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Ministère de la Santé et de la Protection Sociale



Organisation
mondiale de la Santé
Maroc

DFPA
The Danish Family
Planning Association

COST-BENEFIT STUDY ON FAMILY PLANNING IN MOROCCO

version : year 2021



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2021

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ACRONYMS

ACA	Cost-Benefit Analysis
ACB	Cost-Benefit Analysis
AMPF	Moroccan Family Planning Association
Dhs	Dirhams
HCP	The High Commission for Planning
ISF	Total Fertility Rate (TFR)
MSPS	Ministry of Health and Social Protection
PEC	Care and Support
PF	Family Planning
PNPF	National Family Planning Program
RH	Human Resources
SSR	Sexual and Reproductive Health
TPC	Contraceptive Prevalence Rate (CPR)
UNFPA	United Nations Population Fund

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INTRODUCTION

A cost-benefit analysis, commonly known as financial cost-benefit analysis, is a systematic process used by businesses to analyze which decisions to make and which to forgo. Also, a CBA involves measurable financial metrics such as revenue earned or costs saved resulting from the decision to pursue a project. Many health services are tightly connected to population size. These benefits include health, education, food subsidies, social protection, housing, public services, and infrastructure, influenced by population size and allocation. Some are more straightforward, like health and population. Nevertheless, other services like housing and population programs are less direct and only appear over a long time.

The main aim in conducting a financial cost-benefit analysis of a family planning (FP) policy is to measure the monetary savings to the government that results from delivering the same level of services to a smaller number of people. The money saved may theoretically be used to meet the cost of the FP program. However, the resources saved are most likely to be spent on improving the quality of services. The critical issue, in this case, is how to allocate resources among social service sectors optimally.

This leads to an important question: Is an FP program financially viable and sustainable? Since maintenance or expansion of any existing program entails a substantial financial commitment by the government, policymakers and budget planners would be interested in knowing the cost and savings involved in the program.

This FP cost-benefit analysis includes two components:

- ♦ The first economic section estimates the financial needs for various social services (e.g., education and health) based on different FP program support and management scenarios (ECP).

- ♦ The second cost-benefit section compares monetary costs associated with the FP program versus monetary benefits resulting from lowered social services required at reduced fertility levels.

We should highlight two critical points to understand a "cost-benefit" analysis of Family Planning. Firstly, it addresses only the cost implications of an FP program and therefore should never be used independently to develop a population policy. Secondly, assessing the cost-saving benefits of FP does not suggest that the government should spend less money on social services. Instead, it implies that an FP program relieves the burden of delivering the same services to a larger population and allows the government to upgrade and improve the quality of services.

This study's objectives are as follows:

- 1 - To assess the financial investment of the FP program in Morocco ;
- 2 - To identify and determine the direct and indirect economic benefits of the program in Morocco based on its demographic, social, and financial aspects.
- 3 - To provide evidence and suggest compelling arguments to support the FP program in Morocco, considering its potential costs.

1 - OVERVIEW

Indeed, various studies have admittedly contributed to the FP program cost-benefit studies worldwide and particularly in African and Arab countries. In this regard, Egypt carried out a study in 2014, along with the Guttmacher Institute's 2012 and 2019 experiences, to provide significant and meaningful insights for the present analysis. Each experience shows a different perspective on the FP cost-benefit study in each country and institution.

On the one hand, the Egyptian report focuses on financial returns. That is to say, the internal performance of the program, viewed as a set of projects requiring an estimate of costs/ expenses and benefits and discounting them using a discount/investment rate. On the other hand, the Guttmacher Institute provides, through the 2012 and 2019 reports, assumptions to estimate and/ or measure the immediate effects of contraception on mothers' and child's lives. At this point, only abortions and deaths are identified as, essentially, perceived impacts following the non-use of contraception to meet women's overall pregnancy spacing needs.

1.1 - UNFPA Report on FP Programs in 2006

This report, published in 2006(1), "Meeting the Need: Strengthening Family Planning Programs", is the product of a collaboration between PATH and the United Nations Population Fund (UNFPA). Having fewer children is said to reduce the economic burden on poor families and allow them to invest more resources in each child's care and schooling, and thus help break the cycle of poverty (1).

Investing in family planning also opens a window of opportunity for faster economic growth in nations as a whole by reducing fertility and changing the population's age structure and dependency ratio. As the number of workers increases relative to the number of children they must support, savings and investment can increase. Countries that pursue sound financial and social policies can translate these economic gains into improved living standards and lower levels of poverty(2)(3)«mendeley»: {«formatted Citation»:»(3. According to one recent analysis, opening this demographic window could lower poverty rates in the world by 14 percent between 2000 and 2015 (4).

Investing in family planning also cuts the cost of social services as, for example, fewer children attend school and fewer pregnant women seek antenatal and delivery care. Depending on which social services are offered, each dollar spent on family planning may save governments up to US\$31 in expenditures on health, education, food, housing, water, sewage and the like (5). Slower population growth also places less stress on limited natural resources, including fresh water and arable land (5).

1.2 - Guttmacher Institute Report on Costs and Benefits of Investing in Contraceptive Services in 2012

According to the Guttmacher Institute's 2012 report(6), an estimated 80 million unintended pregnancies will occur in 2012 in the developing world resulting from contraceptive failure and nonuse among women who do not wish to have another pregnancy soon. These unintended pregnancies will lead to 30 million unplanned births, 40 million abortions, and 10 million miscarriages.

The numbers would be much higher, however, if the 645 million women practicing modern contraception in the developing world had used no

method of contraception. Compared with this hypothetical no-use scenario, modern method use will prevent 218 million unintended pregnancies in 2012, including 55 million unplanned births, 138 million abortions (of which 40 million would have been unsafe), and 25 million miscarriages.

Moreover, this report has clearly shown that the benefits of practicing contraception are broad, spanning social, economic, and health outcomes and they stem from women's and couples' ability to achieve the smaller families they want, time their pregnancies to fit their lives, and provide their infants with the best chances for health and well-being. The study is built around the assumptions and trends outlined below:

Contraceptive prevalence has increased very slightly between 2008 and 2012 in developing countries.

- ♦ If there were at least two years between a birth and a subsequent pregnancy, deaths of children younger than five would fall by 13% ; if the gap were three years, such deaths would decrease by 25%.
- ♦ Women with an unmet need for modern contraception would take up different types of methods in the same proportion as current users in their country with the same marital status and fertility intentions.

This assessment was achieved by explaining unintended pregnancy and producing supporting and relevant data, including abortions and maternal deaths. This report undertakes the following methodology:

- ♦ The number of unintended pregnancies = Total of unplanned births, using the total number of annual births and providing information on the proportion of unintended births, induced abortions, and miscarriages.
- ♦ Using the most recent data available regarding the estimated proportion of women aged 15-49 in developing countries who need and use contraceptives.

- ♦ Unintended pregnancies averted (pregnancies that would occur if all women's needs for modern methods were met and fulfilled) are distributed into unplanned births, abortions and miscarriages.
- ♦ Maternal deaths resulting from abortions are based on a review of total maternal mortality levels in 2010 and on estimates in 2008.

Finally, based on ad hoc surveys and regional data projections across the world, this 2012 report conducted assessments for only the effects that directly result from avoiding unintended pregnancies. These include maternal and infant deaths. This report failed to demonstrate other effects induced by contraceptive use, including socioeconomic outcomes.

1.3 - Report on the Costs and Benefits of Family Planning Program in Egypt in 2014

The cost-benefit analysis of FP in Egypt developed in 2014 (7) focuses on estimating and projecting the resource requirements of various social services (e.g. health, education) under the alternative fertility scenarios. Indeed, population size directly impacts government expenditure on many social services, including public health, education, food subsidies, housing, and utilities.

In fact, a higher population growth rate means a larger number of children and adults demanding services and hence an increase in total government costs. By reducing population growth, family planning programs can lower total public expenditures on health, education, food subsidies, housing, and other public services.

In Egypt's case, they established a projected annual public expenditure under the PF program between 2014 and 2050. The calculation involved discounting the costs and benefits (advantages). Then, they estimated the total savings of social services by adding up all the differences for each year in the sectors of health, education, food subsidies, housing, and other public services.

The additional financial costs resulting from the adoption of the FP program were measured. Lastly, the net savings in government expenditure is calculated by subtracting the extra family planning costs from the total social sector savings in health, education, food subsidy, housing, and utilities. The first year 2014 shows a negative value, which means that the costs of the family planning program are higher than the benefits in saving in social expenditure. This, however, changes immediately in the second year, reflecting that the benefits of the family planning program are higher than the costs. The net saving continues to increase starting 2015 until the end of the projection period by 2050.

1.4 - Guttmacher Institute's Study: Investing in Sexual and Reproductive Health 2019

To identify the benefits of addressing sexual and reproductive health (SRH) needs over the period 2009-2019, the Guttmacher Institute conducted a study(8). This report assessed the gains from meeting the need for modern contraception and pregnancy-related and newborn care in developing countries. This would produce significant improvements in the quality of health in these countries, as follows:

- ♦ Unintended pregnancies would drop by 68%, from 111 million to 35 million ;
- ♦ Unplanned births would drop by 71%, from 30 million to nine million ;
- ♦ Unsafe abortions would drop by 72%, from 35 million to 10 million ;
- ♦ Maternal deaths would drop by 62%, from 299,000 to 113,000 ;
- ♦ Newborn deaths would drop by 69%, from 2.5 million to 0.8 million ;
- ♦ New HIV infections among babies six weeks and younger would drop by 88%.from 110,000 to 14,000.

Table 1: Benefits of Sexual and Reproductive Health Services, including Family Planning as reported by the Guttmacher Institute, 2019

Social and Economic Benefits	Studies have drawn on various data and analytical approaches to show the broad social and economic benefits from investments in contraceptive and pregnancy-related and newborn care. One study covering 74 countries with high maternal and child mortality found that increasing expenditures for reproductive, maternal, newborn, and child health services by just \$5 per capita per year to the year 2035 could yield up to nine times that value in economic and social benefits. This includes higher GDP growth through improved productivity. Evidence from experimental studies in the resource-poor areas of Matlab, Bangladesh, and Navrongo, Ghana, where community-based family planning and health programs exist, showed that fertility declines were associated with improvements in women’s health, earnings, and participation in paid employment. Moreover, the children of women in areas with family planning outreach programs were healthier and better educated than children in other areas.
The Demographic dividend	Some studies have revealed that contraceptive use can lead to a “demographic dividend”—accelerated economic growth resulting, in part, from a decline in a country’s fertility and the subsequent change in the population age structure. With fewer births each year, the size of a country’s dependent population grows smaller relative to the working-age population. In theory, with fewer younger and older people for workers to support, a country has a window of opportunity for rapid economic growth and a boost in per capita income. Therefore, the dividend could be especially advantageous for emerging economies with younger populations. Nevertheless, achieving the dividend is not a given. The right social and economic policies must be in place to provide education and create employment opportunities for all people.
Benefits for the Environment	Many experts view universal access to voluntary Family Planning as a “climate-compatible” development strategy. Reductions in unintended pregnancy through contraceptive use and women’s empowerment can help slow population growth, thereby lowering environmental needs. In addition, by affecting both the size and overall health of future populations, improved sexual and reproductive health care positively impacts the ability of households, communities, and countries to adapt and respond to environmental changes.

1.5 - Cost-Benefit analysis of Family Planning in Ghana in 2020

According to a Cost-Benefit Analysis of Family Planning in Ghana in 2020(9), the anticipated benefits of increasing the contraceptive prevalence rate (CPR) by 10 and 12 percentage points for married and unmarried women, respectively, include maternal and infant deaths, averted pregnancy and induced abortion costs avoided, and the demographic dividend that results from a decrease in the dependency ratio.

Initially, this report discusses the question of maternal mortality averted among women, linking the mortality rate to inadequate pregnancy spacing. Clearly, failure to space live birth at least 24 months apart has a current mortality rate of 36 per 1000 live births in this country ; the risk ratio of neonatal mortality from lack of spacing is 1.26. According to this study, the causes of neonatal mortality are, unfortunately, numerous and vary greatly. Based on life expectancy, the estimated total neonatal deaths are averted per 2% increase in the CPR for Ghana.

Moreover, life expectancy in Ghana stands at 63.5 years at birth. The FP program is anticipated to avert 81,500 and 71,600 pregnancies for married and unmarried women, respectively. Also, there is a benefit associated with the avoided costs of antenatal care, delivery, newborn costs, and avoided abortions. The percentage of unwanted pregnancies aborted is 11.6%, an average across the age groups 15-49.

Concerning the demographic dividend, the study focused on the population replacement rate. Indeed, for married women, holding all other things equal (including the fertility rate of unmarried women and adolescents), the Total Fertility Rate (TFR) declines from 3.9 to 3.59 as a result of a 10% increase in the CPR. According to the study, the socioeconomic impact that a decline in TFR has on the economy is better described as the demographic dividend.

2 - BACKGROUND FOR EVALUATING THE COST OF FP AND ITS BENEFITS IN MOROCCO

Before proceeding with economic analyses in the “Cost-Benefit” of Family Planning in Morocco, we need to understand the context for evaluating the investment in FP services in Morocco and its potential benefits across the health and other social sectors, especially education and employment.

2.1 - Insightful Overview: Moroccan Health System

The Moroccan population in 2019 is 35.6 million, and people under 15 years of age represent about 26.3% (10). The total fertility rate (TFR) has seen a declining trend dropping from 7 children per woman in 1962 to 2.38 children in 2018(11). Life expectancy has experienced an increase ranging from 47 years in 1962 to 76.4 years in 2019(10)(12) and an aging population that constitutes a critical challenge for the health system. According to the National Survey on Population and Family Health (NSPFH), Morocco-2018, the results confirmed the downward trend in under-five mortality rate, which declined from 47 to 22.2 deaths per 1,000 live births during the 2004-2018 period. The maternal mortality ratio has also been significantly reduced from 227 to 72.6 deaths per 100,000 live births from 2004 to 2018(11). These developments are clearly in line with Morocco’s significant progress in improving the healthcare system, notably in expanding the hospital network and providing primary medical care facilities, clinics, and private practices.

As of 2019, the public sector in Morocco includes 159 hospitals with a bed capacity of 25385 and 2888 urban and rural primary health care

facilities. In addition, the private health care sector is rapidly expanding. In 2019, there are 359 clinics, 9671 medical offices, 3614 dental surgery offices, and 8997 pharmacies. Regarding medical staff, Morocco currently has 12034 doctors in public health structures covering all specialties, including 160 pharmacists and 458 dental surgeons working outside university hospitals, and 31657 nurses and health technicians, as opposed to 13545 doctors practicing in the private sector, with 8355 specialists(13).

2.2 - FP Program in Morocco

The Moroccan Family Planning Program is widely regarded as one of the best achievements of the Ministry of Health and Social Protection, providing family planning services and meeting the need of the population. Contraceptive Prevalence Rate(CPR) is dominated among married women aged 15-49, reaching 70.8%, using modern methods at 58%, in 2018(11). Since its introduction, Family Planning has become an integral part of the country's various development plans and related activities. Indeed, several strategies have been implemented and integrated into the primary health care services and facilities within the Ministry of Health and Social Protection.

In the public sector, primary health care facilities such as clinics, health centers, reference structures for reproductive health, and hospitals offer free contraceptive services. This comes in line with the free health care financing system in Morocco. The community approach has shaped the program's development, involving various governmental and non-governmental partners to meet the objectives defined by the Ministry of Health and Social Protection's action plans.

To ensure smooth and easy access to contraceptive methods for the entire population, the Ministry of Health and Social Protection and

its partners have worked together to implement various initiatives and strategies and improve client treatment and care. Therefore, reinforcing the program is essential for its continued success. In this regard, the Ministry of Health conducted a large-scale training program for healthcare professionals and undertook educational campaigns and awareness-raising efforts through all available media channels.

According to several studies working in this field, the family planning program was described as highly successful. Over the past thirty years, the program has achieved outstanding progress, setting a good example for Morocco.

In addition, fertility has been gradually decreasing from 1962 to 2018. Also, the total fertility rate has dropped from 7.2 children per woman to 2.38 at the national level. This fertility rate decline is driven by an increase in age at first marriage and the growing use of contraception. To this day, the Ministry of Health and Social Protection ensures continuous preservation and reinforcement of the PNPF's actions. The program has been successful and may suffer from policymakers' convictions or beliefs that the health system no longer requires investment in this particular project. While Morocco has come a long way in achieving a multi-faceted gain from investing in FP, this success story may not be immediately visible. Therefore, this study aimed to develop scientific and technical arguments for the FP program.

2.3 - Comparing Morocco with other countries in the field of FP

This report uses global contraceptive use data to measure progress in family planning. The purpose is to position Morocco among developed nations and place it alongside countries representing a potential target for advancement and growth.

Table 2. Proportion of women of reproductive age using contraception all methods, year 2018

Country	CPR (%)
Morocco	70.8
Mexico	73.1
Indonesia	55.5
Jordan	51.8
Tunisia	50.7
Ethiopia	40.1

Source : United Nations, World Contraceptive Use 2020 (14)

The figures mentioned in the table above demonstrate the position of Morocco concerning a selection of model countries. Morocco is well-positioned among countries with significant family planning achievements.

METHODOLOGY

Cost-Benefit Analysis (CBA) is an economic and analytical method, comparing all the total costs and benefits, generally stated in monetary values, of any given project.

1 - STUDY PHASES

This study is divided into three parts, as follows.

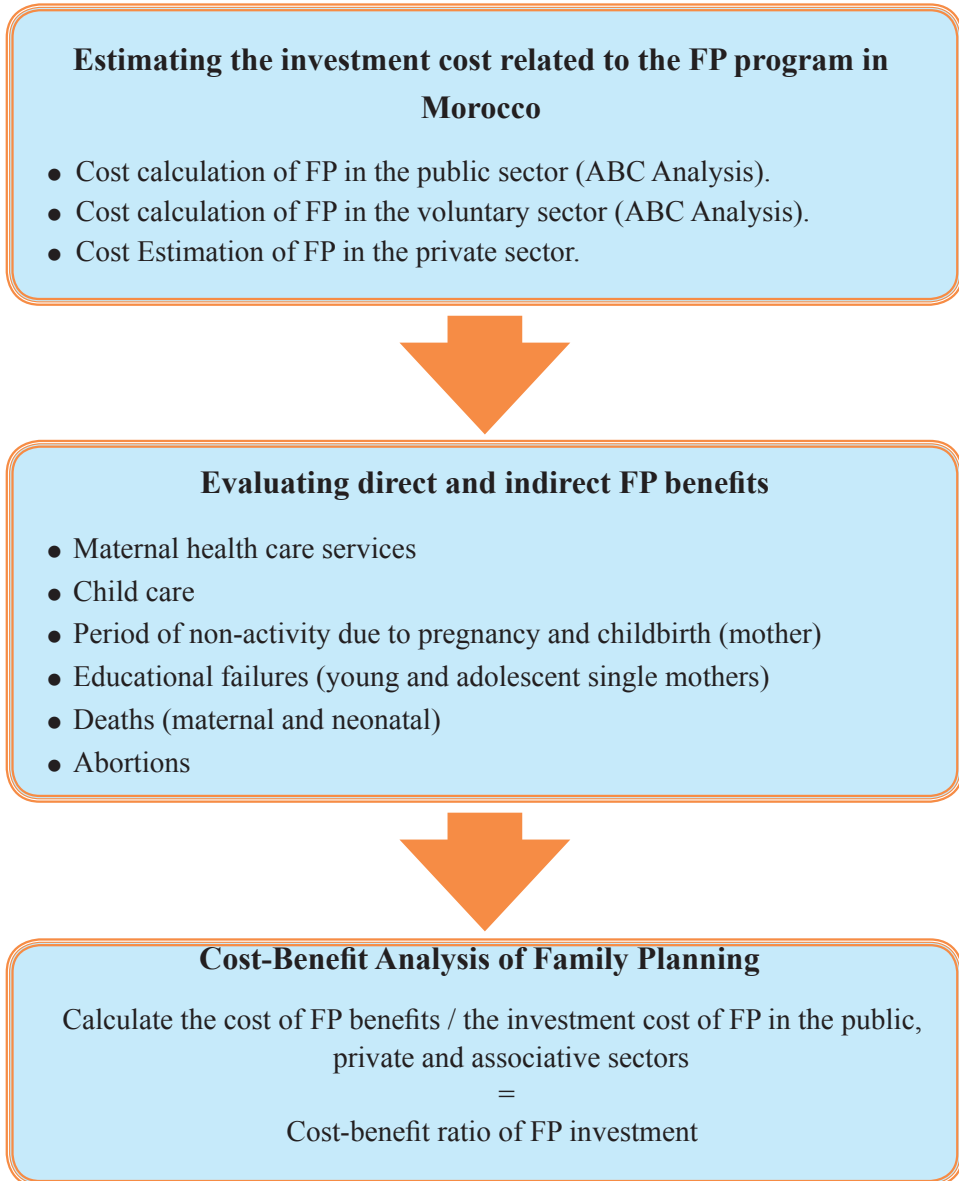


Figure 1. - Cost-Benefit Study phases of FP in Morocco

2 - COST ESTIMATION METHODOLOGY OF FAMILY PLANNING IN MOROCCO

Two previous studies were conducted in 2019 by the Ministry of Health and Social Protection and the Moroccan Family Planning Association (a non-profit, non-governmental organization created in 1971 and recognized as a public utility in 1972) to determine the cost of FP services in Morocco. Both studies established the overall mean cost of FP services offered by the national public healthcare system and the different service delivery areas covered by the Moroccan Family Planning Association. Regarding the private sector, we estimated the FP service cost using the average cost obtained for the public sector.

The following table shows the estimated cost of the National Family Planning Program:

- **Family Planning Cost - The Ministry of Health and Social Protection (The public sector) = Number of services provided x average cost¹**
- **Family Planning Cost - (The private sector) = Number of services delivered x average cost²**
- **Family Planning Cost - The Moroccan Family Planning Association (The associative sector) = Number of services offered x average cost³**

It results from the above that the total cost of the National Family Planning Program in Morocco is as follows:

$$\begin{aligned} &\text{The total cost of FP in Morocco} = \\ &\text{Cost of FP in the Public Sector} + \text{Cost of FP in the Private Sector} + \\ &\text{Cost of FP in the Associative Sector} \end{aligned}$$

- 1 - This cost comes from an average cost calculation on the various FP services offered by the public sector.
- 2 - The Ministry of Health and Social Protection should apply this cost for two reasons. First, the private rates contain cost prices with profit margins. Second, the private fees do not reflect the real cost.
- 3 - This study conducted in 2019 provided the calculation cost of FP service delivery for the Moroccan Family Planning Association.

3 - COSTS AVOIDED BY INVESTING IN FAMILY PLANNING

To facilitate writing and ensure methodological accuracy, we use concepts as synonyms. These are "avoided costs," which should mean in this study as "cost savings" or "benefits" or "advantages" resulting from investing in family planning.

Using one year to calculate this study requires a methodological approach for an accurate and scientific evaluation. Furthermore, pretending to perform an analysis over several years involves admitting statistical and economic calculation limitations, as the data are estimated and updated, which falls far short of reality.

It is noteworthy that some cost components are not evaluated for the unavailability of data, especially the number of maternal and newborn morbidity cases and miscarriages. The approach constraints and limitations and the data needed to successfully calculate and compare the costs and benefits of FP investments are discussed at the end of this document.

The costs avoided from investing in FP, coupled with the complexity of tracking and calculating by mother type cohort (married or single), indicates that this study will have to provide a description and cost calculation for both types without distinction. It implies that the overall avoided cost resulting from investing in FP will not discriminate between married and single mother costs.

Therefore, this study employs a combination of data collected from several sources and does not attempt to replicate them.

The identification process for the cost avoidance (benefits) of investing in FP is presented in the following figure:

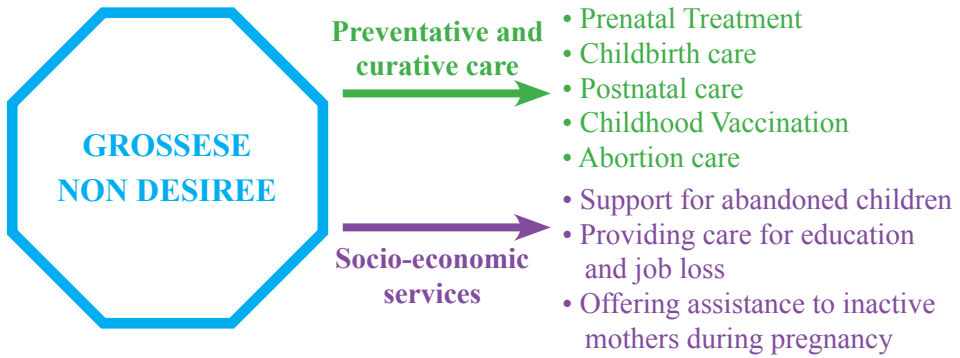


Figure 2. Unwanted pregnancy and its potential health and socio-economic consequences

COSTS - BENEFITS OF FAMILY PLANNING IN MOROCCO

This chapter discusses the expected costs and benefits of investing in FP in Morocco. Indeed, the purpose is to review the potential impact of unwanted pregnancies and estimate the costs avoided or savings resulting from using more extensive contraception under the FP program in Morocco.

1 - THE INVESTMENT COSTS IN FAMILY PLANNING

For reference, a study was undertaken in the public sector in Morocco in 2019 to determine the annual cost of investing in FP. A similar report allowed the calculation of the FP cost for associations. However, in the private sector, this study provided an estimation of the cost of FP services.

1.1 - Public Sector Investment

The initial study on FP service delivery costs(15), conducted within the health facilities operated by the Ministry of Health and Social Protection, provided a detailed overview of public sector investment using the micro-costing method, calculated by the type of FP service. This method allows for a more precise assessment of the economic costs of the healthcare intervention. It helps meet the strategic need to establish a pricing system for primary health care in line with the national vision for generalizing medical coverage.

The following table presents cost estimation for the National Family Planning Program. Therefore, the total annual coverage cost is roughly 98 million Dirhams considering all costs. This figure represents 0.5% of the yearly budget of the Ministry of Health and Social Protection. This first number serves as an indicator and reference to assess the Ministry of Health and Social Welfare's investment in the National Family Planning Program.

Table 3: Total Annual Cost Estimate for FP at the Public Sector Level

	Total annual cost (in Dhs)	Total cost without HR (in Dhs)	Total cost without depreciation (in Dhs)	Total cost without depreciation and HR (in Dhs)
Program costs for health centers	96 571 128,21	56 718 515,43	78 379 726,75	38 527 113,97
Cost of tubal ligation	1 371 570,06	814907,04	1255205,70	698542,68
Total FP Program Cost	97 942 698,27	57 533 422,47	79 634 932,45	39 225 656,65
% from the budget of the Ministry of Health	0,5%			

Source: Ministry of Health, *FP Benefits Cost Study Report in Morocco*, Edition 2021

1.2 - Associative Sector Investment

Following a cost study (16) based on synthetic documents and the associative sector's budget for 2019, we have identified cost components, including expenses incurred by the Moroccan Family Planning Association¹ in providing FP health services. These accumulated expenditures reached 8.314 million Dirhams.

Table 4. Types of FP Costs Generated by the Moroccan Family Planning Association in 2019

Types of expenses	Cost (in Dhs)
Staff	5 418 408,39
Medical equipment	529 542,60
Office supplies	359 334,67
Premises	354 818,50
Overhead costs	1 252 250,00
Drugs and fungibles	400 200,00
Total costs	8 314 554,16

Source: Moroccan Family Planning Association, *Study Mission Report: Cost Estimation of Family Planning in Morocco*, 2019

1.3 - Private Sector Investment

An estimation methodology was adopted, using public sector costs as a starting point to assess the value of private sector investment compared to FP service production. Unlike the public sector, the private market has a profit margin applied to the fees charged. This study aims to show the contribution made by private-sector providers both in terms of volume and cost in Family Planning services. The report states that the number of FP services provided to public sector customers exceeds 3.8 million, providing a statistical foundation that further enhances the estimate's credibility. These benefits are divided by contraceptive method type (13).

¹ - The Moroccan Family Planning Association (AMPF) is a non-governmental organization that facilitates access to sexual and reproductive health services and advocates for the rights of all individuals without discrimination or stigmatization. It provides FP services through 28 locations in 7 regions in Morocco.

This estimate reflects the lack of instant data from the national health information system for services rendered by the private sector.

There is practically no available study that provides a precise analytical approach to the total cost of services delivered by the private sector. Nevertheless, in the present study, this method is generally accurate to reflect the cost of FP services in the private sector.

At this point, there are two steps in the calculation process:

- ♦ The cost estimation of services provided assumes the average cost corrected using the cost calculated for the public sector. This study recognizes that private sector fees are 2.5 times those charged in the public sector for all contraceptive methods. The total expenses for services delivered in the private health care system (private doctors and private/mutual clinics) reached 13,410,131.09 Dhs.
- ♦ To this cost of benefits is added the procurement of supplies from private pharmacies. The cost of the pill and the condom is allocated only to the private sector, considering the high volume of provision of these two contraceptive methods in the private market compared to the other types. Each woman uses a pharmacy to obtain a cycle of pills or condoms (an average of 5 units per month). The estimated cost of supply at the private pharmacy level equals the public purchase price plus 30% to cover any logistical costs (transportation and distribution in this case). The calculation was carried out using a consumption volume at the pharmacy level of 55% for the pill and 45% for condoms. The total amount is 5,038,692. Note that the distribution estimation of this condom and pill volume was done by considering the National Survey on Population and Family Health 2018 sample. This estimation indicates a supply cost up to :

16,375,749 Dhs((2771281x3.25) + (2,267,411 x 0.65 Dhs x 5 condoms)).

The above shows that investment in the private sector represents a total value of 29,785,880.09 Dhs for any given service provided. The following table presents a cost estimation of modern methods of contraception in the private sector.

Table 5. Total Annual Cost Estimate for FP at the Private Sector Level
Private doctors and private/mutual clinics

Method type	Total of benefits - public sector	Weighting (%)	Estimated volume of benefits - private sector	Average public cost (in Dhs)	Adjustment (in Dhs)	Total cost (in Dhs)
Pill	3 292368	86,11	152945	29,08	72,69	11 117572,05
Intrauterine devices	75 890	1,98	3 517	50,50	126,25	444021,25
Condoms	287497	7,52	13 357	27,54	68,86	919763,02
Injectable progestins	164702	4,31	7 655	30,03	75,07	574660,85
Tubal ligation	2 966	0,08	142	997,51	2493,76	354113,92
Total	3 823 423	100	177616			13 410 131,09

Private Pharmacies

Method type	Weighting (%)	Estimated volume of benefits	Public unit price (in Dhs)	Adjustment (in Dhs)	Total cost (in Dhs)
Pill	55	2771281	2,5	3,25	9 006 663,25
Condoms	45	2 267411	0,5	0,65	7 369 085,75
Total	100	5 038 692			16 375 749
Total cost of private sector					29 785 880,09

1.4 - Total FP investment in Morocco

From the preceding, we deduce the total investment in FP in Morocco using the various sub-studies and estimations conducted until now. Therefore, the overall investment within the National Survey on Population and Family Health scope is roughly 136 043 132,52Dhs. It represents nearly all the work undertaken by the various sectors involved in this program. The following table shows the overall estimated investment in FP.

Table 6. Total Annual FP Investment in Morocco

Sector type	Investment amount (in Dhs)
Public	97 942 698,27
Private	29 785 880,09
Associative	8 314 554,16
Total investment in FP	136 043 132,52

2 - AVOIDED COSTS OF THE PF PROGRAM

As indicated in the methodology, the FP program's benefit estimation has been established on a one-year basis. Some benefits only occur in the long term (several years). Therefore, the percentage that goes to 2019 is assessed through a calculation performed for each benefit dimension. The estimation represents the difference between two different situations, concerning the impact of the FP program's operationalization.

These two scenarios are 1) a situation with no FP investment and 2) a situation with the existing investment. Indeed, the gap between both situations will allow us to identify the cost-benefit and the gains obtained by the country from successfully implementing FP activities. Besides, the total fertility rate evolution offers a proxy for FP program impact. Thus, this indicator aims to construct estimates and compare the benefits with the reality of the situation in 2019. The following table presents an overview of the TFR development in Morocco.

Table 7. Development of the Moroccan TFR between 1962 and 2018 - High Commission for Planning

Year	1962	1975	1982	1994	2004	2010	2014	2018
Total Fertility Rate	7.2	5.91	5.52	3.28	2.47	2.19	2.21	2.38

First, the FP program's benefit comes from the estimated costs incurred in the case where the program is not operating. This situation reflects, in this context, a maximum Total Fertility Rate (TFR) of 7.2.

However, the factors influencing changes in the annual abortion numbers are multidimensional, including FP program effectiveness. According to this study, the initial investment in managing all abortion cases

is relatively zero, compared to what would be required. The country's cost of performing all abortions in a supervised, regulated setting is equivalent to the public hospital cost of managing every case. The investment benefit gap, in this case, suggests an opportunity cost that has not been mobilized as an investment, and therefore the gap becomes a zero to full investment difference.

2.1 - Cost avoidance of births

To estimate the total cost of managing childbirths related to unwanted pregnancies, which ultimately will place a heavy burden on the health system, we proceed, at this stage, to assess the various factors that will allow us to determine the total cost on an objective basis.

Using Guttmacher data, the estimated total number of women in Morocco who do not want a pregnancy is 4,700,000.00 in 2019. This figure represents the number of women who will be exposed to unwanted pregnancies if the FP program is not introduced, thereby achieving a maximum TFR.

That is to say, if all women do not use contraception, they will be expected to have 7.2 children over the reproductive period from age 15 to 49, or 34 years. As a result, the possible births with no contraception come to 33840 000 ($4\,700\,000 \times 7.2$). This figure refers to a group of women who will have this many children over the reproductive period. The expected births number in 2019 is defined as the total number of all children born and divided by the reproductive period, which is 34 years. This number stands at 995,294. The gap with the current situation has been calculated using the expected births estimated for 2019, as projected by the Ministry of Health and Social Protection, which amounts to 681,606(13). The following table recapitulates the estimation process adopted. In this study, the number of births is equivalent to the number of births resulting from unwanted pregnancies

Table 8. Annual number of births averted in 2019

Total number of births (without contraception)	995 294
Current number of births with contraception	681 606
Gap in births averted in 2019	313 688

Before calculating the total cost of childbirth management, it is helpful to differentiate between the sector type that provides this care (public and private) and the delivery type (normal childbirth or Caesarean delivery). To break down the gap in births averted in 2019, we must first take into consideration the delivery rate in a monitored facility, which is 86.1% (270,085 deliveries), the ratio of the public and private sectors, and the delivery type (with or without Caesarean section), as reported by the National Survey on Population and Family Health in 2018.

Table 9. Distribution of averted supervised births by sector and type of birth

Sector type	Weight	Number of births by sector	Type of birth	Weight	Number of births by type
Public	0,817	220 659	Cesarean section	0,12	26 479
			Without Cesarean section	0,88	194 180
Private	0,183	49 426	Cesarean section	0,62	30 644
			Without Cesarean section	0,38	18 782

After identifying the number of births averted, the next step involves estimating the costs of the management process for both with or without cesarean section. This study was prepared using data gathered in hospitals. Therefore, the present cost of cesarean section management in the public domain stands at 4,300 Dhs, while the without a cesarean section stands at 1,600 Dhs.

In the private sector, national reference pricing is applied. However, this approach is not valid for the public sector, as the latter has social fees that do not reflect the scale of the investment involved. The following table presents the overall cost of birth coverage as an earned benefit. Thus, the total cost is 726, 045,700 Dhs.

Table 10: Cost estimation of averted births by sector and type of birth.

Sector type	Type of birth	Cost of a service (in Dhs)	Total cost (in Dhs)
Public	Cesarean section	4 300	113859700
	Without Cesarean section	1 600	310688000
Private	Cesarean section	8 000	245152000
	Without Cesarean section	3 000	56346000
Total costs			726 045 700

2.2 - Cost avoidance of maternal deaths

Maternal deaths during pregnancy and childbirth have national economic implications and incur costs. Maternal deaths averted are included in the list of benefits achieved by the FP program.

The reported number of births averted (313,688) represents the gap between a situation where the FP program is functioning and the other where it is not. Given that the maternal mortality ratio is 72.6 deaths per 100,000 live births (11), the estimated number of maternal deaths in 2019 is 228 ($313,688 \times 72.6/100,000$).

All these women could, in theory, have been active. Applying the female unemployment rate of 13.5%(10) to this number, we can deduce the number of women contributing to economic activity.

The income earned by these women represents a loss to the country's economy and a financial burden on the women's households. The wage received is assumed to be more or less equivalent to the productivity and

profitability gain for the employers. Non-working women contribute by working at home, and this can be translated as an opportunity cost equivalent to the guaranteed minimum wage (SMIG)(10).

Table 11. Estimated Cost Avoidance of Maternal Deaths

	Estimated number	Monthly salary (in Dhs)	Total cost (in Dhs)
Working women	197	4000 *	-9 456 000 (197 active women x 4000 Dhs x 12 months)
Non-working women	31 (228 x 13.5%)	2 939.04	-1 093 323 (31 non-working women x 2939.04 Dhs x 12 months)
Total costs (in Dhs)			- 10 549 323

*4000Dhs: The average salary of an employee is estimated using the medium household income divided by the number of working people per household. (18).

Note that this cost is negative. Also, it is not an avoided cost, but rather an avoided gain resulting from the economic productivity of the deceased women, which might have improved the Gross Domestic Product (GDP). In the final calculations, this cost will be deducted from the overall benefits gained by the FP program.

2.3 - Cost avoidance of pre- and post-natal consultations

Pregnancy care and management are related to prenatal and postnatal follow-up and monitoring. Most women receive prenatal care, 88.5%, most of which 42% come from the public sector and 57.5% from the private system(11). Moreover, to facilitate the cost-benefit estimation, the average number of three prenatal consultations and one postnatal examination is adopted. However, to estimate this cost component, we used the number of births averted (313,688). This figure represents the difference between two situations, one operational and the other is not functional and the national reference rate, assuming no cost data are available for primary health care services.

As a result, the total cost of pre-and postnatal consultations saved by using contraceptive methods comes to 139,937,416.8 Dhs. This cost refers to prenatal and postnatal follow-up at the health care facilities. The following table summarizes the costs as a saved benefit.

Table 12. Estimated cost avoidance of pre- and post-natal consultations

Sector type	Weight	Number of women	Number of consultations	Cost/ Applied rate per consultation (in Dhs)	Consultation costs (in Dhs)
Public	0.42	116 598	466 392	92.9 *	43 327 816,8
Private	0.58	161 016	644 064	150	96 609 600,0
Total	100	277 614	1 110 456		139937416,8

* This cost estimation focused on data obtained and gathered at the level of primary health care facilities.

2.4 - Cost avoidance of neonatal deaths

The neonatal death rate is 13.6 per 1000 live births(11). To say it differently, 4,266 newborns die every year in Morocco (313,688 x 13.6/1,000). Since a child turns 25 years old and can be economically productive throughout his or her 35 years of life, the cost should be estimated using an average annual salary of 4,000 Dhs with a 9.2 percent unemployment rate(10). This cost is a negative value. However, the FP program implementation helps reduce this burden. This non-activity cost is as follows:

Table 13. Estimated cost avoidance of potential activity

Number of neonatal deaths in 2019	4 266
Number of children who would be unemployed (4 266 x 9.2/100)	392
Cost of neonatal deaths measured in potential business loss (in Dhs) (4 266 – 392) x 4000 Dhs x 12 months	-185 952 000

Therefore, the endogenous costs include the living expenses and school fees for these lost children. Let us not forget that the data provided

by the High Commission for Planning (19) (20) shows the following costs for schooling and living fees:

- 7773 Dhs per individual for the annual subsistence allowance.
- 7,998 Dhs per individual attending school every year.

Otherwise, the State is obliged to provide care and support for deceased newborns. Furthermore, this investment needs to be reduced from the economic benefits generated by these lost newborns when they become active (for 35 potential years). Hence, we estimate the cost of living expenses and schooling for the child (before reaching 18 years of age) as follows:

Table 14. Estimated cost avoidance of living expenses and education

Cost of living support	33 159618 Dhs
Cost of covering the education expenses	34 119 468 Dhs
Total cost of living support & education fees	67 279086 Dhs
Economic loss of deceased children (in Dhs) (67 279 086 -185 952 000)	- 118 672 914

This cost is negative and represents a positive value for profit. That is to say that neonatal deaths lead to a loss of revenue for the state, amounting to 118,557,732 Dhs. When calculating benefits from implementing FP in Morocco, this cost must be subtracted.

2.5 - Cost avoidance of vaccination

Implementing a vaccination program for every child constitutes a financial cost for the health system. As immunization is, in many cases, delivered in sessions to a group of children, we consider only the necessary inputs for vaccination. The human resource component of vaccine administration is fairly minor and insignificant in this situation.

To determine how much the health system would need to pay for extra vaccination in the absence of FP program actions, we need to assess the cost of covering vaccination for many children.

Table 15. Cost estimation for vaccination per child up to one year of age

Description	Unit of account	Cost in Dhs incl. tax	Unit cost in Dhs	Number of doses received during a year	Cost in Dhs
BCG	20	26,03	1,3015	01	1.3015
HB (pediatric)	10	12,15	1,215	01	1.215
VPO	10	20,41	2,041	04	8.164
VPI	5	167,4	33,48	01	33.48
RR	10	62,64	6,264	01	6.264
DTC-HepB –Hib	10	70,2	7,02	03	21.06
Pneumo	1	115	115	03	345
Rota	1	38	38	03	114
Average cost of vaccination (in Dhs)					530.48

On top of the cost of vaccine inputs, we estimated the vaccine administration cost (human resources, fungible per child) at 94.44 Dhs calculated based on 17 doses. The total expenditure is 624.92 Dhs/child.

According to the National Survey on Population and Family Health in 2018, 90.6% of children are fully immunized. It represents 280336 (309,422x 90.6/100) children requiring vaccination under this coverage.

Since most antigens are delivered at the public sector level (more than 99.2%)(11), the average cost estimated for vaccinating each child is applied to all children. The following table presents the extra expenses incurred by the health system for vaccination, amounting to 175,187,573.12 Dhs.

Table 16. Estimated cost avoidance of vaccination

Gap in births averted in 2019	313 688
Number of neonatal deaths in 2019	4 266
Number of children requiring vaccination in 2019	309 422
Number of children requiring vaccination in accordance with present coverage (2019)	280 336
Total cost of children's vaccination (in Dhs) (280 336 x 624.92 Dhs)	175 187573,12

2.6 - Cost avoidance of abandoned children

In Morocco, many children are abandoned at birth, creating a burden for the State to provide them with access to education, care, and integration into society until they become economically active. Like countries with weak data systems on this population, it is necessary to provide assessments. Therefore, in this study, we focus on the figures that show a certain consensus.

According to the findings of a study conducted by the United Nations Children's Fund (UNICEF) and the Moroccan League for Child Protection, 2% of children are abandoned at birth from the total number of new births in the country (21). If we apply this percentage to the number of births prevented by FP in 2019, there would be 6,274 abandoned children. The financial cost of providing care for these children is an additional burden to the overall management costs of unwanted pregnancies. Assuming that 313,688 is the difference between children without contraception and children with contraception in 2019, we calculate the number of abandoned children based on the annual average of 13,632 (2% of expected births in 2019) and compare it to the number of births per year.

Therefore, we apply this figure to calculate the estimated number of additional abandoned children who would need support and care services. Then, the HCP statistics help determine the overall assistance and management budget (including the medical aspect).

In this regard, the figure of 6,274 $(13,632/681,606) \times 313,688$ constitutes the extra number of children abandoned at birth for 2019, as calculated by considering the difference between a Family Planning program operating with its current capacity and one with a TFR of 7.2. The average annual costs of education and livelihoods, according to the HCP survey data (19) (20), are as follows:

- 7,998 Dhs per individual enrolled in school on an annual basis.
- 7,773 Dhs per individual in terms of living expenses per year.

Thus, the cost of providing care for the 6,274 children left behind at birth registered in Morocco in 2019 is estimated at Dhs 98,947,254, assuming that the FP program is not functioning as planned today.

Table 17. Estimated cost avoidance for the care of abandoned children

Gap in births averted 2019	313 688
Number of additional abandoned children	6 274
Cost of annual care coverage for additional abandoned children (in Dhs) $6\,274 \times (7\,998 + 7\,773)$	98 947 254

2.7 - Cost avoidance for single mothers' education and employment

According to data obtained from a previous study, the annual number of unmarried girl mothers in Morocco is 30,000(17). Pregnancy among single girls leads to educational failure, representing a significant loss of the country's human capital and widening the gender inequality gap. This will affect the national economy. However, to prevent this from happening, the State must mobilize an additional resource, like an opportunity value, to ensure that all unmarried girls can pursue their education during pregnancy and remain fully integrated into student life. This requires commitment and efforts from the government to maintain these girls' process and avoid their stigmatization. We assume that this additional cost is similar to the one retained for regular education. Using the number of unmarried girls per year as a starting point, we can estimate the total cost that the State needs to raise to cover their education expenses. The total cost of providing care for unmarried girls (single mothers) is determined by looking at the following:

- ♦ The avoided expenditures associated with single mothers' schooling are 7,998 Dhs/year.
- ♦ The expenses resulting from job loss for single mothers, caused by an unwanted pregnancy, are roughly estimated at the minimum wage (2,939.04 Dhs) (10), and this applies to six months of unemployment

per single mother (from the 3rd to the 9th month of pregnancy), considering unemployed women representing 13.5 % (10).

The average annual cost, including the schooling and the job loss costs for single mothers, amounts to -199 235 548.8 Dhs.

Table 18. Estimated Average Annual Cost of Coverage for Schooling and Job Loss for Single Mothers

Number of single mothers per year (30.000) 12,000 girls represent 40% of single mothers aged between 15 and 26 (22) 10080 constitute 84% of the 12,000 girls enrolled in schools (23)	10 080,00
Annual schooling expenses for every girl (in Dhs) (10080 x 7998 Dhs)	80 619 840
Number of unemployed single mothers (30 000 x 13.5%)	4050
Cost of unemployment for single mothers (30 000 – (10 080+ 4050)) x 2 939.04 Dhs x 6 months	-279 855 388,8
Coverage cost and support expenses for schooling and job loss for single mothers (in Dhs) (80 619 840 - 279 855 388,8)	-199 235 548,8

2.8 - Cost avoidance of non-employment for mothers

According to article 152 of the Labor Code, the pregnancy period includes three months of maternity leave, more precisely 14 weeks. However, this time represents a paid leave for the employer and the company. Nevertheless, it does not involve any economic activity by the women. Therefore, as the number of pregnancies increases, there will be more non-working days paid by the employers or the social security fund. To determine the cost of non-employment of mothers, we use the difference in additional averted births (313,688 births) by implementing the FP program. Then, we isolate married women who are supposed to be in economic activity age.

If we consider that each woman should have three months of maternity leave, the number of months lost would be paid by the employers or the social security fund. We obtain the present number of women on paid

maternity leave by deducting unemployed women. Subsequently, we apply a minimum wage to calculate the total cost. It represents an opportunity cost for non-working women while they are on maternity status. Thus, the total cost would be about 1 378 045 319, 04 Dhs. The following table summarizes this assessment.

Table 19: Estimated cost avoidance of non-employment for mothers during maternity periods

Number of pregnancies averted (number of mothers)	313 688
Number of mothers (married women): 57,6 %	180 684
Number of unemployed mothers (13.5%)	24 392
Number of working mothers	156 292
Coverage cost for working mothers: (156,292 x minimum wage 2,939.04 Dhs x 3 months)	1 378 045 319,04

2.9 - Cost avoidance of abortion

There is no information available on abortions that take place in Morocco. To establish the estimated cost of abortion management, we first calculate the total number of abortions in 2019 using the Guttmacher–Lancet Commission data (24). Since abortion is not legalized in Morocco and there is no evidence of complicated abortions managed in health facilities, we adopt an assumption to assess the avoided cost of these operations. This hypothesis considers performing these abortions in a controlled healthcare facility.

The average abortion cost, if carried out in a public hospital using a dataset provided by local health care facilities, is roughly 2,300 Dhs. Indeed, there is a significant difference in costs between the private and public sectors. The last one does not include profit. Thus, the annual cost of abortion care in Morocco is approximately 760,462,800 Dhs. This cost has implications for health care financing.

Table 20. Estimated cost avoidance for abortion management and care services

Number of women of reproductive age in 2019 (13)	9 449 756
Estimated number of abortions in 2019 according to the Guttmacher-Lancet Commission figures (0.035 per thousand)	330 636
Annual cost of abortion care and treatment services (in Dhs)	760 462 800

3. COST-BENEFIT INVESTMENT RATIO OF THE PF

Cost-benefit analysis helps visualize the investment cost in a program and the potential benefits generated by its successful implementation. Investing in FP involves management and coverage costs and prevents the country from spending a lot of money on other social aspects. The table below outlines the estimated costs and benefits of investing in FP in Morocco over one year.

Table 21: Cost-benefit investment ratio of FP in Morocco-2019

Cost of FP investment	Amounts (in Dhs)
Cost in the public sector	97 942 698,27
Cost in the private sector	29 785 880,09
Cost in the associative sector	8 314 554,16
Total cost of FP investment	136 043 132,52

Costs avoided through FP	Amounts (in Dhs)
Cost avoided of births	726 045 700
Cost avoided of maternal deaths	- 10 549 323
Cost avoided of pre- and post-natal consultations	139 937 416,8
Cost avoided of neonatal deaths	- 118 672 914
Cost avoided of vaccination	175 187 573,12
Cost avoided of abandoned children	98 947 254
Cost avoided for schooling and unemployment among single mothers	-199 235 548,8
Cost avoided of non-employment of mothers	1 378 045 319,04
Cost avoided of abortions	760 462 800
Total cost of benefits	2 950 168 277,16

Cost-benefit investment ratio of FP	22
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This study found that one (1) Dirham invested in FP in Morocco generates 22 Dirhams of savings (or expenditure gains), an important finding in the country's future budgetary decisions. It should help reposition FP as a central program to maintain and support Morocco. This data also provides further insights and evidence into the social investment that contains demographic, economic, and social benefits. In recent years, the TFR development has contributed to decreasing unwanted pregnancies in Morocco and raising the living standards of Moroccan citizens. Moreover, women's education and increased contraceptive coverage have helped to improve access to FP services.

Moreover, funding FP services does not serve as an end in itself but rather ensures savings in education, living expenses, and women's employment. Thus, this study 'findings will provide a foundation for advocacy to further secure that investment in FP avoids Government expenditures and results in cost savings.

This study proved that it is possible to calculate avoided costs using a series of expenses generated throughout a given process. Indeed, we can apply and conduct this work for other healthcare benefits and services. This is the first study performed in Morocco for the National Family Planning Program. It allows us to stir up our interests and determine the return on investment in FP for a better understanding of its social and economic benefits.

SCOPE AND LIMITATIONS

The FP cost-benefit analysis is a solid tool for decision-making for use by the government in funding health care programs at a national level. By putting a monetary value (in Dhs or dollars) on health services benefits, this process allows us to compare the value of costs incurred by the given health program - in this case, family planning in Morocco. This cost-benefit analysis is presented as a «cost-benefit “ ratio for a specific period - one year in the present study.

This study offers an opportunity to lay the groundwork for universal access to FP services to meet the needs of women of reproductive age who are still not fully covered (contraceptive prevalence rates of 71%).

The ratio calculation obtained from this study, amounting to 22 Dhs for 1 Dh invested in FP, in Morocco, has some limitations or methodological difficulties, including:

- 1 - The first limit of this study is to propose strategies for implementing the National Family Planning Program. It is important to remember that this study could not have been undertaken at a TFR of 7.2 (1962), before the beginning of the National Family Planning Program. Hence, the absence of earlier evaluation surveys represents a significant limitation to the analyses that might have provided time-based comparisons of costs. This restriction is a valid reason to introduce an estimation logic for the additional costs likely to be incurred by higher investment in FP. Therefore, it is necessary to estimate the avoided costs in the event of non-investment in the FP program.
- 2 - No data are available for some cost factors or items, especially for abandoned children and abortions. Thus, we relied on databases provided at the international level.

- 3 - Cost estimation for maternal and neonatal morbidity and miscarriage are not addressed in this study as data on these matters are difficult to approach and measure.
- 4 - This study finds its principles from the calculation process performed at the Ministry and associative sector level in 2019. The benefit figures are estimated using a baseline year in 2019 as the health crisis of Covid-19 appeared in 2020 and did not generate meaningful data on service provision, including sexual and reproductive health services and family planning programs.
- 5 - Certain calculation values associated with the cost-benefit analysis are difficult to measure. In this respect, the borrowed analysis relies heavily upon the process of unintended pregnancy and related cost-benefit factors observed along the process.
- 6 - The monetization stage is essential to the PF investment cost-benefit analysis. Some components require an approximation value for which an exact measurement is difficult or impossible to obtain (proxies). This can be done by looking at comparative or logically similar costs or simply by estimating the value assigned to the service assessed in either hospital or clinic pricing.
- 7 - This study does not cover the long-term benefits of FP, mainly indirect economic and social effects. Without considering these impacts, the results of such a cost-benefit gap analysis may change completely. Resorting to an annual basis in this exercise represents a way to operationalize the cost-benefit analysis by reducing this time horizon problem.

CONCLUSION

Many studies have examined the impact of family planning activities in different countries. These reports seek to provide scientific evidence about the return on investment and ensure ongoing FP program actions and efforts. Family planning is regarded as a significant activity, and its indicators are incorporated into SDGs monitoring and implementing programs. Unfortunately, this strategic importance is unclear to decision-makers in some countries. While health system managers understand the contribution of FP activities, policymakers in parliaments and some civil society organizations do not necessarily recognize this value. Misleading messages are often conveyed, endangering the smooth operation of the FP program and decreasing political mobilization to support its initiatives and actions.

The FP program launched a few years ago has achieved a TFR of about 2.38 today and contributed to a demographic dividend gain. Morocco is well ahead of neighboring countries, including Egypt. Following a successful political and strategic period for FP development, there is a strong need to strengthen the National Family Planning Program and reinforce its effectiveness. For this purpose, providing evidence is of paramount importance in promoting the political convergence of decision-makers for sustainable and stable support of FP activities. Thus, the evidence-based argument is potentially an effective tool for fostering agreement among stakeholders and policymakers for sustained and consistent support for the National Family Planning Program.

With well-argued figures and facts, all ambiguities will be clarified and resolved. For example, there is a general belief that the FP program threatens to reduce the population and eventually leads to its disappearance. The present study seeks to address this ambiguity by

providing evidence-based documents to support FP program managers in building their advocacy for FP.

This study involves evaluating the country's investment in FP, drawing on data from preliminary analyses of the public and associative sectors, and estimating the investment in the private sector.

Then, we estimate the cost-savings benefit of implementing the FP program. The method used focuses on certain components of the FP benefit while adjusting for information systems and data availability to produce the cost estimates.

Meanwhile, this study helped develop a methodology that might be applied in the coming years, following the same logical approach, as part of other analyses or as a tool for monitoring or evaluating the National Family Planning Program.

This report found that each Dirham (or Dollar) invested in FP equals 22 Dhs (or Dollars) as a benefit earned by the country. This figure alone is a powerful argument when multiplied by years of FP functioning and operations. The National Family Planning Program is not only economically viable, but also socially beneficial.

The evidence produced in this study serves as a solid foundation for developing a communication approach that can be used as a tool to encourage political divergence in support of family planning.

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رقم الإيداع القانوني : 2022M00877
ISBN : 978-9920-30-205-0 : رقم