

## Spatial Analysis of Women Equalities and Women's Empowerment in Egypt

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### Abstract

Women equalities and women's empowerment are one of the Millennium Development Goals (MDG's)<sup>3</sup> and the main concerns for many national and international organizations. Gender equality as one of the main human rights, implies a society in which women and men enjoy the same opportunities, outcomes, rights and obligations in all spheres of life, including equal opportunities for access to education, financial independence, politics influences and reproductive health. Women's empowerment in all previous issues is vital to sustainable development and the realization of human rights for all. In this study I apply modern visualization methods, spatial analysis and graph on both country level and governorates level to address the progress of women equalities and women's empowerment in education, work, health and political influences by using different sources of data and indicators such as Census of Population Housing and Establishments (CPHE), Labour force surveys and others. Using visualization methods helps government and decision makers to visually recognize the priorities of governorates and sectors which need more attention for women's empowerment.

**Key Words:** Data Visualization, Demographic, GIS, MDG, Official Statistics.

### 1. Introduction

CAPMAS draws a great attention for providing data and indicators which measure the status of women equalities and the gender gap in all sectors. CAPMAS published those indicators in the web site [CAPMASTAT 1.0-2012](http://www.capmas.gov.eg/CAPMASTAT1.0-2012)<sup>4</sup> which includes a database contains 132 indicators covering population, economy, education, environment, health, ICT, in addition to special indexes for women status. I use it as a main source for MDG's indicators for Egypt beside [UNSD MDG 2012](http://www.un.org/unsd/mdg/)<sup>5</sup> which contains the official UN statistics used in monitoring the world's progress towards the MDG's and other references.

This paper aims at providing a visualize view of the progress that Egypt has achieved in women equalities and empowerments.

I included in this paper two sections; in the first section I apply spatial analysis on the level of the governorates and use graphs for the country level to monitor the progress of the MDG's indicators categorized by education, maternal health, work and political influences, second section gives a brief conclusion about the benefits of using visualization methods and the priorities of governorates and sectors which Egypt's government and policy makers have to draw attention to them.

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<sup>3</sup> <http://mdgs.un.org/unsd/mi/wiki/MainPage.ashx>

<sup>4</sup> <http://www.censusinfo.capmas.gov.eg/DivInfo/>

<sup>5</sup> <http://www.devinfo.info/mdginfo/>

## 2. Analysis of Women Equalities and Empowerments in Egypt

### 2.1 Equalities in Education

Referring to **MDG(2)**: Achieve universal primary education and **MDG(3)**: Promote gender equality and empower women and their indicators and targets.

#### 2.1.1 Country level analysis for women education:

We notice from Figures (1-4) that Egypt has achieved valuable progress in Education of women, the 5-24 years old females literacy rate in 2006 compared to 1996 increased, net enrolment ratio in primary education reached 95% by 2012, percentage of completion primary stage became almost 97% by year 2009, gender parity index of primary stag reached 92.2 %, preparatory 97.2%, secondary 96.7% and tertiary stage 82% in 2012.

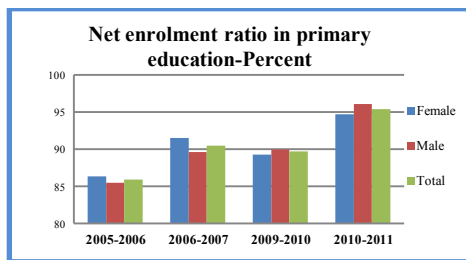


Fig (1)

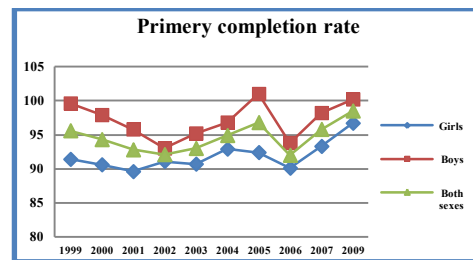


Fig (2)

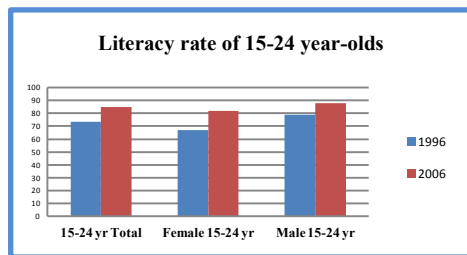


Fig (3)

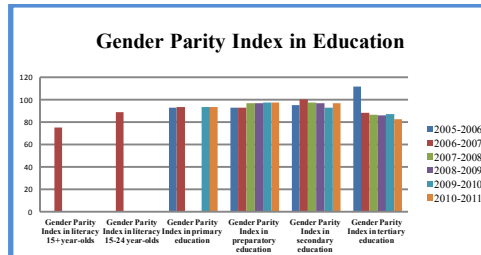


Fig (4)

#### 2.1.2 Governorates level analysis for education indicators

We can see from Fig (5), Fig (6), Fig (7) that most governorates of Egypt have enrolment to education gender parity index over than 80% in all education stages except two Bedouin governorates Matrouh and North Sinai, the disparity of growth in the ratio of +15 years old women to men literacy rate in CPHE 2006 compared to 1996, disparity in +15 years old CPHE 2006 gender gap in all education stages.

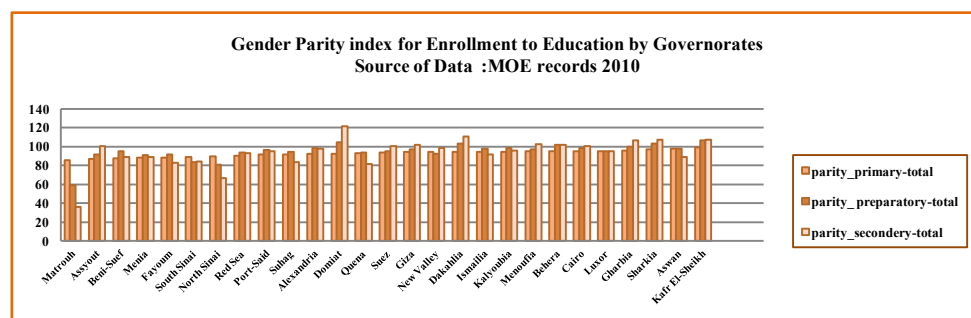


Fig (5)



### 2.2.2 Maternal mortality ratio and no of health units by governorates level

We could recognize from Fig(10) that maternal mortality ratio in Upper Egypt is higher than lower Egypt governorates, also we could notice that there is lack of health units per 100,000 population in some upper Egypt governorates .

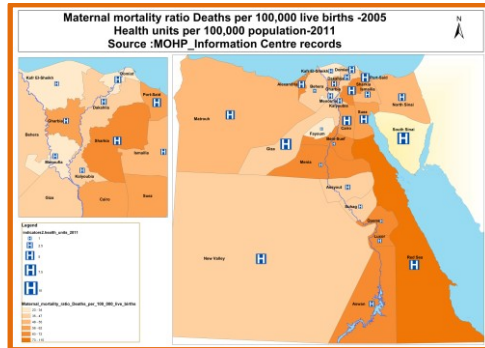


Fig (10)

### 2.3 Equalities in Employment

Recalling **MDG (1)** : Eradicate extreme poverty and hunger and target 1.B: Achieve full and productive employment and decent work for all, including women and young people.

#### 2.3.1 Analysis of employment indicators - Country level

We could notice From Fig (11-16) that the percentage of employment to population ratio of the women is approximately half of the men , unemployment ratio with secondary education is higher than below secondary and university degree, percentage of females who work in governmental and public sectors is greater than men, percentage of men and women who work in informal sector are almost alike and there are gaps between urban and rural area for women who are legislator ,senior officials and mangers and also for professional and technical workers, the percentages of women who work as legislator, senior officials, and mangers are very small about 2.9% in 2010.

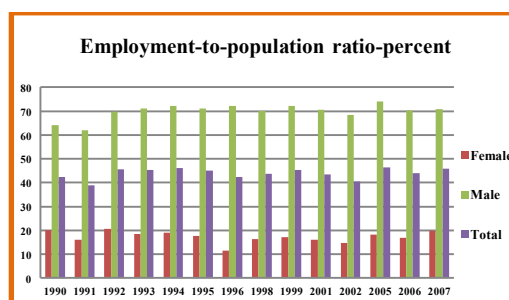


Fig (11) Source: UNSD MDG 2012

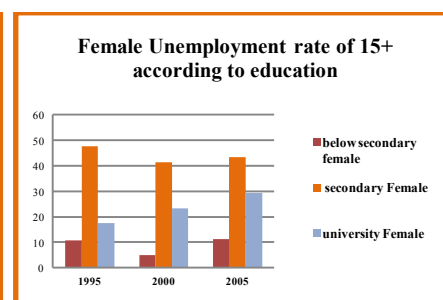


Fig (12) Source: CAPMASTAT 1.0 2012

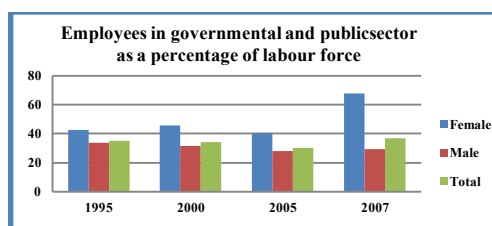


Fig (13) Source: CAPMASTAT 1.0 2012

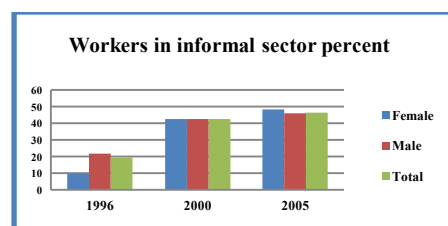


Fig (14)

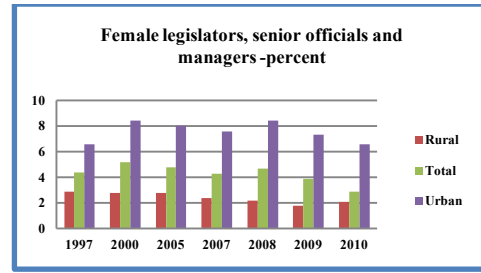
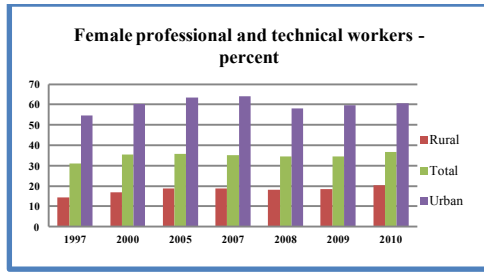


Fig (15) Source: CAPMASTAT 1.0 2012 Fig (16)

### 2.3.2 Spatial analysis of employments indicators-governorates level

We could easily recognize from the maps on Fig (17) and Fig (18) the disparity between governorates in employment indicators. We can notice that Egyptian women prefer working in governmental and public sector than men, most governorates have the greatest female unemployment percent with secondary education except Bedouin governorates like south and north Sinai that have unemployment percent with below secondary is the greater value. We can notice from Fig (19) the +15 year disparity of female labor force and distribution of female percentages of professional, technical workers with legislators, senior officials and managers.

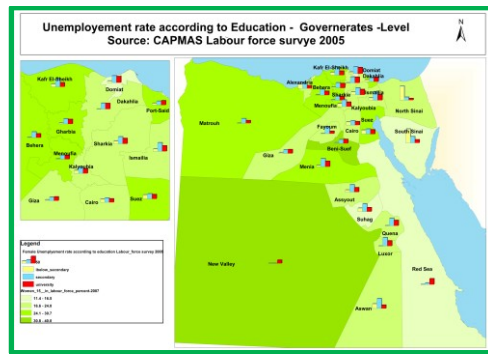
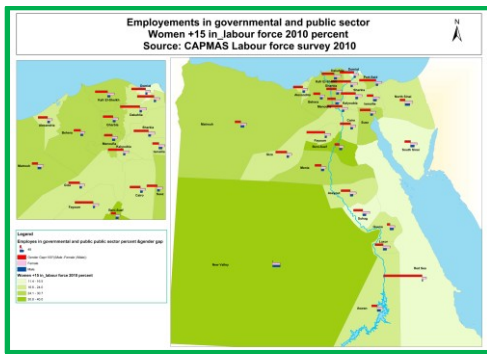


Fig (17) Fig (18)

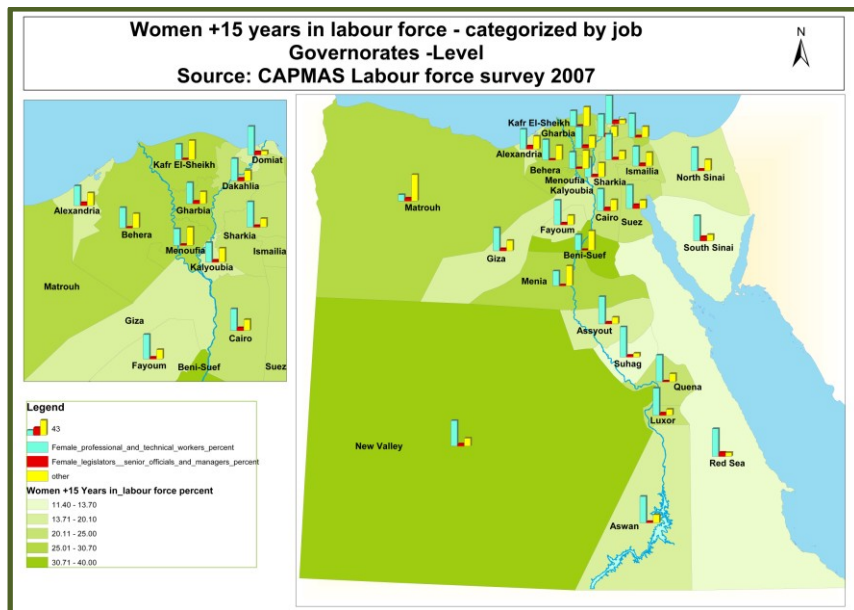


Fig (19)

## 2.4 Equalities in Political Influence

Referring to Fig (20), Fig (21) we notice that Egyptian women still have large gender gap in political influences thus along 22 years from 1990 to 2012 the maximum percentage of seats was 12.7% in 2011 decreased to 2% on 2012 and the percentage of appointed females in high administrative jobs slightly increased from 16.2% in 2005 to 31.42% in 2010.

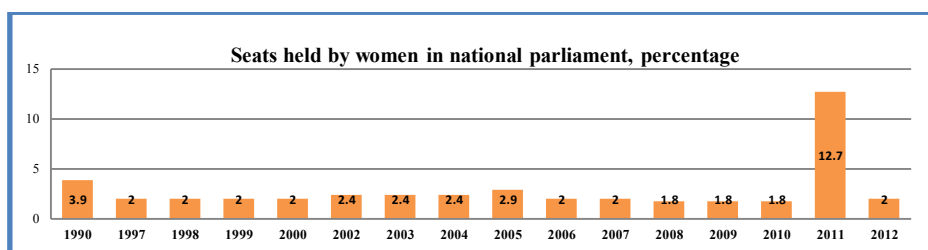


Fig (20) Source: CAPMAS statistical year books

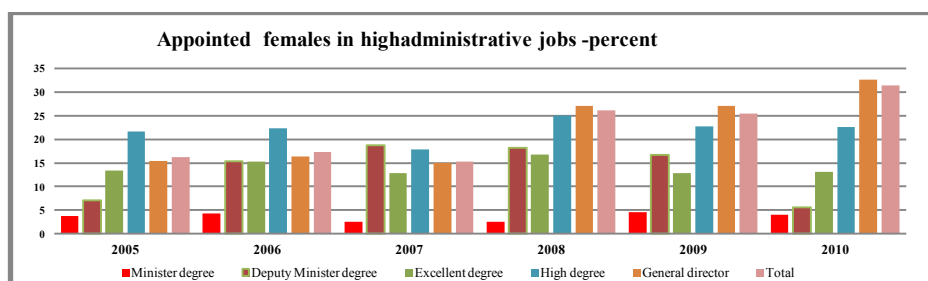


Fig (21) Source: CAPMAS statistical year books

## 3. Conclusion

Using visualization methods helps government and decision makers to visually recognize the priorities of governorates which need more attention. Egypt has achieved valuable progress in women empowerments in education and reproductive health, but it is noted that discrimination against women still exists in employment opportunities, decision-making positions and political influences and also in rural areas, Upper Egypt and Bedouin governorates.

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