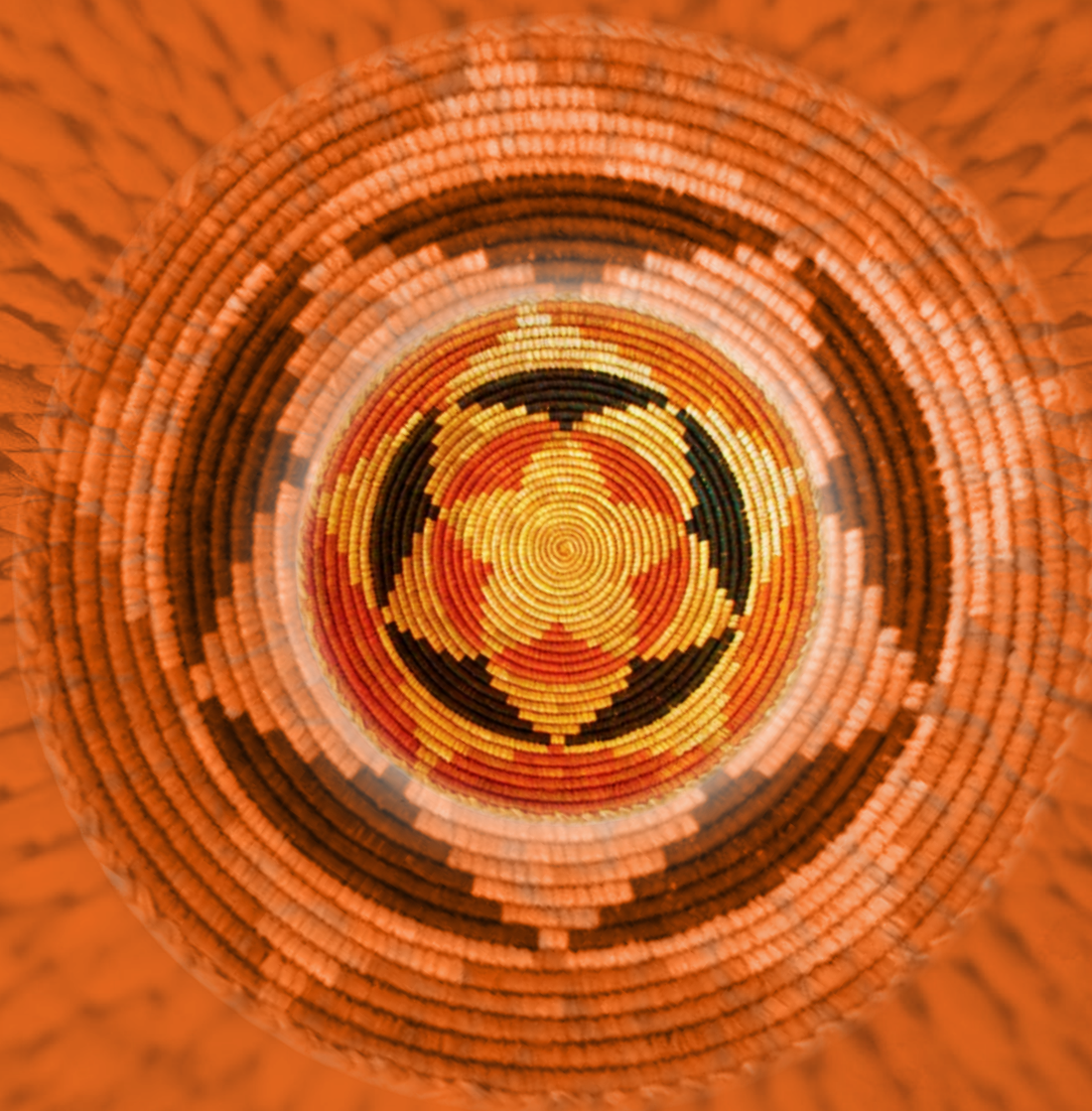




Investment Case Towards Ending
Unmet Need for Family Planning

BOTSWANA

September 2021



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ACKNOWLEDGEMENTS

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LIST OF ACRONYMS

ABR	Adolescent Birth Rate	MoHW	Ministry of Health and Wellness
BDS	Botswana Demographic Survey	NDP	National Development Plan
BNFPS	Botswana National Family Planning Strategy	NGOs	Non-Governmental Organizations
CPR	Contraceptive Prevalence Rate	TFR	Total Fertility Rate
FP	Family Planning	TWG	Technical Working Group
HA	Health Accounts	SDG	Sustainable Development Goal
HIS	Health Information Systems	SHA	System of Health Accounts
HIV	Human Immunodeficiency Virus	SRH	Sexual and Reproductive Health
HPV	Human Papillomavirus	STIs	Sexually Transmitted Infections
HSU	Health Statistics Unit	UB	University of Botswana
LiST	The Lives Saved Tool	UHC	Universal Health Coverage
MCH/FP	Maternal and Child Health/ Family Planning	UNAIDS	Joint United Nations Programme on HIV/AIDS
mCPR	Modern Contraceptive Prevalence Rate	UNFPA	United Nations Population Fund
MFED	Ministry of Finance and Economic Development	WHO	World Health Organization



EXECUTIVE SUMMARY



Botswana is an upper-middle-income country with a population of about 2.2 million people. The country has enjoyed good governance, a stable and democratic government, and a sustained high economic growth of about 9 per cent for two decades between 1975 and 1996. Growth however slowed down to an average of 3.9 per cent between 2009 and 2016. One of the aspirations of Botswana as expressed in the national policy document, Vision 2036, is to graduate from an upper-middle-income country to a high-income country with increased prosperity for its people by 2036.



Since 1973, the Government of Botswana has shown a strong commitment to family planning by integrating sexual and reproductive health (SRH) and sexually transmitted infections (STI) services into the health system. This means that women who visit public health facilities to utilize services such as antenatal and post-natal care, immunization and STI treatment are also offered free family planning services. Other key interventions by the Government include pre-service and in-service training of health service providers, training of non-governmental organization (NGO) staff, and community-based workers on condom use. The main goal is to improve family planning outreach to women and youth and increase distribution points of family planning services.

These interventions are guided by strategic policy documents such as the National Development Plans (currently NDP 11, 2017-2023), Vision 2036, Adolescent Sexual

and Reproductive Health Implementation Strategy (2010-2016) and the Botswana Integrated Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health and Nutrition (RMNCAH&N) Strategy (2018-2022). In addition, the country has a national SRH programme which is aligned with existing strategic policies. The SRH programme embraces equity, universal access, inclusivity as well as human rights in supporting high-impact cost-effective interventions that inform policy. Resulting from its multi-sectoral approach, total fertility rate (TFR) has declined from 6.6 children in 1960 to 3.1 children per woman in 2017. The maternal mortality rate has also declined from 151.6 deaths to 133.7 deaths per 100,000 live births, from 2014 to 2018 respectively, and child survival has increased over the same period.

Against this background, this study estimates the investment and the impact of scaling up coverage of modern contraceptive



methods among married/in-union women aged 15-49 years in Botswana within a time frame of ten years (2020-2030). The goal is to reduce unmet need for family planning among women, from 17.3 per cent in 2020 to 8 per cent or less by 2030.

In undertaking the investment case, four possible scenarios were modelled based on the Spectrum suite toolkit with guidance from UNFPA and Avenir Health for the strategic planning, costing of high-impact interventions and projection of the health benefits expected from implementation. The baseline case (or status quo) scenario assumes that the current contraceptive prevalence rate (CPR) of 67.4 per cent prevails over time and does not change.

The second scenario assumes that the CPR of 67.4 per cent only prevails in the base year and thereafter increases over time to reach a target of 75 per cent by 2030 – the SDG target for all countries to ensure universal access to sexual reproductive health and rights. The third scenario assumes that the CPR of 67.4 per cent increases over time until it reaches 80 per cent by 2030. The fourth scenario is an ambitious scenario that assumes that the CPR will reach 90 per cent by 2030.

Below are highlights of key findings and their policy implications.

Key Findings

- An increase in modern contraceptive prevalence rate (mCPR) from 64.52 per cent to 86 per cent with a view to ending unmet need for family planning will significantly increase the scale of impact to avert unintended pregnancies by 2030. In total, 665,775 unintended pregnancies will be averted between 2020 and 2030, with the mCPR at 64.52 per cent (baseline/status quo scenario with the CPR of 67.4 per cent). The number of unintended pregnancies averted by 2030 will increase: to 703,992 if the mCPR is increased to 72 per cent (in scenario 2 with a CPR of 75 per cent in 2030); to 729,173 if the mCPR is increased to 77 per cent (in scenario

3 with a CPR of 80 per cent in 2030); and finally, to 779,482 if the mCPR is increased to 86 per cent (in scenario 4 with a CPR of 90 per cent by 2030).

- Similarly, increasing the mCPR will amplify the potential to avert unsafe abortions. Between 2020 and 2030, the total number of unsafe abortions averted will increase from 139,014 (baseline/status quo scenario); to 146,994 in scenario 2; 152,251 in scenario 3; and 162,756 in scenario 4.
- The number of maternal deaths averted will increase from 993 (baseline/status quo scenario); to about 1,050 in scenario 2; 1,088 in scenario 3; and 1,160 in scenario 4.
- Maintaining the current CPR and mCPR through 2030 will require a cumulative additional cost of about \$10.1 million over the 10-year period. However, scaling up the CPR to 75 per cent, 80 per cent and 90 per cent by 2030 will require cumulative additional cost of \$12.6 million, \$14 million and \$16.8 million, respectively, for the 10-year period. These estimates show that while the impacts of scaling up FP services under the different scenarios are quite significant, the cost increases from the baseline/status quo are marginal, especially after attaining the second scenario.
- Given the available government resources, the financing gap to achieve coverage targets ranges between \$12.3 million and \$16.5 million across the scenarios over the 10-year period.

Policy recommendations

Among others, interventions such as integrating SRH and STI services, training of health service providers on family planning services, free provision of SRH and increased availability of health services underscore the commitment of the Government to meet national family planning needs. The country, through its family planning achievements, has also made great strides in empowering women with their



agency and bodily autonomy on rights and choices. Women and girls who can decide when, if and how many children to have, tend to obtain higher education levels, thereby increasing their ability to harness productive assets and income-generating opportunities and contribute to inclusive economic growth.

To address the pockets of unmet need for family planning among the poor, least educated and rural dwellers, the following policy recommendations are put forward:

- **Allocate more resources to primary health care within the context of universal health coverage:** Additional resources need to be allocated to primary health care (PHC) considering the need to scale up effective coverage of quality family planning services at the PHC level, which is currently allocated only about 24 per cent of total health spending. Family planning is currently considered only as part of the care package of integrated services within referral systems with secondary and tertiary health facilities, which receive 44 per cent of total health spending.
- **Explore alternative health financing options:** Considering the emergence of disease outbreaks and public health emergencies

such as COVID-19, which negatively impact economic activity and consequently reduce government revenue, there is a need to mobilize additional resources through innovative financing options for sexual reproductive health and rights services.

- **Strengthen monitoring, evaluation and accountability mechanisms:** One of the main limitations in Botswana is the weak monitoring and evaluation of the family planning programme and landscape due to gaps in routine data on key SRHR indicators. The latest survey that included a family planning module was the Botswana Demographic Survey conducted in 2017. However, the survey did not comprehensively cover family planning and left out key SRH indicators (such as Adolescent birth rate, Unmet need for family planning, etc) that are vital for supporting the planning and implementation of targeted family planning programmes. There is, therefore, a need to strengthen monitoring and evaluation of family planning programmes to support timely use of evidence and data for course correction and accelerated actions as part of UHC and SRHR accountability mechanisms.



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1. BACKGROUND



Botswana is a landlocked country with a population of about 2.2 million people. Of this, 47 per cent is male, and 53 per cent female; 34.7 per cent is under the age of 15. Females aged 15-49 years account for about 50.3 per cent of the female population (Statistics Botswana, 2017). In 1960, total fertility rate (TFR) was estimated at 6.6 children per woman and declined to 3.1 children per woman in 2017 (Statistics Botswana, 2018). Likewise, maternal mortality ratio decreased from 151.6 deaths to 133.7 deaths per 100,000 live births. Infant mortality has also declined from 97 deaths per 1,000 live births in 1971 to 38 deaths per 1,000 live births in 2017, while under-five mortality reduced from 152 deaths to 48 deaths per 1,000 live births over the same period (Statistics Botswana, 2018). About 95 per cent of the population has access to health-care services and live within an 8 km radius of the nearest health facility.



In 1966, when it became an independent Republic, Botswana had a per capita gross domestic product (GDP) of about \$90, placing it in the low-income country (LIC) category. By 2005, Botswana had moved up to the upper-middle-income country (UMIC) status.¹ In 2019, the country recorded a GDP per capita of \$7,961. With the upward trend in economic growth, Botswana aspires to graduate from an upper-middle-income country to a high-income country (HIC) by 2036 (Republic of Botswana, 2016).² While increased child survival rate and

reduction in fertility rate and maternal deaths have opened a window of opportunity for strategic investments in Botswana to maximize the demographic dividend to support its graduation to an HIC, high youth unemployment, poverty, gender and income inequality pose challenges to the national efforts. Female-headed households, for instance, are not only found to be poorer than male-headed households (Statistics Botswana, 2018) but are also less likely to transition out of poverty (Siphambe, 2007).

¹ [GDP per capita \(current USD\) - Botswana | Data \(worldbank.org\)](#)

² Botswana Vision 2036 Council (2016). Vision 2036 - Achieving Prosperity for All.



Women and adolescent girls are also susceptible to gender-based violence, abuse, unintended pregnancies and unsafe abortions. Investing in sexual and reproductive health and rights to end unmet need for family planning is critical and has implications for the realization of Botswana's goal of transitioning into an HIC, as well as its other socioeconomic development goals as outlined in the country's development blueprint, Vision 2036. Against this backdrop, the Government of Botswana in partnership with the United Nations Population Fund (UNFPA) commissioned an investment case study to determine the impact of scaling up effective coverage and additional resources required to achieve the transformative result to end unmet need for family planning among married/in-union women aged 15-49 years. The case study seeks to contribute to the national policy and strategic frameworks such as the Third Botswana National Strategic Framework for HIV & AIDS 2019 - 2023 (NSF III) and the Botswana National Family Planning Strategy 2020 - 2025 (BNFPS), among others, towards the achievement of Vision 2036, the National Development Plan (NDP) 11, and the Sustainable Development Goals (SDGs).

1.1 Investment case objectives

The specific objectives of the investment case are:

- i) to provide a situation analysis of aggregate country-level data on health financing and family planning
- ii) to estimate financing requirements for increased investment in family planning under different options (or scenarios) for target setting
- iii) to assess the benefits of investing in family planning.

The analysis compares scaling up effective coverage, impact and resource requirements of investment in family planning from the baseline scenario (or status quo) to three alternative scenarios over the period 2020-2030 towards achieving zero unmet need for family planning.

1.2 Situation analysis

1.2.1 Family planning programme landscape

Family planning services in Botswana are available and accessible without user fees from public health facilities, clinics and hospitals, NGO clinics and community-based outlets, and at subsidized cost in private clinics and hospitals. PHC accounts for about 24 per cent of total health spending as opposed to secondary and tertiary health care, which accounts for about 44 per cent.³ The Government of Botswana's programme of cooperation with UNFPA and partners, focuses on achieving a transformative agenda that is inclusive, universal, rights-based and anchored around the principle of equality and 'leaving no one behind' (Republic of Botswana, n.d).⁴ The programme aims to reduce maternal deaths from 134 to 103 deaths per 100,000 live births, to be achieved by increasing equitable access to integrated SRH services that meet human rights standards and are gender sensitive. Also, in view of the youthful population of Botswana, the programme aims to increase the percentage of youth and adolescents aged 15-24 years who have knowledge of at least three contraceptive methods from 45 per cent to 75 per cent, with increased access to adolescent and youth responsive services.

The national SRH policy guideline and service standards lay out the processes, types of family planning methods as well as essential steps to be complied with before prescribing the medical

³ General health and administration services account for 12 of total health expenditure; other category (comprised of ancillary services such as medical and diagnostic labs, home health care and ambulatory health care) represents 21 per cent of total health expenditure.

⁴ Government of Botswana-UNFPA 6th Country Programme, 2017-2021.

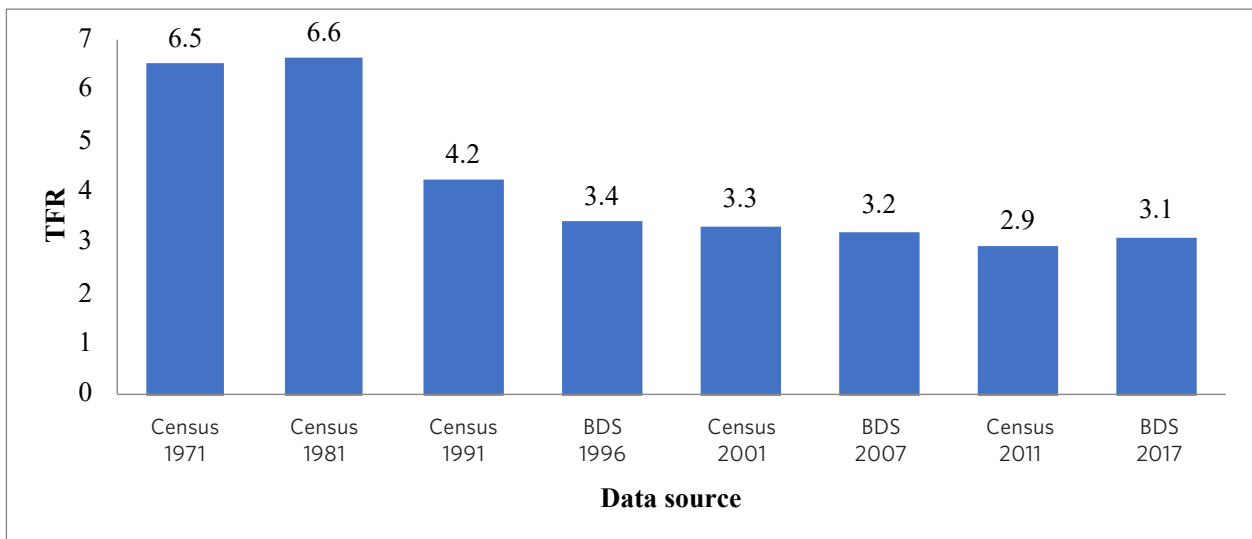


and non-medical family planning methods to clients. All sexually active adolescents, youth, men and women are eligible for family planning services whether for medical reasons, delaying spacing, or limiting childbirth. Post-partum women, regardless of the place of delivery, are provided with postnatal care and counselling as an essential service and as an integral part of SRH services within the context of universal health coverage. All clients, regardless of their family planning method of choice, are encouraged to use condoms for the prevention of STIs, including HIV and human papillomavirus (HPV) transmission, thereby offering triple protection.

The contraceptive methods available in Botswana are (i) modern methods, including male condom, female condom, male sterilization, female sterilization, injectable-3-month

(Depo Provera), intrauterine device (IUD) copper-T 380-A IUD (10 years), pill standard daily regimen, Norplant,⁵ implant (Implanon 3-year and Jadelle 5-year); and (ii) traditional methods, such as prolonged abstinence, withdrawal and periodic abstinence. The investment case uses modern contraceptive method mix to inform the analysis. Among these methods, the most prevalent is male condom at 64.2 per cent, followed by injections (17 per cent), pills (12.6 per cent), intrauterine device (1.4 per cent) and female sterilization and Norplant (1 per cent each) (Statistics Botswana, 2018). Other family planning methods such as contraceptive vaginal ring, patch and vaginal barrier are non-existent in the country but were kept in the analysis as recommended by the Ministry of Health and Wellness (MoHW).

Figure 1: Total Fertility Rate, Botswana: 1971-2017



Source: Botswana Demographic Survey (BDS) Report, 2017

⁵ Only Jadelle and Implanon implants are available in Botswana, but, due to monitoring and evaluation gaps, the documents and survey that was reviewed captured Norplant, which is not available. Therefore, the study captured Norplant in the analysis and not implants as data was not available.

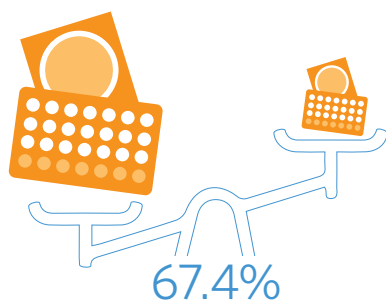


The decline in Botswana's total fertility rate is partly attributed to the increased age at first birth, improved child survival, increased female educational attainment and a strong and comprehensive family planning (FP) programme (MoHW, 2018b).⁶ Women who are more educated are more likely to use contraceptives, delay and space childbearing and subsequently, have a smaller family size compared to less educated women. In 2017, contraceptive use among married women of childbearing age was estimated at 67.4 per cent, but there is low contraceptive use among the poor, least educated and among rural dwellers when compared to the more educated, wealthy, and urban counterparts (Statistics Botswana, 2018). The disparities in modern contraceptive prevalence among demographic and income groups imply that pockets of unmet need for family planning exist that have the potential to undermine the achievements in sexual and reproductive health and future national development goals.

Despite a high level of knowledge (98 per cent) of at least one method of family planning among the population (Statistics Botswana, 2018), the mix of modern contraceptives in use is very limited. This could be mainly due to inadequate supervision, support, and mentoring of trained staff; lack of training for some health-care providers on the full range of family planning methods; weak supply chain management and distribution; inventory monitoring of FP commodities; and myths and misconceptions about some of the methods.

While the predominance of condom use may be associated with family planning intervention, it could also be attributed to the high prevalence of HIV and STIs in Botswana.

Other multisectoral challenges need to be addressed as they affect the performance of the family planning programme in Botswana. These include weak monitoring and evaluation of public sector programmes, including family planning, due to gaps in routine data on key indicators. Botswana relies mainly on programmatic data for tracking progress in the family planning programme. Unlike other countries in the region where a comprehensive demographic and health survey is conducted every five years, survey data on SRH and family planning in Botswana are collected once in 10 years by the national statistics institution, Statistics Botswana. The latest survey which had the family planning module was the Botswana Demographic survey conducted in 2017. However, the survey did not comprehensively cover family planning and left out key SRH indicators vital for supporting the planning and implementation of targeted family planning programmes. Some of the key indicators missed during the 2017 BDS include: adolescent birth rate (ABR) and the proportion of women aged 15-49 years who are married or in a union who make their own decisions on sexual relations; and use of contraceptive and health care. The 2017 BDS also did not capture unmet need for family planning. This is critical as half of HIV-infected pregnant women report that the pregnancy was unintended, with 20.2 per cent seroconverting during pregnancy (Republic of Botswana, n.d).



CONTRACEPTIVE USE AMONG MARRIED WOMEN OF CHILD-BEARING AGE WAS ESTIMATED AT 67.4% (2017) but there is low contraceptive use among the poor, least educated as well as among rural dwellers when compared to the more educated, better off, and urban dwelling counterparts (Statistics Botswana, 2018).

⁶ Ministry of Health and Wellness, 2018: Opportunities and Policy Actions to Maximize the Demographic Dividend in Botswana - Demographic Dividend Study Report.



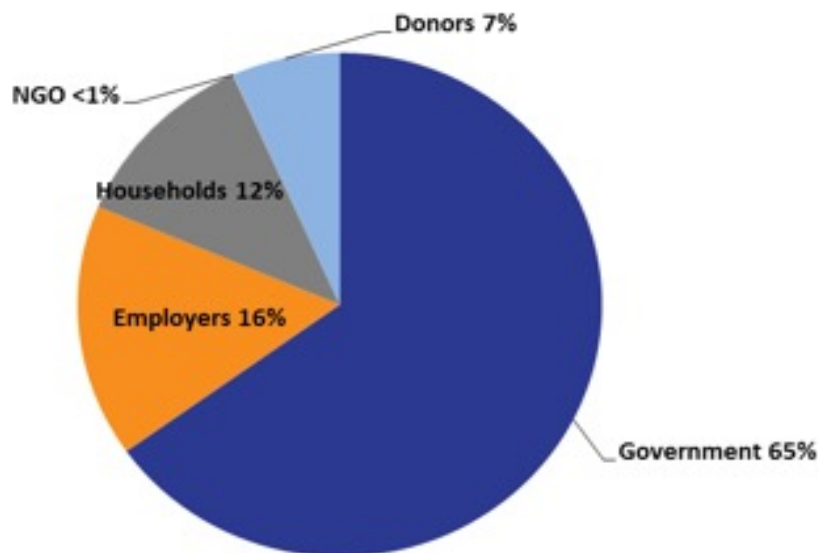
Survey data on SRH and family planning in Botswana are collected only once in ten years by Statistics Botswana. The latest survey (2017) with the family planning module **LEFT OUT A NUMBER OF KEY SRH INDICATORS** and **DID NOT CAPTURE UNMET NEED** for family planning.

1.2.2 Health financing

Like many countries in the region, Botswana prioritizes the attainment of universal health coverage (UHC) by ensuring financial protection of households while accessing health care. The Government of Botswana is the major funder of public health (65 per cent) with households and donors contributing far less (Figure 2). The investments in health financing are tracked using the National Health Accounts (NHA) system. So far, Botswana has completed four rounds of Health Accounts (HA).⁷

Despite some fluctuations, the Government has increased public health expenditure over time to ensure it meets the Abuja target of 15 per cent. Figure 3 compares total public health expenditure against total government expenditure. The country has surpassed the Abuja target since 2003, but there was a significant drop to 12 per cent in the 2013-2014 period.

Figure 2: Health Expenditure by Financing Source, 2013/2014

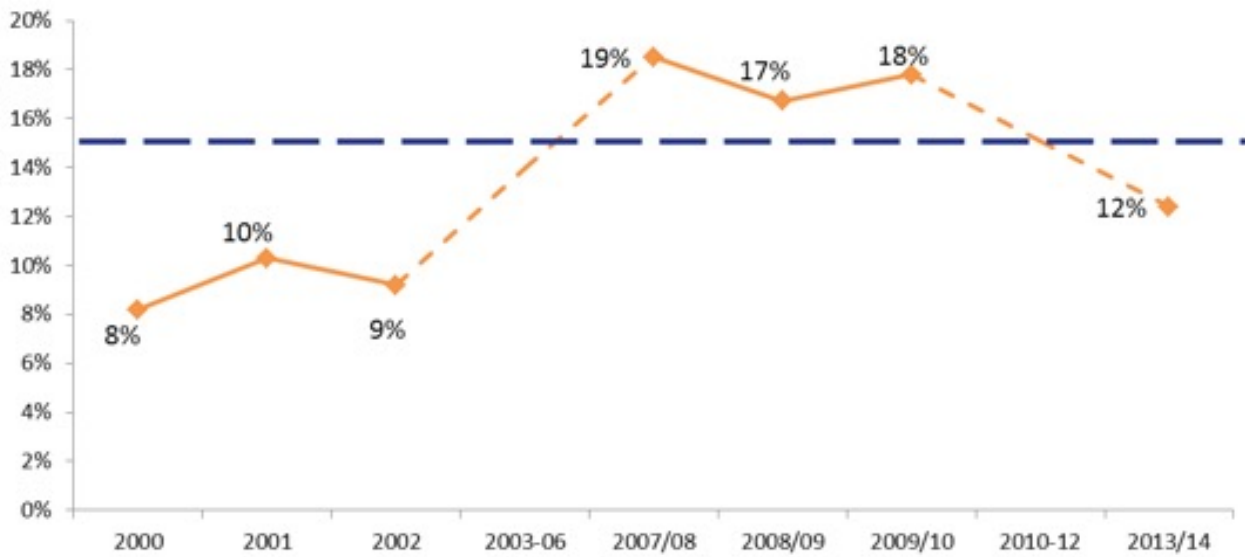


Source: National Health Accounts Report, 2013/2014

⁷ Health accounts provide details on health care spending flows and distribution from government, external donors, private employers, non-governmental organizations, medical aid schemes and households. The analysis breaks down health care spending into the standard classifications defined by the system of health accounts (SHA) 2011 framework namely: source of financing, financing scheme, financing agent, type of provider, type of activity, and disease/health condition. The first round, in 2006, covered fiscal years 2000/2001, 2001/2002, and 2002/2003; the second round in 2012, covered fiscal years 2007/2008, 2008/2009, and 2009/2010. The third round in 2013/2014 was the first to use the System of Health Accounts (SHA) 2011 framework. The fourth and latest round commenced in 2016.



Figure 3: Share of the Government in total health expenditure (2000-2014)



Source: National Health Accounts Report, 2013/2014

In 2013-2014, 12 per cent of the total health expenditure (THE) was spent on reproductive health, of which 9 per cent was allocated to maternal conditions; 1 per cent each to perinatal conditions and contraceptive management (family planning); and less than 1 per cent on unspecified reproductive health conditions. (See Figure 4.)

The largest source of funding for reproductive health spending over the period 2000-2014 was from the Government, constituting 92 per cent of the total (MoHW, 2016), while households and employers contributed about 4 per cent each. External sources of funding for reproductive health were less than 1 per cent, indicating minimal dependency on external funds to sustain the success and scale of reproductive health programmes.

Of the total funding for reproductive health, expenditure on maternal health accounted for 78 per cent, while perinatal conditions and family planning each accounted for 11 per cent. The decline in government funding on family planning interventions can be attributed to increased allocations for HIV/AIDS interventions over the years.

Whereas the Government's share of spending on reproductive health demonstrates relative sustainability, there is a need to examine whether the 11 per cent allocated to family planning will be adequate over time and the extent to which this level of spending may fall short of the need to reduce unmet need. This information will aid in decision-making on the funding allocation for family planning and other relevant actions.



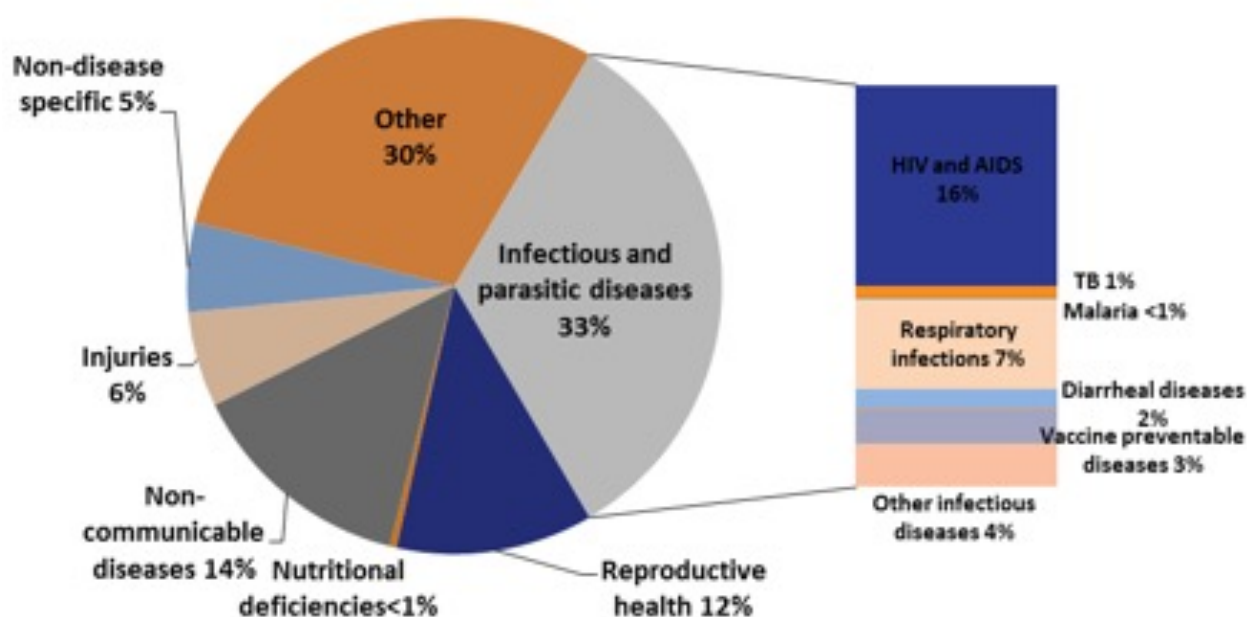
\$ 92%

The Government has been the largest source of funding for reproductive health covering 92% OF TOTAL (2000-2014). Family planning expenditure accounted for 1% of the FUNDING FOR REPRODUCTIVE HEALTH.

\$ 1%



Figure 4: Health expenditure by health/disease condition, 2013/2014



Source: National Health Accounts Report, 2017

Budget allocation for family planning and cancer screening between 2015-2016 and 2019-2020 is presented in Table 1 below. On average, the budget increased by 1 per cent over this period. Between 2015-2016 and 2016-2017, budget allocation to family planning and cancer screening declined by about 0.21 per cent or \$107,658.14. It increased between 2016-2017 and 2017-2018 by about 0.2 per cent but

declined thereafter by 0.31 per cent between 2017 and 2020. While there is available data on the budget allocated for family planning and cancer screening, there is a lack of national data on the cost of family planning commodities as well as on the actual cost incurred for family planning which poses a limitation on the analysis of funding requirements.

Table 1: Budget allocation for family planning and cancer screening, 2015-2020

YEAR	ACCOUNT	BUDGET (\$) ⁸
April 2015-March 2016	Family planning and cancer screening	491,308.33
April 2016-March 2017	Family planning and cancer screening	383,650.19
April 2017-March 2018	Family planning and cancer screening	460,887.95
April 2019-March 2020	Family planning and cancer screening	316,053.51

Source: TWG and MoHW

⁸ The budget allocations were provided by the TWG and MoHW in BWP. Exchange rate was obtained from [Exchange Rates | Bank of Botswana](#). In March 2018, USD1 was equivalent to BWP 9.46, to BWP 10.52 in March 2017, to BWP 10.93 in March 2016 and to BWP 11.96 in March 2020.



1.3 Making a case for investing in family planning to end unmet need in Botswana

Investing in family planning saves lives, promotes efficient health systems, gender equality and economic prosperity (Karra & Canning, 2020; World Health Organization, 2018). Starrs. *et al.* (2018) demonstrated the return on investment in family planning with benefits in improved health and well-being, improved prospects of gender equality, increased productivity, reduced poverty, and several multigenerational benefits for children, households and society. In addition, family planning increases young women's years of education and earnings, household savings and assets, and subsequent increase in children's years of schooling, and consequently, contribution to GDP growth. Kohler and Behrman (2014) found that for every \$1 invested in family planning programmes, \$120 is accrued

in savings in public health care and economic opportunity costs in the long term. Starbird, *et al.* (2016) put forward that additional investment in family planning services would save developing countries, in the aggregate, over \$11 billion each year in maternal and newborn health-care costs. Among all the 169 SDG targets, universal access to contraception has been cited as having the second-highest return on investment.⁹

The above-cited studies support Botswana's effort to achieve the socioeconomic development goals of reducing poverty and inequality, attaining universal health coverage and financial protection and prosperity for all by 2036 through, among others, strategic investment to meet the need for family planning. This investment case analyzes the scale and scope of investment needed to support family planning and accelerate progress towards ending unmet need based on identified high impact and cost-effective interventions.



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⁹ https://www.familyplanning2020.org/sites/default/files/Our-Work/Advocacy-cso/Business_Case_FP_Rwanda.pdf



2. METHODOLOGY



2.1 Estimation of projections

The Impact40 toolkit developed by UNFPA, Avenir Health and other Technical Partners was used for modelling the investment case. The FamPlan module in Spectrum was used to calculate CPR, mCPR, fertility rate, unmet need for family planning (FP) and the cost of investing in family planning. The Lives Saved Tool (LiST) module was used to estimate the cost of reducing unmet need for FP, while the Impact40 online toolkit was used to estimate the number of unintended pregnancies, maternal deaths, and unsafe abortions averted with the use of modern contraceptives.

2.2 Data sources

The study team worked in close consultation with the national TWG to discuss the methodology, to identify data sources to be used to update the pre-populated (baseline) data on the toolkit and official documentation for the desktop reviews, and to validate the investment case.

Desktop reviews were conducted on policy documents such as Botswana Integrated Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health and Nutrition (RMNCAH&N) Strategy 2018-2022; Vision 2036; Botswana National Family Planning Strategy; Sexual and Reproductive Health Policy Guidelines and Service Standards; Revised National Health Policy; National Development Plan (NDP) 11; Maternal Mortality Statistics Brief 2013-17 and 2014-2018; and Budget Speeches. The base data was updated with recent figures from the

latest national household survey, the Botswana Demographic Survey (BDS) 2017. Where more recent estimates were not available from the BDS 2017, a literature review of countries that have comparable economic and fertility patterns as those of Botswana was used to inform the estimates. In other instances, regional estimates obtained from the Spectrum tool were used to inform the country estimates where data was missing. The estimate for unmet need for family planning among all women used in the analysis was based on the United Nations estimates and projections for Botswana (United Nations, 2013). This was estimated at 17.3 per cent in 2020. By consensus between the national TWG and MoHW, the mid-term target to reduce unmet need from 17.3 per cent in 2020 was set to 14 per cent by 2025, and the long-term target was set to 8 per cent or below by 2030.

Appendix B expounds on the details of the methodology.

2.3 Assumptions

The analysis assumed that to end unmet need for family planning, the modern contraceptive prevalence rate (mCPR) would need to be improved. Accordingly, four scenarios were drawn up for the investment case to achieve this goal. The baseline case (or status quo) scenario assumes that the current contraceptive prevalence rate (CPR) of 67.4 per cent prevails over time and does not change. The second scenario assumes that the current CPR of 67.4 per cent in the baseline year increases over time to reach a target of 75 per cent in 2030 in line with SDG 3/Target 3.7. The third scenario



assumes that the current CPR increases over time until it reaches 80 per cent by 2030. The fourth and most ambitious scenario assumes a CPR of 90 per cent by 2030.

2.4 Contraceptive method mix

The proportion of all users of a particular method as at 2020 was obtained from the Botswana Demographic Survey, 2017. Projections of each method were estimated,¹⁰ scrutinized by experts in the national TWG, and approved as plausible within the context of Botswana. As the use of modern methods of family planning is anticipated to increase over time, it is also envisaged that use of traditional methods would decrease. Currently, the prevalence of the withdrawal method is estimated at 0.5 per cent, and over time, it is expected this family planning method would

decrease to zero. The contraceptive prevalence rates of prolonged abstinence, periodic abstinence and other traditional family planning methods are currently estimated at 0.5 per cent, 0.2 per cent and 0.3 per cent, respectively. By 2030, it is expected that these would be reduced to zero per cent.

The prevalence of female condom use is expected to increase from 1.1 per cent in 2020 to 1.9 in 2030. Efforts are underway to reposition female condom programming. This intervention is expected to increase the community distribution points for family planning methods, and consequently, increase the contraceptive use by 2030. A similar effect is expected on the use of male condoms, estimated to increase from the current prevalence of 64.2 per cent to 64.6 per cent by 2030.

Table 2: Estimate of projected contraceptive method mix (%), 2020 and 2030

METHOD	2020	2030
Female condom	1.1	1.9
Male condom	64.2	64.6
Female sterilization	1.0	1.0
Male sterilization	0.1	0.1
3-month injectable	17	17.2
IUD Copper-T 380-A (10 year)	1.4	1.5
Pill-standard daily regimen	12.6	12.7
Norplant	1.0	1.0
Withdrawal	0.5	0
Periodic abstinence	0.2	0
Traditional (not specified)	0.9	0
Total (%)	100	100

¹⁰ The projections towards reaching the target for contraceptive prevalence were reached through consultative discussions and agreements by experts in the national TWG that modern contraceptive methods would be increased while reducing traditional methods but both methods combined would account for 100 per cent.

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



3.1 Reduction in unmet need

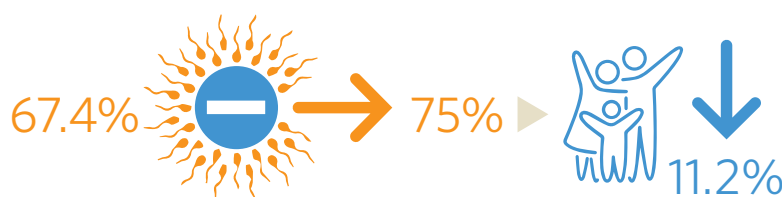
Table 3 presents projections under the different scenarios with corresponding CPR and mCPR targets.

Table 3: Results for different scenarios used to model reduction in unmet need for family planning: 2020, 2025, and 2030

POLICY TARGET	STATUS QUO		SCENARIO 2 (75% CPR TARGET)		SCENARIO 3 (80% CPR TARGET)		SCENARIO 4 (90% CPR TARGET)	
	2020	2030	2025	2030	2025	2030	2025	2030
Contraceptive prevalence rate (CPR)	67.40	67.40	71.20	75.00	73.70	80.00	78.70	90.00
Modern contraceptive prevalence (mCPR)	64.52	64.52	68.16	71.79	70.55	76.58	75.33	86.15
Total fertility rate	3.10	3.10	2.73	2.36	2.49	1.88	2.01	0.91
Unmet need for family planning (% of women aged 15-49 years)	17.3	17.3	14.2	11.2	12.2	7.6	8.5	2.1

Increasing contraceptive use (which will also increase the use of modern contraceptives) will reduce the unmet need for family planning under each scenario between 2020 and 2030. Under scenario 2, unmet need will be reduced from 17.3 per cent in 2020 to about 14.2 per cent in 2025 and 11.2 per cent in 2030.

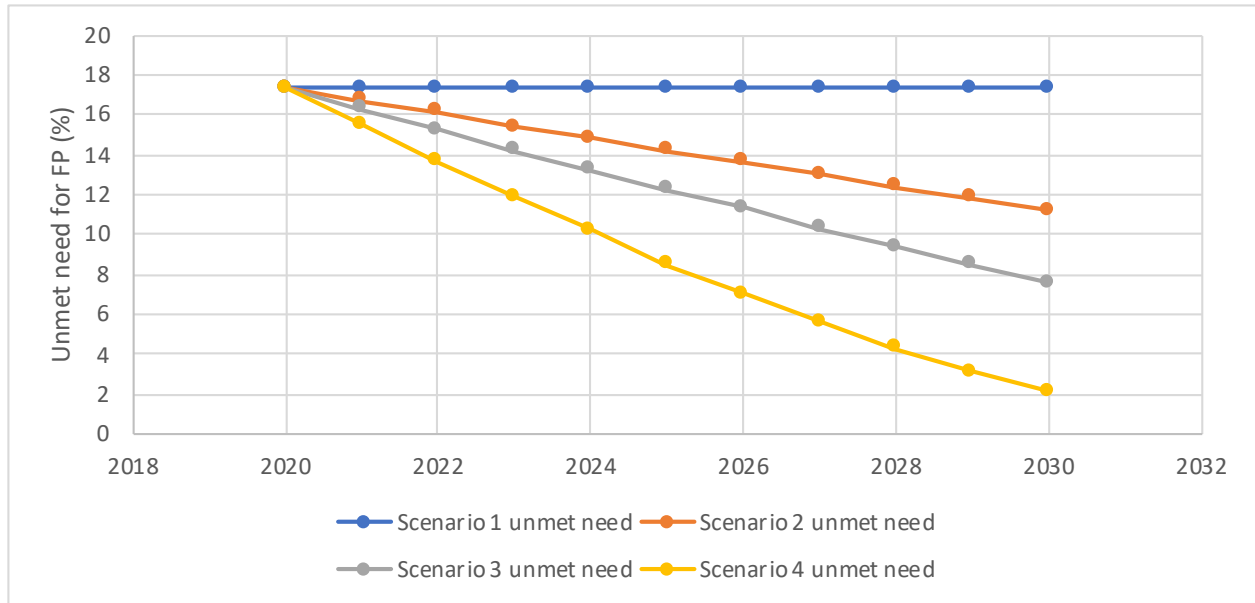
When mCPR is increased to 76.58 per cent in 2030 under scenario 3, unmet need will be further reduced to about 7.6 per cent. Under the ambitious scenario 4, increasing mCPR to 86.15 per cent in 2030 will reduce unmet need to 2.1 per cent (see Figure 5).



If the CURRENT CPR of 67.4% IS INCREASED TO 75% (with mCPR of 71.8%), UNMET NEED for FAMILY PLANNING will be REDUCED FROM 17.3% in 2020 to about 11.2% in 2030.



Figure 5: Projected trends in unmet need for family planning under different scenarios, 2020-2030



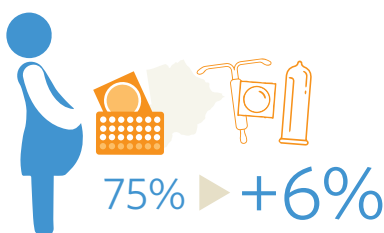
3.2 Impact of ending unmet need for family planning on health outcomes

This section presents results on the impact of increasing modern contraceptive prevalence rate on outcomes, particularly unintended pregnancies, maternal deaths and number of unsafe abortions averted (Table 4). The impact of increased mCPR is highest on the reduction in the number of unintended pregnancies. Specifically, the total number of unintended pregnancies averted

between 2020 and 2030 is 665,775 in scenario 1, 703,992 in scenario 2, 729,173 in scenario 3 and 779,482 in scenario 4. The number of unsafe abortions averted ranges from 139,014 in scenario 1 to 162,756 under scenario 4. The number of maternal deaths averted from using modern contraception ranges from 993 under scenario 1 to 1,160 for the ambitious scenario 4. The results for 2030 under the different scenarios are presented in Table 4. The impact per year is shown in Appendix A in Table 10.

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

IMPACT (RESULTS): 2020-2030	STATUS QUO 67.40% CPR	SCENARIO 2: 75% CPR	SCENARIO 3: 80% CPR	SCENARIO 4: 90% CPR
Cumulative number of unintended pregnancies averted	665,775	703,992	729,173	779,482
Cumulative number of maternal deaths averted	993	1,050	1,088	1,160
Cumulative number of unsafe abortions averted	139,014	146,994	152,251	162,756



THE IMPACT of increased use of MODERN CONTRACEPTIVES IS HIGHEST on the REDUCTION IN THE NUMBER OF UNINTENDED PREGNANCIES. With the CPR increased to 75%, the total number of unintended pregnancies averted between 2020 and 2030 WILL INCREASE BY 6% from 665,775 under the status quo to 703,992.



4. COSTS OF ENDING THE UNMET NEED FOR FAMILY PLANNING



The costs of interventions for ending unmet need for family planning are presented in Figures 6 to 9. The four cost categories¹¹ considered include: (1) drugs and supply, (2) labour costs,¹² (3) other recurrent costs, and (4) capital costs. These costs are presented as incremental costs (in USD), i.e., in addition to the baseline cost in order to achieve the targets for contraceptive prevalence. Total intervention costs are presented in Table 5. Detailed incremental costs for each of the family planning method are presented in Figures 12 to 31 in Appendix A.



All four categories of costs increase in absolute terms in each scenario over time. Labour costs constitute the largest share of the total intervention costs, followed by drugs and supply costs, capital costs and then other recurrent costs. However, the share of labour costs decreases over time, while all other costs have increasing shares. The results show that for the base case scenario, labour costs will account for 79 per cent of the total incremental costs, followed by drugs and supply cost (10 per cent), capital cost (8.7 per cent) and other recurrent costs (2.5 per cent). Under scenario 2 (75 per cent CPR), labour cost

will account for 71 per cent of the total incremental cost, followed by drug and supply costs (13.7 per cent), capital cost (11.8 per cent) and other recurrent costs (3.5 per cent). For scenario 3 (80 per cent CPR), labour cost will account for 65 per cent, followed by drugs and supply costs (16.5 per cent), capital costs (14.2 per cent) and other recurrent costs (4.2 per cent). For the ambitious scenario (90 per cent CPR), labour cost will account for 59 per cent, followed by drugs and supply costs (20 per cent), capital costs (17 per cent) and other recurrent costs (4.9 per cent).

¹¹ See Appendix B for details on composition of costs.

¹² Considering that the health sector is more labour intensive, it is unsurprising that labour costs in Botswana constitute a significant contribution to costs. In 2013-14, salaries accounted for about 43 per cent of THE (MoHW, 2016).



Table 5: Total costs for interventions invested under different scenarios, 2020-2030 (in USD)

ITEM	STATUS QUO	SCENARIO 2 (75% CPR)	SCENARIO 3 (80% CPR)	SCENARIO 4 (90% CPR)
Drug and supply costs	1,057,231	1,815,824.19	2,314,935	3,313,241.45
Labour costs	8,220,385	8,781,850.77	9,151,236	9,890,006.67
Other recurrent costs	265,587.3	456,558.64	582,219.5	833,591.59
Capital costs	906,612.2	1,558,289.86	1,987,093	2,844,853.74
Total intervention costs	10,449,815.5	12,612,523.45	14,035,483.7	16,881,693.45

The pattern is similar across the scenarios and shows the evolving mix of methods in the country. According to the BDS 2017, male condom prevalence rate was 64.2 per cent due to its triple protection use established within the national policy, followed by: injectable-3 month (Depo Provera) at 17 per cent; pill-standard daily regimen at 12.6 per cent; IUD Copper-T 380-A IUD (10 year) at 1.4 per cent; female sterilization at 1 per cent; male sterilization at 0.1 per cent;

and other methods. Projecting into the future (by 2030), it is anticipated that male condom prevalence will increase to 64.6 per cent; injectable 3-month (Depo Provera) to 17.2 per cent; and pill-standard daily regimen to 12.7 per cent. In terms of resource implications, this implies that the resource costs required would be scaled along the prevalence patterns of the different commodities, with male condoms constituting a larger portion of the costs.

Figure 6: Estimate of incremental cost by FP cost category (in USD), Scenario 1, 2020-2030

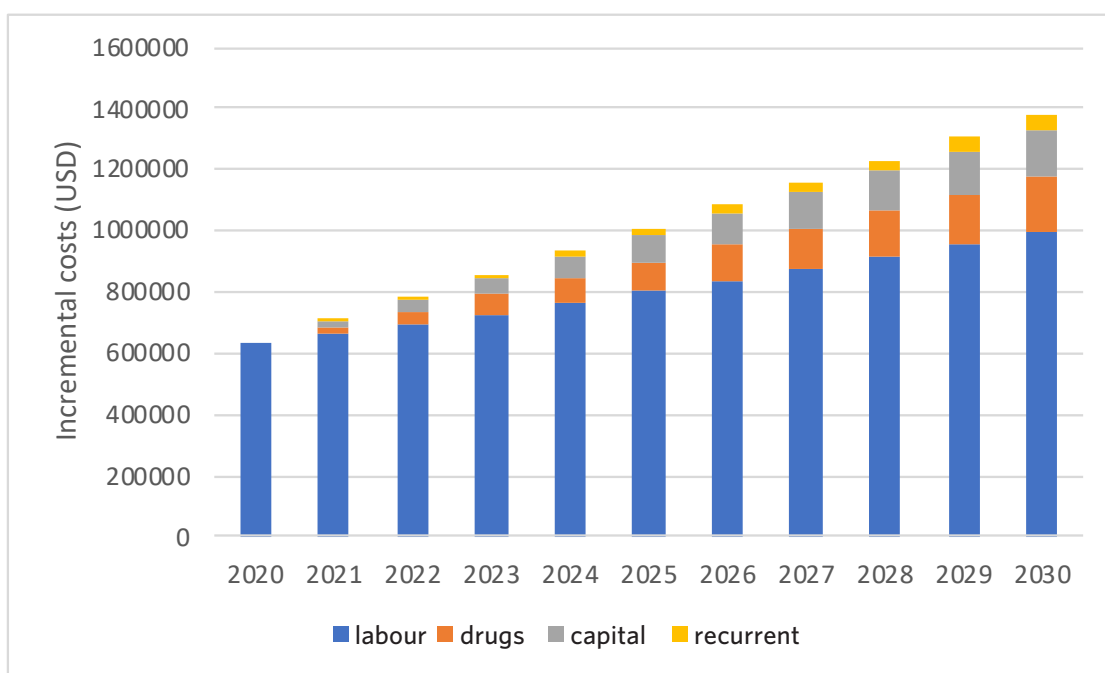




Figure 7: Estimates of incremental cost by FP cost category (in USD), Scenario 2, 2021-2030

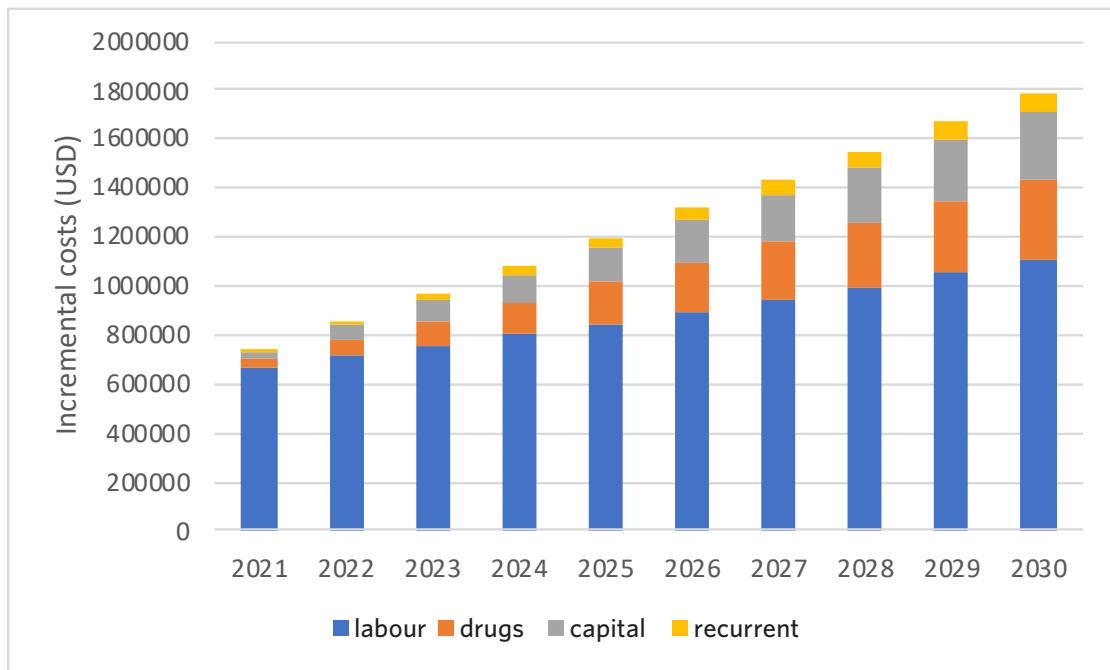


Figure 8: Estimates of incremental cost by FP cost category (in USD), Scenario 3, 2021-2030

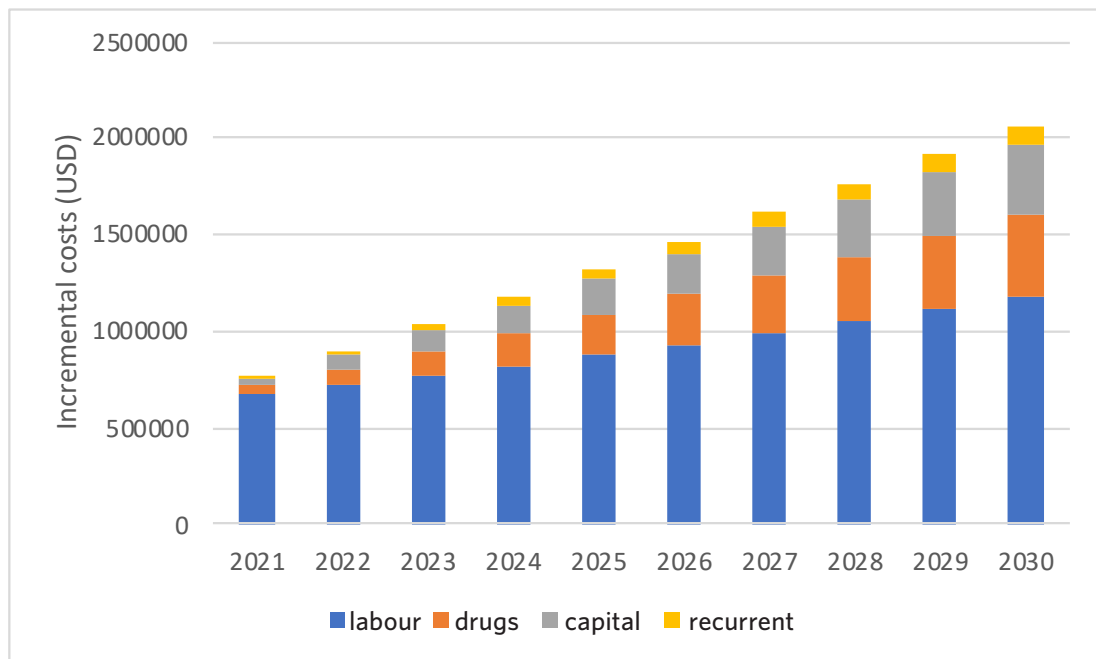
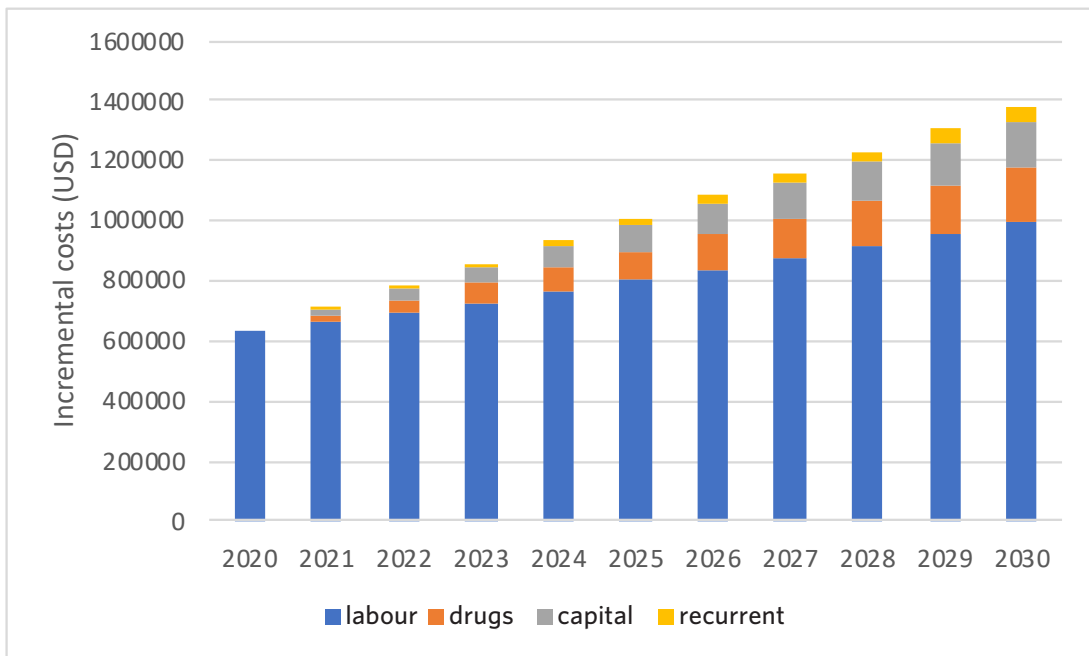




Figure 9: Estimates of incremental cost by FP category (in USD), Scenario 4, 2021-2030



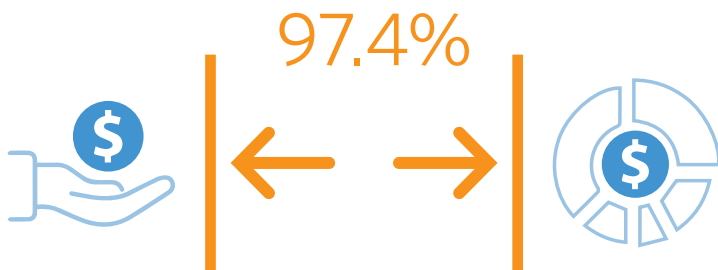
As indicated in section 1.2.2, lack of national data on the cost of family planning commodities as well as on the actual cost incurred in family planning programmes was a limitation. The investment case relied on unit costs provided within the tools to assess the funding requirements to achieve each of the projection scenarios. To determine the funding gap to eliminate unmet need for family planning, the investment case assumes that approximately 1 per cent of the budget for sexual and reproductive health is allocated for family planning programmes in the country. This is in line with the pattern of budget allocation for family planning presented in

Table 1, as well as the history of total health expenditure allocation to family planning as documented in the NHA 2013-2014. The assumption used to estimate the funding gap was acceptable to the TWG and MoHW.

The estimates in Table 6 show a significant gap in public funding of 97.3 per cent, 97.3 per cent and 97.5 per cent (average of about 97.4 per cent) of total funding needs over the period 2020-2030 for scenario 2, scenario 3 and scenario 4, respectively. If donor and private funding are included in the calculations, the funding gap would be reduced.

Table 6: Public financing gap for family planning to end unmet need (in USD), 2020-2030

SCENARIO	TOTAL PUBLIC FUNDING REQUIRED, 2020-2030 (A)	PROJECTED BUDGET ALLOCATION, 2020-2030 (B)	FINANCING GAP (C) [(A) - (B)]	FINANCING GAP (C)/(A) (%)
Scenario 2 (75% CPR)	12,612,523.45	347, 284.74	12,265,238	97.3
Scenario 3 (80% CPR)	14,035,483.7	381, 602.13	13,653,881.57	97.3
Scenario 4 (90% CPR)	16,881,693.45	419, 310.64	16,462,382.81	97.5



With increased targets for CPR and mCPR, the estimates of **REQUIRED FUNDING V.S. PROJECTED BUDGET ALLOCATION** for 2020-2030 **SHOW A SIGNIFICANT GAP** of about **97.4%** in public funding on average across the scenarios.



5. CONCLUSION



Family planning has the potential to significantly influence health and other development outcomes such as reduction in unintended pregnancies and maternal deaths, increased agency and bodily autonomy for women and gender equality, improvement in women's education and economic participation, and child survival, as well as HIV prevention.



This study makes the case for further investment in family planning towards ending unmet need in Botswana, including an ambitious goal of reaching a CPR of 90 per cent and mCPR of 86.15 per cent by 2030. Four scenarios were modelled to show varying CPR and mCPR and the corresponding results in terms of health outcomes and reduction in fertility rate and unmet family planning need, and the resource requirements needed to raise family planning interventions to support the varying levels of achievement.

The investment case indicates that in all the four scenarios, increasing the CPR and the use of modern contraceptive methods would save more lives (averting unintended pregnancies, maternal deaths and unsafe abortions) that would otherwise lead to loss of potential productive capacity, among others, the value of which would far exceed the current public spending for family planning services. By increasing access to family planning methods, women and youth would be empowered to delay and space pregnancies, which in turn, would enable them to pursue opportunities for higher education, boosting their ability to effectively engage in income-generating activities and participate in the labour market. This would then be expected to accelerate Botswana's

socioeconomic development and support its transition to a high-income country status. It would also lead to accelerated achievement of the SDGs, especially universal access to sexual and reproductive health and rights.

While there are notable developments to expand the national family planning programme, there is a need to scale up training of health-care providers on quality provision of method mix. There is also a need to strengthen data generation to support policymaking and for monitoring and evaluation of family planning programmes. Additional resources also need to be allocated to primary health care (PHC) facilities within the context of universal health coverage, considering that most family planning services are accessed at PHC level as opposed to secondary and tertiary health facilities. As the country seeks to recover and build forward better from the ongoing public health emergency due to the COVID-19 pandemic, it is important to safeguard the investment in family planning given the competing priorities to address the negative impact of the pandemic on the economy and, consequently, reduced government revenue. In this regard, there is also the need to strengthen advocacy to mobilize additional resources to fund SRHR interventions and to develop innovative financing mechanisms.



REFERENCES

- Statistics Botswana, S. (2018). *Botswana Demographic Survey 2017 Report*. Gaborone, Botswana.
- Statistics Botswana. (2018). *Botswana Multi-Topic Survey 2015-16 Report*. Gaborone, Botswana.
- Karra, M. a., & Canning, D. (2020). The Effect of Improved Access to Family Planning on Postpartum Women: Protocol for a Randomized Control Trial. *JMIR Res Protoc*.
- Letamo G., a., & Navaneetham, K. (2015). Levels, trends and reasons for unmet need for family planning among married women in Botswana: a cross-sectional study. *BMC Open*.
- Mayondi, G., Wirth, K., Morroni, C., Moyo, S., Ajibola, G., Diseko, M., . . . Lockman, S. (2016). Unintended Pregnancy, contraceptive use, and childbearing desires among HIV-infected and HIV-uninfected women in Botswana: a cross-sectional study. *BMC Public Health*.
- MoHW. (2018). *Botswana Intergrated Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health and Nutrition (RMNCAH&N) Strategy 2018-2022*.
- MoHW. (2018b). *Opportunities and Policy Actions to Maximise the Demographic Dividend in Botswana. Demographic Dividend Study Report*.
- MoHW. (2016). *National Health Accounts: Botswana 2013-14 Health Accounts Report*.
- MoHW. (n.d). *Botswana National Family Planning Strategy 2020-2025*.
- MoHW. (n.d). *Policy Guidelines and Services Standards: Sexual and Reproductive Health*.
- MoPAPA. (2019). *The Third Botswana National Strategic Framework for HIV & AIDS*. Gaborone, Botswana.
- Republic of Botswana. (2016). *Vision 2036: Achieving Prosperity for All*. Prepared by Vision 2036 Presidential Task Team.
- Siphambe, H. K. (2007). *Growth and Employment Dynamics in Botswana: A Case Study of Policy Coherence*.
- Statistics Botswana. (2018). *Botswana multi-topic household survey report: 2015-16*. Gaborone: Statistics Botswana.
- United Nations. (2013). *National, Regional and Global Estimates and Projections of the Number of Women Aged 15 to 49 Who Are Married or in a Union, 1970-2030*.
- United Nations, Department of Economic and Social Affairs, Population Division. (2015). *Model-based Estimates and Projections of Family Planning Indicators 2015*. New York: United Nations
- United Nations Population Fund (2020). *Developing Investment cases for Transformative Results, Impact40 Toolkit*.
- United Nations Population Fund (2020). *Assessment of SRHR in Universal Health Coverage in Botswana*.
- Wheldon M.C., Kantorová, V., Ueffing, P. a., & Dasgupta, A. (2018). *Methods for estimating and projecting key family planning indicators among all women of reproductive age*.
- United Nations, Department of Economic and Social Affairs, Population Division.
- WHO (2018). *Family Planning: A Global Handbook for Providers - Evidence based guidance developed through worldwide collaboration*.



APPENDIX A

Table 7: Scenario for contraceptive prevalence rate (CPR), modern contraceptive prevalence rate (mCPR), fertility rate, and unmet need for FP, Scenario 1 (base case scenario)

YEAR	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Scenario 1											
CPR	67.40	67.40	67.40	67.40	67.40	67.40	67.40	67.40	67.40	67.40	67.40
mCPR	64.52	64.52	64.52	64.52	64.52	64.52	64.52	64.52	64.52	64.52	64.52
Fertility rate	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
Unmet need (%)	17.30	17.30	17.30	17.30	17.30	17.30	17.30	17.30	17.30	17.30	17.30

Table 8: Scenarios for contraceptive prevalence rate (CPR), modern contraceptive prevalence rate (mCPR), fertility rate, and unmet need for FP: Alternative Scenarios, 2020-2030

YEAR	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Scenario 2											
CPR	67.40	68.16	68.92	69.68	70.44	71.20	71.96	72.72	73.48	74.24	75.00
mCPR	64.52	65.25	65.97	66.70	67.43	68.16	68.88	69.61	70.34	71.07	71.79
Fertility rate	3.10	3.03	2.96	2.88	2.81	2.73	2.66	2.58	2.51	2.44	2.36
Unmet need (%)	17.3	16.7	16.1	15.4	14.8	14.2	13.6	13	12.4	11.8	11.2
Scenario 3											
CPR	67.40	68.66	69.92	71.18	72.44	73.70	74.96	76.22	77.48	78.74	80.00
mCPR	64.52	65.72	66.93	68.14	69.34	70.55	71.75	72.96	74.17	75.37	76.58
Fertility rate	3.10	2.98	2.86	2.74	2.62	2.49	2.37	2.25	2.12	2.00	1.88
Unmet need (%)	17.3	16.3	15.2	14.2	13.2	12.2	11.3	10.3	9.4	8.5	7.6
Scenario 4											
CPR	67.40	69.66	71.92	74.18	76.44	78.70	80.96	83.22	85.48	87.74	90.00
mCPR	64.52	66.68	68.84	71.01	73.17	75.33	77.50	79.66	81.82	83.99	86.15
Fertility rate	3.10	2.89	2.67	2.45	2.23	2.01	1.79	1.57	1.35	1.13	0.91
Unmet need (%)	17.3	15.5	13.6	11.9	10.2	8.5	7.0	5.6	4.3	3.1	2.1



Figure 10: Trend in contraceptive prevalence rate (CPR) under different scenarios, 2020-2030

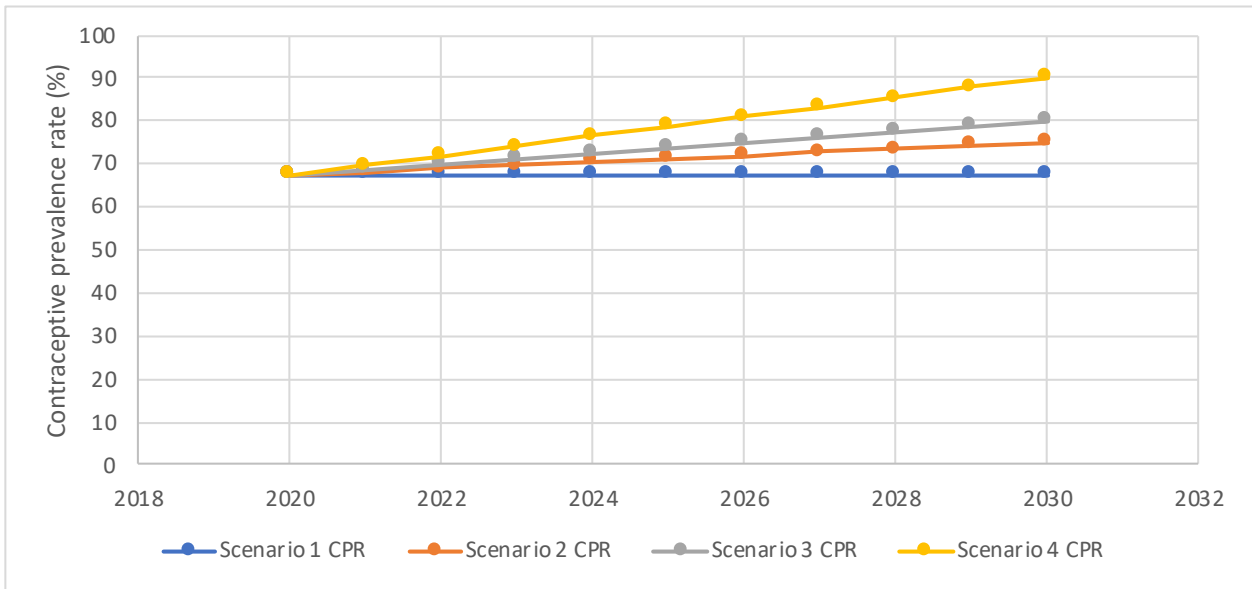


Figure 11: Trend in modern contraceptive prevalence rate (mCPR) under different scenarios, 2020-2030

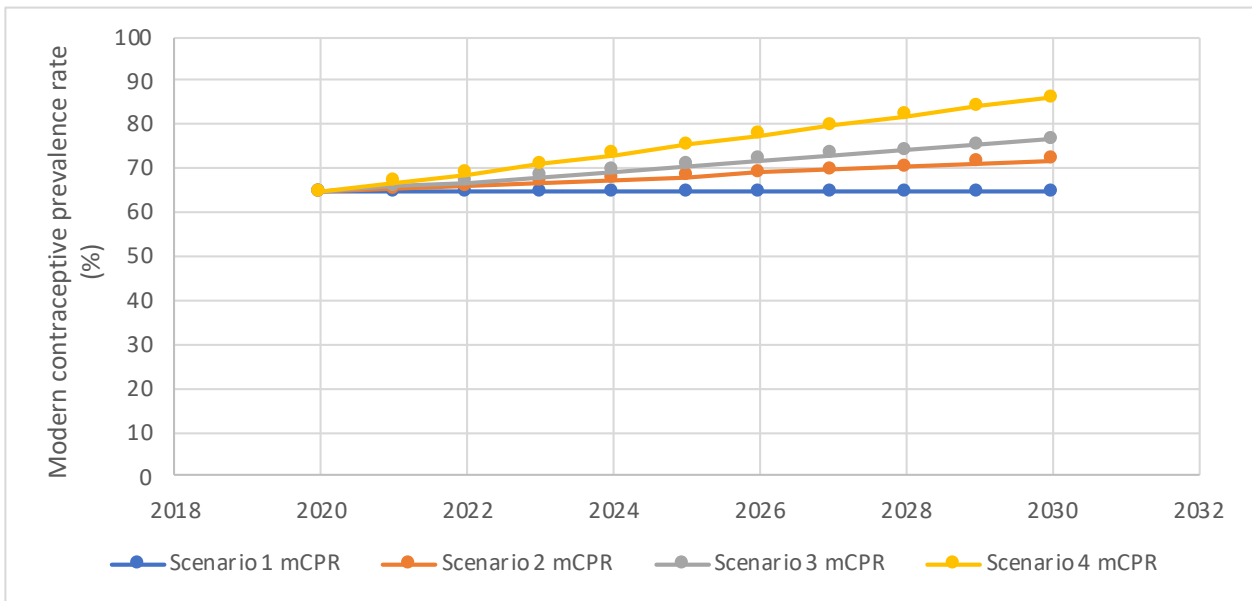




Table 9: Projected use of contraceptives: percentage of users by method (method mix), 2020–2030

YEAR	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Method mix (%)											
Modern methods											
Female condom	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.9
Male condom	64.2	64.2	64.3	64.3	64.4	64.4	64.4	64.5	64.5	64.6	64.6
Female sterilization	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Male sterilization	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
3-month injectable	17	17	17	17.1	17.1	17.1	17.1	17.1	17.2	17.2	17.2
IUD Copper-T 380-A (10 year)	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5
Pill-standard daily regimen	12.6	12.6	12.6	12.6	12.6	12.7	12.7	12.7	12.7	12.7	12.7
Norplant	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Traditional methods											
Withdrawal	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0
Periodic abstinence	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0	0	0
Traditional (not specified)	0.9	0.8	0.7	0.6	0.5	0.5	0.4	0.3	0.2	0.1	0
Total (%)	100	100	100	100	100	100	100	100	100	100	100



Table 10: Impact of increasing CPR on maternal deaths, unsafe abortions and unintended pregnancies under different scenarios, 2020–2030. (The targets of 75%, 80% and 90% are for CPR (not mCPR))

YEAR	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	TOTAL
Scenario 1 (67.40%)												
Unintended pregnancies averted	55,326	56,511	57,636	58,715	59,764	60,769	61,719	62,615	63,462	64,256	65,002	665,775
Maternal deaths averted	83	84	86	88	89	91	92	93	95	96	97	993
Unsafe abortions averted	11,552	11,800	12,035	12,260	12,479	12,689	12,887	13,074	13,251	13,417	13,573	139,014
Scenario 2 (75%)												
Unintended pregnancies averted	55,326	57,123	58,890	60,640	62,387	64,118	65,818	67,489	69,132	70,743	72,327	703,992
Maternal deaths averted	83	85	88	90	93	96	98	101	103	106	108	1,050
Unsafe abortions averted	11,552	11,927	12,296	12,662	13,026	13,388	13,743	14,092	14,435	14,771	15,102	146,994
Scenario 3 (80%)												
Unintended pregnancies averted	55,326	57,527	59,717	61,908	64,115	66,325	68,519	70,700	72,868	75,017	77,152	729,173
Maternal deaths averted	83	86	89	92	96	99	102	105	109	112	115	1,088
Unsafe abortions averted	11,552	12,012	12,469	12,926	13,387	13,849	14,307	14,762	15,215	15,664	16,109	152,251
Scenario 4 (90%)												
Unintended pregnancies averted	55,326	58,332	61,368	64,441	67,569	70,733	73,915	77,115	80,332	83,557	86,794	779,842
Maternal deaths averted	83	87	92	96	101	106	110	115	119	124	128	1,160
Unsafe abortions averted	11,552	12,180	12,814	13,455	14,108	14,769	15,434	16,102	16,773	17,447	18,123	162,756



Table 11: Incremental costs of family planning for the different CPR scenarios (in USD), 2021-2030

STATUS QUO	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	TOTAL COSTS
Drug and supply costs	21,594.27	42,138.62	61,912.58	81,208.03	99,917.22	117,730.07	134,727.20	150,927.05	166,250.45	180,825.27	1,057,223.00
Labour costs	661,591.60	694,562.50	728,480.37	763,553.73	799,698.16	836,695.86	874,646.25	913,562.47	953,378.26	994,216.05	8,220,385.00
Other-recurrent costs	5,433.87	10,591.15	15,556.77	20,404.62	25,104.21	29,575.71	33,842.73	37,909.45	41,755.12	45,413.64	265,587.30
Capital costs	18,544.03	36,151.04	53,102.73	69,651.07	85,693.85	100,959.65	115,527.17	129,410.95	142,540.67	155,031.01	906,612.20
Total intervention costs	707,163.77	783,443.30	859,052.46	934,817.46	1,010,413.46	1,084,961.3	1,158,743.36	1,231,809.91	1,303,924.5	1,375,486	10,449,076.28
Scenario 2 (75%)											
Drug and supply costs	34,141.57	67,693.25	100,911.49	134,075.32	167,054.85	199,499.18	231,464.87	262,944.46	293,823.77	324,215.42	1,815,824.20
Labour costs	670,433.18	711,678.75	754,648.60	799,592.97	846,462.23	895,060.03	945,522.07	997,895	1,052,138.59	1,108,419.34	8,781,850.77
Other-recurrent costs	8,594.48	17,026.72	25,376.94	33,715.93	42,007.53	50,161.52	58,195.57	66,107.33	73,867.21	81,505.40	456,558.64
Capital costs	29,328.38	58,110.72	86,612.11	115,073.80	143,374.36	171,206.90	198,629.84	225,635.46	252,123.20	278,195.09	1,558,289.90
Total intervention costs	742,497.62	854,509.45	967,549.13	1,082,458.02	1,198,898.98	1,315,927.63	1,433,812.35	1,552,582.25	1,671,952.76	1,792,335.26	12,612,523.45
Scenario 3 (80%)											
Drug and supply costs	42,400.03	84,509.16	126,572.31	168,860.08	211,227.99	253,298.30	295,111.71	336,643.77	377,757.21	418,554.66	2,314,935
Labour costs	676,250.05	722,939.48	771,864.57	823,303.03	877,228.11	933,457.57	992,150.93	1,053,376.98	1,117,112.51	1,183,553.09	9,151,236
Other-recurrent costs	10,676.02	21,262.84	31,839.76	42,475.55	53,130.33	63,707.00	74,219.35	84,660.76	94,995.76	105,252.16	582,219.5
Capital costs	36,430.10	72,564.63	108,664.50	144,963.93	181,328.82	217,428.95	253,303.39	288,947.81	324,223.70	359,230.82	1,987,093
Total intervention costs	765,756.20	901,276.12	1,038,941.15	1,179,602.6	1,322,915.24	1,467,891.82	1,614,791.37	1,763,629.32	1,914,089.17	2,066,590.73	14,035,483.7
Scenario 4 (90%)											
Drug and supply costs	58,925.36	118,149.4	177,902.37	238,438.02	299,582.61	360,904.83	422,413.78	484,050.81	545,632.65	607,241.62	3,313,241.45
Labour costs	687,883.72	745,460.88	806,296.44	870,723.07	938,759.73	1,010,252.45	1,085,408.57	1,164,340.86	1,247,060.39	1,333,820.56	9,890,006.67
Other-recurrent costs	14,844.13	29,740.09	44,770.44	59,999.83	75,380.92	90,802.95	106,271.94	121,772.64	137,257.93	152,750.71	833,591.59
Capital costs	50,649.10	101,488.02	152,784.83	204,759.73	257,253.23	309,888.49	362,684.02	415,588.07	468,440.37	521,317.88	2,844,853.74
Total intervention costs	812,302.30	994,838.38	1,181,754.1	1,373,920.6	1,570,976.49	1,771,848.7	1,976,778.31	2,185,752.37	2,398,391.35	2,615,130.78	16,881,693.45



Note A.1: Total incremental costs 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 male condoms by 2030 across the scenarios is high as informed by the method mix agreed to by the country. While the costs of other family planning methods also increase over time, the proportion for male condoms is significant. The incremental costs associated with IUD Copper-T 380-A and female sterilization are almost non-existent.

Figure 12: Incremental costs for drugs and supply (in USD), by type of method/commodity: Scenario 1 (67.4% CPR)

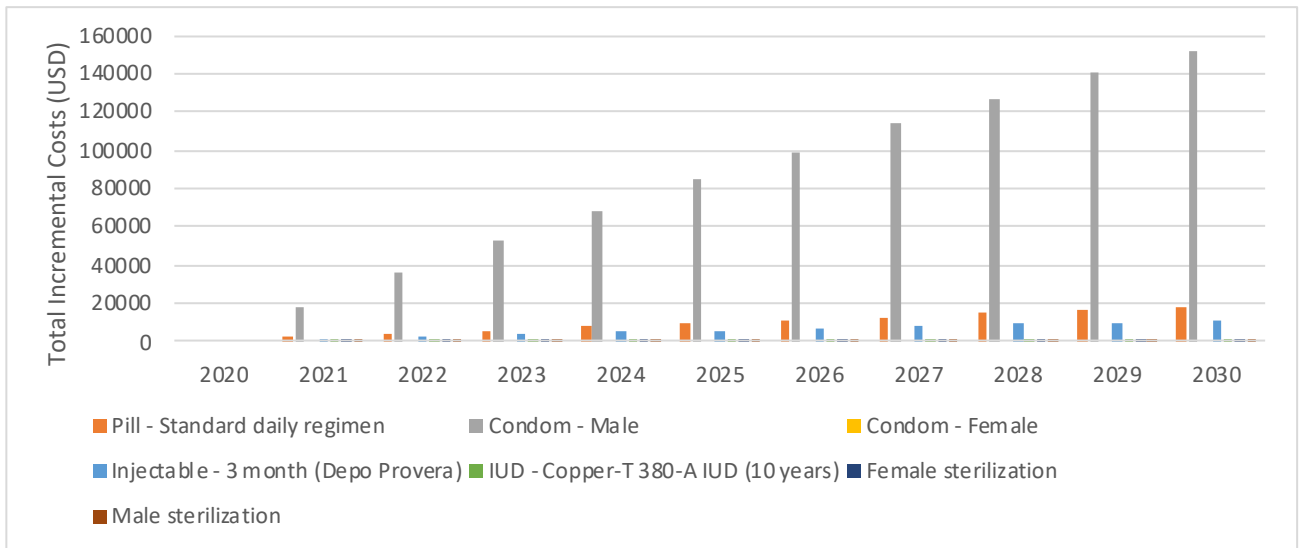


Figure 13: Incremental costs for drugs and supply (in USD), by type of method/commodity: Scenario 2 (75% CPR)

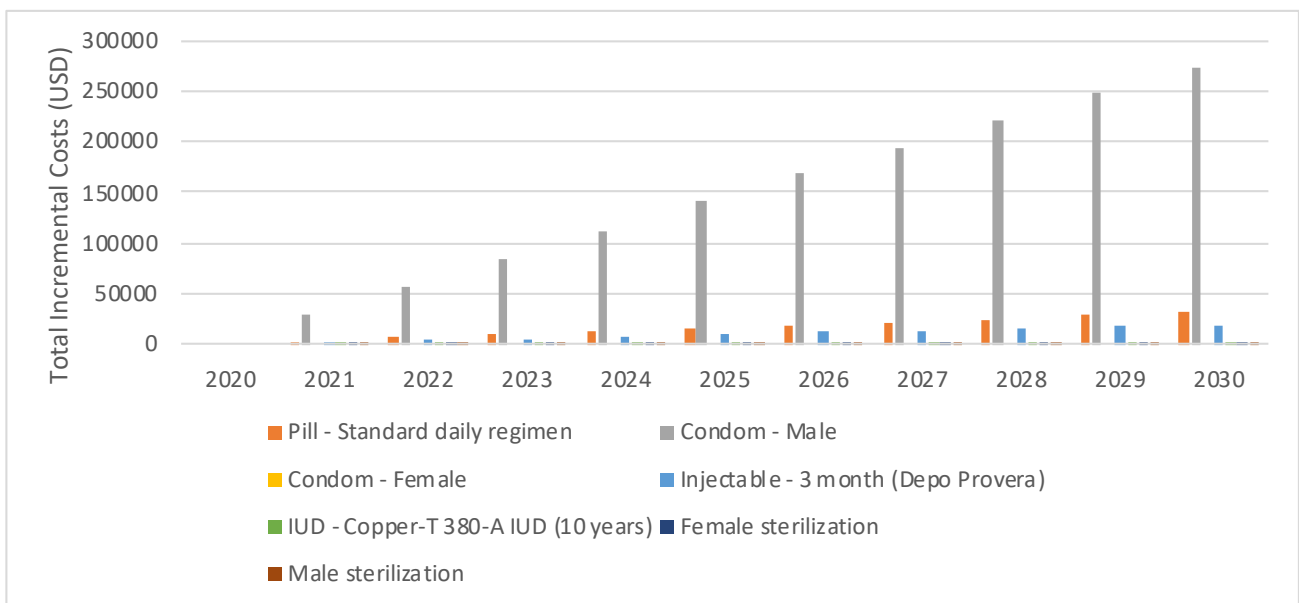




Figure 14: Incremental costs for drugs and supply (in USD), by type of method/commodity: Scenario 3 (80% CPR)

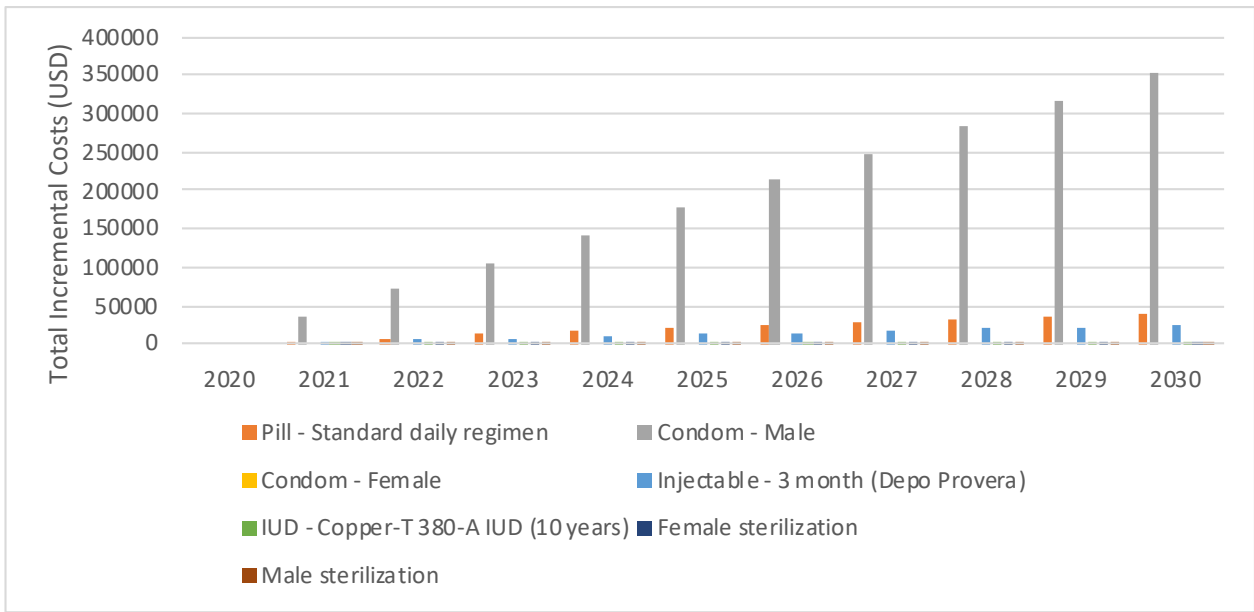
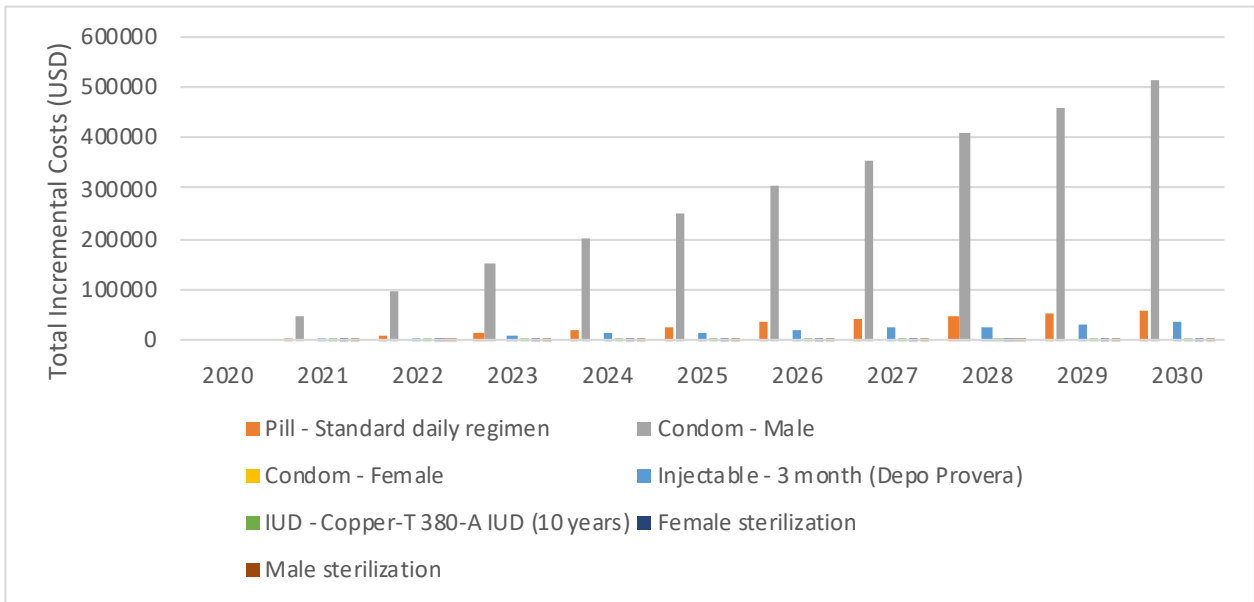


Figure 15: Incremental costs for drugs and supply (in USD), by type of method/commodity: Scenario 4 (90% CPR)



Note A.2: Incremental Costs for labour

Relative to other cost categories, labour costs also constitute a significant portion of total incremental costs. The incremental labour costs associated with IUD Copper-T 380-A, male and female sterilization are negligible.

Figure 16: Incremental costs for labour (in USD), by type of method/commodity: Scenario 1 (67.4% CPR)

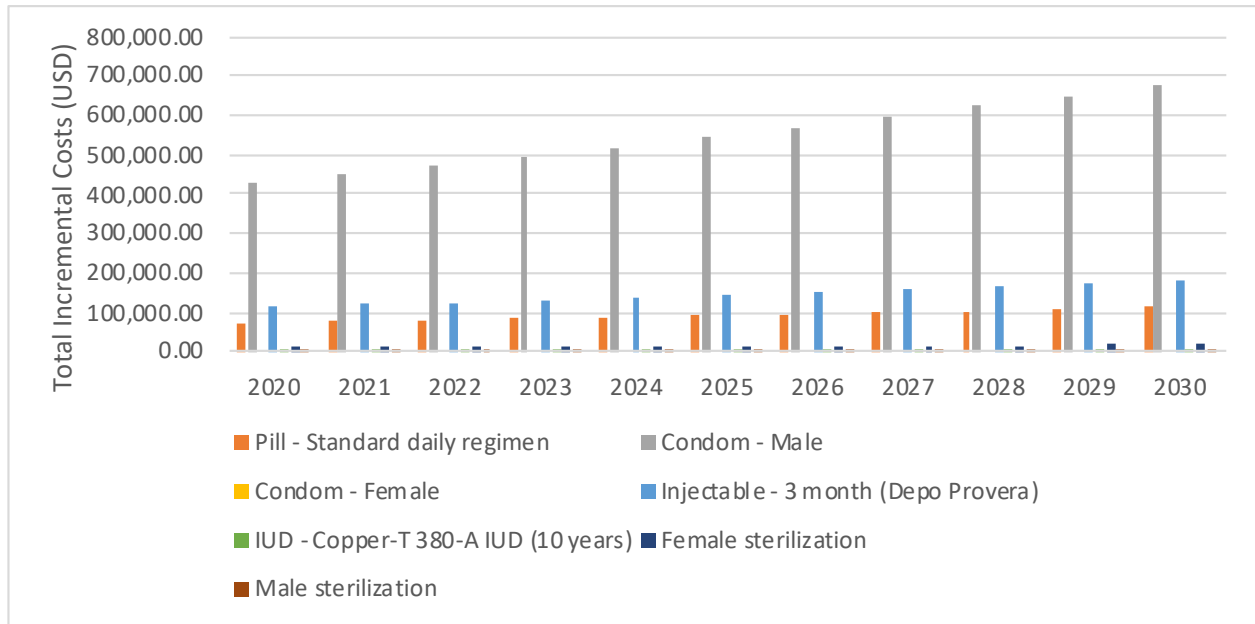


Figure 17: Incremental costs for labour (in USD), by type of method/commodity delivery: Scenario 2 (75% CPR)

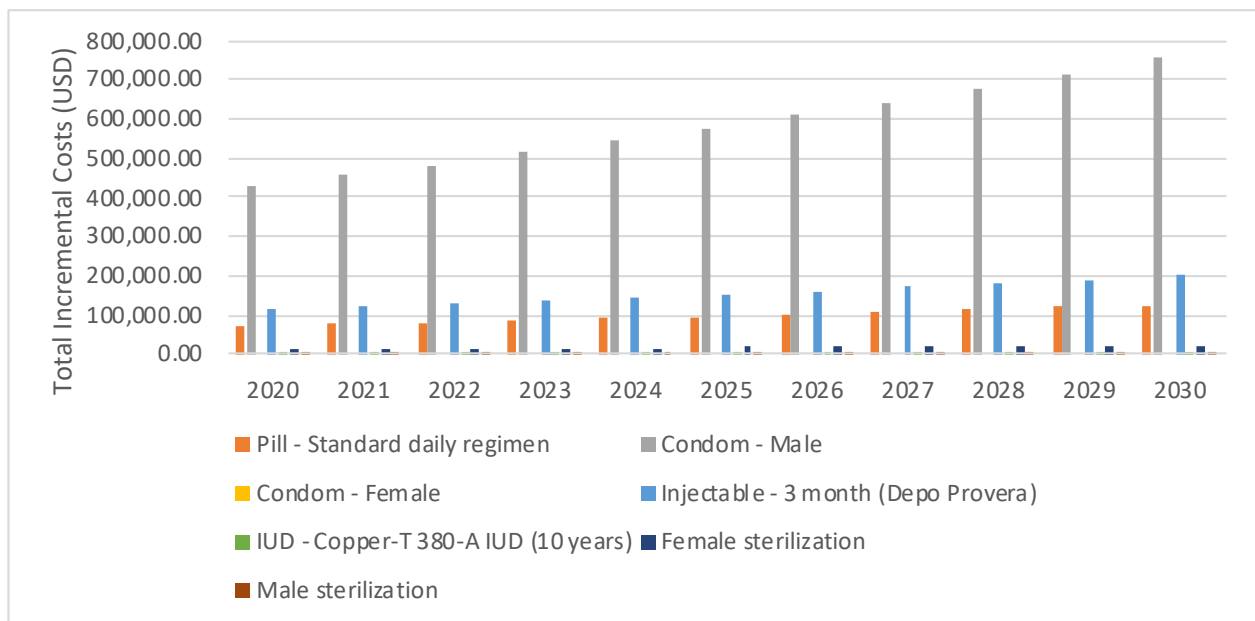




Figure 18: Incremental costs for labour (in USD), by type of method/commodity delivery: Scenario 3 (80% CPR)

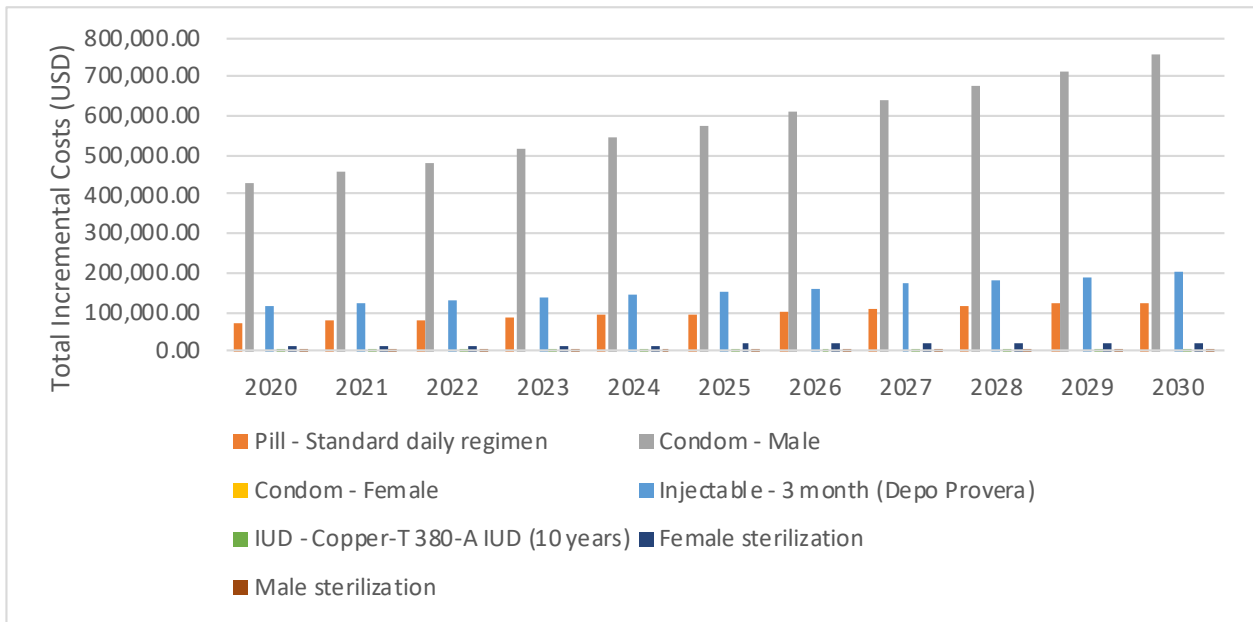
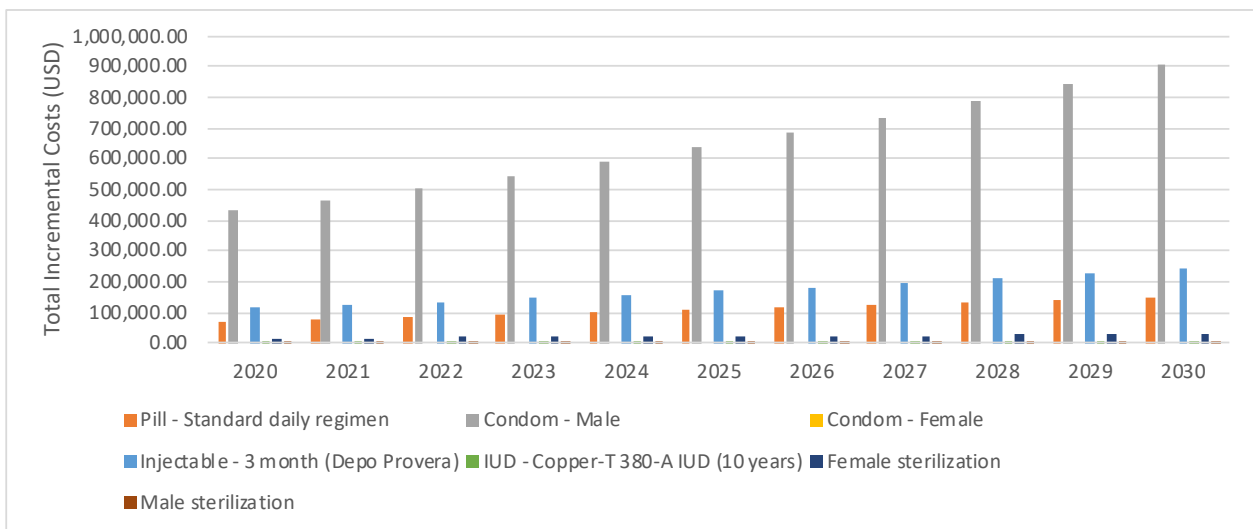


Figure 19: Incremental costs for labour (in USD), by type of method/commodity delivery: Scenario (90% CPR)





Note A.3: Incremental cost for Other Recurrent Costs

While incremental recurrent costs associated with male condoms continue to dominate other family planning methods compared to other drugs and supply costs category, there is a very wide gap between the costs associated with male condoms and injectable-3 month (Depo Provera), the next highest in recurrent costs. This is true across the four scenarios and over time.

Figure 20: Incremental costs for other recurrent costs (in USD), by type of method/commodity: Scenario 1 (67.4% CPR)

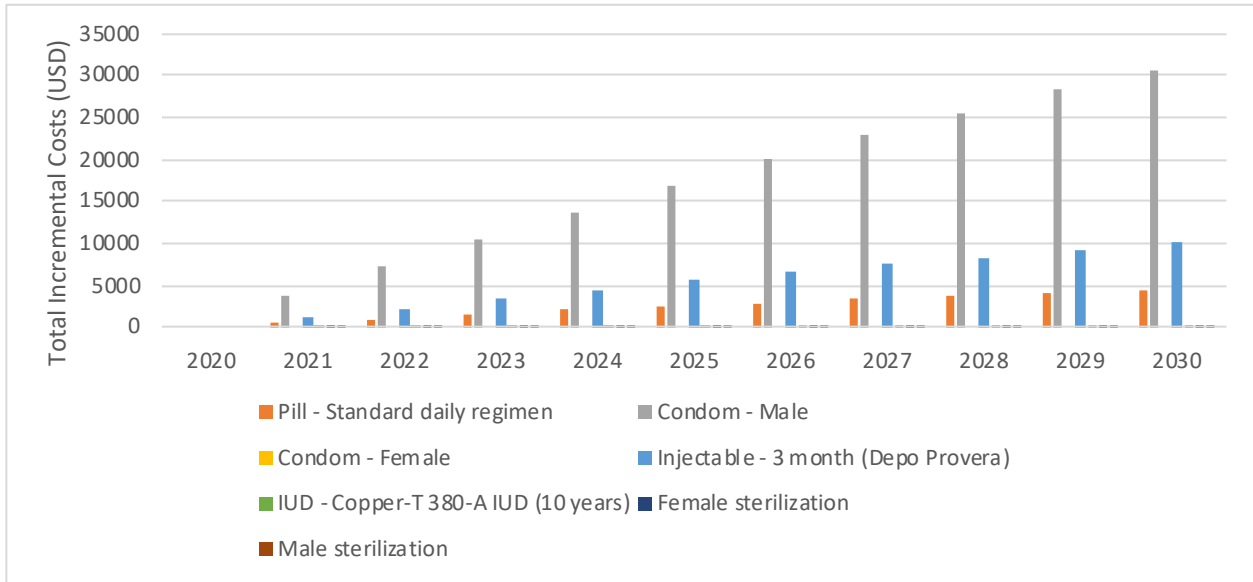


Figure 21: Incremental costs for other recurrent costs (in USD), by type of method/commodity: Scenario 2 (75% CPR)

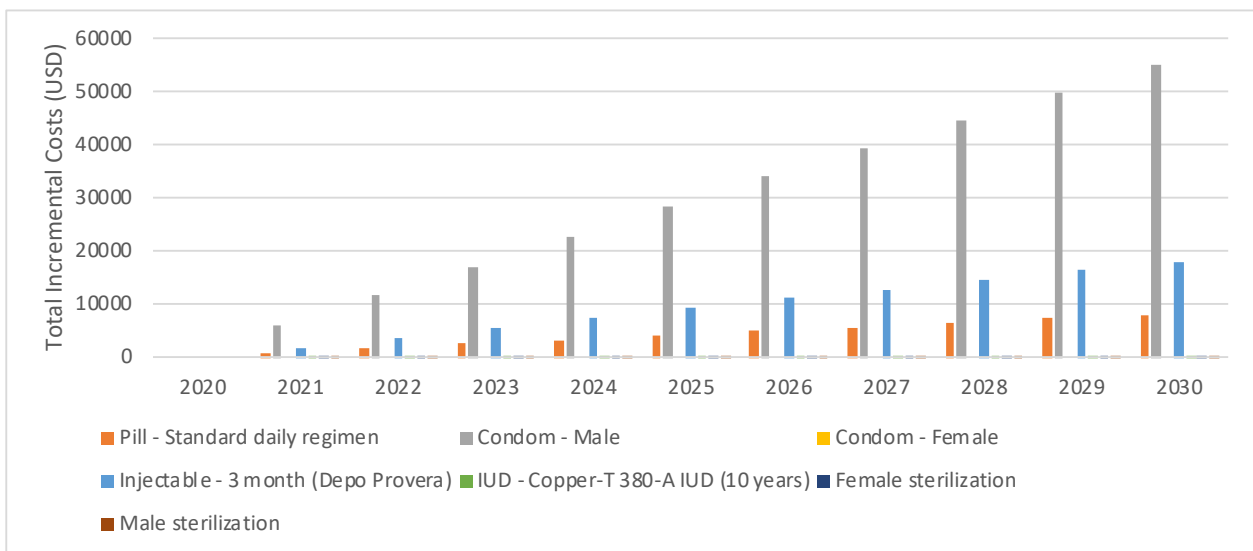




Figure 22: Incremental costs for other recurrent costs (in USD), by type of method/commodity: Scenario 3 (80% CPR)

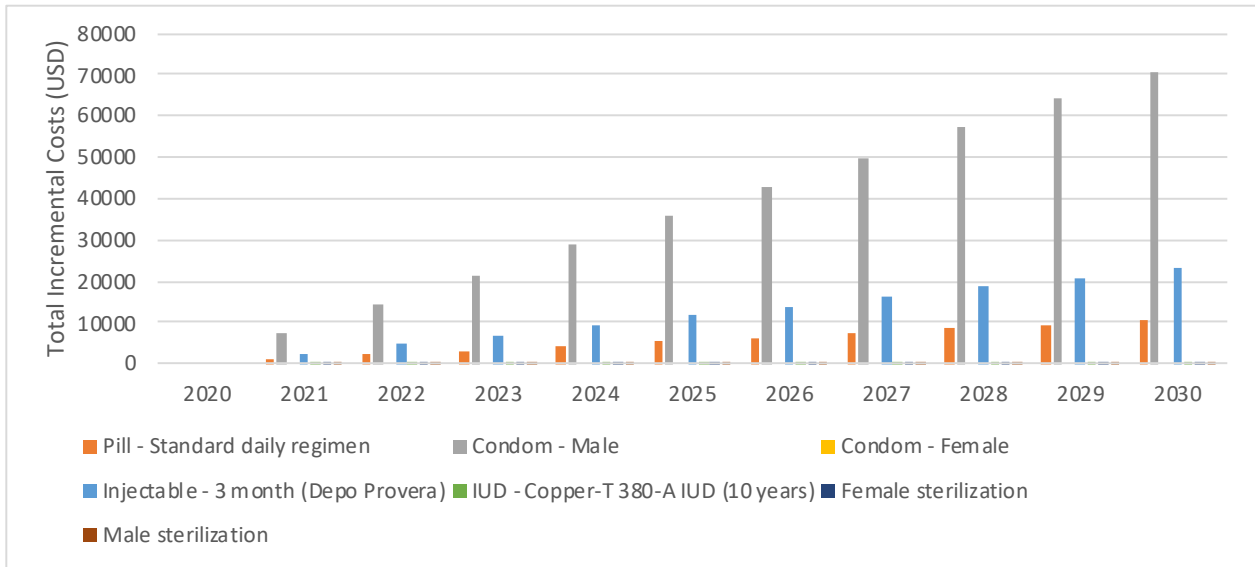
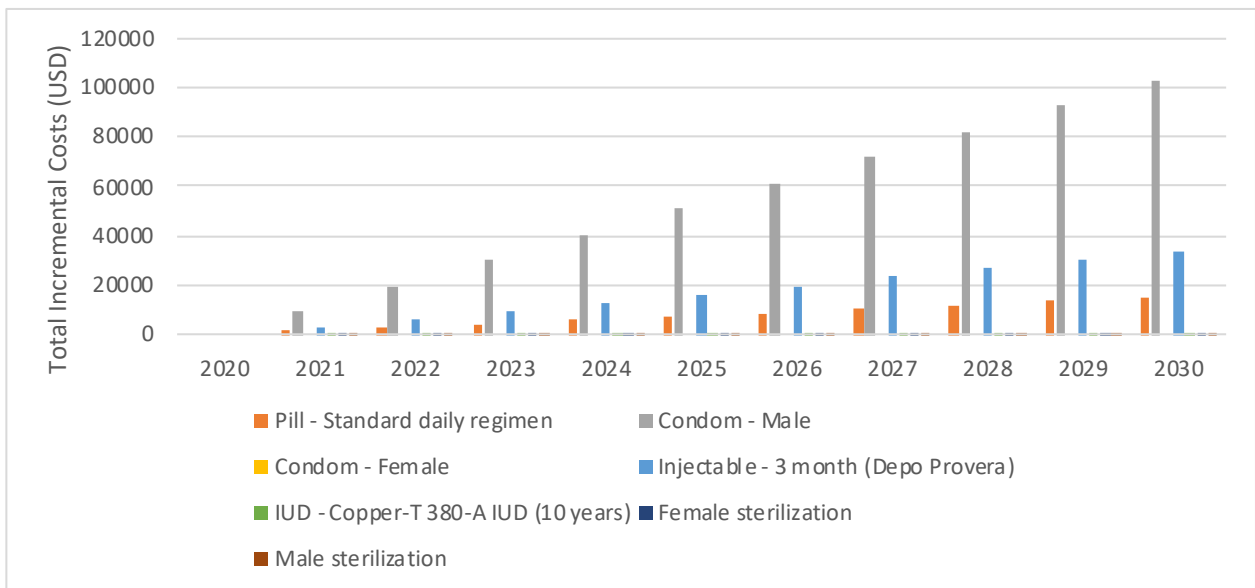


Figure 23: Incremental costs for other recurrent costs (in USD), by type of method/commodity: Scenario 4 (90% CPR)





Note A.4: Incremental capital costs

In all the scenarios, it is observed that a major component of the total incremental capital costs is associated with male condoms. This is followed by injectable-3 month (Depo Provera) and pill standard daily regimen. This is the case in all the scenarios over time. Capital costs associated with IUD Copper-T 380-A, male and female sterilization are almost non-existent across time and scenarios.

Figure 24: Incremental capital costs (in USD), by type of method/commodity: Scenario 1 (67.4% CPR)

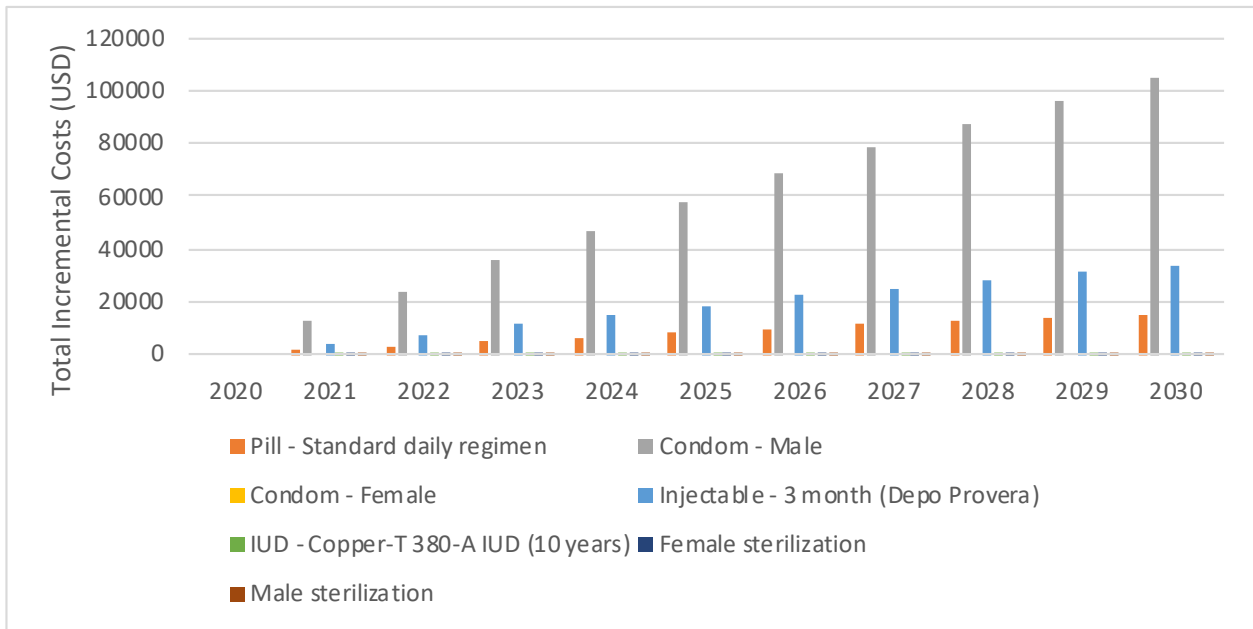


Figure 25: Incremental capital costs (in USD), by type of method/commodity: Scenario 2 (75% CPR)

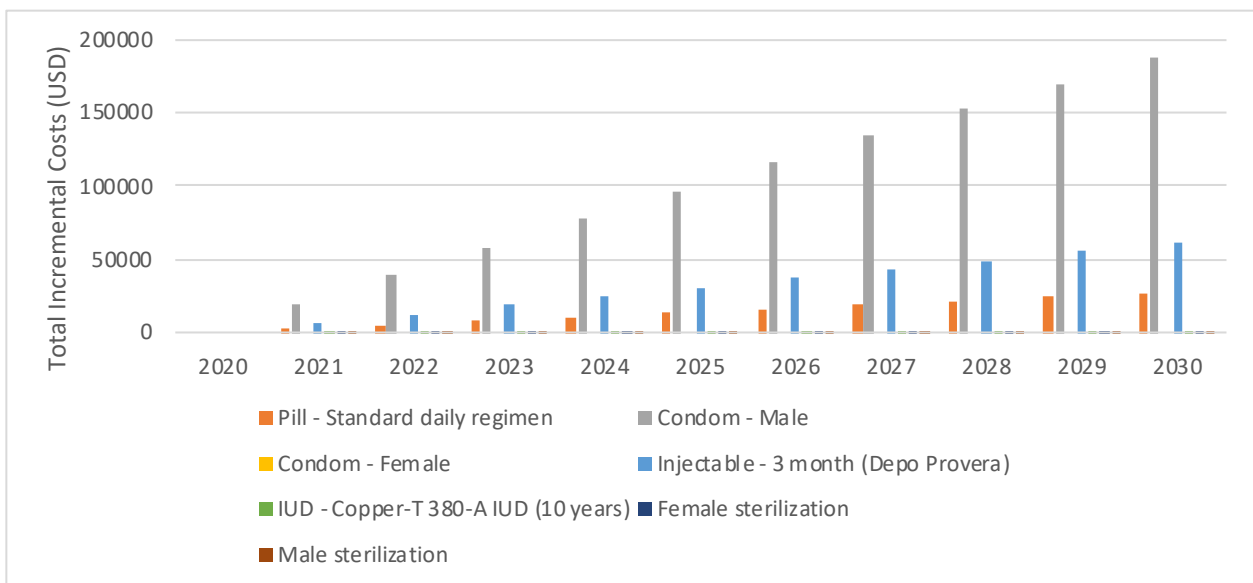




Figure 26: Incremental capital costs (in USD), by type of method/commodity: Scenario 3 (80% CPR)

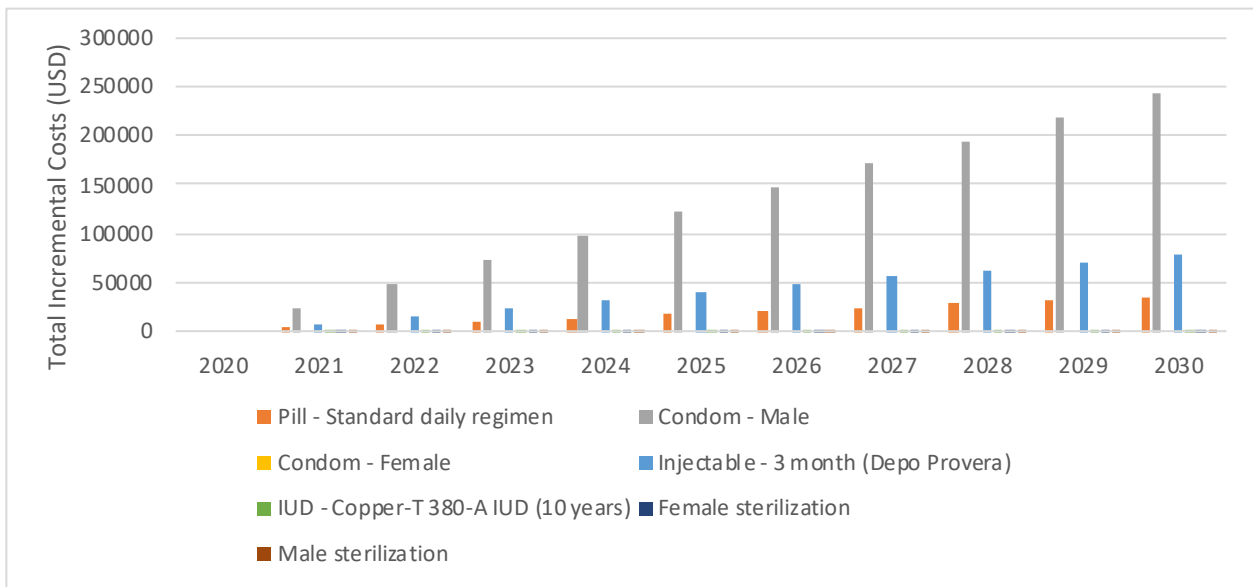
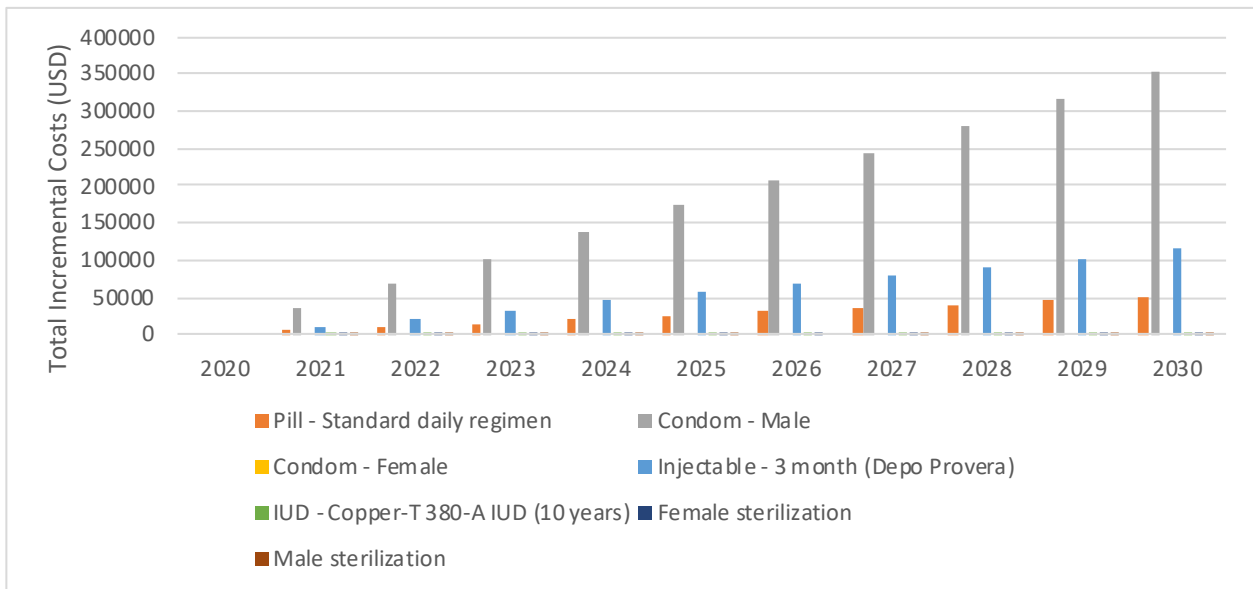


Figure 27: Incremental capital costs (in USD), by type of method/commodity: Scenario 4 (90% CPR)





Figures 28 to 31 show the relative amounts of the total intervention costs by family planning method. Overall, male condom accounts for the largest proportion of the total incremental intervention costs. This is followed by injectable-3 month (Depo Provera) and pill standard daily regimen. This is the case in all the scenarios as well as over time.

Figure 28: Total intervention costs (USD) by FP method - Scenario 1 (67.4% CPR)

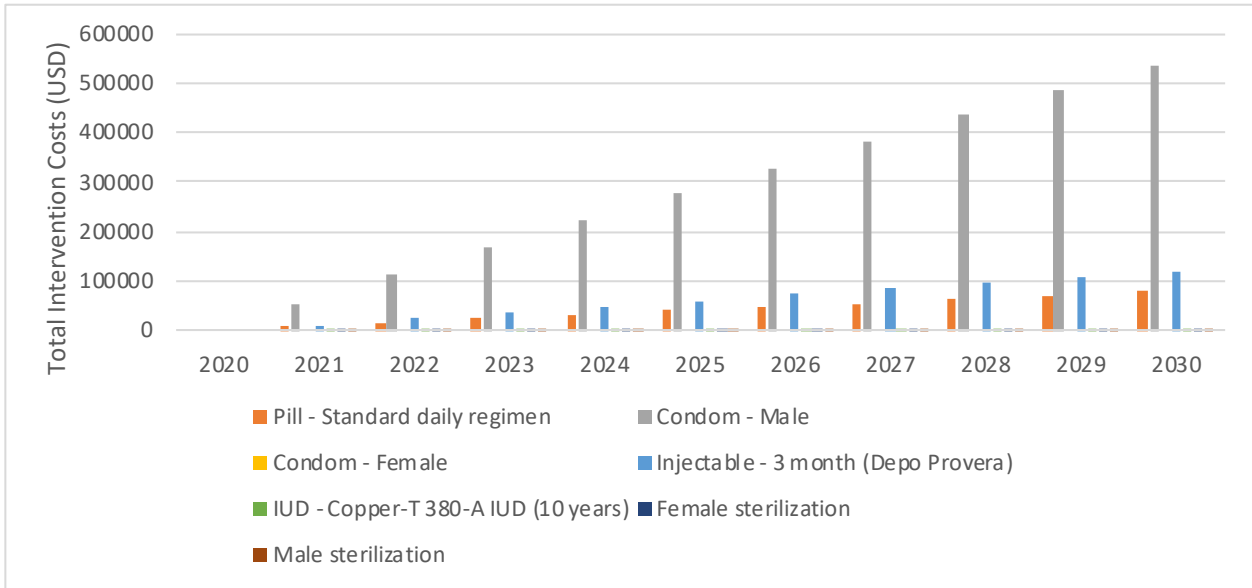


Figure 29: Total intervention costs (USD) by FP method - Scenario 2 (75% CPR)

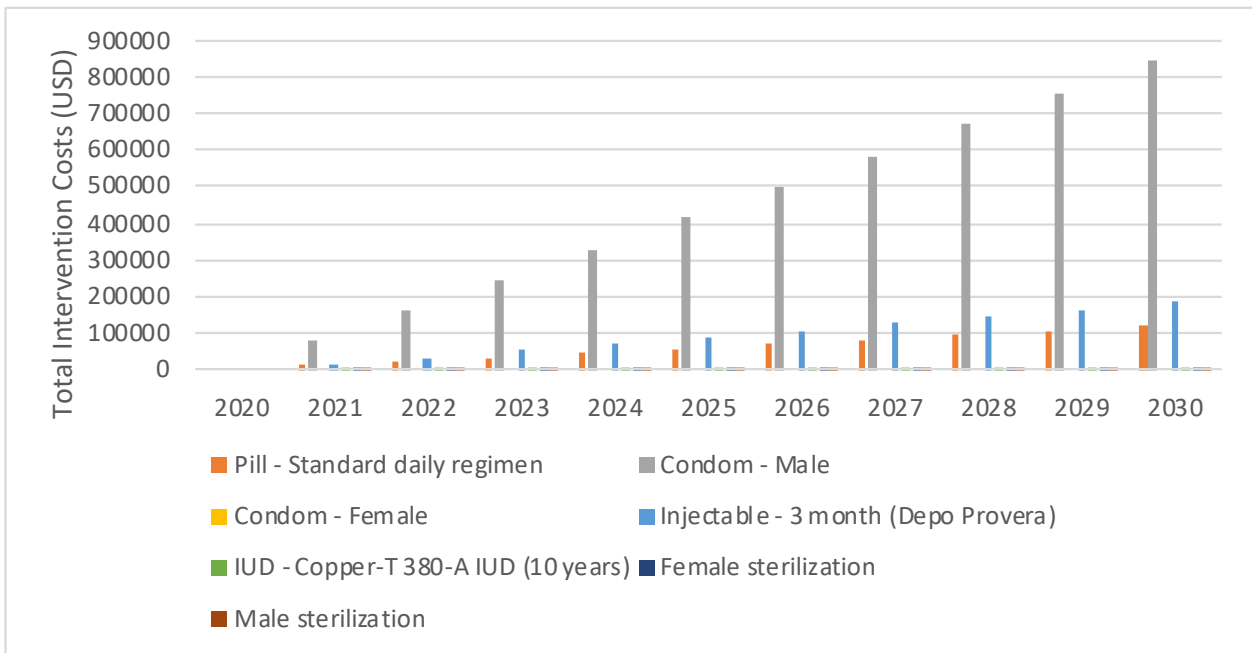




Figure 30: Total intervention costs (USD) by FP method - Scenario 3 (80% CPR)

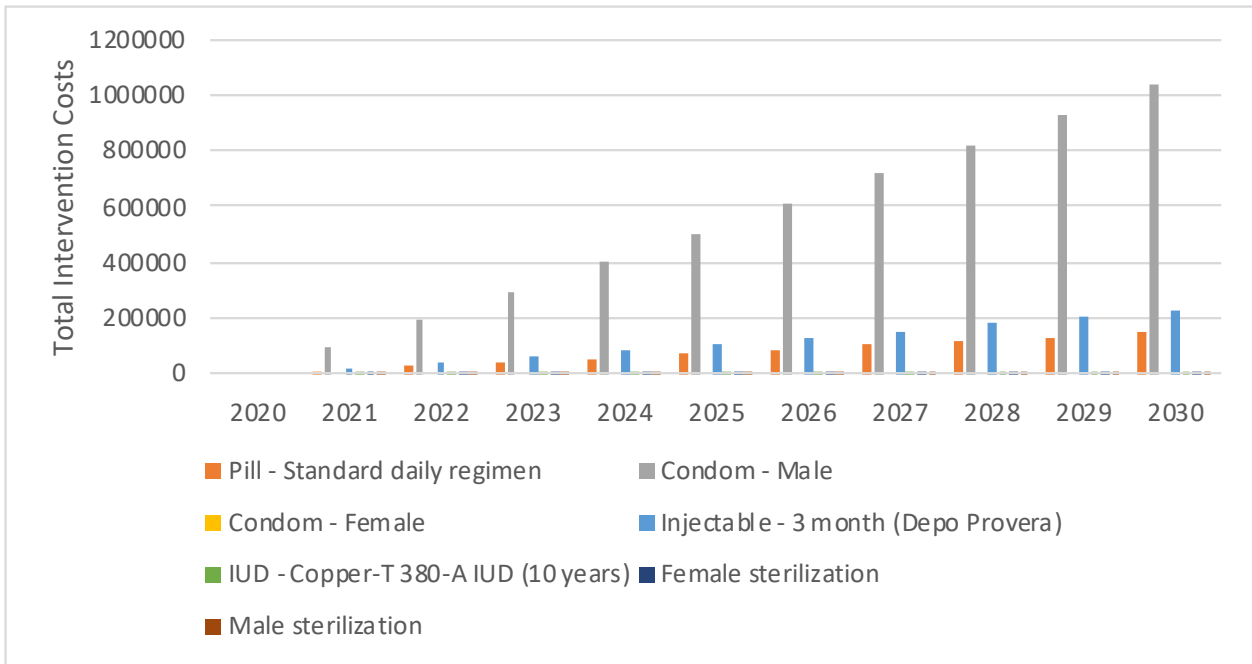
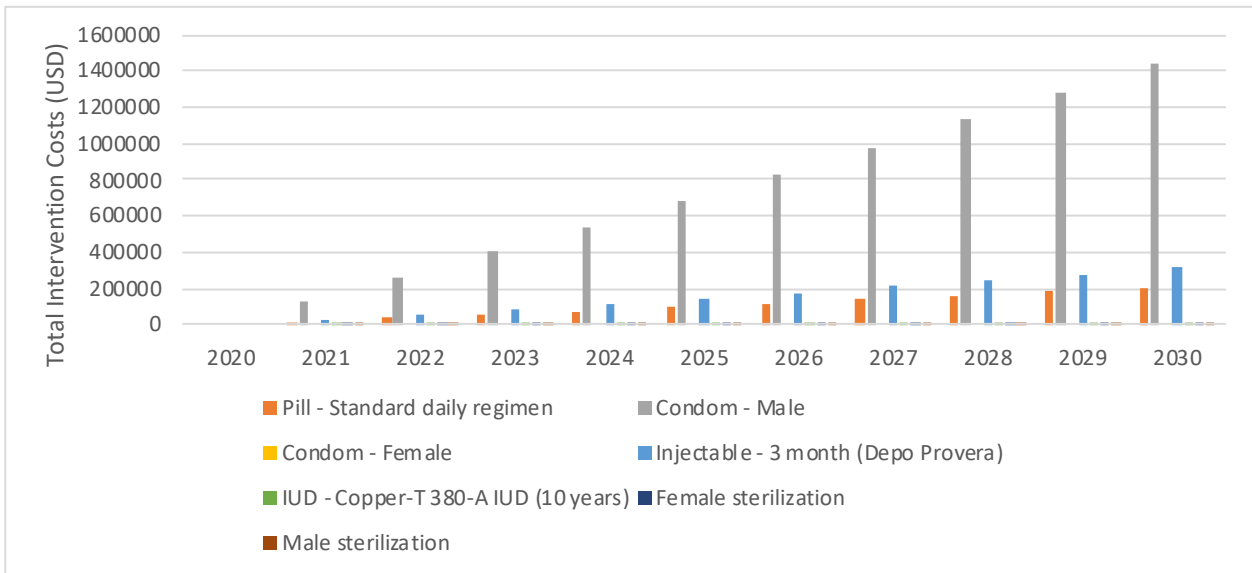


Figure 31: Total intervention costs (USD) by FP method - Scenario 4 (90% CPR)





APPENDIX B

Methodology

The development of the investment case for the transformative results in Botswana involved an extensive consultative process, the active engagement of a core national Technical Working Group (TWG), and guidance from representatives of UNFPA in Botswana and UNFPA's Eastern and Southern Africa Regional Office (ESARO). Desktop reviews were conducted on relevant policy documents such as the Botswana Integrated Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health and Nutrition (RMNCAH&N) Strategy 2018-2022; Vision 2036; Botswana National Family Planning Strategy, Sexual and Reproductive Health Policy Guidelines and Service Standards; Revised National Health Policy; National Development Plan (NDP) 11; Maternal Mortality Statistics Brief 2013-17 and 2014-2018; Budget Speeches; and the BDS 2017 report.

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

The Spectrum policy software (version 6.06), which houses several tools, was used to analyse the transformative result of ending unmet need for family planning in Botswana. 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 programme 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 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 married or in a sexual union, duration of post-partum insusceptibility and abortion rates (Stover and Winfrey, 2010).



Baseline data and analysis

Pre-loaded baseline data from the FamPlan and LiST modules in Spectrum was relied on and acceptable to the national TWG following a review. The Spectrum tool extracts country-specific baseline data from various national surveys that collect information on the respective variables. In cases where some national-level data sets were available, those were compared with the baseline data from the tool, and where variations were found, the more recent ones were used.

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 Botswana. The analysis and modelling relied on data from shadow countries, regional estimates and existing empirical studies to update the baseline data gaps in the tool. The toolkit also had some limitations. When estimating the impact of increasing effective coverage of modern contraceptive methods, the LiST module allowed only the estimation of averting unintended pregnancies and abortions due to the non-inclusion of interventions aimed at ending preventable maternal deaths. 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 female condoms and Norplant, 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.

