Policies to address fertility Plateau in Egypt
Final Report

By

Social Research Center
The American University in Cairo

January 2012

Supported by United Nations Population Fund, Cairo Office
# Contents

- Introduction ......................................................................................................................... 2
- Project activities ................................................................................................................ 2
- Summary of Substantive Contributions ............................................................................. 3
  - Main Findings of the Background Report ................................................................. 3
  - Main findings of the research topics ......................................................................... 17
- Future Policy Actions to Reposition Population Priorities in the New Egypt .............. 42
- Project Team ..................................................................................................................... 45
- Appendices ........................................................................................................................ 46
**INTRODUCTION**

The project is conducted by the Social Research Center (SRC) of the American University in Cairo (AUC) in partnership with United Nations Population Fund (UNFPA). Egypt project is also considered as a first phase that will include Jordan and Syria. The objective of this report is to document all activities that was conducted under the first phase of the project which focused on Egypt.

Phase one of the project aimed to examine the reasons behind the deceleration of fertility decline in Egypt and recommended a number of policies and programs to face this plateau. It moreover aimed to hold a scientific meeting to discuss the results and recommendations of the proposed studies to the decision makers, researchers, civil society, and interested partners. The duration of Phase one lasted for 18 months from July 2010 to December 2011.

**PROJECT ACTIVITIES**

The first activity of the project was conducting a background report to review the international and Egyptian experience. The report suggested a number of research topics to tackle fertility challenges in Egypt.

A number of technical meetings were held to discuss the suggested research topics with the experts and decision makers, along with the participation of representatives from Syria and Jordan. These topics were transformed into eight scientific papers/studies). Several collective meetings (October 2010, February, June, and November 2011) were held under the auspices of SRC and UNFPA to design the outline for each study, to discuss the progress as well as the preliminary findings and the policy recommendations of each study. These meetings were also attended by Ministry of Health and Population (MOHP) personnel and the National Population Council (NPC), as well as expert demographers to acquaint policy makers with the project and enrich the discussions. In addition, individual meetings were conducted with the authors of the papers in several occasions.
After the completion of the scientific papers and the settling of the political situation in Egypt, it was agreed to hold the two-day scientific meeting in December 2011. An organizing committee for the meeting was formed from SRC, UNFPA, and expert demographers. It was agreed to hold the meeting on December 26 & 27 and to have all presentations and discussions in Arabic. During the meeting, a consensus was reached around the policy actions needed to deal with the population challenges facing Egypt and reposition population priorities in the New Egypt. All studies and presentations prepared for the meeting are available in the meeting site at http://www.aucegypt.edu/research/src/Pages/PopConf_studies.aspx

Finally, the project team prepared a policy report based on the results of the scientific papers, presentations, deliberations and discussions during the two-day meeting. This policy report is considered as a contribution to the future directions of the population strategy that is currently under review.

SUMMARY OF SUBSTANTIVE CONTRIBUTIONS

The following includes a summary of findings of different activities. The outputs of which are presented in the appendices.

Main Findings of the background report (For more details, refer to appendix 1)
1) International Experience
During the latter half of the twentieth century, most developing countries experienced rapid fertility decline. Many countries had attained the replacement fertility level of 2.1 births per woman by 2000. Although many of countries are expected to continue their fertility decline until their total fertility rate is below the desired replacement level of 2.1 births per woman, many find themselves facing the problem of fertility plateau, in other words experiencing stalled fertility while in mid-transition.

General perceptions annotate that fertility levels came to a halt because processes that once propelled fertility decline had now been fully diffused into society, and thereby run
their course. Fertility decline was now becoming increasingly linked with socioeconomic development. Former improvements such as well organized family planning programs and accessible contraception had either come to a complete halt or were trivial in determining fertility trends. Therefore, lack of or slow socioeconomic progress, alongside weakening family services are the two primary factors contributing to fertility plateau.

The precise manner through which socioeconomic factors are able to effect reproductive behavior of a society differs from one case study to another; however often these trends pose a similar situation. For example, when income levels are particularly low there is an increasing need for more children per family, as stated by Bongaarts. Another common trend depicts that where high levels of urbanization exist, fewer children are desired per family as urban life differs substantially from rural life. Overall there appears to exist a general consensus that where there is an improved education sector, rising income levels and high levels of urbanization, total fertility rates will be declining.

Another form of development closely intertwined with socioeconomic development is human development, which is often seen as the branch of development that furthers fertility decline the most, and when it falters in progress, it slows socioeconomic progress and contributes a fair amount to the coming fertility plateau. Human development, particularly focusing on literacy and schooling, and high life expectancy rates are major factors that closely interact with socioeconomic development to lower total fertility rates and sustain the process of fertility decline. However, where human development is little, meaning where low levels of literacy and a weak education sector exist, that society is at risk of facing stalled fertility as there are no factors interacting together to force the continuation and sustainability of fertility decline.

Government commitment is essential to a society’s fertility transition as the importance of a sufficient and organized public family planning service must not be overlooked. Past examples indicate to us that when government commitment is apparent and emphasis on an efficient government sponsored family planning service exists, a society’s fertility decline always benefits from such conditions.
The two cited forms of development are the primary remedies for fertility plateau, each set of policies of course should be relative to an individual country’s circumstances. Essentially, policymakers should focus on the following available options:

- Encouraging social and economic development whilst forming a basis for reducing the demand of children in developing countries
- Strengthening the family planning program whilst reducing the number of unplanned pregnancies as well as the unmet need for contraception

The following figure, taken from Bongaarts’s “The Causes of Stalling Fertility Transitions,” models the impact socioeconomic development and efficient family planning can have on developing societies facing stalled fertility levels.

![Analytical framework for the determinants of fertility](image)

**Figure 1**: Analytical framework for the determinants of fertility (Bongaarts 2006)

**Encouraging Socioeconomic Development**

Through the study of contemporary patterns in fertility transition, we can see that countries that began their transitions in the 1960s experiences three primary trends while in transition. Initially there is a high level of fertility until a country enters a period of transition, after which fertility decline is rapid as it was for many countries after the 1960s, however this pace decelerates during the later stages of transition. While some countries were able to more or less follow this pattern, others faced stalled fertility while in mid-transition, leading to their first encounter with fertility plateau.

Since most developing countries facing stalled fertility levels in mid-transition are nearing the latter phase of their respective fertility transition, socioeconomic development becomes far more closely tied with fertility than it would be during the early stages of
fertility transition. Policymakers must ensure that the government of a country facing fertility plateau take this into account and adopt and implement policies that encourage and further process of industrialization and urbanization, along with making investments in the appropriate sectors that will lead to higher literacy rates, lower infant mortality rates, higher life expectancy rates and increased female employment. Improvements of these socioeconomic indicators will lessen the number of wanted children as a result of rising costs coupled with a lower economic value for children. Lower levels of wanted fertility will increase the demand for contraception, which once met, will inevitably lead to fertility control. In essence, governments committed to socioeconomic development will play a core role in ensuring that their country completes their fertility transition and attains replacement fertility levels.

*Driving Forth Human Development*

Human development has been cited by many authors, such as Caldwell and Bongaarts, as being the most effective determinant of fertility decline, as fertility levels are shown to be very responsive to progressing human development, particularly within increasing female education and higher life expectancy rates.

This notion of has been supported by case studies of Sri Lanka and the state of Kerala in India, where poverty exists in high levels. In both cases, existing poverty had a very minor if not nonexistent impact on fertility levels, as both societies also encompassed high levels of literacy, coupled with thriving female education and seemingly low levels of infant mortality. These factors contributed in helping both societies attain replacement fertility levels, signifying the importance of high levels of literacy and female empowerment in societies wishing to accomplish a similar feat.

However, these two cases are often exceptions, as other cases such as that of Kenya, demonstrate that even with high levels of literacy and schooling, societies with a relatively low GDP are often marginalized in their attempts to overcome fertility plateau. Thus, although human development in some cases, as those of Sri Lanka and Kerala, can be a primary force in assisting a society to continue its fertility transition, a relatively low
GDP per capita is sufficient enough to prolong stalled fertility levels even though high levels of literacy and schooling may be apparent.

**The Impact of Rapid Socioeconomic Development**

A primary indicator of a society’s socioeconomic development is the level of wanted fertility. Some countries have taken initiative and encouraged rapid socioeconomic development, thus entailing that wanted fertility is reduced to 2 children or less per family. The primary reason some countries experiencing rapid socioeconomic development still face stalled fertility levels is because of unwanted fertility, which should be attributed to the lack of sufficient family planning services. However, other countries, particularly those belonging to sub-Saharan Africa, such as Ghana and Kenya face wanted fertility levels of 3 and higher. For countries like these, where wanted fertility itself exceeds replacement level fertility, socioeconomic development is imperative in order to achieve replacement fertility levels and complete the fertility transition.

Whilst discussing the importance of socioeconomic development with respect to fertility decline, it is important to understand how such development can reduce wanted fertility levels. With regard to aforementioned idea put forth by Bongaarts of a ‘chain reaction,’ an increase in the cost to benefit ratio allows families to desire fewer children in order to attain their desired benefits. Changes in the children’s cost to benefit ratio usually entail when a society experiences rapid industrialization and urbanization. The traditional approach is that rural societies have had relatively high levels of fertility, due to the economic value of children in such conditions. Once a society is able to urbanize, and crucial investments toward literacy and public health are made, the declining economic value of children has been cited as a prime factor driving forth that society’s fertility transition. As urban societies better entail fertility decline than rural societies, governments of developing countries facing fertility plateau must adopt policies encouraging such development in order to reduce levels of wanted fertility.
• **Strengthening Family Planning**

The successful fertility declines experienced by developing countries from the 1960s onwards were largely successful in part due to initiative taken by governments to provide efficient family planning services, allowing men and women to take control of their reproductive lives. It is no surprise that once these services started declining due to lack of funding and government support, fertility decline began to decelerate at a rapid rate, and in some cases led to stalled fertility levels.

Meeting the demand for birth control is imperative for societies wishing to complete their fertility transitions. A growing unmet demand for contraception is contingent upon a number of factors such as lack of access to sufficient birth control and lack of information pertaining to contraceptive use, coupled with minor factors such as a fear of the side effects of birth control and little if none support from spouses. Countering the impact of these factors is largely contingent upon whether or not a public family planning program is sufficiently able to provide the required tools such as easy access to birth control and other forms of contraception. Along with accessible contraceptive methods, a family planning program is also responsible for creating awareness of the levels of unwanted fertility, encouraging fertility control through the use of contraception.

• **Comparative case study of Costa Rica and South Korea**

Costa Rica and South Korea’s experiences with stalled fertility levels better articulate the negative impact of a weak family planning program as well as the rapid progress entailed by a strengthened family planning program. Whereas both countries experienced stalls in fertility, Costa Rica with a considerably longer period of 10 years relative to South Korea’s stalling periods, the latter was able to surpass its fertility plateau and continue into its fertility transition, whereas the former was subject to severe stalling due to lack of adequate government commitment. In examining these two case studies, the differences in family planning provide a reasonable explanation for why one was able to surpass its fertility plateau whereas the other is still facing stalled fertility levels during mid-transition. As illustrated in the Figure, by the late 1970s, Costa Rica’s fertility decline
was beginning to decelerate, leading to an established fertility plateau by the mid-1980s. In contract, although South Korea faced short periods of plateauing in its fertility rates, it was able to surpass these obstacles to continue its fertility transition.

South Korea’s fertility stalls were relatively short in comparison to Costa Rica’s prolonged fertility stalling, as the South Korean family planning services were largely improved in response to the plateauing. In fact, as of 1981, the South Korean government sponsored family planning program promoted the “one-child” slogan, encouraging families to reduce their wanted fertility levels. The South Korean Government adopted a fresh approach to driving forward their country’s fertility transition by creating initiatives for families to reduce their wanted fertility. These initiatives linked taxation, housing priority and health care to a preferable family size, promoting fertility control and fertility preference. As their family planning program was largely a success in the early 1980s, fertility preferences were met and the unmet demand for contraception largely decreased, helping South Korea continue its fertility transition until it achieved replacement fertility levels.

While government commitment and fresh initiatives allowed South Korea to continue its fertility transition, Costa Rica’s fertility levels remained stalled due to declining
government commitment and weak family planning services. The unmet demand for contraception inevitably increased as fewer women preferred to use weak family planning services. Costa Rica’s family planning program went from moderate in quality to weak in the 1970s and 1980s. As family planning services declined in quality, the result were apparent in the form of increasing teenage pregnancies and unwanted pregnancies in general, as female education on family planning and conception was low. In Costa Rica’s case, a strong family planning service, that receives government commitment and funding is crucial for the continuation of its fertility transition.

The comparative study of Costa Rica and South Korea has been used as an essential proponent of the argument to improve family planning because it articulates that a government that takes newer initiatives to meet demographic targets is more likely to reduce wanted fertility and satisfy existing demand for birth control than one that simply centers its policies regarding fertility on health care and human rights.

Summary
As mentioned before in the section, policymakers generally have two primary options, which they can tailor relative to the circumstances surrounding each country with fertility plateau. These two options are: A) Encourage socioeconomic development to reduce the demand for children; B) Strengthen family services to reduce, if not, prevent unwanted pregnancies. Each case, however, must be assessed within its own framework. Where unwanted fertility rates are particularly high, the government must prioritize the strengthening of its family planning services and should sort out its finances accordingly so. Where the majority of the overall total fertility rate is comprised of wanted fertility, the government must prioritize rapid ‘modernization’ in order to further advance their socioeconomic development and thereby decrease the demand for children by the reducing the economic value of children. Similarly, where unwanted fertility is particularly high amongst uneducated families, a strong effort to improve literacy rates must be undertaken. To conclude, the government’s role in implementing appropriate policies is crucial, a prime example being Vietnam, where despite significantly low levels
of literacy and schooling, the government’s one or two child policy ensures the completion of their fertility transition.

In order to ensure that each country adopts appropriate policies tailored to its circumstances and environment, policymakers should prioritize their options and articulate the single most important change a society requires to continue and complete their fertility transition. This process requires a government to provide commitment and support that will be sustainable in the long-term, allowing countries stuck in mid-transition to complete their fertility transition and achieve replacement fertility levels.

2) The Egyptian Context
   • Fertility Levels and Trends in Egypt

Since 1980 Egypt has been conducting national demographic surveys documenting the fertility change in the country as a whole and by region. Estimates of total fertility rate from various surveys conducted during the period 1988-2008 show a slow decline since 1995 especially during the period 2005-2008. The fertility has declined from 4.4 live births in 1988 to 3.0 live births in 2008, a decline of about 1.4 live births in 20 years. The decline that occurred during the period 1988-2000 (0.9 live births) is more than double what occurred during the period 2000-2008 (0.4 live births). At the regional level, the data clearly shows that rural Upper Egypt is taking the lead in the decline while the other regions are causing the fertility plateau but with some variation, as shown in the following Table.
### Total fertility rates by Region in Egypt, 1988-2008 (EDHS 88-EDHS 08)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Governorates</td>
<td>3.0</td>
<td>2.7</td>
<td>2.8</td>
<td>2.9</td>
<td>2.5</td>
<td>2.6</td>
<td>0.037</td>
</tr>
<tr>
<td>Lower Egypt</td>
<td>4.5</td>
<td>3.7</td>
<td>3.2</td>
<td>3.2</td>
<td>2.9</td>
<td>2.9</td>
<td>0.037</td>
</tr>
<tr>
<td>Urban</td>
<td>3.8</td>
<td>2.8</td>
<td>2.7</td>
<td>3.1</td>
<td>2.7</td>
<td>2.6</td>
<td>0.06</td>
</tr>
<tr>
<td>Rural</td>
<td>4.7</td>
<td>4.1</td>
<td>3.5</td>
<td>3.3</td>
<td>3.0</td>
<td>3.0</td>
<td>0.037</td>
</tr>
<tr>
<td>Upper Egypt</td>
<td>5.4</td>
<td>5.2</td>
<td>4.7</td>
<td>4.2</td>
<td>3.7</td>
<td>3.4</td>
<td>0.10</td>
</tr>
<tr>
<td>Urban</td>
<td>4.2</td>
<td>3.6</td>
<td>3.8</td>
<td>3.4</td>
<td>3.1</td>
<td>3.0</td>
<td>0.05</td>
</tr>
<tr>
<td>Rural</td>
<td>6.2</td>
<td>6.0</td>
<td>5.2</td>
<td>4.7</td>
<td>3.9</td>
<td>3.6</td>
<td>0.137</td>
</tr>
<tr>
<td>Frontier Governorates</td>
<td>NA</td>
<td>NA</td>
<td>4.0</td>
<td>3.8</td>
<td>3.3</td>
<td>3.3</td>
<td>0.17</td>
</tr>
<tr>
<td>Total</td>
<td>4.4</td>
<td>3.9</td>
<td>3.6</td>
<td>3.5</td>
<td>3.1</td>
<td>3.0</td>
<td>0.06</td>
</tr>
</tbody>
</table>

The ideal number of children for ever-married women 15-49 years of age on average is almost 3 children regardless of education, work status, wealth quintile, and place of residence as observed in EDHS 2008. Almost 60 percent of the couples desire the same fertility preference between the wife and the husband. However, more than one in every five women reported that her husband wants more than she does. Just below two-thirds of ever-married women wants to limit childbearing. This percentage goes as high as 67 percent in the Urban Governorates and as low as 55 percent in the frontier governorates. Almost 14 percent of births that occurred in the five-year period before 2008 EDHS were not wanted. This percentage clearly increases dramatically by the birth order. Almost one third of the births with order 4 and above are not wanted, as shown in the following table. As a result, almost twenty percent of TFR of three is not wanted. This percentage goes as high as 28 percent in rural Upper Egypt and as low as 15 percent in the Urban Governorates.
Trends of current use of family planning methods during the period 1984-2008 clearly show that the major jump occurred during the period 1984-1992 where the rate increased more than 50 percent from 30.3 percent in 1984 to 47.1 percent in 1992. During the period 1992-2000, the contraceptive prevalence rate increased by almost 19 percent from 47.1 percent in 1992 to 56.1 percent in 2000. However, the national rate has been leveling off during the period 2003-2008 around 59-60 percent. These changes are not uniform across all regions. Rural areas are still moving forward while urban areas are facing a plateau since late 1990s towards the new millennium.

An important concern is the timing of the first use of contraception among Egyptian women. The idea of using contraception before having any children is widely resisted in Egypt, representing 0.2 percent of ever-married women. Around six in ten women begin use of family planning after having their first child.

Regarding discontinuation rates, women stop using a method within 12 months of starting in almost one-quarter of all episodes of contraceptive use during the five-year period before EDHS 2008. The main reasons contributing to about 50 percent of this discontinuation rate are the presence of side effects/health reasons followed by method failure. These two reasons highly identify the role doctors at the primary health care could play to work on correcting this issue.
According to 2008 EDHS, the total unmet need in Egypt is 9.2 percent. The likelihood of having unmet need is highest among women who have no education, live in rural areas especially rural Upper Egypt, belong to the lowest wealth quintile. The total met need as mentioned above is 60 percent. The majority of users are limiters, since four in every five users report that they want no more children leaving only one woman in every five users as a spacer.

- **Past Fertility Plateau Studies in Egypt**

Zaky (2004) studied the relationship between demographic transition and female rational choices in Egypt. He used the data of EDHS 1995. He concluded that the idea of wife’s opportunity cost and rational choices related to fertility desires is not yet valid in Egypt in the 1990s. The dynamics behind female employment and future fertility desires is not yet that of opportunity cost and value of the wife’s time, and how much she may lose by having children. This may explain why actual and desired fertility has been declining but at rates which are getting smaller across time. One should not expect dramatic decline in fertility, close to the levels of post-transitional societies in the absence of the dynamics of rational choice explanations. The study has suggested several policy directions. Programs aiming to decrease future fertility desires should focus more on wife’s education and on increasing the awareness of quality, rather than quantity of children. Policies encouraging female employment without changing female status, type of work and attitudes towards child bearing may not decrease desires due to the role that is being played by other generations to assist in child-care. Family planning programs need to emphasize on decreasing the gap between fertility desires and achieved number of children.

The study by Casterline and Roushdy (2007) was motivated by the slow pace of fertility decline in Egypt in the period since 1992. The study investigated the nature of current childbearing desires, why women wish to have three or more births, the attitudes of younger cohorts who were starting their reproductive careers, and finally the policies and programs that might facilitate more rapid fertility decline in Egypt. In doing so, the study
conducted a sample survey in 2004 on 3293 of the women selected in the sample of Egypt Interim Demographic and Health Survey that was conducted in 2003. Two further samples were interviewed in 2004: a sample of unmarried women and men aged 18-29, each of about 900 observations. The study concluded that to achieve replacement level, policies should place roughly equal weight on the reduction of wanted and unwanted fertility focusing on rural areas, Upper Egypt, the least educated women, the poorest households. In addition, policies and programs that persuade couples to desire two children regardless of sex of the children are highly needed. The study found that one-third of pregnancies are unwanted, and they come mainly from women in rural areas, with no schooling, the poorest, and women over age 30. Young never-married adults are not fully convinced that two children is their ideal outcome. Most women are opposed to delaying the first birth.

El-Zeini (2008) drew upon data from the 2004 Slow Fertility Transition Survey (SFT), a follow-up to the 2003 Egypt Interim Demographic and Health Survey, to investigate obstacles to achieving replacement fertility. For the majority of Egyptian women, widespread indifference can be observed between the desires for having two and three children. Such indifference may be attributable in part to public population messages that for many years showed three children as an acceptable small family size. The results of the study identified three clusters of obstacles to the eventual achievement of replacement-level fertility in Egypt. Women manifesting these three groups of challenges can be termed the missed clients, the ambivalent, and the resistant.

The first group -the missed clients- are those who are willing to have only two children but who do not feel that they have an urgent need to practice family planning. This group includes older women and women who engage in sex infrequently. These women do not contribute much to the national level of fertility, although they constitute a significant portion of those with an unmet need for contraception and produce a disproportionate share of unwanted children. For these women, the available choice of family planning methods should be extended to accommodate their needs and considering sterilization for older women.
In considering the problem of women’s ambivalence toward the two-child ideal, a point to keep in mind is that optimistic economic expectations could result in an increase in desired fertility. In the long term, a fundamental approach is to encourage more egalitarian gender values, and providing women with new channels for self-actualization and economic independence. Institutional changes that foster-parenting values associated with high childrearing costs, such as promoting the importance of higher education, will also strengthen the motivation for restricting family-size ideal to two children. In near-term avenue addressing concerns about contraceptives’ negative side effects to health is key.

The third and last group consists of women who are clearly set against the notion of the two-child family -the resistant. To a large degree, institutional factors that amplify the cost benefits of having children, along with purely cultural aspect to the aversion to limiting childbearing to two, or even to a number beyond two. The pronatalists identified within the SFT sample tend to believe that couples have no control over their childbearing. They also express discriminatory gender attitudes. Not surprisingly, this hard-core group is mainly found in Upper Egypt, where both institutional and cultural forces work against the idea of birth control.

Altigani (2009) looked at both Egypt and Tunisia and studied their path towards replacement level. Egypt and Tunisia began their fertility transitions at roughly the same time and at almost identical fertility levels. Despite their similar beginnings, Tunisia’s transition succeeded in reaching replacement fertility by 2001, whereas TFR in Egypt has yet to decline below three live births. In Tunisia, women residing in all regions of the country and women at all levels of educational attainment experienced a rapid and sustained decline in fertility during the course of the transition. In Egypt, the sustained decline in fertility was limited to rural women and to women with no schooling. Among urban and educated women, the decline in the TFR has been inconsistent, particularly during the period 1995–2005.
Investigation of the determinants of the decline in the TFR over time in both countries has shown that the major force behind the initial decline in the TFR in Tunisia was the rise in age at marriage. The impact of contraception on the TFR became evident beginning in the mid-1980s. In Egypt, the initial decline in the level of the TFR was primarily influenced by nuptiality factors, however, whereas the effect of nuptiality has decreased the decline in the TFR was increasingly influenced by contraceptive use since the 1980s. The study finding suggests that the relatively young age at marriage of Egyptian women played an important role in Egypt’s fertility rate’s remaining above replacement level. Therefore, attainment of replacement-level fertility in Egypt is likely to hinge on further declines in marital fertility that come about from reduction in family-size preference and from expansion of family planning program coverage and improved efficiency of service delivery and use, resulting in reduction of unwanted fertility.

The total wanted fertility rate in Egypt is estimated to be 2.3 children. Therefore, even if current unwanted fertility (0.8 children) is eliminated, the resulting TFR would continue to be above replacement level. Further decline in unwanted fertility might be achieved by reducing contraceptive discontinuation; eliminating unwanted fertility altogether is unlikely because female surgical sterilization and induced abortion are not available as means of birth control. Clearly, the reduction in wanted fertility should be the focus of program effort. Acceptance of the two-child family norm can be encouraged by means of an information, education, and communication campaign and the institution of systems of incentives and disincentives promoting a family size of two children.

**Main findings of the research topics** (For list of topics, refer to Appendix 1)

It is evident that further investigation on why Egypt is currently passing through fertility plateau is highly needed. Analyses of the available data at smaller administrative level are required to fully understand the issue. The syntheses of challenges revealed by the background report were grouped into three primary levels. The first targets the individual level and their personal desires to have relatively high fertility. The second level seeks to consider the contextual disparities among regions. The third and final level discusses the
structural and administrative challenges. Each of these levels was tackled by a number of suggested research topics. Owing to the inter-linkages and the overlapping between the three levels, some of the suggested topics deal with more than one level as follows:

The first level: Fertility desires are still high (collective direction):

1. Fertility preference in Egypt (2.9) per family for all geographic regions, educational levels, and employment status of women.

The suggested research topics that tackles this challenge are;

- Profile of women who desire two children and how to scale up their experience
- Can work, education, and female empowerment help to reach replacement level?
- A Qualitative Study to assess the current attitudes and perceptions toward the two child norm in Egypt and the influence of religion.
- Family formation and fertility desires and behavior among youth and their future implications.

2. The actual level of fertility is around the same level as the desired (3.0) and above the targeted.

The suggested research topics that tackle this challenge are;

- Why urban areas did not complete their transition to replacement levels and how to influence this transition?
- Actions to speed-up fertility decline in rural areas and their potentials to avoid future stalling in fertility
- Family formation and fertility desires and behavior among youth and their future implications.

The second level: Disparities among Regions (spatial direction)

3. Different patterns: Rural Upper Egypt fertility is still declining while other urban and rural areas are showing fertility plateau.

The suggested research topics that tackle this challenge are;

- Why urban areas did not complete their transition to replacement levels and how to influence this transition?
• Actions to speed-up fertility decline in rural areas and their potentials to avoid future stalling in fertility.
• Intra-urban fertility differentials in Cairo Governorate: Are deprived neighborhoods contributing to the fertility plateau?

4. There appears to be a service potential missed in the form of unmet need for women especially in rural areas (10.9 %), and discontinuation of use (25.9 %) due to side effects of contraceptives (9.4 % of discontinuers).
The suggested research topics that tackle this challenge are;
• Actions to speed-up fertility decline in rural areas and their potentials to avoid future stalling in fertility
• Are urban areas reflecting a missed service potential?

The third level: Structural Challenges
5. Changes in the organizational structure, Uncertainty of international funding (contraceptives, surveys), Reproductive health model is perceived as a competitor to the family planning program, Signals of backlash
The suggested research topics that tackle this challenge is;
• Analysis of structure and current fertility policies and recommendations for the future (pillars, institutional framework, new initiatives, proposed reforms).

Can work and female empowerment help reach replacement level in Egypt?
The total fertility rate in Egypt has declined from 4.7 in 1988 to 3.9 in 1992. The rate of decline has started slowing down afterwards to reach 3.2 in 2003, 3.1 in 2005 and finally it reached 3.0 according to the Egypt DHS 2008. This slow down in fertility decline has put Egypt in a stalled fertility state. This paper utilizes the ELMPS 2006 as well as the DHS 2008 data to explore the relation between women’s potential sources of empowerment with special focus on employment and their fertility choices in terms of the total number of children ever born. Choices between having two, three and four or more children are studied.
Results show that regional differences pertain as expected with respondents in rural upper having the highest percent with four or more children. Preference for two and three children is almost the same across all regions.

Respondents living in households with the lowest level of the wealth index have considerably higher preference for four or more children while the percent having two or three children is very small. As wealth index increases, the percent having four or more children decreases but still almost the same preference for two and three children is revealed.

Effect of education on fertility preference does not show up unless the level of education reaches secondary level or higher; percent of respondents having four or more children drops considerably when this level of education is reached while those having two or three children increase. The percent having two or three children is very close in the DHS data but considerable preference for two children shows in the ELMPS 2006 data. The drop in the average number of children ever born is evident when education reaches secondary level in all regions. Upper Egypt has the steepest slope in terms of the average number of children ever born which means that educating girls in this region has a larger effect on the drop in fertility than the other regions.

When it comes to female employment, no evident difference shows for working or non working women. Furthermore, respondents who have ever worked and have low level of education have larger average of children ever born than those who have never worked. When job characteristics are explored, it is found that a higher percent of respondents with low job quality (security) have four or more children compared to those who have never worked before where job quality is measured in terms of whether the job is permanent, inside an establishment, sector of employment, having a contract and social security. Almost equal preferences for having two and three children exist. The average number of children ever born for those with low job quality is higher than the average for those who have never worked for almost all levels of education.

In general, except for demographic variables like age and age at first marriage, the preference between having two or three children is almost the same across all
respondents’ characteristics including region of residence, education, wealth index and job characteristics. Choices of having fewer that four children is significantly related to having secondary education or higher with such relation stronger in rural Egypt (Table 1). Having jobs with low security (quality) is associated with higher risks of having four or more children. These jobs don’t force women to compromise the number of children with their employment but rather provide an extra source of income to help provide for their children and also have more children. These jobs are mainly occupied by less educated women in agriculture and the services sectors. Respondent with low level of education and low job characteristics have higher average number of children than those who have never worked and the same level of education.

Results show that reaching replacement level of having two children is not feasible at this stage since the preference for two or three children seems to be a personal choice that depends on context and not on some measureable criteria as revealed by the analysis.

On the other hand, two important policy implications are due: 1) since the effect of respondents' education in upper Egypt shows the steepest slope on the average number of children ever born, policies aiming at reducing TFR should target this group more intensively since this would help reduce the average number of children ever born considerably but it will not reach replacement level though; 2) while providing women with employment opportunities that require low-skills and are flexible helps them to enter the labor market and increase their earnings which could help in reducing poverty, it also increases fertility. This applies to jobs in agriculture, services and informal sectors. This means that ways of setting restrictions on these jobs that forces women to compromise between employment and having children in a cost-benefit analysis need to be introduced. Means of formalizing these jobs are needed. Micro credits need to also incorporate forms that force women for example to work outside their homes in order to avoid the flexibility reached when they work from home and take care of their children at the same time. The dilemma of ethical concerns in such policies and their contradiction with poverty-alleviation programs could be an issue and that is why programs that focus more on capacity building and educating girls should be targeted at the same time.
Policies aiming at reducing the TFR should change their media-related campaigns and consider going through stages; the first sets having fewer children as the target since the message currently adopted of having two children is seemingly not well received by targeted population and the difference between having two or three children does not seem to have a health implication nor a poverty-related one. This is evident as mentioned in the almost equal percents having two or three children across different respondents’ characteristic. Reducing the percent of respondents having four or more children will have an impact on TFR but will not help reach replacement level.

Thus providing women with potential sources of empowerment; namely education and employment opportunities could help reduce fertility under certain circumstances that relate to the level of education reached and the type of employment provided.

Profile of women who desire two children and how to scale up their experience

Egypt has experienced a remarkable decline in its TFR from 5.3 children per woman to 3 in 2008. Since late 1990s, however, fertility is stalled. At the current fertility level an Egyptian woman continuously married from age 15 could expect three children over a 30-year reproductive life, nearly one child above the replacement level (2.1). Recent data, EDHS 2008, show that for women of every age group the mean ideal number of children is persistently above two children. It’s between 2.5 and 3 children for young cohorts and reaches about 4 children among women at the end of their reproductive career. Furthermore, far below the majority are choosing to have two children (36.5% and 29.2% among all women and women aged 40-49, respectively) and half of those were able to achieve two children (23.2% and 11.7%, respectively).

When studying the level of consistency among women who are, contrary to the average norm, have desired two children and the profile of those who succeeded in fulfilling their desires, results reveal that the level of attachment to two children is weak among women at the end of their reproductive career. On average, one third of this group who preferred
two children during their entire life achieved so. In contrast, ninety five percent of their peers who preferred more than two children achieved so.

Ability to maintain two children is very weak, notably, among women who suffered from one (22%) or two or more child deaths (10.5%), residents of rural Upper Egypt (10.9%), the poor (17.8), the illiterates (20.4%), and the housewives (27.1%). Son preference is not a strong hindrance of achieving the target as about fifty percent of those their ideal is two living children have two daughters. Results demonstrate that duration of marriage (and its implication of duration of exposure to child bearing as well as its correlate with age at first marriage) is a strong differentiating factor in fertility behavior.

Although the correlates with the different demographic and socio-economic factors go with the expected direction, still above the majority of advantaged groups; the urban residents, the highly educated, the richest, and those who have successful child survival failed to realize their two child target.

Women who successfully achieved their intended fertility of two children ‘achievers of 2’ or ‘achievers’ are highly selected with regard to most of the demographic, socio-economic and reproductive health factors that influence fertility. They marrying, on average, at old age. While in Egypt still delaying marriage, especially after age 30 is not welcomed, considerable fraction of the achievers married at age above 30. They have short duration of marriage before reaching the end of their reproductive career. They are enjoying successful child survival much more than their peers, and they do not have strong son preference.

Achievers have favorable socio-economic characteristics; they are highly educated, have high rate of participation in the labor market, and have high standard of living and are living in urbanized areas. Furthermore, they are marrying to better off husbands in terms of the level of occupational skills and level of education.
Achievers with regard to their reproductive health behavior have, generally, slightly better indicator than total women. However, they are notably better in regard to two indicators; place of child birth and husband’s desire for more children. None of the achievers delivered their babies at their homes and fewer husbands desire more than two children. These two findings are much related to the achievers’ level of education in general and level of health education in particular and to their economic standard of living as well as to their husbands’ level of education and skills.

Two additional important interrelated findings are in order. 1) Although a great percent of the achievers (77.8%) encourage their daughters/sons to have two children, and in this regard they are not different from the total population, still, close to one quarter of them would like their daughters/son to have more than two children. And 2) It does not matter a great deal for nearly half of them if they had one additional child. As denoted by (Hill, et al. 1959 cited in: Ware, 1974), societies in a transitional stage from high fertility to low fertility, they are also in transitional stage of attitude development between an unequivocal preference for large families and an unequivocal preference for small ones. During such period the individual may be subject to two opposing value systems, both of which he can agree with.

Two major interrelated dimensions should be the focus of population and family planning policies in Egypt, namely; changing the traditional norm and attitude toward family size, especially among rural residents and rising the level of development and individuals standard of living.

In Egypt, four major factors play important role in its transitional stage of attitude development: a) the prevailing norm about what is the large family? On the one hand, childlessness and raising singleton is strongly rejected. Hence couples are to choose from minimum two or more children. On the other hand, still the prevailing normative family size does not view three children and even four children as a large family, b) the normative pressure to have a boy child, c) fear of child death considerably contribute to preferring more than two children and d) the perception of low costs of childrearing.
Moving from two to three children does not dilute remarkably the resources necessary for maintaining an adequate standard of living for the family, especially at the childhood period of their children.

There are four related factors that strongly contribute to lower fertility; 1) rising age at marriage and hereby shortening duration of exposure to childbearing, 2) expanding educational opportunities up to secondary or higher level of education for the individuals will contribute to rising age at marriage for girls and rising the cost of childrearing. By education, children will be withdrawn from the labor market and become economically dependent on their parents. 3) increasing women’s participation in the formal labor market by which the costs of motherhood women will be high. And 4) rising standard of living coupled with improving quality of health services will increase child survival by which families are in no need to have extra children to compensate for child loss.

**Youth and the Fertility Plateau in Egypt: The Alignment of Two Policy Objectives**

A discussion of population issues with focus on youth is relevant and most timely. Youth have been at the center of the political scene in 2011, championing what has been acclaimed at the Arab Spring for democratic change. This magnificent group is the outcome of a certain point in Egypt’s fertility transition, being the largest in size compared to cohorts that are younger and older. The power demonstrated in their sheer size of this group is to be attributed to demographic changes in Egypt in the recent decades. More importantly, young people’s transition to adulthood is mediated by the battery of modernization factors long highlighted in the population and demographic transition literature. Education, particularly women’s education, is central for the inclusion of female youth as well as for fertility decline. Similarly, women’s economic participation has a pivotal role in reducing fertility and continues to be a major marker for youth inclusion.
Despite Egypt’s documented success in reducing fertility, the country has not reached replacement level. Decades of population policies have shown that the focus on the supply of contraception without addressing the root causes for families to need more children is less successful. The optimal model now is to make family planning methods available while addressing deficiencies in the education and labor market to increase the opportunity cost of having more children.

Also, despite decades of investment in education, recent data on young people show that school non-enrollment and early dropout persists, particularly in poorer areas in rural Upper Egypt. These areas continue to show rates of fertility that lag behind the national average and that of metropolitan areas. Data on women’s economic participation also show very weak level of participation, with no clear policies that seem to address this ongoing issue.

Delayed marriage has been considered as a developmental blessing for its implications on girls’ education and the economic participation of women. Delayed marriage has a direct impact on reducing the span of fertility years for women, particularly since childbearing out of wedlock is culturally ostracized. However, the extended delay in age at marriage, particularly for urban young men, constitutes a form of youth exclusion that relates to housing costs and lack of economic stability. In a cultural context where “completeness” is only achieved through marriage, delayed marriage is a delay in reaching the fullness of adulthood.

In all cases, ideational change among young people to accept and seek replacement level family size has not been achieved. Ideals of large families persist, slowing the adoption of family planning methods.

The above argument shows that there are no quick fixes for the fertility plateau issue in Egypt. Egypt’s population profile is tied to its human development index, particularly as relates to how its youth are economically and socially integrated. Particular focus should be placed on young women’s education and economic integration. In education, there is
urgent need to addressing school drop-out education quality issues and the connection with poverty, particularly in rural Upper Egypt. In terms of women’s employment, this issue remains absent from the policy discourse in Egypt. There is need to make women’s employment a priority policy issue, away from allegations that the focus on women’s labor force participation is part of a Western agenda. Rather, women’s employment is measure of their economic inclusion with the latent objective of regulating fertility. Similarly, there is need for law enforcement to stop under-age marriages.

However, the international experience has shown the positive impact of certain interventions in the field of population regulation. These relate to the promotion of long-term family planning methods and addressing women’s complaints from side effects to prevent discontinuation. The promotion of life skills among young people has also been emphasized as a means to instill values of responsible parenting, gender role attitudes and reproductive health. The above discussion on lack of information about the ovulatory cycle highlights the importance of promoting life skills. Programmatic activities for fertility regulation rarely devote efforts to fertility awareness-based methods of family planning, despite their low cost. There is also need to address young married couples with targeted services to promote use of family planning methods. Experience in sub-Saharan countries shows the viability of using new technology such as SMS messages in promoting reproductive health issues. This is an experience that can be replicated to young married couples to inform them about family planning methods at a very low cost. Specific to Egypt, the lack of support to the two-child family ideal relates to public population messages that have shown the three child family as an acceptable “small” family size. It is therefore important to make clear the difference between a two-child versus three-child families and the impact of both on population momentum.

Addressing fertility plateau with focus on youth issues is relevant and timely. However, it requires a holistic policy agenda that gives priority to issues of young people’s education, economic integration and awareness raising.
A Qualitative Study to assess the current attitudes and perceptions toward the two child norm in Egypt and the influence of religion

A Qualitative Study to assess the current attitudes and perceptions toward the two child norm in Egypt and the influence of religion was undertaken between the end of December 2010 and the middle of January 2011. It was conducted in three main governorates: Cairo the capital of Egypt, El Gharbeyia Governorate in Lower Egypt and Assuit Governorate in Upper Egypt. The study reveals that while FP practice is socially acceptable, it is not acceptable according to some religious points of views. A representative in the MoHP at the central level noted that it is socially acceptable to “plan” birth rather than “controlling” it, in a qualitative study to assess the current attitudes and perceptions toward the two child norm in Egypt and the influence of religion. Childbearing as an act that can be controlled is socially acceptable for the majority of the sample. However, it is not acceptable according to religious points of view, where this study revealed around 20% of women think that religion is against the use of family planning methods.

Qualitative data of rural Upper Egypt illuminates some of the reasons for the preference for more children. The following statements are from the governorate of Sohag in Upper Egypt. This governorate has one of the lowest levels of current use of family planning method, and is currently the lowest among all Upper Egypt governorates (Zanaty and Way, 2008:78). In a focus group discussion, informants repeat what they know is commonly accepted in their socio-cultural environment. For this reason, data coming from focus group discussion present views that can be confirmed by large-scale surveys. On the ideal number of children, a woman presents her logic for why she would want four children with focus on the gender of the children. The ideal family for this woman would be:

.. two boys and two girls. Because (having) a boy is not like (having) a girl. This is better than having one girl and one boy. A family of four children is an ideal family. The girl is sister to the girl and the boy is brother to the boy.

Another woman seems to echo this same notion noting:
The minimum is two boys. This is to keep the name (of the family) and for jealousy from other brothers. (people would say) why did X or Z have five children and you only have two.

The above quotes show that children are seen as a source of power and social pride. Having more children seems to be a social achievement from the above quotes. More importantly, preference for boys is clearly pronounced in the above quotes. This is an issue that El-Zeini (2008) highlights as one of the major hindering obstacles to the adoption of the two-child ideal among couples in Egypt.

**Why urban areas did not complete their transition to replacement levels and how to influence this transition?**

Some areas in Egypt are considered urban areas while their characteristics are greatly different from the characteristics of other urban areas. Those areas include towns and slum areas. Towns are the urban administrative units with population size less than 50 thousand people. Most of the towns are located among rural areas which makes their characteristics closer to the characteristics of rural areas. Towns women have the lowest education and socio-economic levels, the lowest contraceptive use, the highest unmet needs, age at first marriage, ideal number of children, TFR and number of children ever born among all types of urban administrative units.

Despite having many definitions, slum areas have a main characteristic which is being built far from legislations and discipline. Structure and characteristics of slum areas population differ also from those of the non-slum urban population. The available studies on slum areas show that women in slum areas are less educated and poorer than women in non-slum urban areas. Fertility levels are also higher in slum areas than in non-slum areas.
Different urban regions are not homogeneous in their characteristics. Urban south upper Egypt, urban north upper Egypt and urban frontier governorates seems to have the lowest characteristics and the highest fertility levels compared to other urban regions in Egypt.

The direction and pace of improvement of different population characteristics were better in rural areas than in urban areas. The slow improvements, sometimes retrogression, in the characteristics and fertility determinants of urban women cause the fertility stall that urban areas witnessed during the last 15 years while rural areas continued moving forward across transition stages.

Education of the woman and her husband appeared among the most important factors that affect contraceptives use. Despite the improvement achieved in these indicators during the last 15 years, about two fifth of women and spouses didn't enrolled in secondary school and about one sixth of women and their husbands are uneducated.

Women’s socio-economic level, work status, age at first marriage, number of children ever born, ideal number of children, living in a certain region and a certain type of urban administrative units are the characteristics that mostly affect contraceptive use and fertility level.

Total fertility rate in urban areas does not differ from the mean ideal number of children that was reported by urban women.

Exposure to FP messages is one of the variables that affect contraceptive use and, hence, fertility levels. It decreased during the past years in all urban areas especially in urban governorates and large cities may be due to the retrogression of Egyptian TV channels against satellites.

The following recommendations are suggested to deal with the status of urban areas in Egypt:

*Issue: Classification of urban areas:*

1- Egypt needs to review the definition of urban areas. Criteria upon which areas are classified as urban or rural should be determined, cleared, published and used to
re-classify different administrative units in Egypt. As a result, the classification of towns and slums as urban areas might be reconsidered in the light of their population characteristics and the civil services available in these areas.

2- Government in collaboration with private sector should also work on improving the characteristics of the population living in those areas.

**Issue: Improving the characteristics of urban population:**

1- Improving the characteristics of urban population through encouraging education among different population groups. This in turn will result in changes in women participation in labour force and socio-economic status as well as fertility preferences of couples, which may lead to further reductions in fertility.

2- Policies should pay more attention to improve the demographic characteristics and fertility preferences of women in slum areas, towns and upper Egypt especially south upper Egypt.

**Issue: Exposure to and content of FP messages:**

1- Total fertility rate in urban areas does not differ from the mean ideal number of children that was reported by urban women. This fact asserts the need to review the family planning messages to change urban population beliefs and convince couples of the importance and benefits of the small family and the consequences of repeated childbearing on mother and birth.

2- Diversify the mass media messages and find new message delivery approaches to reach women in different urban areas in order to promote the adoption of the 2-child policy. Messages should address the dangers of early marriage, the dangers of early and late child bearing and the importance of the 3-5 year spacing intervals.

3- Population problem must be discussed and promoted extensively in different contexts to convince Egyptians that an additional child certainly is a burden not
only on the family but also on the country with all its utilities, especially with respect to scarcity and inadequacy of country natural resources.

**Issue: Density and quality of FP services:**

1- There is a great need to increase the number of health units that provide FP services especially in urban.

2- Improve the quality of services provided in the units and insure the existence of a female health provider in each unit. Training courses should be provided to doctors working in health units that provide RH services to enable them to serve women regardless of their education and socio-economic levels.

**Actions to Speed-up fertility Decline in Rural Areas and their Potentials to Avoid Future Stalling in Fertility**

It is clear that the role of family planning program has diminished since the last decade. This diminishing role might have been through lack of service improvement, awareness through mass media, and educational programs.

Having a look at the trend and the behavior of TFR we can notice that, stalling in TFR in rural lower Egypt may be due to:

1- Changes in factors related to contraception such as:

- Decrease in contraceptive use effect in 2008 as a main determinant for TFR in rural lower Egypt, as shown by Bongaarts Model. It was indicated that index of contraceptive use rose from 0.299 in 2005 to 0.327 in 2008, as mentioned before high value in index indicates low percent of reduction in TFR due to this index. Also the percent of current contraceptive use for limiting decreased in 2008 to reach around 50 percent.

- Decrease in contraceptive demand for limiting the family size; it decreased from 58.3 in 2005 to 55.5 in 2008.
• Increase in unmet need for both limiting and spacing, as noticed unmet need rose from 7.1 in 2005 to 7.7 in 2008.

These changes in contraception factors lead to TFR increase, so TFR increase may begin with stalling then increase later. By examining the factors that lead to contraception decrease we should refer to the decrease in mass media role since the last decade. As mentioned above, in 2008 the percent of women who were not exposed to FP messages rose to 32.2 compared with 9.1 in 2005 and 2.6 in 2000. However, urgent actions should be taken to avoid the decrease of contraceptive use.

2- Stalling the mean age at first birth

When the mean age at first birth rises TFR decreases, both mean age at first birth and TFR were steady since 2005 with mean age at first birth equal to 20.4 years.

3- Stalling the percentage of educated husband and woman.

When the percentage of educated husband increased TFR decreased. Between 2005 and 2008 the percentage of educated husband was steady and there was no significant change in this percentage.

The same pace was found for woman as the percent of educated women did not change obviously between 2005 and 2008. Also we expressed that when the percent of educated women increase it causes TFR decrease as we observed, among years increase of this percentage caused TFR decease but between 2005 and 2008 no clear increase causes TFR stalling.

For Rural Upper Egypt

TFR decreased in rural Upper Egypt between 2005 and 2008 but with a slow pace (from 3.9 to 3.6). To avoid stalling and to continue decreasing we should represent the factors attributed to slight TFR decreasing. In the following change that occurred in these factors will be presented by change in TFR between 2005 and 2008 compared to changes in previous years.
The proportion of married women

The percentage of married women increased clearly from 52.2 to 65.8, this increase was accompanied with increase in TFR slightly by 0.3.

Mean age at first marriage

Between 2005 and 2008 mean age at first marriage increased by 0.3 year compared to 0.6 year between 2000 and 2005. This increase accompanied with TFR slight decrease (0.3 births per woman) compared to the decrease (0.76) occurred between 2000 and 2005.

Contraception

The percentage of current use of any method increased in 2008 by 3.2, contraceptive use for limiting increased by 2.2 percent. Also the contraceptive demand increased slightly from 46.3 in 2005 to 47.1 in 2008. This increase in contraceptive demand is considered the lowest increase occurred since 1988. On the other hand, unmet need for limiting decreased by 1.4 while unmet need for spacing is still approximately the same.

Also the index of contraceptive use decreased slightly between 2005 and 2008 by 0.03, compared to 0.1 decease occurred between 2000 and 2005.

In addition the percentage of women who are exposed to any family planning message decreased sharply from 92% to 64% in 2008.

Mean age at first birth

The increase in the mean age at first birth is associated with TFR decline. Also this association appeared obviously since 1995. As during the period from 1995 and 2005, the mean age at first birth increased obviously by 0.85 year. Also TFR declined during this period by 1.3 births per woman. But in 2008 the mean age at first birth increased slightly from 18.96 year in 2005 to 19.1 year. this increase was accompanied with TFR slight decline (0.3births per woman) between 2005 and 2008.

Educational status of husband

There is a negative association between the percentage of educated husband and TFR. When the percentage of educated husband increases, TFR decreases. It’s previously
mentioned that, in 1992 the percentage of educated husband decreased and TFR decreased slightly. In addition, in 1995 when this percentage had the highest increase, TFR had the highest decrease. Between 2005 and 2008 the percent of educated husband increased slightly, almost no change occurred, TFR decreased by 0.3. so we can conclude that when the percentage of educated husband decreases or increases slightly, TFR decreases slightly. But when this percentage increases obviously, TFR decreases also obviously. About the educational status of women, one can notice the significant negative relationship between the percentage of educated women and TFR. As previously shown the percentage of educated women increased by almost 19 during the last two decades. This increase is accompanied with TFR decrease. But during 2005 and 2008 only 2.2% increase in the educated women percentage, and only 0.3 TFR declined.

**Wealth quintile**

Despite the perception that high fertility is found among the families in the lowest wealth quintile, data for rural Egypt showed that rural Egypt has special characteristics. As TFR decreased since 2000 from 4.84 to 3.64 in 2008. But TFR in the low wealth quintile increased slightly from 3.82 to 3.79. Moreover, in 2008 TFR for who has high wealth quintile exceeded TFR for who has low wealth quintile.

The role of family planning awareness program is diminishing since the last decade. This diminish occurred due to lack of quality of provided services, lack of family planning program mass media, lack of education programs. To recover the fertility stalling status in rural lower Egypt some actions should be taken. To enhance the quality of provided services, expand mass media programs on FP, and enhance the social side for rural Egypt.

The majority of women discontinued using contraceptive methods due to fearing from the side effects from using Pill, IUD, and injectables. So, some actions should be taken to eliminate discontinuation due to fear from the side effect; first of all the provided services should be improved and the quality should be risen. It was previously mentioned that EDHS2008 indicated that the main reason of discontinuation was due to side effects (8.3 percent. Discontinuing using Pill due to side effect reached to 10.1 percent, and discontinuing using IUD was (4.8 percent), while injectables discontinuation due to side
effects reached to 20.6. So the quality of services should be improved to reduce discontinuation and satisfy unmet need. If unmet need for limiting satisfied in rural lower Egypt this will lead to increase contraceptive use to 69 percent. In addition TFR will decline to 2.3.

The recommendations for action are as follows:

**Offering various methods** which would be available for rural Lower Egypt hospitals and health units. Also advertising on health methods as they are safe to use to reduce women’s fearing from the side effects and to correct misconceptions about contraceptive methods.

**Improving services provider** effectiveness and expand counseling

For improving services provider capacity, it is recommended to support training physicians, specially the females, health workers, and midwives on family planning methods. In addition focusing on inserting IUD by more efficient way to improve the quality and to reduce method failure. For counseling on Family planning program, it should be expanded to encourage women on using contraceptive methods. According to EDHS2008 we can notice that counseling on FP is very limited. About 93% of women reported that no one visited them during the last 6 months preceding the survey to discuss FP with them. In addition among women who visited private doctors during the last 6 months preceding the survey approximately 67 percent of them mentioned that private doctors did not discuss FP with them. Also about 83 percent of women said that there was not any discussion about FP during vaccinating their children.

**Eliminating the shortage of female services providers**

According to the characteristics of the rural Egypt and its traditions and customs, some women avoid having medical examination by male doctors specially in reproductive health. So needs for these women should be satisfied by some actions. First, providing female physician and nurses in the rural lower areas by encouraging them on working in these rural areas. As providing some concessions and incentives for them. Also it is recommended to making training for female physicians and nurses in different health specialties who are living in these areas on providing FP services.
Policies should focus on the social side to overcome demand for large family size. To overcome the problem of desiring large family size, policies should focus on the social side in order to achieve the social development. As indicated previously the mean ideal number of children in rural lower Egypt increased in 2008 to reach 3.18 births per woman. This means there is still desiring large family size in rural lower Egypt. In addition it is mentioned previously that stalling the TFR in rural lower Egypt is associated with the educational status of parents. So to overcome this status of stalling, increase the number of educated individual should be a target. Policies on education should have many changes and adjustments. It is recommended to make a mandatory program for schooling people in rural areas. Rising the percent of schooled people in rural areas does not only contribute solving the problem of desiring large family, but also improved the current educational level. It is recommended to strengthen information on FP specially in the preparatory and secondary schools. As many people leave schools at these stages.

On the other hand, the role of mass media programs has obviously diminished during the last decade. It’s worth mentioning that very few percent in rural Lower Egypt in 2008 said that they were exposed to any family planning messages through the various mass media. The lack of exposure to family planning methods contributed in rising TFR for the rich in rural lower Egypt in 2008 to 3.35 births per woman. It’s worth considering and checking that TFR for people in the high wealth quintile is higher than people in the low wealth quintile. This means that rural Egypt has special characteristics that enhancing the standard of living leads to TFR increase. It is obvious that this is a good evidence on the diminishing in the role of mass media for awareness people on the importance of having small family size.

As for Rural Upper Egypt

The situation in rural Upper Egypt does not differ much from the situation in rural Lower Egypt in many sides. In fact rural Upper Egypt continued decreasing in TFR. But the decreasing rate is smaller in comparison with the previous decreases. To avoid stalling in TFR which occurred in rural Lower Egypt all factors that led to fertility stalling must be taken into consideration. These factors were mentioned previously. As decreasing
contraceptive use and demand, increase in unmet need, stalling the mean age at first birth, and stalling the percentage of educated husband and woman.

So all recommendations for rural Lower Egypt are applicable for rural Upper Egypt. But focusing on improving the provided services is important not only to avoid stalling TFR but also to continue decreasing it. So the quality of services should be improved to reduce discontinuation and satisfy unmet need. As mentioned before if unmet need for limiting satisfied in rural upper Egypt this will lead to increase contraceptive use to 57.9 percent. In addition TFR will decline to 2.3.

Also it worth mentioning that mass media should increase and expand its role in FP awareness campaigns. In EDHS2008 the majority of women reported that they did not expose to any FP message through various mass media channels during the last 6 months. In addition, about 90 percent of women in rural Upper Egypt said that they were not visited by anyone to discuss family planning with them. And about 81 percent among who visited private doctor during the last 6 months preceding the survey mentioned those doctors did not talk with them about FP. Also 84 percent from women in rural Upper Egypt reported that during vaccinating their children no one discuss FP. So FP programs should expand advertising and awareness through various mass media channels to continue TFR decline.

Intra-urban fertility differentials in Cairo Governorate: Are deprived neighborhoods contributing to the fertility plateau?

Starting mid 1990’s, Egypt has experienced a stalled fertility decline. The total fertility rate declined from 3.6 children per woman in 1995 to 3 children per woman in 2008. A comparison between the changes in fertility levels between the rural and urban areas would clearly show that while fertility has been declining slowly in the rural settings, the urban settings and in particular urban governorates, fertility levels have been stagnate and fluctuating in a range of 0.5 child. Between 1995 and 2008, urban governorate exhibited a decline of 0.2 children per woman (TFR was 2.8 child per woman in 1995 and 2.6 child per woman in 2008). This very slow pace of fertility decline has posed many important
questions regarding the underlying factors. One of the most commonly cited reasons for the stagnation of fertility in urban settings is the high levels of fertility prevailing among the less privileged in the cities. The poor and the uneducated are more likely to adopt attitudes that promote childbearing.

In the cities, since the slums or deprived areas usually house the less privileged population, investigations have commonly focused on exploring the impact of these areas on fertility. In this regard, two main hypotheses have been investigated. The first hypothesis is that the differences between slum/deprived areas and the non-slum/deprived areas are mainly attributed to the aggregation of the less privileged population in the former areas. The second hypothesis is that the above aggregation of the less privileged can generate a new common ideology that promotes excess fertility in these areas, net of the individual factors.

Two hypotheses within Cairo governorate in Egypt were tested. The areas were classified according to their physical structure into three categories, namely the most deprived, medium or intermediate and the least deprived. Exploration of the women characteristics in these categories revealed some similarity between the first two categories with regard to the levels of social vulnerability defined in terms of low educational attainment and standard of living. In contrast, the residents of the least privileged areas exhibited the lowest levels of social vulnerability. Exploring the bivariate relationship between the neighborhoods’ physical deprivation and seven fertility indicators and controlling for age revealed that for all indicators except for contraceptive use, there were significant neighborhood differences. The least deprived neighborhoods, expect for wanting more than 2 children, were exhibiting better fertility indicators than the other two categories. However, controlling for the educational attainment and standard of living was able to absorb all these differences in the case of early pregnancy, number of living children and having more than 3 children.

Three indicators showed unexpected patterns although consistent with some of the previous results. The un-intendedness of the last child was significantly lower in the least
deprived areas even with controls for other factors and controlling for the current number of living children (not presented in the table). This result can be interpreted in terms of the success of the least deprived neighborhood in fulfilling their fertility plans. Residents of those neighborhoods have achieved low levels of fertility and according to the current result; they are less likely to report the last child as unintended.

The last two indicators which relate to wanting more children among those with 2 or more children and unmet need for limiting showed that residents of intermediate/medium neighborhoods were more likely to adopt pro-childbearing attitude net of their socioeconomic characteristics. They are more likely to want more children and less likely to report unmet need.

The above results clearly indicate that intra-urban differences are mere reflection to the aggregation of less privileged population in certain neighborhoods within these urban centers. Those living in the least deprived neighborhoods exhibit the highest aggregation of secondary educated women as well as high living standard. Within this social success context, women have succeeded in lowering their fertility and effectively implementing the appropriate strategies to fulfill their fertility objective. In contrast, the high aggregation of less than secondary educated women and the prevailing intermediate standard of living in the other two types of neighborhoods still play a significant role in slowing the fertility decline. Furthermore, residents of intermediate neighborhoods were found more likely to want more than two children.

The above discussion was only able to shed some light on the intra-urban fertility differences and their underlying causes. However, it revealed the significant role of structural forces that shape the environment in which women live. The study reiterates the well documented significant and important role of education and poverty on fertility indicators. This conclusion requires two types of policy recommendations; namely short term and long term policies.
For the short term policies

- Address women's attitudes regarding fertility particularly among the less than secondary educated women through targeted health education programs
- Change the content of the reproductive health messages in the media and other health promotion program to stress avenues for women self-realization other than fertility
- Focusing on reproductive health counseling as an important strategy to raise women awareness and change their attitudes particularly among the less educated and the less privileged.

For the long term policies

- Strengthen existing effort to promote girls education and push for retaining girls in secondary and higher levels of education.
- Strengthen commitment to a two-child norm particularly among young adults since they will be forming the reproductive profile in the future.

Egypt’s Population Policies And Organizational Framework

Egypt has a comprehensive population policy since 1975 with clearly defined dimensions including population growth, distribution and characteristics as well as wide differentials between geographic regions or groups.

Population growth was at the core of all population strategies and the main quantitative goal was to rationalize its level through reducing fertility and increasing contraceptive utilization.

Real significant progress has been achieved during the eighties and early nineties and continued in the late nineties although at a slower pace. Donor resources were instrumental at this stage which benefitted the program at all levels. The declining of these resources in recent years was not totally matched by government sources. This was
very clear in mobilizing resources for the strategic plan 2007-2012 which was denied the necessary financial funds for implementation.

High-level political support varied during the period under consideration which affected the level of performance and the support provided to the national program.

Several challenges need to be tackled to ensure the successful implementation of national program and achieving national goals. These include:

- Establishing consensus about the scope and content of the population situation,
- Population growth and other dimensions,
- The FP program,
- The unmet-need which represents a missing opportunity that could have allowed achieving replacement level in a large number of governorates,
- Institutional framework that has to be modified in accordance with the specified criteria,
- The absence of a comprehensive monitoring and evaluation plan to assess progress at all levels.

Coping with these challenges and having a clear assignment of roles and responsibilities for all stakeholders would be instrumental in contributing to changing the current stalling situation. Emphasizing decentralization of population plan would also lead to customizing programs to local conditions and accordingly enhance potential success.

**FUTURE POLICY ACTIONS TO REPOSITION POPULATION PRIORITIES IN THE NEW EGYPT**

The two-day scientific meeting was held in December 2011 to position the population challenges within the new context of Egypt. The meeting attempted to respond to the current Egyptian context and the renewed calls for revisiting population and women
empowerment policies. The objective of the meeting was to provide a forum for presenting scientific evidence and engage with different stakeholders’ perspectives. The final goal was to move towards a more informed consensus on how to position the population challenges and to recommend evidence-based policies (for more details, refer to Appendix 2 for meeting agenda). The meeting was attended by about 100 participants from various stakeholders from the National Population Council, Ministry of Health and Population, workers in the field of population, academicians, NGOs, Syrian and Jordanian representatives, and others. Based on the scientific papers, presentations, discussions of the two-day scientific meeting, a policy report was prepared (appendix 3) and the following future policy actions were agreed on:

- The need to have a clear and unified vision and a consensus around the population challenges facing Egypt and the approaches, strategies, policies, programs and tools to deal with these challenges.

- Support a renewed political commitment and the revisiting of the existing structure and paradigm. A shift from the narrow focus on family planning to reproductive health approach is needed.

- Initiate contacts with all parties, coalitions, fractions to raise their awareness towards the population challenges and get their consensus around a unified vision towards population.

- The need to support a human development approach. Human capital development includes improved education access, equality and quality, and raising labor market efficiency. Fostering the nation’s human capital will boost productivity in all key sectors, allow more equitable resource distribution and enable higher levels of innovation and creativity, and ultimately will help Egyptians fulfill their demographic goals. Integrate RH plans within other development plans.

- Provide women with potential sources of sustainable empowerment; namely higher education and more secured employment opportunities will certainly help them achieve their reproductive desires. It is suggested, for example, that micro
credits need to incorporate forms that support women, for instance, to work in empowering jobs outside homes, in attempt to influence their reproductive desires and behaviors

- Sustain and Improve national and sub-national data on population issues and analyze their underlying social determinants of health at local levels.

- Adopt a disaggregated approach to deal with population challenges in different geographical areas and prioritize under-served populations and regions.

- Emphasize decentralization of population plan would also lead to customizing programs to local conditions and accordingly enhance potential success.

- A renewed focus on ideational changes particularly for youth is highly needed and the continuing engagement with religious leaders.

- There is a need to review family planning messages to convince couples of the importance and benefits of the small family and the health consequences of repeated childbearing on mother and birth especially in rural area.

- Diversify the mass media messages and find new and different message delivery approaches to reach women in different areas in order to promote the adoption of the small family policy.

- There is a great need to increase the number of health units that provide FP/RH services especially in rural Upper Egypt. Focus on strengthening service delivery at the local levels. Improve management, supervision and feedback to deliver better quality service.

- Improve the quality of services provided in the units and ensure the existence of a female health provider in each unit. Training courses should be provided to doctors working in health units that provide RH services to enable them to serve women with better quality.

- Offer a variety of family planning methods to be available in health units especially in rural areas. The advertising for safe methods is very important to
ease the fear of side effects and to correct misconceptions about contraceptive methods.

- Improve services provider effectiveness and expand counseling. For improving services provider capacity, it is recommended to support training for physicians, specially females, health workers, and midwives on family planning methods.

- For counseling on family planning/reproductive program, it should be expanded to encourage women on using contraceptive methods. This message needs to be propagated during various missed opportunities such as antenatal and postnatal care and times of children vaccination.

- Enforce one message/vision but also ensure efficient implementation by all relevant stakeholders. Assign clear roles and responsibilities for all stakeholders to instrumentally contribute to changing the current stalling situation.

- Monitor and evaluate using quality performance indicators to evaluate process and impact in the field and at local levels.

**Project Team**

The team consisted of a core team from SRC and UNFPA Cairo office, a technical committee, authors of scientific papers, expert demographers, members of collective meetings (refer to Appendix 4 for details).