats SA.

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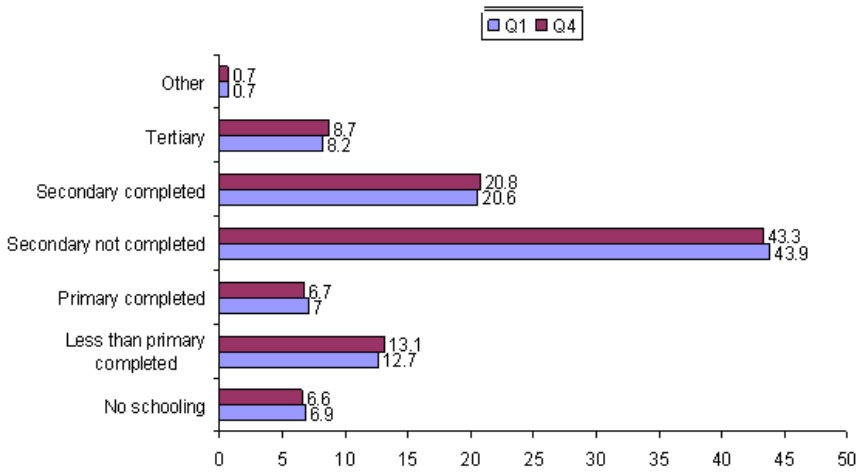
As also shown in figure 4.5, there is no difference in participation rates between Q1 and Q4 for those with Tertiary and Other Tertiary categories, but increased for those with less than primary completed and secondary completed.

Figure 4.5: Distribution of Female Population aged 15-64 by Education.



Source: QLFS 2008, Stats SA.

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4.3 Socio-economic characteristics

This section looks at the LM status, comparing the findings of QLFS 2008 with Census 2001, and provides the major LM indicators.

4.3.1 Labour Market status

From Table 4.6, the population of working age in Q2, Q3 and Q4 show slight reductions in sample sizes. On the average, 36% were employed in 2008, with 46% NEA, and 5% not actively seeking for jobs.

Table 4.6: Distribution of Labour Market status

LM Status	Quarter 1 (%)	Quarter 2 (%)	Quarter 3 (%)	Quarter 4 (%)	2008 Annual rate (%)
Employed	35.8	39.0	36.2	36.6	***36.9***
Unemployed	13.1	12.1	12.6	12.1	***12.5***
Discouraged job seekers	4.9	3.5	4.3	4.3	***4.3***
Total	**100**	**100**	**100**	**100**	**100**
Sample size	***32077***	***31693***	***31399***	***31299***	***31617***

Source: QLFS 2008, Stats SA.

Both Tables 4.6 and 4.7 show increase in employed, and decreases in the unemployed, not economically active and the discouraged job seekers categories. Figure 4.6 below clearly depicts these dynamics.

Table 4.7: Distribution of Females population of working age (15-64) by LM status

Labour Market categories	Quarter 1 (%)	Quarter 2 (%)	Quarter 3 (%)	Quarter 4 (%)	2008 Annual rate (%)
Employed	11479	12360	11381	11454	11669
Unemployed	4214	3835	3961	3794	3951
Not Economically Active	14807	14389	14710	14690	14649
Sample size	***32077***	***31693***	***31399***	***31299***	***31617***

Source: QLFS 2008, Stats SA.

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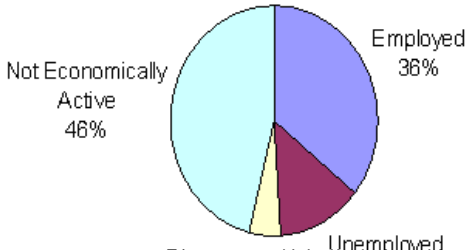
Figure 4.6 below shows the percentage distribution in the four categories for the first quarter of 2008. This composition is much the same for all the quarters.

Figure 4.6 Distribution of FLF by LM Status for quarter 1.



Source: QLFS 2008, Stats SA.

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4.3.2 LM status: Census and QLFS compared

From Table 4.8, the employment proportion increased from 33% in 2001 to 36% in 2008 showing a growth of 2% in the employment proportion.

Table 4.8: Labour Market status based on Census 2001 and QLFS

LM Status	Census 2001 (%)	QLFS (%)
Employed	33.7	36.9
Unemployed	24.0	12.5
Economically not active	42.3	50.6
Total	**100**	**100**
Population size	*14784218*	*31617*

Source: QLFS and Census 2001, Stats SA.

4.3.3 Major Labour Market indicators

The major LM indicators are calculated with the information provided in table 4.7 and presented in Table 4.9 using the following FLFP rate relationships;

- $FLF\ \text{Pr}\,ate = Female(empld + unempld) * 100 \big/ female(15-64)$.
- $Absorptn.rate = Employed * 100 \big/ Total.\,females(15-64)$
- $Unemployment.rate = unemployment * 100 \big/ unemployed + employed$

From table 4.9, FLFP rate remains stable at 49% except in quarter 2 that reported 51%. FLFP rate for 2008 is 49%. The absorption rate is 37% in 2008, which is stable except in quarter 2 that reported 39%. Female unemployment rate was highest in quarter 1 with 27%, decreased quarter on quarter with a minimum figure registered in quarter 2 with 24% and averaged 25% for 2008.

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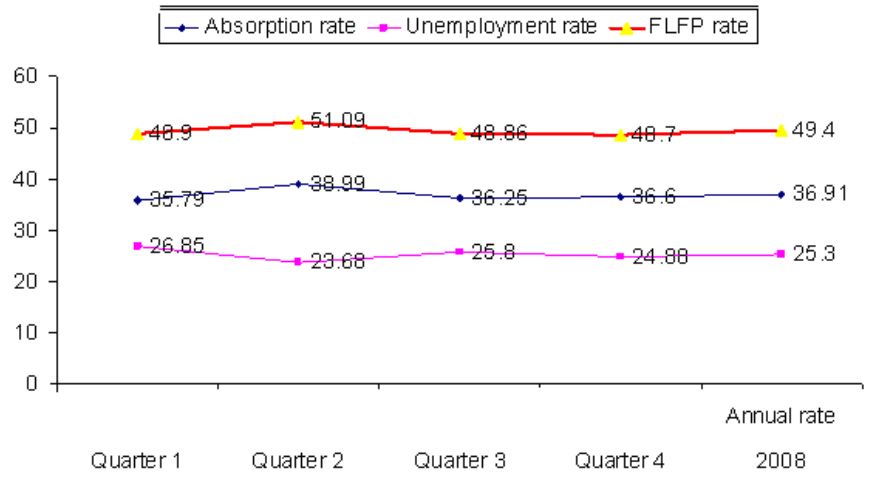
Table 4.9: Major LM indicators

Indicator	Quarter 1 (%)	Quarter 2 (%)	Quarter 3 (%)	Quarter 4 (%)	2008 Annual rate (%)
Absorption rate	35.79	38.99	36.25	36.6	36.91
Unemployment rate	26.85	23.68	25.80	24.88	25.30
FLFP rate	48.90	51.09	48.86	48.70	49.4
Sample Size	***32077***	***31693***	***31399***	***31299***	

Source: QLFS 2008, Stats SA.

Figure 4.7 Key LM Indicators for all quarters and annual rates.



Source: QLFS 2008, Stats SA.

In figure 4.7 above, the LM absorption rate is higher than unemployment rate in all quarters. Overall, there is a stable FLFP rate in all quarters except for a slight increase in quarter 1.

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4.3.3 Economic sector

Table 4.10 shows the females' sector of activity. The findings show that about 64% of females work in formal registered (including agriculture) sector in all quarters, 19% in informal unregistered (including agriculture) in all quarters, and the remaining 17% in private households. From the results, it can be noted that females are more likely to work in formal sector compared to all other sectors. This opposes our hypothesis there are more females in the informal than the formal sector.

Table 4.10 Sector (includes agriculture in the formal and informal sectors)

Sector	Quarter 1 (%)	Quarter 2 (%)	Quarter 3 (%)	Quarter 4 (%)	2008 Annual rate (%)
Formal sector	63.5	64.5	64.5	65.0	64.4
Informal sector	20.0	19.1	17.8	17.1	18.5
Private household	16.5	16.4	17.7	17.9	17.1
Total	**100**	**100**	**100**	**100**	**100**
Sample size	***11479***	***11382***	***11381***	***11454***	***11424***

Source: QLFS 2008, Stats SA.

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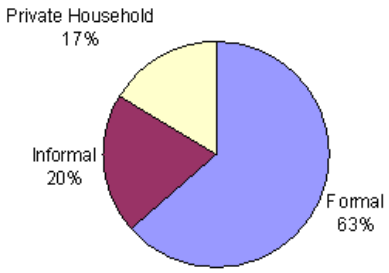
Figures 4.8a and 4.8b below show the distribution according to these sectors for Q1 and Q4 respectively. Formal sector employment grew reaching 65% in Q4 from 64% in Q1. The Private household sector also saw a percentage point growth from 17% in Q1 to 18% in Q4. The Informal sector contracted from 20% in Q1 to a low of 17% in Q4. The main sector of females LM activities is the formal sector.

Figure 4.8a Distribution of Female Sector of Activity for Quarter 1



Source: QLFS 2008, Stats SA.

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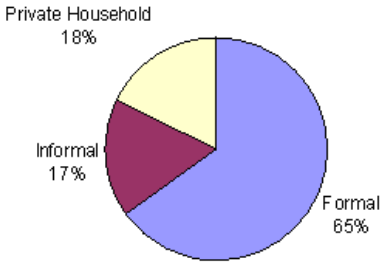
Figure 4.8b Distribution of Female Sector of Activity for Quarter 4



Source: QLFS 2008, Stats SA.

4.3.5 Females main occupation

Table 4.11 shows the distribution of females across different economic occupations. The highest proportion of 22% accounts for females who are employed in the elementary occupation. This is followed by those engaged in domestic work category (17%). The Skilled agricultural and fishery work category is least provider of females' employment.

Table 4.11: Main Occupation of female labour force participation

Main occupation	**Quarter 1 (%)**	**Quarter 2 (%)**	**Quarter 3 (%)**	**Quarter 4 (%)**
Legislators, senior officials and managers	4.1	4.5	4.5	4.7
Professionals	4.6	5.3	5.5	5.7
Technical and assoc. professionals	13.5	13.6	13.9	13.4
Clerks	15.5	15.3	15.5	15.5
Service workers and shop and market sales workers	14.1	14.0	14.1	13.9
Skilled agricultural and fishery workers	0.7	0.3	0.5	0.4
Craft and related trades workers	4.9	5.2	4.8	4.4
Plant and machine operators and assemblers	2.8	3.0	2.8	2.7
Elementary Occupation	23.6	22.7	21.4	21.8
Domestic workers	16.1	16.3	16.9	17.5
Total	**100.0**	**100.0**	**100.0**	**100.0**
Sample size	***11479***	***11382***	***11381***	***11454***

Source: QLFS 2008, Stats SA.

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4.4 Labour market participation rates by demographic variables

In this section, we look at females LM quarterly participation percentage distribution within categories by demographic characteristics.

4.4.1 Female LM participation rate by age group

Table 4.12 indicates that female LM participation rate is highest among the age group 25-49, peaking at 69% on the average in the age group 35-39.

The school going age 15-19 has the lowest participation rate of 8% in the LM. From age 20, after completion of secondary school, many females enter the LM market with an average of 47% in the age group 20-24 participating in the LM. The participation increased with age progression reaching a maximum of 69% at 35-39, and thereafter declines with only 17% of them still in LM up to the retirement age.

In all quarters and on the average, 49% participate in the LM in 2008.

Table 4.12: Age-specific LM participation rates

Age Group	Quarter 1				Quarter 2				Quarter 3				Quarter 4			
	No (%)	**Yes (%)**	Total	Sample size	**No (%)**	**Yes (%)**	Total	Sample size	**No (%)**	**Yes (%)**	Total	Sample size	**No (%)**	**Yes (%)**	Total	Sample size
15-19	91.4	8.6	100	5353	91.7	8.3	100	5306	92.2	7.8	100	5225	93.2	6.8	100	5163
20-24	53.1	46.9	100	4659	52.4	47.6	`00	4477	53.4	46.6	100	4427	54.1	45.9	100	4355
25-29	35.7	64.3	100	4037	34.6	65.4	100	3953	34.3	65.7	100	3796	35.2	64.8	100	3782
30-34	32.8	67.2	100	3431	32.9	67.1	100	3354	32.7	67.3	100	3297	32.7	67.3	100	3301
35-39	31.8	68.2	100	3223	31.5	68.5	100	3220	30.7	69.3	100	3215	30.3	69.7	100	3174
40-44	33.0	67.0	100	2995	33.0	67.0	100	2992	33.6	66.4	100	2992	33.7	66.3	100	2977
45-49	38.0	62.0	100	2732	39.1	60.9	100	2736	38.6	61.4	100	2778	36.4	63.6	100	2801
50-54	46.6	53.4	100	2331	46.3	53.7	100	2354	47.8	52.2	100	2347	47.8	52.2	100	2431
55-59	58.7	41.3	100	1837	58.7	41.3	100	1847	59.3	40.7	100	1870	59.0	41.0	100	1858
60-64	83.2	16.8	100	1480	82.1	17.9	100	1454	83.1	16.9	100	1452	84.1	15.9	100	1457
Total	*51.1*	*48.9*	*100*	*32077*	*50.9*	*49.1*	*100*	*31693*	*51.1*	*48.9*	*100*	*31399*	*51.3*	*48.7*	*100*	*31299*

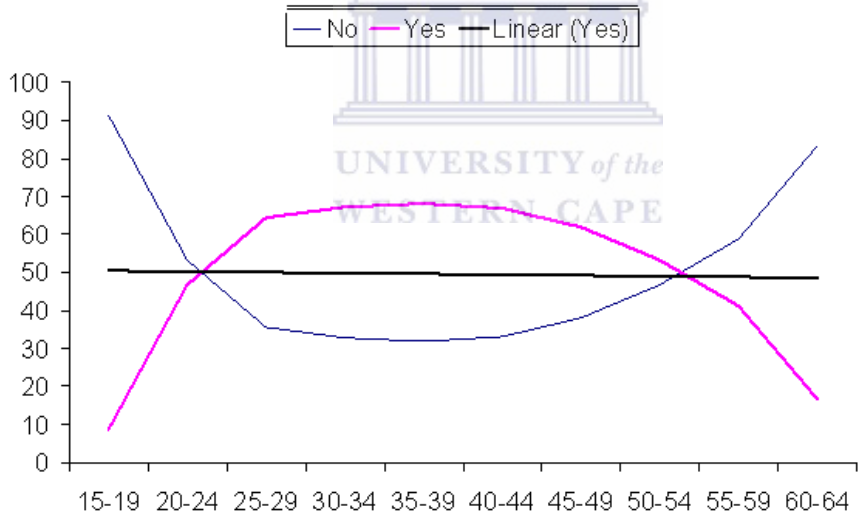
Source: QLFS 2008, Stats SA.

In figure 4.9 below, it is shown that non-participation is a mirror image of participation in the FLF with age progression. Females' participation increases from age group 15-19 years to 25-29 years, remains slightly constant up to age group 40-44 years, and starts to decline with about fifteen percent of females still participating up to age 60-64 years. As

participation increases with age, non-participation reduces and increases as participation reduces with age progression, resulting in a mirror image of non-participation in the females LM.

Participation would also be a mirror image of the curvilinear relationship between industrialization and FLFP put forward by Scott and Tilly (1975) according to the literature herein. The curvilinear relationship means that FLFP declines during the early phase of industrialization, bottoms out in the middle phase, and then increases in the latter phase, thus giving negative, zero, or even positive correlation (Scott and Tilly 1975). Females' non-participation similarly declines, bottoms out and then increases with age progression, giving it a negative, zero and then positive relation.

Figure 4.9: Female age-specific participation rate for Quarter 1



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Source: QLFS 2008, Stats SA.

4.4.2 Female LM participation rate by province

We investigate participation rates within the Provinces in this section.

From table 4.13, Gauteng Province has the highest part rate of all Provinces across all quarters of an average of 65% followed by WC of 58% participation rate.

Limpopo Province has the least part rate of 37%. All Provinces witnessed a decreased rate in the 4th quarter.

Table 4.13 Provincial distribution of female LM participation

Province	Quarter 1				Quarter 2				Quarter 3				Quarter 4			
	No (%)	**Yes (%)**	Total	Sample size	**No (%)**	**Yes (%)**	Total	Sample size	**No (%)**	**Yes (%)**	Total	Sample size	**No (%)**	**Yes (%)**	Total	Sample size
Western Cape	41.4	58.6	100	3574	42.1	57.9	100	3755	42.2	57.8	100	3551	41.7	58.3	100	3441
Eastern Cape	59.7	40.3	100	3730	59.8	40.2	100	3505	60.0	40.0	100	3517	59.1	40.9	100	3566
Northern Cape	53.7	46.3	100	1754	53.9	46.1	100	1747	53.6	46.4	100	1691	50.9	49.1	100	1705
Free State	48.2	51.8	100	2714	45.6	54.4	100	2686	49.3	50.7	100	2710	50.2	49.8	100	2667
KwaZulu-Natal	54.5	45.5	100	5559	55.3	44.7	100	5551	55.3	44.7	100	5498	56.2	43.8	100	5503
North West	58.6	41.4	100	2635	58.4	41.6	100	2620	56.6	43.4	100	2602	55.4	44.6	100	2612
Gauteng	35.1	64.9	100	5213	34.3	65.7	100	5063	35.2	64.8	100	5191	35.6	64.4	100	5238
Mpumalanga	54.1	45.9	100	3096	53.3	46.7	100	3029	52.5	47.5	100	2966	52.6	47.4	100	2927
Limpopo	61.9	38.1	100	3802	62.3	37.7	100	3737	62.9	37.1	100	3673	64.8	35.2	100	3640
Total	***51.1***	***48.9***	***100***	***32077***	***50.9***	***49.1***	***100***	***31693***	***51.1***	***48.9***	***100***	***31399***	***51.3***	***48.7***	***100***	***31299***

Source: QLFS 2008, Stats SA.

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4.4.3 Female LM participation rate by marital status

The divorced category constitute the highest proportion of the female labour force (LF) i.e. 67%, peaking in Q4 at 69%, followed by LT like H/W, married, never married and W/W at 56%, 55%, 44% and 42% respectively.

Table 4.14 Female LM participation by marital status

Marital Status	Quarter 1				Quarter 2				Quarter 3				Quarter 4			
	No (%)	**Yes (%)**	**Total**	Sample size	**No (%)**	**Yes (%)**	**Total**	Sample size	**No (%)**	**Yes (%)**	**Total**	Sample size	**No (%)**	**Yes (%)**	**Total**	Sample size
Married	44.6	55.4	100.0	9473	44.8	55.2	100.0	9032	45.2	54.8	100.0	9053	45.6	54.4	100.0	9042
Living together	43.6	56.4	100.0	2542	43.5	56.5	100.0	2478	43.5	56.5	100.0	2377	42.7	57.3	100.0	2400
Widow/Widower	56.4	43.6	100.0	2092	57.0	43.0	100.0	2065	57.6	42.4	100.0	2163	57.1	42.9	100.0	2170
Divorce or separated	34.5	65.5	100.0	1216	32.4	67.6	100.0	1174	32.2	67.8	100.0	1186	30.7	69.3	100.0	1161
Never married	56.4	43.6	100.0	16754	55.7	44.3	100.0	16944	56.0	44.0	100.0	16620	56.3	43.7	100.0	16526
Total	**51.1**	**48.9**	**100.0**	**32077**	**50.9**	**49.1**	**100.0**	**31693**	**51.1**	**48.9**	**100.0**	**31399**	**51.3**	**48.7**	**100.0**	**31299**

Source: QLFS 2008, Stats SA.

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4.4.4 Female LM participation rate by population group

In table 4.15, the White racial group has the highest participation rate of 62% followed by the Coloured group with a rate at 54%.

Black/African and the Indian/Asian are the least with 47% and 46% respectively.

Table 4.15: Female LM participation by population group

Population group	Quarter 1				Quarter 2				Quarter 3				Quarter 4			
	No (%)	**Yes (%)**	**Total**	Sample size	**No (%)**	**Yes (%)**	**Total**	Sample size	**No (%)**	**Yes (%)**	**Total**	Sample size	**No (%)**	**Yes (%)**	**Total**	Sample size
African /Black	53.1	46.9	100	25288	52.6	47.4	100	25203	53.0	47.0	100	24847	53.3	46.7	100	24793
Coloured	44.6	55.4	100	3723	45.7	54.3	100	3529	46.3	53.7	100	3447	45.3	54.7	100	3376
Indian/ Asian	54.46	45.54	100	791	53.7	46.3	100	773	53.3	46.7	100	768	52.8	47.2	100	831
White	36.8	63.2	100	2275	37.6	62.4	100	2188	38.2	61.8	100	2337	37.3	62.7	100	2299
Total	***51.1***	***48.9***	***100***	32077	***50.9%***	***49.1 %***	***100***	31693	***51.1***	***48.9***	***100***	31399	***51.3***	***48.7***	***100***	31299

Source: QLFS 2008, Stats SA.

4.4.5 Female LM participation rate by education status

The chi-square test of association was used to test the significance of association between the education [the key variable] and participation status. Education of females was hypothesized to be positively related to their labour force participation. The p-value was found to be P = 0.000, indicating an existing relationship.

Table 4.16 below shows the participation rates according to status of education. Clearly, the rate of participation is positively related to education status. Those within the no schooling category have the least rate of 33%, while those with tertiary education are more active in the LM than all categories with a rate of 87%.

Table 4.16: Female LM participation by education status

Education status	Quarter 1				Quarter 2				Quarter 3				Quarter 4			
	No (%)	**Yes (%)**	**Total**	Sample size	**No (%)**	**Yes (%)**	**Total**	Sample size	**No (%)**	**Yes (%)**	**Total**	Sample size	**No (%)**	**Yes (%)**	**Total**	Sample size
No schooling	66.5	33.5	100	2214	66.5	33.5	100	2128	65.6	34.4	100	2134	67.1	32.9	100	2078
Less than primary completed	59.8	40.2	100	4082	61.0	39.0	100	4080	61.8	38.2	100	4058	62.1	37.9	100	4093
Primary completed	59.3	40.7	100	2236	58.5	41.5	100	2241	63.0	37.0	100	2228	63.7	36.3	100	2100
Secondary not completed	59.	40.2	100	14077	60.1	39.9	100	13772	60.5	39.5	100	13488	60.2	39.8	100	13560
Secondary completed	34.6	65.4	100	6616	33.0	67.0	100	6649	32.5	67.5	100	6548	32.9	67.1	100	6505
Tertiary	12.6	87.4	100	2616	12.1	87.9	100	2580	13.0	87.0	100	2720	12.8	87.2	100	2733
Other	12.8	87.2	100	236	48.6	51.4	100	243	50.2	49.8	100	223	51.3	48.7	100	230
Total	**51.1**	**48.9**	**100**	32077	**50.9**	**49.1**	**100**	31693	**51.1**	**48.9**	**100**	31399	**51.3**	**48.7**	**100**	31299

Source: QLFS 2008, Stats SA.

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4.5 Logistic regression analysis

4.5.1 Introduction

The logistic regression results of Q1, Q2, Q3 and Q4 are presented in terms of odds ratios which help to quantify the relationship between our dummy variable (FLFP status) and predictors (education status, population group, age group, marital status and provinces, etc). The odds ratios of each category of each variable in the model are compared to the reference category in the same variable.

4.5.2. Quarter 1 results

Table 4.17 presents the logistic regression results (odd ratios) between the dependent variable "FLFP" (participate and not participate), and explanatory variables (education status, marital status, population group, age group and province). In Model 1, the effect of education on FLFP is estimated. Taking "no schooling" as a reference, the results show that having completed less than primary (odds ratios = 2.059), or primary (odd ratios = 2.148), or not completed secondary (odd ratios=2.166), or completed secondary (odd ratios = 6.235), or tertiary (odd ratios = 16.914), or other kind of education (odd ratios = 3.473), increases the odds of females to participate in the labor force. In other words, having some schooling increases the odds of females participating in the labour force.

When controlling for "Marital status" in the second model (Model 2), the odds ratios for education status are reduced for females with lower level of education (less than primary completed, primary completed), and higher level of education (tertiary and other), whereas, the odds ratios are increased for females with middle level of education (secondary not completed and secondary completed). However, the odds rarios remain in the same direction for both Model 1 and Model 2. This means that, having some schooling increases the odds of female's participation in the labour force.

On taking married as a reference category in the female marital status, the results show that females living together like husband and wife and divorced/separated women are

1.718 and 1.050 times respectively more likely to participate in the labour force than married females. It was also shown that being a widow/widower, and never married reduces the odds of FLFP (odds ratios = 0.308 and odds ratios = 0.527 respectively).

In Model 3, three other variables (population group, age group and provinces) are introduced. The odds ratios of education status reduce again but having some schooling still increases the odds FLFP. For Marital status, the odds ratios reduces for females living together as husband and wife, and divorced/separated, and increase for widow/widower as well as for never married women. However, the odds ratios remained in the same direction as in Model 2.

For age group category, taking "15-19" as a reference group, it is observed that, being in the 20-24 age group reduced the odds (odds ratios = 0.252) of FLFP. It was also observed that females in the age groups 25-29 and above are respectively 2.121, 5.146, 5.866, 6.515, 6.769, 5.719, 4.495, 2.853 times more likely to participate in the labour force than women in age group 15-19.

Regarding population group, if the "African/ Black" is considered as a reference group, it is observed that the Coloured and Asian/Indian women are respectively 1.123 and 1.413 times more likely to participate in the labor force than African/Black women, whereas being white reduces the odds (odds ratios = 0.895) of FLFP compared to African/Black women.

For the Provinces, taking Western Cape as a reference category, it is observed that being from the Province other than Gauteng (with odds ratios = 1.318) reduces the odds of FLFP.

Table 4.17 Logistic Regression Results of FLFP

Characteristics	Model 1	Model 2	Model 3
Education Status	Odd ratios	Odd ratios	Odd ratios
No schooling (r)	1.000	1.000	1.000
Less than primary completed	2.059***	1.961***	1.357***

Primary completed	2.148***	2.109***	1.550***
Secondary not completed	2.166***	2.232***	1.814***
Secondary completed	6.235***	6.398***	3.870***
Tertiary	16.914***	15.519***	9.954***
Other	3.473***	3.360***	2.205***
Marital Status			
Married (r)		1.000	1.000
Living together like husband and wife		1.718***	1.292***
Widow/Widower		0.308***	0.782***
Divorce or separated		1.050	1.017***
Never married		0.527***	0.932**
Population group			
African/Black (r)			1.000
Coloured			1.123***
Indian/Asian			1.413**
White			0.895***
Age group			
15-19 (r)			1.000
20-24			0.252***
25-29			2.121***
30-34			5.146***
35-39			5.866***
40-44			6.515***
45-49			6.769***
50-54			5.719***
55-59			4.495***
60-64			2.853***
Provinces			
Western Cape (r)			1.000
Eastern Cape			0.541***
Northern Cape			0.674***
Free State			0.932

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KwaZulu-Natal			0.652***
North West			0.597***
Gauteng			1.318***
Mpumalanga			0.756***
Limpopo			0.483***

Notes: (r) Reference category; * p<0.10; ** p<0.05; *** p<0.001.

Almost all of the variables are significant due to the large sample size. When we used the backward elimination method in all quarters, all of the variables are still significant with education and age appearing prominent.

4.5.3 Quarter 2 results

Table 4.18 presents the logistic regression results (odd ratios) between the dependent variable "FLFP" (participate and not participate) and explanatory variables (education status, marital status, population group, age group and province). In Model 1, the effect of education on FLFP is estimated. Taking "no schooling" as a reference, the results show that having completed less than primary (odds ratios = 1.935) or primary (odd ratios = 2.143) or not completed secondary (odd ratios=2.119) or completed secondary (odd ratios = 6.595) or tertiary (odd ratios = 17.798) or other kind of education (odd ratios = 3.549) increases the odds of females participating in the labour force. In other words, having some form of education increases the odds of females participating in the labor force.

When controlling for "Marital status" in the second model (Model 2), the odds ratios for education status are reduced for females with lower level of education (less than primary completed, primary completed) and higher level of education (tertiary and other), whereas they are increased for females with middle level of education (secondary not completed and secondary completed). However, they remain in the same direction for both Model 1 and Model 2; that is, having some schooling still increases the odds of females to participate in the labor force.

Also taking married as a reference category in the female marital status, the results show that females living together like husband and wife and divorced/separated women are 1.751 and 1.114 times more likely to participate in the labour force than married females.

We also find that being a widow/widower and never married reduces the odds of FLFP (odds ratios = 0.307 and odds ratios = 0.546 respectively).

In Model 3, three other variables (population group, age group and provinces) are introduced. The odds ratios of education status reduce again, but having some schooling still increases the odds FLFP. For Marital status, the odds ratios reduce for females living together as husband and wife and divorced/separated, and increase for widow/widower as well as for never married women, but always in the same direction as in Model 2.

For the age group, taking "15-19" as a reference group, it is observed that, being in the 20-24 age group reduce the odds (odds ratios = 0.235) of FLFP. It is also discovered that females in the age groups 25-29 and above are respectively 2.030, 4.846, 5.878, 6.384, 6.464, 5.491, 4.339, 2.760 times more likely to participate in the labor force than women in age group 15-19.

Regarding the population group, if "African/ Black" is considered as a reference group, it is observed that Coloured, Asian/Indian and White women are respectively 1.296, 1.430, 1.111 times more likely to participate in the labor force (FLFP) compared to African/Black women.

For the Provinces, taking Western Cape as a reference category, it was observed that being from the province other then Gauteng (with odds ratios = 1.133) reduces the odds of FLFP.

Table 4.18 Logistic Regression Results of FLFP

Characteristics	Model 1	Model 2	Model 3
Education Status	Odd ratios	Odd ratios	Odd ratios
No schooling (r)	1.000	1.000	1.000
Less than primary completed	1.935***	1.863***	1.310***
Primary completed	2.143***	2.101***	1.534***
Secondary not	2.119***	2.175***	1.758***

completed			
Secondary completed	6.595***	6.670***	3.908***
Tertiary	17.798***	16.157***	10.534***
Other	3.549***	3.329***	2.277***
Marital Status			
Married (r)			1.000
Living together like husband and wife		1.751***	1.286***
Widow/Widower		.307**	0.783***
Divorce or separated		1.114**	1.107*
Never married		0.546***	0.971
Population group			
African/Black (r)			1.000
Coloured			1.296***
Indian/Asian			1.430***
White			1.111
Age group			
15-19 (r)			1.000
20-24			0.235***
25-29			2.030***
30-34			4.846***
35-39			5.878***
40-44			6.384***
45-49			6.464***
50-54			5.491***
55-59			4.339***
60-64			2.760***
Provinces			
Western Cape (r)			1.000
Eastern Cape			0.490***
Northern Cape			0.621***
Free State			0.904***
KwaZulu-Natal			0.599***
North West			0.569***
Gauteng			1.233***
Mpumalanga			0.725***
Limpopo			0.435***

Notes: (r) Reference category; * p<0.10; ** p<0.05; *** p<0.001.

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Almost all of the variables are significant due to the large sample size.

4.5.4 Quarter 3 results

Table 4.19 presents the logistic regression results (odd ratios) between the dependent variable "FLFP" (participate and not participate) and explanatory variables (education status, marital status, population group, age group and province). In Model 1, the effect of education on FLFP is estimated. Taking "no schooling" as a reference, the results show that, having completed less than primary (odds ratios = 1.179), or primary (odd ratios = 1.122), or not completed secondary (odd ratios=1.248) or completed secondary (odd ratios = 3.967), or tertiary (odd ratios = 12.748), or other kind of education (odd ratios = 1.890), increases the odds of females participating in the labour force. In other words, having some form of schooling increases the odds of females participating in the labor force.

When controlling for "Marital status" in the second model (Model 2), the odds ratios for education status are increased for education status except for those with less than primary completed. However, like in the other quarters, they remain in the same direction for both Model 1 and Model 2; that is, having some form of schooling still increases the odds of females participating in the labor force.

Taking the married as a reference category in the female marital status, the results show that females living together like husband and wife, and divorced/separated women are 1.370 and 1.963 times respectively more likely to participate in the labor force than married females. It was also observed that, being a widow/widower, and never married, reduces the odds of FLFP (odds ratios = 0.904 and odds ratios = 0.703 respectively).

In Model 3, three other variables (population group, age group and provinces) are introduced. The odds ratios of education status reduce again, but having some schooling still increases the odds FLFP. For Marital status, the odds ratios increased for all marital status except for females living together as husband and wife, but always in the same direction as in Model 2.

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For the age group, taking "15-19" as a reference group, observed that, being in the 20-24 age group reduce the odds (odds ratios = 0.305) of FLFP. It was also observed that females in the age groups 25-29 and above are respectively 2.382, 5.775, 6.786, 8.531, 8.600, and 7.801, 5.598 and 3.746 times more likely to participate in the labor force than women in the age group 15-19.

With reference to population group, the "African/ Black" category was taken as a reference group, and it was observed that, Coloured and Asian/Indian women are respectively 1.513 and 1.590 times more likely to participate in the labour force than African/Black women, whereas being white reduces the odds (odds ratios = 0.889) of FLFP compared to African/Black women.

For Provinces, taking Western Cape as a reference category, it was observed that, being from a Province other than Gauteng (with odds ratios = 1.349) reduces the odds of FLFP.

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Table 4.19 Logistic Regression Results of FLFP

Characteristics	Model 1	Model 2	Model 3
Education Status	Odd ratios	Odd ratios	Odd ratios
No schooling (r)	1.000	1.000	1.000
Less than primary completed	1.179**	1.215**	1.112*
Primary completed	1.122*	1.196**	1.190**
Secondary not completed	1.248***	1.421***	1.680***
Secondary completed	3.967***	4.527***	4.244***
Tertiary	12.748***	13.425***	11.565***
Other	1.890***	1.992	1.820***
Marital Status			
Married (r)			1.000
Living together like husband and wife		1.370***	1.323***
Widow/Widower		0.904*	1.332***
Divorce or separated		1.963***	2.025***

Never married		0.703***	1.550***
Population group			
African/Black (r)			1.000
Coloured			1.513***
Indian/Asian			1.590***
White			.889
Age group			
15-19 (r)			1.000
20-24			0.305***
25-29			2.382***
30-34			5.775***
35-39			6.786***
40-44			8.531***
45-49			8.600***
50-54			7.801***
55-59			5.598***
60-64			3.746***
Provinces			
Western Cape (r)			1.000
Eastern Cape			0.582***
Northern Cape			0.718***
Free State			0.872**
KwaZulu-Natal			0.726***
North West			0.608***
Gauteng			1.349***
Mpumalanga			0.834**
Limpopo			0.520***
Sample size			
P-value			

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Notes: (r) Reference category; * p<0.10; ** p<0.05; *** p<0.00

Almost all the variable are significant due to the large sample size.

4.5.5 Quarter 4 results

Table 4.20 presents the logistic regression results (odd ratios) between the dependent variable "FLFP" (participate and not participate), and explanatory variables (education status, marital status, population group, age group and province). In Model 1, the effect of education on FLFP is estimated. Taking "no schooling" as a reference, the result show that having completed less than primary (odds ratios = 1.975), or primary (odd ratios = 2.062), or not completed secondary (odd ratios=2.381), or completed secondary (odd ratios = 7.371), or tertiary (odd ratios = 19.396), or other kind of education (odd ratios = 4.212) increases the odds of females to participate in the labor force. In other words, having some form of schooling increases the odds of females to participate in the labor force.

When controlling for "Marital status" in the second model (Model 2), the odds ratios for education status are reduced for all education categories except for "secondary not completed". However, they remain in the same direction for both Model 1 and Model 2; that is, having some form of schooling still increases the odds of females to participate in the labor force.

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Also taking married as a reference category in the female marital status, the results showed that females living together like husband and wife and divorced/separated women are 1.904 and 1.203 times respectively more likely to participate in the labour force than married females. It was also observed that, being a widow/widower and never married reduces the odds of FLFP (odds ratios = 0.298 and odds ratios = 0.545 respectively).

In Model 3, three other variables (population group, age group and provinces) are introduced. The odds ratios of education status reduce again, but having some form of schooling still increases the odds FLFP. For Marital status, the odds ratios reduce for females living together as husband and wife, and increase for widow/widower, divorce/separated as well as for never married women, but always in the same direction as in Model 2.

For the age group, taking "15-19" as a reference group, It was observed that, being in the 20-24 age group reduce the odds (odds ratios = 0.241) of FLFP. It was also observed that females in the age groups 25-29 and above are respectively 2.188, 5.699, 6.749, 7.347, 6.837, 6.769, 4.651, 3.136 times more likely to participate in the labour force than women in the age group 15-19.

Regarding the population group, the "African/ Black" category was taken as a reference group, and it was observed that, Coloured and Asian/Indian women are respectively 1.123 and 1.413 times more likely to participate in the labour force than African/Black women, whereas being White reduces the odds (odds ratios = 0.895) of FLFP compared to African/Black women.

For the Provinces, taking Western Cape as a reference category, it was observed that, being from the province other than Gauteng (with odds ratios = 1.266) reduces the odds of FLFP.

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Table 4.20 Logistic Regression Results of FLFP

Characteristics	Model 1	Model 2	Model 3
Education Status	Odd ratios	Odd ratios	Odd ratios
No schooling (r)	1.000	1.000	1.000
Less than primary completed	1.975***	1.892***	1.266***
Primary completed	2.062***	2.002***	1.493***
Secondary not completed	2.381***	2.401***	1.895***
Secondary completed	7.371***	7.311***	3.967***
Tertiary	19.396***	17.340***	10.588***
Other	4.212***	4.110***	2.503***
Marital Status			
Married (r)			1.000
Living together like		1.904***	1.302***

husband and wife			
Widow/Widower		.298***	0.773***
Divorce or separated		1.203***	1.243***
Never married		.545***	0.924**
Population group			
African/Black (r)			1.000
Coloured			1.309***
Indian/Asian			1.491***
White			1.054
Age group			
15-19 (r)			1.000
20-24			0.241***
25-29			2.188***
30-34			5.699***
35-39			6.749***
40-44			7.347***
45-49			6.837***
50-54			6.769***
55-59			4.651***
60-64			3.136***
Provinces			
Western Cape (r)			1.000
Eastern Cape			0.534***
Northern Cape			0.733***
Free State			0.796***
KwaZulu-Natal			0.647***
North West			0.659***
Gauteng			1.266***
Mpumalanga			0.803***
Limpopo			0.428***

Notes: (r) Reference category; * p<0.10; ** p<0.05; *** p<0.001.

Almost all the variables are significant due to the large sample size.

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CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

The main objectives of this study were to highlight the demographic determinants of FLF participation, investigate the relationship between FLFP and education, and to examine the differentials in the FLF participation across the nine provinces of South Africa in 2008. The following were the main areas of interest in the study: demographic characteristics of the females, females socio-economic characteristics [investigating their sectors of work and providing the key LM indicators], LM participation rates by demographic variables [age group, education status, population group, marital status and Province], and studied their effects on FLFP status using descriptive statistics and binary logistics regression.

The female labour force follows the population distribution of the Republic of South Africa for all the demographic variables investigated in the study (age group, population group, educational status, marital status and Province of residence). However, it is a little different for the White race group. It also means that the sample size of the South Africa Quarterly Labour Force Survey is representative.

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5.1 Discussion of the main results

The sample consisted of 32077, 31693, 31399 and 31299 for Quarter 1, Quarter 2, Quarter 3 and Quarter 4 respectively. Despite the decreased rate of unemployment in 2008 (Stats SA), females unemployment rate of 25% [for Q4] reduced when compared to Q1 [26.85].

The LM absorbed 37% of the female labour in Q4 compared to 36% in Q1, with overall 49% FLFP rate in the reference period. This revealed that just under half of female population of working age participates in the labour market (LM).

The study showed that, as found by the Community Survey Stats SA (2007), there are more Black/African females in LM than all other race groups. This is followed by Coloured women, then White and Indian/Asian women respectively. This composition of the labour market reflects the population distribution of South Africa.

Females in LM tend to be young (between 15 and 29 years old), and single/never married.

According to Rindfuss (1991) as cited by Amoateng *et al*., (2003), using the life courses concept in his Presidential Address to the American population Association, named the young adult years (i.e., 18-32 ages) as a *demographically dense* period of life. In his explanation, this is a period when multiple roles and events such as marriage, fertility, leaving school, unemployment, migration and mortality occur. Relevant to this work we found that most of the females in the LM were young, with 48% within the age group 15-29 years. Over 30% of females in the LM are married.

Mostly educated women's participation rate increases with their level of education. Among the females in the study, 20% were without educational skills, 7% had Primary level education, over 43% of the female had some secondary education but did complete and 21% each of grade 12/std 10 and tertiary education. This result represents a high rate of limited female LM entry opportunity as the majority does not have educational skills needed to join the labor force. This is consistent with Adison (1993), unemployment rates are mostly higher among females as their opportunity of searching for jobs in the LM are low compared to their male counterparts. According to Kuznets hypothesis (1950s), technology, industrialization and urbanization, lower the demands for unskilled labour and by these findings, females in the South African LM will for sometime be low since majority do not have the basic education. Technology comes with education requirement and with the lack of the educational background by our females counterparts; it becomes increasing difficult for them to access the opportunity of grasping the technological know-how. Furthermore, the findings are consistent with the hypothesized relationship in this study and validated by the Human Capital Theory [HCT].

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Moreover, the findings support the theoretical paradigm of contestation in this study, the Human Capital Theory, and quite consistent with the hypothesized positive relationship between education and FLFP in this study.

There is a strong indication of differentials in participation among Provinces, with Gauteng having the highest followed by WC, with the least rate in Limpopo Province. The employment rate increases with time as shown by the trend from Quarter 1 to Quarter 4.

Females tend to work in formal sector than all other sectors. This opposes the hypothesis that females are more in the informal sector than the other sectors..
Females' main occupation is the elementary group followed by domestic work and clerks categories with the least proportion in the agriculture and fishery work settings.
The logistic regression analysis also reveals an existing strong relationship between FLFP and education which shows that the more women are educated, the more they participate to labour market (LM).

On the marital status of females', the research findings showed that in South Africa female LM are more likely to be single/never married contributing about 53% of the female LM. However, participation rates among these categories showed that those in the divorce category has the highest participation rate of 68%, followed by those living together, married with participation rates of 57% and 45% respectively and 45% of each of widow/widower and never married/singles categories.

We further looked at females' preferences of the economic sectors and the results revealed that 64% of the working females participate in the formal sector, while 19 % are engaged in the informal sector, and 17 % are involved in the private household sector. This indicates that female participants are more likely to be employed in the formal sector than the other sectors. What makes the formal sector more attractive to females is another area worth investigating.

In establishing the differentials in participation of female participants in the labour force across the nine provinces of South Africa, we found that KwaZulu Natal had the highest composition in the LF though, Gauteng had **the highest** female LM participation rate, annexed by Eastern Cape, Western Cape with the lowest participation rate reported for Limpopo Province.

To investigate the effect of some demographic characteristics on the FLFP status, the study used logistic regression analysis. We run three models. In model 1, we estimated the effect the key variable [according the Human Capital Theory] on the dependent variable female labour force participation (FLFP). Prior to this estimation, descriptive statistics of the variables were run and those of Quarter1 and Quarter 4 are provided in Appendix 2 and 3 respectively. The first model in each quarter is more of a baseline model and ignores all other variables. In model 2, we introduced a second variable [marital status] and in model 3 we then introduced three other demographic variables.

The results show that, females are more likely to participate in the LM. It is however important to note that sample sizes are quite large probably which could have influenced results. The study has also shown that females have less competitive urge to compete since the majority does not have required human capital stock to join the LM.

5.2 Recommendations

In the light of the findings, we recommend that more effort in addition to the existing constitutional provisions still needs to be put into absorbing more females in the South African labour market.

Education of women should also be enhanced since it was found that Education & Training is strongly linked with FLFP as a focal point of the Human Capital Theory.

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Appendix 1:

Quarter 1 logistics regression results

Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Classification Table[a,b]

Observed			Predicted		
			Female Labour Force Participation Status		
			No	Yes	Percentage Correct
Step 0	Female Labour Force Participation Status	No	0	26371	.0
		Yes	0	32654	100.0
		Overall Percentage			55.3

a. Constant is included in the model.

b. The cut value is .500

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Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	.214	.008	666.263	1	.000	1.238

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	60940.198[a]	.290	.388

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Classification Table[a]

Observed			Predicted		
			Female Labour Force Participation Status		
			No	Yes	Percentage Correct
Step 1	Female Labour Force Participation Status	No	15610	10761	59.2
		Yes	4511	28143	86.2
		Overall Percentage			74.1

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1	Education_Status			2070.403	6	.000	
	Education_Status(1)	.305	.044	47.356	1	.000	1.357
	Education_Status(2)	.438	.052	71.236	1	.000	1.550
	Education_Status(3)	.596	.042	202.098	1	.000	1.814
	Education_Status(4)	1.353	.047	834.658	1	.000	3.870
	Education_Status(5)	2.298	.065	1242.134	1	.000	9.954
	Education_Status(6)	.791	.104	57.544	1	.000	2.205
	Q16MARITALSTATUS			102.015	4	.000	
	Q16MARITALSTATUS(1)	.256	.040	40.872	1	.000	1.292
	Q16MARITALSTATUS(2)	-.246	.049	25.313	1	.000	.782
	Q16MARITALSTATUS(3)	.017	.057	.084	1	.772	1.017
	Q16MARITALSTATUS(4)	-.071	.028	6.209	1	.013	.932
	Q15POPULATION			54.741	3	.000	
	Q15POPULATION(1)	.116	.046	6.227	1	.013	1.123
	Q15POPULATION(2)	.346	.056	37.891	1	.000	1.413
	Q15POPULATION(3)	-.111	.078	2.055	1	.152	.895
	agegroup2			7731.386	9	.000	
	agegroup2(1)	-1.377	.064	459.209	1	.000	.252

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	agegroup2(2)	.752	.059	164.630	1	.000	2.121
	agegroup2(3)	1.638	.059	762.027	1	.000	5.146
	agegroup2(4)	1.769	.060	881.291	1	.000	5.866
	agegroup2(5)	1.874	.059	1002.978	1	.000	6.515
	agegroup2(6)	1.912	.059	1056.968	1	.000	6.769
	agegroup2(7)	1.744	.058	893.662	1	.000	5.719
	agegroup2(8)	1.503	.059	656.668	1	.000	4.495
	agegroup2(9)	1.048	.060	304.792	1	.000	2.853
	Province			983.962	8	.000	
	Province(1)	-.614	.047	170.667	1	.000	.541
	Province(2)	-.395	.052	57.499	1	.000	.674
	Province(3)	-.070	.051	1.867	1	.172	.932
	Province(4)	-.428	.046	86.503	1	.000	.652
	Province(5)	-.516	.051	103.775	1	.000	.597
	Province(6)	.276	.046	35.926	1	.000	1.318
	Province(7)	-.280	.050	30.855	1	.000	.756
	Province(8)	-.727	.050	214.301	1	.000	.483
	Constant	-1.355	.077	305.967	1	.000	.258

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Appendix 2:

Quarter 4 Logistic regression

Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Classification Table[a,b]

Observed			Predicted		
			Female Labour Force Participation Status		
			No	Yes	Percentage Correct
Step 0	Female Labour Force Participation Status	No	0	25874	.0
		Yes	0	31634	100.0
		Overall Percentage			55.0

a. Constant is included in the model.

b. The cut value is .500

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Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	.201	.008	574.983	1	.000	1.223

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	58209.989[a]	.305	.408

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1	Education_Status			2159.817	6	.000	
	Education_Status(1)	.236	.046	26.273	1	.000	1.266
	Education_Status(2)	.401	.054	54.802	1	.000	1.493
	Education_Status(3)	.639	.044	214.823	1	.000	1.895
	Education_Status(4)	1.378	.048	808.254	1	.000	3.967
	Education_Status(5)	2.360	.066	1286.300	1	.000	10.588
	Education_Status(6)	.918	.109	70.241	1	.000	2.503
	Q16MARITALSTATUS			121.632	4	.000	
	Q16MARITALSTATUS(1)	.264	.042	39.723	1	.000	1.302
	Q16MARITALSTATUS(2)	-.257	.049	27.487	1	.000	.773
	Q16MARITALSTATUS(3)	.218	.061	12.538	1	.000	1.243
	Q16MARITALSTATUS(4)	-.079	.029	7.340	1	.007	.924
	Q15POPULATION			59.697	3	.000	
	Q15POPULATION(1)	.269	.046	33.991	1	.000	1.309
	Q15POPULATION(2)	.400	.057	49.579	1	.000	1.491
	Q15POPULATION(3)	.053	.076	.485	1	.486	1.054
	Agegroup2			7489.585	9	.000	
	Agegroup2(1)	-1.424	.068	434.790	1	.000	.241
	Agegroup2(2)	.783	.061	163.540	1	.000	2.188
	Agegroup2(3)	1.740	.062	788.683	1	.000	5.699
	Agegroup2(4)	1.909	.062	942.475	1	.000	6.749
	Agegroup2(5)	1.994	.062	1046.954	1	.000	7.347
	Agegroup2(6)	1.922	.061	999.318	1	.000	6.837
	Agegroup2(7)	1.912	.061	998.710	1	.000	6.769
	Agegroup2(8)	1.537	.060	646.889	1	.000	4.651
	Agegroup2(9)	1.143	.062	339.604	1	.000	3.136

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	Province			936.138	8	.000	
	Province(1)	-.628	.048	171.754	1	.000	.534
	Province(2)	-.311	.054	33.419	1	.000	.733
	Province(3)	-.228	.052	19.380	1	.000	.796
	Province(4)	-.435	.047	85.648	1	.000	.647
	Province(5)	-.417	.052	63.844	1	.000	.659
	Province(6)	.236	.047	25.370	1	.000	1.266
	Province(7)	-.219	.052	17.795	1	.000	.803
	Province(8)	-.849	.051	277.018	1	.000	.428
	Constant	-1.601	.081	394.042	1	.000	.202

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Appendix 3: Section 1 of the QLFS Questionnaire

Quarterly Labour Force Survey

4th Quarter 2008

Report No. P0211

Table A: Contents of the QLFS questionnaire

Section	Number of questions	Details of each section
Section 1	7	Biographical information (marital status, language, migration, education, training, literacy, etc.
Section 2	8	Economic activities
Section 3	19	Unemployment and economic inactivity
Section 4	25	Main work activities in the last week
All sections	59	Comprehensive coverage of all aspects of the labour market

Table (i): Response rate by province

Province	October – December 2008
	Percentages (%)
Western Cape	84,5
Eastern Cape	97,2
Northern Cape	90,4
Free State	94,2
KwaZulu-Natal	96,0
North West	95,7
Gauteng	89,1
Mpumalanga	97,0
Limpopo	98,4
South Africa	**93,3**

CONTENTS OF CD

The CD contains a flat, ASCII, fixed-field file, with one line of given length per record. This format was chosen so as to make the data usable with as many statistical programs as possible, and thus accessible to as wide a range of people as possible.

Users can also access, explore and download the micro data in various formats, i.e. SAS, SPSS, Stata, etc., as well as the metadata from StatsOnline at www.statssa.gov.za. Click on 'Interactive data' then 'Explore micro data'.

Other important information can be found in the:

Questionnaire
Additional code lists (occupation and industry)
Relevant statistical release
Record layouts
Stats SA website: www.statssa.gov.za

The data file

The file and the corresponding sections of the questionnaire are as follows:

Data section 1, 2, 3 and 4.

Each section contains the following information for each variable:

Description of variables

Descriptive name: This is a short description of the variable with the variable name in brackets.

Position of the variable: The position of a variable within a record is recorded in the format (@xxx y.). '@xxx' indicates that the variable starts at position (i.e. column) xxx, and 'y' indicates the length of the field.

Final code list: The range of valid values for variables. For continuous variables it only reflects the upper and lower limits.

Not applicable: The code for 'missing' values is given for each variable (□ = Not applicable).

Note to users: Additional information for further clarity on questions.

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DATA FILE

Unique number (UQNO) *(@ 1 18.)*

Unique household identifier allocated to each household.

Valid range: 1010001900000017 01–9860106700000218 01

Person number (PERSONNO) *(@19 2.)*

Person (respondent) number

Valid range: 01–85

Primary sampling unit (PSUNO) *(@21 8.)*

Valid range: 10100019–98601067

Province (Province) *(@29 1.)*

South African provinces as at December 2005 released by the Municipal Demarcation Board in January 2006.

Final code list

1 = Western Cape

2 = Eastern Cape
3 = Northern Cape
4 = Free State
5 = KwaZulu-Natal
6 = North West
7 = Gauteng
8 = Mpumalanga
9 = Limpopo

SECTION 1

This section covers particulars of each person in the household.

Question 1.2

Stayed at least four nights (Q12NIGHTS) *(@30 1.)*

1.2	Has.....stayed in this household for at least four nights on average per week during the last four weeks? 1 = YES 2 = NO → *End of questions for this person*	1 2

Note to users

This question was asked for each person found in the selected dwelling. Those who were not household members (those who had not spent at least four nights per week during the last four weeks) were excluded from the data (2 = No). The instruction in this question was to end the interview for those who had answered 'No' to this question. It is by means of this question that household members are identified within the selected dwelling.

Universe

Every person who had stayed in the households in selected dwelling units at least four nights a week in the four weeks prior to the interview.

Final code list

1 = Yes

Question 1.3

Gender (Q13GENDER) *(@31 1.)*

1.3	Is..... a male or a female? 1 = MALE 2 = FEMALE	1 2

Note to users

This question was asked for all household members, to determine their gender. Enumerators were instructed not to assume the gender of household members by just looking at people's names or physical appearances. In this instance, they had to ask the respondent the gender of each member of the household without any assumptions.

Universe

Every person who had stayed in the households in selected dwelling units at least four nights a week in the four weeks prior to the interview.

Final code list

1 = Male
2 = Female

Question 1.4

Age (Q14AGE) *(@32 3.)*

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Derived variable

This is a derived variable indicating the age of the household member. Age of the household member was derived from question 1.4 of the questionnare.

This question was asked for each member of the household. The instruction was to write the age in completed years to the nearest whole numbers and not in words. Thus, if a person was two years and six months, the instruction was to write the two completed years. For children aged less than a year, the instruction was to write 000.

Universe

Every person who had stayed in the households in selected dwelling units at least four nights a week in the four weeks prior to the interview.

Final code list

Valid range: 0–108

Question 1.5

Population group (Q15POPULATION) *(@35 1.)*

1.5	What population group does..... belong to?	
	1 = AFRICAN/BLACK	1
	2 = COLOURED	2
	3 = INDIAN/ASIAN	3
	4 = WHITE	4
	5 = OTHER, *specify, in the box at the bottom*	5

Note to users

This question was asked to determine the population group of persons from the selected dwelling units. The respondent had to answer for each member and the enumerator was not to make any assumptions. The enumerator was also instructed not to come to any conclusions, which may be influenced by his observation or using people's names during the interview. This question may seem very sensitive to some respondents especially in this post apartheid era, but it is important to find out the composition of the South African population.

Universe

Every person who had stayed in the households in selected dwelling units at least four nights a week in the four weeks prior to the interview.

Final code list

1 = African/Black
2 = Coloured
3 = Indian/Asian
4 = White

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Question 1.6

Marital status (Q16MARITALSTATUS) *(@36 1.)*

1.6	What is .....'s present marital status?	
	1 = MARRIED	1
	2 = LIVING TOGETHER LIKE HUSBAND AND WIFE	2
	3 = WIDOW/WIDOWER	3
	4 = DIVORCED or SEPARATED	4
	5 = NEVER MARRIED	5

Note to users

This question is about the marital status of the members of the household. Both modern and traditional marriages are considered in this question.Universe

Every person who had stayed in the households in selected dwelling units at least four nights a week in the four weeks prior to the interview.

Final code list

1 = Married
2 = Living together like husband and wife
3 = Widow/Widower
4 = Divorce or separated
5 = Never married

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Question 1.7

Highest education level (Q17EDUCATION) *(@37 2.)*

1.7	What is the highest level of education that... has successfully completed?	
	00 = No schooling	00
	01 = Grade R/0	01
	02 = Grade 1/ Sub A	02
	03 = Grade 2 / Sub B	03
	04 = Grade 3/Standard 1	04
	05 = Grade 4/ Standard 2	05
	06 = Grade 5/ Standard 3	06
	07 = Grade 6/Standard 4	07
	08 = Grade 7/Standard 5	08
	09 = Grade 8/Standard 6/Form 1	09
	10 = Grade 9/Standard 7/Form 2	10
	11 = Grade 10/ Standard 8/ Form 3	11
	12 = Grade 11/ Standard 9/ Form 4	12
	13 = Grade 12/Standard 10/Form 5/Matric	13
	14 = NTC I	14
	15 = NTC II	15
	16 = NTC III	16
	17 = Certificate with less than Grade 12/Std 10	17
	18 = Diploma with less than Grade 12/Std 10	18
	19 = Certificate with Grade 12/Std 10	19
	20 = Diploma with Grade 12/Std 10	20
	21 = Bachelors Degree	21
	22 = Bachelors Degree and diploma	22
	23 = Honours Degree	23
	24 = Higher degree (Masters, Doctorate)	24
	25 = Other, *specify in the box at the bottom*	25
	26 = Don't know	26

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Note to users

Enumerators were instructed that it was only those qualifications already obtained which had to be entered. That means the current level of study with which a person was still busy, was not applicable. It was very important to complete each record even if the person had not attended school. Enumerators were instructed to record diplomas and certificates that were of at least six months' duration.

Universe

Every person who had stayed in the households in selected dwelling units at least four nights a week in the four weeks prior to the interview.

Final code list

00 = No schooling
01 = Grade R/0
02 = Grade 1/Sub A
03 = Grade 2/Sub B
04 = Grade 3/Standard 1
05 = Grade 4/Standard 2
06 = Grade 5/Standard 3
07 = Grade 6/Standard 4
08 = Grade 7/Standard 5
09 = Grade 8/Standard 6/Form 1
10 = Grade 9/Standard 7/Form 2
11 = Grade 10/Standard 8/Form 3
12 = Grade 11/Standard 9/Form 4
13 = Grade 12/Standard 10/Form 5/Matric
14 = NTC l
15 = NTC II
16 = NTC III
17 = Certificate with less than Grade 12/Std 10
18 = Diploma with less than Grade 12/Std 10
19 = Certificate with Grade 12/Std 10
20 = Diploma with Grade 12/Std 10
21 = Bachelors Degree
22 = Bachelors Degree and Diploma
23 = Honours Degree
24 = Higher Degree (Masters, Doctorate)
25 = Other
26 = Do not know

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