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Situation in Egypt Between Employment
and Unemployment (2002-2012)**

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Study Change the Demographic Situation in Egypt between Employment and Unemployment (2002-2012)

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Abstract

In light of the world's attention to employment and unemployment issues as one of the priorities of development plans and policies overall, as well as the improvement for its indicators will result in reinforce the levels and opportunities of human development for each country. Indeed, this study is considered important because it traces the % change in both employment and unemployment rates in Egypt according to some demographic variables and it will focuses on monitoring the gender gap with regard to employment and unemployment to highlight the status of females in Egypt. Consequence, it will depend on data issued by the statistics and databases on the national level for the sake of compiling time series for the target period (2002-2012), and then using statistical methods that be suitable to achieve the objectives of this study.

The study concluded that unemployment rates in Egypt was the highest in 2012, besides there are relative differences between males and females in labor force according to economic activity and educational status, as unemployment rate was highest among those have higher education, especially females, as there were significant differences in those rates that attributable to the gender and residence, as unemployment in urban was higher than rural. Births, the males unemployed in urban and males graduates of theoretical faculties were the highest impact on increasing the No. of unemployed in Egypt (2002-2012).

The study recommends the adoption of the implementation of national projects of employment in collaboration with the private sector to limit the gender gap and reinforce the participation rate of youth in the labor force, especially females whose have highest education to reduce the aggravation problem of unemployment sharply. Moreover, It tries to attract attention of officials to develop plans and policies regarding these indicators to enhance the economic status within Egypt, in favor of youth and women together.

Keywords: Egypt, Labor force, Unemployment, Demographic change, Gender

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Background

The issue of unemployment clearly is one of the most pressing problems for most countries over the recent decades. Now it tops on the list of priorities for development programs for countries in the world with a special focus on the % of gender gap. Internationally, the world is confronting a worsening youth employment crisis with young people three times more likely to be unemployed than adults and over 75 million youth worldwide hunting for work. For instance the statistical office of the European Union declared that Euro area unemployment rate accounts for 12.0% in 2013, while the youth unemployment rate was 23.7% in the euro area (Eurostat, 2013). As the International Labour Organization (ILO) warned that the youth facing a dangerous mix of high unemployment, in particular the developing world (Mirkin, 2013). For the Arab region, generally this region stands out in terms of its overall unemployment problem that exceeded 10% in 2011, and the youth unemployment rate in this region rose sharply in the wake of the Arab Spring, and amounted 27% in 2012; i.e. the highest in the world and twice the global rate for youth. ILO showed that unemployment rate was the highest among Arab youth and represents about a three times of the rate of total unemployment in the Arab countries, and World Bank also showed that unemployment rates among the youth ranges between 15% and 25% in many countries of the Middle East; i.e. a quarter of the young men cannot find jobs (Andreson, 2013). On the other hand the Arab region's labor participation rates amongst lowest worldwide, currently 35% vs. global average of 52% (Khalifa, 2013). Furthermore, the age group (20-24) years was the highest unemployment rate in accordance with unemployment statistics in the Arab region for the distributions of age and sex, and unemployment rates among females of male superiority (ESCWA, 2005).

The League of Arab States indicated that the share of women in the Arab region does not exceed 20% of the business no matter the agricultural sector, and is lower compared to its share at the international Level, which amounted 40%. The World Bank also showed that 75% of Arab women are jobless (Andreson, 2013). Moreover, there are still differences in employment indicators in accordance with the gender (LAS, 2013), while the unemployment rate for young males is estimated at 24.5 % in 2012, 42.6% of young females were unemployed (ILO, 2013), and this considers the contrary to the principle of non-discrimination and to avoid exclusion of community by gender. So, the World Bank urges job creation for women and youth in the Arab countries, Egypt has been occupied the ranked third among Arab countries in terms of high youth unemployment rates, reaching 31%, according to the Human Development Report for Arab states in 2013.

For Egypt, in recent times it has experienced rapid and substantial aggravation of the unemployment problem, in particular, among the youth. The unemployment problem is considered a national issue of the highest priority for the Egyptian government, which strives to find appropriate solutions with the encouragement of initiatives and studies that address this issue in depth.

Besides, the private sector in Egypt accounts for 73% of employment, has shrunk in the wake of their revolution in the 25 January 2011, thus slowing down its potential to create jobs, while the public sector employs 27% of the labor force that stands at 26 million, of whom, just 22% are women (AfDB, 2013). Against the backdrop of deteriorating economic conditions, employment creation stagnated. As a result, the Central Agency for Public Mobilization and Statistics in Egypt (CAPMAS) reported in 2013 that unemployment rate has climbed to 13.4% in the third quarter of 2013 compared to 13.3% in the third quarter, 12.5% in the same quarter in 2012, and 8.9% in the same quarter in 2011 respectively. While the results according to gender, the employment rate of males has also increased to 9.9% in the third quarter of 2013 up from 9.1% in the same quarter in 2012; while, the employment rate of females has climbed to 25.1% in the third quarter of 2013 compared to 24% in the same quarter of 2012 (AfDB, 2012). Despite consensus about the adverse economic, social and political implications of this problem, the present study starts from the premise there are a gap in the employment and unemployment indicators according to gender, and there are some demographic variables that have a significant effect on the unemployment rates. Accordingly, this paper attempts to examine the relative differences between males and females, according to some demographic characteristics, as well as examine the relationship between the demographic factors and increasing the unemployed in Egypt. The ultimate objective is to reach a new set of indicators that help policymakers to determine the appropriate treatment for the gender gap, and reducing the unemployment rates. This in turn could enhance the efficiency and effectiveness for development of policies and plans of the coming years.

The Problem of Study

Over the next ten years, through 2020, at least 30 million more young people will join the workforce as a result of increasing growth in the working-age population in many countries including Egypt (Martin, 2009). During the past period 2011-2013, UNICEF also pointed out that Egypt suffering sluggish economic performance and growing unemployment rates. Moreover, in the past two years and the toppling of many governments, Egypt suffers at present from labor strikes and security conditions deteriorating, as well as demonstrations on a daily basis almost, which constitute significant challenges for any government, and a restriction to adopt clear employment policies for limiting the unemployment. In addition, the establishment of more national projects, and to encourage foreign investment are still restricted in front of the development opportunities and progress of Egypt in this fields. And these factors together had a sharp impact on the high of unemployment rates and a widening gender gap whether in the employment and unemployment situation. The youth unemployment rate in Egypt amounted 13.4% in 2013 and was higher than the global unemployment rate, which amounted about 12.6% and 12.4% in 2013 and 2012 respectively (ILO, 2013). As well as women's

participation in the labour market in Egypt became low and there are a gender gap as a result of the existence of discrimination in employment on various grounds (ITUC, 2011).

Although the creation of productive employment for youth has climbed to the top of policy concerns in Egypt in recent years, it notes the rising unemployment trends are worrisome. Especially, past demographic growth is now translating into increasing numbers of young job seekers with a gap gender (Assaad et al., 2007). Consequence, this poses challenges and obstacles in front of the Egyptian officials that need more studies and researches that help the policy makers to find suitable solutions. So, this study will pursue to examine the % of change rate for the case of both unemployment and employment during the past periods (2002-2012) in Egypt, besides monitoring the gender gap. On the other hand this study will shed the light on change rates of the unemployment that will contributes to its improvement across presenting a good interpretation for it, and until the plans and policies should take into account all special needs and circumstances to reduce the high those rates. Hence, the study will cover the answer for three following questions:

- What is the shape of the change rate % for the unemployment and employment during the time period (2002-2012) in Egypt?
- Are there any relative differences in the unemployment, according to gender and residence during the (2002-2012)?
- Are there any relative differences in the unemployment, according to gender and educational status, as well as economic activity in 2012?
- Which of demographic or social characteristics has significant effect on increasing of the unemployed in Egypt; which were already available for the study through the national statistics for the time period (2002-2012)?

Justification

The importance of this study, as follows:

- The ILO through its regional office for Africa has warned in 2013, that North Africa, including Egypt, remains among the regions with the highest unemployment rates, and are associated with the gender gap.
- Lacking of studies that have focused on studying the % of change rates in both of the unemployment and employment across different periods of time
- Keeness to support any future plans or policies to the Egyptian decision makers take into account how to reduce the high rates of

unemployment and addressing gender gap in the employment opportunities as well.

- Pledges of the Egyptian government and officials towards seeking about appropriate solutions to solve the problems of youth unemployment.

The Objectives of Study

The main objective: « contribute to reducing unemployment in Egypt and improving the gender gap for enhancing the opportunities of gender equality and supporting the status of women in the labor market in parallel ».

Sub-Objectives

- Gain in-depth understanding of the % of change of unemployment and employment rates during the time period (2002-2012) in Egypt depending on the gender.
- Examine the relative differences in unemployment rates, according to gender and residence based on the data of period (2002-2012).
- Determine the relative differences of gender in the employment according to economic activity, and both of the unemployment and employment according to educational status, in 2012.
- Determine which demographic or social factor has the highest influence on the employed in Egypt from the reality of the data available to the labor force statistics for the period 2002-2012.

Literature Review

High unemployment rates could combine with lack of awareness has provided the perfect breeding ground for the illicit works for each country (UNODC, 2005). Rapid population growth and the gender gap or gender inequality inevitably leads to high rates of unemployment incorrectly balanced between males and females, thus it is considered a concern on the economic, social, educational and security. The study of Goulding has focused on gender equality within national employment policies (Goulding, 2013). Furthermore, the Gender, Equality and Diversity Branch of ILO have outlined some key areas within the world of work where considering the gender-related roles, and the main role for promoting gender equality (GED, 2013). The study of Bernard (2013) focused on the gap between the unemployment rates of youth and adults, and reached that the youth unemployment rate was the highest.

Another studies addressed the trends of employment or unemployment during different time periods or regions, the study of Ghose discussed trends of employment and labour market in China during the period 1990-2002 (Ghose, 2005). A study examined the nature of Greek unemployment depending on

cross-sectional dependence among Greek regions (Bakas & Papapetrou, 2012). Another study interested in studying the major trends of employment in light of the change demographic to China (Meiyan & Yang, 2010). The study of Visaria goes about determining the problem of youth unemployment trends in India (Visaria, 1998). While the another study focused on the age variable in examining the unemployment rates in developed countries, and argues that young people aged 16-25 have been particularly hard hit, with a gap between males and females (Bell and Blanchflower, 2010). As the study of (Cai and Chan, 2009) examined the impacts of the global economic crisis in China of 2008–2009 on the job security of urban workers, and its repercussions for the economy Chinese. A study of (Fougère et al., 2006) examined the influence of unemployment on crimes and violent in France.

On the other hand some studies have also reflected the statement how the share of women in the labor market was low whether nationally or internationally, such as the study of (Assaad et al., 2007) mentioned that educated young women are more adversely affected than their male counterparts by the unemployment in private sector. Another study showed that women's share of the labour market in the Middle East and North Africa (MENA) is estimated at only 2.25%; which is considered one of the lowest rates in the world (Andreson, 2013). While there are some studies have put forward solutions to the problem of unemployment, such as the study of Radwan pointed to the implementation of unconventional policies and the creation of institution are necessary to achieve the objectives of full employment in Egypt. It concludes the three major components as whole cohesive, represented in expansionary macroeconomic policy, enhancing the productivity of labor force, and the reform of the civil service (Radwan, 2002). The study of Fawzy showed that the real danger of unemployment lies in the fact that it reflects low and inefficient levels of investment and growth (Fawzy, 2002). Also, study of (Fougère et al., 2007) has suggested that training improves the matching process between jobseekers and firms in France. A study showed that, the most important factors contributing to the rising volume of unemployment include privatization and inflation (El-Agrody et al., 2010).

Although many studies have pointed to the problem of unemployment, especially among young people as well as the weakness of women's opportunities in the labor market; however, a low attention was given to indicate for the importance of demographic variables in line with addressing the gender gap when dealing with the solutions of unemployment problem. Recently the studies in Egypt did not address to these aspects as well as rates of change in unemployment and employment and the gender gap. So the current study will shed the light on all those aspects in more details. As the current study concluded that the most important problems of unemployment perhaps come from the following factors, especially in Egypt:

- Widening the gender gap in employment indicators and employment would negatively impact on the party without the other party.

- The limited number of job opportunities for young fresh graduates especially in light of the preference to work in the government sector.
- Increase the supply of labor, which does not meet the requirements and needs of the market either nationally or internationally.
- Inadequacy of the policies and programs of the labor market or education, so it couldn't resolve the disparity between supply & demand for labor yet.

So, it will try raising awareness concerning the problems of youth, women and the gender gap that associated with the unemployment in Egypt.

Methodology

The current study is considered as descriptive and explanatory research simultaneously, and based on quantitative approach. And this study is a longitudinal study that depends on time series design which measurements of variables being studied are taken at different points in time, i.e. during the period 2002-2012. And this due to the official data in Egypt for this period is available in a consistent and adequate shape. The methodology of this study was presented in the following most important points:



The Scope

Location

The current study focused on The Arab Republic of Egypt, which is located in the northeast corner of Africa and southwest corner of Asia. It is bounded on the north by the Mediterranean Sea, on the east by Palestine and Israel, on the south by Sudan, and on the west by Libya. The total area of the Arab Republic of Egypt reaches nearly 1.010.000 Km², while the populated area reaches 78990 km² representing 7.8% of the total area (<http://www.sis.gov.eg>).

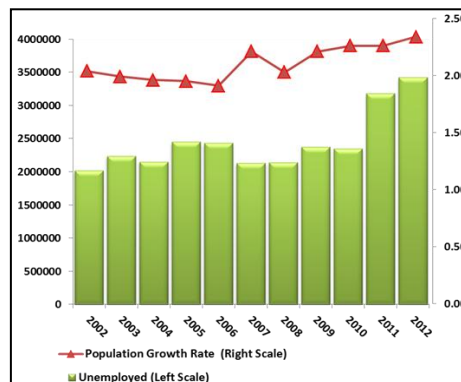
Demography

The great majority of its people live near the banks of the Nile River, an area of about 40,000 Km², where the only arable land is found. Egypt is most

populated country in the Middle East, and the third most populous on the African continent (<http://en.wikipedia.org>), with about 85 million inhabitants as of 2014; according to last statistics of population issued by the Central Agency for Public Mobilization And Statistics through its website. Moreover, the males account for 51% of the total population in census of 2006, while females account for 49%. And 27.2 million Egyptians represents total of Labor force, of whom, 87% employed and 13.3% unemployed. Also 338,000 nearly Egyptians joined the workforce during the third quarter of 2013, of whom, 57% males and 43% females, and 3.6 million Egyptians remain unemployed. Over this period, unemployment rates were 13.4%, where were 9.95% for males; and 25.1% for females. Figure (1) shows that No. of employed in Egypt were increasing during (2002- 2012) in line with the population growth rate during the same period.

Thus, it means may be indicator of the relationship between two aspects, or in other words the growth rate has an impact on increasing the numbers of employed in Egypt as this growth will constitute a new manpower each year and seeks for jobs but didn't get it. The high population growth rate is considered one of impediments to economic development opportunities in Egypt.

Figure 1. *No. of Unemployed & Growth Rate of Population in Egypt*



Delimitations and Limitations

The current study has identified some delimitations, limitations, and assumptions that accompanied starting from the preparation stage, then processing of data and come up the final results phase, and it is as follows:

- **Delimitations:** The current study has exerted strenuous efforts in order to gather the maximum amount of data and statistics related to unemployment published with the official Egyptian, especially CAPMAS over the target time of the study 2002-2012, and in a manner consistent for the composition of time series data which be complete and sufficient for examination and study, while avoiding incomplete and cutting in the data for other years.

- *Limitations:* Focus on the study of the effect of some variables and not others on unemployment or employment, this restriction due the extent of data or indicators availability from the official sources, and this may give the opportunity to further studies and research to include others variables for the sake of study this problem deeply later. Thus the change rates of and the gender gap were determined in the unemployment or employment rates in Egypt according to some demographic variables that were available in the labor force surveys during the target period (2002-2012).

Statistical Analysis

To realize the aims of the study, appropriate statistical methods were used such as the percentages and frequencies as well as calculating the change rate % of unemployment and employment as whole, and according to gender separately. Besides, Test of two proportions was used to determine the differences between the % of males and the % of females in concerning to the educational status and economic activity. T-Test for independent samples and Mann–Whitney test will be used to determine if there are relative differences in the unemployment rates of the target period by the study according to the gender or residence, i.e. between males & females, as between rural and urban during this period respectively. Through the test of the following hypotheses:

$$H_0: d_1 = d_2 \quad (\text{Null Hypotheses})$$

Meaning that there is no a significant difference in the unemployment rates attributed to the gender or residence.

$$H_a: d_1 \neq d_2 \quad (\text{Alternative Hypothese})$$

Meaning vice versa, i.e. there is a difference due the gender or residence. Multiple regression analysis was also used to determine the most important impact on the unemployed in Egypt during (2002-2012) attributed to some background characteristics, in particular for monitoring the influence of demographic and social variables in deeply.

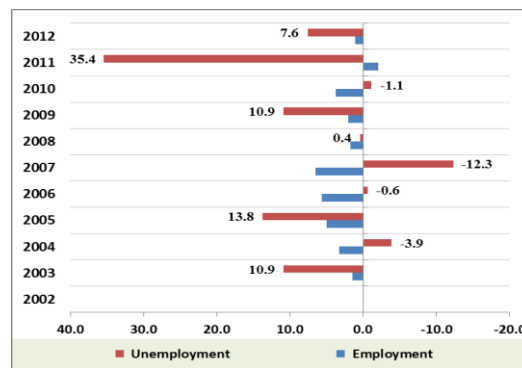
Results & Discussion

The results have revealed the cover for the change rates for each of the labor force, unemployment and employment in Egypt (2002-2012) included in table No. (1) at appendices at the level of both males and females separately. And chart (1) at appendices showed the trends of unemployment and employment rates in parallel to the increase in the numbers of the population in the labor force. Although employment rates during the target period was higher than unemployment rates, however, but the direction of the unemployment rates is higher compared to the global level of unemployment, which ranges between 5-7%, according to the statistics of World Bank and ILO.

Furthermore this chart showed that the unemployment rates in Egypt in a growing trend since 2010 until 2012, specifically, in the wake of the Egyptian revolution in 2011. During that period, it was noted a clear decline in employment rates with increasing for unemployment rates , and this may be due to the negative effects of the revolution on the tourism sector and economic in particular. This requires Egyptian decision-makers continue to resolve several multifaceted challenges faced by their country as a result of this revolution.

A successful settlement on all the aspects and levels is a fundamental prerequisite for Egypt to turn around its economy to a sustainable and equitable growth path that would create jobs for its many unemployed youth (AfDB, 2012). As the figure (2) reflects significantly the % of change in the unemployment and employment rates during the targeted period by study; which varies between the negative and positive values from year to year, and perhaps the highest % of the change in the unemployment rates amounted 35% approximately between 2010 and 2011, and this may due the influence of the revolution of January 25 and its repercussions on the Egyptian economy, in addition there was a decrease in those rates between 2007 and 2008, which dropped by about 12%, and at the same time in 2007 and 2008 was witnessed the highest % of change in employment rates, which reached 7%, while the lowest % of change in the employment rates was between 2010 and 2011, which reached to 1%.

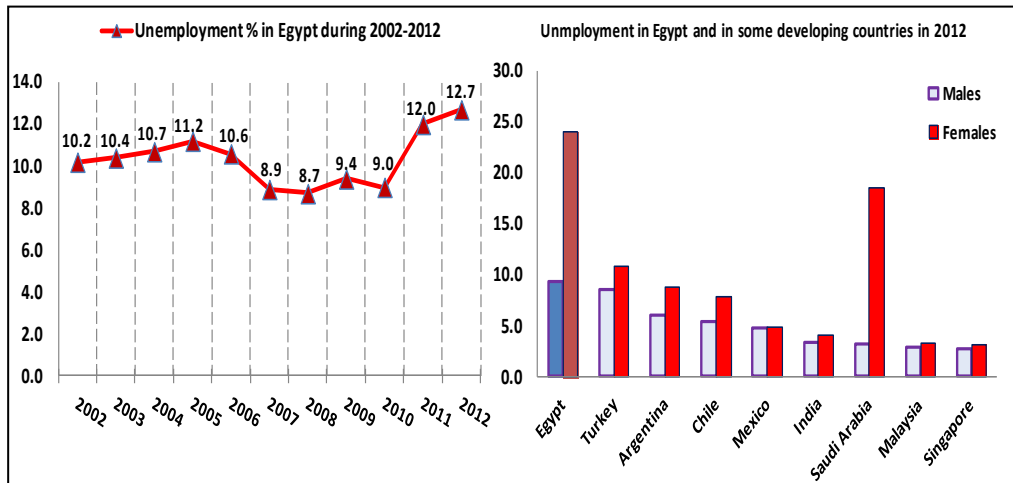
Figure 2. *Change Rate (%) of Employment & Unemployment in Egypt (2002-2012)*



Also the total change rate of No. of employed in the age of Labor force during (2002-2012) amounted 32%, i.e. increasing for 3% per year in the trends of those rates, which it has a growing trend during the target period, as it is clear from chart (2) at appendices, while the total change rate of No. of unemployed (15+) amounted 69%, i.e. increasing for 7% per year. Thus, the change rate of unemployment was equivalent twice the change rate of employment in Egypt during (2002-2012) whether annually or generally, and noteworthy the period (2010-2013) has the highest increasing in the No. of unemployed. This obviously in the high rates of unemployment in Egypt during this period, as shown in Figure (3), despite a slight fluctuation in the

trend of unemployment rates, but it is witnessing a continuous rise until reached to the highest value in 2012, where amounted to 13% approximately, as this figure also reflects the presence of a significant rise in the unemployment rates for both females and males in Egypt that accounts for 24% and 9.3% in 2012 respectively, particularly when comparing to some developing countries.

Figure 3. *The Unemployment Rate in Egypt (2002-2012), and Compared to Some Developing Countries in 2012*



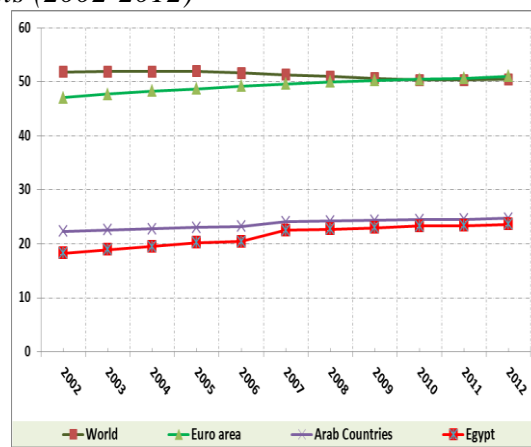
Source: World Bank (2002-2012), World Development Indicators, (<http://worldbank.org>).

In general, the unemployment rate among women was 24% in North Africa during the third quarter of 2012 including Egypt; i.e. more than double that for men that stood at 9.1% (AfDB, 2013). This result indicates to the high rates of unemployment among females compared to males whether in Egypt or the regional level surrounding. Moreover, the study has assumed the existence of relative differences between males and females with respect to % of change rates in the unemployment and employment in Egypt. It was noted from both chart (3) and chart (4) at appendices that the total change rate in the No. of unemployed among females (15+) during (2002-2012) amounted to 43%, meaning increase 4% annually of females unemployed, while for men has stood at 97%, and this means increasing 10% annually of males unemployed. This conclusion came contrary to the expectations, which indicates that trends of the growth of unemployment among males (15+) were almost equivalent to double if compared to the its trends among females.

Similarly, the total change rate of females employed (15+), which reached 41%, i.e. there was an increase, which amounted 4% per year, while for males has stood at 30% that means an annual increase about 3%. And this indicates the growth trends of employment among females is higher than males, and this may be due to the keenness of state policies during this period for raising women's participation in the labor market in light of the international interest through recent years. In general the woman in Arab region is not adequately represented in senior positions (LAS, 2013).

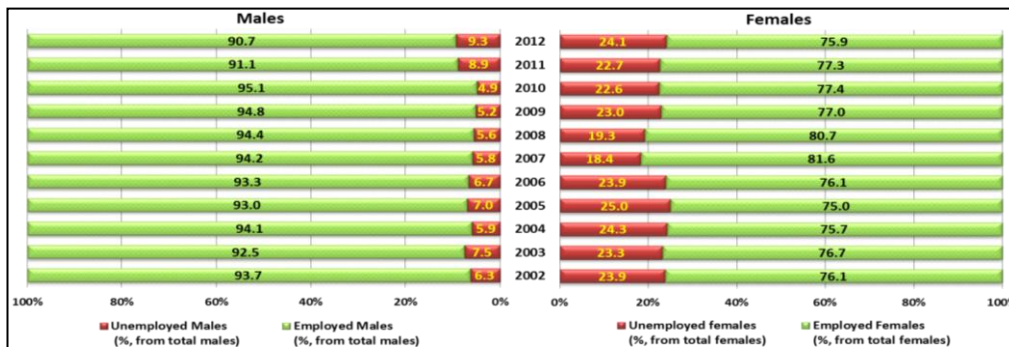
For the % of females' participation in Labour markets in Egypt, it was still considered low during (2002-2012) comparing to the Arab countries, European and global level, as shown in figure (4), which poses one of challenges to the Egyptian government for pursue the work on increasing their participation % in the labor market for the coming period. Especially, ILO in 2013 has indicated that although young women in Egypt and Jordan are attaining high levels of education, but they still face a difficult time in getting hired in occupations appropriate to their qualifications. This reflects the extent of suffering of Egyptian women to get the jobs opportunities that meet their aspirations and needs.

Figure 4. Labor Participation Rate of Females (15+) in Egypt Compared to International Levels (2002-2012)



The following figure (5) has shown the unemployment and employment rates within each gender separately, i.e. for both of males and females during (2002-2012). It was noted that the % of females unemployed to the total females was higher than the % of males unemployed to the total of males in each year during the target period by the study. Consequence, it is concluded the high rates of unemployment among females, as the chart (5) at appendices shows that the unemployment rates among in urban whether for males or females is higher than rural areas, which may attribute to the nature of population in the rural community that depends mainly on agricultural activity.

Figure 5. The Employment & Unemployment Rates in Egypt for Each Gender Separately (2002-2012)



For more in-depth study and analysis to the extent of the gender gap in Egypt between males and females, concerning to the indicators of employment and unemployment during (2002-2012). So, the study deliberately using test of two proportions in order to examine the relative differences according to gender, as one of target techniques for this purpose. The results indicates to significant differences between males and females in most economic activities, as shown table (3) at appendices where the participation rates of Egyptian females in educational, health and social work, and agricultural activities was higher than males' participation, whereas the opposite for the construction, manufacturing and transportation activities in favor of males' participation; which were the highest rates in comparison with females, perhaps due to the fact of these activities that requires muscular effort and high work hours than fit dramatically with men more than women. As a matter of fact, there was no significant difference between males and females in Egypt just except in the creative and art activities, as well as regional and international relations, while there were significant differences in the rest of economic activities.

Equally important, there were statistically significant differences between males and females, in accordance with the educational status, both for unemployed or whose employed, as the unemployed with low education is lower among females than males, while unemployed with higher education is higher among females than males, and vice versa for the employed status, which constitutes one of the obstacles to improving the status of educated women in Egypt, thereby necessitating the need to develop policies to ensure increased participation rates of women with higher education in the foreground of employment programs. In like manner, the findings of t-test and Mann–Whitney test in the following table (1a) has shown that there were differences in unemployment rates according to the gender and residence where the values in both of two tests were statistically significant at the level less than 0.05 in favor of the unemployment rates of females; which were higher than the unemployment rates of males. Likewise, unemployment in urban areas was higher than in rural areas.

Table 1(a). *Examine the Relative Differences in Unemployment Rates, According to Gender and Residence Based on the Data of Period 2002-2012*

Test variable	Grouping variables	Mean	T-test	Mann–Whitney test	
Unemployment Rates	Gender	Males (15+)	6.6%	21.185*	-3.974*
		Females (15+)	22.8%		
	Residence	Urban (15+)	18.4%	2.437*	-2.680*
		Rural (15+)	11.8%		

* Significant at the level of less than 0.05

Accordingly, this is an indication that the demographic variables have an effect on unemployment rates, in that case requires taking these variables into

account when adopting policies and plans national to address the problem of unemployment in Egypt, inasmuch some plans fits only the case of males and the others be suitable for females, as well as when addressing this problem for both of rural and urban areas. As a result, policymakers in Egypt should been working towards implementing more national projects that will promote job-intensive growth among females, especially the youth in urban, as an important step to reduce the negative aspects of this problem to a minimum, both on a social or security level in light of deteriorating the economic conditions in Egypt currently in the wake of the revolution, and attempts transitional governments successive addressing this the crisis, which was one of the main drivers for the youth to adopt revolution January 25.

Too, multiple regression analysis was used by Stepwise method for the demographic and social variables under interest of the current study (see appendices: Table 5), and which have already been available for the period (2002-2012). This analysis concluded that both of % of young unemployed in urban, the dependency ratio, births, and the males graduates from theoretical faculties respectively had the greatest impact on increasing the numbers of unemployed in Egypt during target period, as well as in the long run in the future. The findings in table (5) also revealed that the R^2 amounted 0.98, i.e. the contribution of these independent variables together in the regression equation in the interpretation of 98% of the variation in the dependent variable (No. of unemployed), which is statistically significant at the level of less than 0.05, and thus it indicates to the fitness of model proposed to explain the relationship of the regression. In addition, the variance analysis (ANOVA) has proved the validity of the proposed model by referring to the significance of regression equation that incorporates these variables combined, as the value of F amounted 91.99; and it is statistically significant at the level of less than 0.05. This confirms the existence of a correlation between the independent variables and the dependent variable in the following equation:

$$\text{No. of unemployed} = (-45450.3) + (11.7) \cdot X_1 + (372.1) \cdot X_9 + (963.9) \cdot X_{13} + (0.14) \cdot X_{22}$$

Whereas: X_1 denotes to births, X_9 denotes to the dependency rate, X_{13} denotes to the males unemployment rate in urban and X_{22} to No. of males graduates of theoretical faculties.

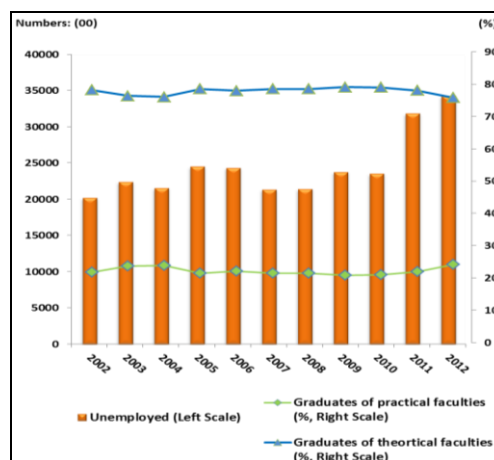
Based on the above equation, the % of males unemployed in urban was the highest impact on increasing the No. of unemployed in Egypt during (2002-2012), then followed by the influence of each of the dependency rate, the births and finally the males graduates from theoretical faculties respectively. Hence, it notes some demographic variables play a significant role in rising of unemployment in Egypt, e.g. births and dependency rate. Given these points, the demographic factor should be taken in account henceforth in the future plans. Especially the unemployment rates continues to increase in parallel to the growth of the population in Egypt, as clear in previous figure (1), and this constitutes an economically and socially strain on the state.

The most noticeable in these results is the effect of the % of males unemployed in urban and the No. of graduates of theoretical faculties, which indicates the existence of a clear imbalance in the higher education systems in

Egypt, and the weak of quality of its outputs, on the other hand ESCWA indicates that high unemployment among Arab youth due to problems associated with the mechanisms of youth employment and absorbed into the labor market besides a poor educational outcomes that do not fit labour markets (ESCWA, 2005), therefore, there was a high rates of unemployment among the youth educated.

Thus reflecting a conflict illogical and clearly shown by chart (6) at annexes that reveals high rates of unemployment among people with higher education, especially females, compared to people with low education, and this is due to that people with higher education need jobs that fits their qualification and expectations, and they do not accept any jobs lower than that, as well as the figure (6) indicates that the % of graduates of theoretical faculties exceeds the % of graduates of practical faculties during (2002-2012) at a high level and constant along with the rise in the unemployed during the same period. May be the main reason for this inconsistency or imbalance of education to the scarcity of initiatives from the state towards launch national projects for the sake of increase the job opportunities for those young people or the work to rehabilitation them, despite the high number of graduates and institutions of higher education in Egypt, but the education and training systems currently in place was unable to give the youth skills required for meeting the needs of labor market (Ministry of Manpower and Immigration (2010).

Figure 6. *No. of Unemployed and No. of University Graduates in Egypt (2002-2012)*



Indeed, the youth with higher education attainment are the most adversely affected by joblessness given that only two out of ten find jobs (AfDB, 2013) and the report of Arab Human Development Report in 2013 demonstrated that highly educated people are affected by unemployment just as much as those with lower education (Mirkin, 2013). In brief to face this imbalance is not just to provide jobs for youth, but there are many challenges should be addressed form all aspect that are relevant to the unemployment problem, whether this was concerning to the gender gap or the gap between educational systems and needs of Labour markets, as well as the needs of youths and expectations to get

better jobs and suitable with their specialties, taking into account the expansion of role of private sector participation in this addressing.

Recommendations

- The policy makers should focus on addressing rising labour market mismatch problems with the graduates through training and re-skilling programmes; directing actions on youth joblessness. Opening the centers of training and development career within universities to follow-up the situations of graduates and finding out the requirements and skills they need it, as well as providing them with bulletins about career services and jobs opportunities on a regular basis, e.g. each month.
- Reviewing the development and investment policies in Egypt, as well as the opportunities of foreign investment. And the deals should be awarded directly to the investment policies needed to achieve high and sustainable rates of investment, as more new jobs and limiting the gender quality.
- The necessity of the government to adopt a multitude of policy initiatives and reforms to enhance employability in education systems and Labour markets across the public employment services, and addressing employability challenges.
- Improving the performance, productivity, relevance, and quality of education and training systems, in particular technical and higher education systems.
- Better involvement of stakeholders and social dialogue, and in particular institutions of the private Sector.
- Initiatives to support the professional integration of youth and females in the labour market.
- The government should take actions to improve women's participation in the workforce and ensure to close the gender gap in employment and wages.
- Reliance on the establishment of modern centers and sophisticated for the sake of rehabilitation for graduates. And these centers should be are subject to an independent body under the supervision of the state be interested in the needs of the labour markets and its changes successive.
- Importance of international cooperation among neighboring countries or on a regional level, and especially recommend to the countries overlooking the Mediterranean to open new investment projects and Duty free or markets. This suggested in the countries that most exposed to this problem in areas bordering directly on the Mediterranean, and entitled "Mediterranean Duty Free" to serve the economy of those countries.

- The expansion of grand investment, industrial and productivity projects in accordance with the priorities of strategic Egyptian, including the ability to absorb the largest number of unemployed and graduates in the future, reduce the gender gap, high rate of economic growth and trade openness and reduce the rates of internal and external migration, such as project to develop waterway of the Suez Canal, the establishment of investment projects in South and North Sinai, open free markets, and industrial zones to compete Foreign goods. And take into account the stability of youth's family in the sites of those projects by providing all the appropriate elements of living in terms of housing, malls, schools, universities, clubs, hospitals...etc.

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Appendices | Charts

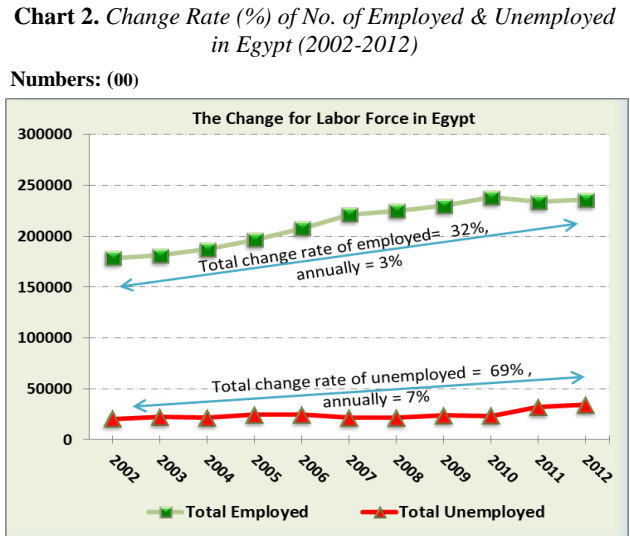
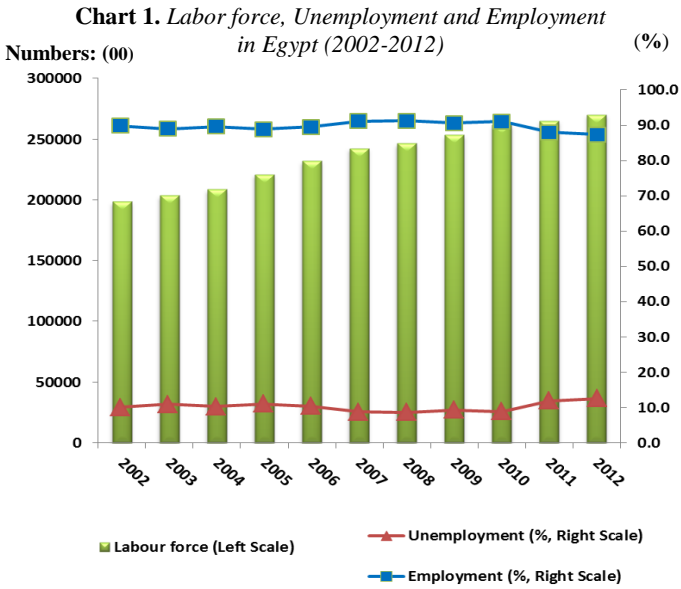


Chart 3. Change Rate (%) of Females Employed & Unemployed in Egypt (2002-2012)

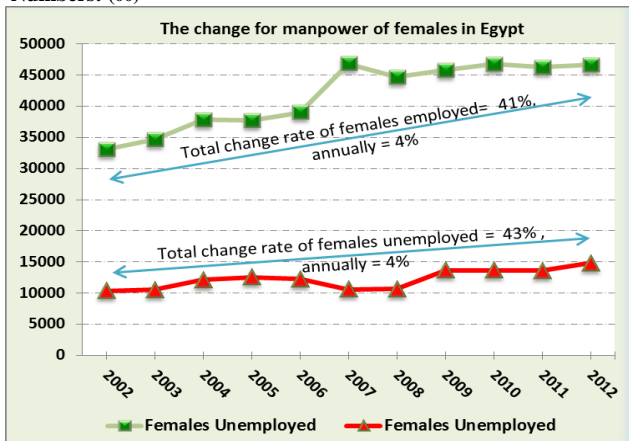


Chart 4. Change Rate (%) of Males Employed & Unemployed in Egypt (2002-2012)

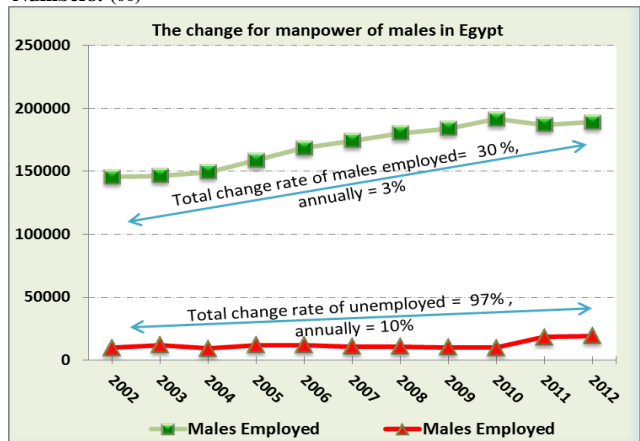


Chart 5. Unemployment Rate in Egypt, By Resistance (Rural & Urban) and Gender in 2012

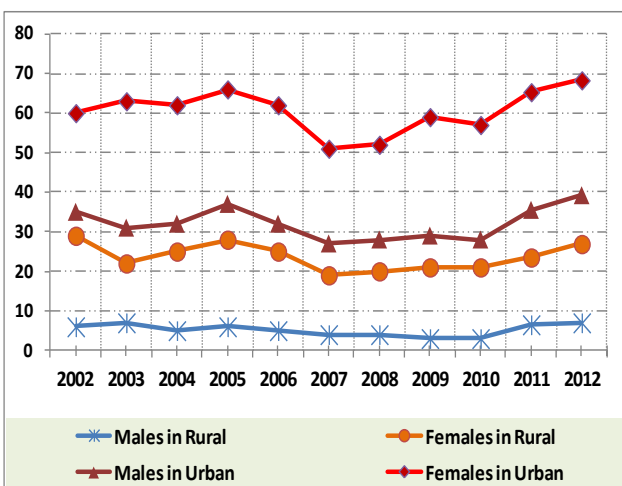
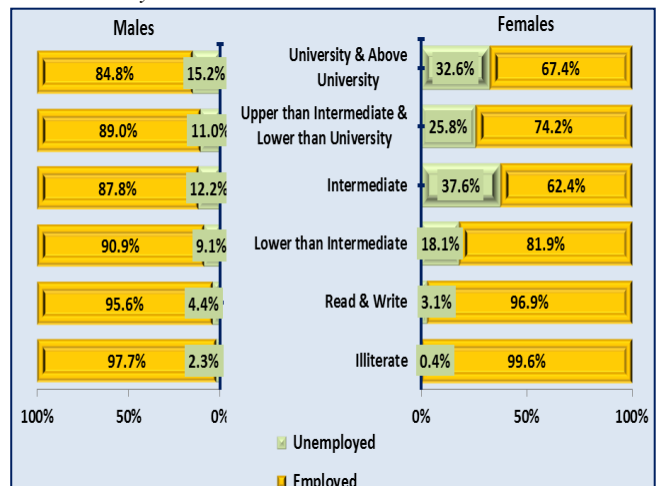


Chart 6. The % of Employed and Unemployed in Egypt By Educational Status and Gender in 2012



Appendices || Tables

Table1. Change Rate (%) of Labour Force, Employment and Unemployment in Egypt, By Gender (2002-2012)

Numbers: (00)

Year	Males	Change Rate (%)	Females	Change Rate (%)	Total	Change Rate (%)
Labor Force						
2002	155339	--	43429	--	198768	--
2003	158387	1.96	45209	4.10	203596	2.43
2004	158790	0.25	49923	10.43	208713	2.51
2005	170760	7.54	50280	0.72	221040	5.91
2006	180810	5.89	51250	1.93	232060	4.99
2007	185110	2.38	57390	11.98	242500	4.50
2008	191200	3.29	55320	-3.61	246520	1.66
2009	194100	1.52	59430	7.43	253530	2.84
2010	201400	3.76	60400	1.63	261800	3.26
2011	205406	1.99	59884	-0.85	265290	1.33
2012	208736	1.62	61469	2.65	270205	1.85
Employment						
2002	145507	--	33055	--	178562	--
2003	146520	0.70	34669	4.88	181189	1.47
2004	149364	1.94	37810	9.06	187174	3.30
2005	158820	6.33	37720	-0.24	196540	5.00
2006	168730	6.24	38980	3.34	207710	5.68
2007	174330	3.32	46820	20.11	221150	6.47
2008	180420	3.49	44660	-4.61	225080	1.78
2009	183970	1.97	45780	2.51	229750	2.07
2010	191530	4.11	46760	2.14	238290	3.72
2011	187187	-2.27	46272	-1.04	233459	-2.03
2012	189319	1.14	46638	0.79	235957	1.07
Unemployment						
2002	9832	--	10374	--	20206	--
2003	11867	20.70	10540	1.60	22407	10.89
2004	9426	-20.57	12113	14.92	21539	-3.87
2005	11940	26.67	12560	3.69	24500	13.75
2006	12080	1.17	12270	-2.31	24350	-0.61
2007	10780	-10.76	10570	-13.85	21350	-12.32
2008	10780	0.00	10660	0.85	21440	0.42
2009	10130	-6.03	13650	28.05	23780	10.91
2010	9870	-2.57	13640	-0.07	23510	-1.14
2011	18220	84.60	13614	-0.19	31834	35.41
2012	19417	6.57	14831	8.94	34248	7.58
Unemployment Rate (%)						
2002	6.33	--	23.89	--	10.17	--
2003	7.49	18.38	23.31	-2.40	11.01	8.26
2004	5.94	-20.77	24.26	4.07	10.32	-6.23
2005	6.99	17.79	24.98	2.95	11.20	8.53
2006	6.68	-4.45	23.94	-4.16	10.60	-5.36
2007	5.82	-12.83	18.41	-23.10	8.90	-16.04
2008	5.64	-3.19	19.27	4.67	8.70	-2.28
2009	5.22	-7.43	22.97	19.19	9.40	8.08
2010	4.90	-6.10	22.57	-1.73	9.00	-4.26
2011	8.87	81.00	22.73	0.73	11.99	33.22
2012	9.30	4.87	24.10	6.01	12.70	5.92

Data Source: CAPMAS, Annual estimates of Labor Status, Egypt statistical yearbook, 2013.

Table2. Unemployment Rate in Egypt, By Resistance and Gender (2002-2012)

Year	Rural				Urban			
	Males (%)	Change rate (%)	Females (%)	Change rate (%)	Males (%)	Change rate (%)	Females (%)	Change rate (%)
2002	6	--	23	--	6	--	25	--
2003	7	16.67	15	-34.78	9	50.00	32	28.00
2004	5	-28.57	20	33.33	7	-22.22	30	-6.25
2005	6	20.00	22	10.00	9	28.57	29	-3.33
2006	5	-16.67	20	-9.09	7	-22.22	30	3.45
2007	4	-20.00	15	-25.00	8	14.29	24	-20.00
2008	4	0.00	16	6.67	8	0.00	24	0.00
2009	3	-25.00	18	12.50	8	0.00	30	25.00
2010	3	0.00	18	0.00	7	-12.50	29	-3.33
2011	6.5	116.67	17	-5.56	12	71.43	29.8	2.76
2012	7	7.69	19.9	17.06	12.3	2.50	29.1	-2.35

Data Source: CAPMAS, Annual estimates of Labor Status, Egypt statistical yearbook, 2013.

Table 3. Estimates of Employed in Egypt (15 +), By Gender and Industry in 2012

Numbers: (00)

Economic Activity	Males	%	Females	%	Total	%	Z-value
Agriculture, Hunting , Forestry & Cutting trees	46333	24.47	17522	37.57	63855	27.06	-57.02*
Mining & quarrying	397	0.21	5	0.01	402	0.17	9.33*
Manufactures	24188	12.78	2002	4.29	26190	11.10	52.24*
Electric, gas, steam, air condition supply	2318	1.22	215	0.46	2533	1.07	14.33*
Water support, drain, recycling	1425	0.75	164	0.35	1589	0.67	9.49*
Constructions	27765	14.67	183	0.39	27948	11.84	85.45*
Whole and retail sale vehicles , motorcycles repairing	22623	11.95	3225	6.91	25848	10.95	31.18*
Transportation & storage	16125	8.52	352	0.75	16477	6.98	58.92*
Food, residence services	5044	2.66	156	0.33	5200	2.20	30.70*
Information, Telecommunications	1632	0.86	385	0.83	2017	0.85	0.77
Insurance & Financial Intermediation	1382	0.73	571	1.22	1953	0.83	-10.55*
Real estate, Renting	151	0.08	15	0.03	166	0.07	3.47*
Specialized technical, scientific activities	3208	1.69	572	1.23	3780	1.60	7.21*
Administrative Activities & Support Services	1340	0.71	145	0.31	1485	0.63	9.71*
Public Administration ,defense, social solidarity	14132	7.46	4749	10.18	18881	8.00	-19.38*
Education	11253	5.94	11114	23.83	22367	9.48	-118.12*
Health and Social Work	2838	1.50	3836	8.23	6674	2.83	-78.48*
Amusement & Creation & Arts Activities	975	0.52	227	0.49	1202	0.51	0.77
Other Services Activities	5297	2.80	202	0.43	5499	2.33	30.32*
Services of home service for private households	850	0.45	988	2.12	1838	0.78	-36.73*
International and Regional Agencies & Organized	24	0.01	7	0.02	31	0.01	-0.39
Activities not classification	19	0.01	3	0.01	22	0.01	0.72
Total	189319	100	46638	100	235957	100	

* Significant at the level less than 0.05.

Data Source: CAPMAS, Annual estimates of Labor Status, Egypt statistical yearbook, 2013.

Table 4. *Distribution of Unemployed, Employed in Egypt, By Educational Status and Gender in 2012*

Numbers: (00)

Educational Status	Males	%	Females	%	Total	%	Z-value
Unemployed							
Illiterate	1037	5.3	65	0.4	1102	3.2	25.47*
Read & Write	982	5.1	57	0.4	1039	3.0	24.98*
Lower than Intermediate	2506	12.9	462	3.1	2968	8.7	31.91*
Intermediate	8701	44.8	7224	48.7	15925	46.5	-7.17*
Upper than Intermediate & Lower than University	957	4.9	875	5.9	1832	5.3	-3.96*
University & Above University	5234	27.0	6147	41.4	11381	33.2	-28.21*
TOTAL	19417	100.0	14830	100.0	34247	100.0	
Employed							
Illiterate	43381	22.9	15515	33.3	58896	25.0	-46.27*
Read & Write	21473	11.3	1807	3.9	23280	9.9	48.44*
Lower than Intermediate	24955	13.2	2088	4.5	27043	11.5	52.86*
Intermediate	62592	33.1	11985	25.7	74577	31.6	30.64*
Upper than Intermediate & Lower than University	7762	4.1	2514	5.4	10276	4.4	-12.23*
University & Above University	29157	15.4	12729	27.3	41886	17.8	-60.21*
TOTAL	189320	100	46638	100	235958	100	

* Significant at the level less than 0.05.

Data Source: CAPMAS, Annual estimates of Labor Status , Egypt statistical yearbook, 2013.

Table 5. *Coefficients^(a) of Multiple Regression Analysis for Demographic or Social Variables Have Most Impact on the No. of Unemployed in Egypt, that Available During (2002-2012)*

Model	B	S.E	Beta	t	Sig.
(Constant)	-45450.26	5801.23	---	-7.835	0.001*
Births (X ₁)	11.69	1.66	0.869	7.023	0.001*
Dependency Rate (X ₉)	372.12	44.01	0.866	8.454	0.000*
% males unemployed in Urban (X ₁₃)	963.99	126.42	0.491	7.626	0.001*
No. of males graduates from Theoretical Faculties (X ₂₂)	0.14	0.03	0.352	4.055	0.010*
F-test for the Model = 91.99* , R ² = .987 and Adjusted R ² = .976					

* Significant at the level less than 0.05.

a. Method: (Stepwise) & Dependent Variable: (No. of Unemployed in Egypt), See the following list:

List of Variables Used within the Regression Analysis

No. of unemployed (Dependent)	Y	No. of students in Theoretical Faculties	X15
Births	X1	No. of males students in Theoretical Faculties	X16
Deaths	X2	No. of Females students in Theoretical Faculties	X17
Marriage rates	X3	No. of students in Practical Faculties	X18
Divorce rates	X4	No. of males students in Practical Faculties	X19
Natural Increase	X5	No. of Females students in Practical Faculties	X20
Population Density	X6	No. of graduates from Theoretical Faculties	X21
The Population Growth rate	X7	No. of males graduates from Theoretical Faculties	X22
Annual growth of the labor force	X8	No. of Females graduates from Theoretical Faculties	X23
Dependency rate	X9	No. of graduates from Practical Faculties	X24
% of women in labor force	X10	No. of males graduates from Practical Faculties	X25
% males unemployed in rural	X11	No. of Females graduates from Practical Faculties	X26
% females unemployed in rural	X12	No. of students in Technical education	X27
% males unemployed in Urban	X13	No. of males students in Technical education	X28
% females unemployed in Urban	X14	No. of males students in Technical education	X29
		Significant within the model	