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Investment Case Towards Ending Unmet Need For Family Planning Egypt 2023

FORWARD

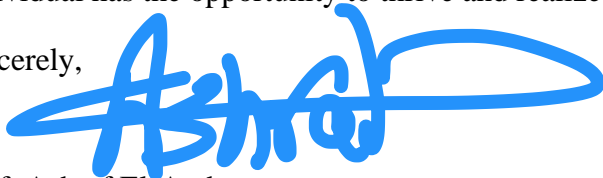
It is with great pleasure that I present this investment case addressing the critical issue of unmet need for family planning in Egypt. As we navigate the complex landscape of reproductive health, this report serves as a comprehensive guide, outlining the challenges, opportunities, and strategies to propel Egypt towards achieving its family planning objectives.

Egypt, like many countries, grapples with the persistent challenge of unmet need for family planning, despite commendable progress in reducing fertility rates. This report delves into the multifaceted factors contributing to this issue, ranging from limited access to information and services to socio-cultural barriers and health financing challenges. It underscores the far-reaching implications of unmet need for family planning on women's health, child welfare, gender equality, and socioeconomic development. Central to this investment case is the recognition of family planning as a catalyst for transformative change. Through rigorous methodology and scenario analysis, this report delineates the potential pathways towards achieving positive socioeconomic and demographic outcomes, offering insights into the cost-effectiveness of various interventions.

Crucially, this investment case emphasizes the imperative of collaborative action. By fostering partnerships between government entities, non-governmental organizations, international stakeholders, and the private sector, Egypt can leverage collective expertise and resources to maximize the impact of family planning interventions. As we embark on this journey towards a future marked by improved health, gender equality, and sustainable development, I urge policymakers, practitioners, and stakeholders to heed the recommendations outlined in this report. By prioritizing strategic implementation, data-driven decision-making, financial commitment, continued research, and collaborative partnerships, Egypt can chart a course towards a brighter tomorrow for all its citizens.

I extend my deepest gratitude to the dedicated report team behind the development of this investment case. Their tireless efforts, expertise, and commitment have been instrumental in bringing this report to fruition. Furthermore, I am deeply appreciative of the collaboration with the United Nations Population Fund (UNFPA), whose invaluable insights and support have enriched the content and scope of this investment case. The partnership with UNFPA underscores our shared commitment to advancing reproductive health and gender equality in Egypt. Additionally, I wish to express my sincere appreciation to the European Union for its generous assistance in producing this report. May this report serve as a roadmap for action, guiding us towards a future where every individual has the opportunity to thrive and realize his/her full potential.

Sincerely,



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TABLE OF CONTENTS

LIST OF TABLES	IV
LIST OF FIGURES	V
LIST OF ACRONYMS	VIII
EXECUTIVE SUMMARY	IX
1.BACKGROUND	1
1.1 Investment Case Objectives	2
1.2 Situation Analysis	3
1.2.1 Current Situation of Family Planning Program	3
1.2.2 Health Financing in Egypt	6
2.METHODOLOGY	10
2.1 Estimation of Projections and Utilized Tools	10
2.2 Data Sources	10
2.3 Scenario Assumptions.....	11
2.4 Contraceptive method mix.....	11
2.5 Definition of Unmet Need of Family Planning.....	13
3.RESULTS: Impacts of Investing in Family Planning to End Unmet Need	14
3.1 Reduction in Unmet Need.....	14
3.2 Impact of Ending Unmet Need for Family Planning on Health Outcomes	16
4.COSTS OF ENDING THE UNMET NEED FOR FAMILY PLANNING	17
4.1 Total Family Planning (FP) Interventions Costs Invested Under Different Scenarios	18
4.2 The Incremental Cost of Family Planning	19
4.3 Incremental Costs by Type of Method/Commodity Delivery.....	21
.....	25
4.4 Public Financing Gap for Family Planning.....	26
5.CONCLUSION AND WAY FORWARD.....	27
6.REFERENCES	29
APPENDIX A: List of Reference Group Members	31
APPENDIX B	32
APPENDIX C	48

LIST OF TABLES

TABLE 1: DEVELOPING METHOD MIX FROM 2000 TO 2021	12
TABLE 2: ESTIMATE OF PROJECTED CONTRACEPTIVE METHOD MIX (%), 2023 AND 2030.....	12
TABLE 3: SCENARIOS RESULTS TO MODEL REDUCTION IN UNMET NEED FOR FAMILY PLANNING: 2023, 2026, AND 2030.	14
TABLE 4: PROJECTED IMPACT OF INCREASED CPR AND MCPR BY 2030 WITH RESPECT TO THE STATUS QUO	16
TABLE 5: TOTAL COSTS OF INTERVENTIONS UNDER DIFFERENT SCENARIOS, 2023-2030 (IN BILLION EGP)	18
TABLE 6: INCREMENTAL COSTS OF FAMILY PLANNING FOR THE DIFFERENT SCENARIOS, 2024-2030	19
(IN BILLION EGP)	19
TABLE B.1: SCENARIO FOR CPR, MCPR, FERTILITY RATE, AND UNMET NEED FOR FP, STATUS QUO	32
TABLE B.2: SCENARIOS FOR CPR, MCPR, FERTILITY RATE, AND UNMET NEED FOR FP: ALTERNATIVE SCENARIOS, 2023-2030.....	32
TABLE B.3: PROJECTED USE OF CONTRACEPTIVES: PERCENTAGE OF USERS BY METHOD, 2023–2030	34
TABLE B.4: PROJECTED IMPACT OF INCREASED CPR AND MCPR BY 2030	34
TABLE B.5: IMPACT OF INCREASING CPR ON MATERNAL DEATHS, UNSAFE ABORTIONS AND UNINTENDED PREGNANCIES UNDER DIFFERENT SCENARIOS, 2023–2030. (THE TARGETS OF 66.4%, 70%, 75%, AND 80% ARE FOR CPR NOT MCPR)	35

LIST OF FIGURES

FIGURE 1: TRENDS IN CONTRACEPTIVE PREVALENCE AND TOTAL FERTILITY RATES IN EGYPT AND THE WORLD (1980-2021).....	4
FIGURE 2: HEALTH EXPENDITURE BY FINANCING SOURCE (2019-2022)	6
FIGURE 3: PUBLIC HEALTH EXPENDITURE AS A PERCENTAGE OF PUBLIC EXPENDITURE (2016-2022)	7
FIGURE 4: PUBLIC HEALTH EXPENDITURE AS A PERCENTAGE OF GDP (2016-2022)	7
FIGURE 5: CURRENT HEALTH EXPENDITURE (2000-2020).....	9
FIGURE 6: PROJECTED PERCENT TRENDS IN UNMET NEED FOR FAMILY PLANNING UNDER DIFFERENT SCENARIOS, 2023-2030	15
FIGURE 7: PROJECTED TRENDS OF DEMAND SATISFIED WITH MODERN METHODS FOR FAMILY PLANNING UNDER DIFFERENT SCENARIOS, 2023-2030	15
FIGURE 8: ESTIMATE OF INCREMENTAL COST BY FP COST CATEGORY (IN EGP) COMMODITY\ METHOD, STATUS QUO, 2024-2030	20
FIGURE 9: ESTIMATE OF INCREMENTAL COST BY FP COST CATEGORY (IN EGP), COMMODITY\ METHOD, SCENARIO (1), 2024-2030	20
FIGURE 10: ESTIMATE OF INCREMENTAL COST BY FP COST CATEGORY (IN EGP), COMMODITY\ METHOD, SCENARIO (2), 2024-2030	20
FIGURE 11: ESTIMATE OF INCREMENTAL COST BY FP COST CATEGORY (IN EGP), COMMODITY\ METHOD, SCENARIO (3), 2024-2030	20
FIGURE 12: INCREMENTAL COSTS BY FAMILY PLANNING COST CATEGORIES (IN EGP), BY TYPE OF METHOD: STATUS QUO	22
FIGURE 13: INCREMENTAL COSTS BY FAMILY PLANNING COST CATEGORIES (IN EGP), BY TYPE OF METHOD: SCENARIO (1)	23
FIGURE 14: INCREMENTAL COSTS BY FAMILY PLANNING COST CATEGORIES (IN EGP), BY TYPE OF METHOD: SCENARIO (2)	24
FIGURE B.1: TREND IN CONTRACEPTIVE PREVALENCE RATE (CPR) UNDER DIFFERENT SCENARIOS, 2023-2030	33

FIGURE B.2: TREND IN MODERN CONTRACEPTIVE PREVALENCE RATE (MCPR) UNDER DIFFERENT SCENARIOS, 2023-2030.....	33
FIGURE B.4: INCREMENTAL COSTS FOR DRUGS AND SUPPLY (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO 1(70%)	38
FIGURE B.5: INCREMENTAL COSTS FOR DRUGS AND SUPPLY (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO 2 (75% CPR).....	39
FIGURE B.6: INCREMENTAL COSTS FOR DRUGS AND SUPPLY (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO 3 (80.2% CPR).....	39
FIGURE B.7: INCREMENTAL COSTS FOR LABOR (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: STATUS QUO (66.4% CPR).....	40
FIGURE B.8: INCREMENTAL COSTS FOR LABOR (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO1 (70% CPR).....	40
FIGURE B.9: INCREMENTAL COSTS FOR LABOR (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO2 (75% CPR).....	41
FIGURE B.10: INCREMENTAL COSTS FOR LABOR (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO3 (80.2% CPR).....	41
FIGURE B.11: INCREMENTAL COSTS FOR OTHER RECURRENT (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: STATUS QUO (66.4% CPR).....	42
FIGURE B.12: INCREMENTAL COSTS FOR OTHER RECURRENT (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO 1 (70% CPR)	42
FIGURE B.13: INCREMENTAL COSTS FOR OTHER RECURRENT (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO 2 (75% CPR)	43
FIGURE B.14: INCREMENTAL COSTS FOR OTHER RECURRENT (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO 3 (80.2% CPR)	43
FIGURE B.15: INCREMENTAL COSTS FOR CAPITAL (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: STATU QUO (66.4% CPR).....	44
FIGURE B.16: INCREMENTAL COSTS FOR CAPITAL (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO 1 (70% CPR).....	44
FIGURE B.17: INCREMENTAL COSTS FOR CAPITAL (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO 2 (75% CPR).....	45

FIGURE B.18: INCREMENTAL COSTS FOR CAPITAL (IN EGP), BY TYPE OF METHOD/COMMODITY DELIVERY: SCENARIO 3 (80.2% CPR).....	45
FIGURE B.19: TOTAL INTERVENTION COSTS IN (EGP) BY FP METHOD STATUS QUO 66.4%	46
FIGURE B.20: TOTAL INTERVENTION COSTS IN (EGP) BY FP METHOD SCENARIO 1 (70%).....	46
FIGURE B.21: TOTAL INTERVENTION COSTS IN (EGP) BY FP METHOD SCENARIO 2 (75%).....	47
FIGURE B.22: TOTAL INTERVENTION COSTS IN (EGP) BY FP METHOD SCENARIO 3 80.2%	47

LIST OF ACRONYMS

CAPMAS	Central Agency for Public Mobilization and Statistics
CHE	Current Health Expenditure
CPR	Contraceptive Prevalence Rate
EFHS	Egypt Family Health Survey
EGP	Egyptian Pound
FP	Family Planning
GDP	Gross Domestic Product
GE	Government Expenditure
HA	Health Accounts
IUD	Intrauterine Device
List	The Lives Saved Tool
mCPR	Modern Contraceptive Prevalence Rate
MPED	Ministry of Planning and Economic Development
MOHP	Ministry of Health and Population
NDP	National Development Plan
NGOs	Non-Governmental Organizations
PHE	Public Health Expenditure
SDG	Sustainable Development Goal
TFR	Total Fertility Rate
UNFPA	United Nations Population Fund
WHO	World Health Organization

EXECUTIVE SUMMARY

Background

Egypt faces the persistent challenge of unmet need for family planning (FP) that stands at 13.8%, despite progress in reducing fertility rate that reaches 2.85 in 2021. Gaps between women's fertility preferences and actual contraceptive use exist due to barriers such as limited access to information and resources, inadequate service quality, opposition from partners and families, and cultural views against contraceptives.

Addressing this issue is crucial for women's reproductive and maternal health, child health, gender equality, socioeconomic development, and achieving Egypt's demographic goals. Youth constitute a significant portion of the population, which provides Egypt with an opportunity to harness the potential of the demographic dividend, a boost in economic productivity that occurs when there are growing numbers of people in the workforce relative to the number of dependents. Strategic investments in family planning are essential to foster sustainable development and build a resilient future.

Current Situation

Egypt employs a mixed public-private FP system with the Ministry of Health and Population (MOHP) playing a leading role. Initiatives with non-governmental organizations under the leadership of the Ministry of Social Solidarity and the National Project for the Development of the Egyptian Family support awareness and service provision. Donor assistance also plays a role, providing support to various national entities. Despite these efforts, Egypt faces challenges in health financing. Out-of-pocket (OOP) spending constitutes a large portion of total healthcare expenditure, with only about a third covered by the government. While efforts are underway to increase public health funding and to meet the constitutional obligations of a health budget of 3% of GDP by 2030, the sector currently falls short of the 15% GDP target set by the Abuja Declaration. Challenges also include:

- Sub-national Disparities: Unmet need is higher in rural Upper Egypt.
- Service Quality: Concerns about side effects and discontinuation rates highlight the need for improved counselling and follow-up.
- Socio-Cultural Barriers: Norms and beliefs influence FP decisions.
- Health Financing: Egypt's system relies heavily on OOP spending (60%). There's an ongoing effort to boost public health expenditure to reduce the financial burden on citizens.

Purpose of Investment Case

This investment case serves as an instrumental tool to demonstrate the transformative potential of addressing unmet need for FP through strategic investments. It underscores the economic and social advantages of addressing this issue, informs decision-making and ensures that investments are channeled effectively and efficiently toward achieving lasting positive outcomes. It serves as catalysts for increased public investment and the promotion of private financing partnerships,

fostering a collaborative and comprehensive approach to achieving family planning objectives. Key potential benefits of investing in family planning include:

- Health Impacts: Reduced maternal mortality, improved child health, lowered unintended pregnancies, and reduced unsafe abortions.
- Economic & Social Progress: Enhanced educational and economic opportunities for women, increased household savings, and a positive influence on GDP growth.
- Demographic resilience: Stabilized population growth, easing adaptation of systems and harnessing opportunities.
- Cost-Effectiveness: Significant returns on investment realized by decreasing long-term public expenditures associated with unintended pregnancies, healthcare, and social support.

Methodology

1. Collaborative Approach

A reference group of experts from various pertinent government entities, alongside the UNFPA Egypt country office and the UNFPA Headquarters was established. A list of the esteemed members is included in Appendix A of the report. The primary objective of this distinguished group was to ensure the robust validation of the data's integrity and the selected scenarios, underscoring the commitment to the reliability and accuracy of the study's findings.

2. Modelling and Data

- Tools: The Impact40 toolkit (UNFPA, Avenir Health, et al.) was used, including the FamPlan module (to calculate contraceptive prevalence rate (CPR), modern contraceptive prevalence rate, mCPR), total fertility rate (TFR), and unmet need for FP) and the Lives Saved Tool (LiST) Costing module to estimate the cost of addressing unmet needs for FP.
- Data Sources:
 - Family Planning: Egyptian Family Health Survey 2021 (EFHS)
 - Demographics: Central Agency for Public Mobilization and Statistics 2021-2022
 - Costs: Ministry of Health and Population
 - Regional Estimates were applied when national data gaps exist, the Spectrum tool was used to inform country-level estimates.

3. Scenarios

The analysis focuses on increasing the mCPR to address unmet need for FP. Three scenarios in addition to the status quo were modeled. These scenarios showcase varying the projected CPR and mCPR levels, detailing the resulting health outcomes, reductions in fertility rates, and the necessary resources to raise FP interventions to achieve these diverse levels of success.

- Baseline/Status quo: CPR remains constant at 66.4% from 2023 to 2030.

- Scenario 1: CPR increases to 70% by 2030.
- Scenario 2: CPR reaches 75% by 2030 (aligning with SDGs and the National Population and Development Strategy 2023-2030).
- Scenario 3: CPR reaches 80.2% by 2030.

4. Contraceptive Method Mix

The 2021 EFHS was used to provide the baseline data on contraceptive method usage. The Experts Group validated projections that anticipate a shift in family planning preferences towards greater reliance on modern methods over time:

- Modern Methods Increasing: Increased use of implants and IUDs is expected.
- Traditional Methods Declining: Withdrawal, periodic abstinence, and other traditional methods are projected to decrease significantly or disappear by 2030.
- Mixed Trends: Injectable use and pill use are expected to slightly decrease, as well as condom and female sterilization.

5. Definition of Unmet Need

The definition aligns with WHO/EFHS criteria and focuses on women of childbearing age (15-49):

- Spacing: At risk of pregnancy, not using FP, and wanting to delay the next birth or uncertain about timing.
- Limitation: At risk of pregnancy, not using FP, and wanting no more children.

Results and impact of ending unmet need for Family Planning

1. Reduction in Unmet Need

All scenarios project a decrease in unmet need for family planning from 2023-2030 with the anticipated increased contraceptive use:

- Scenario 1: Unmet need declines to 11.6% by 2030
- Scenario 2: Unmet need drops to 8.6% by 2030
- Scenario 3: Unmet need reaches to 5.7% by 2030

2. Impacts on Health Outcomes

Increased modern contraceptive use is projected to reduce the number of unintended pregnancies and unsafe abortions. Between 2023 and 2030, approximately 11.5 million unintended pregnancies and 5.7 million unsafe abortions are estimated in the status quo. Scaling up contraceptive use is expected to avert large numbers of unintended pregnancies and unsafe abortions as per Fig.1.

Projected Number of Averted Unintended pregnancies and Unsafe abortions due to increased CPR 2023–2030

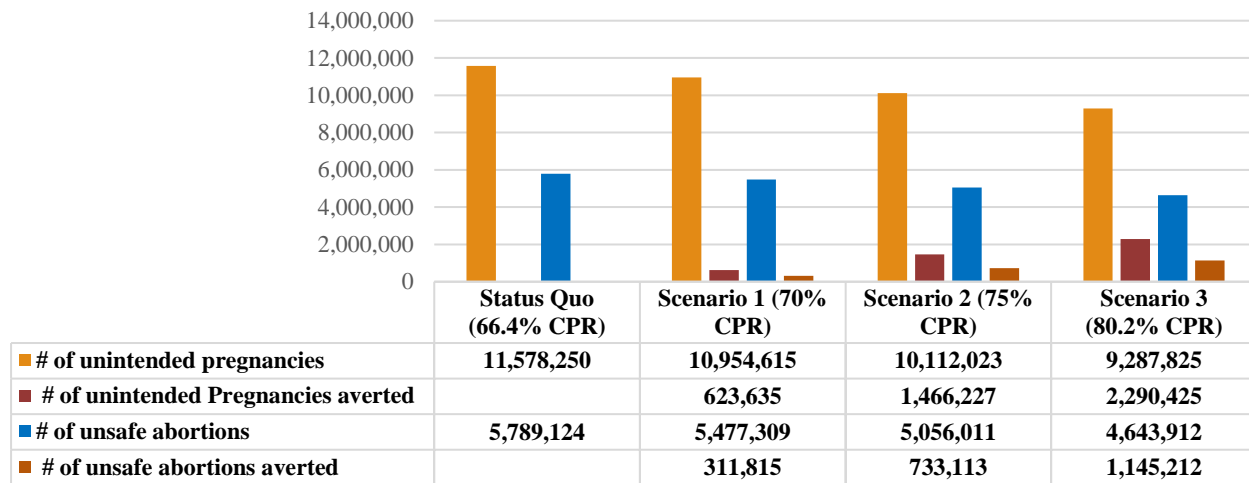


Figure 1

Cost of Ending the Unmet Need for Family Planning

The total FP Intervention Costs include all costs associated with ending unmet need for FP including drugs and supplies, labor, capital and other recurring costs. As per Fig.2, costs increase as contraceptive prevalence targets rise, yet there will be a decreasing long-term public expenditure associated with unintended pregnancies and improved maternal health.

Additional investment needed to reduce unmet need for FP versus status quo in millionEGP (2023-2030)

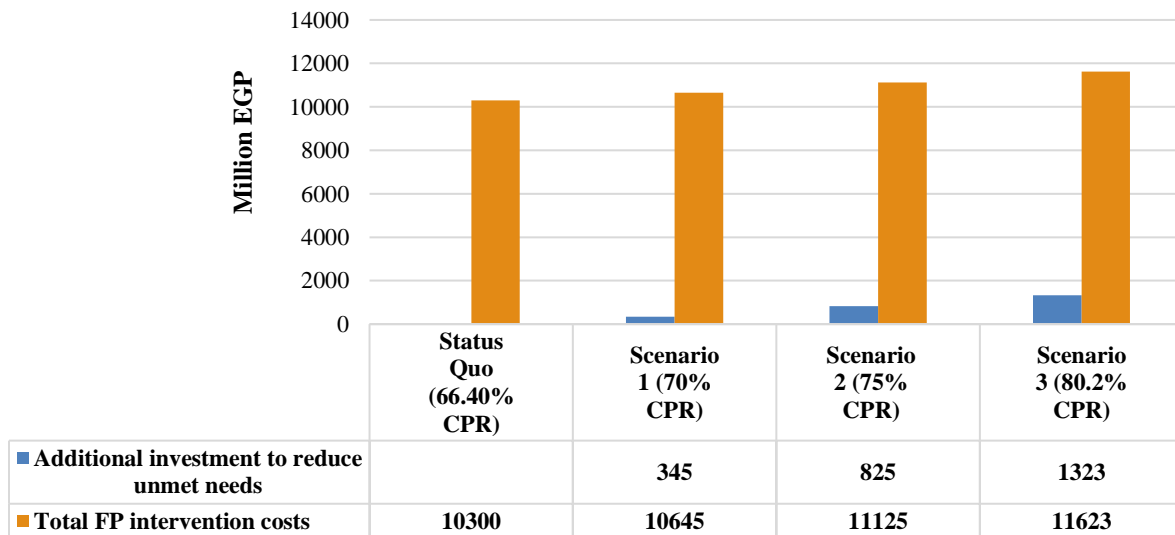


Figure 2

Incremental Costs by Method

- Labor Dominates: Labor costs are the highest for all contraceptive methods across scenarios.
- Pill Costs Significant: Due to frequent use, the total cost of pills remains high, even if usage decline.
- IUD Costs Also Rise: Costs increase significantly as IUD use becomes more prevalent in higher prevalence scenarios.

Investment required and financing gap

The lack of comprehensive national data pertaining to the cost of FP methods and the actual expenditures incurred in FP programs poses a limitation. The investment case relied on unit costs provided by MOHP for selected methods, serving as the basis to assess the funding requirements to achieve each of the projection scenarios. To determine the funding gap to reduce the unmet needs of family planning, the investment case first uses total FP intervention costs. Secondly, the investment case employed the percentage of the family planning budget allocated to programs during the fiscal year 2023/2024, amounting to 0.0076% of the national budget of Egypt. The investment case assumes an increase of the allocated budget assigned by the same percentages, mirroring the annual increase in incremental costs.

Financing gap for family planning to end unmet need, 2023-2030

(in billion EGP)

	Scenario 1 (2030 Target: 70% CPR)	Scenario 2 (2030 Target: 75% CPR)	Scenario 3 (2030 Target: 80.2% CPR)
Total estimated funding required, for total FP interventions 2023- 2030 (A)	10.6	11.1	11.6
Projected public budget allocation for family planning (B)	3.24	3.3	3.6
Financing Gap (C) = [(A) – (B)]	7.36	7.8	8
Financing Gap = (C)/(A) (%)	69.43%	70.27%	68.96%

Key Messages

- The investment case advocates for increased investment in family planning in Egypt, emphasizing the ambitious goal of eliminating unmet needs.
- The total cost between 2023 to 2030 of FP related to the status quo amounts to EGP 10.3 billion. **For Egypt to reduce unmet need by 2030, aligning with the SDG target and the updated National Population Strategy (Scenario 2) an additional investment of**

EGP 825 million is needed over the seven years, bringing the total investment to EGP11.1 billion to achieve the 75% CPR by 2030. It would reduce the unmet need to 8.6% by 2030.

- Compared to the status quo, Scenario 2 (75% CPR by 2030) could prevent around:
 - **1.5 million unintended pregnancies.**
 - **733k unsafe abortions.**
- As per the scenario 3, an additional investment of EGP 1.3 billion between 2023 to 2030 compared to status quo would increase the CPR to 80.2% and would reduce the unmet need for FP to 5.7% (6% targeted by the updated National Population Strategy).
- Compared to the status quo, Scenario 3 (80.2% CPR by 2030) could prevent around:
 - 2.3 million unintended pregnancies.
 - 1.14 million unsafe abortions.
- Funding is estimated to fall short by an average of around 70% across all scenarios (2023-2030).
- Closing the gap will require exploring alternative funding sources like integrated approach, innovative financing tools, increased investment from domestic budget, funding from donors and partnerships.
- Reduced unmet needs by 2030 contribute to achieving several SDGs:
 - SDG Goal 3 (Good Health and Well-being): Reduce maternal mortality, unintended pregnancies, and unsafe abortions.
 - SDG Goal 5 (Gender Equality): Empower women by giving them control over their reproductive health.
 - SDG Goal 1 (No Poverty): Improve economic well-being by enabling smaller families and increasing female workforce participation.
- Family planning stands as a pivotal factor with the potential to significantly influence health and broader development outcomes. This includes a reduction in unintended pregnancies, unsafe abortions and maternal deaths.

Recommendations and the way forward

- Strategic implementation and capacity building: it is of interest to develop and implement strategic initiatives to enhance the capacity of healthcare providers to deliver a quality method mix. There is a value added in integrating comprehensive family planning training programs within the broader healthcare framework to ensure sustained impact.
- Data enhancement for informed decision-making: Investing in systems for improved data generation to facilitate evidence-based decision-making for policymakers and establish robust monitoring and evaluation mechanisms to track the progress of family planning programs and their impact on health outcomes.
- Financial commitment and resource allocation: Advocacy efforts to increase financial commitment to family planning interventions, emphasizing addressing unmet

need in Egypt requires work towards securing funding from diverse resources including international partners.

- Continued research and adaptation: Encourage further research by implementing investment cases on reducing maternal mortality and gender-based violence against women and girls including child marriage and female genital mutilation. And adapting the implementation plan based on emerging research findings, ensuring that interventions remain responsive to evolving needs and challenges.
- Collaborative partnerships: Foster collaboration between government entities, non-governmental organizations, international organizations, and the private sector to leverage collective expertise and resources.

By adopting these recommendations, Egypt can further drive forward its family planning agenda, fostering a future marked by improved health outcomes, gender equality, and societal resilience. Family planning could be seen as a cornerstone for broader public health and development objectives, setting the stage for a healthier, more equitable, and sustainable future for the country.

1. BACKGROUND

Egypt has made progress towards achieving the Sustainable Development Goals (SDGs), however, significant challenges remain (League of Arab States, 2022). At the heart of this challenge lies the challenges of meeting the unmet needs of family planning. Total fertility rate in Egypt declined from 5.3 births per woman in reproductive age in 1980 to 2.85 in 2021. The use of modern family planning methods by currently married women aged 15-49 years has been increased from 56.9% in 2014 to 64.7% in 2021. Despite the achieved progress, unmet need for family planning among currently married women in reproductive age remains at 14%. Therefore, it is important to end the unmet need for family planning. Currently ranking the third-most populous country in Africa, Egypt is home to approximately 105 million people, with a gender composition of nearly 48 % female, and 52% male (CAPMAS, 2023). Distinct age brackets underscore the demographic landscape with 13.6 % under the age of 5, and 34.2 % under the age of 15. Reproductive-age females, aged 15 to 49, constitute about 41.8 % of the female population (CAPMAS, 2022).

Global fertility has declined from 3.3 births per woman in 1990 to 2.3 births per woman in 2021 (UNDESA, 2022). In Egypt, while the total fertility rate (TFR) has shown a decline from 6.8 children per woman in 1960 (WBD, 2023), and although it declined to 2.85 children per woman in 2021 (CAPMAS, 2022), it still exceeds the targeted rate (Khalifa, et al., 2000). Addressing these challenges is integral to fulfilling the human development objectives outlined in the Egyptian Vision 2030. A crucial aspect of this vision is ensuring universal access to social services, particularly family planning, with the aim of achieving 75% Contraceptive prevalence rate by 2030 (MOHP, 2023). This strategic approach seeks to empower females to make informed reproductive choices, minimizing the risk of unwanted pregnancies and fulfilling unmet family planning needs.

In the realm of economic dynamics, Egypt is classified as a lower-middle-income country, with a real GDP growth rate averaging 4.3% annually since the 1990s, outpacing both regional averages in the Middle East and North Africa (MENA) and the African continent. However, the beginning of the global pandemic in 2020 had profound repercussions on the world economy, significantly impacting Egypt's economic landscape (OECD et al., 2021). In the wake of the pandemic, Egypt experienced a downturn in GDP growth, recording a figure of 3.6% attributed to tourism reduction and global supply chain disturbance (World Bank, 2023).

In response to these challenges, Egypt initiated an economic recovery in 2021, recording a GDP growth of 3.3%, driven by the non-oil sector, particularly construction, manufacturing, and services. Building on this momentum, the government's steadfast efforts led to an economic boom in 2022, reaching a remarkable 6.6% growth (World Bank, 2023). This recovery can be attributed to numerous factors, including robust domestic demand, an uptick in exports, and tourism resurgence. However, the ongoing population growth is placing pressure on

infrastructure, resources, and public services, particularly in health and education. Access to family planning services appears as a critical priority for ending unmet need for family planning which will contribute in enhancing demographic resilience.

The aim is to build a prosperous and inclusive society where every Egyptian citizen can thrive with optimal health, well-being, and opportunities. This entails prioritizing equitable, rights-based, and sustainable population and development policies to foster a thriving population that actively contributes to Egypt's progress and advancement. This investment case outlines the importance of strategic investments to address the unmet need for family planning. By doing so, the quality of life of individuals will be enhanced, population characteristics improved, and demographic resilience refined, all of which will contribute in sustainable socio-economic development across the country.

1.1 Investment Case Objectives

In Egypt, the persistence of gaps in unmet family planning requirements calls for significant financial investments. The investment case for eliminating these unmet needs is crucial for the well-being of children, families, and society in Egypt. This strategic initiative holds multifaceted benefits with far reaching implications, such as enhancing maternal and child health, reducing maternal mortality rates, achieving the reproductive goals of the Egyptian women by reducing the unwanted pregnancies, improving overall well-being, fostering gender equality, boosting productivity, decreasing poverty rates, and providing other cross-generational benefits that are vital for Egypt's overarching objectives. Family planning, beyond its immediate health-related impacts, contributes to numerous positive indicators. It can boost the number of school years young females can dedicate to education, increases their incomes, enhances household savings and assets, extends the number of school years for children, and positively influences GDP growth rate. Long-term efforts to strengthen structural family planning offers a dual advantage, not only benefiting the national public budget by lowering expenditures related to unplanned pregnancies, abortions, births, cesarean delivery, and infant healthcare but also ensuring sustained socio-economic development.

Considering Egypt's constrained resources, investment cases play a crucial role in identifying the most cost-effective solutions to this substantial challenge. Investing in unmet family planning needs yields considerable and long-term benefits, addressing critical societal goals and aligning with the nation's limited resources. Investment cases, by underscoring the economic and social advantages of addressing this issue, have the power to persuade decision-makers to endorse programs and policies that augment access to family planning. They serve as catalysts for increased public investment and the promotion of private financing partnerships, fostering a collaborative and comprehensive approach to achieving family planning objectives. Furthermore,

investment cases provide a strategic roadmap by outlining goals and targets. This aids in measuring progress over time, offering a comprehensive view of the impact of interventions, and pinpointing areas where further investment may be necessary. As Egypt strives for sustainable development, investment cases serve as instrumental tools for informed decision-making, ensuring that investments are channeled effectively and efficiently toward achieving lasting positive outcomes.

1.2 Situation Analysis

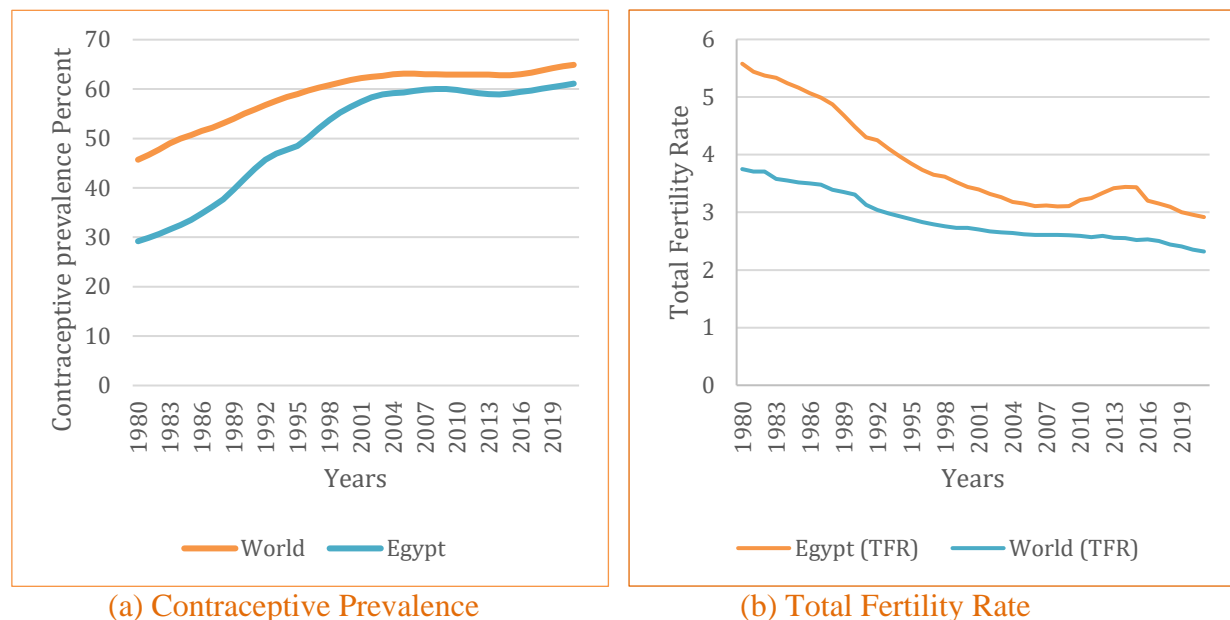
1.2.1 Current Situation of Family Planning Program

Egypt has historically employed family planning as a short-term strategy since the early 1960s to stabilize population growth. The updated National Strategy for Population and Development aims for replacement-level fertility by 2030, targeting a total fertility rate of 2.1 births per woman, down from the 2021 rate of 2.85 (National Population Council, 2023). Key indicators include increasing contraceptive prevalence from 66.4% (2020) to 75% and reducing unmet needs from 14% (2021) to 6% by 2030 (National Population Council, 2023).

A wide range of public and private facilities provide family planning services. Public facilities, including primary health care facilities and hospitals, are largely operated by the Egyptian Ministry of Health and Population (MOHP), whilst private facilities include for-profit (private doctors, private pharmacies, and private hospitals) and non-governmental organizations (NGOs). The governmental sector accounts for 62.5% of all family planning customers, with roughly 6,000 FP clinics including rural health units, urban health centers, family health units, clinics at general hospitals, and mobile clinics. Family planning users in Egypt are more likely to obtain their method from a public sector (62.5%) more than private provider (37.4%). The majority of IUD, injectable, and implant users utilize public sector providers, whereas most sterilized women (81.8%) use private sector providers (CAPMAS, 2022).

Family planning plays a significant role in improving maternal and child health outcomes, facilitating human development, and reducing poverty. Several socio-demographic determinants, such as gender norms, educational attainment, economic conditions, and employment opportunities, shape desired fertility and family planning decisions. Gaps between women's fertility preferences and actual contraceptive use exist due to barriers such as limited access to information and resources, inadequate service quality, opposition from partners and families, and cultural views against contraceptives. Adolescent girls are especially vulnerable to health consequences of pregnancy and delivery, as early childbearing can have negative effects on girls' healthy development into adulthood and on their educational and employment prospects. The 2021 Egyptian Family Health Survey (EFHS) indicates a decrease in the total fertility rate to 2.85 children per woman compared to 3.5 in 2014 (see Figure 1).

Figure 1: Trends in Contraceptive Prevalence and Total Fertility Rates in Egypt and the World (1980-2021)



Source: Authors' compilation from UNDESA, (2022) and World Bank (2023).

The Egyptian government particularly the Ministry of Health and Population (MoHP) is implementing different programs to improve the quality of family planning services. In 2020, the "Two are Enough" campaign "Etnein Kefaya" launched by the Ministry of Social Solidarity aimed to increase access to family planning services and raise awareness. The program has successfully reached 5.8 million women through door-to-door visits and has referred approximately one million women to family planning clinics (MOSS,2023). In April 2021, the Ministry of Planning and Economic Development introduced the National Project for the Development of Egyptian Families (2021-2023), outlining cultural, service, and awareness raising interventions. Targeting women aged 18 to 45; the plan incorporates digital transformation, legislative reforms for women's economic empowerment and provides free contraceptive methods and services. The project also included mass media campaigns to raise awareness about family planning and its positive impact. The "Osra" family initiative focuses on providing information on voluntary family planning, particularly targeting the youth. The government collaborates with UNFPA, supported by the European Union, to facilitate implementation of the National Population and Development Strategy. This collaboration involves capacity building, community engagement, and empowering adolescents, young people, and women. UNFPA contributions include procurement of contraceptives and capacity building of MoHP staff aiming to enable all 5,500 units to offer at least three modern family planning methods (United Nations-Egypt, 2023). In Egypt, socio-demographic, cultural, and reproductive factors act as barriers to family planning,

leading to increased discontinuation rates and unmet needs (Saad, 2020). Reasons for not using family planning methods include lack of knowledge and education, religious belief, fear of side effects, and cost. These barriers underscore the importance of supporting NGOs to provide family planning and reproductive health services alongside their awareness-raising role in the promotion and acceptability of contraception (Younes, et al, 2023). Contraceptive prevalence rates slightly vary across geographical regions, with urban areas recording higher rates amounting to 68% in 2021, compared to 65% in rural areas. The percentage of usage increased to 71% in urban and coastal governorates, while it decreases to only 57% in rural areas of Upper Egypt. Sohag governorate records the lowest usage level at 47.2%. The highest percentages of women still use IUD, though its usage has decreased by 1 percentage point between 2014 and 2021. Meanwhile, the use of other modern methods has increased (National Population Council, 2023).

The governmental sector is the primary source for obtaining family planning methods, with reliance on the sector increasing from 57% in 2014 to around 61% in 2021. Conversely, the contribution of NGOs has decreased from 5.1% in 2005 to 2.5% in 2008, to 0.6% in 2014, and dropped to 0.3% in 2021 (National Population Council, 2023). The Egyptian Family Health Survey 2021 indicated that approximately 30% of family planning methods users discontinued use within 12 months of initiation. Common reasons for discontinuation include side effects and health concerns accounting for 11% of cases, while 4% discontinued due to method failure (pregnancy occurred while using the method). This emphasizes the necessity for family planning programs to provide substantial counseling and follow-up, to assist female users in overcoming challenges and obstacles and thereby encouraging sustained method use. Data further revealed that only about 42% of users received information from service providers regarding potential side effects, and merely 28% were informed about how to manage side effects if they occurred. Additionally, about 14% of currently married women in Egypt have an unmet need for family planning. Among them, 4% desire spacing between births, and 10% wish to cease childbearing altogether but are not using any family planning method. The rate of unmet needs in 2021 is slightly higher than the 2014 rate, which was around 13%. Furthermore, there is significant variation in unmet needs across different geographic regions, with rural Upper Egypt experiencing an 18% unmet need compared to 11% in rural Lower Egypt. The rate rises to 22% in Assiut and Sohag governorates. Egypt consistently maintains an unmet need for family planning higher than the global average for countries with a similar level of contraceptive use (National Population Council, 2023).

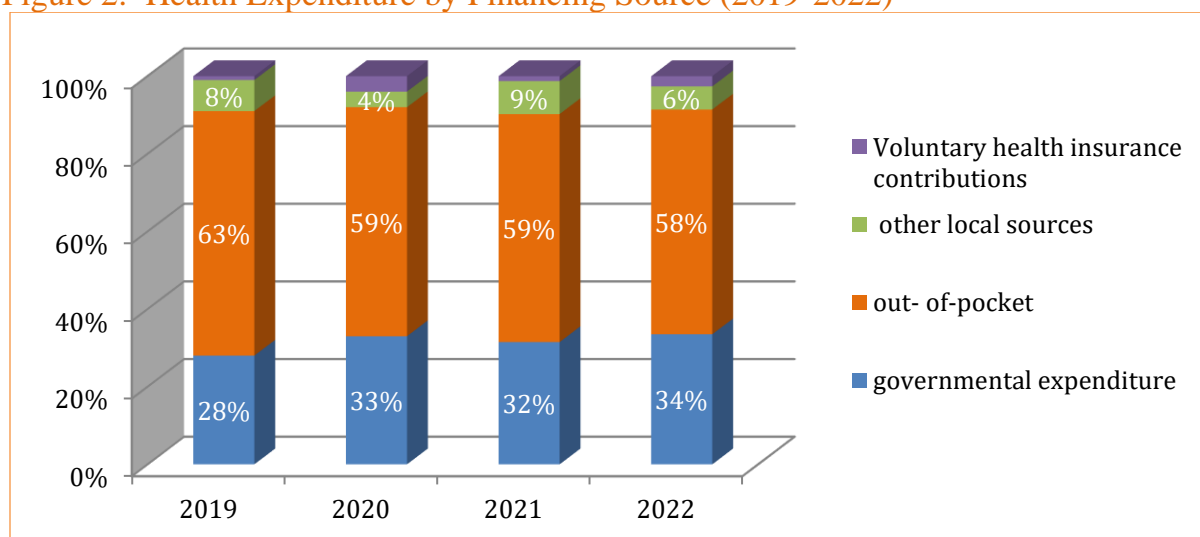
In sum, family planning in Egypt is a multifaceted effort involving government initiatives, collaborative partnerships, and awareness campaigns. Addressing barriers, regional disparities, and enhancing service quality are essential components in the country's ongoing commitment to promoting family planning and reproductive health.

1.2.2 Health Financing in Egypt

Government health spending constitutes nearly one-third of total health expenditure, but the total health expenditure as a percentage of GDP has stagnated at around 5.5% for the past 12 years. Out-Of-Pocket (OOP) spending accounts for about 60% of healthcare cost, with government expenditures covering approximately 34%, the remaining 6% being, social and voluntary health insurance schemes, and nongovernmental organization financing sources. Pharmaceutical spending ranges from 26.0% to 37.0% of total expenditure (Fasseeh et al., 2022). Figure 2 illustrates the diverse primary financing sources for the Egyptian healthcare system. Notably, approximately 58% of the total health expenditure (THE) originates from households through OOP spending. It is important to emphasize the objective of transitioning expenditure away from OOP towards government or third-party funding mechanisms given that government spending amount to approximately 34%. And private agents, including private insurance, syndicates, firms, and NGOs, along with employers' health spending on employees, collectively contribute around 6% of THE. Donor assistance also plays a role, providing support to various entities such as the Ministry of Health and Population (MOHP), health insurance organization, as well as other ministries and NGOs.

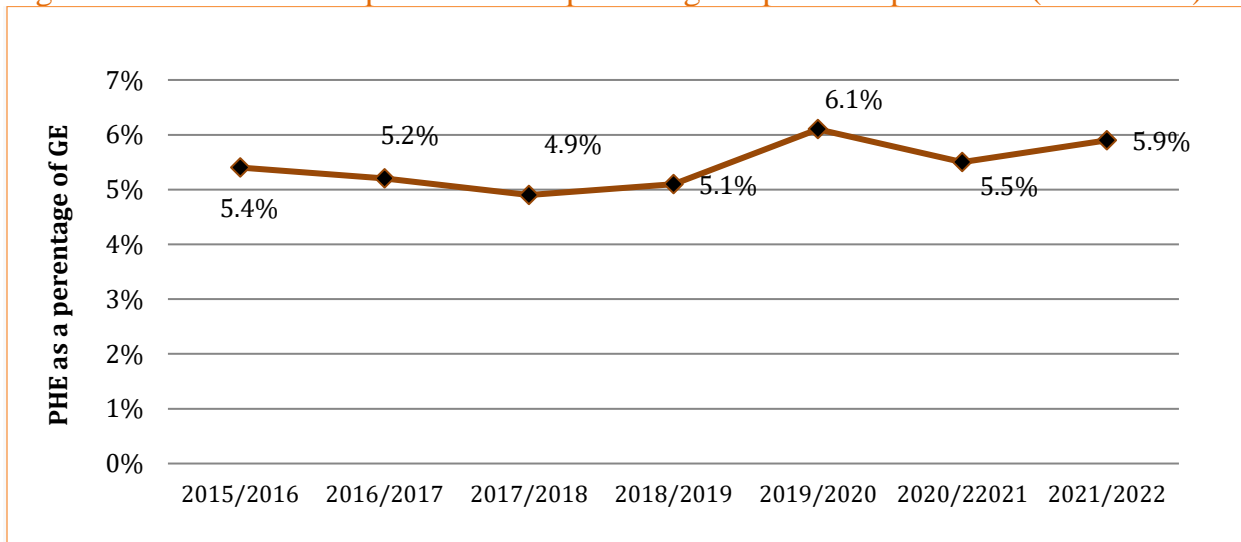
In recent years, the Egyptian government has endeavored to boost the health budget, aiming for it to constitute 34% of THE by 2022, compared to 28% in 2019. This initiative seeks to reduce the reliance on Out-Of-Pocket contributions, which accounted for 58% in 2022, down from 63% in 2019. Despite fluctuations, there is an ongoing effort to increase public health expenditure, as depicted in Figure 3, which compares total Public Health Expenditure (PHE) against total Government Expenditure (GE).

Figure 2: Health Expenditure by Financing Source (2019-2022)



Source: Authors' compilation according to WHO (2023)

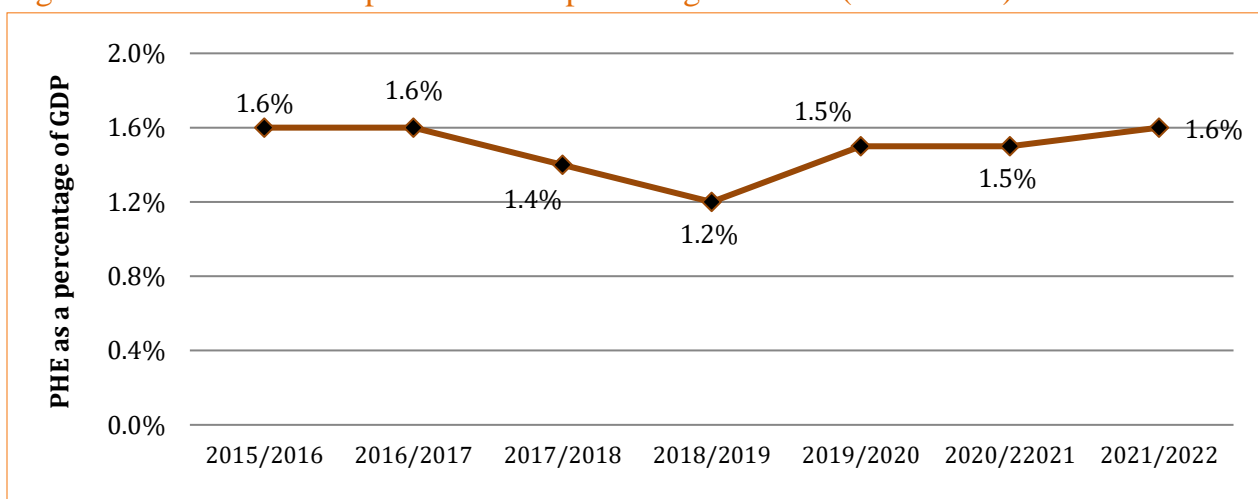
Figure 3: Public health expenditure as a percentage of public expenditure (2016-2022)



Source: CAPMAS, 2022

The government's healthcare priorities align with social justice objectives, and there has been a financial commitment to meet the constitutional obligations, including reaching a health budget of 3% of GDP by 2030. Figure 4 depicts the trend of public health expenditure as a percentage of GDP from 2016 to 2022. Unfortunately, the current health budget, nearly 6% of the total government budget, falls short of the Abuja Declaration commitment, where African Union countries targeted allocating at least 15% of their annual budget to improve the health sector and urged donor countries to scale up support (WHO, 2011).

Figure 4: Public health expenditure as a percentage of GDP (2016-2022)

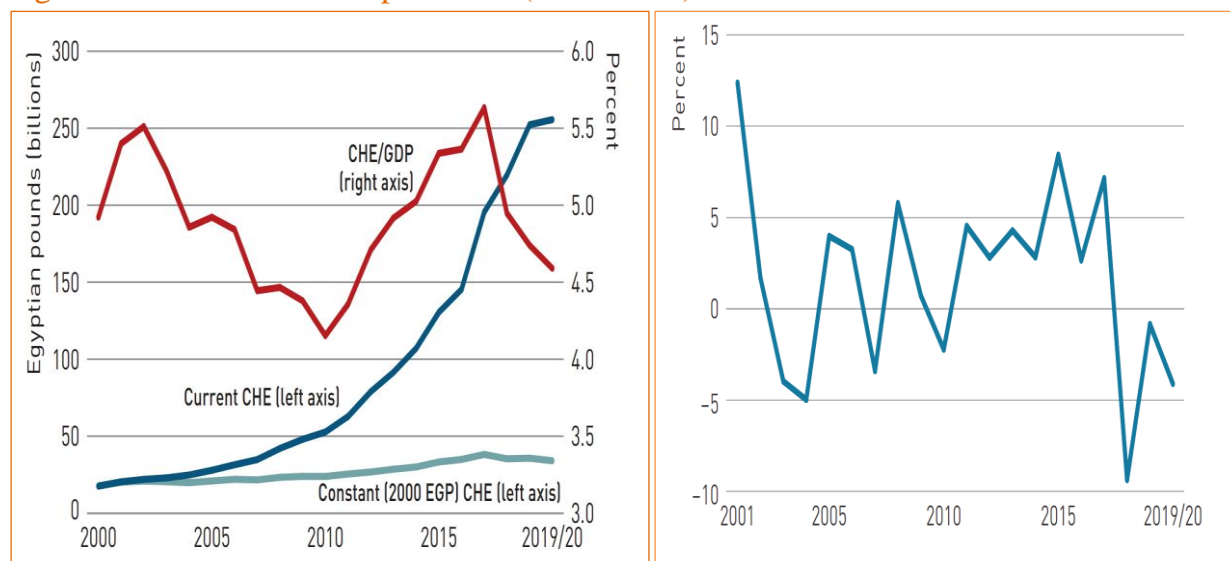


Source: CAPMAS, 2022

For fiscal year 2019/2020, current health expenditure (CHE) in Egypt is estimated at EGP 255.6 billion, equating to EGP 2,560 per capita and representing 1.6% of GDP. Total health expenditure (THE), encompassing CHE and capital formation, is estimated at EGP 271.4 billion, equating to EGP 2,718 per capita and representing 4.9% of GDP (WHO 2023, Egypt National Health Accounts 2019/2020). Over the period from 2000 to 2020, CHE experiences an average annual increase of 4.1% in real terms, factoring in inflation. Notably, between 2000 and 2010, CHE exhibited slower growth than the economy on average. In 2000, CHE constituted 4.9% of GDP, marking a decline to 4.2 % by 2010. However, from 2010 to 2017, CHE growth surpassed economic growth, reaching 5.6% of GDP. Subsequently, from 2017 onward, there has been a reversal, with CHE growth falling behind economic growth, leading to a decline in CHE as a proportion of GDP, as illustrated in Figure 5. Although CHE per capita, in real terms, grew at an average rate of 1.4% per year between 2000 and 2020, population growth outpaced CHE growth, resulting in negative growth in CHE per capita since 2017, as depicted in Figure 5 Panel (b). These means that investing in unmet need will reduce the unwanted pregnancies, that will slower the population growth that in turn will support the CHE growth

The financing framework identifies key functions of revenue generation and resource allocation, categorizing revenue sources within the financing system. Out-Of-Pocket payments by households remain the largest source, contributing an estimated EGP 151.6 billion, constituting 59% of CHE (WHO, 2023). General government health expenditure (GGHE), encompassing government domestic revenue, transfers from foreign origins, and social contributions, is the second-largest source at around EGP 84 billion, representing 33% of CHE (WHO, 2023). A notable divergence in healthcare spending distribution exists among different sources and financing schemes. For example, 54% of household Out-Of-Pocket spending goes to pharmacies and other medical retailers, while 51% of government scheme spending is directed to hospitals (WHO, 2023). This indicates a reliance on OOP payments for outpatient services and government schemes for inpatient services. Of particular interest is the spending distribution by the Universal Health Insurance (UHI) financing scheme to its contracted providers. Activities delivered in ambulatory provider settings receive the largest share (49%) of the UHI's current expenditure, followed by spending on hospitals (39%) (WHO, 2023). This suggests a potential shift in service delivery from hospitals to ambulatory care and primary health care (PHC). However, if population needs are not adequately met by UHI contracted pharmacies and PHC facilities, households may persist in relying on retailers, potentially creating a financial burden for those already covered by insurance.

Figure 5: Current health expenditure (2000-2020)



(a) CHE current and as % of GDP (b) CHE per capita, year to year real growth
Source: WHO (2023) and Egypt National Health Accounts (2019/2020)

2. METHODOLOGY

A reference group was convened, comprising a panel of experts drawn from various pertinent government entities, alongside the UNFPA country office in Egypt and UNFPA Head Quarter. A full list of the esteemed members is included in Appendix A. The primary objective of this distinguished group was to ensure the robust validation of the data's integrity and the selected scenarios, underscoring the commitment to the reliability and accuracy of the study's findings.

2.1 Estimation of Projections and Utilized Tools

The Impact40 toolkit, a collaborative effort involving UNFPA, Avenir Health and other Technical Partners, was used for modeling the investment case. Leveraging the FamPlan module within Spectrum allowed for the calculation of essential metrics, including Contraceptive Prevalence Rate (CPR), modern Contraceptive Prevalence Rate (mCPR), total fertility rate (TFR), and unmet need for family planning (FP). To estimate the cost associated with reducing unmet need for FP, the Lives Saved Tool (LiST) Costing module was employed. Additionally, the Impact40 online toolkit facilitated the estimation of projections related to the number of unintended pregnancies, maternal deaths, and unsafe abortions averted through the adoption of modern contraceptives.

2.2 Data Sources

The research team collaborated extensively with the UNFPA Country office in Egypt and headquarters, engaging in thorough discussions regarding the methodology, identification of pertinent data sources for updating the pre-populated baseline data on the toolkit, and scrutiny of official documentation for the desktop reviews. The aim was to validate the selected data used in the investment case effectively.

To ensure comprehensive insights, data for family planning dynamics were extracted from the Egyptian Family Health Survey (EFHS) conducted in 2021. Demographic information, crucial for the analysis, was sourced from the Central Agency for Public Mobilization and Statistics (CAPMAS) for the years 2021-2022. The Ministry of Health and Population (MOHP) provided essential data pertaining to the costs associated with addressing the unmet need for family planning during the same timeframe. In instances where national data gaps existed, regional estimates from the Spectrum tool were used to inform the country level estimates. The analysis considered the estimate for unmet need for family planning among all women, which was based on EFHS estimates, indicating a rate of 13.8% in 2021. The overarching target included reducing the unmet need for family planning to 6% by 2030, aligning with the goals of the National Population and Development Strategy and Sustainable Development Goals (SDGs). A more ambitious goal involves reducing the unmet need for family planning to zero, in alignment with UNFPA's transformative result of ending unmet need for family planning by 2030.

2.3 Scenario Assumptions

The analysis operated on the assumption that enhancing the modern contraceptive prevalence rate (mCPR) is essential to eliminate the unmet need for family planning. Accordingly, three distinct scenarios were formulated beyond the existing status quo to delineate the potential trajectories for the investment case aimed to achieving this objective.

- The baseline case (or status quo) scenario assumes that the current contraceptive prevalence rate (CPR) of 66.4 % prevails over time and does not change.
- The first scenario assumes that the current CPR of 66.4% in the baseline year increases gradually over time to satisfy demand with an increase in modern contraceptive prevalence rate (mCPR) reaching a target of 70% CPR in 2030.
- The second scenario assumes that the initial CPR of 66.4% in the baseline year progresses to attain a target of 75% by 2030, aligning with SDG target and the national population and development strategy 2023-2030.
- The third scenario assumes that the current CPR increases over time, ultimately reaching 80.2 % by 2030.

These scenarios were designed to provide a comprehensive framework for the investment case, offering detailed perspectives on potential pathways to boost the modern contraceptive prevalence rate (mCPR) and consequently address the unmet need for family planning in Egypt. This entails that scenarios 1 to 3 assume that the demand will be satisfied by an increase in mCPR.

2.4 Contraceptive method mix

Contraceptive method prevalence, defined as the proportion of users for each method in 2021, was extracted from EFHS. Estimated projections for each method underwent rigorous scrutiny by experts during the reference group meeting, gaining approval as plausible within Egypt's contextual framework¹. Anticipating a shift in family planning dynamics, the projections envisage an increase in modern methods' utilization alongside a decline in traditional methods. Currently, the withdrawal method's prevalence is estimated at 0.8%, with an expectation of reducing to zero over time. Likewise, the prevalence of periodic abstinence and other traditional family planning methods, at 0.5%, and 1.2%, respectively, is projected to reach zero by 2030. Male condom use is expected to decrease from 1.2% in 2023 to 0.8 in 2030. Female sterilization prevalence is expected to decrease from 3% in 2023 to 2% in 2030. Conversely, the prevalence of implant use is expected to increase from 3.9% in 2023 to 4% in 2030, while IUD use is projected to rise from 44.4% in

¹ The projections towards reaching the target for contraceptive prevalence were reached through consultative discussions and agreements by experts in the reference group meeting that modern contraceptive methods would be increased while reducing traditional methods but both methods combined would account for 100 %.

2023 to 51.4% in 2030. Injectable 3-month (Depo Provera) use is anticipated to decrease from 15.3% in 2023 to 14.5% in 2030, and Pill- Standard Daily regimen use is expected to decrease from 29.4% in 2023 to 27% in 2030.

Table 1: Developing method mix from 2000 to 2021

Method	2000	2005	2008	2014	2021
Pill	16.9	16.7	19.7	27.4	29.4
IUD	63.4	61.5	59.8	51.4	44.4
Injectable	10.9	11.9	12.3	14.5	15.3
Male Condom	1.7	1.7	1.2	0.8	1.2
Female Sterilization	2.5	2.2	1.8	2.1	3
Other Modern Methods	0.7	1.5	0.8	1.1	4.2
Traditional Methods	3.9	4.6	4.4	2.8	2.5
Total	100	100	100	100	100

Source: Egypt Family Health Survey 2021

Table 2: Estimate of projected contraceptive method mix (%), 2023 and 2030

Method Mix	2023	2030
Condom:		
Male condom	1.2	0.8
Sterilization:		
Female sterilization	3	2
Injectable:		
3 month (Depo Provera)	15.3	14.5
Implant:		
Implanon (3 years) & Jadelle (5 years)	3.9	4
IUD:		
IUD	44.4	51.4
Pill:		
Standard Daily regimen	29.4	27
Other Modern Methods:		
Vaginal barrier	0.3	0.3
Traditional:		
Withdrawal	0.8	0
Periodic abstinence	0.5	0
Traditional (not specified)	1.2	0
Total	100	100

2.5 Definition of Unmet Need of Family Planning

Women experiencing unmet need are those who, despite being fecund and sexually active, refrain from using any contraception method while expressing either the desire to cease childbearing or the wish to postpone the next child. The concept of unmet need underscores the disparity between women's reproductive intentions and their actual contraceptive practices. In the context of monitoring Millennium Development Goals (MDG) followed by SDGs, unmet need is quantified as a percentage, focusing on women within marital or consensual union, according to WHO criteria and EFHS, respectively, as depicts in Equation 1 (Motala et al., 2015; CAPMAS, 2022).

Unmet Need for Family Planning =

$$\frac{\text{Women of reproductive age (15–49) who are married and who have an unmet need for family planning}}{\text{Total number of women of reproductive age (15–49) who are married or in a union}} \times 100$$

Equation (1)

According to the Egyptian Family Health Survey (EFHS) 2021, the definition of unmet need for family planning includes: Women of childbearing age (15-49), who despite not using family planning methods, express the desire to delay the next childbirth (spacing) or stop childbearing altogether (limitation).

- Women are considered to have an unmet need for spacing if they are at risk of pregnancy, not using family planning, and either not wanting to conceive within the next two years or are uncertain about their pregnancy intentions. This also applies to women who are currently pregnant but consider the pregnancy unintended.
- Women are categorized as having an unmet need for limitation if they are at risk of pregnancy, not using family planning, and have no desire for additional children. This classification extends to women who are pregnant but do not want the pregnancy.

3. RESULTS: Impacts of Investing in Family Planning to End Unmet Need

3.1 Reduction in Unmet Need

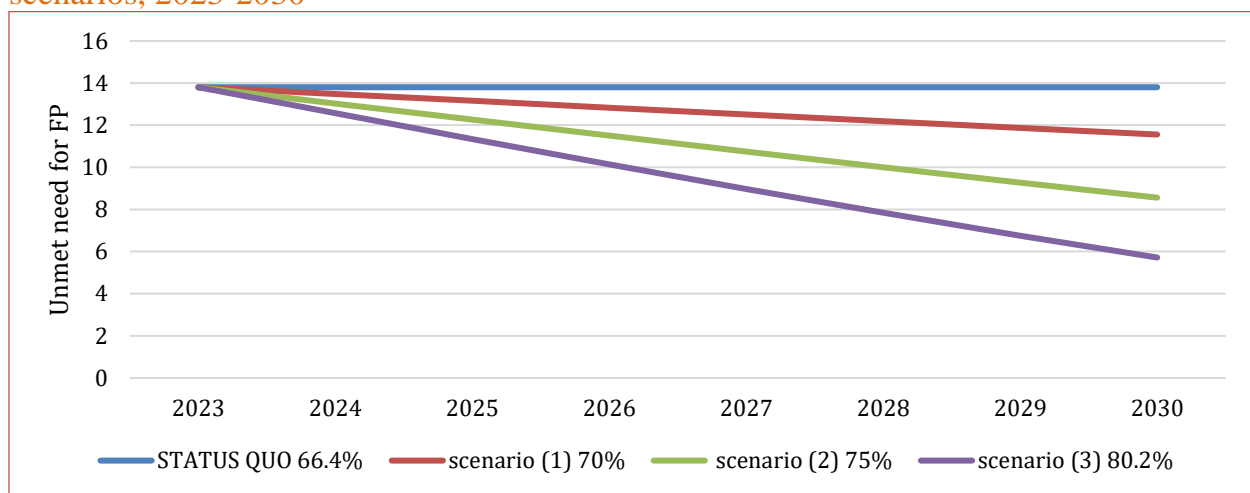
Enhancing contraceptive utilization, particularly the adoption of modern contraceptives, will effectively reduce the unmet need for family planning across all scenarios from 2023 to 2030. In scenario 1, the unmet need is projected to decline from 13.8% in 2023 to about 12.8% in 2026 and further to 11.6% in 2030. Scenario 2 anticipates a reduction in unmet need from 13.8% in 2023 to approximately 11.5% in 2026 and a notable decrease to 8.6% in 2030. When modern contraceptive prevalence (mCPR) is increased to 78.2% in 2030 under scenario 3, unmet need is expected to undergo a more substantial reduction, reaching around 5.7%. Figure 6 offers a visual representation of these trends. Figure 7 illustrates the projected trends of demand satisfied with modern methods for family planning under different scenarios from 2023 to 2030. These scenarios are informed by key metrics outlined in Table 3, which depict the expected changes in contraceptive prevalence rate (CPR), mCPR, total fertility rate, and unmet need for family planning across the specified years and scenarios.

Table 3: Scenarios results to model reduction in unmet need for family planning: 2023, 2026, and 2030.

Policy Target	Status Quo		Scenario (1) (70% CPR Target)		Scenario (2) (75% CPR Target)		Scenario (3) (80.2% CPR Target)	
	2023	2030	2026	2030	2026	2030	2026	2030
Contraceptive prevalence rate (CPR)	66.4	66.4	67.9	70.0	70.1	75.0	72.3	80.2
Modern contraceptive prevalence (mCPR)	64.7	64.7	66.2	68.3	68.3	73.1	70.5	78.2
Total fertility rate	2.85	2.85	2.69	2.48	2.48	2.0	2.25	1.44
Unmet need for family planning (% of women aged 15-49 years)	13.8	13.8	12.8	11.6	11.5	8.6	10.1	5.7
Total demand (CPR+ unmet need)	80.2	80.2	80.7	81.6	81.6	83.6	82.5	85.9
Demand satisfied (CPR/total demand)	82.8	82.8	84.1	85.8	85.9	89.8	87.7	93.3
Demand satisfied with modern methods (MCPR/total demand)	80.7	80.7	82.0	83.7	83.8	87.5	85.5	91.0

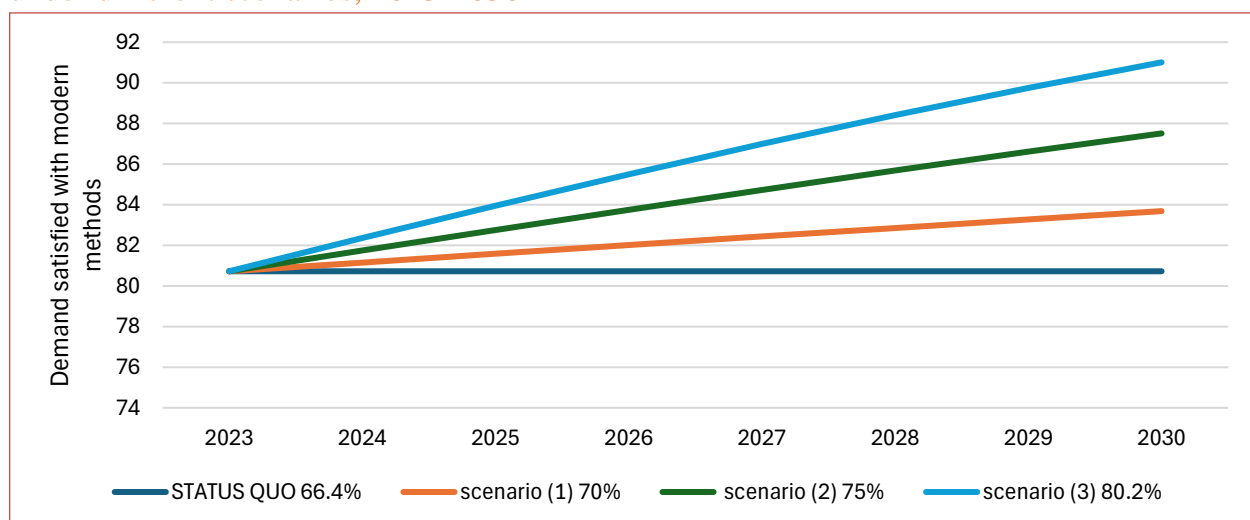
Figure 7 showcases the anticipated improvements in demand satisfied with modern methods, highlighting the impact of scaling up contraceptive use to address unmet needs effectively. For instance, in Scenario 2, which targets a CPR of 75% by 2030, the proportion of demand satisfied with modern methods is projected to increase from 82.0% in 2026 to 87.5% by 2030. Similarly, in Scenario 3, aiming for an 80.2% CPR target, the figure indicates a notable rise in mCPR from 85.5% in 2026 to 91.0% by 2030. These projections underscore the potential of strategic investments in family planning to drive significant improvements in meeting the reproductive health needs of women in Egypt.

Figure 6: Projected Percent trends in unmet need for family planning under different scenarios, 2023-2030



Source: Authors' Calculation

Figure 7: Projected trends of demand satisfied with modern methods for family planning under different scenarios, 2023-2030



Source: Authors' Calculation

3.2 Impact of Ending Unmet Need for Family Planning on Health Outcomes

This section delineates the outcomes associated with the increased use of modern contraceptives, focusing particularly on unintended pregnancies, and the number of unsafe abortions averted. The most significant impact of an increased mCPR is observed in the substantial reduction of unintended pregnancies. Between 2023 and 2030, the total number of unintended pregnancies is 11,578,250 in the status quo (for more details, see Table B4). Scaling up the contraceptive use will lead to additional increase in the unintended pregnancies averted to 623,635 in scenario (1), 1,466,227 in scenario (2), 2,290,425 in scenario (3) compared with the status quo scenario (for more details, see Table B4).

The increase in mCPR resulting in prevention of unsafe abortions ranging from 5,789,124 in the status quo to 4,643,912 under the ambitious scenario (3). The escalation in the prevention of unsafe abortions spans from 311,815 in scenario (1) to 733,113 in scenario (2) to 1,145,212 in scenario (3). For comprehensive details on the results for 2030 under the different scenarios, the reader is referred to Table 4, while the annual impact is shown in Table B5. It is important to emphasize that the increased use of modern contraceptives has a significant impact on reducing the number of unintended pregnancies compared to unsafe abortion. For instance, in scenario (2), where the Contraceptive Prevalence Rate (CPR) rises to 75%, there is a substantial decrease in unintended pregnancies reaching 1,466,227 cases between 2023 and 2030, compared to 733,113 cases of unsafe abortions under the same scenario.

Table 4: Projected impact of increased CPR and mCPR by 2030 with respect to the status quo

Impact (Results): 2023-2030	Scenario (1) (2030 Target 70% CPR)	Scenario (2) (2030 Target 75% CPR)	Scenario (3) (2030 Target 80.2% CPR)
Unintended pregnancies averted	623,635	1,466,227	2,290,425
Unsafe abortions averted	311,815	733,113	1,145,212

4. COSTS OF ENDING THE UNMET NEED FOR FAMILY PLANNING

In this section of the study, we delve into the details of the financial landscape and cost implications across different scenarios, employing the Spectrum classification. The costs associated with interventions to end unmet needs for family planning are categorized into four pivotal segments, shedding light on the intricate details of funding requirements and gaps.

1. **Drugs and supplies:** This category encapsulates the costs tied to pharmaceuticals and medical devices essential for the effective delivery of family planning services. Unsurprisingly, drugs and supply costs dominate the financial landscape across all scenarios, constituting nearly 43% of total intervention costs. This highlights the pivotal role of drugs and medical provisions in family planning interventions.
2. **Labor costs:** Encompassing expenses related to healthcare personnel, including nurses, physicians, and other health care providers, labor costs represent a substantial share of the financial outlay. In our analysis, labor costs occupy nearly 25% of total intervention costs. This underscores the human resource-intensive nature of family planning services and the financial commitments associated with skilled healthcare professionals.
3. **Capital costs:** encloses significant assets like buildings, equipment, and vehicles, capital costs contribute significantly to the financial requirements. In our examination, capital costs represent 24% of total intervention costs. This underscores the infrastructure and equipment demands associated with the expansion and enhancement of family planning programs.
4. **Other recurring costs:** This category encompasses recurrent expenditures such as transportation, office supplies, and training. While comprising a smaller share at 7% of total intervention costs, these recurring expenses are critical for the sustained and effective delivery of family planning services.

It is important to emphasize that incremental costs represent the additional expenses required to meet the contraception prevalence objectives. These incremental costs, spanning across drugs and supplies, labor, capital, and other recurring expenses, collectively constitute the total intervention costs. In essence, the incremental costs encapsulate the financial commitments over and above the existing baseline, providing a clear understanding of the additional resources required to meet the targeted contraception prevalence objectives. The total intervention costs, thereby, serve as a comprehensive amalgamation of these incremental expenses, offering a holistic perspective on the financial landscape associated with advancing family planning initiatives.

4.1 Total Family Planning (FP) Interventions Costs Invested Under Different Scenarios

The total intervention costs with no discounting included all the costs of family planning, pregnancy, childbirth, breastfeeding, vaccines, etc. In the total costs for interventions invested under different scenarios, the drugs and supply costs constitute the largest share of the total intervention costs in all scenarios, followed by labor costs, capital costs, and other recurrent costs. The results demonstrate that for all scenarios, drugs and supply costs represent almost 43 % of total intervention costs, followed by labor costs which represent almost 25 %, capital costs which represent 24 %, and finally other recurrent costs which represent 7 % (See Table 5).

Table 5: Total family planning (FP) intervention costs under different scenarios, 2023-2030
(in billion EGP)

Item	Status Quo 2030 Target 66.4%	Scenario (1) (2030 Target 70% CPR)	Scenario (2) (2030 Target 75% CPR)	Scenario (3) (2030 Target 80.2% CPR)
Drugs and supply costs	4.5	4.6	4.8	5
Labor costs	2.6	2.7	2.8	3
Other recurrent costs	0.72	0.76	0.8	0.83
Capital costs	2.4	2.5	2.7	2.8
Total intervention costs	10.3	10.6	11.1	11.6

Table (6) depicts the comprehensive cost analysis of family planning interventions across three distinct scenarios in comparison to the status quo. The total costs are broken down into various categories: drugs and supply costs, labor costs, other recurrent costs, and capital costs. In Scenario (1), which targets a 2030 contraceptive prevalence rate (CPR) of 70%, the additional total intervention cost needed is approximately 345 million EGP. This includes 140 million EGP for drugs and supply costs, 97 million EGP for labor costs, 25 million EGP for other recurrent costs, and 83 million EGP capital costs. In Scenario (2), aiming for a 2030 CPR of 75%, the addition total intervention cost amounts to 825 million EGP. This includes 334 million EGP for drugs and supply costs, 232 million EGP for labor costs, 60 million EGP for other recurrent costs, and 199 million EGP for capital costs. Scenario (3) sets a more ambitious target of achieving a 2030 CPR of 80.2%. This requires an additional 1.3 billion EGP to the total intervention cost of

the status quo. It is distributed for drugs and supply costs, labor costs, other recurrent costs, and capital costs as 535, 372, 96, and 320 million EGP, respectively.

Overall, Table (6) illustrates the increasing costs associated with higher targets for contraceptive prevalence rates, reflecting the additional resources required to expand family planning services and meet the specified goals.

Table 6: Incremental costs of family planning difference as compared to the Status Quo
(in million EGP)

Scenarios	Scenario (1) (2030 Target 70% CPR)	Scenario (2) (2030 Target 75% CPR)	Scenario (3) (2030 Target 80.2% CPR)
Drugs and supply costs	140	334	535
Labor costs	97	232	372
Other recurrent costs	25	60	96
Capital costs	83	199	320
Total intervention costs	345	825	1323

4.2 The Incremental Cost of Family Planning

Incremental costs included the family planning commodities\ methods (the family planning incremental costs only). When examining the estimated incremental costs associated with family planning, there is a consistent rise in all four categories of expenses across each scenario over time. Labor costs take the lead as the most significant contributor to the incremental costs of family planning, followed by drugs and supply costs, capital costs, and other recurrent costs as illustrated Figures 8 to 11. In the status quo scenario (66.4% CPR target), the total intervention cost will increase by 82.81% from 2024 to 2030. Comparatively, in scenario 1 (70% CPR) the total intervention cost sees a rise of 88.21% over the same period. In scenario 2 (75% CPR), the increase is more substantial at 113.40%, and in the ultimate scenario (80.2% CPR) it surges by 136.19%. In contrast to the status quo scenario, the divergence in the various scenarios underscores an expansion in the array of modern contraceptive methods provided free of charge by the Ministry of Health and Population, coupled with an extension of free contraceptive services to all eligible users. Consequently, this necessitates a substantial investment in family planning for Egypt to accommodate the escalating costs associated with these interventions.

Figure 8: Estimate of incremental cost by FP cost category (in EGP) commodity\ method, STATUS QUO, 2024-2030

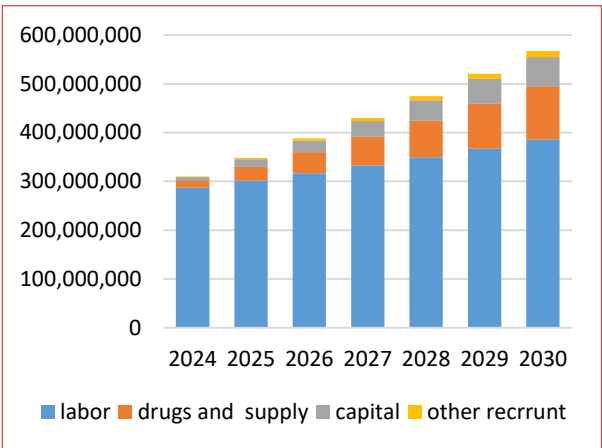


Figure 9: Estimate of incremental cost by FP cost category (in EGP), commodity\ method, Scenario (1), 2024-2030

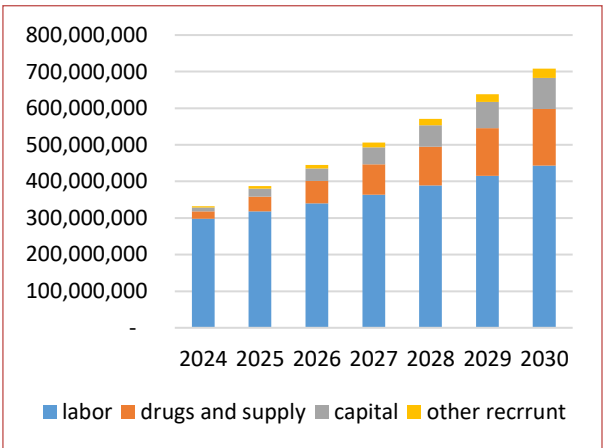


Figure 10: Estimate of incremental cost by FP cost category (in EGP), commodity\ method, Scenario (2), 2024-2030

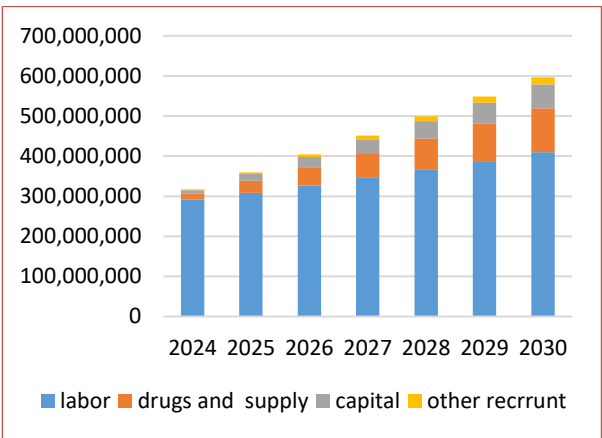
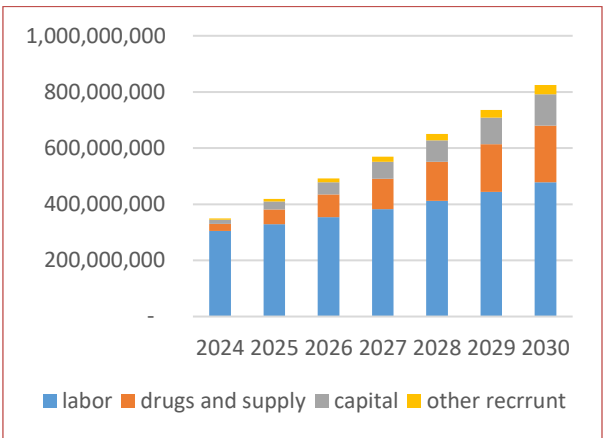


Figure 11: Estimate of incremental cost by FP cost category (in EGP), commodity\ method, Scenario (3), 2024-2030



4.3 Incremental Costs by Type of Method/Commodity Delivery

Figures (12) to (15) illustrates the cost distribution for different contraceptive methods over the years. Each bar represents a contraceptive method, and the segments within each bar depict the incremental cost categories: drugs and supplies, labor, capital, and other recurrent costs. Overall, the cost on labor appears to be the highest across all contraceptive methods, years, and scenarios, indicating significant personnel costs. Cost of drugs and supplies shows variability across contraceptive methods, years, and scenarios, reflecting the change in method mix and suggesting fluctuations in pharmaceutical expenses. The prevailing cost of the pill-standard daily regime is anticipated to be notably high by year 2030 across all scenarios, although the methods mix determined by the country indicates a 2% decrease in pills (see Table 2). This is due to the frequent and regular use of the pill-standard daily regime. As the costs associated with other family planning methods show an upward trajectory over time, the share of the pill-standard daily regime also becomes significant reflecting why the country wants to further reduce the pill usage in to cut expenses. In the first scenario (Figure 13) the cost of the pill-standard daily regime in 2030 is projected to increase by 42.89% compared to the status quo scenario (Figure 12). Furthermore, this cost is expected to surge by 102.46% and 164.41% for scenarios 2 and 3 (Figures 14 and 15), respectively. Following closely, the cost of the IUD - Copper-T 380-A IUD (10 years) is forecasted to experience a rise of 43.99% in the first scenario for the year 2030 compared to the status quo scenario. Subsequently, this cost is projected to escalate by 105.51% and 170.01% for scenarios 2 and 3, respectively. In terms of resource implications, this indicates that the financial resources required would ascend in accordance with the prevalence patterns of different methods, except in the case of the pill-standard daily regime representing a more substantial portion of the overall costs. Although IUDs represent the high usage, the cost of tablets is the most significant due to the regular use of pills.

Capital expenditure remains relatively stable over the years for most contraceptive methods, with some fluctuations observed. The “Other recurrent” category represents miscellaneous costs not categorized as drugs, labor, or capital, and it shows relatively minor fluctuations over the years. The prevalence of IUD is anticipated to be notably high by year 2030 across all the scenarios. Overall, this section provides insights into the incremental costs’ patterns associated with different contraceptive methods and highlights the distribution of costs across drugs, labor, capital, and other recurrent categories over the years and across all scenarios. For a detailed breakdown of each cost category, please refer to Appendix B.

Figure 12: Incremental Costs by Family Planning Cost Categories (in EGP), by Type of Method: Status Quo



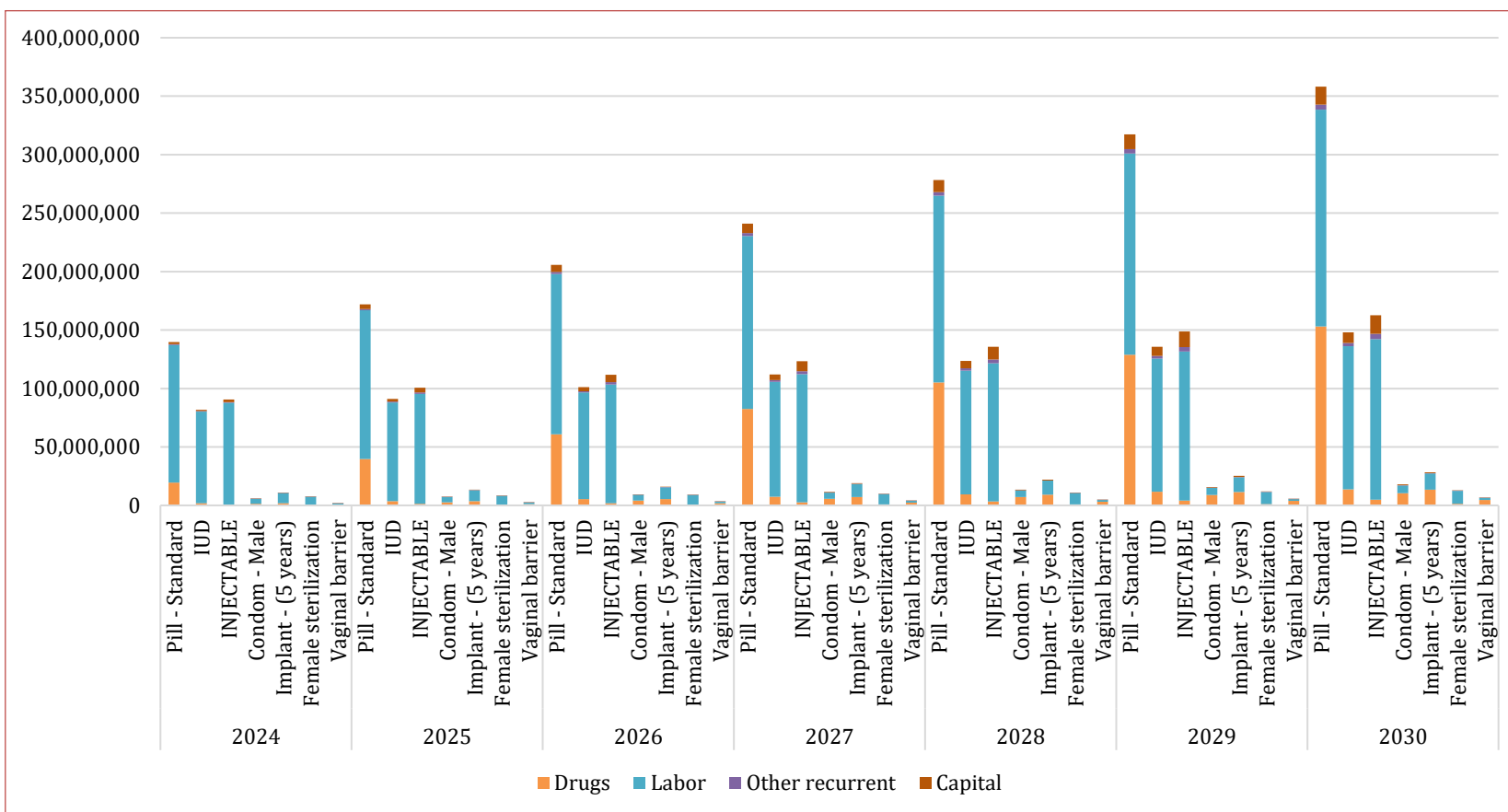
Figure 13: Incremental Costs by Family Planning Cost Categories (in EGP), by Type of Method: Scenario (1)



Figure 14: Incremental Costs by Family Planning Cost Categories (in EGP), by Type of Method: Scenario (2)



Figure 15: Incremental Costs by Family Planning Cost Categories (in EGP), by Type of Method\ Commodity: Scenario 3



4.4 Public Financing Gap for Family Planning

The lack of comprehensive national data pertaining to the cost of family planning methods and the actual expenditures incurred in family planning programs poses a limitation. The investment case relied on unit costs provided by the MOHP for selected methods, serving as the basis to assess the funding requirements to achieve each of the projection scenarios. To determine the funding gap to reduce the unmet needs in family planning, the investment case first uses total family planning intervention costs. Secondly, the investment case employed the percentage of the family planning budget allocated to programs during the fiscal year 2023/2024, amounting to 0.0076% of the national budget of Egypt. The investment case assumes an increase of the allocated budget assigned by the same percentages, mirroring the annual increase in incremental costs. Even with increased targets for CPR and mCPR, the estimates of required funding reveal a significant gap, averaging about 69.5% in public funding across all scenarios from 2023 to 2030. The estimates in Table 7 indicate a pronounced shortfall in public funding of 69.43%, 70.27%, and 68.96% over the specified period for scenario 1, scenario 2, and scenario 3, respectively. The incorporation of donor and private funding, and out of pocket expenditure in the calculations could potentially alleviate this funding gap to some extent. Looking at the substantial resource needs outlined in these scenarios, seeking additional support from international partners and diversifying funding sources can alleviate the immediate strain on government resources. By tapping into external funding opportunities, ensuring adequate financial backing to effectively pursue NPS objectives without overburdening domestic resources. This approach not only facilitates the attainment of the desired goals but also promotes financial sustainability and resilience in government efforts.

Table 7: Public financing gap for family planning to end unmet need, 2023-2030

(in billion EGP)

Scenarios	Scenario 1 (2030 Target: 70% CPR)	Scenario 2 (2030 Target: 75% CPR)	Scenario 3 (2030 Target: 80.2% CPR)
Total estimate funding required, for total interventions 2023-2030 (A)	10.6	11.1	11.6
Projected public budget allocation for family planning (B)	3.24	3.3	3.6
Financing Gap (C) = [(A) – (B)]	7.36	7.8	8
Financing Gap = (C)/(A) (%)	69.43%	70.27%	68.96%

5. CONCLUSION AND WAY FORWARD

In conclusion, this study underscores the transformative potential of family planning in shaping health and developmental outcomes, notably contributing to the reduction of unintended pregnancies, while concurrently fostering enhanced agency, bodily autonomy for women, and the advancement of gender equality. The investment case rigorously advocates for heightened financial commitment to family planning, with a particular emphasis on addressing unmet needs in Egypt. The audacious objective, encapsulated by the aspiration to achieve a Contraceptive Prevalence Rate (CPR) of 80.2% and a modern Contraceptive Prevalence Rate (mCPR) of 78.2% by 2030, stands as a visionary pursuit with profound implications for societal well-being.

Employing a strategic modeling approach, the study outlined three distinct scenarios, each portraying varied CPR and mCPR trajectories. The resulting analysis shed light on the consequential health outcomes, accentuating reductions in fertility rates and unmet family planning needs. Importantly, the study meticulously quantified the resource requisites imperative to elevate family planning interventions to meet these diverse benchmarks.

The study offers a comprehensive financial analysis, providing a detailed roadmap for understanding the resource requirements, cost structures, and potential funding gaps associated with different scenarios addressing unmet needs for family planning. As family planning programs play a crucial role in achieving broader public health and development goals, addressing these financial considerations is paramount for ensuring the successful implementation and sustainability of these initiatives. Notably, the investment case resoundingly affirms that, across all three scenarios, the augmentation of CPR and the widespread adoption of modern contraceptive methods emerge as pivotal contributors to the preservation of lives. This encompasses the prevention of unintended pregnancies, and unsafe abortions, mitigating the potential loss of productive capacity and thereby charting a course towards a more resilient and equitable future for Egypt.

This study represents a basis for the team for extending the current study to include cost benefit analysis and future studies in different health areas such as maternal and child health interventions, and gender-based violence. The insights assembled from this study pave the way for a strategic and impactful approach to advancing family planning initiatives in Egypt. The transformative potential uncovered underscores the urgency and importance of intensive efforts in this domain. The following recommendations outline the way forward:

- Strategic implementation and capacity building: it is of interest to develop and implement strategic initiatives to enhance the capacity of healthcare providers in delivering a quality method mix. There is a value added in integrating comprehensive family

planning training programs within the broader healthcare framework to ensure sustained impact.

- Data enhancement for informed decision-making: Investing in systems for improved data generation to facilitate evidence-based decision-making for policymakers and establish robust monitoring and evaluation mechanisms to track the progress of family planning programs and their impact on health outcomes.
- Financial commitment and resource allocation: Advocacy efforts to increase financial commitment to family planning interventions, emphasizing addressing unmet needs in Egypt requires work towards securing funding from diverse resources including international partners.
- Continued research and adaptation: Encourage further research by implementing investment cases on reducing maternal mortality and gender-based violence including child marriage and female genital mutilation. And adapting the implementation plan based on emerging research findings, ensuring that interventions remain responsive to evolving needs and challenges.
- Collaborative partnerships: Foster collaboration between government entities, non-governmental organizations, international organizations, and the private sector to leverage collective expertise and resources.

By adopting these recommendations, Egypt can further drive forward its family planning agenda, fostering a future marked by improved health outcomes, gender equality, and societal resilience. Family planning could be seen as a cornerstone for broader public health and development objectives, setting the stage for a healthier, more equitable, and sustainable future for the country.

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APPENDIX A: List of Reference Group Members

Entity	Concerned Person
Ministry of Health and Population (representatives from the Family Planning Sector, Primary Health Sector, Universal Health Coverage Department and the National Population Council)	Dr. Soad Abdel-Mageed, Head of the Central Administration for Planning and Monitoring
Ministry of Finance	Mr. Ahmed Said Mamoon, Director at the State Budget Sector Dr. Dalia Fouad Mohamed, Director of the General Administration of Monitoring and Evaluation in the Central Administration for Strategic Management and Supervisor of the Equal Opportunities Unit
Central Agency for Public Mobilization and Statistics	Dr. Heba Megahed Ahmed, Population Statistics Sector
Ministry of Planning and Economic Development	Dr. Amira Tawadros, Executive Director of the Demographic Center
United Nations Population Fund (UNFPA) Arab States Regional Office	Professor Hala Youssef, Regional Advisor for Sexual and Reproductive Health
United Nations Population Fund (UNFPA) Egypt Country Office	Ms. Frederika Meijer, UNFPA Representative Dr. Tej Ram Jat, Programme Specialist Reproductive Health/Family Planning Ms. Dawlat Shaarawy, Program Analyst, Population and Development Dr. Maha Mowafy, Programme Specialist, RH
World Health Organization (WHO) office in Egypt	Dr. Naema El-Gasir, Egypt Country Office Representative of the WHO in Egypt
Experts	Professor Maha Rabat, Former Minister of Health and Population Professor Fatma El-Zanati, General Supervisor of the Egyptian Household Health Survey, and Head of the Global Health Surveys Program

APPENDIX B

Table B.1: Scenario for CPR, mCPR, fertility rate, and unmet need for FP, STATUS QUO

Year	2023	2024	2025	2026	2027	2028	2029	2030
Contraceptive prevalence (CPR)	66.4	66.4	66.4	66.4	66.4	66.4	66.4	66.4
Modern contraceptive prevalence (mCPR)	64.7	64.7	64.7	64.7	64.7	64.7	64.7	64.7
Total fertility rate	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
Percent unmet need	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8

Table B.2: Scenarios for CPR, mCPR, fertility rate, and unmet need for FP: Alternative Scenarios, 2023-2030

Year	2023	2024	2025	2026	2027	2028	2029	2030
Scenario 1 (70% CPR)								
Contraceptive prevalence (CPR)	66.4	66.9	67.4	67.9	68.5	69.0	69.5	70.0
Modern contraceptive prevalence (mCPR)	64.7	65.2	65.7	66.2	66.7	67.2	67.7	68.3
Total fertility rate	2.85	2.80	2.75	2.69	2.64	2.59	2.53	2.48
Percent unmet need all need	13.8	13.5	13.2	12.8	12.5	12.2	11.9	11.6
Scenario 2 (75% CPR)								
Contraceptive prevalence (CPR)	66.4	67.6	68.9	70.1	71.3	72.5	73.8	75.0
Modern contraceptive prevalence (mCPR)	64.7	65.9	67.1	68.3	69.5	70.7	71.9	73.1
Total fertility rate	2.85	2.73	2.60	2.48	2.35	2.22	2.10	1.97
Percent unmet need	13.8	13.0	12.3	11.5	10.8	10.0	9.3	8.6
Scenario 3 (80.2% CPR)								
Contraceptive prevalence (CPR)	66.4	68.4	70.3	72.3	74.3	76.3	78.2	80.2
Modern contraceptive prevalence (mCPR)	64.7	66.7	68.6	70.5	72.4	74.4	76.3	78.2
Total fertility rate	2.85	2.66	2.46	2.25	2.05	1.85	1.64	1.44
Percent unmet need	13.8	12.6	11.3	10.1	9.0	7.8	6.8	5.7

Figure B.1: Trend in contraceptive prevalence rate (CPR) under different scenarios, 2023-2030

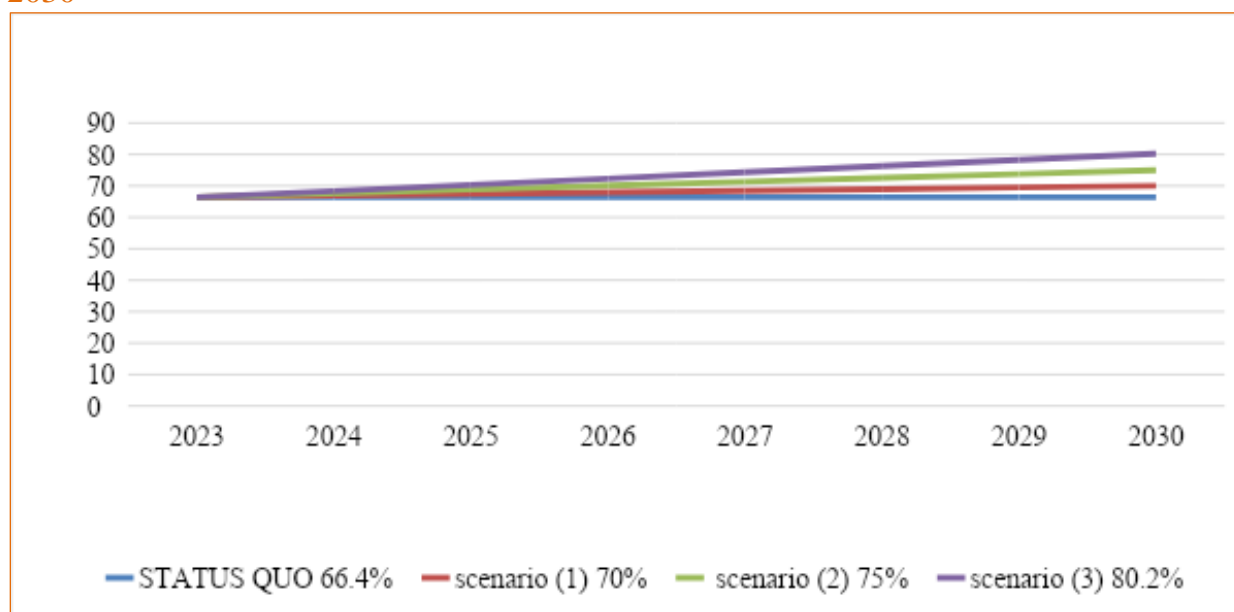


Figure B.2: Trend in modern contraceptive prevalence rate (mCPR) under different scenarios, 2023-2030

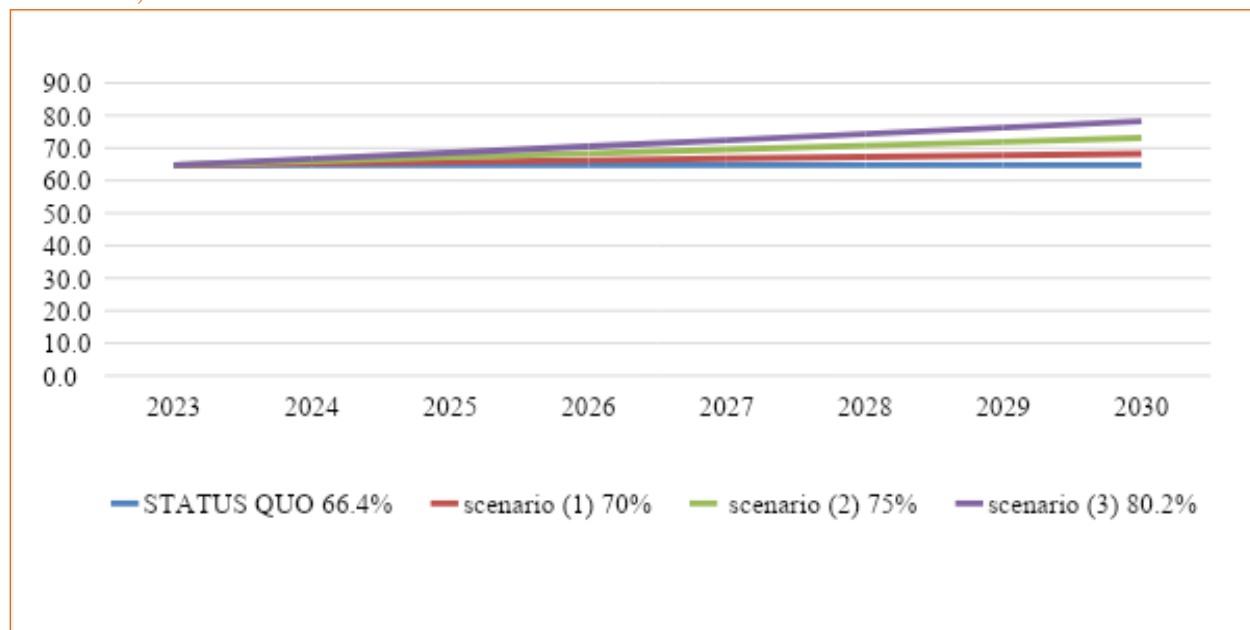


Table B.3: Projected use of contraceptives: percentage of users by method, 2023–2030

Method mix %	2023	2024	2025	2026	2027	2028	2029	2030
Condom								
Male condom	1.2	1.1	1.1	1.0	1.0	0.9	0.9	0.8
Sterilization								
Female sterilization	3	2.9	2.7	2.6	2.4	2.3	2.1	2
Injectable								
3 months (Depo Provera)	15.3	15.2	15.1	15.0	14.8	14.7	14.6	14.5
Implant								
Implanon (3 years) & Jadelle (5 years)	3.9	3.9	3.9	3.9	4.0	4.0	4.0	4
IUD								
IUD	44.4	45.4	46.4	47.4	48.4	49.4	50.4	51.4
Pill								
Standard Daily regimen	29.4	29.1	28.7	28.4	28.0	27.7	27.3	27
Barrier methods								
Vaginal barrier	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Traditional								
Withdrawal	0.8	0.7	0.6	0.5	0.3	0.2	0.1	0
Periodic abstinence	0.5	0.4	0.4	0.3	0.2	0.1	0.1	0
Traditional (not specified)	1.2	1.0	0.9	0.7	0.5	0.3	0.2	0
Total	100	100	100	100	100	100	100	100

Table B.4: Projected impact of increased CPR and mCPR by 2030

Impact (Results): 2023-2030	Scenario 1 (70% CPR)	Scenario 2 (75% CPR)	Scenario 3 (80.2% CPR)
Unintended pregnancies	10,954,615	10,112,023	9,287,825
Unsafe abortions	5,477,309	5,056,011	4,643,912

Table B.5: Impact of increasing CPR on unsafe abortions and unintended pregnancies under different scenarios, 2023–2030 (The targets of 66.4%, 70%, 75%, and 80% are for CPR not mCPR)

Year	2023	2024	2025	2026	2027	2028	2029	2030	Total
Status Quo (66.4% CPR)									
Number of unintended pregnancies	1,352,842	1,377,959	1,403,815	1,430,606	1,458,594	1,487,823	1,518,005	1,548,606	11,578,250
Number of unsafe abortions	676,421	688,979	701,907	715,303	729,297	743,911	759,003	774,303	5,789,124
Scenario 1 (70% CPR)									
Number of unintended pregnancies	1,352,842	1,357,247	1,361,654	1,366,227	1,371,185	1,376,530	1,381,960	1,386,970	10,954,615
Number of unsafe abortions averted due to	676,421	678,624	680,827	683,114	685,593	688,265	690,980	693,485	5,477,309
Scenario 2 (75% CPR)									
Number of unintended pregnancies	1,352,842	1,328,547	1,303,440	1,277,779	1,251,860	1,225,782	1,199,387	1,172,386	10,112,023
Number of unsafe abortions	676,421	678,624	680,827	683,114	685,593	688,265	690,980	693,485	5,056,011
Scenario 3 (80.2% CPR)									
Number of unintended pregnancies	1,352,842	1,298,806	1,243,539	1,187,732	1,132,131	1,077,323	1,023,726	971,726	9,287,825
Number of unsafe abortions	676,421	649,403	621,770	593,866	566,065	538,661	511,863	485,863	4,643,912

Table B.6: Incremental costs of family planning for the different CPR scenarios (in EGP), 2024-2030

	2024	2025	2026	2027	2028	2029	2030	Total
Status quo (66.4% CPR)								
Labor	287,256,679	301,485,984	316,560,143	332,597,716	349,609,389	367,494,662	386,099,747	2,341,104,318

	2024	2025	2026	2027	2028	2029	2030	Total
Drugs and supply	13,875,171	28,222,910	43,128,705	58,715,365	74,975,151	91,744,715	108,771,494	419,433,510
Capital	7,637,746	15,549,660	23,783,069	32,410,320	41,410,445	50,667,374	60,022,600	231,481,214
Other recurrent	1,584,998	3,230,623	4,944,990	6,747,588	8,629,693	10,555,718	12,479,343	48,172,953
Total intervention costs	310,354,594	348,489,177	388,416,907	430,470,989	474,624,678	520,462,468	567,373,183	3,040,191,996
Scenario 1 (70% CPR)								
Labor	291,794,548	308,582,701	326,461,980	345,574,613	365,955,263	387,521,560	410,131,870	2,436,022,535
Drugs and supply	14,800,844	30,085,818	45,785,085	61,862,663	78,093,243	94,003,883	109,009,073	433,640,608
Capital	8,145,301	16,570,761	25,217,383	34,063,881	42,960,164	51,605,263	59,650,866	238,213,618
Other recurrent	2,272,860	4,627,800	7,078,910	9,647,889	12,327,909	15,083,517	17,866,863	68,905,748
Total intervention costs	317,013,553	359,867,080	404,543,358	451,149,046	499,336,579	548,214,223	596,658,672	3,176,782,509
Scenario 2 (75% CPR)								
Labor	298,097,029	318,439,315	340,214,415	363,598,252	388,657,801	415,336,831	443,509,739	2,567,853,381
Drugs and supply	19,709,796	40,046,996	61,172,007	83,225,832	106,215,816	129,984,040	154,268,714	594,623,201
Capital	10,889,434	22,110,597	33,780,842	45,983,402	58,705,386	71,832,277	85,198,055	328,499,992
Other recurrent	3,241,904	6,582,047	10,056,370	13,689,836	17,478,017	21,385,870	25,363,223	97,797,266
Total intervention costs	331,938,162	387,178,955	445,223,634	506,497,322	571,057,019	638,539,017	708,339,731	3,588,773,840
Scenario 3 (80.2% CPR)								
Labor	304,651,683	328,690,215	354,517,063	382,342,601	412,268,439	444,264,654	478,222,780	2,704,957,435
Drugs and supply	25,829,976	52,396,169	79,989,268	108,768,544	138,758,148	169,804,924	201,637,933	777,184,962
Capital	14,323,575	28,986,316	44,230,949	60,151,544	76,744,436	93,896,047	111,432,886	429,765,753
Other recurrent	4,266,126	8,630,870	13,169,356	17,909,802	22,850,524	27,956,698	33,175,847	127,959,222
Total intervention costs	349,071,360	418,703,570	491,906,636	569,172,490	650,621,547	735,922,323	824,469,446	4,039,867,372

Note B.1: Total Incremental Cost for Drugs and Supply

While the total incremental costs for scaling up availability of drugs and supply are set to zero in all the scenarios, the total incremental costs associated with pill – standard daily regimen by 2030 across the scenarios is the highest given the anticipated method mix. The costs of other family planning methods also increase over time, the proportion for pill – standard daily regimen is significant. The incremental costs associated with vaginal barrier method and female sterilization are almost non-existent. The prevalence of IUD is anticipated to be notably high by year 2030 across all the scenarios. However, the cost of the pill-standard daily regime is anticipated to be notably high by year 2030 across all scenarios, due to the regular use of pills. Although IUDs represent the highest usage. As the costs associated with other family planning methods show an upward trajectory over time, the share of the pill-standard daily regime costs becomes significant. In the first scenario (Figure B.4) the cost of the pill-standard daily regime in 2030 is projected to increase by 42.89% compared to the status quo scenario (Figure B.3). Furthermore, this cost is expected to surge by 102.46% and 164.41% for scenarios 2 and 3 (Figures B.5 and B.6), respectively. Following closely, the cost of the IUD - Copper-T 380-A IUD (10 years) is forecasted to experience a rise of 43.99% in the first scenario for the year 2030 compared to the status quo scenario. Subsequently, this cost is projected to escalate by 105.51% and 170.01% for scenarios 2 and 3, respectively. In terms of resource implications, this indicates that the financial resources required would ascend in accordance with the prevalence patterns of different methods, with the pill-standard daily regime representing a more substantial portion of the overall costs.

Figure B.3: Incremental Costs for Drugs and Supply (in EGP), by Type of Method/Commodity Delivery: STATUS QUO (66.4% CPR)

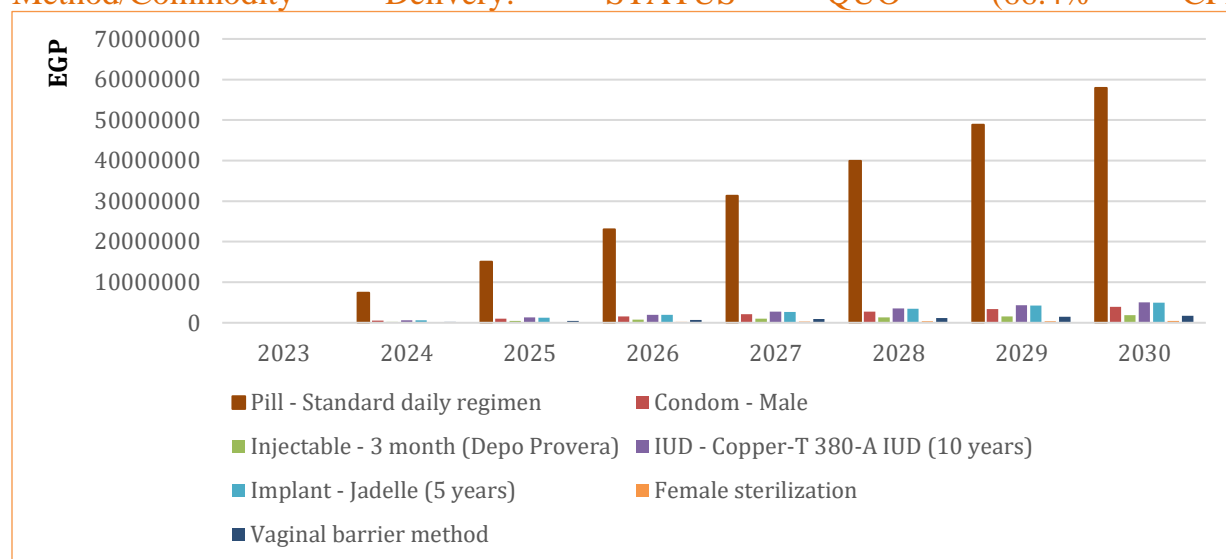


Figure B.4: Incremental Costs for Drugs and Supply (in EGP), by Type of Method/Commodity Delivery: Scenario 1(70%)

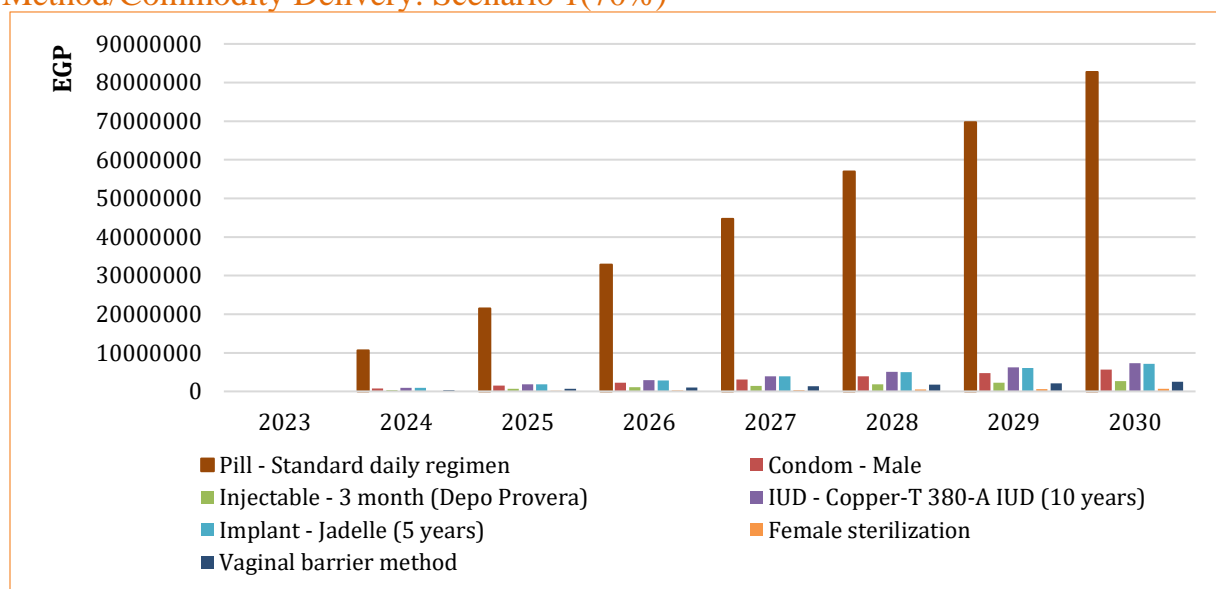


Figure B.5: Incremental Costs for Drugs and Supply (in EGP), by Type of Method/Commodity Delivery: Scenario 2 (75% CPR)

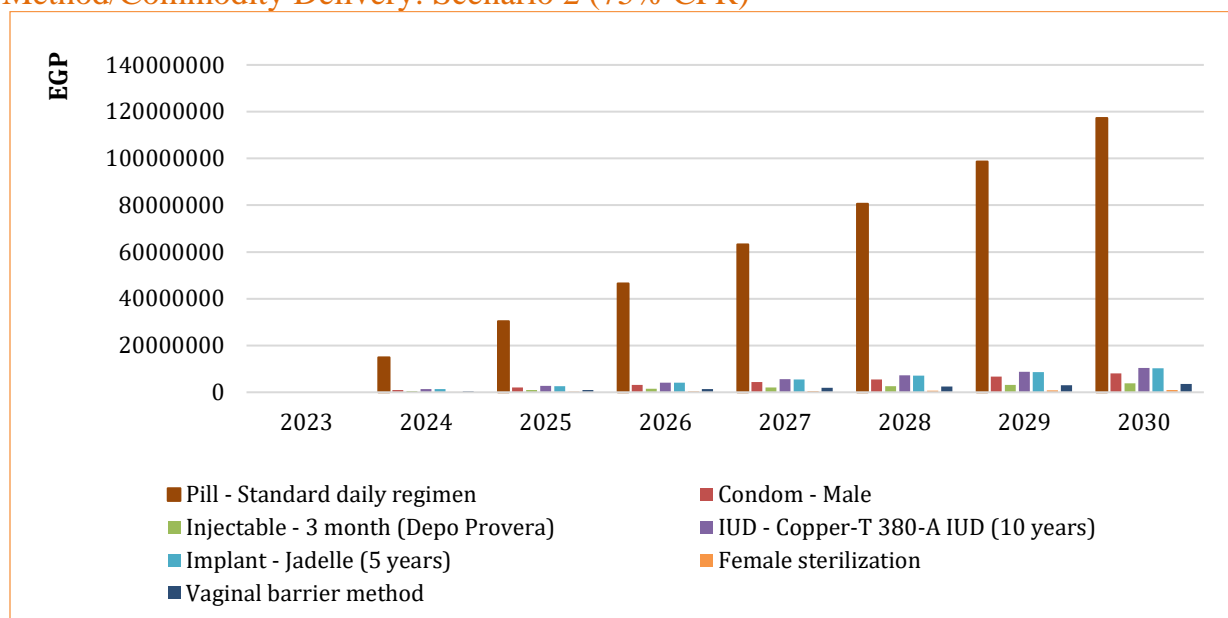
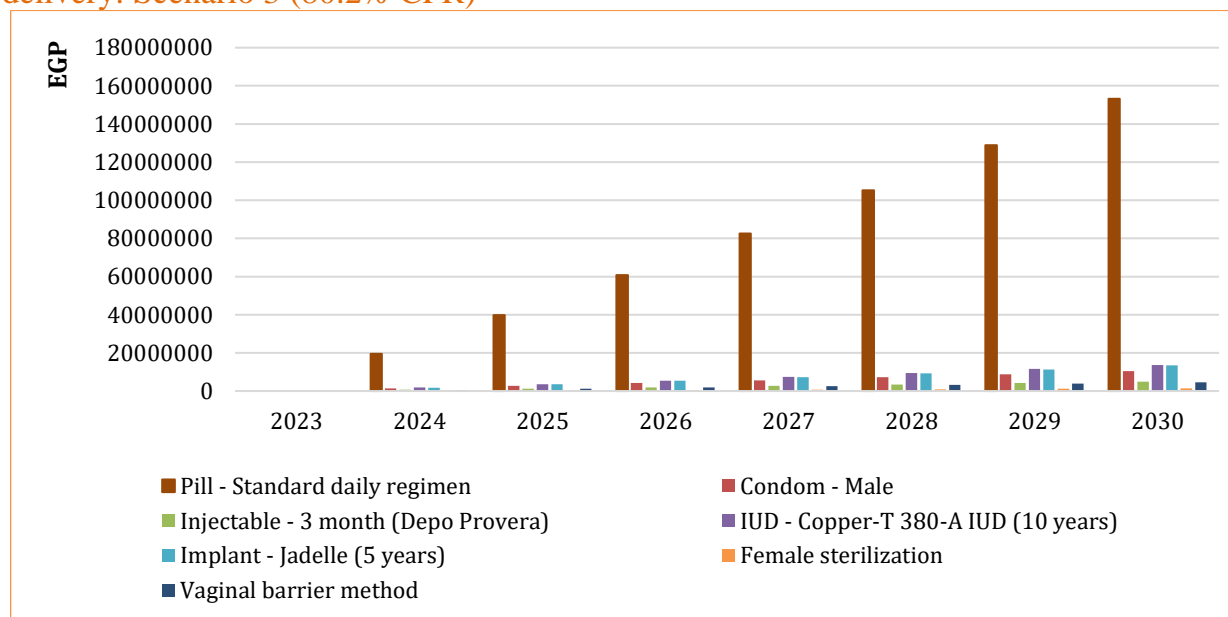


Figure B.6: incremental costs for drugs and supply (in EGP), by type of method/commodity delivery: Scenario 3 (80.2% CPR)



Note B.2: Incremental Costs for Labor

Relative to other cost categories, labor costs also constitute a significant portion of total incremental costs. The incremental labor costs associated with condom-male, vaginal barrier method and female sterilization are negligible.

Figure B.7: Incremental Costs for Labor (in EGP), by Type of Method/Commodity Delivery: STATUS QUO (66.4% CPR)

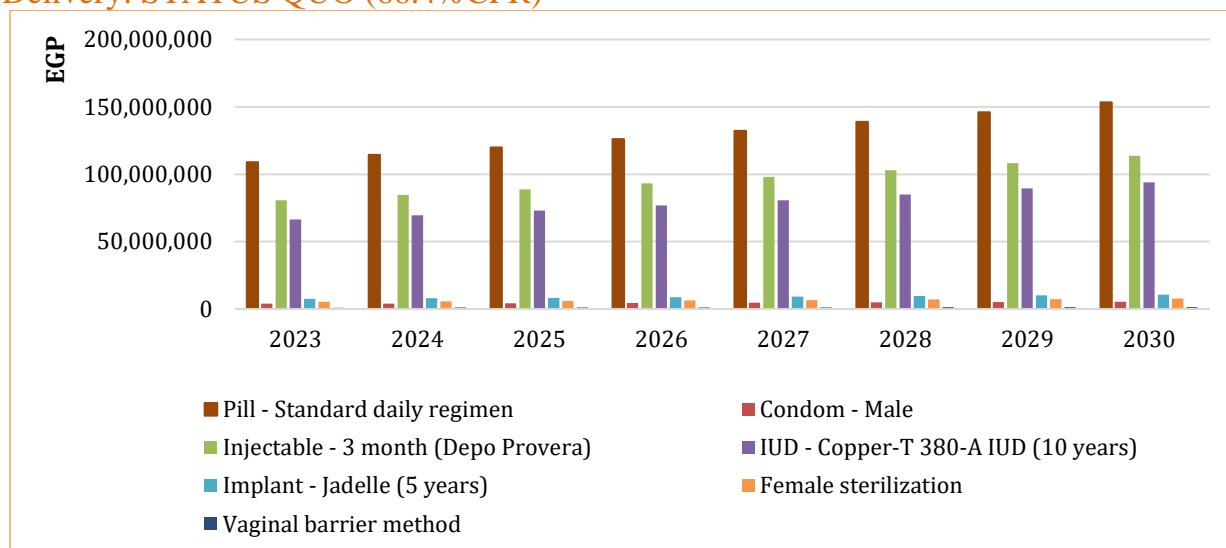


Figure B.8: Incremental Costs for Labor (in EGP), by Type of Method/Commodity Delivery: Scenario1 (70% CPR)

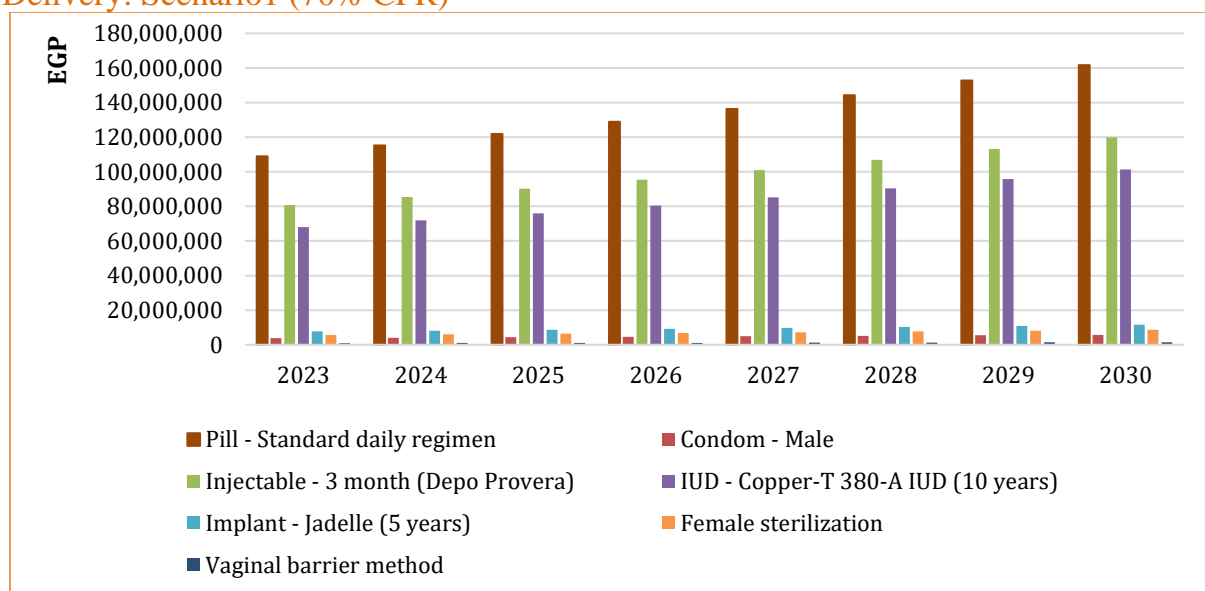


Figure B.9: Incremental Costs for Labor (in EGP), by Type of Method/Commodity Delivery: Scenario2 (75% CPR)

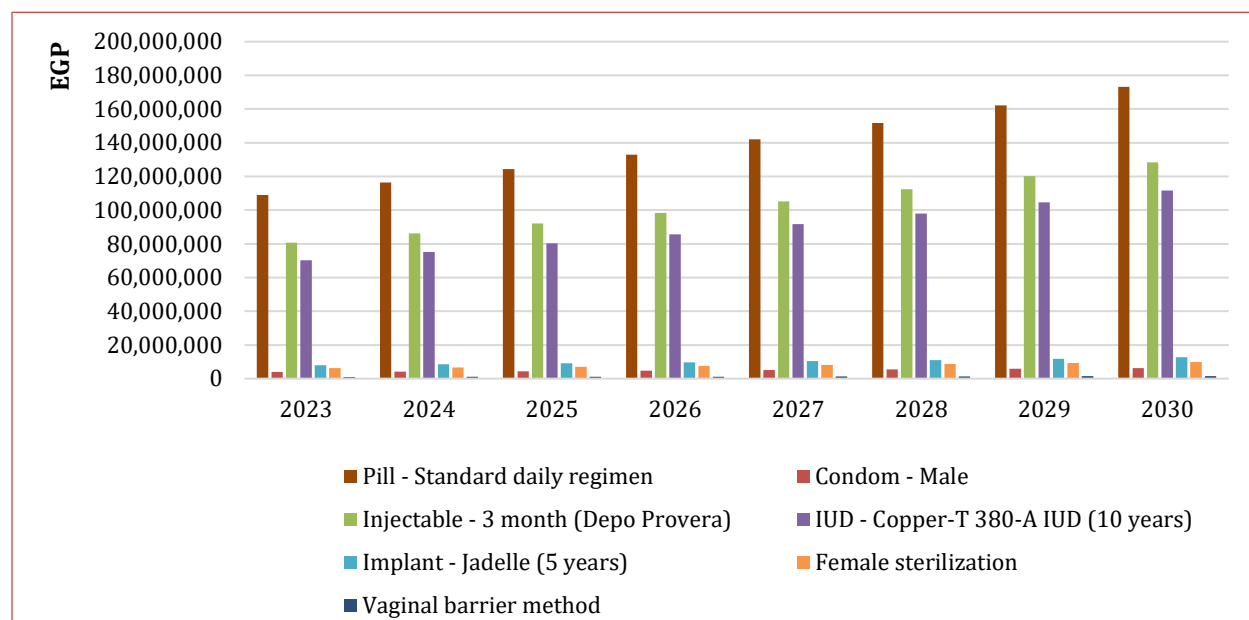
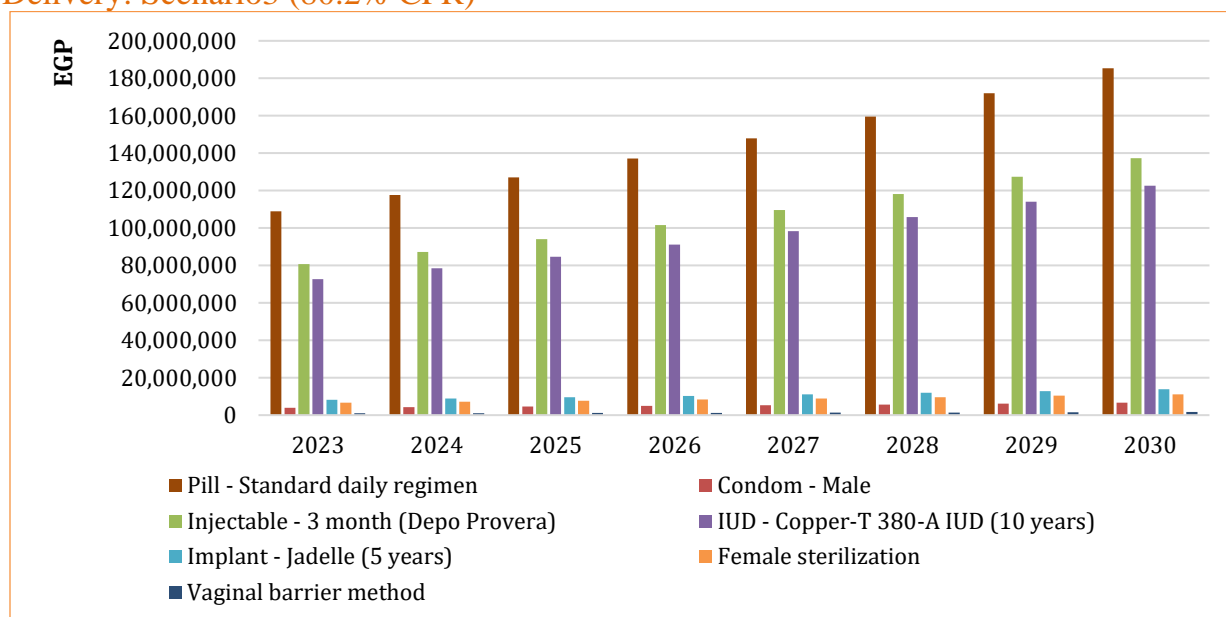


Figure B.10: Incremental Costs for Labor (in EGP), by Type of Method/Commodity Delivery: Scenario3 (80.2% CPR)



Note B.3: Incremental Cost for Other Recurrent Costs

While incremental recurrent costs associated with injectable-3month (Depo Provera) is greatest than other family planning methods compared to other drugs and supply costs category, there is a very small gap between the costs associated with injectable-3 month (Depo Provera) and pill - standard daily regimen, the next highest in recurrent costs. This applies to all four scenarios and over time.

Figure B.11: Incremental Costs for Other Recurrent (in EGP), by Type of Method/Commodity Delivery: STATUS QUO (66.4% CPR)

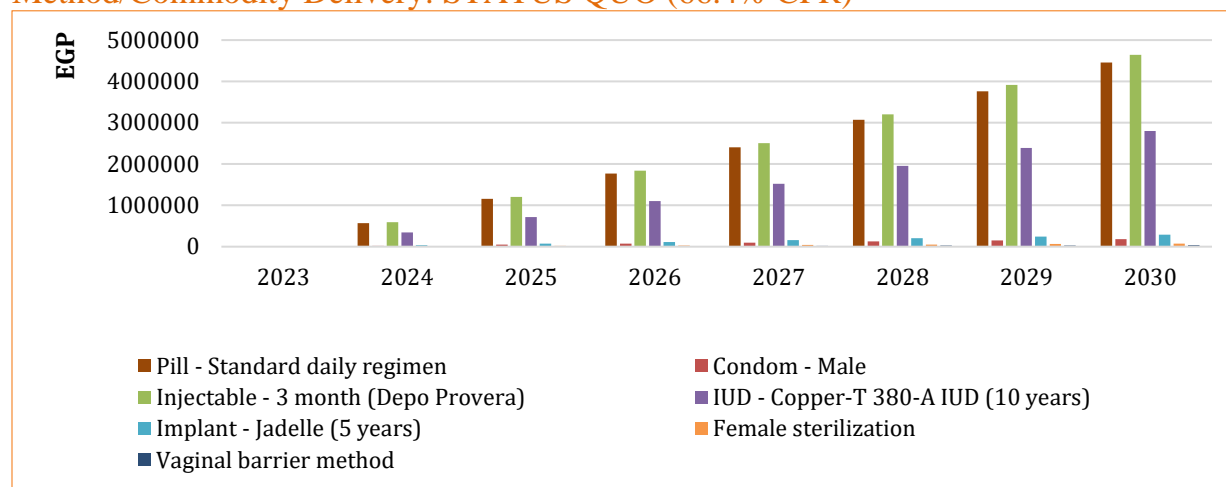


Figure B.12: Incremental Costs for Other Recurrent (in EGP), by Type of Method/Commodity Delivery: Scenario 1 (70% CPR)

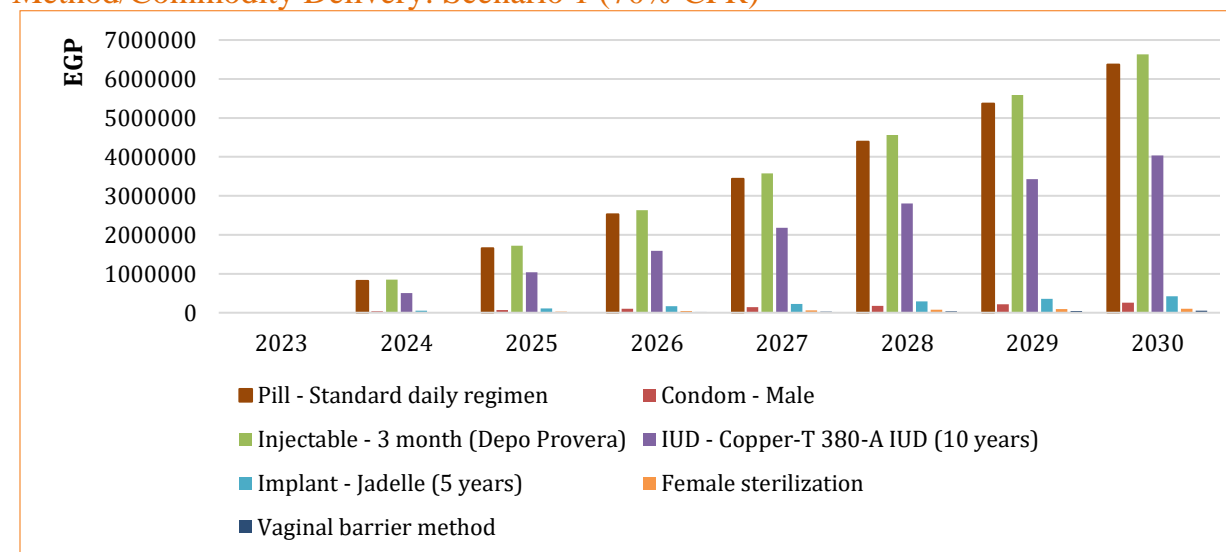


Figure B.13: incremental costs for other recurrent (in EGP), by type of method/commodity delivery: Scenario 2 (75% CPR)

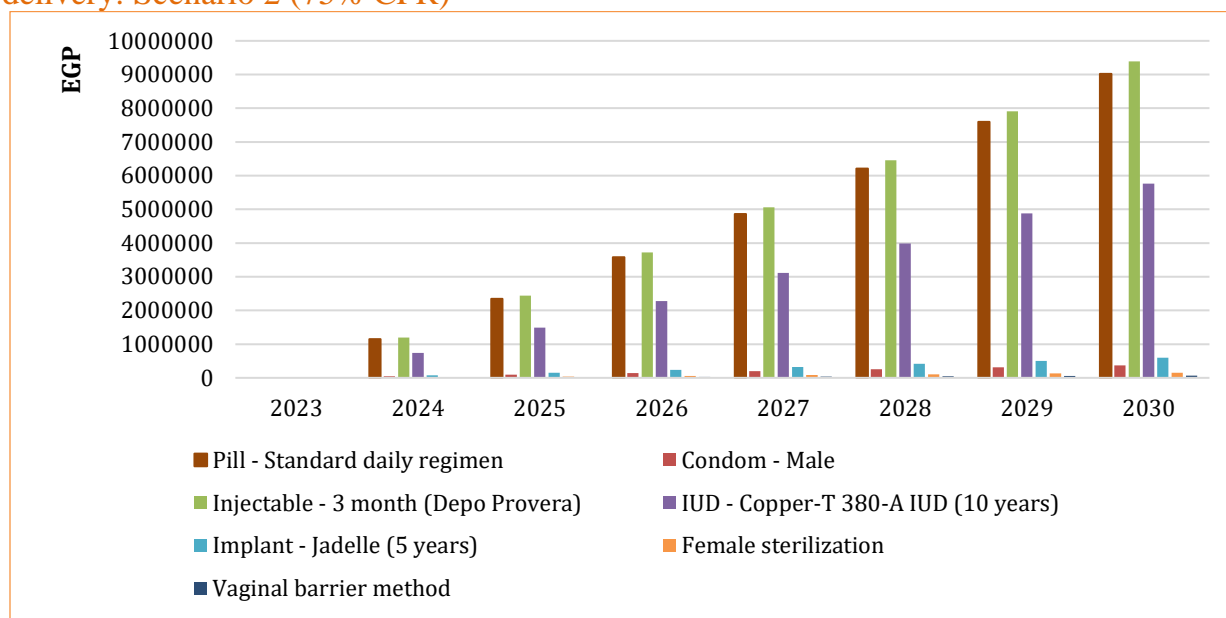
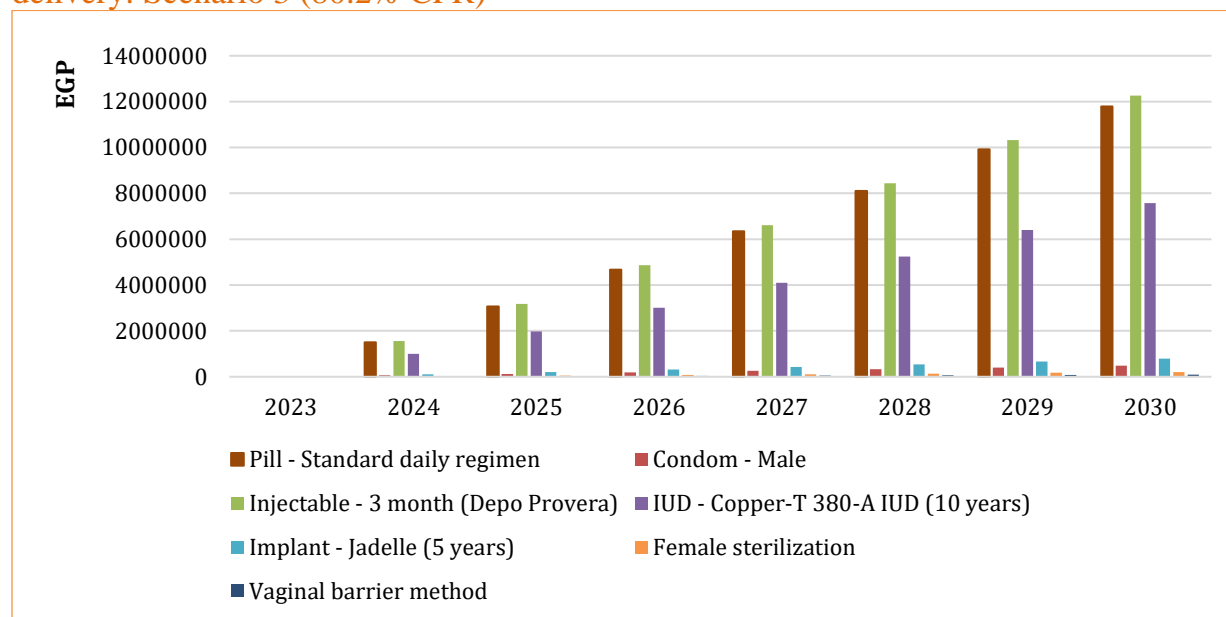


Figure B.14: Incremental costs for other recurrent (in EGP), by type of method/commodity delivery: Scenario 3 (80.2% CPR)



Note B.4: Incremental Capital Costs

In all the scenarios, it is observed that a major component of the total incremental capital costs is associated with injectable-3months (Depo Provera). This is followed by pill standard daily regimen and implant. This is the case in all the scenarios over time. Capital costs associated with condom-male and female sterilization are almost non-existent across time and scenarios.

Figure B.15: Incremental Costs for Capital (in EGP), by Type of Method/Commodity Delivery: STATU Quo (66.4% CPR)

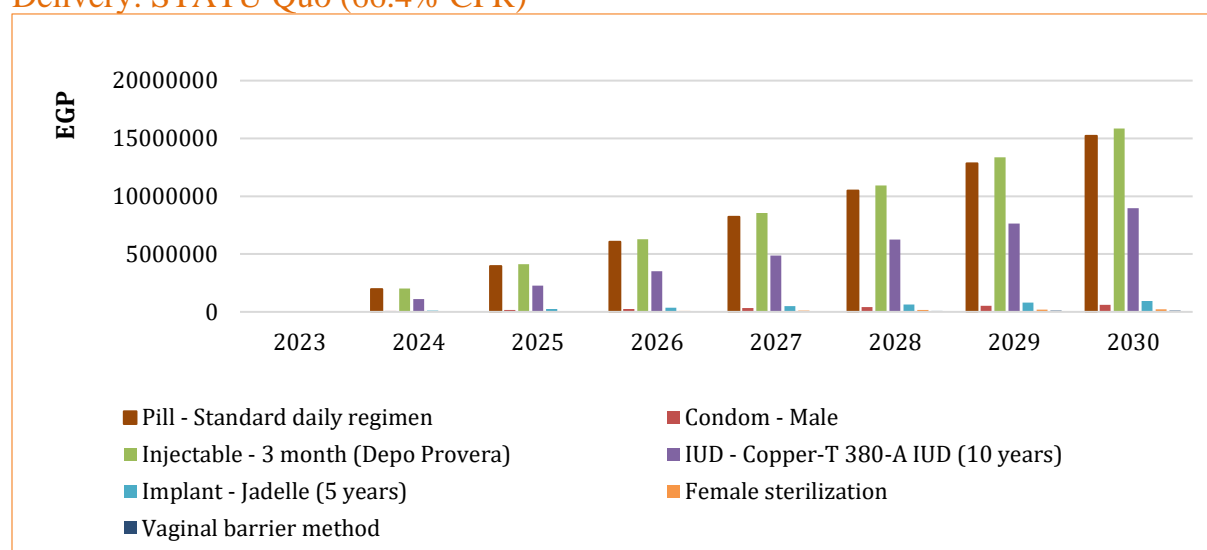


Figure B.16: Incremental Costs for Capital (in EGP), by Type of Method/Commodity Delivery: Scenario 1 (70% CPR)

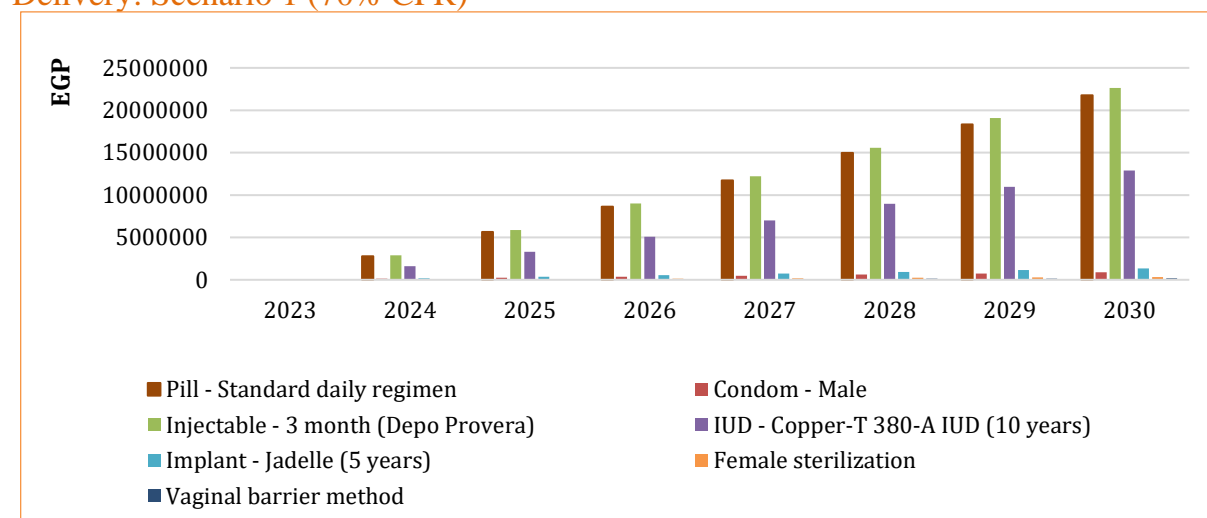


Figure B.17: incremental costs for capital (in EGP), by type of method/commodity delivery: Scenario 2 (75% CPR)

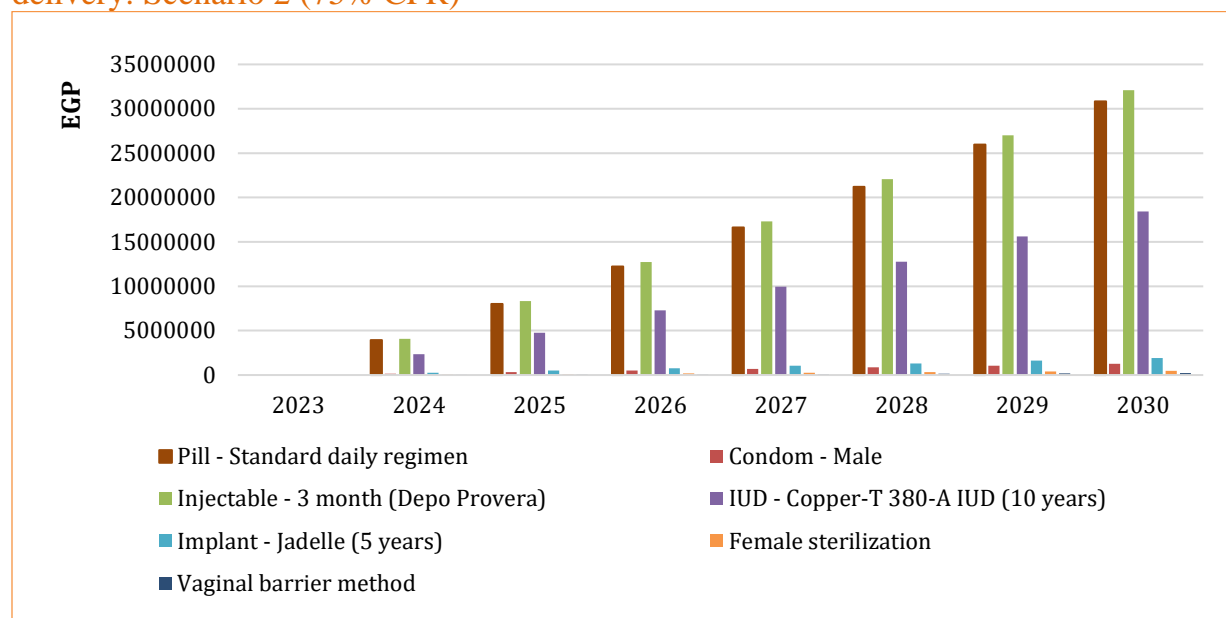
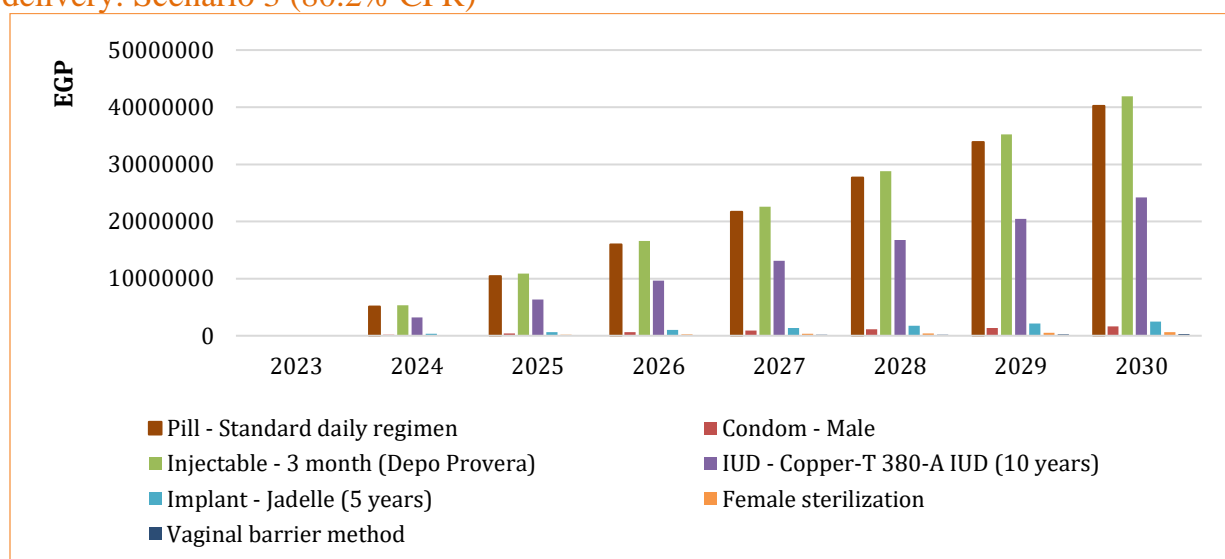


Figure B.18: incremental costs for capital (in EGP), by type of method/commodity delivery: Scenario 3 (80.2% CPR)



Figures B.19 to B.22 show the relative amounts of the total intervention costs by family planning method. Overall, pill -standard daily regimen accounts for the largest proportion of the total

incremental intervention costs. This is followed by injectable-3 month (Depo Provera) and IUD Copper-T 380-A. This is the case in all the scenarios as well as over time.

Figure B.19: Total intervention costs in (EGP) by FP method STATUS QUO 66.4%

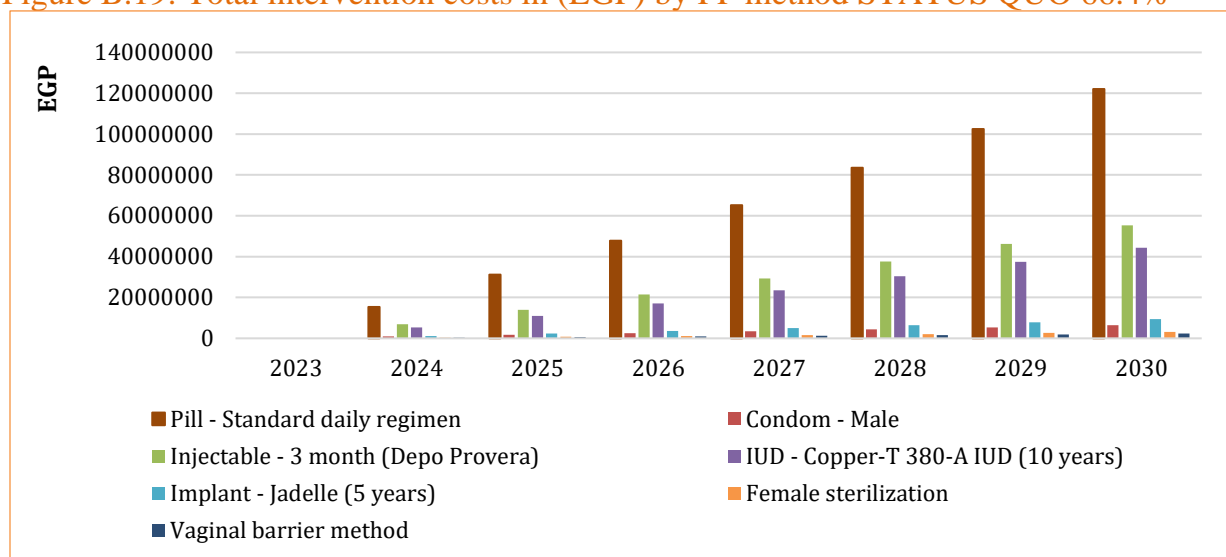


Figure B.20: Total intervention costs in (EGP) by FP method scenario 1 (70%)

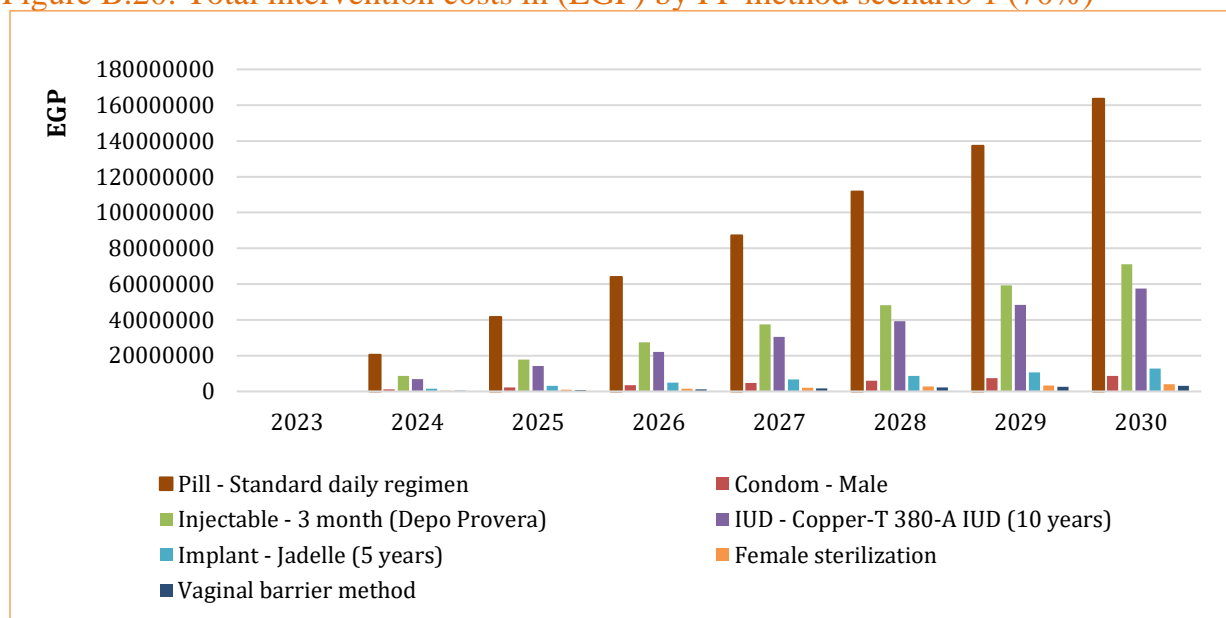


Figure B.21: Total intervention costs in (EGP) by FP method scenario 2 (75%)

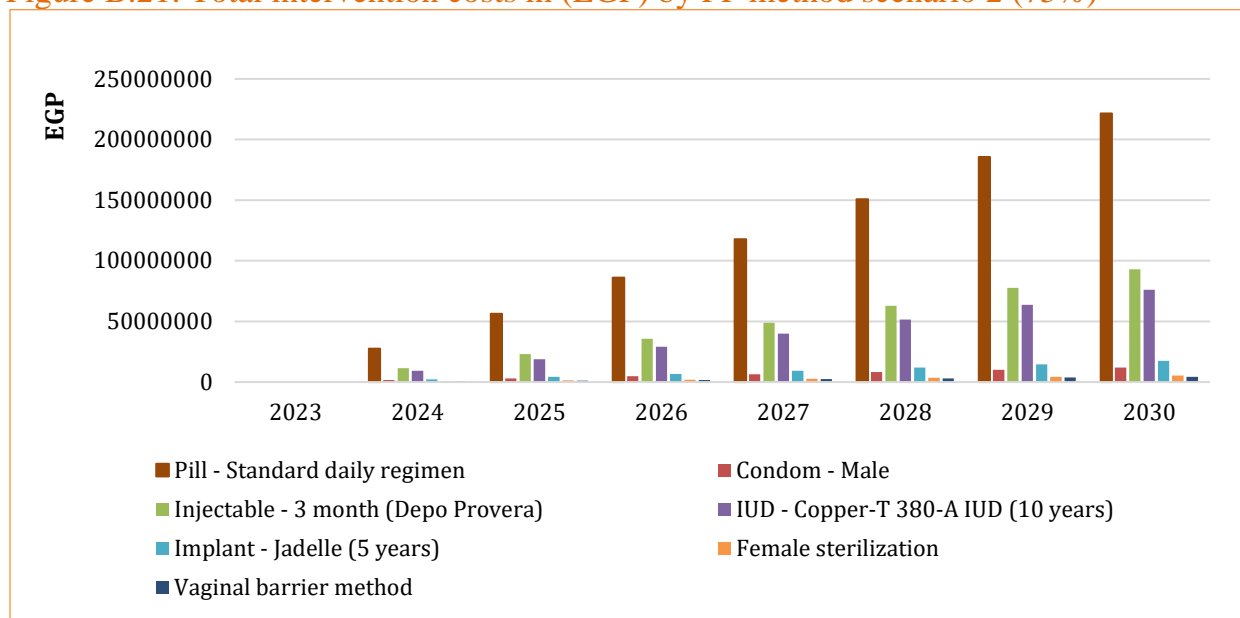
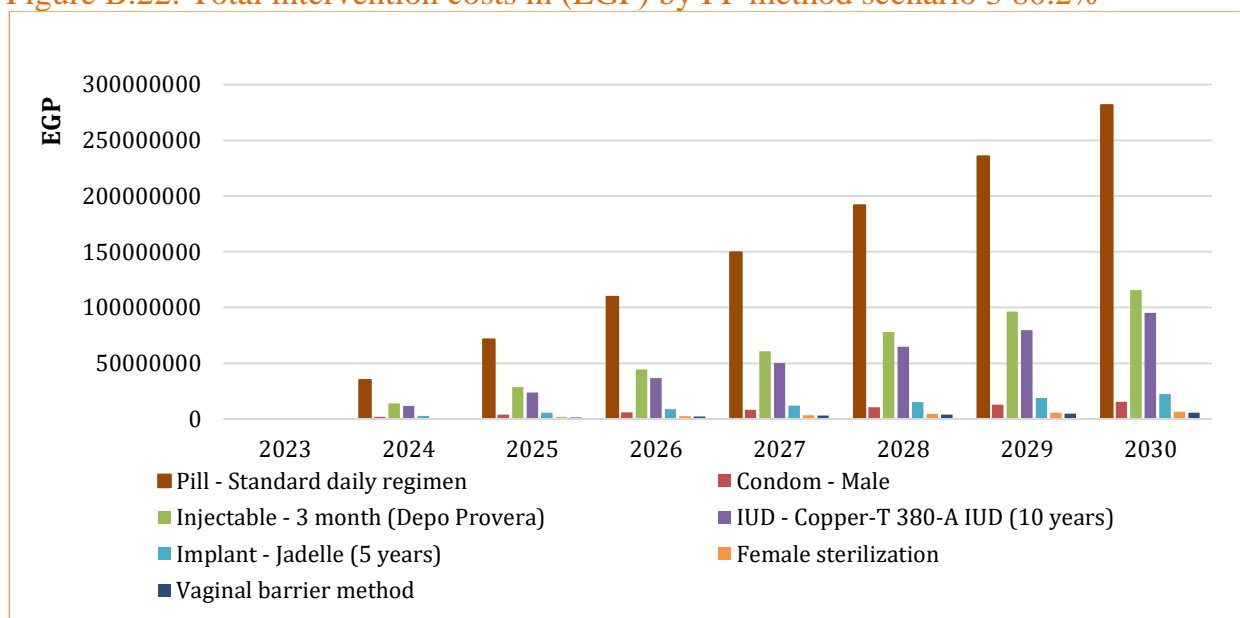


Figure B.22: Total intervention costs in (EGP) by FP method scenario 3 80.2%



APPENDIX C

Methodology

The development of the investment case for the transformative results in Egypt involved an extensive consultative process, the active engagement of a core national reference group, and guidance from representatives of UNFPA in Egypt. Meetings with representatives of Ministry of Health and Population, the National Population Council, CAPMAS, Al-Zanaty center and the Demographic Center for population and desktop reviews were conducted on relevant policy documents such as the Egyptian Family Health Survey (EFHS) 2021, the Egyptian Ministry of Health Strategy 2018-2022, Egypt Vision 2030, data from Central Agency for Public Mobilization and Statistics (2021, 2022) and data from Ministry of Health and Population (2021, 2022).

The Spectrum model platform and the Lives Saved Tool (LiST)

The Spectrum policy software (version 6.06), which houses several tools, was used to analyze the transformative result of ending unmet need for family planning in Egypt. The software suite was developed by the Institute for International Programs (now Avenir Health) at Johns Hopkins Bloomberg School of Public Health and funded by the Bill & Melinda Gates Foundation to support decision-making in the health sector (Spectrum Suite, 2014; Stover and Winfrey, 2010). The Spectrum program consists of several modules, which interact with one another to address a variety of issues in demography and population health. The demographic module (DemProj) generates population projections and requires inputs on various determinants of demographic data, including population, age distribution, fertility rates, mortality rates and international migration, among others.

To model the impact and cost of family planning interventions, the FamPlan module in Spectrum was also used. However, while the FamPlan module allows for baseline and targets to be set for all family planning-related interventions, costs related to these interventions can only be extracted from the LiST tool. The impact of the family planning interventions was extracted from the online version (Impact40) of the tool. The FamPlan module allows one to identify the preferred family planning intervention mix appropriate for the country context. The module also requires inputs on total fertility, contraceptive prevalence, and the proximate determinants of fertility, including the proportion of women of reproductive age, and abortion rates.

Baseline data and analysis

Data sets collected at the national level were used. Several variables were not available on the national level, pre-loaded core data from the FamPlan and LiST modules in Spectrum were adopted after being reviewed and accepted by the National Reference Group. The Spectrum tool

extracts basic country-specific data from different national surveys that collect information on the variables in question.

Limitations

There were several limitations in undertaking the investment case. There were missing national data on some variables needed to estimate unmet need for family planning for Egypt. The analysis and modelling relied on data from regional estimates and existing empirical studies to update the baseline data gaps in the tool. The toolkit also had some limitations. The Impact40 tool is comprised of family planning methods such as male condom, male and female sterilization, injectable (3-month) (Depo Provera), Copper-T 380-A IUD (10-year), pill (standard daily regimen), withdrawal, periodic abstinence, traditional (not specified) and vaginal barrier. The tool does not allow for removal and addition of contraceptive methods applicable to the country context (such as Implanon (3 years) and 1 month (Lunelle) which are not pre-populated in the tool). As such, the analysis focused on using the Spectrum suite and particularly, the LiST module, to estimate the impact of increasing modern family planning methods. Despite these, the analysis followed all the steps required for modelling an investment case and produced reasonable estimates as a basis for informing policy decisions.

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