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TOTAL MARKET APPROACH PROJECTION TOOL

User's Guide and Lessons Learned from an Application in
Two Countries

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Abbreviations

DHS	Demographic and Health Survey
HP+	Health Policy Plus
IUD	intrauterine device
mCPR	modern contraceptive prevalence rate
NGO	nongovernmental organization
USAID	U.S. Agency for International Development
TMA	total market approach
WRA	women of reproductive age

Introduction

The Total Market Approach (TMA) Projection Tool is an Excel-based tool that estimates the health and financial impacts of increased commercial sector investment in family planning. It was developed with the objective of improving policymakers' understanding of how shifts in market share among public, social marketing, and commercial players can lead to increased modern contraceptive prevalence rate (mCPR), equity, and sustainability of a country's family planning program. The tool estimates financial and health equity impacts at the country level if commercial family planning markets grow while free and subsidized resources are better targeted to those who lack the ability and/or willingness to pay for products and services. It creates a vision of what the outputs of implementing TMA could be and demonstrates how enabling growth of the commercial family planning sector can grow the family planning market overall and improve market sustainability.

The model projects the increase in women served by the commercial sector if commercial products are more readily available, as well as the shift in commercial market share. The TMA Projection Tool allows a user to project the public and donor resources that are saved when a proportion of wealthier women shift from using family planning products that are subsidized by donors and government to using commercial family planning products. It then estimates the number of additional women that could be reached if those savings are invested in pro-poor outreach programs. With these outputs, the model helps policymakers envision the role of the commercial sector in achieving a more sustainable family planning market.

Existing methodologies for market analyses and market segmentation have often relied on Demographic and Health Survey (DHS) data. DHS data provide the location where clients acquire their method of family planning (e.g., government family planning clinic or pharmacy), but not the type of product (e.g., free, subsidized, or commercial) selected at that location. In many markets with robust social marketing programs, products subsidized by donors may be reported as being acquired at a commercial source, which overestimates the true market share of full-price, commercial products. Differentiation between product source and type is necessary to more accurately estimate the product market size by sector. Doing so can help countries to reimagine their targets and adjust market interventions in line with what is required to achieve a more sustainable family planning market.

Context for the TMA Projection Tool

As donor funding for key health programs plateaus and government resources fall short of filling the gap in developing countries, the commercial sector is often seen as a potential source of funding and a mechanism to achieve more efficient provision of health services. However, family planning program stakeholders within governments and the development community struggle to envision how this sector can contribute to creating a more sustainable health market. There is often a perception that making room for commercial sector growth will crowd out the public and social marketing sectors—one of several barriers to commercial sector entry into family planning markets.

TMA aims to improve access and equity to family planning products and services through an open, transparent, results-oriented engagement platform involving all players within the health

sector. Each market player serves a different role; commercial sector products and services priced at various levels can serve those who have the ability to pay, while public/donor resources can be targeted to those who cannot pay. Successful application of TMA should allow for the entire family planning fiscal space to grow and become more sustainable while also increasing access and choice for end users.

Use of the Tool

The TMA Projection Tool is most useful for countries working to reduce unmet need for family planning with market sustainability in mind. A country may be a good candidate for this tool if it has identified donor dependence as a threat to its family planning program and wants to actively take steps to address the issue. These steps might include recognizing the importance of the private commercial sector in policy documents, or, in a more advanced scenario, planning or implementing market interventions that are aligned with strategies. In countries where a level of buy-in for TMA exists among key decisionmakers, this tool can help policymakers to reinforce the case using evidence regarding the health and financial impacts of increased commercial sector involvement in family planning.

The following user's guide and insights from applications in Uganda and Nepal serve to help users of the TMA Projection Tool set up, implement, and interpret the tool and its outputs effectively to drive policy and market-level interventions in a given country. The TMA Projection Tool, developed by the U.S. Agency for International Development (USAID)-funded Health Policy Plus (HP+) project, comes pre-loaded with data from nine of the 24 USAID Family Planning Priority countries: Ethiopia, Haiti, Malawi, Nepal, Pakistan, the Philippines, Senegal, Tanzania, and Uganda. These countries were selected based on recently available data; a DHS was conducted in each in 2015-2016 (or more recently) and a previous DHS had been conducted fewer than six years prior. Stakeholders interested in applying the tool in other countries are welcome to reach out to the model developers through info@healthpolicyplus.com to discuss options for adapting the tool for their country context.

Key Tool Components

The tool compares two scenarios in the projection year:

- Status quo scenario
- TMA scenario (scenario in which some proportion of wealthier women who currently access family planning products and services from public and social marketing sources shift to the commercial sector)

The following data inputs provide the foundation of the model:

Box 1. Product Cost and Price

- **Product Cost:** Inclusive of import and distribution but not service delivery costs for public sector and socially marketed products.
- **Product Price:** Calculated for commercial sector products; should account for product and distribution costs as well as any profit margins along the supply chain.

- Two most recent data sets from the DHS, segmented by wealth quintile, geography (rural/urban), and source of contraception¹
- World Bank poverty headcount
- United Nations population estimates
- Product cost and price for five family planning methods:² pill, intrauterine device (IUD), injectable, implant, and condom (details in Box 1 and sections 3-4)
- Pro-poor program cost (details in Box 2 and section 5)

Box 2. Pro-Poor Program Cost

- Cost of reaching one woman in a difficult-to-reach, rural area, e.g., through a mobile outreach program.
- Inclusive of products and service delivery costs as well as other program implementation costs such as radio spots, flyers, and banners.

Key User Assumptions

There are two core assumptions that the user must make to populate the tool:

1. Proportion of wealthier women predicted to shift their source of family planning method from the public or nongovernmental sector to the commercial sector by the projection year
2. Change in the proportion of products sold through private outlets that are commercial brands (versus subsidized/socially marketed products) from start year to projection year

The projection parameters are best refined in consultation with in-country stakeholders to determine what shifts in the market could be expected if it were opened to commercial sector players. Users must triangulate multiple data sources and insights provided by stakeholders working in public, social marketing, and/or commercial family planning sectors to set key assumptions. Full details on setting assumptions are included in the “User’s Guide” section below.

Model Structure

The model follows the following structure:

¹ The DHS includes many sources (i.e. locations) where contraception can be acquired in each country, including but not limited to government hospitals, government health centers, community health workers (public), community health workers (NGO), private pharmacies, drug shops, and private clinics. HP+ grouped these sources into five categories: public sector (facility), public sector (outreach), social marketing, social marketing non-traditional, and private commercial. Grouping the source enables comparison of the public and private sectors more broadly, for both current and projected markets.

² The current model focuses on modern, pharmaceutical product-based methods, as they are typically the focus of national strategies to scale-up family planning. Service-oriented methods, such as male and female sterilization, likely require a different set of market interventions, and thus were not included in this model iteration. These could be considered for future model upgrades.

- **Cover page:** Explains the purpose of the model
- **Dashboard:** The top half requires user inputs and key assumptions; the lower half displays overall model outputs
- **Method-specific results:** Displays model outputs disaggregated by method for more nuanced market projections
- **Financial settings:** Requires user inputs related to average cost of family planning products

Model Application and Results to Date

The preliminary version of the TMA Projection Tool, developed in September 2017, was applied in Uganda in September 2017 and in Nepal in January 2018. Based on insights from the two countries, the tool was further refined over the course of 2018. The model was streamlined and additional country data added in early 2019 to finalize this first publicly available version.

The experiences applying the tool in Uganda and Nepal were distinct, providing valuable insight into these countries' broader political economies, which affect family planning decision-making and thus the role of the private sector. Throughout the process of working with key stakeholders to apply the model, ideologies, interests, and incentives of different market players had the potential to foster or inhibit the modeling experience. These findings are explained further in the "Country-Specific Model Application" section that follows the user's guide.

User's Guide

This section presents a step-by-step guide of how a user interacts with the TMA Projection Tool. At each step, the guide lists what actions the user takes to set up the model, including where he/she should source the data to input. It then explains how the model works, along with assumptions and considerations built into the tool.

The model is set up to guide the user through the following key steps:

1. **Core Settings** ("Dashboard" tab): Enter foundational information regarding projection period and targets. This should be defined at the start of the activity by the TMA projection and family planning strategies already established for the country
 - a. Select country and projection year range
 - b. Adjust method mix in projection end year
2. **Financial Settings** ("Financial Settings" tab): Gather and enter family planning commodity cost and price information as well as the cost of a pro-poor program
 - a. Set average cost of family planning products in public and social marketing sectors
 - b. Set average price of commercial family planning products
 - c. Set average cost of a pro-poor program

3. **Define TMA Projection Parameters** (“Dashboard” tab): Through a series of consultative meetings, define the parameters associated with the expected proportion of wealthier users who would opt to purchase family planning products through the commercial sector, as well as the increased availability of commercial products on the market
 - a. Estimate users who shift to commercial family planning products
 - b. Estimate proportion of family planning products in private outlets that are commercial

Settings

1. Select Country and Projection Year Range

User’s action: In the “Dashboard” tab, the user must first select the country and then the year range (start and end years) to make the projection.

Main Inputs
First, select a country, followed by the start and end years of the savings projection. *Navigate to the Financial Settings tab to adjust price settings and exchange rate for the selected country.*

Country	Uganda
Projection Start Year	
Projection End Year	

Main Inputs
First, select a country, followed by the start and end years of the savings projection. *Navigate to the Financial Settings tab to adjust price settings and exchange rate for the selected country.*

Country	Uganda
Projection Start Year	2019
Projection End Year	2022

On the backend: The model uses results from the most recent DHS for the selected country to estimate the percentage of women living in urban areas compared to rural areas. Then, separately for rural and urban women and for women in each wealth quintile, the model uses the most recent DHS and United Nations Population Division population growth projections to estimate the number of women of reproduction age (WRA) in the projection years who are using each of the five contraceptive methods analyzed (pill, IUD, injectable, implant, condom) and the share of products that are sourced from the public sector, social marketing, and private commercial sector for each of these methods.

These data from the most recent DHS are combined with data from the preceding DHS to estimate existing trends in mCPR by method and sector. The change between the two surveys is assumed to have followed a linear trend. For example, within the wealthiest quintile of urban

WRA in Uganda, assume that 4.25 percent were using pills from the commercial sector at the time of the 2011 DHS and 3 percent were using pills from the commercial sector at the time of the 2016 DHS. Over this five-year period, the model would assume an annual decrease of 0.25 percentage points and project that change to continue linearly into the future, such that the same figure would be 2 percent by 2020.

Annual estimates of the number of WRA within the selected country come from the United Nations Population Division's Medium Fertility Variant projection.³ This projection, which estimates country populations from 2015-2100, was last revised in 2019.

2. Adjust Method Mix in Projection End Year

User's action: In the "Dashboard" tab, the user can choose to use the projected method mix based on historical trends, or to manually adjust the method mix in the selected end year. By default, the model will estimate the method mix in the user's selected end year based on linear trends observed in the DHS data.

³ United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision, DVD Edition.

mCPR in 2022
 First, decide whether to use the method mix in 2022 as projected from past DHS surveys. If you choose to adjust the method mix in 2022, select whether to adjust by inputting a new total mCPR or a new method mix. Finally, enter your adjustment in the space provided below.

Adjust Method Mix in 2022?	No - Use Projected
-----------------------------------	--------------------

If "Yes":

Adjustment	Input Total mCPR
-------------------	------------------

If "Input Total mCPR":

Total mCPR in 2022	50%
---------------------------	-----

If "Input Method Mix":

Pill	8%
IUD	4%
Injectable	10%
Implant	8%
Condom	2%

However, the user may want to adjust this estimate. For example, stakeholders may want to project the health and financial impacts that could be achieved based on mCPR and method mix targets defined in costed implementation plans or other national family planning strategies. In such a case, the user can enter either an alternative method mix for the five contraceptive methods analyzed in the model, or an alternative overall mCPR inclusive of all five modern methods.

mCPR in 2022
 First, decide whether to use the method mix in 2022 as projected from past DHS surveys. If you choose to adjust the method mix in 2022, select whether to adjust by inputting a new total mCPR or a new method mix. Finally, enter your adjustment in the space provided below.

Adjust Method Mix in 2022?	Yes
-----------------------------------	-----

If "Yes":

Adjustment	Input Total mCPR
-------------------	------------------

If "Input Total mCPR":

Total mCPR in 2022	50%
---------------------------	-----

If "Input Method Mix":

Pill	8%
IUD	4%
Injectable	10%
Implant	8%
Condom	2%

mCPR in 2022
 First, decide whether to use the method mix in 2022 as projected from past DHS surveys. If you choose to adjust the method mix in 2022, select whether to adjust by inputting a new total mCPR or a new method mix. Finally, enter your adjustment in the space provided below.

Adjust Method Mix in 2022?	Yes
-----------------------------------	-----

If "Yes":

Adjustment	Input Method Mix
-------------------	------------------

If "Input Total mCPR":

Total mCPR in 2022	50%
---------------------------	-----

If "Input Method Mix":

Pill	8%
IUD	4%
Injectable	10%
Implant	8%
Condom	2%

On the backend: If a user enters a total mCPR rather than a method mix, the model uses each method's proportion of the total mCPR from the DHS data to estimate the percent of women using each type of method in the end year.

If a user enters an alternative method mix, mCPR in the end year for each wealth quintile, in each geography, and for each sector will be scaled up or down by the same factor. For example, if the linear trend from the DHS data predicted that 1 percent of Ugandan WRA would be using the pill by 2020 but the user thought that this would instead be 2 percent, then end-year prevalence of pills would double across the board.

3. Set Average Cost of Family Planning Products in Public and Social Marketing Sectors

User's action: In the "Financial Settings" tab, the user will need to set the average cost of public and socially marketed products from the perspective of the public sector or the donor. This assumes that public family planning products are offered for free to the user, and thus the entire cost is borne by the government or the donor. In the case of socially marketed products, there is usually some level of cost recovery, as the product is sold at a certain price. Thus, the cost to the donor (the typical funder of social marketing organizations for distribution of socially marketed products) will be reduced by the price of the product.

The user should estimate the cost of these products by consulting relevant government procurement agencies and social marketing organizations, as well as procurement plans and retail audits. The total cost should include the cost of the family planning commodity itself, as purchased from the manufacturer; any import taxes and/or fees (if manufactured abroad); freight/distribution; and storage costs. In some cases, products are exempt from import taxes and fees as public sector commodities. In other cases, because social marketing organizations procure the public sector (non-branded) products on behalf of the government with donor funding, public and social marketing procurement costs may be quite similar.

In the case of estimating the cost of social marketing products, in addition to calculating the cost, retail audit data should be referenced to estimate the average price of the product as it is sold to users. This price should be deducted from the total procurement cost to define the cost to the donor.

Average value of government or donor resource by method and type				
	Public Sector		Social Marketing	
Pill	\$0.38	1373.65 UGX	\$0.31	1098.92 UGX
IUD	\$0.97	3477.6 UGX	\$0.77	2782.08 UGX
Injectable	\$1.21	4347 UGX	\$0.97	3477.6 UGX
Implant	\$13.69	49266 UGX	\$10.95	39412.8 UGX
Condom	\$0.05	173.88 UGX	\$0.04	139.1 UGX
Female condom	\$0.97	3477.6 UGX	\$0.77	2782.08 UGX

On the backend: The public sector and social marketing costs are used to estimate the subsidies saved when a user who used to get free or subsidized products chooses to purchase a commercial product. In the two scenarios (status quo and TMA), the model multiplies these product costs by the number of wealthier users opting to get free or subsidized products. In the TMA scenario, fewer wealthier users opt for these products. The difference between the total cost of free and subsidized products given to wealthier users is the subsidies saved.

4. Set Average Price of Commercial Family Planning Products

User's action: The user should estimate the average prices of the commercial products available through private outlets for each of the five methods. Retail audit data is the easiest source of information to determine this setting. If retail audits are not available, the user may opt to visit a random sample of retail outlets to gather this information directly. This is not optimal, however, as retail audits are representative of the private market, whereas the number of sites visited may be limited in number, skewing the results.

Average price at method distribution point by type		
	Commercial	
Pill	\$0.83	3000 UGX
IUD	\$2.78	10000 UGX
Injectable	\$0.56	2000 UGX
Implant	\$2.78	10000 UGX
Condom	\$0.83	3000 UGX
Female condom	\$0.28	1000 UGX

On the backend: The price of the family planning product is multiplied by the projected number of wealthier users who use that method and opt to purchase a commercial product. This calculates the value of the commercial sector market, which could be used as an advocacy point to engage the private sector to invest in growing their family planning market in the country.

5. Set Average Cost of Pro-Poor Program

User's action: In consultation with key stakeholders and by referencing key family planning documents, the user should select a pro-poor program that is successful in reaching rural/poorer communities in the given country context, e.g., mobile clinics or community health workers. The user should gather information to reflect the cost of providing family planning methods to one woman in a hard-to-reach area. The cost should be as inclusive as possible, including commodity cost, cost of service delivery (including staff and supplies), transportation, and awareness-raising activities.

Average cost to reach women in rural/poorer communities, with targeted outreach	
\$31.55	113590.8 UGX

On the backend: This unit cost should be used to estimate the number of additional users that could be reached through the subsidies saved. The total subsidies saved, calculated in Step 3, would then be divided by this unit cost to project the potential number of women who could be reached through the pro-poor program if public/donor resources are better targeted to those facing financial or other barriers to accessing family planning.

6. Estimate Shift to Commercial Family Planning Products

User's action: In the "Dashboard" tab, the user must input switch rates separately for urban and rural WRA and for wealthier populations. Wealthier populations are composed of either the top two wealth quintiles as defined in the DHS or the top two income brackets as calculated by combining the DHS asset index with World Bank poverty headcounts.

When inputting switch rates based on wealth quintiles, the first step is for the user to decide what percentage of wealthier WRA might feasibly switch to using commercial family planning products by the given end year. This percentage should be determined based on estimated ability and willingness to pay for commercial products, assuming that they are available. To define this future state, the user should hold a consultative meeting of key family planning stakeholders to better understand to what extent the enabling environment for commercial sector growth might be established during this projection period, what types of market interventions are being planned, and the expected changes in wealthier WRA's interest in purchasing commercial products.

Market interventions implemented during the projection period can directly or indirectly enable commercial sector growth. These interventions may include improvement of the policy and regulatory environment for commercial products; introduction of commercial products into the market; reduction or removal of subsidies; or other activities based on market player and stage of market development. A more complete list of TMA interventions can be found in the HP+ brief "[From Policy to Practice: Defining Health Market Interventions within a Total Market Approach.](#)"

When inputting switch rates based on income brackets, the assumption logic remains the same, but the switch rates are set for WRA living on over US\$5.50 per day and WRA living on between US\$3.20 and US\$5.50 per day.⁴ If the user does not wish to apply the same switch rate to all methods within population groups, he/she may select to input switch rates separately for each of the five methods of contraception analyzed (for a total of 20 separate switch rates).

⁴ This functionality was included in response to key stakeholders in Uganda and Nepal stating that setting switch rates with wealth quintiles—a relative term comparing the national population—proved difficult. Grouping the target population by income per day may allow for stakeholders to better analyze the potential willingness and ability to pay among the wealthier population based on the price of the family planning product. The income-level methodology is further explored in the Annex.

Switch Rate to Private Sources

In this step, you will decide how many users will switch to commercial sources by the end year. First, decide whether to enter switch rates based on wealth quintiles or poverty lines. Next, decide whether to input different switch rates for each family planning method, or whether to assume that the same rate applies for all methods.

Use switch rates based on:

Wealth Quintiles

Adjust switch rates by method?

No

If "No":

	Urban	Rural
Wealthiest (Q1)	50%	20%
Wealthier (Q2)	25%	10%

If "Yes":

	Wealthiest (Q1)		Wealthier (Q2)	
	Urban	Rural	Urban	Rural
Pill	50%	20%	25%	10%
IUD	50%	20%	25%	10%
Injectable	50%	20%	25%	10%
Implant	0%	0%	0%	0%
Condom	50%	20%	25%	10%

Switch Rate to Private Sources

In this step, you will decide how many users will switch to commercial sources by the end year. First, decide whether to enter switch rates based on wealth quintiles or poverty lines. Next, decide whether to input different switch rates for each family planning method, or whether to assume that the same rate applies for all methods.

Use switch rates based on:

Poverty Lines

Adjust switch rates by method?

No

If "No":

	Urban	Rural
Above \$5.50 per day	50%	20%
\$3.20 - \$5.50 per day	25%	10%

If "Yes":

	Above \$5.50 per day		\$3.21 - \$5.50 per day	
	Urban	Rural	Urban	Rural
Pill	50%	20%	25%	10%
IUD	50%	20%	25%	10%
Injectable	50%	20%	25%	10%
Implant	0%	0%	0%	0%
Condom	50%	20%	25%	10%

On the backend: The model assumes that this switch rate will apply evenly to all free and socially marketed products. If the user decides that 50 percent of the wealthiest quintile or top income level of urban WRA will switch from free and subsidized pills to commercial pills, then 50 percent of the women using free pills will switch to commercial pills and 50 percent of the women using subsidized pills will switch to commercial pills. The switch rate is also applied evenly to current and future family planning users, so if the other model parameters estimate an annual increase in the number of urban WRA in the wealthiest quintile or top income level who are using subsidized pills, 50 percent of these new users will instead use commercial products.

7. Estimate Proportion of Commercial Family Planning Products in Private Outlets

User's action: In the “Dashboard” tab, the user will estimate the percentage of family planning products available in private outlets that are commercial (versus socially marketed) in the first and last years of the year range selected.

In many countries, a proportion of family planning products sold in private outlets are socially marketed; in some countries, socially marketed products dominate these outlets. In such cases, even if women have the willingness and ability to pay for commercial products, they do not have the option to buy them. Better targeting of government and donor resources to decrease social marketing saturation in the wealthiest urban markets, thereby increasing the share of commercial products available, can free up funds to reach more vulnerable populations in these cases.

The user should triangulate multiple data sources (e.g., social marketing sales data, retail audits, etc.) to estimate the current share of commercial family planning products that are available through private outlets. To estimate this share for the last year of the range selected, the user should consult key family planning stakeholders to understand planned market interventions and feasible targets.

Commercial Share of Products in Private Outlets		
For each family planning method, specify the percent of products in private outlets that are commercial in the projection start and end years.		
	2019	2022
Pill	20%	50%
IUD	0%	10%
Injectable	0%	10%
Implant	95%	95%
Condom	10%	40%

On the backend: In Step 6, the model calculated the number of women who would go to a private outlet to purchase their family planning product. However, as previously noted, this does not necessarily mean that these women are purchasing commercial products. The model uses the settings from this step to estimate the number of women who would purchase commercial products through private outlets, yielding a total commercial sector market share.

Interpreting the Outputs

Several tables and graphs on the “Dashboard” tab display the model outputs. Their interpretation is explained below.

The model compares the absolute number of women accessing family planning at the start year and end year. The increase will be partly attributable to population growth, growth in mCPR (if the user had made this adjustment), and growth of the commercial sector and overall family planning market. Change in mCPR is also depicted from start year to end year.

Number of women accessing family planning

2019	2,968,060	mCPR 2019	30.4%
2022	3,824,967	mCPR 2022	35.0%
Difference	856,908		
Average Annual Rate of Growth	285,636		

The following table compares the size of the commercial sector from the start year to both the status quo scenario and the TMA scenario. The number of women served by the commercial sector in the status quo scenario will be a slight increase from the number of women served by the commercial sector in the start year due to population growth. However, the real difference in the size of the commercial sector is understood by comparing the size of the commercial sector in the TMA scenario to the start year. The growth of the commercial sector can be measured and compared to the start year in four ways: the number of women served by the commercial sector, the size of the commercial sector, the number of products sold by the commercial sector, and the percentage of products sold by the commercial sector. This table also tells the user how many women are now being reached through the commercial sector who had previously been getting their method of family planning for free or at a subsidized price (i.e. the number of women served in the TMA scenario minus the number of women served in the status quo scenario).

Commercial sector profile

	2019	Status Quo	TMA Scenario
# women served by commercial sector	140,003	189,678	429,506
% women served by commercial sector	4.7%	5.0%	11.2%
# products sold by commercial sector	1,729,789	2,072,532	8,967,459
% products sold by commercial sector	4.1%	4.0%	17.3%

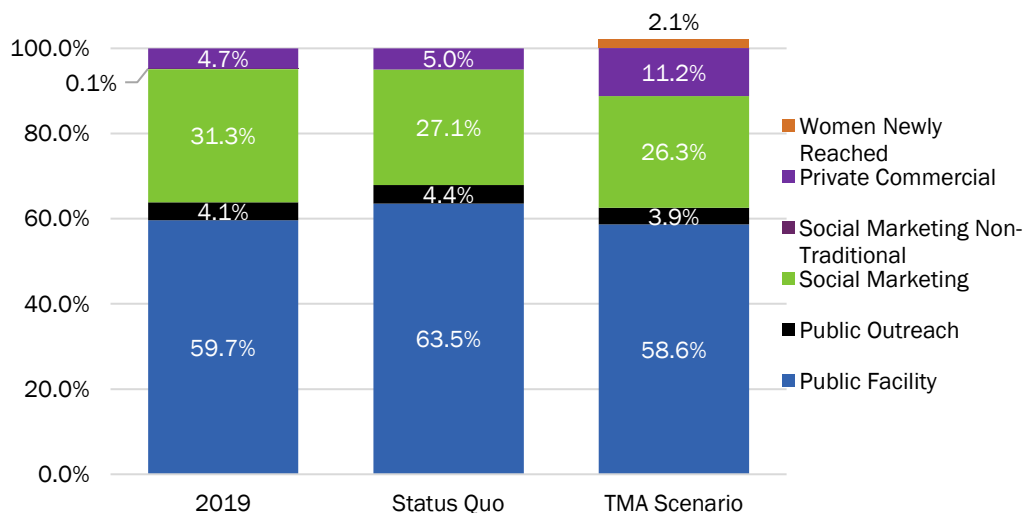
The following table summarizes the overall impact on the commercial market during the projection period in terms of increased commercial market value. This table is useful for the commercial sector; since commercial actors would need to be convinced to enter the family planning market, this output gives them insight into the market opportunity.

Commercial market impact

	UGX	US\$
Increased commercial market value	38,940,719,990	10,816,867

While the commercial sector profile is of significant interest, the model also displays an overview of the entire market, breaking down the percentage of family planning products accessed across sources. This graph shows how each segment of the market shifts over time, as well as what percentage of the market in the end year is composed of women who have been newly reached (shown in orange).

Percent of women accessing family planning by source/distribution point



The model uses the outputs from the commercial sector profile table to calculate the savings to donors and government over the course of the projection period that results from a proportion of family planning users shifting from public/socially marketed products to commercial products. This output is a key point for advocacy to governments as a financial benefit in terms of subsidies saved.

Public and donor financial impact summary

Subsidies Saved	9,114,342,411	2,531,762

The family planning impact table shows the number of additional users that could be reached through the subsidies saved. This figure represents growth of the total market. This output is another key advocacy component, as retargeting of resources will allow for more equitable distribution of family planning products and a larger, more sustainable market.

Family planning impact

Number of rural/poorer women additionally reached with any family planning method	80,238
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Method-specific results

Finally, in the “Method-Specific Results” tab, users can view each of the results by method. These results include the estimated number and percentage of commercial products in the TMA scenario (implants in the below example); the commercial market impact for the method; the subsidies saved attributed to commercial scale-up of the method; and how many additional users can be reached through subsidies saved by scale-up of the commercial method alone.

TMA Model Results by Method

Select Method

Method >>

Commercial sector profile - Implant

	2019	Status Quo	TMA Scenario
# of Implant users served by commercial sector	103,404	148,607	204,827
% of Implant users served by commercial sector	15.2%	15.5%	21.3%

Commercial market impact - Implant

	UGX	US\$
Increased commercial market value	729,671,069	202,686

Public and donor financial impact summary - Implant

	UGX	US\$
Subsidies Saved	3,615,458,766	1,004,294

Family planning impact - Implant

Number of rural/poorer women additionally reached with any family planning method	31,829
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Comparing Status Quo to TMA Scenario

Number of women accessing family planning by source/distribution point - Implant

Year/Scenario	Public Facility	Public Outreach	Social Marketing	Social Marketing Non-Traditional	Private Commercial	Women Newly Reached	Total
2019	523,576	46,483	48,483	103,404	0	0	721,946
Status Quo	736,416	53,872	22,846	148,607	0	0	961,735
TMA Scenario	683,636	48,817	24,482	204,827	0	31,829	993,591

Country-Specific Model Application

The TMA Projection Tool was applied in Uganda in September 2017 and in Nepal in January 2018. The experiences applying the tool in Uganda and Nepal were distinct, providing valuable insight into these countries' broader political economies, which affect family planning decision-making and thus the role of the private sector. Throughout the process of working with key stakeholders to apply the model, ideologies, interests, and incentives of different market players had the potential to foster or inhibit the modeling experience, which is explained further below. This section is intended to help the user anticipate and troubleshoot challenges in the data collection process as well as better understand and explain the assumptions made when applying the tool.

Modeling TMA in Uganda: Moving from Knowledge, Evidence, and Policy to Action

The application of TMA is not a new concept in Uganda. The country's public sector and social marketing organizations are mobilized around the idea of implementing TMA through various engagement mechanisms and technical working groups, and the concept is beginning to appear in national policies, such as the draft national TMA strategy. However, challenges remain.

Notably, the development and implementation of a TMA strategy in Uganda has been complicated by a lack of clarity regarding the composition of the current family planning market, especially the commercial sector's contribution. Based on the TMA Projection Tool's ability to differentiate between social marketing and commercial products, HP+ found that less than 5 percent of the total products in Uganda were commercial (compared to the nearly 40 percent estimated by DHS). Eighty to 100 percent of oral contraceptives, IUDs, injectables, and condoms were subsidized products. This information helped to adjust expectations around the targets set for the national TMA strategy, which had aimed to double the commercial sector market over three years. At the same time, it provided a clear understanding that making room for the commercial sector would lead to overall growth of the family planning market for all sectors, rather than reducing the role of one or more sectors.

Providing key stakeholders with these results was possible due to the participation of a major social marketing organization in Uganda that was able to provide HP+ with crucial product and pro-poor programming cost data. Beyond this organization, multiple other individuals who contributed to model inputs were familiar and aligned with the goals of TMA and how market share would need to shift. As a result, they were willing and able to provide needed assumptions based on current data, understanding of the consumer, and knowledge of the broader family planning environment. HP+ held a series of key informant interviews and one-on-one follow-up meetings to gather data from these relevant organizations and individuals. Financial settings were set utilizing the national quantification report for reproductive, maternal, newborn, child, and adolescent health products, as well as a family planning retail audit conducted in the previous year. The preliminary results of the model were shared at a family planning technical working group meeting, and assumptions were further refined through small-group meetings with key family planning government stakeholders.

Implementing partners and government representatives were eager to see that this modeling exercise gave them a differentiable, concrete vision compared to the multiple assessments and research studies previously conducted in Uganda.

Modeling TMA in Nepal: A Role for the Commercial Sector Not Yet Emerging

HP+ embarked upon the same modeling exercise in Nepal but received very different results. In stark contrast to Uganda, discussion around TMA—not to mention its application—was not occurring in Nepal, although government stakeholders had been expressing interest in increasing the level of private sector engagement in the health sector. In both the *Nepal Health Sector Strategy III 2015-2020* and the *National Family Planning Costed Implementation Plan 2015-2020*, building mutually beneficial partnerships between the public and private sectors is prioritized and represents a key strategic objective. Unfortunately, cooperation between state and non-state sectors has been hampered by a lack of a clear policy framework for private sector engagement, which inhibits progress towards implementing TMA for family planning.

Even though market data suggest that Nepal is reliant on free public sector and highly subsidized socially marketed products, many government planners were not yet considering the commercial sector's role in improving sustainability. Just as sustainability and country ownership were not viewed as urgent priorities, TMA was not topic of conversation that had gained widespread recognition and understanding among core family planning decisionmakers.

The impact of these predominant perceptions and ideologies was felt during the data gathering and modeling exercise. While the HP+ team was able to extract product costs and prices from government and non-governmental organizations, the team encountered discomfort from key stakeholders regarding uncertainty with the concepts and therefore estimates provided. Given the limited frameworks for understanding market interventions for private sector engagement and shifting of users from free or socially marketed products to commercial, unclear policy direction, and lack of available and accurate data to drill down into differentiation between product sources and product type, family planning stakeholders could not reach a comfortable consensus on the key model inputs. While it was unfortunate that country stakeholders were not provided with a future vision for cost savings and expanded access to family planning associated with improved commercial sector investment in family planning, the environment signaled that further TMA sensitization may be needed before ownership of the results could lead to incorporation into national policy or planning of market interventions.

Conclusion

To grow both the commercial sector and the total number of family planning users in a given country, policymakers, donors, implementing partners, and the commercial sector should align and understand each player's role and value to implement market interventions that can improve equity and sustainability in the long term. The TMA Projection Tool shows in quantitative terms that better targeting of government and donor resources can bring about a more equitable distribution of family planning products and services. It also demonstrates that based on country context, stage of market development, and political disposition toward the role of the commercial sector, countries will be scattered across the continuum from TMA knowledge to action. Without robust thought leadership and sensitization around TMA, the concept may be met with some skepticism. However, the existence of early adopters and champions of TMA can significantly increase the success of the tool in advancing advocacy to set actionable interventions into motion.

Ultimately, the tool will be most effective when a critical mass of influential key stakeholders align around these principles and can encourage countries to take ownership on a national or state level. Policymakers, donors, commercial sector actors, and others are encouraged to download the tool with pre-loaded country data, set assumptions based on their own evidence-gathering processes, and use the results to drive advocacy and decision-making to create more equitable, sustainable access to family planning.

Annex: Poverty Lines Methodology

During model applications in Uganda and Nepal, key informants who were asked to set the key assumptions related to the percentage of users that might switch to commercial products from free/subsidized ones found wealth quintiles too relative as a measure by which to predict switch rates. Because it can be difficult to consider WRA's ability and willingness to pay by wealth quintile, this model includes the option of inputting switch rates by income per day, which is an absolute measure. Instead of inputting separate switch rates for each of the top two wealth quintiles, the user is asked for separate switch rates for WRA living on more than US\$5.50 per day and WRA living on between US\$3.20 and US\$5.50 per day.

The population of WRA in each of these income ranges is estimated using poverty headcounts from the World Bank. To estimate prevalence rates by method and sector for urban and rural WRA in each of the two highest income groups, the DHS wealth index is assumed to be a good proxy for income. If 75 percent of the population is living on US\$5.50 or less per day, then the top 25 percent of households as ranked by the DHS asset index are assumed to be living on over US\$5.50 per day. These percentages are assumed to remain unchanged throughout the projection. This approach to linking the DHS wealth index with the World Bank poverty headcount was first explored by Avenir Health in the USAID-funded Strengthening Health Outcomes through the Private Sector Plus (SHOPS+) project's Family Planning Market Analyzer (<http://fpmarketanalyzer.org/>).

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