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SOCIO-ECONOMIC AND DEMOGRAPHIC CORRELATES OF LABOUR FORCE  
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## DECLARATION

I hereby declare that with the exception of acknowledged citations and ideas, this work is my original work, produced from research under supervision, and that neither part nor whole of this work has been presented anywhere else for the award of another degree.

Signed.....

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Signed.....

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(Supervisor)

Date.....



## DEDICATION

I would like to dedicate this work firstly to the memory of my late sister, Ms. Selina Narh and my late Uncle, Mr. Moses Addey Narh.

Secondly, to my beloved siblings, Mr. John Narh and Ms. Joana Narh.



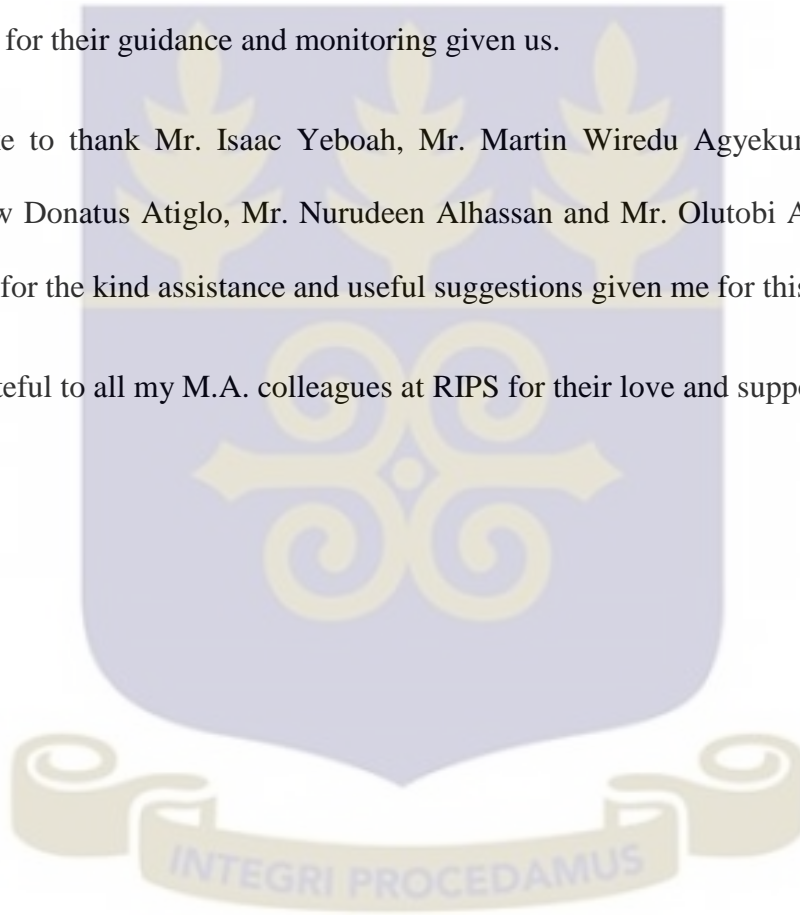
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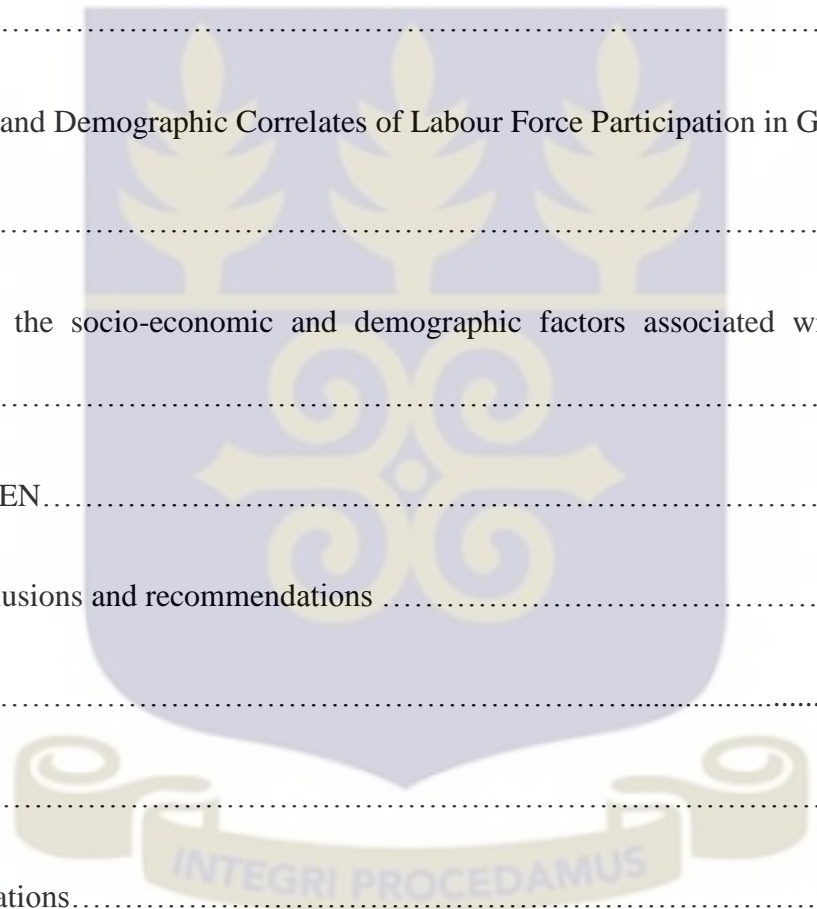
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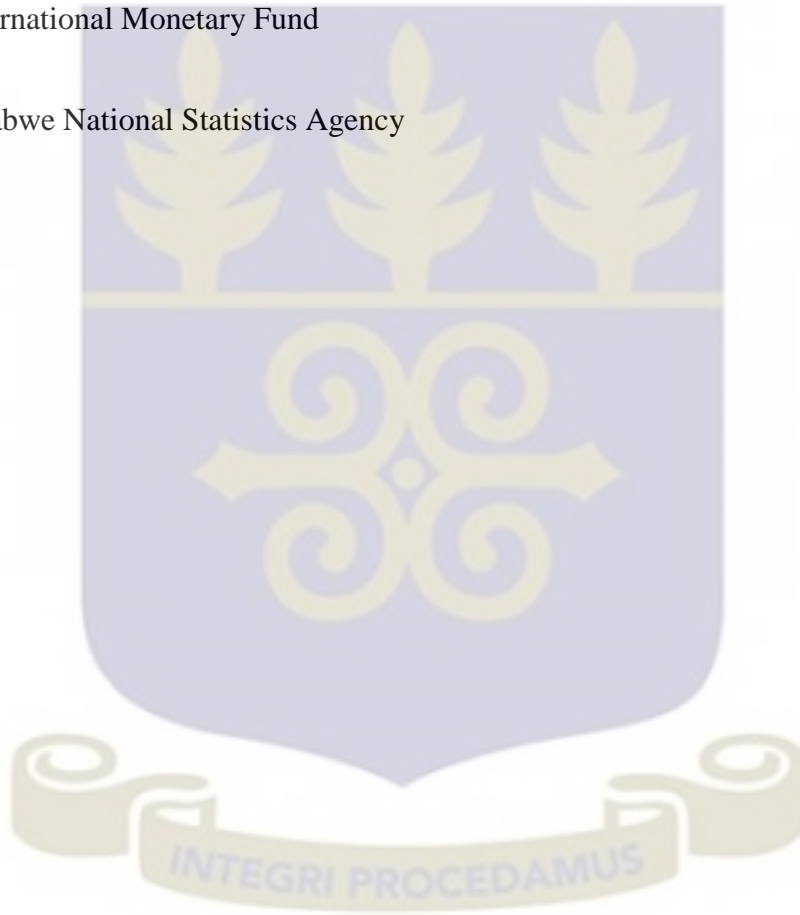
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GSS	Ghana Statistical Service
PHC	Population and Housing Census
ILO	International Labour Organisation.
IMF	International Monetary Fund
Zimstat	Zimbabwe National Statistics Agency



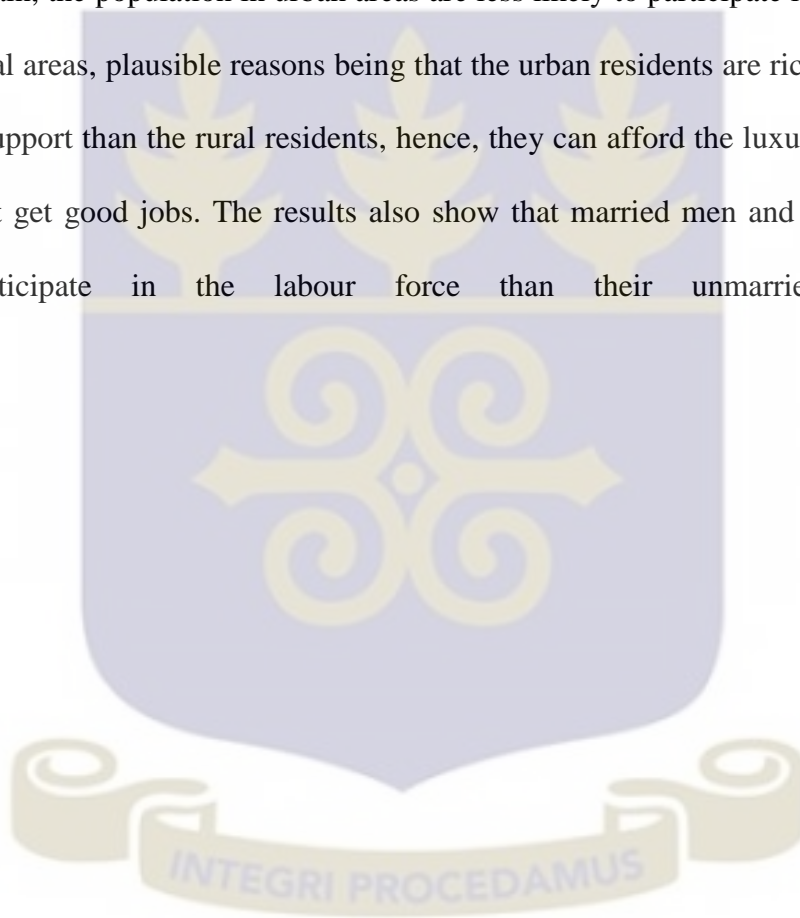
## ABSTRACT

The study examines socio-economic and demographic correlates of labour force participation in Ghana. Data from the 2010 Ghana Population and Housing Census were used for this study. The study focused on the population aged between 15 to 64 years (who were considered to be within the active working age). The analysis was done at three levels namely, univariate, bivariate and multivariate levels. Graphs, frequencies and percentages were used to describe the characteristics of the respondents at the univariate level. The results show that 72.8% of the study group was in the labour force, while the remaining 27.2% was not in the labour force. Also, there were more people in urban areas than in rural areas. Again, there were more people in the youngest age group (15-24 years) than any of the other age groups.

At the bivariate level, cross tabulations and chi-square tests were used to test the relationships between the predictor variables and labour force participation. The results indicate that males participated more in the labour force than females. Also, married men and women participated more in the labour force than their unmarried counterparts. However, among the married, married men participated more in the labour force than married women.

The binary logistic regression model was used at the multivariate level to examine how the predictor variables correlated with labour force participation. The results show that nationality was not statistically significant in predicting labour force participation in Ghana. This means that being a Ghanaian or a Non-Ghanaian does not necessarily predict whether one would be in the labour force or not. However, all the other variables namely, age, age squared, sex, marital status, household type, level of education, place of residence, region of residence, ethnicity and religion were statistically significant, hence, they predict whether one would be in the Ghanaian

labour force or not. Age was found to have a hump-shaped or concave relationship with labour force participation. Also, education was found to be negatively correlated with labour force participation. The result regarding education is contrary to earlier research findings. However, this could be explained by the fact that significant proportions of the respondents especially, those within 15-24 years were full-time students, and hence, majority of them could not enter the labour force. Again, the population in urban areas are less likely to participate in the labour force than those in rural areas, plausible reasons being that the urban residents are richer and also have enough family support than the rural residents, hence, they can afford the luxury of not working if they could not get good jobs. The results also show that married men and women are more likely to participate in the labour force than their unmarried counterparts.



## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the study**

The term labour force refers to the total number of people who are of working age (15 years and older), and who are either employed or unemployed but are actively searching for employment, (Ghana Statistical Service, 2013). Labour force participation describes whether a person is in the labour force or not. The participation rate measures the ratio between the labour force and the entire working age population.

The labour force participation rate plays a very vital role in determining socio-economic growth and development of a nation. This is so because human beings use their energy, skills and knowledge to mobilize and accumulate capital, exploit natural resources and put in place all other relevant measures to ensure productivity, hence the development of a country. Also, it shows the supply of labour in the economy and the composition of the human resources of the country. It also has a strong effect on poverty reduction (Faridi et al, 2009a). These mean that one vital way of ensuring effective development of a nation and the improvement in the standard of living of the citizens is to improve labour force participation. Labour force participation can be improved if appropriate policies are formulated and implemented to develop and utilize effectively, the nation's human resource.

Analysis of labour force participation is helpful in determining the productive capacity of a nation. It also helps in determining employment policy and policy formulation for human resource development (Faridi et al, 2009a). Regarding policy formulation for human resource development, for instance, it would guide government on investment in human capital in areas such as education, skill development and job training to render the labour force more

employable and also to raise the productivity of those employed, which in turn increases their earnings.

Ghana's population has been increasing continuously. For instance, in 1984, the Ghana Statistical Service reported a total population of 12,296,081, after the nationwide census. The figure rose to 18,912,079 in the year 2000 and further increased to 24,658,823 in the 2010 census (GSS, 2013).

One critical issue concerning this increasing population is the fact that the continuous increase in the overall population has been corresponding with a rise in the number of people within the working age population as well (GSS, 2013). For instance, in the 1984 census, a total of 55% of the people were in the working age population (15 years and above). Then in the 2000 census, the proportion rose to a total of 58.7%. Then again, in the 2010 census, it increased to 61.7% (GSS, 2013). This trend should reflect in an increase in the size of the labour force. However, this has not been the case. Though the proportion of the working age population has been increasing since 1984, the proportion in the labour force has been declining over the period; from 82.5% in 1984 to 74.7% in 2000 and then to 71.1% in 2010 (GSS, 2013). This declining trend in labour force participation could be attributed partly, to certain socio-economic and demographic factors.

For instance, research shows that some demographic and socio-economic factors influence labour force participation. Some of them include sex, level of education, marital status, place of residence (Rahmah and Idris, 2012; Faridi et al, 2009a&b; Magidu, 2010). These factors can influence labour force participation either negatively or positively. These same factors can have a bearing on the fate of those who participate in the labour force, thus whether they get employed, unemployed, underemployed and the sector and industry in which they are employed.

It is therefore, useful to study and understand the socio-economic and demographic characteristics of the labour force in Ghana, and how these characteristics influence labour force participation, so as to guide government and other relevant bodies in designing and implementing policies to address the needs of this key segment of the population.

## **1.2 Statement of the problem**

Labour is undoubtedly a significant factor which influences economic growth and development of a country. It plays a critical role in the production of goods and services which influence the overall development of a country. Since the labour force engages in economic activities to bring about the production of goods and services, it implies that the extent of development of a country would depend on the size and characteristics of the labour force, the proportion of the labour force that engages in economic activities and the various economic activities that the people engage in. But the Ghanaian labour force, as elsewhere in the world, is made up of people with various demographic and socio-economic characteristics such as age, sex, marital status, level of education, place of residence, and region of residence. These characteristics can influence either positively or negatively, the participation of the people in the labour force, (Rahmah and Idris, 2012; Yakubu 2010; Faridi et al, 2009 a&b). For instance, men most often participate in the labour force more than women, though women normally form the majority of the population in most countries. In Ghana for example, the population is composed of 48.8% males and 51.2% females as at 2010 (GSS, 2013). Also, when women are in the labour force, they often work in the informal sector, as self employed, often without employees, especially in Sub-Saharan African countries like Ghana.

Taking level of education as another example, it is generally observed that labour force participation increases with level of education. Thus people who are more educated engage in the labour force more than those who have little or no education. For instance a study by Yakubu (2010) in South Africa indicates that female labour force participation generally increases with level of education. The result also shows that the highest proportions of females in the labour force are single or never married. A similar research conducted by Faridi et al (2009b) in Pakistan, reveals that males with higher education participated more in the labour force than their counterparts with low level of education. Sackey (2005) found that both primary and post-primary schooling levels exert significant positive impact on women's labour market participation in Ghana.

The main problem with labour force participation in Ghana is that, the nation's population has seen consistent increase over the years (as manifested in the various population censuses), coming along with persistent increase in the working-age population. However, while the working-age population increased persistently, labour force participation of this demographic group on the contrary, reduced persistently, which should not be the case, under normal circumstances.

Estimates from the International Labour Organisation (ILO, 2014, as cited in World Bank, 2015) show that as at 2013, the labour force participation rate in Ghana was 69%. The ILO's estimates indicate low labour force participation in many countries, especially, developed nations (64% in Netherlands, 66% in Norway, 63% in United States 60% in Germany, 65% in Australia; probably due to population ageing). However, Ghana's participation rate of 69% is still low as compared to the rate of some other Sub-Saharan African countries such as Tanzania, with labour force participation rate of 89% Malawi, with 83%, Senegal, with 77% and Burkina Faso, with participation rate of 83% (World Bank, 2015). It is also low as

compared to other countries outside Africa, such as Vietnam with 77%, Bolivia with 73%, United Arab Emirates with 80% and Thailand with 72% (World Bank, 2015).

Low labour force participation in any nation, as in the case of Ghana, can have negative effects on individuals as well as the nation. At the individual level, it can lead to high dependency on the employed people in the labour force, poverty on the disadvantaged group (Kalil, 2005). Poverty would further lead to conditions such as depression (Kalil, 2005), deterioration of family relationships such as spouse conflict, child-parent conflict (Hoffman et al, 1996).

At the national level, the situation would lead to loss of tax revenue, loss of vital human capital, political instability (Nicholas et al, 2013), increase in crime (Raphael & Winter-Ebmer, 2001).

There is therefore, the need to conduct comprehensive research on the factors that determine labour force participation in Ghana in order to find strategies to mitigate the problem of low participation and its associated problems.

Very little research has been conducted on this in Ghana, mostly focused on only female labour force participation. For instance, Sackey (2005) studied the effects of education on female labour force participation in Ghana. Also, Baah-Boateng et al (2013) studied the effect of fertility and education on female labour force participation in Ghana.

Therefore, this study would help to provide more comprehensive information on the correlates of labour force participation, since it considers both the male and female populations in the country, and also seeks to analyse the correlation of several variables with labour force participation. Accurate findings would help to provide useful recommendations

that can guide policies on human resource development and labour force participation in Ghana.

### **1.3 Research questions**

The study seeks to find answers to these questions;

- (i) What socio-economic and demographic factors influence labour force participation in Ghana?
- (ii) What is the relationship between the socio-economic and demographic factors and labour force participation in Ghana?

### **1.4 Rationale for the study**

The ultimate goal of every government of any country is to improve the standard of living of its people. This goal can be achieved by reducing poverty among the citizens and promoting overall national development. The overall development of a country is based on the production of goods and services. Critical to the production process is the labour force of the country. Although all persons irrespective of age and sex consume goods and services produced, only a section of the total population produces them: a working proportion of the labour force often referred to as the “employed”. Generally, the larger the employed population, the more wealth is created leading to the general well-being of the population (GSS, 2013). Contributing to employment opportunities in any country or area are factors such as the structure of the population, proportion of the economically active population and the labour market. Evidence provided in the earlier sections suggests that labour force participation in Ghana is generally low.

Ghana, with her abundant natural resources can improve employment significantly and improve overall national development when she is able to evolve policies to get a very

significant proportion of her active working age population in the labour force, develop and effectively utilize the labour force, so as to ensure effective and adequate exploitation of these resources. This would subsequently result in poverty reduction.

However, government can formulate and implement effective policies to develop the labour force if the characteristics, size and participation rates are known.

It has been established that some socio-economic and demographic factors have influence on labour force participation (Faridi et al, 2009a&b; Yakubu, 2010; Magidu, 2010). The study, therefore, seeks to identify the socio-economic and demographic characteristics of the Ghanaian labour force, and ultimately how these characteristics correlate with labour force participation rate. Accurate information yielded would help to provide relevant information to government to inform its decisions on the labour force. For instance, the findings would help government in shaping patterns of human resource development in the country, and to formulate effective employment policies. It would also help identify which demographic group is disadvantaged in order to adopt appropriate policy interventions. Again, it would reveal the regions that have the lowest proportion of their population in the labour force, and the possible reasons behind these.

### **1.5 Objectives of the study**

The main objective of the study is to examine the socio-economic and demographic correlates of labour force participation in Ghana.

Specifically, the study would:

- (i) Identify the socio-economic and demographic variables that influence labour force participation in Ghana.

- (ii) Establish the relationship between the socio-economic and demographic variables and labour force participation in Ghana.

### **1.6 Outline of the study**

The study is organized in seven chapters. Chapter one involves the background of the study, statement of the problem, research questions, rationale, research objectives and the outline of the study.

Chapter two reviews relevant literature on labour force participation and presents the conceptual framework and the research hypotheses, whereas chapter three deals with methodology and definition of terms.

Chapter four presents the profile of Ghana and the characteristics of the study population. Chapter five consists of the relationship between the socio-economic and demographic variables and labour force participation. The results of the multivariate analysis are presented and discussed in chapters six. Chapter seven provides the summary, conclusions, recommendations and the limitations of the study.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter reviews the relevant literature on labour force participation. It presents a review of what some researchers have done, describing and analysing various socio-economic and demographic correlates of labour force participation.

Labour force participation refers to an individual's decision whether to participate in the labour force or not (Ehrenberg and Smith, 1997, as cited in Baah-Boateng et al, 2013). The labour force comprises people who are either employed or unemployed, but are actively searching for employment (GSS, 2013). Labour force participation rate is a measure of the proportion of a country's working-age population (15 years and older) that engages actively in the labour market, either by working or looking for work (ILO, 2014). The economically active population refers to the people within the working-age population who are either employed or unemployed, but are actively searching for employment (GSS, 2013). This simply means that the economically active population comprises those in the labour force.

For purposes of international comparability, the working-age population is commonly defined as persons aged 15 years and older. In addition to using a minimum age threshold, certain countries also apply a maximum age limit. Adoption of a specified upper age limit means that all persons above that age limit are excluded from the count of the working-age population (ILO, 2014).

In Ghana, the active working age population is pegged between ages 15-64 years (GSS, 2013). For a country like Uganda it is pegged between 15-65 years (Magidu, 2010).

## **2.2 Empirical literature**

This examines some empirical studies conducted on the correlates of labour force participation. It presents research findings on the influence of various socio-economic and demographic factors on labour force participation.

### **2.2.1 Age and labour force participation**

Yakubu (2010), in his study of labour force participation in South Africa', found that females in the South African labour market are relatively young (between 15 and 29 years old). According to his results, women in this age group constituted about 48% of the female labour force in South Africa in 2008.

In another study, Hafeez and Ahmad (2002), investigated factors determining the labour force participation decision of educated married women in the district of Punjab', Pakistan. Their study was based on field survey. The results indicate, among others, that the probability of labour force participation increases with age. The researchers attributed this result to the fact that younger females lack the requisite experience and training. The researchers further argued that since the females are young, they might have not yet completed their family size, hence, their low labour force participation.

Mei (2014), studied the gender gap in labour force participation in Canada'. The paper used data from labour force survey of Statistics Canada and a logistic model to analyse the effects of various socio-economic variables on female and male labour force participation. Results from the analysis indicate that those aged 15 to 24 years are less likely to participate in the labour force than those who are between the ages of 25 and 39 years. The researcher explained that those between the ages of 15 and 24 years might still be in school in order to

acquire as much knowledge and skills as possible. In addition, young people may not have much work experience compared to those in the older ages.

The results also indicate that the female and male labour force participation rates of those aged 25-34 years are not significantly different from those of the 35 to 39 year age group. The results further indicate that labour force participation rates for the age group 40 to 44 years are lower than those of the 35 to 39 year age group. It was also observed that labour force participation rate seems to decline dramatically after age 45 years as compared to those aged 35-39 years for both males and females. According to the researcher, this suggests that from the age of 45 years, people are starting to leave the labour force, conceivably due to declines in physical health. The researcher argues that most of them have retired and have left the labour market by the age of 65 years, which is the standard retirement age. The researcher concludes that the highest labour force participation rates occur between the ages of 25 and 44 years.

Patacchini et al (2013) investigated changes in women labour market participation in fifteen European Union countries over a twenty-year period, using data from ECHP and EUSIL databases. They divided the country into four groups as follows; Southern (Spain, Italy, Greece and Portugal), Social Democratic (Sweden, Denmark and Finland), Liberal (United Kingdom) and Continental (Austria, Belgium, France, Germany, Netherlands, Ireland and Luxemburg). They observed a hump-shaped pattern in both labour force participation and employment. The authors noted that the highest probability to participate in the labour force occurs at age 35-44 years, and lower probabilities occur for the higher ages.

The results found by Hafeez and Ahmad (2002), Mei (2014) and Patacchini et al (2013) contradict that of Yakubu (2010). This suggests that the correlation between age and labour

force participation can vary from country to country. The detailed result given by Mei also indicates that labour force participation can vary between various age groups.

### **2.2.2 Sex and labour force participation**

The International Monetary Fund (2013), in a staff discussion note, explains that women constitute a little over half of the world's population, but their contribution to measured economic activity, growth, and well-being is far below its potential, having serious macroeconomic consequences. The report further explained that despite significant progress in recent decades, labour markets all over the world remain divided along gender lines, and efforts being made to achieve gender equality in the labour market seem to have stalled. The report asserts that females' labour force participation remain lower than that of males, and women account for most unpaid work. Also, when women are employed in paid work, they are mostly found in the informal sector and among the poor. The report argues that women's participation in the labour market is necessary for the growth and stability of nations. The report also argues that, in rapidly ageing economies in particular, higher female labour force participation can enhance growth by mitigating the effect of a decreasing workforce. The report further argues that creating better opportunities for women, for instance through higher levels of school enrolment for girls can also contribute to improved economic development in developing countries.

In another study, Magidu (2010), used data from the Uganda National Service Delivery Survey to examine labour force participation of the active individuals between 15-65 years in Uganda. The results suggest among others, that females face a lower relative probability to participate in formal sector more than their male counterparts. The paper concludes by highlighting the need to focus on education and gender as a priority for achieving economic

growth and ensuring that individuals especially, women enter the labour market. It further argues that other supply side policies are required to rectify some of the other barriers that individuals, and especially women, face in entering formal employment. The researcher recommended the provision of suitable childcare arrangements, to enhance female labour force participation.

Rahmah and Idris (2012), studied gender wage differentials and discrimination in Malaysian labour market, making use of data from 4,535 working households surveyed in 2007/8 for all sectors in Peninsular Malaysia. They observed that females' labour force participation rate is much lower than that of males, even though they are equally educated. They explained that women are always less preferred by employers because they are perceived to be less skilled and immobile as compared to men. The researchers noted that when women successfully enter the labour market, they often receive lower wages than their male counterparts do.

All the above studies made similar discoveries, that female labour force participation is less than that of males.

### **2.2.3 Marital status and labour force participation**

In their study of female participation in the labour force of Botswana, Siphambe and Motswapong (2010), found that marriage impacts negatively on female labour force participation. They attributed this to the fact that married females stay at home to carry out household duties, and also, that there is no household budget sharing, therefore the wives need not forgo household activities to participate in the labour market. They however, observed that if married females decide to engage in the labour force, they are more likely to participate in the public sector, parastatal, non-governmental organisations, agriculture and

unpaid family work than in the private sector. The researchers explained that married females are likely to choose the public sector than the private sector because there is job security in the public sector. Another reason they gave is that the government has a policy on transfer which allows married couple to work in the same locations. According to them, that policy is not available in the private sector hence, in the private sector it may be difficult for married women to be transferred to where their husbands are working.

Karaoglan and Okten (2012), analysed labour force participation of married women in Turkey, specifically focusing on married women's labour supply responses to their husbands' job loss and unemployment conditions. They found that married women whose husbands are unemployed or underemployed are more likely to participate in the labour force and work more hours. The researchers also constructed two year panels based on questions on previous year's labour market outcomes. The Panel results reveal that wives whose husbands experience a job loss are more likely to increase their labour force participation. However, the wives tend to decrease their labour force participation when unemployment rate in their region increases. They concluded by stating that labour supply of married women responds positively to their husbands' job loss and underemployment, and negatively to a decrease in overall unemployment opportunities. However, women's notable roles as caregivers for children and low levels of education prevent them from more effective participation in the labour market.

Yakubu (2010), found out in his study of female labour force participation in South Africa, that the highest proportion of females in the South African labour force were single or never married. He noted that this group makes up about 53% of the female labour force of the country.

Roopnarine and Ramrattan (2011), investigated female labour force participation in Trinidad and Tobago. They used a probit model to examine how variables such as education, age, marital status, religion and earnings influence female labour force participation. The results show that being a single woman had a positive relationship with participation in the labour force as opposed to being a woman in a relationship.

Faridi et al (2009a), in their study of the determinants of women labour force participation in the Bahawalpur District of Pakistan, realised that marital status influences the female labour force participation positively. They attributed the result to the fact that females are more likely to join labour market just to share the financial burden of the family and to support their counterparts in meeting basic economic needs.

Patacchini et al (2013), in their investigation into changes in women labour market participation in fifteen European Union countries, found that being married is negatively related to female labour force participation and employment. The authors noted that the negative effect is high in countries characterised by more traditional family structure, such as continental and southern countries.

The finding of Faridi et al (2009a) sharply contradicts that of Siphambe and Motwapon (2010), Yakubu (2010), Roopnarine and Ramrattan (2011) and Patacchini et al (2013). It also contradicts the general perception about labour force participation of married women. Theoretically, participation of married women in the labour market should fall due to increasing responsibilities at home. This however, suggests that marriage, especially among females can have either positive or negative correlation with labour force participation.

#### **2.2.4 Household type and labour force participation**

Household type is classified into male-headed household and female-headed household. A household head refers to that usual member of the household who manages the day to day activities of the household and its members, and is regarded as such by other usual members of the household (Zimstats, 2015).

Geir and Sletten (2007), presented a report on Syrian labour market, based on the 2003 Syrian unemployment survey. They noted that households headed by females suffer a significant risk of not having a member in the labour force as compared to households headed by males. The authors explained that the sex of the household head seems to be a much important determinant of labour force participation in Syria than even the region of residence. They distinguished between married and unmarried female heads of households in their report. They noted that households headed by married females are mostly young, and often had very few people in the working age. Also, the married females who head households often have their husbands working elsewhere in Syria or abroad. Regarding unmarried female heads, the authors noted that they consist of older and often, widowed women, and their households often do not have any member in the working age apart from the woman herself.

Fadayomi and Olurinola (2014), made similar findings in their study of the influence of household structure on labour force participation in Nigeria. They found that male-headed households participate more in the labour force than female-headed households.

#### **2.2.5 Education and labour force participation**

Many studies have been done on the influence of education on labour force participation.

For instance, Faridi et al (2009a), studied the socio-economic and demographic determinants of women work participation in Pakistan. They used data collected through field survey in the year 2007-2008, using a sample of females aged 15-64 years. The results show that female labour force participation increases with higher level of education. The authors suggested that government should provide higher education to females especially in rural areas. They also suggested that the quality of education should be improved and training opportunities be provided for females to enhance their participation in the labour force.

Yakubu (2010), used logistic regression to examine the factors that influence female labour force participation in South Africa, using the 2008 quarterly labour force survey of Statistics South Africa. The result reiterated the importance of female education in enhancing female labour force participation, and concluded that the education of women should also be improved, since it was found that education and training have strong influence on female labour force participation.

Widarti (1998), analysed the influence of some socio-demographic, economic and cultural factors on the labour force participation of married women in Jakarta. The study concludes that education is a strong determinant of women's participation in the Jakarta labour force. Thus, married women with higher education were more likely to participate in the labour force.

Baah-Boateng et al (2013), in a similar study, examined the influence of fertility and education on female labour force participation in Ghana. They used data from the fifth round of the Ghana Living Standards Survey. They found that women with basic and tertiary education have a higher tendency of participation in the labour force compared with those

with no education. The paper argues that women's labour force participation and home production are complements rather than substitutes. The researchers explained this assertion with regard to the fact that a lot of women engage in self-employment and/or informal sector where they are able to combine work and home production.

Faridi et al (2009b), analysed the determinants of male labour force participation and employment status in Pakistan, concentrating on the Bahawalpur District. The main purpose of their study was to identify the factors which influence male labour force participation and employment status. The results indicate that education significantly influences the participation of males in the labour force and their employment status. The researchers realised that higher educated males were more likely to participate in economic activities. It was also found that male worker's participation in self-employment increases and casual employment decreases as education increases. Also, underemployment reduces as education increases.

Sackey (2005) used the third and fourth rounds of the Ghana Living Standard Survey of 1991 and 1998 respectively, in his study of female labour force participation in Ghana. He found that female education influences their labour force participation in both urban and rural localities positively, but has an opposite effect on fertility. The paper concluded that government policy needs to ensure that the gender gap in education is improved and sustained. He argued that this is the key instrument for enhancing female human capital and productive employment.

In another research, Siphambe and Motswapong (2010), used 2005/06 labour force survey data of Botswana to investigate the determinants of female labour force participation in

Botswana and also to analyse the employment sectors they prefer if they do participate. The results show that higher education increases females' probability of participating in the labour force. The results also show that education plays a role in determining the sectors of the economy where females chose to work. For instance, they found that educated females prefer to work in the private sector as compared to the agricultural sector and unpaid family work. The researchers argue that this may be because education gives access to better opportunities in wage employment that are relatively secure and have stable income.

The findings from all of the above articles are consistent with each other, suggesting that education is positively correlated with labour force participation.

#### **2.2.6 Place and region of residence and labour force participation**

Uraz et al (2010), used three different household level data sources in Turkey for the period 2003-2006 to analyse trends and profiles of labour force participation of women in Turkey. The results indicate that urban women at working age have lower labour force participation rates (21.4%) than rural women (35.8%). They also observed that the difference between the labour force participation of females in urban and rural areas increases after the age of 29 years; and reduces after the age of 60 years. In the same analysis, the researchers found that male labour force participation does not significantly differ across urban and rural areas for young men up to the age of 45 years, but falls sharply for urban men after that age.

In their study of female labour force participation in Botswana, Siphambe and Motswapong (2010), realised from their results that females who live in urban areas are more likely to participate in the labour market than those who live in rural areas. According to the researchers the possible reason for this observation is that in urban areas there are more job

opportunities for women as compared to the rural areas so females have a variety of choices to make, hence, they are more likely to participate in the urban areas.

Ali and Tasnim (2009), studied labour force participation of married women in Punjab, Pakistan. This paper used the probit model to examine the factors that influence the decision of married women in the age group of 16-60 years to participate in the labour force. The results indicate that rural women are more likely to participate in economic activities than urban women. The researchers attributed this observation to weak financial background, larger family size of rural households and general work environment on farms.

This result is similar to the findings of Uraz et al (2010), but contradicts the findings of Siphambe and Motswapong (2010). This suggests that location may influence labour force participation positively or negatively.

### **2.2.7 Ethnicity and labour force participation**

Iwayem & Olusoj, (2013), studied women's labour force supply in Nigeria, using an econometric model. They found that ethnic origin significantly determine labour supply of women in Nigeria. For instance, members of the Yoruba ethnic group were found to be more likely to participate in the labour market than those from the Hausa ethnic group.

In another study, Ali et al, (2012), examined the socio-cultural, demographic and ethnic variables that influence the decision of women to engage in paid jobs in Khyber Pakhtunkhwa, Pakistan. The results indicate that respondents' ethnic origin, among others, have a significant positive association with their participation in paid employment. The authors argue that in societies where social and cultural norms are strong, females' movement

from home to employment places become difficult and costly. They therefore, suggested that in order to promote female labour force participation in such societies, jobs must be made available near their home towns and also they must be provided with transport facilities.

### **2.2.8 Nationality and labour force participation**

Katseli (2004), wrote an article on immigrants and European Union labour markets. He noted that most European countries are experiencing increased immigration, and that immigrants are contributing to population growth and helping to meet labour shortages, thereby supplementing growth and competitiveness. The writer further explained that in sectors in which foreign and domestic labour can be easily substituted for one another, the employment of immigrants has resulted in increased unemployment among indigenous workers. He further asserts that labour rigidities in almost all European countries mean that new immigrant flows coexist with low labour force participation rates, labour shortages, and unemployment. He added that in the coming decades, there will be the need for greater integration of labour markets through migration. The writer concluded by stressing that effective management of migration flows would therefore, become a top priority for policymakers across Europe.

Lim (2011), wrote a paper on the impact of age, ethnicity, nationality and economic growth on women in the Singapore economy. The paper concludes that foreign labour and immigration policy are essential to Singapore's overall economic development strategy, and its impact on the domestic labour force, especially, on female labour, needs to be studied to determine any problems and issues that might require remediation through adjustment of government policy or business practice.

Both Katseli (2004) and Lim (2011) acknowledged the need for effective management of migration.

### **2.2.9 Religion and labour force participation**

H'madoun (2010), studied the influence of religiosity on women's labour force participation across 48 countries. She examined whether and how the labour force participation of women between the ages of 18 and 55 years is affected by religious affiliation, intensity of belief and participation in religious services. Compared to a reference category of no religion, the results indicate that Hindus and Muslims have the least probability to have paid work. The writer argued that the way in which the Muslim and Hindu faith traditions were shaped over time due to historical circumstances explains their influence on female work decisions today.

In another study, Bayanpourtehrani and Sylvester (2012), empirically examined whether female labour force participation in a cross-section of countries between 1985 and 2005 varies depending upon the religion practised in those countries. Their initial results show that female labour force participation is lower in Muslim countries. However, after introducing some controls, they realised that the association between Islam and female labour force participation is similar to that between Catholicism and female labour force participation. The researchers also found that female labour force participation is higher in countries where Protestantism is common or where no religion is practised.

Pastore and Tenaglia (2013), analysed the impact of religion on female labour force participation in forty-seven (47) countries in Europe. They used data on women age between eighteen and sixty years, drawn from the 2008 European Values Study (EVS). They found that women who belong to the Orthodox and Muslim denominations are less likely to be

employed, while being an agnostic or protestant increases the likelihood of being employed. The authors noted that in the doctrines of all religious denominations, women are considered to be particularly good in performing care activities. They are therefore, expected to give priority to work within the family, rather than outside the family. For this reason, women who are educated on the basis of their religious doctrines may not be interested in entering the labour market.

The major gap identified in the literature is that most of the studies focused on only female labour force participation. Therefore, by including both males and females, and also analysing the influence of several socio-economic and demographic variables, this study would contribute much to literature.

#### **2.4 Conceptual framework**

The conceptual framework for this study is presented in Figure 2.1 below. It is based on information obtained from the review of empirical literature on the topic. The review of the literature (Faridi et al, 2009a&b; Ali et al, 2012, Yakubu, 2010; Magidu, 2010 etc.) pointed to the fact that various socio-economic and demographic variables influence labour force participation.

The conceptual framework for this study establishes that the independent variables influence the dependent variable directly, without working through any intermediate variables. The conceptual framework also establishes that labour force participation has a die-back effect on some of the independent variables specifically, education. Thus, when a person enters the labour force and gets employed, he/she can earn some income which he/she can invest in his/her further education. These are demonstrated in Figure 2.1. However, this study would

focus on only the forward relationship between the independent variables and the dependent variable.

For instance, regarding age, the conceptual framework in Figure 2.1 establishes that age has a direct relationship with labour force participation. The working age population between 15-24 years, are expected to participate less in the labour force as compared to those between 25-54 years. This is due to the fact that most of the people within the former age group are expected to be in school still or undergoing training to be equipped with employable skills, whereas most of those in the latter category are expected to have completed their education and training and therefore, would be available for work. Those within age 55-64 years are also expected to participate less in the labour force because most of them, especially those of 60-64 years, may be due for retirement. Some are also expected to be forced out of the labour force due to poor health and weakness associated with ageing. Therefore, 25-54 years is expected to be the prime time for labour force participation. Age squared is added in order to effectively capture curvilinearity of labour force participation with age.

Sex is also expected to play a critical role in, and have a direct relationship with labour force participation, as shown in Figure 2.1. For instance, males are expected to participate more in the labour force than females. This is due to some societal norms that negatively affect women's labour force participation, and also due to the fact that females, especially married ones, often spend a lot of their time on family responsibilities, such as caring for children and older relatives.

Figure 2.1 again, establishes a direct relationship between marital status and labour force participation. For the purpose of this study, marital status is categorised into three namely, 'never married', 'currently married' and 'formerly married. Individuals who are currently married are more likely to participate in the labour force than those who have never married and those who were formerly married. This is due to the fact those who are currently married are likely to bear more responsibilities, such as providing the needs of their children and sometimes, supporting relatives of their spouses, as compared to those who have never married and those who were formerly married. However, among the married people, married men are more likely to participate in the labour force than married women, due to the fact that the latter spend time caring for children and older relatives.

Household type, which is categorised into 'male-headed' and 'female-headed', is another variable that is expected to have a direct relationship with labour force participation. Male-headed households are expected to have higher proportion of their members in the labour force relative to female-headed households. Geir and Sletten (2007), made two key observations in relation to households headed by females in Syria. They observed that households headed by married females are typically young and often have very few members in the working age. Also, the heads often had their husbands working elsewhere in the country or abroad. The other observation they made is that unmarried females who head households are generally older or widowed, and often do not have any member of their households in the working age other than the head herself. The authors concluded from their study that male-headed households participate more in the labour force than female headed-households, probably due to the above attributes of female-headed households. This is expected to be the situation in Ghana as well.

The individual's level of education is also expected to have a direct relationship with his/her participation in the labour force, as shown in Figure 2.1. More often, highly educated people enter the labour force than those with low level of education, or those with no education. They often seek employment in the formal sector, and are more likely to take up high level occupations as compared with their counterparts with lower levels of education. Hence higher proportion of educated people in the working age population, expected to be in the labour force.

Regarding place of residence, a higher proportion of people in rural areas are expected to participate in the labour force than their urban counterparts. This is because the majority of rural residents are expected to engage in the informal sector of the economy, taking up occupations in agriculture, craft and related work, which are readily available in rural areas, and do not necessarily require any special skills. Majority of their urban counterparts are, however, expected to be engaged in or seeking work in the formal sector, which require some special skills, and where jobs are quite difficult to find.

Region of residence is also expected to have direct influence on labour force participation, as established in Figure 2.1. Higher proportion of people in regions that are more developed such as Greater Accra and Ashanti are expected to participate in the labour force as compared to that of people in less developed regions such as Upper East and Upper West. This is due to the fact that the more developed regions have better employment opportunities than the less developed ones.

Figure 2.1 establishes that nationality also influences labour force participation directly. This is because most foreigners come to reside in Ghana mainly for the purpose of work.

Therefore, though there are laws in Ghana that do not allow foreigners to engage in certain economic activities, such as retail trading, Non-Ghanaians are expected to participate in the labour force more than Ghanaians.

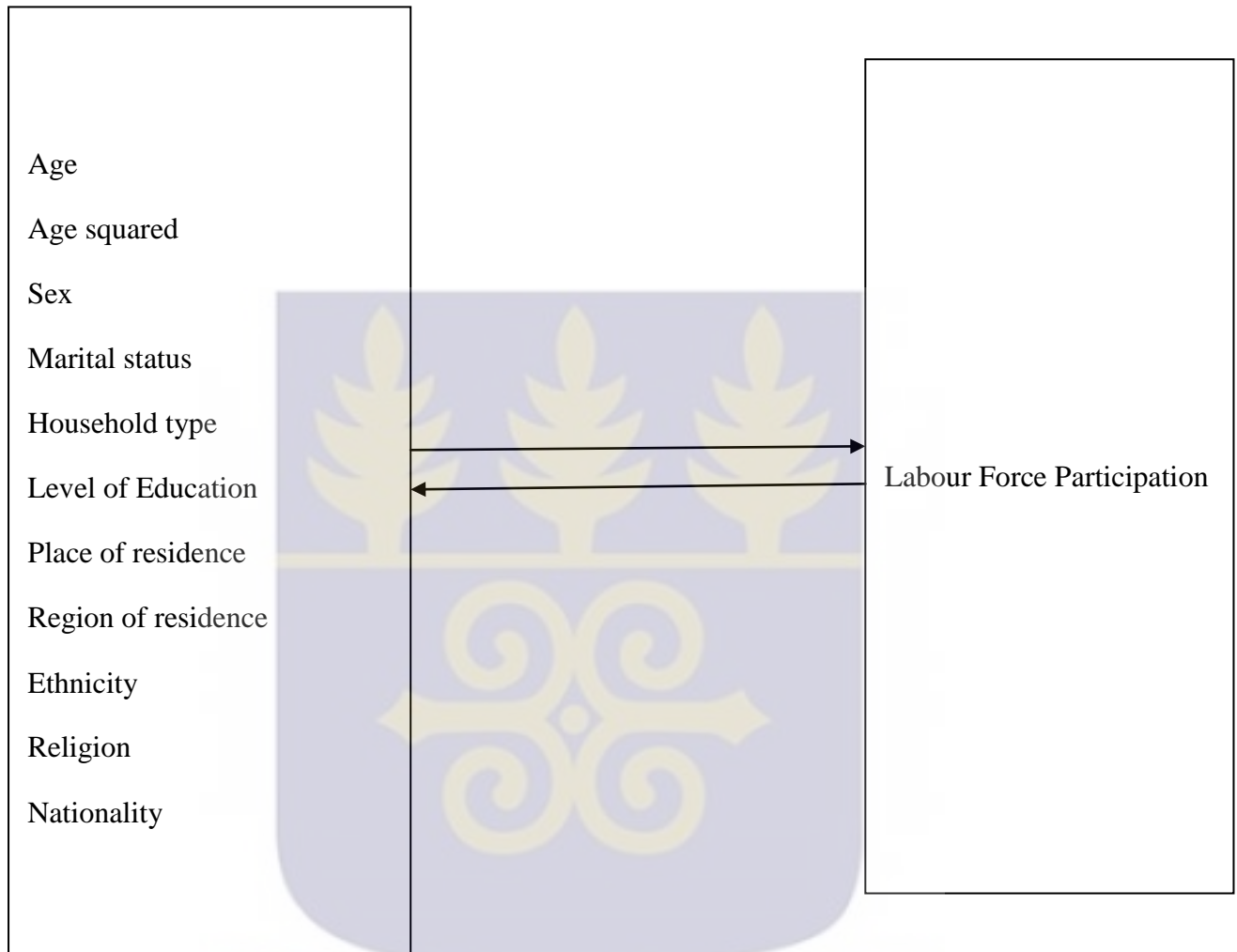
Religion may also influence labour force participation directly in Ghana, as established in Figure 2.1. This is due to the fact that some religious group in Ghana such as Christians and Muslims are very intense with their religious beliefs as compared to those that are non-religious or even traditionalists. Research has also shown that labour force participation reduces with intensity of involvement in religious activities (H'madoun, 2010). Hence, people who belong to religious groups that take their beliefs seriously may participate less in the labour force.

Ethnicity is another factor that can influence labour force participation directly in Ghana. Ethnic groups in northern Ghana are believed to predominantly engage in farming and other agricultural activities like animal rearing, which often do not require any special skills. Ewes are also noted for farming and fishing. Hence, people belonging to these ethnic groups are likely to participate more in the labour force than people from the remaining ethnic groups in Ghana.

**Figure 2.1 Conceptual framework**

**Independent Variables**

**Dependent Variable**



Sources: Faridi et al (2009a&b); Ali et al (2012).

**2.4. Research hypotheses**

Based on the conceptual framework, the following hypotheses have been identified for testing;

(i) People within the age range of 25-54 years are more likely to participate in the labour force than those within ages 15-24 and fifty-five to 55-64 years.

(ii) Men are more likely to participate in the labour force than women.

(iii) Education is likely to correlate positively with labour force participation.

(iv) Rural dwellers are more likely to participate in the labour force than urban dwellers.

(v) Married people are more likely to participate in the labour force than unmarried people.

(vi) Male-headed households are more likely to participate in the labour force than female-headed households.



## CHAPTER THREE

### METHODOLOGY

#### 3.1 Source of data

The 2010 population census data were used for the study. The 2010 population and housing census (PHC) is the eleventh overall, since 1891, and the fifth post-independence national census in Ghana (GSS, 2013). The primary objective of the 2010 PHC was to provide information on the number, distribution and social, economic and demographic characteristics of the population of Ghana necessary to measure the socio-economic development of the country. The 2010 census gathered information from all people present in Ghana on 26th September, 2010. The census also collected data on all living quarters in Ghana as of 26th September, 2010. In the 2010 census, the questions on economic activity were administered to people five years and above in order to meet current international standards. All persons aged five years and above were asked the economic activity questions, irrespective of whether the person was attending school or not (GSS, 2013). Some of the major questions used in the 2010 census on economic activity were as follows: “During the 7 days before census night, did (name) engage in any activity for pay (cash or kind) or profit or family gain for at least one hour? How was (name) mainly engaged? What is the main product or service of the establishment where (name) works/worked?” The first two questions were asked to confirm whether the respondent was economically active or inactive (whether in the labour force or not). In the original data, “economic activity” was categorised into three as ‘employed’ (coded ‘1’), ‘unemployed’ (coded ‘2’) and ‘economically inactive’ (coded ‘3’). These were re-coded into two categories for the purpose of this study. Those categorised as ‘employed’ together with the ‘unemployed’ were merged and considered to be in the labour force, while those who were categorized as ‘economically inactive’ were

considered not to be in the labour force. These were coded into a dummy variable of '1' for 'in the labour force' and '0' for 'not in the labour force'.

Though all persons aged five years and above were asked the economic activity questions, data on those aged 15-64 years were used for this study, since this category of people constitutes the most active working age population (GSS, 2013). This constitutes a sample of 1,405,681 people, of which 674,100 are males and 731,581 are females.

### **3.2 Method of analysis**

The analysis was carried out at three levels; first a univariate analysis was done. The univariate analysis was used to describe the background characteristics of the working age population, in relation to the dependent and the independent variables. This was done by tabulating frequencies and percentages of the background characteristics of the working age population. Second, bivariate analysis was carried out to examine the relationship between the response variable (labour force participation) and the explanatory variables; age, age square, sex, marital status, household type, level of education, region of residence, place of residence, ethnicity, nationality and religion. This was done using cross tabulations. The significance of association was tested using the chi-square test. The third stage of the analysis was a multivariate analysis by the use of a binary logistic regression to examine the effects of the explanatory variables on the response variable. The binary logistic regression model was chosen due to the fact that the dependent variable is dichotomous (measured as whether the respondent was 'in the labour force' or 'not in the labour force'). For each predictor variable, a reference category, (the first category) was selected from all the available categories. The logistic regression was ran using the Statistical Package for the Social Sciences (SPSS) software, based on the 'enter method' (entering all the independent variables at the same

time). Each reference category was given the odds ratio 1.000. The regression model is stated as;

$$LFP_i = \beta_0 + \beta_1 Age_i + \beta_2 Age\ Squared_i + \beta_3 Sex_i + \beta_4 Mar_i + \beta_5 Edu_i + \beta_6 Headsex_i + \beta_7 Place_i + \beta_8 Reg_i + \beta_9 Ethn_i + \beta_{10} Reli_i + \beta_{11} Nat_i + e_i$$

Where;

$LFP_i$  is labour force participation of the  $i$ th individual, which is equal to '1' if the individual participates and '0' if the individual does not,  $\beta_0$  is intercept,  $\beta_1, \beta_2, \dots, \beta_{11}$  are regression coefficients,  $Age_i, Age\ Squared_i, Sex_i, \dots, Nat_i$  are the various socioeconomic and demographic variables and  $e_i$  is error associated with the  $i$ th individual.

### 3.3 Definition of terms

**Labour force:** This stands for the total number of people who are of working age (15 years and older), and who are either employed or unemployed but are actively searching for employment (GSS, 2013).

**Labour force participation:** Labour force participation refers to an individual's decision whether to participate in the labour force or not (Ehrenberg and Smith, 1997, as cited in Baah-Boateng et al 2003). Thus, it refers to whether an individual is working or searching for work, on one hand (in the labour force), or whether he/she is not working, and not searching for work, on the other hand (not in the labour force).

**Labour force participation rate:** It is a measure of the proportion of a country's working-age population that engages actively in the labour market, either by working or looking for

work (ILO, 2014). Thus, it is the ratio of the labour force to the working-age population, expressed as a percentage (ILO, 2014).

**Working-age population:** This refers to all people aged 15 years and older in the population.

**Active working-age population:** This refers to all persons aged 15 to 64 years in the population (GSS, 2013).



## CHAPTER FOUR

### PROFILE OF GHANA AND CHARACTERISTICS OF THE POPULATION

#### 4.1 Profile of Ghana

Ghana is a country located on the West African coast. It has a total area of 238533 square kilometers, of which 277533 square kilometers is covered by land and 11000 square kilometers is covered by water (UN, 2015). It shares borders with three French speaking countries namely, Togo to the east, Cote d'Ivoire to the west and Burkina Faso to the north. It has the Gulf of Guinea to the south. About 69.1% of the nation's land is arable, and has a forest cover of about 21.2% (CIA World Factbook, 2014). The country has a warm tropical climate. The lowest point is the 'Cape Three Points' in the Atlantic Ocean and the highest point is mount Afadjato, with an elevation of about 884 meters above sea level (GSS, 2015).

Ghana boasts of natural resources such as gold, timber, salt, diamond, petroleum among others. The major export commodities of the country are cocoa, gold and timber (GSS, 2015). The country spends about 8.1% and about 4.8% of her Gross Domestic Product (GDP) on education and health respectively (UN, 2015).

Currently, the nation's population is approximately 25.8 million (2014 estimate); (CIA World Factbook, 2014). The population is growing at a rate of 2.1% per annum, between 2010 and 2015 (UN, 2015). The nation has a crude birth rate of 30.6 per 1,000 population (GSS, 2015), a total fertility rate of 4.2 children per woman (GSS, 2015) and a crude mortality rate of 7.37 deaths per 1,000 populations (GSS, 2015). Ghana is predominantly urban, with about 53.4% of the people living in urban areas and the remaining 46.6% residing in rural areas (2014

estimate) (UN, 2015). The rate of urbanization is about 3.4% per annum between 2010 and 2015 (UN, 2015). Life expectancy at birth is 65.75 years on average, with males having 63.38 years and females having 68.19 years (2014 estimate) (CIA World Factbook, 2014). Infant mortality rate in Ghana is 41 deaths per 1,000 live births, while child (under-5) mortality rate is 60 deaths per 1000 live births (GSS, 2015). Maternal mortality rate is 350 deaths per 100,000 live births. Approximately 71.5% of the general population are literate (CIA World Factbook, 2014). Literacy rate among males and females is 78.3% and 65.3% respectively (CIA World Factbook, 2014). Ghana is dominated by Christians. Christians constitute about 71.2% of the population, followed by Muslims who constitute approximately 17.2%. Traditionalists are 5.2%, 0.8% made up of other religions and the remaining 5.2% belong to no religion (CIA World Factbook, 2014).

#### **4.2 Characteristics of the population**

This section presents a description of the demographic and socio-economic characteristics of the study population, and also description in terms of labour force participation. The population is made up of people aged 15-64 years. They are considered as the most economically active population (GSS, 2013). The socio-economic and demographic characteristics of the population considered in this study include age, age squared, sex, marital status, household type, level of education, religion, ethnicity, nationality, place of residence and region of residence.

#### 4.2.1 Age characteristics of the population

The characteristics of the population by age are presented in Table 4.1. From the table, the highest proportion of the population fall within 15-24 years, considered as the youthful age group. This constitutes 35.1% of the population. Also, about 27% of the population are 25-34 years old. This constitutes the second highest proportion of the respondents. Again 18.6% are 35-44 years old, 12.6% of them fall within 45-54 years, and the lowest proportion, constituting 7.1% in within 55-64 years, which is considered to be the older ages.

*Table 4.1 percentage distribution of age characteristics of the population*

Age Group	Frequency	Percentage
15-24	493691	35.1
25-34	373892	26.6
35-44	260869	18.6
45-54	177328	12.6
55-64	99901	7.1
<b>Total</b>	<b>1405681</b>	<b>100.0</b>

Source; PHC, 2010

Labour force participation is expected to increase with age, reach a peak and then decrease. Therefore, labour force participation is expected to be high among those within ages 25-34, 35-44, 45-54 years and low among those within ages 15-24 and 55-64 years.

#### 4.2.2 Sex of the population

Figure 4.1 shows the characteristics of the population by sex. It shows that a slightly higher proportion of the population are females, constituting 52%, while men make up the remaining 48.0%.

*Figure 4.1 percentage distribution of population by sex*



Source; PHC, 2010

This shows that there are more females than males in the Ghanaian population. Labour force participation is expected to be higher among males than females. This is because quite significant proportion of women are likely to be engaged with family responsibilities such as caring for children and older relatives.

### 4.2.3 Marital Status

This sub-section presents the characteristics of the population by marital status. Marital status was categorized into three as never married, currently married and formerly married (divorced, separated or widowed). From Table 4.2, 38.9% of the population have never married. Also, approximately 53% are currently married. This represents the highest proportion of the population in this category.

*Table 4.2 percentage distribution of the population by marital status*

Marital status	Frequency	Percentage
Never married	547,047	38.9
Currently married	74,1989	52.8
Formerly married	116,645	8.3
<b>Total</b>	<b>1,405,681</b>	<b>100.0</b>

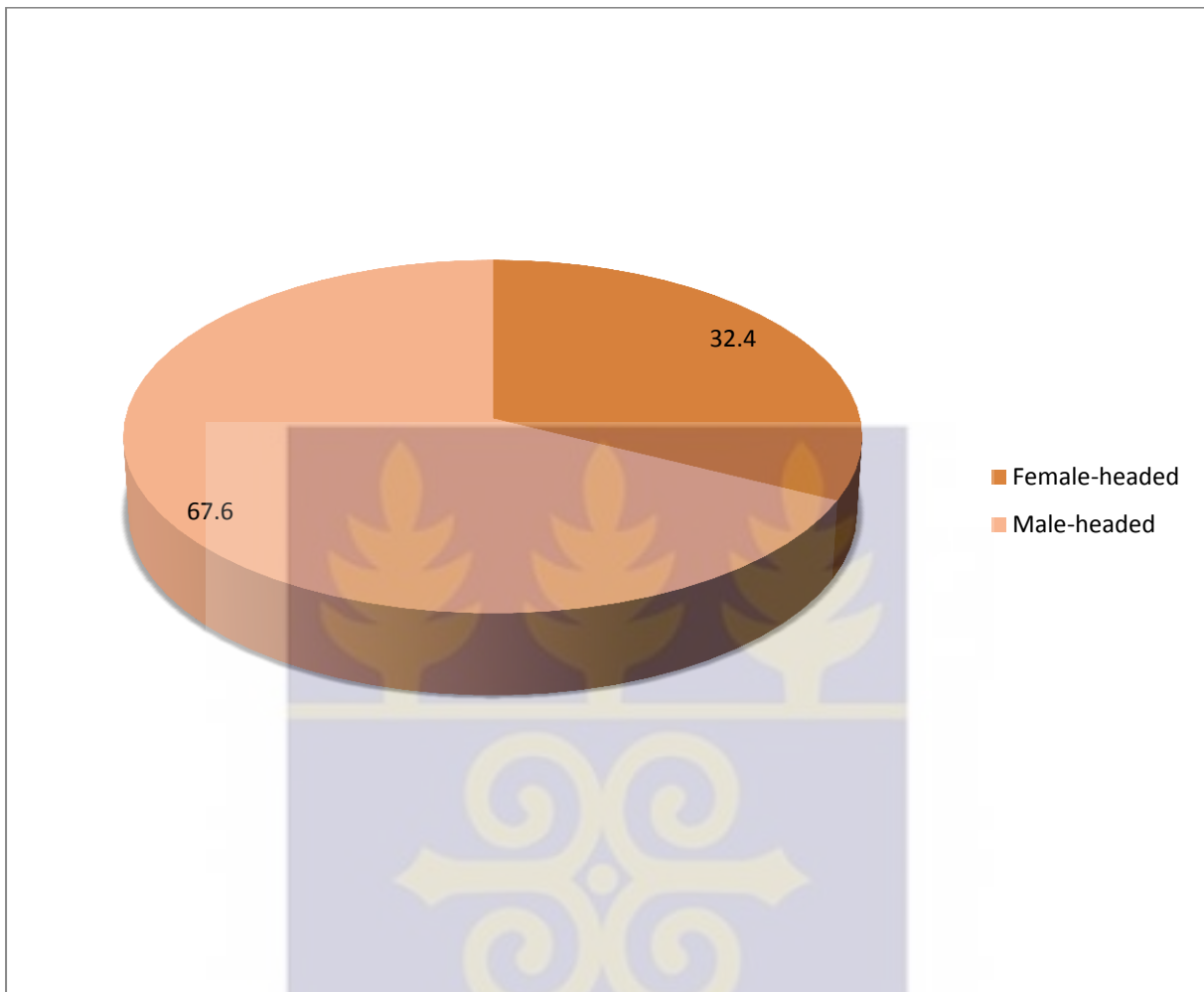
Source; PHC, 2010

Again, 8.3% of the population, constituting the lowest proportion, were formerly married. The results suggest that nuptiality is high among the Ghanaian population.

### 4.2.4 Household type

This variable is categorized into male-headed household and female-headed household. Figure 4.2 presents the distribution of the study population by the type of household they belong to. It shows immense difference between households headed by females and those headed by males. From the figure, approximately 68% of households are headed by males and 32% headed by females.

**Figure 4.2 Percentage distribution of the population by household type**



Source: PHC, 2010

#### **4.2.5 Level of education**

This sub-section presents a frequency and percentage distribution of the population by level of education attained. Results from Table 4.3 show that 25.4% of the population have no education. Also, 17.1% have obtained senior high or vocational education. The highest proportion, making up 49.5% have however, attained basic (Kindergarten, Primary or Junior High School) education and 8.0% have attained tertiary level education.

**Table 4.3 percentage distribution of the population by level of education**

<b>Level of Education</b>	<b>Frequency</b>	<b>Percentage</b>
None	357,222	25.4
Basic	696,022	49.5
SHS/Voc./Tech.	240,267	17.1
Tertiary	112,170	8.0
<b>Total</b>	<b>1,405,681</b>	<b>100.0</b>

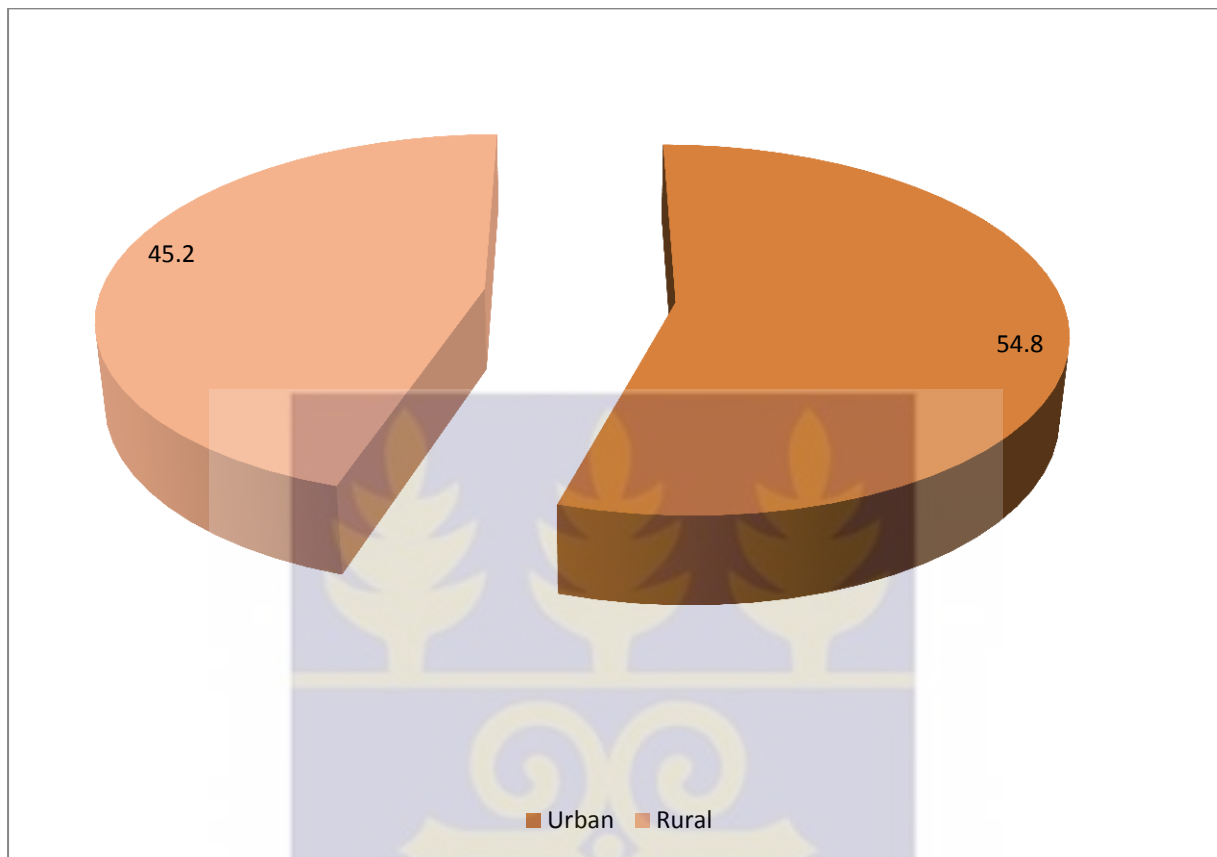
Source: PHC, 2010.

Several studies (Faridi et al, 2009a&b; Yakubu, 2010; Widarti, 1998) have established a positive relationship between education and labour force participation. Hence, majority of the people with higher education were expected to be in the labour force.

#### **4.2.6 Place of residence**

This sub-section presents the distribution of the population in terms of place of residence, which is measured as rural and urban. From Figure 4.3, 45.2% of the population aged 15-64 years reside in rural areas while 54.8% reside in urban areas. The high proportion of urban residents in this demographic group is a reflection of the pattern in the general population. According to the Ghana Statistical Service, the country was more urban than rural as of 2010 (GSS, 2013).

**Figure 4.3 distribution of the population by rural-urban residence.**



Source; PHC, 2010.

The Ghana Statistical Service (2013), attributed the causes of Ghana’s urbanization to rural-urban migration, natural increase in towns and cities and reclassification of villages as they attain the threshold population of 5,000.

#### **4.2.7 Region of residence**

This sub-section analyses the characteristics of the population according to the ten regions of Ghana. Table 4.4 shows that the highest proportion of the population, constituting 19.7% resides in the Ashanti Region. This is followed closely by Greater Accra Region with 18.6% of residents. The results also show that Upper West Region is the least populated, constituting just 2.6% of the study population.

**Table 4.4 percentage distribution of the population by region of residence**

<b>Region</b>	<b>Frequency</b>	<b>Percentage</b>
Western	136,197	9.7
Central	121,758	8.7
Greater Accra	261,732	18.6
Volta	116,493	8.3
Eastern	147,508	10.5
Ashanti	277,088	19.7
Brong-Ahafo	128,075	9.1
Northern	126,643	9.0
Upper East	53,807	3.8
Upper West	36,380	2.6
<b>Total</b>	<b>1,405,681</b>	<b>100.0</b>

Source; PHC, 2010

Though Northern Region is the largest region in Ghana in terms of land size, it ranks fifth in terms of population, constituting 9.0% of the study population. There are some variations among these regions. These variations are in terms of the environmental, socio-economic and demographic characteristics of the regions, which may have some degree of influence on labour force participation. Some of these characteristics include availability of educational opportunities, job opportunities and population size, as presented in Table 4.4 above.

#### **4.2.8 Ethnicity**

This sub-section presents the characteristics of the population according to ethnicity. All the ethnic groups in Ghana were put into five categories as shown in Table 4.5. From the table

Akans constitute the highest proportion with almost 47.0%, followed by Ewes with almost 14.0%. The Ga-Dangme ethnic group constitutes the lowest proportion (7.5%) of the population. The ‘Other’ category is made up of all other ethnic groups originating from Ghana and others from outside Ghana.

*Table 4.5 percentage distribution of the population by ethnicity*

<b>Ethnic group</b>	<b>Frequency</b>	<b>Percentage</b>
Akan	659,751	46.9
Ga-Dangme	105,059	7.5
Ewe	194,819	13.9
Northern tribes	329,197	23.4
Other	116,855	8.3
<b>Total</b>	<b>1,405,681</b>	<b>100.0</b>

Source; PHC, 2010.

#### **4.2.9 Religion**

Table 4.6 presents the characteristics of the population by religion. Results from the table indicate that the highest proportion of the study population (71.7%) is composed of Christians, followed by Moslems, constituting 17.1%. The lowest proportion of 4.7% is made up of traditionalists.

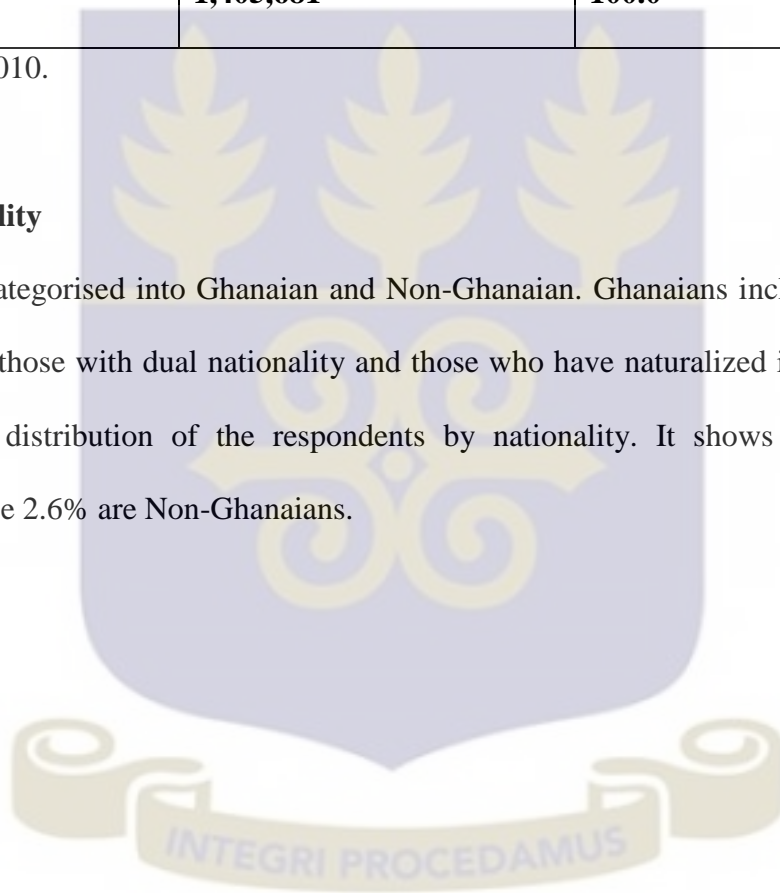
**Table 4.6 percentage distribution of population by religion**

<b>Religion</b>	<b>Frequency</b>	<b>Percentage</b>
No religion	91,998	6.5
Christian	1,007,917	71.7
Islam	239,817	17.1
Traditionalist	65,949	4.7
<b>Total</b>	<b>1,405,681</b>	<b>100.0</b>

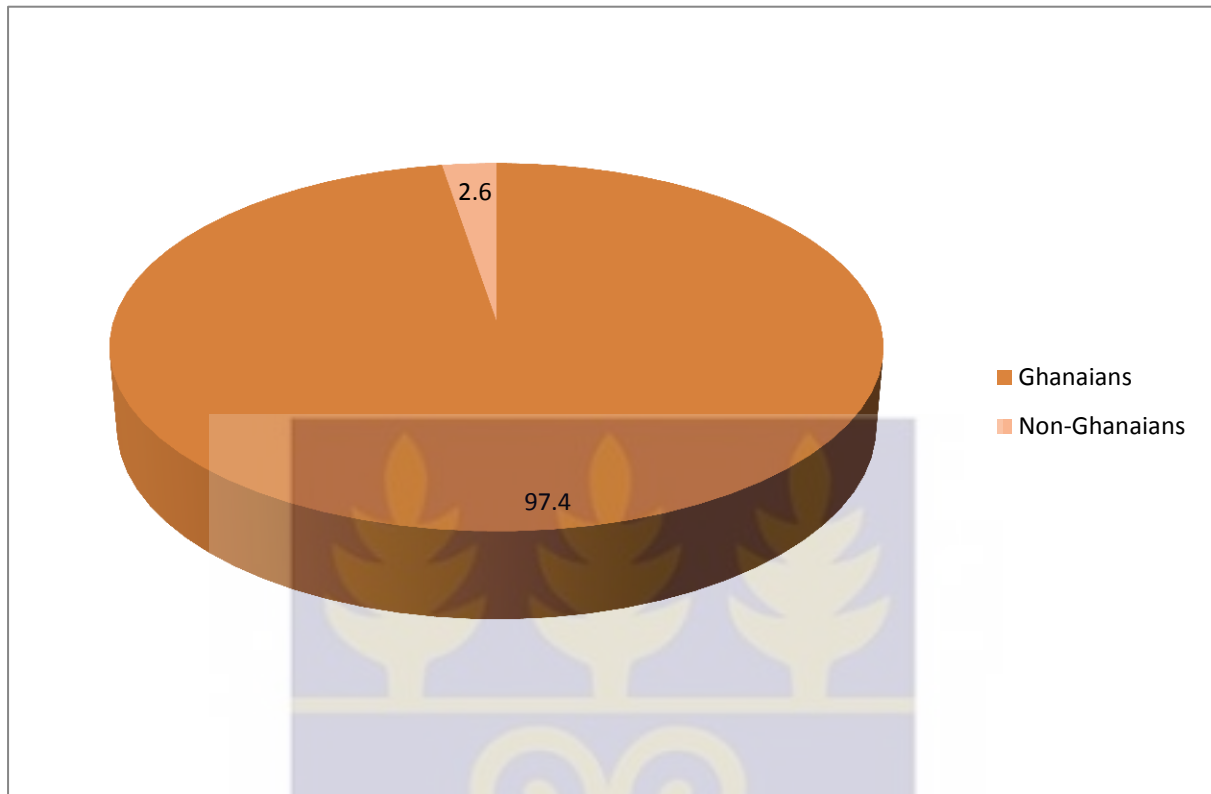
Source; PHC, 2010.

#### **4.2.10 Nationality**

Nationality is categorised into Ghanaian and Non-Ghanaian. Ghanaians include respondents born in Ghana, those with dual nationality and those who have naturalized in Ghana. Figure 4.3 shows the distribution of the respondents by nationality. It shows that 97.4% are Ghanaians, while 2.6% are Non-Ghanaians.



**Figure 4.4** *distribution of the population by nationality.*



Source: PHC, 2010.

#### **4.2.11 Labour force participation**

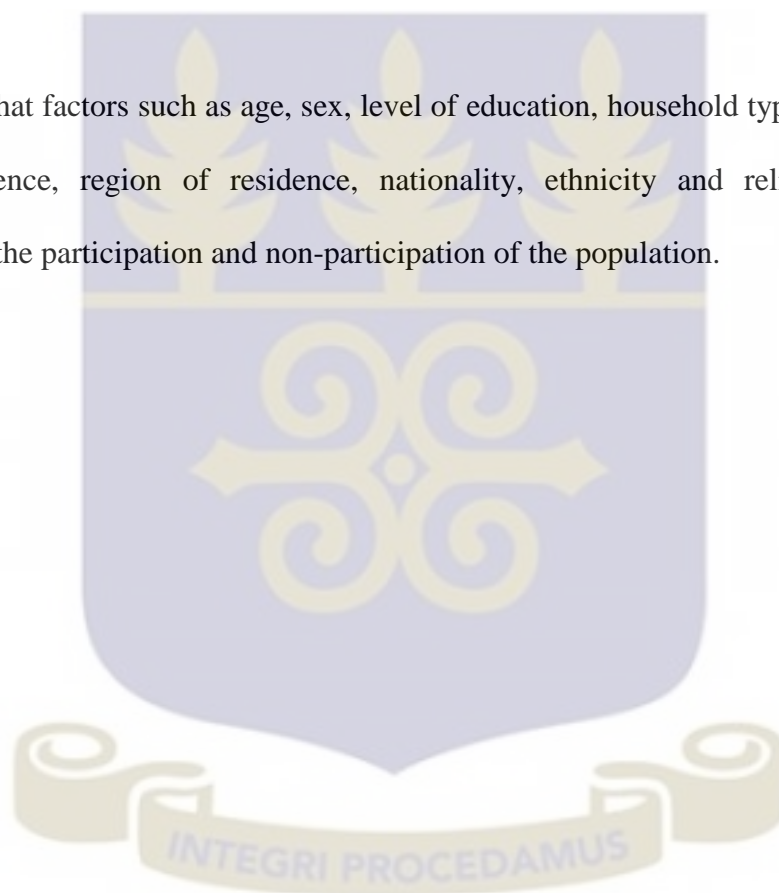
Labour force participation measures whether the individual is 'in the labour force' or 'not'. The total population aged 15-64 years is 1,405,681. Out of this, a total of 1,022,924, representing 72.8% were in the labour force. On the other hand, a total of 382,757, representing 27.2% were not in the labour force. These are presented in Table 4.7.

*Table 4.7 percentage distribution of the population by labour force participation.*

<b>Labour Participation</b>	<b>Force</b>	<b>Frequency</b>	<b>Percentage</b>
In The Labour Force		1,022,924	72.8
Not In The Labour Force		382,757	27.2
<b>Total</b>		<b>1,405,681</b>	<b>100.0</b>

Source; PHC, 2010.

It is presumed that factors such as age, sex, level of education, household type, marital status, place of residence, region of residence, nationality, ethnicity and religion are partly responsible for the participation and non-participation of the population.



## **CHAPTER FIVE**

### **DIFFERENTIALS IN LABOUR FORCE PARTICIPATION BY THE SOCIO-ECONOMIC AND DEMOGRAPHIC FACTORS**

#### **5.1 Introduction**

This chapter examines the variations between the independent variables and the dependent variable. The independent variables include age of the population, sex, marital status, household type, level of education, place of residence, region of residence, nationality, ethnicity, religion, and the dependent variable is labour force participation.

#### **5.2.1 Age and labour force participation**

The Chi-square test suggested that age of the respondents is significantly related to labour force participation statistically. The chi-square test score associated with this value was 310947.8, with a p-value of 0.000. Labour force participation was expected to increase with age, reach a peak and then begin to decrease. This expectation is confirmed by the results in Table 5.1. The results from Table 5.1 show that people in the youngest age group, thus 15-24 years have the lowest proportion in the labour force, constituting 44.6%. The proportion then increased to 85.9% in age group 25-34 years and reached the highest level of 91.8% among those aged 35-44 years. It then began to reduce gradually, to 91.0% in age group 45-54 years and then to 80.8% in the oldest age group, 55-64 years.

*Table 5.1 percentage distribution of labour force participation by age*

Age Group	%In Labour force	%Not in labour force	Total percentage	Total (N)
15-24	44.6	55.4	100.0	493,691
25-34	85.9	14.1	100.0	373,892
35-44	91.8	8.2	100.0	260,869
45-54	91.0	9.0	100.0	177,328
55-64	80.8	19.2	100.0	99,901
<b>Total</b>	<b>1,022,924</b>	<b>382,757</b>	<b>100.0</b>	<b>1,405,681</b>

Source: PHC, 2010.

Chi-square=310947.8. P-value=0.000

The result is related to the findings of Mei (2014), and also that of Hafeez and Ahmad, (2002). The results from Mei's study suggest that those aged 15 to 24 years are less likely to participate in the labour force than those who are between the ages of 25 and 39 years. The researcher attributed this finding to the fact that those between 15-24 years might still be in school to acquire more knowledge and skills. Hafeez and Ahmad (2002) found also that the probability of labour force participation increases with age. They attributed this result to the fact that younger females lack the requisite experience and training, and also, that since the females are young, they might have not yet completed their family size. However, the result contradicts the findings of Yakubu (2010). He found that females in the South African labour market tended to be young (between 15 and 29 years old, constituting 48% of the female labour force). A plausible reason for the very low participation rate of the youth is that a considerable proportion of them might still be in school in order to acquire more knowledge and skill to make them employable, as argued by Mei (2014) and Hafeez and Ahmad (2002).

### 5.2.2 Sex and labour force participation

Many studies (Rahmah and Idris 2012; Magidu, 2010) have suggested that females are less likely to participate in the labour force than males. Results from Table 5.2 below show that males have a slightly higher chance of participating in the labour force than females. The proportion of males in the labour force is 73.6%, only slightly higher than that of females, which is 72.0%. This could be attributed to the fact that quite significant proportion of females spend time in bearing children and also in performing domestic duties, which makes it impossible for them to join the labour force. It could also be due to some cultural attitude and societal norms that negatively affect women's participation in the labour force.

**Table 5.2 percentage distribution of labour force participation by sex**

<b>Sex</b>	<b>% In Labour Force</b>	<b>% Not in Labour Force</b>	<b>Total Percentage</b>	<b>Total (N)</b>
Male	73.6	26.4	100.0	674,100
Female	72.0	28.0	100.0	731,581
<b>Total</b>	<b>1,022,924</b>	<b>382,757</b>	<b>100.0</b>	<b>1,405,681</b>

Source; PHC, 2010

Chi-square=503.7 P-value=0.000

In order to examine any possible variation of the above results in terms of age, a cross tabulation was done on labour force participation by sex and age. The results are presented in Table 5.3. The results show that higher proportion of males participate in the labour force than females for all the age groups, except the youthful age group (15-24 years). Thus, for the youthful age group, higher proportion of females (46%) participate in the labour force than males (approximately 43%). A plausible reason is the fact that quite significant proportion of females within this age group engage in retail trade on their own or help their mothers with their businesses after school, as compared to their male counterparts.

*Table 5.3 Percentage distribution of labour force participation by sex and age*

Sex	Age	% In Labour Force	% Not In Labour Force	Total Percentage	Total (N)
Male	15-24	43.2	56.8	100	241742
	25-34	87.9	21.1	100	174214
	35-44	94.5	5.5	100	124965
	45-54	93.9	6.1	100	84413
	55-64	85.2	14.8	100	48766
	<b>Total</b>		<b>496465</b>	<b>177635</b>	<b>100</b>
Females	15-24	46.0	54.0	100	251949
	25-34	84.2	15.8	100	199678
	35-44	89.4	10.6	100	135904
	45-54	88.3	11.7	100	92915
	55-64	76.5	23.5	100	51135
	<b>Total</b>		<b>205122</b>	<b>526459</b>	<b>100</b>

Source: PHC,2010

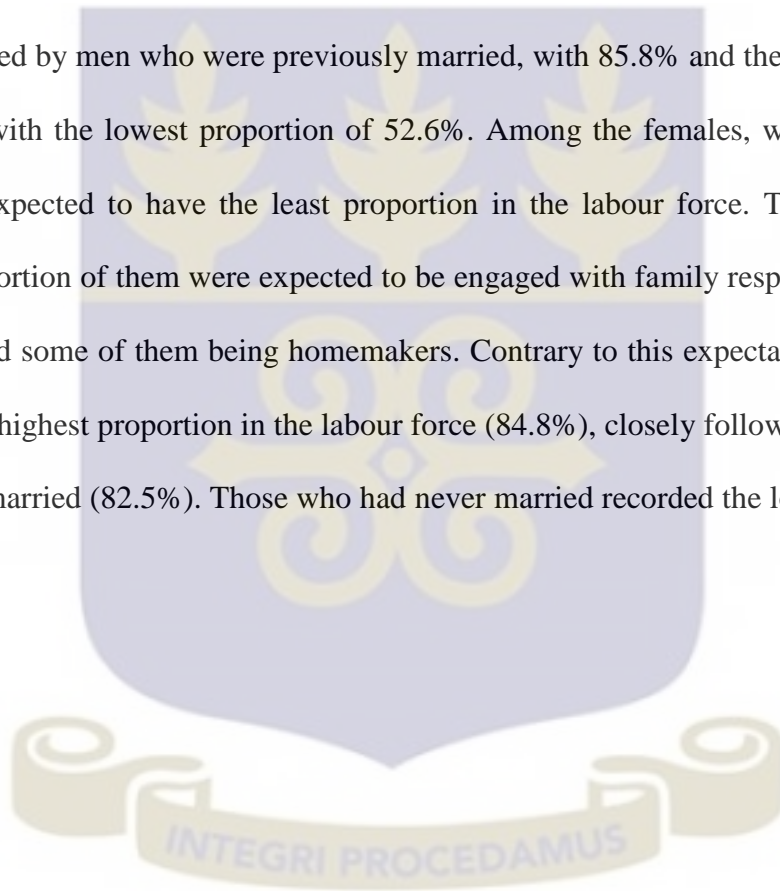
Chi-square; 310947.8 p-value=0.000

Another vital observation is that for all the other age groups, there is greater variation in labour force participation between males and female, than the variation observed in Table 5.2, when age was not included. For instance, between 35-44 years, approximately 95% of male participated in the labour force while 89% of females did. Also, for age 45-54 years, almost 94% of males participated in the labour force, while their female counterparts recorded a lower proportion of approximately 88%.

It can however, be concluded from the analyses above that generally, men participate more in the labour force than women.

### 5.2.3 Marital Status and Labour Force Participation

The chi-square tests conducted show that statistically, there is a significant relationship between marital status and labour force participation. Marital status was categorized into 'never married', 'currently married' and 'formerly married'. Among the male respondents, much difference was not expected in labour force participation between those who never married and those who were married. Results from Table 5.4 however, reveal a significant difference between the two. Married men had the highest proportion in the labour force (92.5%), followed by men who were previously married, with 85.8% and then men who were never married with the lowest proportion of 52.6%. Among the females, women who were married were expected to have the least proportion in the labour force. This is because a significant proportion of them were expected to be engaged with family responsibilities, such as child care and some of them being homemakers. Contrary to this expectation, the married women had the highest proportion in the labour force (84.8%), closely followed by those who were formally married (82.5%). Those who had never married recorded the lowest proportion of 45.5%.



**Table 5.4 Percentage distribution of labour force participation by marital status and sex**

<b>Sex</b>	<b>Marital status</b>	<b>% In Labour Force</b>	<b>% Not in Labour Force</b>	<b>Total percentage</b>	<b>Total (N)</b>
Male	Never married	52.6	47.4	100.0	313878
	Currently married	92.5	7.5	100.0	331049
	Formally married	85.8	14.2	100.0	29173
	<b>Total</b>	<b>496465</b>	<b>177635</b>	<b>100.0</b>	<b>674100</b>
Female	Never married	45.5	54.5	100.0	233169
	Currently married	84.8	15.2	100.0	410940
	Formally married	82.5	17.5	100.0	87472
	<b>Total</b>	<b>526459</b>	<b>205122</b>	<b>100.0</b>	<b>731581</b>

Source: PHC, 2010.

Chi-square=244947.5 P-Value=0.000.

For both the male and females, those who had never married had the lowest proportion in the labour force. This could be due to the fact that significant proportions of them were full-time students at the time of the census. Another plausible reason is that a significant proportion of them may be young; hence, they may still be receiving care and provision of their parents.

As shown in the results from Table 5.4 above, there were high proportions of married and formerly married people in the labour force among both the male and the female population. Faridi et al (2009a) obtained a similar result in their study. Their results also show higher proportion of married women in the labour force than unmarried women. They attributed the result to the fact that the females are more likely to join labour market just to share the financial burden of the family and to support their counterparts in meeting basic economic necessities of life. Baah-Boateng et al (2013) also found that married relative to unmarried women are more likely to participate in the labour market. Between the two sexes however, there were more married men in the labour force (92.5%) than married women (84.8%). This could be due to the fact that most of the married women had family responsibilities, as suggested above.

#### 5.2.4 Household type and labour force participation

Male-headed households were expected to participate more in the labour force than female-headed households. Results presented in Table 5.5 confirm this expectation. The results indicate that male-headed households participate more in the labour force (75.5%) than female-headed households (66.2%).

*Table 5.5 percentage distribution of labour force participation by household type*

Sex of household head	% In Labour Force	%Not In Labour Force	Total Percentage	Total (N)
Male headed	75.5	24.1	100	<b>950877</b>
Female headed	66.2	33.8	100	<b>454804</b>
<b>Total</b>	<b>1022924</b>	<b>382757</b>	<b>100</b>	<b>1405681</b>

Source: PHC, 2010

Chi-square=14515.6 p-value=0.000

### 5.2.5 Level of education and labour force participation

Labour force participation is expected to increase with level of education. Several studies (Faridi et al, 2009a&b; Yakubu, 2010; Widarti, 1998; Sackey, 2005) hypothesized and confirmed a positive correlation between education and labour force participation. The results in Table 5.6 are however, contrary to the researcher's expectation and also contrary to what have been confirmed in most empirical studies. The results reveal that labour force participation does not necessarily increase with increased level of education. The proportion of people with no education in the labour force is 86.4%. This represents the highest among all the levels. This is followed by those with basic education, having a proportion of 72.3% in the labour force. The lowest proportion of 57.3% is made up of those who have attained senior secondary/vocational/technical level. Also, the proportion of those who have attained tertiary level is 65.5%. This is higher than the proportion of those with senior secondary/vocational/technical. This suggests that tertiary education positively influences labour force participation in Ghana than secondary/vocational/technical.

**Table 5.6 percentage distribution of labour force participation by level of education**

<b>Level of Education</b>	<b>In the labour force</b>	<b>Not in the labour force</b>	<b>% Total</b>	<b>Total (N)</b>
No Education	86.4	13.6	100.0	357,222
Basic	72.3	27.7	100.0	696,022
SHS/Voc./Tech.	57.3	42.7	100.0	240,267
Tertiary	65.5	34.5	100.0	112,170
<b>Total</b>	<b>1,022,924</b>	<b>382,757</b>	<b>100.0</b>	<b>1,405,681</b>

Source; PHC, 2010.

Chi-square=65531 P-value=0.000

With regard to those with some education, especially those with senior high/vocational education, one possible reason for having a low proportion of them in the labour force could be due to the fact that quite significant proportion of them were still full-time students as at the time of the census. The reason could also be attributed to inadequate job opportunities in the formal sector, where most of them would want to be employed.

In order to examine the effect of full-time schooling on labour force participation, a cross-tabulation was ran using three variables namely, school attendance, level of education and labour force participation. The aim of running this particular crosstab was to see if there would be significant difference in the labour force participation rate between those who were still in school and those who were previously in school, at all the levels of education. If there is any significant difference, then that would be considered as one possible reason for the overall lower labour force participation of the educated people as compared to those with no education. The result is presented in Table 5.7.

From Table 5.7, the proportion of respondents with 'no education' still remained at 86.4%. It is also clear that quite significant proportion of the respondents who reported to have attained basic, secondary/vocational or tertiary levels were still in school at the time of the survey. These respondents had very low proportions in the labour force. For instance only 10.9% of those who were still in secondary/vocational/technical schools and 22.5% of those in Tertiary institutions were in the labour force.

**Table 5.7 school attendance, level of education and labour force participation**

<b>School Attendance</b>	<b>Level of Education</b>	<b>In the Labour Force</b>	<b>Not in the Labour force</b>	<b>%Total</b>	<b>Total (N)</b>
Never	No education	86.4	13.6	100.0	<b>357,222</b>
Now	Basic	16.5	83.5	100.0	<b>130,534</b>
	SHS/Voc./Tech.	10.9	89.1	100.0	<b>82,744</b>
	Tertiary	22.5	77.5	100.0	<b>39,008</b>
Past	Basic	85.2	14.8	100.0	<b>565,488</b>
	SHS/Voc./Tech.	81.7	18.3	100.0	<b>157,523</b>
	Tertiary	88.4	11.6	100.0	<b>73,162</b>

Source: PHC, 2010.

Chi-square=65531 P-value=0.000

Table 5.7 again shows that after leaving school, labour force participation improved drastically among graduates from the various levels of education. The proportion improved from 16.5% to 85.2% among basic school graduates, from 10.9% to 81.7% among secondary/vocational/technical schools graduates and from 22.5% to 88.4% among tertiary school graduates. The results from Table 5.7 also show that respondents who completed tertiary education have the highest proportion in the labour force, taking all the categories including 'no education' into consideration.

The relationship between education and labour force participation may also vary among males and females. In order to study this possible variation, a cross tabulation was done on labour force participation by sex and level of education. Table 5.8 presents the results of this analysis.

**Table 5.8 Percentage distribution of labour force participation by sex and level of education**

Sex	Level of Education	% In Labour Force	% Not In Labour Force	Total Percentage	Total (%)
Male	No education	90.8	9.2	100	131625
	Basic	73.4	26.6	100	338993
	SHS/Voc/Tech	60.7	39.3	100	133766
	Tertiary	67.3	32.7	100	669716
	<b>Total</b>	<b>496465</b>	<b>177635</b>	<b>100</b>	<b>674100</b>
Female	No education	83.8	16.2	100	225597
	Basic	71.2	28.8	100	357029
	SHS/Voc/Tech	53.1	46.9	100	106501
	Tertiary	62.5	37.5	100	42454
	<b>Total</b>	<b>526459</b>	<b>205122</b>	<b>100</b>	<b>731581</b>

Source: PHC, 2010

Chi-square=65531 p-value=0.000

Table 5.8 clearly shows that males participate more in the labour force than females for all the levels of education. For instance about 91% of males with no education participate in the labour force relative to approximately 84% for females in the same category. Also, about 67% of males who have attained tertiary education participate in the labour force, greater than approximately 63% for females in the same category. The results actually indicate significant difference in labour force participation between males and females for all levels of education.

### 5.2.6 Place of residence and labour force participation

Place of residence is categorized into rural and urban. Most empirical studies found that rural residents are more likely to participate in the labour force than their urban counterparts. Uraz et al (2010), confirmed that urban women at working age have lower labour force participation rates than rural women. Ali and Tasnim (2009), also found that rural women are more likely to participate in economic activities than urban women. They attributed this finding to weak financial background of the rural folks, large family size and the possibility of the rural folks working on farms. According to Siphambe and Motswapong (2010), however, females who live in urban areas are more likely to participate in the labour market than those who live in rural areas. Results from this study, as presented in Table 5.9 confirm the findings of Uraz et al (2010) and Ali and Tasnim (2009).

From Table 5.9, 77.4% of rural residents were in the labour force. This is more than that of urban residents (68.9%). The Chi-square test (having a p-value of 0.000) revealed that place of residence is significantly related to labour force participation statistically.

**Table 5.9 percentage distribution of labour force participation by place of residence**

<b>Place of Residence</b>	<b>% In Labour Force</b>	<b>% Not in Labour Force</b>	<b>Total Percentage</b>	<b>Total (N)</b>
Urban	68.9	31.1	100.0	770,778
Rural	77.4	22.6	100.0	634,903
<b>Total</b>	<b>1,022,924</b>	<b>382,757</b>	<b>100.0</b>	<b>1,405,681</b>

Source: PHC, 2010

Chi-square=12609.1; P-Value=0.000

One plausible reason for the result of this study is that rural residents are more likely to engage in farming and other agriculture related activities, which do not require specialized

skills, and are readily available jobs in the rural areas, as compared to urban residents who might need some level of skills in order to engage in some of the jobs available in the urban areas.

Labour force participation was cross tabulated with sex and place of residence in order to examine whether the rate of participation differs between males and females in rural and urban areas. Results from this analysis are presented in Table 5.10. The results indicate that there is not much difference in labour force participation between males and females within rural areas and within urban areas. For instance, in rural areas, about 78% of male participate in the labour force, almost the same as approximately 77% for females in the same geographical area. Within urban areas, about 70% of male participate in the labour force, just slightly higher than 68% for their female counterparts.

**Table 5.10 Percentage distribution of labour force participation by sex and place of residence**

Place of residence	Sex	% In Labour Force	% Not In Labour Force	Total Percentage	Total (N)
Rural	Male	78.2	21.8	100	308185
	Female	76.7	23.3	100	326718
	<b>Total</b>	<b>491516</b>	<b>143387</b>	<b>100</b>	<b>634903</b>
Urban	Male	69.8	30.2	100	365915
	Female	68.2	31.8	100	404863
	<b>Total</b>	<b>531408</b>	<b>239370</b>	<b>100</b>	<b>770778</b>

Source: PHC, 2010

Chi-square=503.7 p-value=0.000

Results from Table 5.10 however, suggest that between rural areas and urban areas, higher proportion of rural residents engage in the labour force than urban residents, for both males and females. This confirms the earlier analysis presented in Table 5.9. For instance, approximately 78% of males who reside in rural areas engage in the labour force, quite greater than about 70% for males resident in urban areas. With regards to females, about 77% of those who reside in rural areas participate in the labour force, while just 68% of their urban counterparts do participate. It can therefore, be concluded from the analyses above that rural residents participate more in the labour force than urban residents.

Labour force participation in rural and urban areas may also vary with level of education. In order to examine this possible variation, labour force participation was cross tabulated with place of residence and level of education. Table 5.11 presents the results from the analysis. The results suggest that there is much variation in labour force participation among rural and urban residents who have no education and also those who have attained tertiary education. For those who have no education, 89% of them in the rural areas participate in the labour force, while a lower proportion of approximately 81% of their urban counterparts do participate. Regarding those with tertiary education, 71% of those that reside in rural areas engage in the labour force, while just 64% of their urban counterparts participate.

**Table 5.11 Percentage distribution of labour force participation by place of residence and level of education.**

Place of residence	Level of education	% In Labour Force	% Not in Labour Force	Total Percentage	Total (N)
Rural	No Education	89.0	11.0	100	241977
	Basic	72.7	27.3	100	312704
	SHS/Voc./Tech.	56.9	43.1	100	60688
	Tertiary	72.1	27.9	100	19534
	<b>Total</b>	<b>491516</b>	<b>143387</b>	<b>100</b>	<b>634903</b>
Urban	No Education	80.8	19.2	100	115245
	Basic	71.9	28.1	100	383318
	SHS/Voc/Tech.	57.4	42.6	100	179579
	Tertiary	64.1	35.9	100	92636
	<b>Total</b>	<b>531408</b>	<b>239370</b>	<b>100</b>	<b>770778</b>

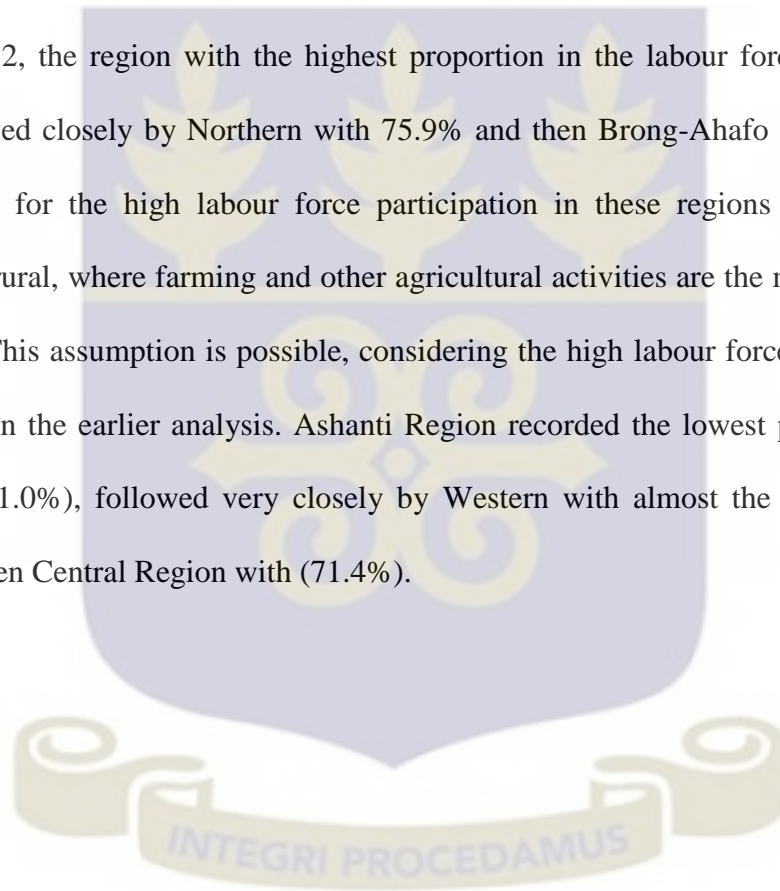
Source: PHC, 2010

Chi-square=65531 p-value=0.000

However, there is almost no variation in the participation rates between rural and urban residents for those who have attained basic and SHS/vocational/technical education. Taking those with SHS/vocational/technical education for instance, the participation rates are the same (approximately 57%) for both rural and urban residents. Regarding those with basic education also, the participation rate is almost the same for both rural and urban residents, with rural residents recording approximately 73% and their urban counterparts with about 72%.

### 5.2.7 Region of residence and labour force participation in Ghana

Regional differences in terms of environmental factors and socio-economic development in particular, were expected to produce differentials in labour force participation. Regions such as Greater Accra and Ashanti, where there are better educational infrastructure and opportunities, as well as better employment opportunities, were expected to have high labour force participation, as compared to the likes of Volta, Upper East and Upper West that do not have enough of such opportunities. The results however, did not confirm this expectation. From Table 5.12, the region with the highest proportion in the labour force is Upper East (76.3%), followed closely by Northern with 75.9% and then Brong-Ahafo with 75.1%. The possible reason for the high labour force participation in these regions is that they are predominantly rural, where farming and other agricultural activities are the main occupations of the people. This assumption is possible, considering the high labour force participation of rural residents in the earlier analysis. Ashanti Region recorded the lowest proportion in the labour force (71.0%), followed very closely by Western with almost the same proportion (71.1%), and then Central Region with (71.4%).



*Table 5.12 percentage distribution of labour force participation by region of residence*

<b>Region</b>	<b>% In Labour Force</b>	<b>% Not in Labour Force</b>	<b>Total Percentage</b>	<b>Total (N)</b>
Western	71.1	28.9	100.0	136,197
Central	71.4	28.6	100.0	121,758
Greater Accra	72.5	27.5	100.0	261,732
Volta	72.2	27.8	100.0	116,493
Eastern	74.0	26.0	100.0	147,508
Ashanti	71.0	29.0	100.0	277,088
Brong-Ahafo	75.1	24.9	100.0	128,075
Northern	75.9	24.1	100.0	126,643
Upper East	76.3	23.7	100.0	53,807
Upper West	72.0	28.0	100.0	36,380
<b>Total</b>	<b>1,022,924</b>	<b>382,757</b>	<b>100.0</b>	<b>1,405,681</b>

Source: PHC, 2010

Chi-square=2247; P-Value=0.000.

Greater Accra was expected to record the highest proportion since it is the capital region and is more industrialised than any of the other regions; therefore, having the highest job prospects among all the ten regions. It however, ranks fifth among the ten regions, with a proportion of 72.5% in the labour force. The Chi-square test score of 2247, with a significant value of 0.000, shows that region of residence is statistically significantly related to labour force participation.

### 5.2.8 Religion and labour force participation

Results from Table 5.13 show that traditionalists have the highest proportion in the labour force (84.2%), followed by those with no religion with 80.6%. The lowest proportion of 71.3% came out of those who are Christians. It is clear from the results that the participation rates of Traditionalists and those with no religion are considerably higher than that of Christians and Moslems. Also, there is no much difference in the participation rates of Christians and Moslems.

**Table 5.13 Percentage Distribution of Labour Force Participation by Religion**

<b>Religion</b>	<b>In the labour force</b>	<b>Not in the labour force</b>	<b>Total Percentage</b>	<b>Total (N)</b>
No religion	80.6	19.4	100.0	91,998
Christian	71.3	28.7	100.0	1,007,917
Islam	72.6	27.4	100.0	239,817
Traditionalist	84.2	15.8	100.0	65,949
<b>Total</b>	<b>1,022,924</b>	<b>382,757</b>	<b>100.0</b>	<b>1,405,681</b>

Source; PHC, 2010

Chi-square=8231; P-value=0.000

H'madoun (2010), studied the influence of religiosity on women's labour force participation across 48 countries and found that Hindus and Muslims have the least probability to have paid work. The writer argued that the way in which the Muslim and Hindu faith traditions were shaped over time due to historical circumstances explains their influence on female work decisions today. This could be partly responsible for the results observed in this study.

The Chi-square value associated with this variable is 8231, with a p-value of 0.000. This shows that statistically, religion is strongly associated with labour force participation in Ghana.

### 5.2.9 Ethnicity and labour force participation

From Table 5.14, the northern ethnic group have the highest proportion in the labour force (75.9%), followed by the Ga-Dangme and the Ewe with approximately 73% each. The Akan and the 'others' ethnic groups have the lowest proportions of approximately 71% each. The result shows that there is not much difference in labour force participation among the various ethnic groups.

*Table 5.14 percentage distribution of labour force participation by ethnicity*

<b>Ethnic group</b>	<b>% In the labour force</b>	<b>% Not in the labour force</b>	<b>Total percentage</b>	<b>Total (N)</b>
Akan	71.3	28.7	100.0	659,751
Ga-Dangme	73.0	27.0	100.0	105,059
Ewe	73.1	26.9	100.0	194,819
Northern tribes	75.9	24.1	100.0	329,197
Others	71.6	28.4	100.0	116,855
<b>Total</b>	<b>1022924</b>	<b>382757</b>	<b>100.0</b>	<b>1,405,681</b>

Source; PHC, 2010.

Chi-square=2493; P-value=0.000

However, the chi-square test shows that ethnicity is statistically significantly associated with labour force participation.

### 5.2.10 Nationality and labour force participation

From Table 5.15, a slightly higher proportion of Non-Ghanaians (73.4%) are in the labour force as compared with Ghanaians (72.8%). This is not surprising since most of the foreigners come to Ghana mainly for work. The P-value of 0.004 suggests that statistically, nationality is significantly associated with labour force participation in Ghana.

*Table 5.15 percentage distribution of labour force participation by Nationality*

<b>Nationality</b>	<b>% In labour force</b>	<b>% Not in labour force</b>	<b>Total percentage</b>	<b>Total (N)</b>
Ghanaians	72.8	27.2	100.0	1,369,101
Non-Ghanaians	73.4	26.6	100.0	36,580
<b>Total</b>	<b>1022924</b>	<b>382757</b>	<b>100.0</b>	<b>1,405,681</b>

Source; PHC, 2010.

Chi-square=7.011; P-value=0.004

The Chi-square tests conducted on all the independent variables in the analyses in this chapter are statistically significant at the 95% confidence level, which was chosen for this study. This implies that there is 95% confidence that all the results (the differences observed in labour force participation among the various categories of the independent variables) from the analyses in this chapter are real or reflect the true characteristics of the population, and that there is just 5% possibility that the differences are due to chance or sampling error. Based on this, it can be concluded from the analyses in this chapter that all the socio-economic and demographic variables have very strong statistical relationship with labour force participation. The analyses also provide crucial results which conform to other empirical studies.

## **CHAPTER SIX**

### **SOCIO-ECONOMIC AND DEMOGRAPHIC CORRELATES OF LABOUR FORCE PARTICIPATION IN GHANA**

#### **6.1 Introduction**

This chapter analyses the influence of socio-economic and demographic variables on labour force participation in Ghana. The socio-economic and demographic variables considered in this study include age, age squared, sex, marital status, household type, level of education, place of residence, region of residence, nationality, religion and ethnicity. The binary logistic regression model was used to determine the variables that determine labour force participation. The logistic regression model gives a direct estimation of the probability of an event occurring. The model was chosen because the dependent variable, labour force participation is dichotomous (has only two categories) - 'In the labour force', coded '1' and 'Not in the labour force', coded '0'.

#### **6.2 Analysis of the socio-economic and demographic factors associated with labour force participation.**

The odds ratio is used to indicate the likelihood of an event occurring as compared to the reference category. An odds ratio that is less than '1' indicates a lower likelihood of the event occurring, while a value greater than '1' indicates a higher likelihood of the event occurring. A 95% level of confidence was chosen for this study. This indicates whether the difference observed between the reference category and the category under consideration is statistically significant or not, at the 95% level. Thus, at the 95% level of confidence, any significance value (p- value) that is less than 0.05 was considered as statistically significant, meaning that

there is 95% confidence that the observed effect or relationship between the reference category and the category under consideration reflects the true characteristics of the population, and that there is only 5% possibility that the observed relationship is due to chance or sampling error. Age (actual) and age squared were used in the model (instead of the ten-year categories used at the bivariate level) in order to clearly capture curvilinearity of labour force participation with age. Table 6.1 shows the relationship between the socio-economic and demographic variables considered and labour force participation.

*Table 6.1 Results of the binary logistic regression showing the relationship between the socio-economic and demographic variables and labour force participation.*

<b>Independent variable</b>	<b>Standard Error (S.E)</b>	<b>Significance (P-value)</b>	<b>Odds Ratios</b>
<b>Age</b>	.001	.000	1.545
<b>Age squared</b>	.000	.000	.995
<b>Sex</b>			
Female (RC)	-	-	1.000
Male	.005	.000	1.398
<b>Marital status</b>			
Never married (RC)	-	-	-
Currently married	.006	.000	1.909
Formerly married	.011	.000	1.258
<b>Household type</b>			
Female headed (RC)	-	-	1.000
Male headed	.005	.000	1.152
<b>Level of education</b>			
No education (RC)	-	-	1.000
Basic	.007	.000	.758
SHS/Voc./Tech.	.008	.000	.395
Tertiary	.010	.000	.317
<b>Place of residence</b>			
Rural (RC)	-	-	1.000
Urban	.005	.000	.685
<b>Region of residence</b>			
Greater Accra (RC)	-	-	1.000
Western	.010	.000	.688
Central	.010	.000	.799
Volta	.011	.000	.656

Eastern	.009	.000	.857
Ashanti	.008	.000	.813
Brong Ahafo	.010	.000	.947
Northern	.012	.000	.796
Upper East	.015	.000	.756
Upper West	.017	.000	.571
<b>Ethnicity</b>			
Akan (RC)	-	-	1.000
Ga-Dangme	.010	.777	.997
Ewe	.008	.000	1.046
Northern Tribes	.008	.000	1.234
Others	.011	.387	.991
<b>Religion</b>			
No religion (RC)	-	-	1.000
Christian	.010	.000	.899
Islam	.012	.000	.739
Traditionalist	.017	.000	1.110
<b>Nationality</b>			
Ghanaian (RC)	-	-	1.000
Non-Ghanaian	.017	.633	1.008
Nagelkerke R –Square: .400			

RC: Reference Category

Results from the binary logistic regression as shown in Table 6.1 suggest that ten out of the eleven socio-economic and demographic variables were statistically significant. The significant variables are the age of the population, age squared, level of education, marital status, sex, household type, place of residence, region of residence, ethnicity and religion. The only variable that was not statistically significant is nationality.

Beginning with age, the odds ratio is 1.545. This implies that a unit change in age would result in a 1.545 unit change in labour force participation. Thus, when one's age increases by one year, his/her labour force participation would increase by 1.545.

Taking age squared, the odds ratio of 0.995, which is less than 1, suggests that there is a concave relationship between age and labour force participation. Thus, labour force participation increases with age, reaches a peak and then reduces.

It can be deduced from the results on age and age squared that there is “∩” shaped relationship between age and labour force participation in Ghana. Based on these results, the hypothesis concerning age and labour force participation is retained.

In relation to sex, the regression analysis indicates that males are more likely to participate in the labour force than females. The odds ratio of 1.398 for males indicates that males are about 40% more likely than females to participate in the labour force. This confirms the hypothesis that men are more likely to participate in the labour force than women, hence the hypothesis is retained. A plausible reason for this result is that a considerable proportion of women, especially those who are married, spend time in bearing children and also in performing domestic duties, which makes it impossible for them to join the labour force. It could also be due to some cultural attitude and societal norms that negatively affect women's participation in the labour force. The hypothesis that men are likely to participate more in the labour force than women is therefore, retained.

The results of the logistic regression also suggest that marriage has a positive relationship with labour force participation. Currently married people, having an odds ratio of 1.909, are approximately 91% more likely than those who have never married, which is the reference category, to be in the labour force. Also those who were formerly married are 25.8% more likely to be in the labour force than those who have never married. This confirms the results at the bivariate level, which suggest that both married men and women have higher probabilities to be in the labour force than those who were never married and those who were

previously married. It also supports the finding by Faridi et al (2009a), but contradicts that of many researcher such as Yakubu (2010), Roopnarine and Ramrattan (2011), Siphambe and Motswapong (2010) and Patacchini et al (2013). Faridi et al (2009a) attributed their finding to the fact that married females join the labour force in order to share the financial burden of the family and to support their counterparts in meeting basic economic needs. This could also explain the finding from this study in relation to married women, considering the high incidence of poverty and low wages for workers in Ghana. A plausible reason for the high participation rate of married people in this study is therefore, due to the fact that they have more financial responsibilities than their unmarried counterparts. The hypothesis that married people are more likely to participate in the labour force than unmarried people is hence, retained.

In relation to household type, the results show that households headed by males are more likely to participate in the labour force than those headed by females. The odds ratio of 1.152 for male-headed households suggests that they are 15.2% more likely to participate in the labour force than female-headed households. This finding confirms the hypothesis concerning this variable, hence the hypothesis is retained.

With regard to level of education, the logistic regression analysis revealed that the population with basic education, having an odds ratio of 0.758, are 24.2% less likely to be in the labour force than those with no education. Also, the population with senior high school/vocational/technical education are approximately 61% less likely to be in the labour force than those with no education. The population having tertiary education, with an odds ratio of 0.317, are the least likely (68.3%) to be in the labour force, relative to those with no education. The result suggests a negative correlation between education and labour force

participation. Therefore, based on the result of the logistic regression, the hypothesis that labour force participation is likely to increase with a rise in level of education is rejected. This result contradicts the findings of many studies such as Faridi et al (2009a&b), Sackey (2005), Yakubu (2010). All of these researchers found a positive correlation between education and labour force participation. One possible reason for this result is that a significant proportion of the people who have attained various levels of education could still be full-time students. Another possible reason is inadequate job opportunities in the country. This might have discouraged some of the people having some level of education from entering the labour force. It might also have compelled a considerable proportion of those who are tired of searching for jobs to have left the labour force.

With regard to place of residence, the odds ratio for urban is 0.685. This shows that urban residents are 31.5% less likely to participate in the labour force than rural residents, which is the reference category. This suggests that urban residency is negatively associated with labour force participation, and confirms the hypothesis that rural dwellers are more likely to participate in the labour force than urban dwellers. The result is similar to the findings of Uraz et al (2010) and Ali and Tasnim (2009). One plausible reason for the result of this study is that rural residents are more likely to engage in farming and other agriculture related activities, which do not require specialized skills, and are readily available jobs in the rural areas, as compared to urban residents who might need some level of skills in order to engage in some of the jobs available in the urban areas. Another plausible reason is inadequate job opportunities in the urban areas, further compounded by the increasing urban population as a result of rapid urbanisation fuelled by rural-urban migration of the youth. And most likely of all is the fact that the rural folks are poorer than their urban counterparts, and so cannot afford the luxury of not working.

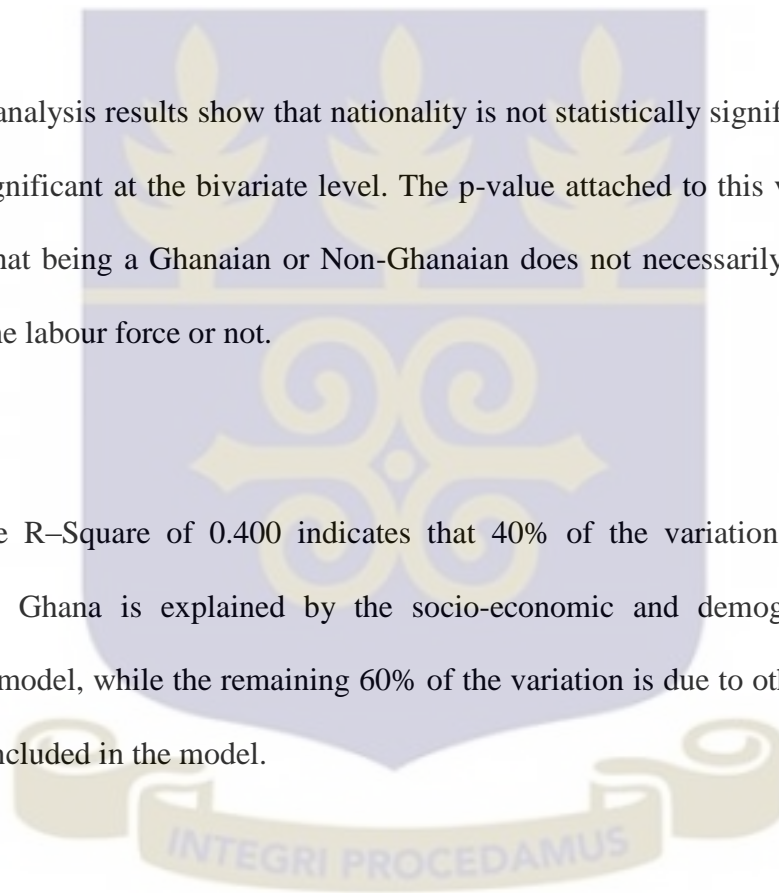
In terms of region of residence, the Greater Accra Region was made the reference category because it is the capital region and hence, perceived to have the best job prospects for the people. The results of the regression analysis show that residents in all the other regions are less likely to participate in the labour force compared to those in the Greater Accra Region. For instance, residents of the Central Region are 20.1% less likely to participate in the labour force than those in the Greater Accra Region. Again, the Brong-Ahafo Region, having an odds ratio of 0.947, suggests that residents of that region are 5.3% less likely to participate in the labour force than those in the Greater Accra Region. Residents of Upper West Region have the least likelihood (approximately 43%) of being in the labour force, compared to the reference category. This is not strange because most job seekers in Ghana are likely to migrate to Accra in search of job since it is the capital region and hence, is perceived to hold better job prospects than any other region.

On ethnicity, the regression results reveal that the Ewe, with an odds ratio of 1.046, are 4.6% more likely to be in the labour force than the Akan. Northern ethnic group, having odds ratio of 1.234, are 23.4% more likely to be in the labour force than the Akan. This suggests that the Northern ethnic group has the most likelihood of participating in the Ghanaian labour force. However, the Ga-Dangme and 'other ethnic group' categories are not significant at 95% confidence level. The 'other ethnic group' category involves other ethnic groups originating from Ghana and those originating from outside Ghana.

With regard to religion, the logistic regression reveals that Christians are about 10% less likely than those in the reference category of 'No religion', to participate in the labour force. Also, Moslems are approximately 26% less likely than those who have no religion, to participate in the labour force. However, Traditionalists are 11% more likely than those who have no religion, to participate in the labour force. These results conform to the a priori expectation.

The regression analysis results show that nationality is not statistically significant, though the variable was significant at the bivariate level. The p-value attached to this variable is 0.633. This suggests that being a Ghanaian or Non-Ghanaian does not necessarily predict whether one will be in the labour force or not.

The Nagelkerke R-Square of 0.400 indicates that 40% of the variation in labour force participation in Ghana is explained by the socio-economic and demographic variables included in the model, while the remaining 60% of the variation is due to other variables that have not been included in the model.



## CHAPTER SEVEN

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 7.1 Summary

The study examined the correlation between socio-economic and demographic variables and labour force participation in Ghana. Specifically, it sought to identify the socio-economic and demographic factors that influence labour force participation, and to establish the relationship between these factors and labour force participation. Data from the 2010 Population and Housing Census conducted by the Ghana Statistical Service were used for the study. Data on those aged fifteen to sixty-four (15-64) years were used for this study, since this category of people constitute the very active working age population (GSS, 2013). This constitutes a sample of 1,405,681 people.

The variables examined were age, age squared, sex, marital status, household type, level of education, ethnicity, place of residence, region of residence, nationality and religion.

At the univariate level, frequencies were used to describe the characteristics of the study population. It was found that there were more people in the youthful age group (15-24 years) than the other age groups. From the results, the population decreases as age increases, reflecting the youthful structure of the Ghanaian population. Also, there were more female, than males in the population. With regard to place of residence, the results suggest that there are more urban residents than rural residents in Ghana. This result is attributed to factors such

as rural-urban migration, natural increase in urban areas and reclassification of rural communities as they attain the threshold population of 5,000. Again, With regard to level of education, the highest proportion (approximately 50%) of the study population has attained basic education, followed by those with no education (25% approximately), with those having tertiary education recording the lowest proportion (8%).

At the bivariate and the multivariate levels, cross tabulation and binary logistic regression techniques respectively, were used to analyse the data. The cross tabulations were used to examine the relationship between the socio-economic and demographic variables and labour force participation. Chi-square test was used to test if the results were statistically significant at an alpha level of 0.05 (95% confidence level). All the results were statistically significant at this level of the analysis, indicating strong relationship between all the independent variables and labour force participation.

The binary logistic regression was used to predict the correlation between the independent variables and labour force participation. At the multivariate level however, nationality was not statistically significant at the 95% confidence level.

In relation to age, the results from the bivariate analysis indicate that labour force participation increases with age, reaches a peak between ages 35-44 years, and then begins to reduce. The multivariate analysis revealed the same pattern, suggesting a concave relationship between age and labour force participation. This confirms the hypothesis of this study in relation to age.

The analysis of sex and labour force participation at the bivariate level suggests that men participate more in the labour force than women. Further analysis with age and sex indicates

that men participate more in the labour force than women at all age levels, except at the youth level. Thus, at the youth level (15-24 years), women participate more in the labour force than men. The multivariate analysis confirms the earlier results found at the bivariate level. It shows that men are more likely to participate in the labour force than women. This result confirms the hypothesis that men are more likely to participate in the labour force than women.

With regard to marital status, it was found at the bivariate level that both married men and married women participate most in the labour force, followed by men and women who were formerly married, with those who never married being the least to participate. However, between the sexes, the results show that married men participate more in the labour force than married women. Results from the binary logistic regression at the multivariate level are consistent with the finding at the bivariate level. They revealed that married people are more likely to participate in the labour force than unmarried people. This finding support the hypothesis that married people engage more in the labour force than unmarried people.

On the issue of household type, both the bivariate and multivariate results indicate that male-headed households participate more in the labour force than female-headed households. This confirms the hypothesis that male-headed households are more likely to participate in the labour force than female-headed households.

In relation to level of education, the results from the bivariate level show that people having no education participate most in the labour force, followed by those with basic education, and then those with tertiary education. The population having Senior High School/Vocational/Technical education happens to be the least to participate in the labour

force. A further analysis between males and females did not show any variation in the results. Results from the multivariate analysis revealed a negative relationship between education and labour force participation. This suggests that education does not necessarily have a positive relationship with labour force participation as hypothesised.

Concerning place of residence, three separate analyses were done at the bivariate level. This was done in order to examine if there were variations in labour force participation in rural and urban areas in terms of sex and level of education. The simple analysis suggests that rural residents participate more in the labour force than urban residents (77.4% and 68.9% respectively). The results did not show much variation in terms of sex, but there were some variations with regard to level of education. However, the patterns of the results generally show that rural residents participate more in the labour force than their urban counterparts. At the multivariate level, it was again confirmed that rural residents are more likely to participate in the labour force than urban residents. This confirms the hypothesis with regard to place of residence.

The bivariate analysis signifies that residents of Upper East and Northern Region participate most in the labour force. Greater Accra ranks fifth among the ten regions, with Ashanti, Western and Central showing the lowest participation rates. This contradicts the expectation that residents in Greater Accra Region would participate more in the labour force than residents in any of the other region. Results from the binary logistic regression (presented in Table 6.1) contradict the findings made from the bivariate analysis. They however, conform to the a priori expectation, indicating that residents in all the regions are less likely to

participate in the labour force than residents in Greater Accra Region, which was made the reference category.

The bivariate and the multivariate analyses produced similar results in relation to religion. The bivariate results show that Traditionalists and the population that do not practice any religion participate far more in the labour force than Christians and Moslems. The results actually indicate that Traditionalist participate most in the labour force among the four categories. Results from the binary logistic regression clearly conform to the findings from the cross tabulation. They reveal that Traditionalists are more likely, while Christians and Moslems are less likely to participate in the labour force than those in the reference category of 'no religion'.

In relation to ethnicity, not much variation was observed in labour force participation among the five categories of ethnic groups at the bivariate level of the analysis. The results however, indicate that the Northern ethnic group participate most in the labour force, with the Akan and the 'other' ethnic group being the lowest to participate. At the multivariate level, the binary logistic regression results confirmed that the Northern ethnic group and the Ewe are more likely to participate in the labour force than the Akan (reference category). The 'other' and the Ga-Dangme ethnic groups were not statistically significant at the multivariate level.

On nationality, the bivariate analysis suggests that Non-Ghanaians participate just slightly more in the labour force (approximately 1%) than Ghanaians. The variable was however, not significant at the multivariate level.

## 7.2 Conclusions

The main aim of the study was to examine the socio-economic and demographic correlates of labour force participation in Ghana. Specifically, the study seeks to identify the socio-economic and demographic variables that influence labour force participation in Ghana, to establish the relationship between the variables and labour force participation and hence, answer the research questions.

The results show that age, age squared, sex, marital status, household type, level of education, place of residence, region of residence, ethnicity and religion are the socio-economic and demographic factors that are associated with labour force participation in Ghana.

The results indicate that labour force participation is lowest at the youth stage (15-24 years), highest during the middle ages (25-54 years), and then reduces a little during the older ages (55-64 years). Based on this, it can be concluded that there is a hump-shaped ( $\cap$ ) or concave relationship between age and labour force participation in Ghana. It can also be concluded that the prime time for labour force participation in Ghana is between ages 25-54 years.

In relation to sex, it can be concluded that being a man increases the probability of labour force participation in Ghana as compared to being a woman. This might be due to the fact that some women spend time on provision of home care, and also due to some cultural beliefs and societal norms that negatively influence female labour force participation

With regard to marital status, it can be concluded that marriage has a positive impact on labour force participation for both men and women. Thus being married increases the

probability of participating in the labour force. However, among the married people, being a married man increases the probability to participate in the labour force than being a married woman.

In relation to household type, it can be concluded that being in a male-headed household increases the probability of participating in the labour force, while being in a female-headed household reduces the probability.

It can also be concluded that education is negatively correlated with labour force participation in Ghana, a possible reason being the effect of full-time schooling.

On place of residence, it can be concluded that urban residency has a negative effect on labour force participation in Ghana, as compared to rural residency, probably due to the fact that rural residents often engage in agricultural activities which do not necessarily require any special skills, and are also poorer than urban residents.

Also, residency in any other region apart from Greater Accra reduces the probability of labour force participation, a plausible reason being that Greater Accra Region, being the capital region, is far more developed and holds better employment opportunities than any of the other regions.

With regard to religion, it can be concluded from the results that being a traditionalist or having no religion increases the probability of participating in the Ghanaian labour force, while being a Christian or a Moslem reduces the probability.

Furthermore, it can be concluded that belonging to the northern ethnic group or being an Ewe increases the probability of labour force participation, while belonging to the Ga-Dangme ethnic group reduces the probability.

Finally, being a Ghanaian or a Non-Ghanaian does not necessarily predict whether one would join the Ghanaian labour force or not.

These suggest that some socio-economic and demographic factors indeed influence labour force participation in Ghana. The study is worth doing because it provides essential results which conform to other empirical studies, and which can also inform policy decisions in Ghana.

### **7.3 Recommendations**

Based on the findings, the following recommendations have been made;

Firstly, implementation of policies to support women's self-employment, and their general engagement in the labour force. The results indicate that males participate more in the labour force than females, though the latter constitutes the higher proportion among the two categories. A plausible reason cited for this result is the fact that quite significant number of women spend time in bearing children and providing home care. Women in this kind of situation can be made to enter the labour force if there is an opportunity for them to get self employed, since they would not be under strict authority or control. They can then have some flexibility to combine home care with market work. Government can do this by providing micro-finance facilities for women to enable them obtain capital to engage in informal economic activities. Another possible policy, which can facilitate women's general engagement in the labour force, is government and non-governmental organisations advocating for the reformation or abolishment of cultural practices and societal norms that affect women's labour force participation.

Secondly, government should implement policies to ensure improvement in industrialisation of the nine other regions apart from Greater Accra Region. Results from the multivariate analysis show that residents in all the regions are less likely to be in the labour force as compared to those in the Greater Accra Region. A plausible reason for this result is the industrial gap between Greater Accra and the other regions. Greater Accra being the capital region is more industrialised than any of the other regions in the country. The gap of industrialisation between Greater Accra Region and the other regions of the country is very wide. Hence, Greater Accra Region holds better employment opportunities than the other regions, especially in the formal sector. This probably motivates a lot of residents of the Greater Accra Region to enter the labour force. Therefore, though Greater Accra also requires more job opportunities, the government should implement policies that would ensure that more factories and businesses are established in the other regions. One of such policies is the government making sure that all new state enterprises are established at vantage areas in the other regions apart from Greater Accra. Another possible policy is government giving incentives to new private businesses or firms that are established in the nine other regions. Such incentives could be in the form of tax relief. Government can also achieve this by developing the infrastructure in all the nine regions as a way to attract foreign direct investment in those regions. This will possibly increase job opportunities in those regions and hence, increase the probability of their residents' participation in the labour force.

#### **7.4 Limitations of the study**

The limitation concerns the fact that the census data do not contain certain household variables such as household income, education of household head, and education of spouse that would have been included in the study. The data were however, used because they

provide more comprehensive information on the population. Also, they were the most current data on the Ghanaian population at the time of the study.

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