

## FERTILITY PLATEAU: CAUSES AND REMEDIES

### BACKGROUND REPORT

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UNDERSTANDING THE RELEVANCE OF FERTILITY PLATEAU

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.

In order to overcome the problem of fertility plateau it is crucial to understand what factors drive forth this phenomenon and how these factors intermingle to force a stall in fertility. General research tells us that fertility is driven by a few core factors such as socioeconomic factors, government involvement in providing public family planning services, literacy rates and employment opportunities for women. The remedies for fertility plateau lie in the subtle manipulation of these factors, driving fertility trends into the preferred direction forcing a decline and allowing countries to complete their fertility transitions.

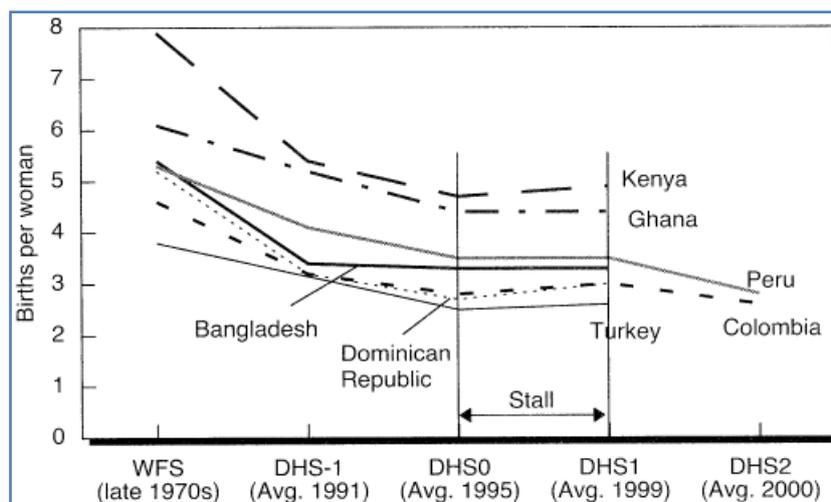


FIGURE 1 (BONGAARTS 2006) TRENDS IN THE TOTAL FERTILITY RATE FOR 7 DEVELOPING COUNTRIES WITH STALLED FERTILITY

Having experienced rapid decline since the 1960s, many developing countries went on to experience a deceleration in decline, and eventually a stall in fertility levels. 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. Research on the matter indicates that demise in the aforementioned factors was the primary cause for fertility plateau. Alongside these trends that played a part in the build up to fertility plateau, socioeconomic development and fertility decline have become conducive to another as never before. Therefore, lack of or slow socioeconomic progress,

alongside weakening family services are the two primary factors contributing to fertility plateau.

Different case studies will show us that each country facing fertility plateau is to be assessed within its own context, all the while acknowledging the existences of common trends that determine fertility stalls.

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## A SYNTHESIS OF FACTORS CONTRIBUTING TO FERTILITY PLATEAU

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Fertility plateau is the result of a cumulative effect created by the intermingling of several factors such as slow socioeconomic progress, lack of government sponsored family services and a somewhat conflicting perception of the matter of fertility. It is helpful to understand each of the aforementioned factors within their own frameworks.

### SOCIOECONOMIC FACTORS

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Lack of socioeconomic development or slow socioeconomic progress is indicative of a society's stalled fertility rates. There is a heavy link between slow socioeconomic progress and fertility plateau as there is between rapid socioeconomic development and fertility decline. Socioeconomic development is considered conducive to fertility decline and is often cited as the main cause of a decline over time. Changes stemming from socioeconomic development create what John Bongaarts has depicted as a chain reaction of circumstances that lead to fertility control. As socioeconomic development prevails, a society sees changes in its cost to benefits ratio, causing for the desired number of children per family to substantially decrease. In addition human development will ensure that mortality rates decline and child survival rates increase, causing fewer births per family to attain the desired number of living children.

The cumulative effect of the aforementioned model inevitably leads to fertility preferences. Once fertility preferences are intact, a demand for birth control is apparent, where birth control is affordable for all in light of the recent socioeconomic development experienced by a society. Eventually this chain reaction will lead to a continuing and increasing use of contraception, leading to controlled fertility in a society. Thus socioeconomic factors as suggested by Bongaarts and several other authors are the single most primary determinants of fertility. Effectively, socioeconomic development acts as a propeller for fertility decline, where slow socioeconomic progress halts fertility rates.

### FAMILY PLANNING SERVICES

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Developing countries that are facing the problem of having their fertility levels stalled above replacement level are urged to examine the options they have at their disposal, one of which is an effective and sufficient family planning service. One of the leading factors contributing to the problem of fertility plateau is a weak or non-existent government sponsored family planning service, which in turn increases the unmet demand for contraception. This unmet demand for contraception is a primary indicator of fertility plateau, as unmet demand rises when efficient family planning services are not in place.

The existence and sustainment of an efficient and well organized public family planning service is not only crucial with respect to acknowledging the unmet demand for contraception, but its existence can also counter lesser known factors contributing to this unmet demand such as side effects of birth control pills, or lack of support from spouses. Thus, the improvement of a government sponsored family planning program can in effect reduce the unmet needs for contraception, particularly in countries where the percentage of this demand is rather high. Prime examples of countries where the unmet demand for contraception is relatively high are Ghana and Kenya. Thus, through the effective use of family planning services, fertility can be controlled as birth control and other forms of contraception will become highly accessible, reducing if not preventing unwanted pregnancies.

### ATTITUDES ON FERTILITY

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Another factor that can be perceived as a strong indicator of fertility status is the prevailing attitude on the matter of fertility. Gender stereotyping, lack of employment opportunities for women and unsupportive spouses have been cited by several authors as minor determinants of fertility plateau.

However, changing up attitudes requires long-term commitment and prioritization from a government. Countering obsolete attitudes and changing up gender stereotyping demands a well educated and literate society. Similarly, altering the perception and role of women in a society requires equal government support and commitment, as employment opportunities need to be opened up for women, in order for them to be able to break out of their traditional roles. Likewise, largely obscure issues that have received little acknowledgement over the years, such as women getting little or no support from within the household, need to be played out in the open.

Countering these attitudes would require an increase in literacy rates and a family planning service that would acknowledge the existence of gender stereotyping as a social determinant of fertility plateau. Thus, closely tied with socioeconomic development and family planning services, changing up the view of women in society would eventually lead to more women exploring their option of having fertility preferences and prevent unwanted pregnancies. Any form of human development in this department, that effectively increased female education and employment opportunities, would be able to intermingle with other determinants to continue fertility decline in developing countries.

### PURPOSE OF REPORT

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This report will use the aforementioned factors that contribute to fertility plateau, break them down within their own contexts and through context of different case studies, offer a comprehensive explanation of how the interaction of several factors can force a stall in fertility above the replacement level. Through analysis of several determinants of fertility plateau, this report will attempt to identify, through case studies and conjecture, what policies would be most sufficient for developing

countries to implement in order to break out of their stalled fertility levels and continue declining until their TFR is below replacement levels. This report will also attempt to locate which countries have successfully countered the problem of stalled fertility and through what policies have they been able to do so. Overall, this report will offer a synthesis of opinion, through which the general causes and remedies of fertility plateau will be articulated. Finally, the report will discuss some thoughts about fertility plateau in Egypt.

### **ACCELERATION AND DECELERATION OF FERTILITY DECLINE**

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Although many developing countries experienced rapid decline since the 1960s, by the mid-nineties many of these countries were facing a deceleration of fertility decline, which eventually came to a halt and established a fertility plateau. As has been mentioned in the previous section, general research repeatedly cites socioeconomic development and the role of the government in enforcing family planning as the two primary factors furthering the road to replacement fertility for many countries. It is of essence to understand how these two primary factors, along with their sub-factors, interact with each other to both accelerate and decelerate fertility decline. Understanding the major role of these factors in stalling fertility, as well as continuing fertility decline can articulate not only why countries are experiencing fertility plateau but also the prospect of how to overcome it.

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. These trends offer a better understanding of how fertility plateau was first encountered. To briefly summarize, there is initially a high level of fertility until a country enter 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.

In this section of the report we will be primarily looking at different aspects of socioeconomic development and the role of the government to illustrate the rapid decline many countries experience in the latter half of the twentieth century, as well as ascertaining how the problem of fertility plateau was first arrived at. Answering the questions of how and why fertility plateau became such a substantial problem in developing counties by the mid-nineties will give us a strong indication of what policies should be implemented to overcome it.

## SOCIOECONOMIC AND HUMAN DEVELOPEMENT

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Having been established as primary determinants of a fertility transition, there still remains a shadow of doubt over the precise methods through which socioeconomic factors are able to effect reproductive methods in a society. These methods differ from one case study to another; however there are a few general sub-factors within this division, which make up common trends in most societies, such as income levels, the question of urban versus rural residences and the importance of literacy and female education.

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 and mentioned earlier in the report. 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. These trends will be further expanded upon in the following sub-sections, but 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, is a major factor that closely interacts 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.

Observing and studying the aforementioned role of socioeconomic and human development will determine how these factors were able to act out a role and sustain rapid fertility decline, only to later slow down their progress as societies faced the problem of stalled fertility while in mid-transition.

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### INCREASING LITERACY

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Human development has been cited as the most effective sort of development that is able to foster a continuation in fertility decline. An improvement in the education sector is thus considered a major socioeconomic indicator of fertility decline. Increasing literacy amongst women in particular is able to counter problems such as gender stereotyping and is able to promote the changing up of values in a society.

A society with high literacy rates and an improving education sector will undoubtedly be one that prioritizes human development. In doing so, a society will be able to manipulate options at its disposal, and drive forth fertility rate in the desired direction, thus being conducive to a decline in fertility rates.

As a society benefits when human development is prioritized, it suffers greatly when literacy levels and schooling are second rate. A demising education sector has been cited as a core reason for a prolonged fertility plateau. Particularly in countries where government commitment is low, the public education sector suffers greatly and at the cost of human development. The sub-factor of literacy and schooling has a substantial bearing on fertility rates, as an improvement in literacy indicates a developing society with declining fertility rates, whereas a second rate education sector indicates a society experiencing slow progress, thus facing a prolonged period of stalled fertility levels.

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### HIGHER LIFE EXPECTANCY

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Another development indicator, higher life expectancy, also serves to demonstrate common trends in fertility. There is a definite correlation between higher life expectancy rates and total fertility rates, where both become strongly associated with one another. Higher life expectancy rates, once again, outlines a society that is experiencing strong human development, which inevitably leads to fertility decline. When countries entered the period of early transition whilst experiencing rapid fertility decline, higher life expectancy rates in developing countries took up a complimentary role in assisting the process of fertility decline.

The relationship between life expectancy and fertility rates show that where life expectancy is reasonably low, total fertility rates are high, thus furthering the notion that when chances of survival are low, the desired number of children per family is high, in order to attain the preferred amount of living children. Thus, low life expectancy rates can be attributed to the problem of fertility plateau, as they contribute heavily to the socioeconomic and human development aspects of problem at hand.

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### INCREASING EMPLOYMENT OPPORTUNITIES FOR WOMEN

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The role of women in a society can be largely attributed to its culture and tradition. In most developing countries, a common problem that plays out as an indicator of fertility rates is that of a deprived socioeconomic environment for women. Some societies deem it credible for women to bear as many children as possible, indicating it to be a sign of womanhood. Alternatively, surveys indicated that many husbands are uncomfortable with the idea of mothers working outside the household environment.

Initially, however, following the rapid fertility decline of the 1960s, there was a social environment in many developing countries which demanded a working role from women. This in turn complimented the rapid decline in fertility as women were required to play roles outside the household. However, when gender roles became more fixed in the coming decades and women resumed their 'traditional' roles, the lack of employment opportunities available for them limited their roles to child bearers, thus playing a role in the buildup to fertility plateau.

Overall, we see that increasing employment opportunities expand women's roles in developing societies, allowing for fertility preferences, whereas fewer employment opportunities will undoubtedly lead to more limited roles for women along with an increasing number of desired children per family.

## GOVERNMENT COMMITMENT

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The role of the government was crucial in sparking a rapid decline in fertility for developing countries, and this role continues to be one of paramount importance as we see lack of government commitment contributing to the problem of fertility stalled above replacement levels. 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.

A strong government presence in providing essential tools is almost conducive to fertility decline, as through the use of these accessible tools, families are able to reduce unplanned pregnancies. A deceleration of fertility decline experienced by a country in its latter stages of transition is almost always accompanied by a fertility plateau as government commitment falters, and family planning services weaken in strength and demand. Understanding the crucial role government commitment plays in ensuring fertility decline serves to show that the very same factors that contributed to the initial decline in total fertility rates in the 1960s can once again interact with one another to overcome fertility plateau.

In essence, a government's commitment toward family planning will undoubtedly play out as a catalyst for overcoming fertility plateau. The following discussion and analysis will primarily focus on the effectiveness of a strong public family planning service as well as the role of a weak family planning service in contributing to fertility plateau. Other factors such as the demand for contraception and accessibility of contraception will also be touched upon.

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## FAMILY PLANNING SERVICES

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Family Planning Services indeed make up an important component of a society's health systems, as they not only offer a route to prevent unwanted pregnancies, but they also encourages fertility preferences, leading many women to take control of their reproductive lives. The core purpose of a family planning program is to acknowledge the unmet demand for contraception and reduce it through the prevention of unwanted pregnancies. Family planning services are a very accurate indicator of a society's current fertility trends. We see that where family planning services are weak and the unmet demand for contraception is high, unwanted pregnancies are not prevented and inevitably the society will face stalled fertility levels. Similarly, where family services are strengthening and the public health

sector is experiencing rapid improvement, the unmet need for contraception will decline, and prevent unwanted pregnancies, thus contributing to a fertility decline.

Many countries that had previously experienced rapid fertility decline but had encountered stalled fertility levels in the mid-nineties were always the victims of weak family planning programs, causing less women to use these services, and driving the unmet need for contraception sky high. Lack of government commitment was often always at the heart of these problems. Although many governments offered unconditional support to the cause of fertility decline in the latter half of the twentieth century, come the mid-nineties and many governments had receded from their previously established policies and were offering less commitment in ensuring an efficient family planning program. The established of a fertility plateau in many developing countries where this was the scenario illustrates its contribution to the problem.

Therefore we can denote that an effective and sustainable family planning program is crucial in meeting the demand of contraception and reducing the unmet demand for contraception, preventing unwanted pregnancies and allowing women and men control over their reproductive lives. Once all these demands are met, it will undoubtedly lead to fertility control in a society, a condition conducive to fertility decline.

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#### RAISING THE LEVEL OF CONTRACEPTIVE PREVALENCE

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As highlighted previously, accessible contraceptive methods are crucial in reducing the unmet demand for birth control. The accessibility of contraception lies in the value of an organized family planning program. As previously stated, successful family planning programs, when effective, will have rising consultations, through which they can advise and educate families on the matter of fertility and how to bring it under control. Accessible contraception will then give many women the option of fertility preferences, which in turn will bring their fertility under control.

Reasons for nonuse of contraception can be pinned down to inaccessibility or lack of information on the matter of birth control. Once again, this is where the effectiveness of a sufficient family planning program comes into play, as by meeting the demand for contraception they are preventing unwanted pregnancies as well as encouraging families with little access to fertility information on how to bring their reproductive life under control. Thus, the level of contraceptive prevalence will be raised as birth control and other sorts of contraception are made widely accessible, reducing the number of unwanted pregnancies, as well as transmitting important information about fertility to families that need it the most.

## CONCLUDING THE IMPLICATIONS OF FERTILITY TRENDS

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The aforementioned fertility trends allow us to infer that once a fertility transition is underway, a number of factors will continue to interact and force a further decline in fertility without any substantial interruption, until replacement fertility levels are attained. Thus, when fertility started to stall above replacement levels in developing countries, a lot of questions were asked of the determinants of this problem.

We can conclude that during fertility stalls there is a sharp decrease in the use of contraception and a likewise increase in the unmet need for contraception, causing more unwanted pregnancies. Although there has not been an agreement on exactly what socioeconomic determinants force a stall in fertility, there is an agreement that the level of fertility relative to the level of development contributes to stalling fertility levels. The duration of a fertility stall depends on how rapid a society's follow up socioeconomic and human development is. The topic of fertility stall durations relative to a society's rate of development will be further examined once countries come out of fertility plateau and the duration of their stalls become available.

All in all, fertility plateau has been seen to be a problem stemming from several factors, namely weak socioeconomic development along with little or declining government support. Countries facing these problems often experience a rise in the unmet demand for contraception and unwanted pregnancies. Slow socioeconomic progress ensures no decrease in the demand for children. Thus these lead to two key proponents that will help countries counter fertility plateau. Firstly, a strengthened family planning program is essential as this will reduce unplanned pregnancies. Secondly, encouraging social and economic development too will push a society back into mid-transition by lessening the demand for children per family. How to adopt and implement policies that will lead to such changes in a society will be discussed in the following section.

### OVERCOMING FERTILITY PLATEAU

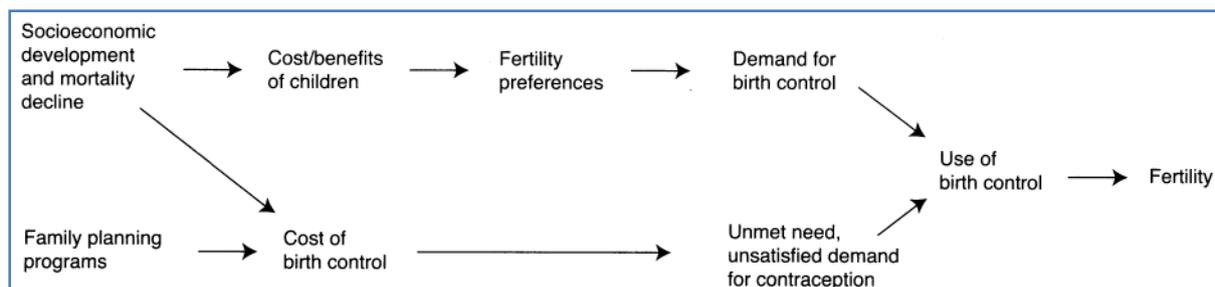
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Countering and overcoming fertility plateau will require several policy changes from developing countries. Any form of human development is encouraged as it is closely intertwined with fertility decline. A country's health policymakers must respond with policies custom to the circumstances of an individual country, relative to its levels of wanted and unwanted fertility. Countries with high levels of unmet demand for contraception and high levels of unwanted pregnancies are in dire need of sufficient family planning services that can acknowledge these problems and substantially reduce them.

Two forms of development have been cited as 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 aforementioned two options should form the basis for forming policies to counter fertility plateau. Policymakers should tailor their strategies in line with the context of every individual country, however not deviating too much from the original script of options. 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



**FIGURE 2 (BONGAARTS 2006) ANALYTICAL FRAMEWORK FOR THE DETERMINANTS OF FERTILITY**

This section will further discuss and detail how and why socioeconomic development and a sufficient family planning program are so closely tied with helping countries end their fertility stalls and continue their respective fertility transitions. In essence, we will be working around the thesis that socioeconomic development is able to reduce the demand for children per family, where efficient family planning programs are able to reduce unwanted pregnancies as well as the unmet demand for contraception. As mentioned in the previous sections, an increased desired rate for children per family and high rates of unplanned pregnancies have been core social determinants of fertility plateau. If these social indicators of fertility plateau are countered, then a country is very likely to come out of its stall and continue with its fertility transition until the total fertility rate is beneath replacement levels. To better understand policies of encouraging socioeconomic development and strengthening family planning within the context of ending a country's fertility plateau let us examine each option in detail.

## ENCOURAGING SOCIOECONOMIC DEVELOPEMENT

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Any form of development, be it social, economic or directed toward the individual, has been cited as the primary indicator of a society's fertility decline. In order for a country to complete its fertility transition, it is imperative that the demand for children falls to 2 or less per family, which can only result from rapidly progressing socioeconomic development. Thus, a society's future course of fertility trends relies heavily on its ability to prioritize human development and sufficiently sustain increasing levels of human development. Once a society is able to propel a rapid progress in the cycle of human development, its wanted fertility will decrease. Inevitably this will counter a primary obstacle preventing many developing societies from continuing their respective fertility transitions as it will reduce if not eventually eliminate high levels of wanted fertility, largely the result of slow socioeconomic progress, low life expectancy and poor literacy rates.

## REMEDIES FOR SLOW DEVELOPMENT IN COUNTRIES WITH FERTILITY PLATEAU

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Slow socioeconomic progress coupled with inefficient or lack of human development such as low life expectancy and high levels of illiteracy have been cited as the most significant factors contributing to stalled fertility levels in developing countries. These factors are prime candidates for the most substantial social determinants of fertility plateau. As modeled in Figure 2, once socioeconomic development prevails in a society, it is evident that wanted fertility levels will cease; life expectancy will rise and mortality rates will decline, in turn allowing for a reducing demand for children, leading to the use of birth control and eventually, fertility control. This cycle will be further investigated by examining remedies for slow socioeconomic progress and high mortality rates relative to conditions.

## DRIVING FORTH HUMAN DEVELOPEMENT

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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. Thus, increases in life expectancy and literacy rates are particularly conducive to fertility decline. The ability of policymakers to urge governments of developing countries with fertility plateau to prioritize human development will play a major role in overcoming this problem.

This thesis 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.

In conclusion, policymakers must encourage governments of developing countries to prioritize human development as its impact in Sri Lanka and Kerala must not be overlooked due to relatively high fertility in other countries with similar literacy and schooling rates. The impact of human development on a society's fertility levels is overwhelming, and once human development is active and running, female empowerment and decreasing child mortality rates can become sufficient factors in ending a country's fertility plateau and driving it back into its fertility transition. Policies encouraging human development must be implemented and prioritized by governments of countries facing fertility plateau. Government commitment to implementing and sustaining the impact of such policies is crucial to a country's continuation of its fertility transition.

#### THE IMPACT OF RAPID SOCIOECONOMIC DEVELOPEMENT

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As a country having entered its fertility transition, moves toward the latter stages of this transition, fertility decline inevitably decelerates as the processes that once propelled rapid fertility decline have now run their course. In order to move toward replacement fertility, a society requires rapid socioeconomic development to compliment fertility decline. Many developing countries experienced a deceleration of fertility decline toward the latter stages of their fertility transition, and although some were able to produce socioeconomic development to help their respective declines carry on, others encountered stalled fertility levels. For many developing countries in their latter stages of fertility transition, socioeconomic development becomes increasingly conducive to fertility decline, and thus in order for fertility decline to progress, the importance of socioeconomic development is unquestionable.

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.

Another factor contributing to decreasing levels of wanted fertility is lower child mortality rates. High child mortality entails that a family must have higher fertility in order to attain the desired number of living children. However, lower child mortality will ensure that families will not need to go beyond their wanted fertility in order to attain the desired number of living children. Ensuring this will require improved health care facilities and public health services providing easier access to tools required to achieve higher levels of life expectancy. The cumulative effect of lower child mortality rates coupled with rapid socioeconomic progress leads to fertility preferences, creating a demand for birth control, which once are satisfied will lead to fertility control.

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. Therefore 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.

## STRENGTHENING FAMILY PLANNING

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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. The primary aim for a government sponsored family planning program is to provide accessible healthcare and support to men and women, along with preventing unplanned pregnancies and ensuring that an individual's fertility preferences are attended to.

Thus, while the inefficiency of family planning services can decelerate fertility decline, often leading to fertility plateau, a strong and efficient family planning program can reduce unwanted pregnancies as well as the unmet demand for contraception. Strengthening family planning services, therefore, is something governments should treat as a main concern in their quest to overcome fertility plateau.

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## REDUCING THE UNMET DEMAND FOR CONTRACEPTION

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The unmet demand for contraception remains a major obstacle that governments need to counter in order to further their country's fertility decline and achieve replacement fertility levels. Family planning services can sufficiently tackle this obstacle if they provide men and women with the necessary information and tools to meet their fertility preferences and take control of their reproductive lives.

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. Once the inhabitants of a society are socially conscious of factors driving forth unwanted fertility, they will begin to practice useful forms of contraception to bring their own reproductive lives under control. Thus, it is not only essential for family planning programs to reduce if not prevent unwanted pregnancies, but to also make a society conscious of the factors leading to a plateauing of fertility levels.

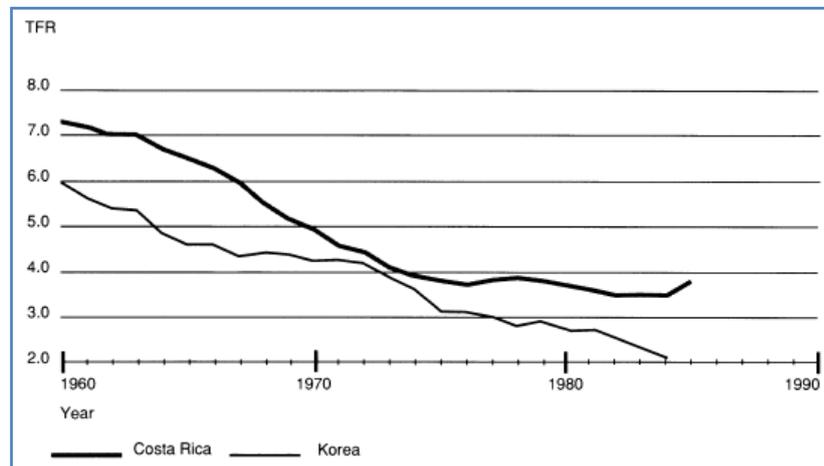
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## COMPARATIVE CASE STUDY OF COSTA RICA AND SOUTH KOREA

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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 Figure 3, by the late 1970s, Costa Rica's fertility decline was beginning to decelerate, leading to an established fertility plateau by the mid-1980s. In contrast, although South Korea faced short periods of plateauing in its fertility rates, it was able to surpass these obstacles to continue its fertility transition.



**FIGURE 3** (GENDELL 1989) TOTAL FERTILITY RATE IN COSTA RICA AND SOUTH KOREA, 1960-1985

The role that family planning plays in both of these countries provides a useful framework within which the importance of an efficient family planning program is better understood. South Korea and Costa Rica greatly differed during the period of their respective fertility stalls, where the former was able to improve its family planning services, thus shortening and eventually surpassing its fertility stall, while the latter suffered deteriorating family planning services, which in turn prolonged its fertility stall. In both cases there were convergences between actual total fertility rates and wanted total fertility rates, in part a factor contributing to their fertility stalls.

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.

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### SATISFYING THE EXISTING DEMAND FOR BIRTH CONTROL

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Meeting the demand for birth control is imperative for societies wishing to complete their fertility transitions. A recent study has shown that many post-transitional developing countries still see unplanned pregnancies make up relatively high proportion of their overall fertility. This can be attributed to the fact that most women who want no more children often do not practice contraceptive methods that are a 100% effective. Although contraceptive prevalence may be apparent, many women continue to use contraceptive methods that are not fully effective, resulting in unplanned pregnancies. Thus, in order to fully satisfy the existing demand for birth control, family planning services should be responsible for increasing the individual's awareness regarding contraceptive methods and practices.

Wanted fertility and unwanted fertility rates are seemingly inversely related to the level of education in a society, meaning that when literacy is high, wanted fertility is low and vice versa. Using this premise, it becomes clear that satisfying the existing demand for birth control requires more initiative from governments, such as investing in the long-term awareness of future generations on the matter of fertility and fertility control. Along with this, family planning programs must not only acknowledge more obscure reasons for an unsatisfied demand for birth control amongst women, such as lack of support and lack of awareness of fertility control, but ensure the gradual extinction of such reasons. Thus it becomes clear that the cumulative effect of reducing if not eliminating the unmet demand for contraception and satisfying the existing demand for birth control will bring about rapid fertility control as fertility preferences will be met. The resulting scenario of each country will be depending on their socioeconomic progress and wanted fertility levels.

### POLICY OPTIONS

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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.

## **THOUGHTS ABOUT FERTILITY PLATEAU IN EGYPT**

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The objectives of this section are two folds, first to provide a background for some issues related to fertility plateau in Egypt. These issues include fertility levels and trends, fertility preferences, contraception prevalence, discontinuation, and unmet need. Second, review the literature that attempted to answer why fertility has leveled off and what are the obstacles to reach replacement level in Egypt.

## **FERTILITY LEVELS AND TRENDS**

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In the period since 1980, Egypt has been conducting national demographic surveys that very well document the fertility change in the country as a whole and by region. A simple portrait can be discussed easily by presenting the estimates of total fertility rate from various surveys conducted during the period 1988-2008. Fertility has been declining slowly since 1995 especially during the period 2005-2008. There are regions in Egypt that have been experiencing stalled fertility transition especially urban governorates and the urban areas in Lower and Upper Egypt.

It is obvious from Table (1) that 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 Table (1).

**Table 1: Total fertility rates by Region in Egypt, 1988-2008 (EDHS 88- EDHS 08)**

Region	1988	1992	1995	2000	2005	2008	Pace of decline 2000-2008
Urban Governorates	3.0	2.7	2.8	2.9	2.5	2.6	0.037
Lower Egypt	4.5	3.7	3.2	3.2	2.9	2.9	0.037
Urban	3.8	2.8	2.7	3.1	2.7	2.6	0.06
Rural	4.7	4.1	3.5	3.3	3.0	3.0	0.037
Upper Egypt	5.4	5.2	4.7	4.2	3.7	3.4	0.10
Urban	4.2	3.6	3.8	3.4	3.1	3.0	0.05
Rural	6.2	6.0	5.2	4.7	3.9	3.6	0.137
Frontier Governorates	NA	NA	4.0	3.8	3.3	3.3	0.17
Total	4.4	3.9	3.6	3.5	3.1	3.0	0.06

## FERTILITY PREFERENCES

A standard measure of the demand for children is the ideal number of children. Ever-married women 15-49 years of age, desire on average 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 table (2).

Table (2): Fertility planning status according to EDHS 2008

Birth order	Wanted	Wanted	Wanted	Missing	Total
	Then	later	no more		
1	98.2	1.2	0.1	0.5	100.0
2	89.8	8.9	0.9	0.4	100.0
3	83.4	6.5	9.3	0.8	100.0
4+	61.8	4.9	32.7	0.6	100.0
Total	85.7	5.1	8.7	0.5	100.0

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.

## CONTRACEPTIVE PREVALENCE, DISCONTINUATION AND UNMET NEED

Trends of current use of family planning methods during the period 1984-2008 clearly show that the national rate has been leveling off during the period 2003-2008 around 59-60 percent. 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. 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 for the family planning program in Egypt is the timing of the first use of contraception. The idea of using contraception before having any children is widely resisted in Egypt. Only 0.2 percent of ever-married women use contraceptives before having any children. The idea of postponing the first child is resisted across all groups 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.

## FERTILITY PLATEAU STUDIES IN EGYPT

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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. He projected that one should not expect further dramatic decline in fertility. His findings indicate that future fertility desires and contraceptive use are becoming endogenous to each other. The relationship between female employment and fertility desires is not typical of a country at post-transitional stage of fertility. The relationships among future fertility desires, female employment, and current use of contraception in Egypt within the framework of fertility transition are studied. Future fertility desires and use of contraception are becoming more and more endogenous to each other. The results support the notion that this relationship is mainly within the control of the family in the expected direction. On the other hand, the relationship between female employment and future fertility desires deserves some attention and future research. The link is missing in some instances and significant in others. This significance is not in the expected direction for a country undergoing its fertility transition. The dynamics behind such relationship is not yet that of opportunity cost and value of the wife's time, and how much she may lose by having children. The idea of rational choices and accordingly rational shifts in fertility is yet not valid in Egypt in the 1990s, given the data set used. 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 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. With consistent adherence to a two-child norm in the mass media and other policy avenues, less indifference might be engendered. Some diffusion theories of fertility decline postulate that less indifference can be reinforced with an increase in the proportion of achievers of the two-child goal.

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. Specifically, family planning services should go beyond coitus-independent long term contraceptives that typically pose heavy health burdens on women. Promoting the emergency contraceptive pill might be an option for these women. Sterilization also might be considered as an option, especially for older women. Recent advances in contraceptive technology have resulted in a wider selection of efficient and convenient methods, such as patches and combined injectables.

The second group -ambivalent women- represents a stronger challenge to program designers. Addressing concerns about contraceptives' negative side effects to health is one near-term avenue. In the long term, a key approach is to encourage more egalitarian gender values, which, among other benefits, could lead to a weakening of son preference. Fertility decline, in its turn, can help promote egalitarian gender values. Providing women with new channels for self-actualization and economic independence can weaken son preference and disentangle economic security from reproduction. Institutional changes that foster-parenting values associated with high childrearing costs and low immediate benefits from having children, such as

promoting the importance of higher education, will also strengthen the motivation for restricting family-size ideal to two children. 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. The understanding that economic prosperity cannot be sustained if childbearing is uncontrolled must be publicly emphasized.

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 benefits of having children in relation to their costs explain this pronatalist attitude. Moreover, a purely cultural aspect exists 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. Strategies for changing these two related forces are required to overcome opposition to replacement-level fertility in Egypt.

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. This study pointed to a number of facets of potential determinants of this discrepancy. The pace of the decline of the TFR in each country is shown to be influenced by the pace of the decline in the TFR of different segments of the population. 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.

Egypt and Tunisia launched their national family planning programs in the mid-1960s. The performance of their programs was greatly influenced by the commitment of political leaders, the integration of the programs within the wider framework of planning for socioeconomic development, and the passage of legislation concerning the family and the social, economic, and health aspects of the program. An indicator of the significance of these three elements is that the efficacy of the Egyptian family planning program changed considerably when commitment from influential political leaders was forthcoming and when the program became an integral part of the five-year development plans, beginning in 1987.

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. The decline in the TFR

since 1980 was increasingly influenced by contraceptive use, however, whereas the effect of nuptiality has decreased. The significant role played by nuptiality factors in the course of the Tunisian fertility transition, compared with that in Egypt, is established by the result of standardization of the TFR in Egypt. The results of the standardization indicate that had Egypt had the nuptiality level and pattern of Tunisia (in 1994), it could have come close to replacement fertility by 1995 and could have reached replacement fertility by 2005. This 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. The slow change in marriage age in Egypt during the past 25 years suggests that no significant change in nuptiality factors is likely to occur soon. 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. For this effort to succeed, it must overcome strong and pervasive preference for sons and the perception of the low cost of childbearing, both factors that constitute serious obstacles to the acceptance of the two-child family in Egypt. 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.

This study raises a number of questions that merit further research. First, why did the leaders of the fertility transition in Egypt (for example, women residing in the Urban Governorates) not complete their transition to replacement fertility as did their counterparts in Tunisia? Identifying the attitudinal, programmatic, and socioeconomic factors behind the behavior of this group could contribute to improved family planning program design and efficient implementation. Second, the difference between Egypt and Tunisia in nuptiality should be explored to determine to what extent it can be attributed to differences in the legal, economic, and cultural status of women. A third question is whether delayed marriage and reduction of fertility within marriage are influenced by the same factors. The data show that in Tunisia a rapid rise in age at marriage has occurred together with a decline in marital fertility associated with increased uptake of family planning methods. In Egypt, marital fertility declined while age at marriage remained low. This anomalous pattern does not concur with the argument that the social customs or concerns that lead to an increased age at marriage are conducive to voluntary control of marital fertility.

It is very evident that the studies on why Egypt is currently passing through fertility plateau are lacking. The need for such investigation is very high. Studies are needed to analyze the available data at smaller administrative level than region. It is possible to combine EDHS for various rounds to reach larger samples and thus have enough observations at smaller administrative levels. The synthesis of the emerging issues with some suggested points to be discussed within each is as follows (see appendix, for details):

1. Fertility Policies: a review and a critique
  - Review and critique of past policies
  - Suggested recommendations for future policies and programs
2. Can female empowerment help to reach replacement level?
3. A profile of women who desire two children
  - Theirs, their husband's and their family's background characteristics;
  - Why they wanted two children not more or less?
  - Their reproductive health profile,
  - Degree of consistency between their desires and their achieved family size.
4. Why urban areas did not complete their transition to replacement levels?
  - Can urban areas be considered homogenous communities?
  - Profile of urban settlers.
  - Urban women's and their husband's background characteristics: level of education, labor force participation, wealth, migration status
  - Are urban women homogenous group with regard to fertility desires and reproductive behavior?
5. Why is the unmet need for contraception still unmet?
  - Trends of unmet need for contraception
  - Reasons for unmet need, pattern of changes in the reasons of unmet need
  - Estimated role of unmet need in fertility plateau
  - Family planning efforts to combat unmet need
6. Why is the discontinuation rate of contraception still high?
  - Reasons for discontinuation, discontinuation by methods of contraception,
  - Level of discontinuation rate among different groups and at different lifecycle.
  - Level of discontinuation rate and fertility desires.
  - Role of discontinuation in unwanted births, unmet need for family planning.
  - What other alternatives/options do women seek/face at time of discontinuation

7. Why did other countries such as Tunisia and Iran succeed in reaching replacement level of fertility
  - TFR at the onset of fertility transition, path of fertility decline
  - Level of health, socioeconomic development at the onset of fertility decline
  - Level of women development
  - Family planning programs and policies,
  - Why they did not experience fertility plateau during the course of fertility decline?
  - Current level of contraceptive use, unmet need for contraceptives and unwanted fertility.
  
8. A profile of unwanted pregnancies
  - Reproductive behavior of women of unwanted pregnancies
  - Reasons for unwanted pregnancies;
  - Unwanted pregnancies and parity, son preferences
  
9. Family formation and fertility desires and behavior among youth.
  - Attitude toward family size, perceived costs and benefits of children Children and social security, gender preference
  - Attitude toward social change and economic expectations
  - Attitude toward family planning, preferred methods of family planning, timing of using family planning methods

It is also likely to conduct in-depth qualitative studies (Focus Groups (FGDs), In-Depth interviews (IDIs) with males and females from urban areas and rural Lower Egypt as well as with policy makers and community workers) to understand the rational of fertility plateau (see appendix, for details):.

- To explore perceptions and influences of fertility motivation among people from urban areas.
- Major factors of high fertility will include "Sex Preference "; "poverty, joblessness and child bearing", and "other socio-cultural issues".
- Factors that reduce fertility will include "perception on women empowerment and couple's fertility communication, Contraception, unmet need for contraception, unwanted births and Age of Marriage". Cultural norms behind urban and rural peoples' views on motivation for childbearing in Egypt will be deeply discussed.

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## CONCLUSION

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In order to surpass fertility plateau, governments of developing countries must take initiative to implement policies that can sustain long-term fertility decline, facilitating the completion of a country's fertility transition. The rapid decline that occurred during the latter half of the twentieth century in many developing countries was in part due the introduction of several processes that had not yet been diffused into society. Once these processes ran their course, fertility decline became increasingly conducive to socioeconomic development. Where development was slow or at a halt, fertility rates responded with a deceleration in their decline, leading to a society's total fertility rate stalled above replacement levels.

Understanding and observing fertility trends of the past give us a better indication of which socioeconomic determinants fertility is more responsive to. Overall, we can conclude that indicators such as socioeconomic progress, high levels of human development and adequacy of family planning services are the most accurate examples of a society nearing the end of its fertility transition or having already completed its transition. Countries still in transition, or facing stalled fertility in mid-transition, must aim to prioritize the aforementioned indicators to further decrease their country's total fertility rate. As discussed in the report, policymakers must aim to provide policies that encourage the advancement of the aforementioned social and economic indicators, but must tailor their policies in line with the needs of each country.

## FINAL THOUGHTS ON POLICY OPTIONS

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As stated in this report, a crucial task for policymakers is to form policies on the basis of priority, thereby giving most support to the most important matters. For instance, if a country's unwanted fertility levels are relatively high, as is the case in Sub-Saharan Africa, policies should be aimed at improving family planning services, satisfying the demand for existing birth control and increasing contraceptive prevalence, thereby significantly reducing unwanted pregnancies. By prioritizing policies, governments can help surpass fertility plateau and help complete their respective country's fertility transition.

There also must be a widespread belief, or a unifying theory, pertaining to how fertility plateau should be surpassed. Although policies must be molded in line with the needs of each country, a unifying theory must form the basis for these policies. To briefly summarize the aforementioned stance this report takes on the remedies for fertility plateau, the following ideas must be accepted and also form the basis for all policy relating to overcoming fertility plateau:

- ✚ Socioeconomic progress is crucial to reducing a country's wanted fertility levels; this can be achieved through industrialization and urbanization, thereby marginalizing rural life and emphasizing urban life
- ✚ Human development, as manifest in the cases of Sri Lanka and Kerala, is one of the primary determinants fertility is most responsive to; lower child mortality and high life expectancy, coupled with female empowerment and high levels of literacy can help a society attain replacement fertility levels without the presence of economic development
- ✚ Efficient family planning services are vital if a country wants to satisfy its existing demand for birth control as well as increase contraceptive prevalence; once the existing demand is satisfied, unwanted fertility will begin to decline as more men and women will have the necessary tools to gain information about contraception and take control of their reproductive lives
- ✚ The social and economic role of women in society is also a socioeconomic determinant of fertility; by changing up the stereotypical view of women in society and increasing employment opportunities, the government will be doing its fertility transition a massive favor by helping women break out of their traditionally accepted roles, thereby empowering them and encouraging them to practice fertility control

As these thoughts and ideas will form the basis for any policy pertaining to overcoming fertility plateau, the crucial task will be to alter and prioritize those policies based on an individual country's needs. However so, once the need to enforce socioeconomic and human development, strengthen family planning services, and increase female employment is met, then surely countries encountering fertility plateau now will gradually overcome their stalls, and continue en route to achieving replacement fertility levels.

## **Appendix:**

### **Suggested quantitative research topics**

#### **1) Analysis of current fertility policies and recommendations for the future (pillars, institutional framework, new initiatives, proposed reforms)**

- Review of past policies (lesson learned)
- Reflect on the opportunities and threats of new institutional frameworks (The new ministry of family and population)
- Suggestions and recommendations for future policies specifying the expected outcome, time frame and implementation cost,
- The pros and cons of positive and negative incentives.
- Discuss the potential outcomes of the door to door policy that will be implemented by the government in rural Upper Egypt.
- Study the potential impact of improving the rural upper Egypt TFR on the average TFR of Egypt.
- Policy recommendations.

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

- What is the profile of urban areas (revisiting the geographical definition of urban areas)?
- Urban women and their husbands' background characteristics: level of education, labor force participation, wealth, migration status and their relationship with fertility desires and behavior.
- Are urban women a homogenous group with regard to fertility desires and reproductive behaviors?
- Recommendations for actions.

#### **3) Actions to speed-up fertility decline in rural areas and their potentials to avoid future stalling in fertility**

- What are the factors attributed to the declining TFR in rural Upper Egypt?
- What is the size of the expected fertility if services are improved in rural Upper Egypt (satisfaction of unmet need, reduction of discontinuation and failure)?

- What are the factors attributed to the TFR plateau in rural Lower Egypt?
- What are the scenarios that might happen for TFR in the near future? (is it going to plateau?)
- Study the role of religious beliefs on fertility behaviors in Rural areas .
- Recommendations for actions.

#### **4) Profile of women who desire two children and how to scale up their experience**

- Study theirs, their husbands' and their families' background characteristics
- Why they wanted two children not more or less?
- Study the reproductive health profile of those women.
- Study the degree of consistency between their desires and their achieved family size.
- Implications for policy and actions.

#### **5) Family formation and fertility desires and behavior among youth and their future implications**

- Attitude towards family size, perceived costs and benefits of children and social security, gender preference
- Attitude towards social change and economic expectations
- Attitude towards family planning, preferred methods of family planning, timing of using family planning methods.
- Projections of future fertility: behavior expectations and future implications.
- Recommendations for actions.

#### **6) Can work, education, and female empowerment help to reach replacement level?**

- Identify work types and educational types that affects fertility attitude and behavior
- What is (are) the most influential item(s) of empowerment that help(s) to reduce fertility?
- Recommendations for short term and long term actions.

## **Suggested Issues for the Qualitative Data Collection**

### **A) OBJECTIVES :**

The objectives of the qualitative study are:

- 1- To study the Egyptian's perceptions and attitudes towards the two child norm and the reasons behind these attitudes.
- 2- The influence of woman's empowerment on the attitudes towards the two child norm.
- 3- To investigate the reasons of the higher level of unmet need for family planning among the never users currently married women and how this need can be met
- 4- To identify the features of family planning programs that could be improved so as to reduce the rate of discontinuation of contraceptives and increase use effectiveness of the method.

The qualitative study will include:

- 1- Focus Groups Discussions with Currently Married Women and Men .
- 2- In-Depth Interviews with health workers, religious leaders, media personnel and population policy makers.

The design and main points that will be discussed are presented in the following section (B) and the detailed questions are included in an Annex.

### **B) METHODOLOGY:**

As mentioned before; the qualitative study will include Focus Groups Discussions and In Depth Interviews. Three types of FGDs will be conducted. The first type will address the perceptions and attitudes towards the two child norm, the second will discuss the reasons for discontinuation of family planning and the third will concentrate on the unmet need among the non users.

#### **First: Focus Groups Discussions "Attitudes Towards Two Child Norm".**

***Design:*** 4 FGDs in Lower Egypt (urban and rural) ; 2 with currently married women (less than 30 years old ) and 2 with currently married men (less than 35 years ). The Urban FGDs participants will be highly educated , working and at high standard of living, while the rural participants will be noneducated, nonworking and poor.

**Issues to be covered:**

- 1- Optimal number of children and the sense of numbers .
- 2- Sex preference and optimal composition.
- 3- Decision making of childbearing and contraception.
- 4- Advantages and disadvantages of postponing and spacing childbearing.
- 5- Contraception; knowledge and attitudes.
- 6- Cost and benefit of children .
- 7- Culture forces and its impact on childbearing and contraception.

**Second: Focus Groups Discussion On "Reasons for Higher Discontinuation rates in Rural Upper Egypt"**

**Design :** 3 FGDs with Currently Married Women Discontinuing using FP in Rural Upper Egypt ((Participants will be stratified according to the last method they used ; IUD, Pills and Injectables).

**Issues to be covered :**

- 1- Information about FP and sources of information (specific information , rumors,..)
- 2- Decision of using FP (role of husband, in-law mother, doctors, other,)
- 3- Reasons for discontinuation (method related reasons, health related reasons, fertility related reasons,...).
- 4- Behavior after discontinuation (intention to use, switching method,...).

**Third: Focus Groups Discussions "Why Unmet Need has not been met yet".**

**Design :** 4 FGDs with never user currently married women with unmet need for family planning in Rural Upper Egypt (Participants will be stratified according to age and work statues).

**Issues to be covered :**

- 1- Knowledge and Attitudes towards contraception .
- 2- Reasons for non use .
- 3- Decision making .
- 4- Accessibility to services (Geographic, Economic, Administrative, Information , Psychological access).

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