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Frontier Health Markets (FHM) Engage

MARKET SIZING REPORT

An Innovative Approach to Identify Family Planning
Market Opportunities by Measuring and Visualizing
Sub-market Size in Tanzania

September 28, 2023

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Authors:

Dr. Yuen Wai Hung, Metrics for Management

Dr. Andrew Corley, Metrics for Management

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1275 New Jersey Ave. SE, Ste 200,

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Acronyms

ADDOs	Accredited drug dispensing outlets
A2IE	Asset to Income Estimator
CHAI	Clinton Health Access Initiative
CYP	Couple-years of protection
DHS	Demographic and Health Surveys
EC	Emergency contraceptives
FP	Family planning
FPET	Family Planning Estimation Tool
GPS	Geographic position system
INLA	Integrated Nested Laplace Approximation
IUD	Intrauterine device
LARC	Long acting and reversible contraception
LEAP	Landscape and Projection of Reproductive Health Supply Needs
LMICs	Low- and middle-income countries
mCPR	Modern contraceptive prevalence
MICS	Multiple Indicator Cluster Survey
MSI	Marie Stopes International
OCPs	Oral contraceptive pills
RHSC	Reproductive Health Supplies Coalition
SAE	Small area estimation
SHOPS	Strengthening Health Outcomes of Private Sector
TMA	Total Market Approach
UN	United Nations
VAN	Visibility and Analytics Network
WRA	Women of reproductive age

Background

Frontier Health Markets (FHM) Engage is a United States International Agency for Development (USAID) project that aims to strengthen markets to improve outcomes in mixed health systems. FHM Engage focuses on strengthening local health markets by optimizing public and private sector engagement to contribute to sustainable market efficiencies and increased access to family planning, maternal and child health, and other health services, products, and information.

The project has two main result areas: 1) improved market environment for greater private sector participation in the delivery of health products and services, and 2) improved equal access to and uptake of high-quality consumer-driven health products, services, and information. Contributing toward the first result area, intermediate result 1.4 (IR1.4) aims to increase effective collection, integration and utilization of private sector data and market intelligence to inform public and private-sector decision-making.

Year 1 activities under FHM Engage identified available global and country-specific data sources on private sector size and market functions. These activities revealed a lack of reliable information to estimate contraceptive market size, particularly at sub-national levels. Subsequent market descriptions for specific health products in Tanzania further revealed areas in need of improved market intelligence.

In year 2, the FHM Engage team in Tanzania conducted a high-level overview of the market for family planning (FP) to identify areas of opportunity in which the private sector may be well positioned to help improve access to and uptake of key services and products to target populations who are currently not well-served. The team noted that the unmet need for FP remained unchanged over the last two decades, a factor that remains especially high among young women.

While the market description identified regions and demographic groups in which FP uptake has fallen behind, the lack of more detailed subnational market intelligence poses a major obstacle to strengthening private sector engagement in increasing access to and use of modern contraceptive products. Data pertaining to the supply and demand of contraceptive products and services is often unavailable, of poor quality, or too sparse to conclude from. Consequently, this activity aims to apply small area estimation techniques to the FP market in Tanzania to enable market actors to identify geographic areas of opportunity for improving the provision of modern contraceptives by understanding where demand for different contraceptive products and services exists and allows for better targeting of interventions and products. It also provides market actors with a quantification of current and potential private sector contraceptive product volume, and real dollar value, to spur interest and action from a commercial perspective.

The Challenge

During meetings with private importers, distributors, and contraceptive wholesalers (participant list found in Annex 1) in Tanzania in September 2022 by FHM Engage and M4M, private sector stakeholders disclosed several challenges related to demand estimation. Due in large part to insufficient market intelligence, these private actors reported often struggling to forecast demand accurately, leading to

reactive procurement throughout the supply chain, which resulted in delivery delays and unsatisfied demand. Despite manufacturers,' importers,' and large distributors' interest in better satisfying future demand as well as in introducing new products into the Tanzania contraceptive market, their difficulties in accurately forecasting demand deterred such decisions.

Overview of tools to estimate family planning market size

Various market size estimation approaches have been applied to family planning. The Clinton Health Access Initiative (CHAI) Family Planning Market Report;¹ DKT's Contraceptive Social Marketing Statistics;² the Family Planning Estimation Tool (FPET);³ Private Sector Counts;⁴ the FP Market Analyzer;⁵ and the Landscape and Projection of Reproductive Health Supply Needs (LEAP) / Commodity Gap Analyses⁶ utilize estimation methods primarily focused on quantifying the proportion or number of users by method and total volume of products at a **national level** across numerous countries.

Some of these tools focus on the size of a specific sector and **not the total market** (which includes social marketing and the for-profit commercial sector). For example, the CHAI Family Planning Market Report quantifies the total public sector FP procurement market in the 83 low- and lower-middle-income countries,¹ and DKT's Contraceptive Social Marketing Statistics summarizes sales data reported by the social marketing sector.²

Other tools enable exploring patterns of public and private sector contraceptive use. The USAID-funded [Private Sector Counts](#) uses Demographic and Health Survey (DHS) data to provide the relative contribution of the public and private sectors to FP service delivery.⁴ The USAID-funded [Family Planning Market Analyzer](#) combines data from the DHS and projections of modern contraceptive prevalence (mCPR) from FP2020 to take a total market approach toward exploring how changes in public and private actors' market activities might alter mCPR.⁵ Reproductive Health Supplies Coalition (RHSC) has been conducting the LEAP / Commodity Gap Analyses, which provide estimates of the number of modern contraceptive users by methods and sector source (public vs. private), and the related costs nationally.⁶ Their report provides results for all 129 low- and middle-income countries (LMICs), and aggregated information on multiple countries by region or income group. While national-level estimates and utilization patterns by key demographics are crucial for understanding the overall market, market actors often need subnational information that is contextually and geographically relevant to their specific business activities to allow for better decision-making around how to target interventions and products within a country.

TABLE 1. EXISTING FP MARKET SIZE TOOLS

Tools	Developer	Characteristics of market sizing	Type of market	Types of data	Methodology
Family Planning Market Report	CHAI	Volumes and values of public sector FP procurement market	Public	Suppliers data	Descriptive summary
Contraceptive Social	DKT	Social marketing product sales and	Private (non-profit)	Social marketing	Descriptive summary

Marketing Statistics		associated CYP by country		programs self-report sales data	
Family Planning Estimation Tool	Track20	Use all available data to develop annual country-specific estimation for contraceptive prevalence and unmet need and projection	Total (contraceptive prevalence rate)	Model combines population data, survey data, and service statistics (when input by the user)	Bayesian hierarchical model
Private Sector Counts	USAID (SHOPS Plus)	Illustrates contribution of the public and private sector to FP service delivery	Public and private	DHS	Descriptive summary
FP Market Analyzer	USAID (SHOPS Plus)	Describes FP users by demographics and method mix in each country, and allow users to explore potential scenarios for a TMA	Public and private	Combines data from DHS and FP2020's projections of mCPR	Descriptive summary combined with population estimates
LEAP / Commodity Gap Analyses	Reproductive Health Supplies Coalition	Estimates of number of users, method used, and related costs for selected country or region (multiple countries), and projects change	Public and private	Household surveys (DHS, MICS, other national surveys), projections developed by UN Population Division, data provided by SRH community, and data purchased from private sector entities	Estimations derived from a combination of specified primary data sources

Small area estimation approaches

Small area estimation (SAE) techniques are a family of statistical methodological approaches characterized by their focus on estimating parameters for small domains from survey data. Domains may refer to geographical area units, such as regions, counties, or districts, or demographic characteristics that the survey is not powered to measure with adequate precision. This technique is applied to address

the challenge of not having a large enough sample size to attain a desired level of precision, often due to the sparseness of data in sub-populations. Small area estimation techniques have been applied across a wide range of disciplines, including health, demography, agriculture, and environmental planning. In the field of health, SAE techniques have been used to estimate HIV prevalence, child mortality, malaria prevalence, vaccination coverage, and modern contraceptive prevalence at a sub-national level.⁷⁻¹²

While the technique has been applied in different health topics, including family planning, the approach of applying SAE techniques and customizing the estimates to meet the private sector's contraceptive market intelligence needs has not been explored. The novel application outlined below builds on two previous examples of SAE in family planning. Notably, the Family Planning Estimation Tool and resources developed under the Sustaining Health Outcomes through the Private Sector (SHOPS) Plus.

The Family Planning Estimation Tool (FPET) has been primarily used to track FP progress, combining multiple data sources to generate annual estimates for contraceptive prevalence, unmet contraceptive need, and satisfied demand for family planning.³ While FPET can also be used at subnational levels,¹³ users must manually input subnational data for the country, which requires a comprehensive understanding of the tool's functionalities and data requirements, including the specific structure of data needed to generate accurate small area estimations. Additionally, the method can generate estimates only at the geographic level which the survey data includes.

Another important resource developed during SHOPS Plus's five-year program tenure was its research into contraceptive use patterns at sub-national geographic levels for a number of its partner countries. Recognizing the importance of understanding geographic variations within a country, SHOPS Plus developed continuously scaled choropleth maps for Tanzania, Guinea, Kenya, Uganda, and Nepal. By using color to correspond with characteristics of modern contraceptive use within geography, these maps visualize key contraceptive use indicators, including rates of utilization in both the public and private sectors subnationally.¹⁴

While the maps generated are useful for advocacy, policy, and program planning, they do not quantify the number of current or potential modern contraceptive users or examine the relative popularity of different contraceptive methods within a particular administrative unit. In Tanzania, the SHOPS Plus maps' visualization, while novel, can be challenging to quantify the number of existing or potential modern method users and the relative popularity of different contraceptive methods by administrative units. These examples of using SAE to estimate modern contraceptive utilization patterns offer valuable information; however, they each struggle to present existing data in a form that appropriately addresses private sector actors' market intelligence needs.

In this report, we present:

- 1) The application of a model-based SAE approach that offers estimates bounded within administrative region boundaries. This allows users to estimate the size of both current and potential new users of private sector contraceptive products and several contraceptive methods of interest (i.e., injectables, implants, and oral contraceptive pills) at a sub-national scale, and
- 2) National-level estimates of the current and potential private market volume and value of several contraceptive methods.

Preliminary outputs from this SAE model were shared with Tanzania private sector stakeholders in July 2023 (participant list found in Annex 1), and their feedback was incorporated into the final model's assumptions and estimates. This report describes a new, multi-pronged analytical approach tailored to meet the business intelligence needs of the private sector.

Methodology

Process

Recognizing the private sector's desire for detailed contraceptive market information to aid their business decision-making (e.g., improved targeting of existing products, strategy for new product entry, etc.), we conducted estimations that resulted in two complementary sets of analytic outputs: 1) maps visualizing subnational variations in estimates of modern contraceptive users and potential users, and 2) national level contraceptive market volume and value estimates.

Analytic outputs

- Maps visualizing subnational estimates
- National level volume and value estimates

Given the limitations in publicly available data, accessible sources were identified through a desk review and consultation with FHM Engage staff. We consulted with FHM Engage Tanzania staff to identify and understand available accessible data sources that might contain relevant information, as well as through conducting a search of the available relevant literature.

To ensure the relevance of the analysis for private sector stakeholders, we presented our methodology and findings to key stakeholders, including the social marketing organizations -- T-MARC, DKT Tanzania, and Marie Stopes International -- as well as a local private importer and distributor of modern contraceptives, Jilichem. Their valuable feedback was incorporated to enhance the utility of the model outputs. Finally, while the importer/distributor Viatris and wholesaler/retailer J.D. Pharmacy were invited but unable to attend the meeting, the team subsequently shared the results of these analyses for their review and comments. Further details regarding data sources and approaches are described in the following section.

Data

Our model utilized different types of data enumerated below.

- Cross-sectional survey data

Cross-sectional survey data comes from Tanzania DHS 2010 and 2015-16.^{16,17} DHS are nationally representative household surveys that serve as an important information source to gauge demand for contraceptive products. This survey data includes geographic position system (GPS) information which is required to accurately assign survey clusters to the current administrative boundaries (districts) in Tanzania.

We extracted individual-level data from each DHS survey, including information on modern contraceptive use, the source of modern contraceptives, traditional contraceptive use, and unmet contraceptive need, as well as age, wealth quintile and GPS location. We used the revised definition of unmet need for contraception.¹⁸

→ Global administrative areas (GADM) shapefiles

We used GADM shapefiles version 4.1 for administrative boundary levels (one and two) to create sub-national maps at district and regional levels using the small area estimation technique.¹⁹

TABLE 2: INFORMATION EXTRACTED BY DATA SOURCE

→ Census

The population size for women of reproductive age (WRA, age 15-49) and young women (age 15-24) were extracted for all districts and regions in Tanzania from the most recent Tanzania Census (2022).²⁰

→ Health facility registry

Data on the location and ownership of various health facilities were extracted from Tanzania’s National Health Facility Registration System.²¹ Data containing the addresses of operating pharmacies and Accredited Drug Dispensing Outlets (ADDOs) were obtained from the Pharmacy Council in Tanzania.

Data source	Information
DHS surveys	Individual level data on: <ul style="list-style-type: none"> • Contraceptive use, by method • Contraceptive need • Contraceptive source • Demographic information • Wealth quintile • Location information • Age
Asset to Income Estimator	<ul style="list-style-type: none"> • Median daily household income (3rd wealth quintile) ~ \$12.50 (USD)
Census	Population of women of reproductive age (age 15-49) and young women (15-24) by district and region
National health facility registry	<ul style="list-style-type: none"> • Private health facilities • Location information
Pharmacy Council	<ul style="list-style-type: none"> • Pharmacy • ADDOs • Location information

Methodology and Analysis

Key analytic terms and definitions

We categorized women who want to delay, space, or limit childbearing in our analyses into two groups: 1) current modern contraceptive users, and 2) potential modern contraceptive method users. Current modern method users include women who are at present using a modern method of contraception. Potential modern method users include women with unmet family planning needs (defined as women who do not want to become pregnant, and who are not currently using any contraception) and women using traditional contraceptive methods.

We used household financial capacity as a proxy for a woman’s ability to pay. We defined women living in a household within the third wealth quintile or above as having the financial means to potentially access contraceptive products from the private sector. We used M4M’s Asset to Income Estimator (A2IE) tool,²² which combines asset-based wealth rankings (from the DHS or Multiple Indicator Cluster surveys) and income distribution data²³ to estimate median individual and household incomes by wealth quintile. According to the A2IE tool, these women have a median daily household income of at least US \$12.50, a threshold validated by private sector stakeholders.

Rationale for our definition of financial capacity

We approximated women’s ability to pay for their choice of contraceptive methods by considering their household wealth quintile. Women in a household in the top three wealth quintiles currently using a modern contraceptive method were significantly more likely to have obtained their method from a private sector source (29.5 percent) than those in the lowest two wealth quintiles (12.8 percent). Using the A2IE tool, household daily income in the lowest two wealth quintiles was below USD 10, reflecting limited disposable income.

We examined where modern contraceptive users obtained their contraceptive products and categorized the sources into two groups: private sector and public sector (see Table 2). To maintain a binary definition that encompasses all respondents, women within the data who reported receiving their contraceptive method from a friend, relative, or neighbor were categorized as belonging to the public sector. This classification is based on the premise that these women are current modern contraceptive users who, similar to public sector clients, could have the potential to become private sector users. While imperfect, this classification served as a practical means to comprehensively account for all Tanzanian women who reported using a modern contraceptive method (those who reported receiving their contraceptive method from a friend, relative, or neighbor consisted of 1.24% of modern contraceptive users in DHS 2015-16).

TABLE 3: ANALYTIC TERMS AND DEFINITIONS

Terminology	Definition applied
Private sector	Includes for-profit, non-profit, social-marketing, and faith-based organizations, shops/kiosk
Public sector	Government, friend/relative/neighbor
Short-term contraceptive methods	Condoms, oral contraceptive pills, injectables, emergency contraception
Long-acting reversible methods	Intrauterine device, implant
Financial capacity	Women living in a household in third or higher wealth quintile (median daily household income of at least \$12.50 USD)

We also conducted sub-analyses for users of specific short-term and long-acting reversible contraceptive (LARC) methods, which included injectables, oral contraceptive pills (OCPs), and implants. For each of these methods, we generated estimates for those 1) obtaining from the private sector, and 2) obtaining from the public sector and with financial capacity. However, due to the very low proportion of emergency contraceptive (EC) users and intrauterine device (IUD) users in the DHS data, we did not produce sub-national use estimates for these methods.

We applied our analytical model to calculate small area estimates for each of these indicators to both all women of reproductive age (women aged 15 to 49) and to young women (aged 15 to 24) alone.

Analytic model for sub-national estimation of indicators

We applied a Bayesian hierarchical model framework, as described by Mercer, Lu, and Proctor,²⁴ that integrates multiple surveys, survey designs, and levels of uncertainty and allows for a spatiotemporal smoothing of estimates. The model requires data from at least two surveys and assumes that there is an underlying value of the indicators and that the direct survey estimates are measurements with associated uncertainty. Spatially structured random effects were included to provide geographical smoothing at the subnational area and a temporally structured space-time interaction was included to account for subnational temporal trends.

We fit the models using R computing language, adapting the analysis codes from the associated GitHub repository of the Mercer et al. article.²⁵ The hierarchical Bayesian space-time model was fit using the Integrated Nested Laplace Approximation (INLA) package in R.²⁶ We computed the median estimates for each indicator at the specified administrative level (Table 4).

The model yields a proportion that we then converted to absolute population estimates for each current and potential use category. To determine the population value associated with each indicator rate (Table 4), we multiplied the estimated indicator rate by the appropriate sub-population value (e.g., all women of reproductive age), as described in the 2022 Tanzania Census report, for the same geographic area. Finally, we displayed results on maps at the district or regional level as appropriate. Maps were generated using R computing language.

As the precision of indicator estimates relies heavily on the quantity of data available within the underlying data sources, indicators with more data can be estimated at smaller geographic regions, while those with relatively less data must be estimated at larger geographic levels to capture the greater amounts of available data. The more data that are available, the more reliable and precise the estimate is likely to be. Not all indicators will have the same amount of available data, as some indicators include questions that follow a skip pattern. For example, a woman who reports not using a modern contraceptive method will not then be asked what type of method she uses. Consequently, we estimated indicators with greater amounts of data, such as mCPR, at the district level, while those with less data, such as the source or type of their method, at the regional level.

Type of users	Indicator	Level
Current modern method users	WRA using a modern contraceptive method <ul style="list-style-type: none"> ➤ All ➤ Private source vs. public source with financial capacity ➤ By method type: private source vs. public source with financial capacity 	District Region Region

Potential modern method users	WRA with an unmet need for contraception or using a traditional method <ul style="list-style-type: none"> ➤ All ➤ Those with financial capacity 	District District
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TABLE 4: SUB-NATIONAL ESTIMATION OF CONTRACEPTIVE USERS, POTENTIAL USERS, AND ASSOCIATED INDICATORS

National estimation of volume and value by types of contraceptive product

In addition to estimating the number of current and potential users at district and regional levels, we calculated the current and potential market size of the Tanzanian private sector, considering both the number of clients and annual revenue for the four contraceptive products of interest (i.e., injectables, OCPs, IUDs and implants). We applied the national-level population data for Tanzanian women aged 15 to 49 from the 2022 Tanzania Mainland and Zanzibar census and then applied this to the proportions reported in the 2015-16 Tanzania DHS (most recent DHS survey data available). From the DHS survey, we estimated:

- Proportion 1: The proportion of WRA currently using one of the four modern contraceptive methods of interest who last obtained their method from a private sector source.
- Proportion 2: The proportion of WRA currently using one of the four modern contraceptive methods who last obtained their method from a public sector source.
- Proportion 3: The proportion of WRA defined as having an unmet need for contraception.
- Proportion 4: The proportion of WRA currently using a traditional method of contraception.

The first set of estimates focused on the current private sector market size for the four contraceptive methods of interest including injectables, OCPs, IUDs, and implants. We applied Proportion 1 for each of the four methods to the population of WRA from the 2022 Census to obtain an estimated number of WRA that use each method obtained from the private sector. For the two short-term methods (injectables and OCPs), we then multiplied each method by its respective Couple-Years of Protection (CYP)²⁷ to determine, on average, the number of product units of each method that could be expected to be sold annually to provide each woman with a year’s worth of prevention from pregnancy. For the long-acting reversible methods, we assumed the annual unit sales to be the same as the number of users obtained from the private sector for that method. We also calculated the private sector market value for each of the four contraceptive products by multiplying the annual units sold by each method by its average retail price, as previously estimated by FHM Engage retail surveys conducted in 2022 (Table 5).²⁸ These analyses resulted in an estimate for the number of current private sector clients of each method, annual unit sales of each method, and annual revenue for each method.

TABLE 5: PRODUCT PRICING APPLIED FOR VALUE ESTIMATION

Product	Unit of Measure	Source	TZS per unit	TZS per year	USD per unit	USD per year
Injectables	1 vial	Retail surveys	TSh 3,000	TSh 12,000	\$1.23	\$4.92
OCPs	1 month course	Retail surveys	TSh 2,100	TSh 31,484	\$0.86	\$12.91
EC	1 dose	Retail surveys	TSh 4,333	TSh 86,667	\$1.78	\$35.53
Implants	1 implant	UNFPA catalog	TSh 20,742		\$8.50	
IUDs	1 IUD	Retail surveys	TSh 25,000		\$10.25	

Next, we aimed to illustrate the potential market growth with a more favorable enabling environment for private sector engagement in Tanzania’s contraceptive market. We considered two potential new private client groups:

- 1) Convertible Modern Method Users - women currently using a modern contraceptive method from a public sector source (Proportion 2) - and
- 2) Convertible Potential Modern Method Users – women who have an unmet need for contraception and those currently using a traditional method of contraception (Proportion 3 + Proportion 4).

To calculate the population size, we multiplied Proportions 2, 3, 4 each by the total population of WRA 15-49 years in Tanzania. To estimate the potential increase in market size, we made three key assumptions:

Key assumptions

1. The proportion of Groups 1 and 2 that have the financial capacity to obtain contraceptive methods from a private sector source
2. The number of Convertible Modern Method Users that could conceivably become private sector clients under the right circumstances
3. The number of Convertible Potential Modern Method Users that could be convinced to adopt a method and to obtain that method from a private sector source

Assumption 1: The proportion of Groups 1 and 2 that have the financial capacity to obtain contraceptive methods from a private sector source.

We defined those belonging to households in the top three wealth quintiles as having the financial capacity to obtain contraceptive products from a private sector source. It is necessary to clarify that financial capacity is not the same as willingness. While financial capacity implies that these women have the means to access private sector contraceptive products, it does not indicate their willingness to do so. Nonetheless, assumption 1 allowed us to home in on a subset of the population with an increased likelihood of becoming private sector clients.

Assumption 2: The number of Convertible Modern Method Users that could conceivably become private sector clients under the right circumstances.

To determine the proportion of Convertible Modern Method Users likely to seek products from the private sector, we conducted a literature search of available evidence in any intervention to convert

public sector users to private sector users through PubMed and Google Scholar. As the search revealed a scarcity of evidence, we analyzed private sector utilization rates among Tanzania's-peer countries. Following discussions with technical staff from FHM Engage in Tanzania, we determined that Kenya could serve as an aspirational benchmark for Tanzania, given its more conducive market environment that has resulted in greater private sector utilization for contraceptive products and comparable contexts.

Based on analyses of the 2021-2022 Kenya DHS,²⁹ private sector utilization among women in the top three wealth quintiles using the four contraceptive methods of interest was 39.5%. If Tanzania were to achieve a comparable private sector utilization rate for the four contraceptive methods of interest as that found in Kenya, 8.75% of current public sector Tanzania clients would shift to the private sector.

Assumption 3: The number of Convertible Potential Modern Method Users that could be convinced to adopt a method and to obtain that method from a private sector source.

A different proportion of private sector extension was required for this assumption than used for Assumption 2. This is because additional considerations must be made when estimating the proportion of current non-users who might adopt a modern contraceptive method. We searched the existing literature to identify examples of interventions that the private sector might be able to implement to increase client uptake. The most useful evidence came from a recent randomized trial in Burkina Faso, which found that an intensive evidence-based family planning campaign delivered through radio increased mCPR by 5.9 percentage points.³⁰ As not all of these new modern contraceptive adopters would seek products from the private sector, we applied the private sector utilization proportion in Kenya for the four methods of interest (39.5%) to come to the conclusion that under similar circumstances 2.3% of current non-users in Tanzania (women with an unmet need or traditional method users, with financial capacity) could be expected to become private sector modern method users.

EC volume and value estimation

Besides the four methods identified above, EC was also a method of interest for the private sector. However, key challenges have been identified in the accurate measurement and monitoring of EC use.^{31,32} Unlike other modern contraceptive methods, EC is used to help women prevent pregnancy after sexual intercourse, often in instances of contraceptive non-use, contraceptive failure, incorrect use, or forced sex. While EC is included as an option in the DHS as a response to current contraceptive method use, women may not report using EC currently because it is not used regularly or during intercourse. Previous research has shown the conventional approach (used in DHS) to measure EC use largely underestimates EC use in the past 12 months.³¹

Recognizing the shortcomings of using DHS to estimate EC use, we presented the estimation of EC volume and value using the same methodology as other contraceptive methods to the private sector stakeholders, who also confirmed that the EC volume was substantially underestimated.

Due to existing EC measurement challenges and a lack of alternative market data for EC use in Tanzania, we chose to collect sales data from known EC distributors to provide an aggregate estimate of the private sector market volume and value of EC as an alternative approach. The volume of EC distributed by social marketing organizations was extracted from DKT's Contraceptive Social Marketing Statistics report,² while the volume of EC distributed by other private sector actors was obtained by in-country

FHM technical staff through direct inquiry to businesses licensed to import and distribute EC in Tanzania in August 2023. Information on EC distribution was obtained from the social marketing organizations MSI Reproductive Choices, T-MARC Tanzania, and DKT. For-profit distributors contributing data included four companies (please see Annex I for the list of private sector stakeholders consulted).

Results

Sub-national estimation of indicators

It is important to note that as of September 2023, the Tanzania DHS 2022 individual data was not yet available. As such, the results presented here are based on older survey data and are simply meant to be illustrative. This section includes estimations for all WRA. Estimations for young women (age 15 to 24), as well as tables of estimated numbers at the subnational level that populate each map, are included in the Annex.

→ Current modern contraceptive users

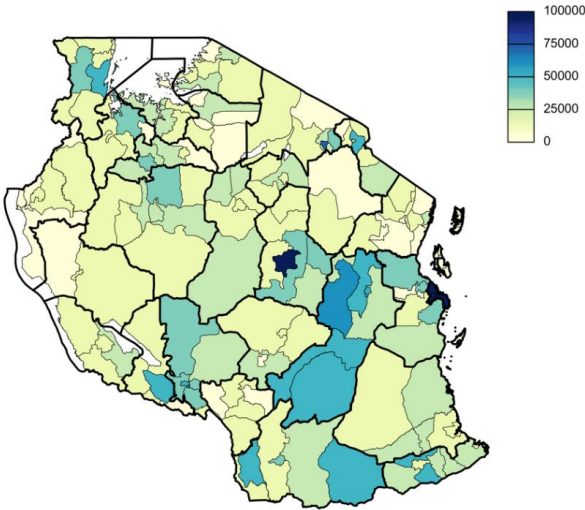


Figure I illustrates the number of women using a modern contraceptive method at a district level. The map shows the uneven distribution of modern contraceptive users across the country. While some highly populated districts contain the highest number of women using a modern contraceptive method, other high population districts (e.g., Geita and Kasulu), in Geita and Kigoma regions, have much lower number of modern contraceptive users.

FIGURE I: NUMBER OF WRA USING A MODERN CONTRACEPTIVE METHOD BY DISTRICT

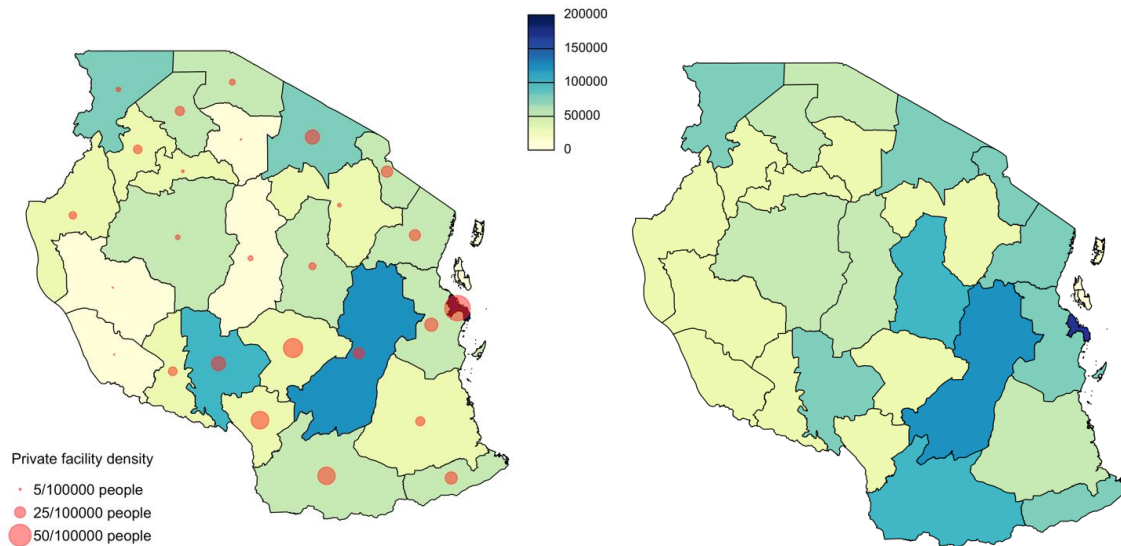


FIGURE 2: NUMBER OF WRA USING A MODERN CONTRACEPTIVE METHOD A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE SECTOR FACILITY DENSITY (LEFT), B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY BY REGION (RIGHT).

Figures 2a and 2b illustrate by region the source of women’s contraceptive methods. Figure 2a shows the number of women using a modern contraceptive method obtained from a private sector source, while Figure 2b shows the number of women using a modern contraceptive method obtained from a public sector source with financial capacity. A comparison of the two maps indicates some regions such as Dodoma, Tanga, Pwani, and Ruvuma have higher numbers of women currently using a modern contraceptive method obtained from a public source who may have the ability to pay for the product in the private sector.

The red circles in Figure 2a indicate the density of private facilities for each region, including ADDOs, pharmacies, and health facilities. Figure 3 illustrates the composition of the private facility density by type of facility in each region. For many regions, ADDOs are the predominant type of private sector providers, such as in Iringa, Ruvuma, and Njombe. However, other regions have greater numbers of pharmacies, such as Dar es Salaam, Arusha, and Lindi. Besides knowing the overall density of private facilities, it is also important to consider the types of contraceptive methods that can be sold by each facility type. For example, ADDOs are currently restricted to selling condoms alone, while pharmacies can sell condoms, OCPs, and EC.

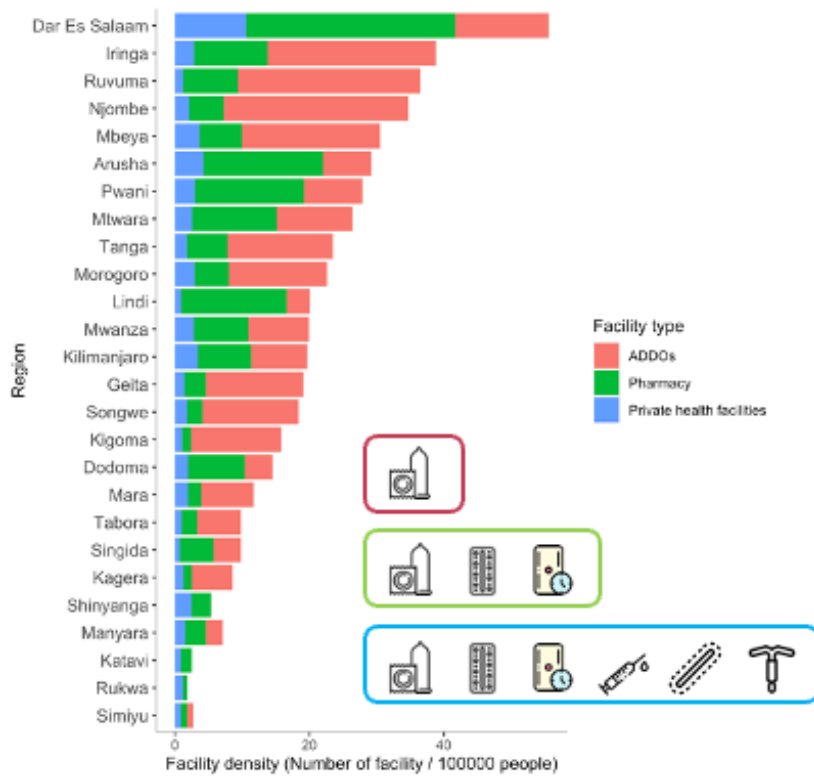
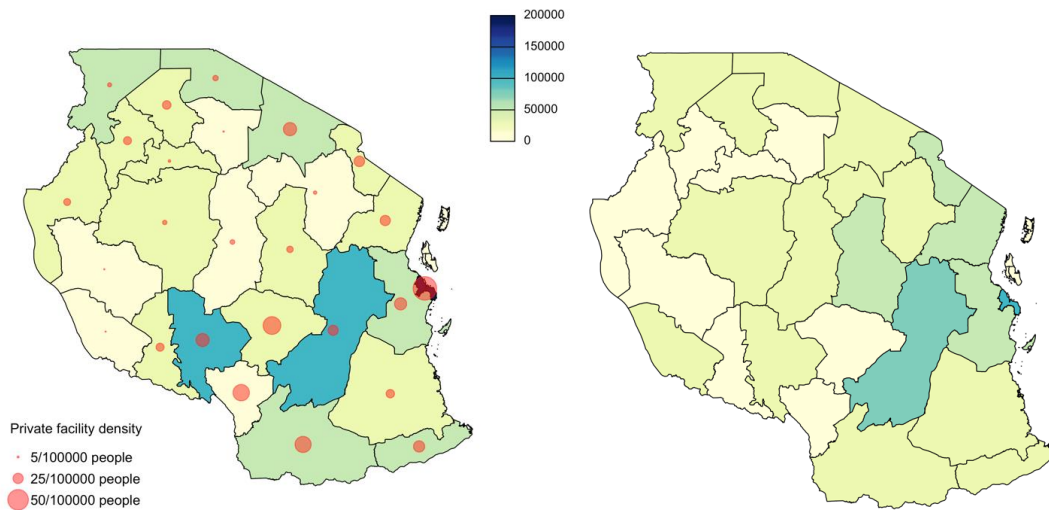


FIGURE 3: PRIVATE FACILITY COMPOSITION AND DENSITY BY REGION.

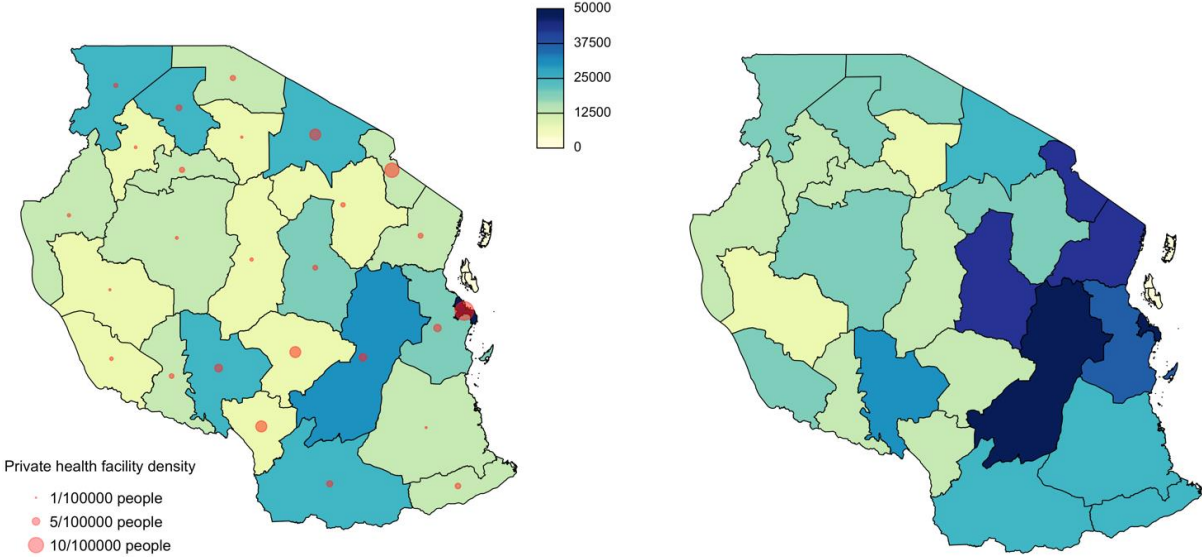
→ Current modern contraceptive users – Short-term methods



FIGURES 4: NUMBER OF WRA USING SHORT-TERM CONTRACEPTIVE METHODS A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE SECTOR FACILITY DENSITY (LEFT), B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY (RIGHT).

Similarly, Figures 4a and 4b show the sector where women obtained their short-term contraceptive products. The red circles in Figure 4a illustrate the density of all private facilities within that region. Figure 4b shows the number of women who obtained their short-term contraceptive products from a public sector source that are considered as having the financial capacity to obtain them from a private source. Several regions such as Dodoma, Kilimanjaro, and Tanga have lower current private sector short-term method users than those obtaining from the public sector with financial capacity.

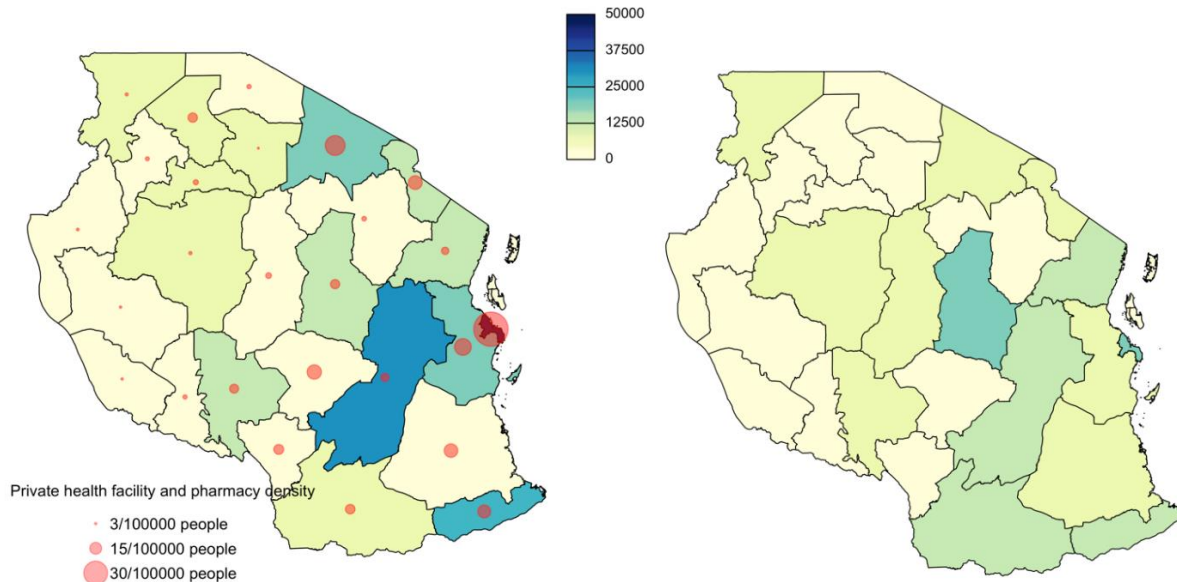
→ Current modern contraceptive users – Injectable contraceptives



FIGURES 5: NUMBER OF WRA USING INJECTABLE CONTRACEPTIVES A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE SECTOR FACILITY DENSITY, B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY (RIGHT).

Figures 5a and 5b follow the same design while focusing on the number of women using injectable contraceptives. As injectable contraceptives can only be distributed at private health facilities, the red circles in Figure 5a include the density of private health facilities only. A comparison of the two maps shows the eastern regions have more injectable users obtaining from the public sector with financial capacity than private sector injectable clients.

→ Current contraceptive users – Oral contraceptive pills

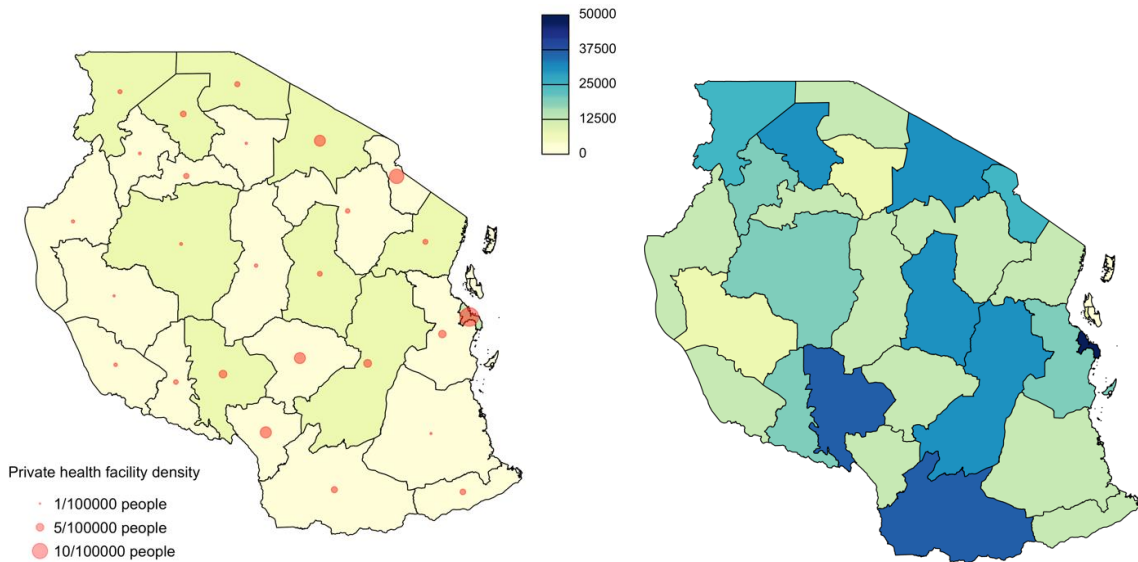


FIGURES 6: NUMBER OF WRA USING ORAL CONTRACEPTIVE PILLS A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE HEALTH FACILITY AND PHARMACY DENSITY (LEFT), B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY (RIGHT).

Figures 6a and 6b focus on number of women using OCPs. In Tanzania, OCPs can be distributed in pharmacies and health facilities. As such, the red circles represent the density of these two types of private facilities. In most regions, more oral contraceptive pill users with financial capacity obtained from the private sector than those from the public sector, except for Dodoma and Ruvuma.

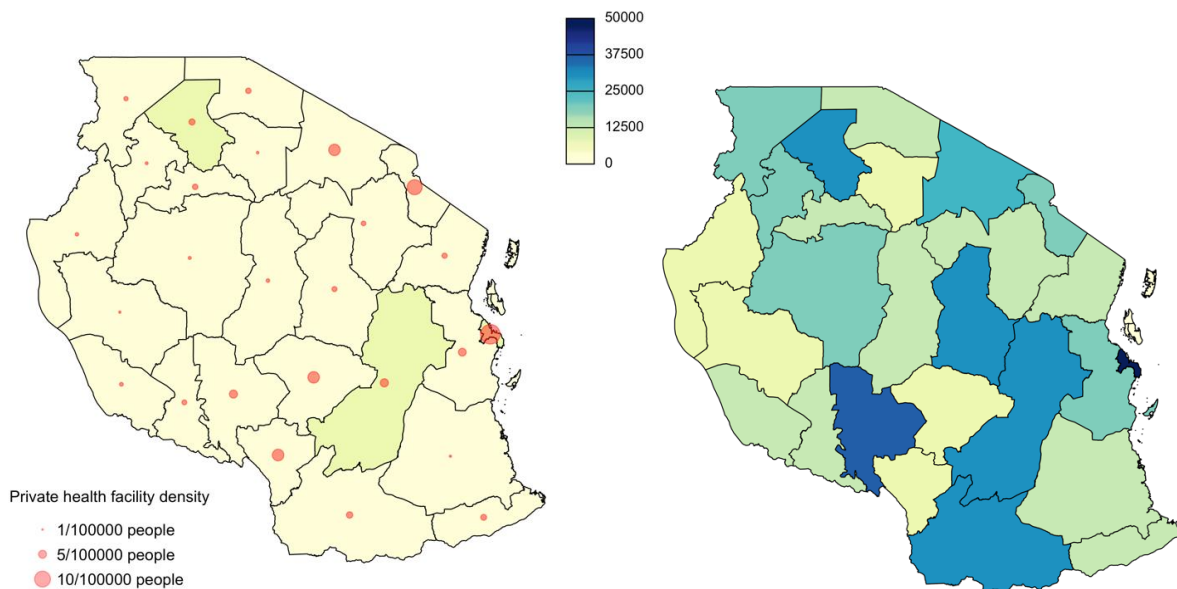
→ Current modern contraceptive users – Long-acting reversible contraceptive methods

Figures 7a and 7b illustrate the estimated number of women using LARC methods by sector source, including intrauterine devices and implants. A comparison of the two maps suggests negligible provision of LARCs in the private sector, despite a significant proportion of LARC users with a financial capacity to pay.



FIGURES 7: NUMBER OF WRA USING LARC METHODS A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE HEALTH FACILITY DENSITY (LEFT), B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY (RIGHT).

→ Current modern contraceptive users – Implants



FIGURES 8: NUMBER OF WRA USING IMPLANTS A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE HEALTH FACILITY DENSITY (LEFT), B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY (RIGHT).

Figures 8a and 8b illustrate the estimated number of implant users by sector. In Tanzania, implants are currently not allowed to be directly distributed by the private sector. Overall, in Tanzania, only a very small proportion of implant insertions occur in private sector facilities.

→ Potential modern contraceptive users – women with an unmet need for contraception or using a traditional method

Figure 9 illustrates the estimated number of women with an unmet need for contraception or women using a traditional contraceptive method at the district level. The map shows that both Dar es Salaam and Geita have the highest number of women who could potentially become modern contraceptive users.

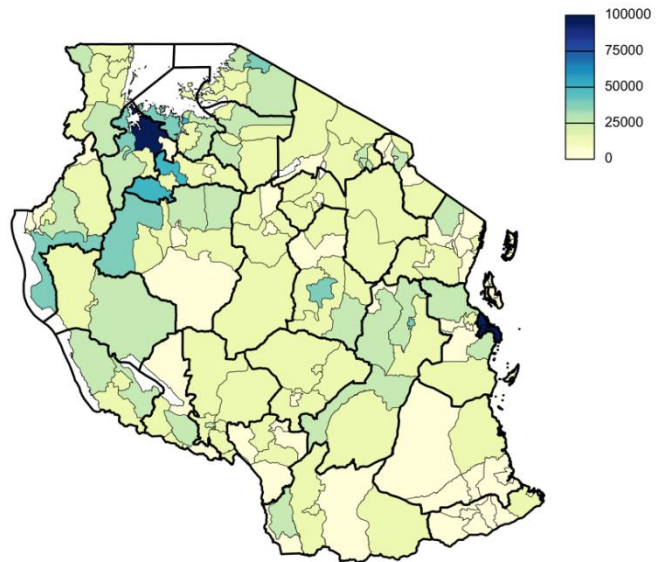


FIGURE 9: NUMBER OF WRA WITH AN UNMET NEED FOR CONTRACEPTION OR USING A TRADITIONAL METHOD BY DISTRICT.

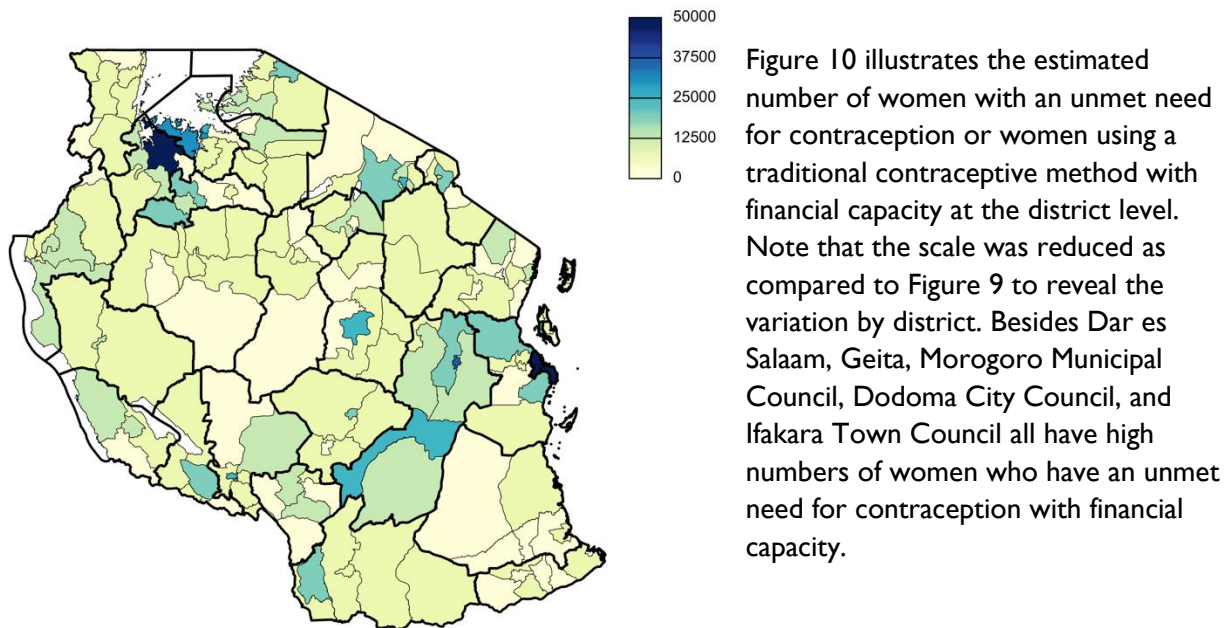


Figure 10 illustrates the estimated number of women with an unmet need for contraception or women using a traditional contraceptive method with financial capacity at the district level. Note that the scale was reduced as compared to Figure 9 to reveal the variation by district. Besides Dar es Salaam, Geita, Morogoro Municipal Council, Dodoma City Council, and Ifakara Town Council all have high numbers of women who have an unmet need for contraception with financial capacity.

FIGURE 10: NUMBER OF WRA WITH AN UNMET NEED FOR CONTRACEPTION OR USING A TRADITIONAL METHOD WITH FINANCIAL CAPACITY BY DISTRICT.

National estimation of volume and value by types of contraceptive product

Current Market Value

Estimates of the current private sector market size for the four contraceptive methods that could be estimated from Tanzania DHS data can be found in Table 6. We estimate that the current retail value of the Tanzania private market for injectable contraceptives, OCPs, implants, and IUDs is \$7,167,000.

TABLE 6: ESTIMATED CURRENT TANZANIA PRIVATE SECTOR CONTRACEPTIVE MARKET VOLUME AND VALUE OF FOUR PRIORITY PRODUCTS.

Contraceptive Product	Estimated number of current private sector client	Estimated annual private sector product volume	Estimated annual private sector product value
Short-term methods			
Injectable methods	481,252	1,925,008	\$2,368,000
Oral contraceptive pills	286,352	4,293,000	\$3,696,000
Long-term methods			
Implants	89,954	89,954	\$765,000
IUDs	32,983	32,983	\$338,000
Total			\$7,167,000

Emergency Contraception Private Sector Market Value

Due to the uncertain validity of DHS data for EC estimation, the EC private sector market value was estimated using sales data. We estimate the current Tanzania private market retail value for EC to be \$3,232,000. As Table 7 indicates, distribution is shared between social marketing organizations and for-profit enterprises.

TABLE 7: ESTIMATED CURRENT TANZANIA PRIVATE SECTOR MARKET VOLUME AND VALUE OF EMERGENCY CONTRACEPTION.

Sector	Annual doses	Annual Revenue
Social Marketers	753,000	\$1,340,000
For-Profit Distributors	1,063,000	\$1,892,000
Total		\$3,232,000

Potential Market Value Increase

Table 8 shows that if Tanzania had a private sector utilization rate similar to Kenya's, the estimated private market for contraceptives would be \$1,400,000 larger. This increase would result from more public sector contraceptive users switching to private sector sources and from current non-users of modern contraceptives, including those with an unmet need and those using a traditional method, choosing to adopt modern contraceptives from private sources.

TABLE 8: ESTIMATED POTENTIAL INCREASE IN TANZANIA PRIVATE SECTOR CONTRACEPTIVE MARKET VOLUME AND VALUE.

Contraceptive Product	Estimated potential increase in number of private sector clients	Estimated potential private sector product volume increase*	Estimated potential private sector product value increase*
Short-term methods			
Injectable methods	89,331	357,324	\$439,000
Oral contraceptive pills	59,308	889,620	\$765,000
Long-term methods			
Implants	15,336	15,336	\$130,000
IUDs	6,429	6,429	\$66,000
Total			\$1,400,000

*The estimated potential product volume and value increase with the conversion of new private sector clients to achieve at least one CYP following the assumptions described in the earlier section.

Estimated Alternative Total Market Value

The alternative Tanzania total private sector market value for the four contraceptive methods of interest was calculated by adding the current market values with those potential new revenues from a more enabling environment. Table 9 shows the new estimated market value under these alternative circumstances.

TABLE 9: ESTIMATED TOTAL PRIVATE SECTOR MARKET VALUE UNDER ALTERNATIVE SCENARIO.

Contraceptive Product	Estimated current annual private sector product value	Estimated potential private sector value increase*	Estimated total private sector value
Short-term methods			
Injectable methods	\$2,368,000	\$439,000	\$2,807,000
Oral contraceptive pills	\$3,696,000	\$765,000	\$4,461,000

			Long-term methods
Implants	\$765,000	\$130,000	\$895,000
IUDs	\$338,000	\$66,000	\$404,000
Total			\$8,567,000

*The estimated potential private sector value increase with the conversion of new private sector clients to achieve at least one CYP following the assumptions described in the earlier section.

Discussion

Utility of the approach – feedback from private sector stakeholders

During a consultative workshop, FHM Engage presented the methodological approach used to estimate the family planning market size. The interactive workshop format facilitated robust discussion with private sector stakeholders, who provided overall positive feedback about the approach. One participant commented that the subnational estimates were “very informative,” as his company currently relied on past sales to make business decisions. Additionally, stakeholders found it valuable to understand the density of different private facilities at the regional level. The stakeholder reported that this new information would help his firm identify regions in which they could optimize the distribution of their products to generate more sales.

Stakeholders also emphasized that having subnational information on current and potential private sector users by product type was particularly helpful, as private sector actors often focus on specific contraceptive products.

“Looking at the maps and tables will help us to know which products and which areas to focus [our efforts].”

Private sector stakeholder,
Tanzania

While we produced estimates on injectables, IUDs, OCPs, and implants, stakeholders additionally requested maps for EC. Due to the challenges described in the earlier section regarding EC user estimation, these estimates were not incorporated in this report. Lastly, private sector partners expressed a preference for estimations to be updated approximately every three years, which contrasts with the initial assumption held by USAID that private sector stakeholders would prefer annual updates. This feedback highlights the importance of aligning data collection and reporting frequencies with the specific needs and priorities of the private sector stakeholders.

Other uses for the subnational maps, as described by a social marketing organization representative, would be to identify underserved populations at the district level. This information could be tremendously helpful to organizations whose mandate includes providing contraceptive services to hard-

to-reach populations. By having district-level data on women with unmet need or using traditional methods, they can more efficiently target their efforts.

However, knowing the market size is not sufficient to increase the availability, access, and uptake of modern contraceptives in the private sector. Stakeholders described marketing regulations and restrictions around demand generation as important barriers to the uptake of contraceptive products in Tanzania. Such issues underline the need for a more comprehensive understanding of the various enabling and constraining market forces. Regular engagement with key market actors (e.g., government, donors, implementing partners, etc.) working toward a common vision of the market can help optimize the delivery of contraception across both public and private channels.

Replicability

The potential replicability of this novel method for estimating the geographic distribution, size, and value of the private market for key contraceptive products in Tanzania is promising. Most of the data utilized in these analyses are freely accessible, and we employed the free software environment for statistical computing and graphics, R, for producing the small area estimations. Furthermore, the Methods section of this report provides a detailed account of how we combined various data sources. However, three key limiting factors deserve consideration before attempting to reproduce these analyses. Firstly, in light of known limitations in DHS survey data concerning EC, obtaining access to distributor and wholesaler sales data for EC is necessary to precisely estimate the present market volume and value for this product. Second, the analyst must be given price data for all the included contraceptive products to ensure an accurate estimation of the private market value. Discrepancies in pricing, such as wholesale versus retail prices, can significantly alter the market's estimated value. Lastly, the subnational estimations require proficiency in the R programming language and an understanding of Bayesian small area estimation techniques. Addressing each of these considerations entails making specific assumptions regarding the data's nature. These assumptions should be discussed and understood not only by the research team but also by the intended audience.

Other potential uses of the approach

While feedback from private sector stakeholders suggests the estimation of the current and potential market size at subnational and national levels for different contraceptive methods can enhance strategic decision-making and targeting, the approach can be a similarly useful resource for actors outside the private sector.

The methodology can be adopted and applied to meet various stakeholders' diverse purposes and information needs. Given the availability of DHS and census in multiple countries, small area estimation can be applied to additional FP indicators tailored for other audiences, including local policymakers who must plan, monitor, and evaluate local-level activities and implementing organizations who need to be able to identify underserved geographical areas to improve programming and advocacy. FP indicators may also be combined with socio-demographic data to better estimate the size of underserved populations sub-nationally. In addition to FP, the methodology can also be applied to understand other aspects of child, adolescent, and maternal health commonly measured in national household surveys, including malaria, malnutrition, immunization, teenage pregnancies, stillbirths, and antenatal care.^{33–35}

Although the methodology relies on household surveys and population data, other routine data sources such as stock, retail audit, or service data may also be incorporated to increase precision.³ Furthermore, as national surveys are periodic, consistent routine data from both the private and public sectors can provide an early indication of trends in product and service use.

Amid its varying uses, these analytic outputs require local contextualization to ensure appropriate customization for the specific purpose and audience. For instance, the rationale for estimating the number of contraceptive users obtained from the public sector with financial capacity was designed to approximate the potential capability to pay for contraceptive products in the private sector. Its utility was then verified with private sector stakeholders. Results were also discussed with the audience to ensure correct interpretation. Application of the methodological approach in other settings will require discussions with local stakeholders to determine if the indicators and associated assumptions are applicable and if additional contextualization is needed.

Limitations

Our approach has several limitations. First, the findings presented should be considered illustrative since 2022 Tanzania DHS individual data is not available as of the submission of this report (September 2023). Second, as the SAE methodology requires associated GPS locations to estimate indicators at the district level, only the two recent Tanzania DHS with available GPS coordinates were included to produce subnational estimates. While at least two surveys are required for this SAE methodology, the inclusion of additional surveys can improve the precision of subnational estimates. Third, there is limited evidence available to inform the assumption of the proportion of modern method users currently obtaining their source from the public sector that might become private sector clients, as well as the contextual factors that would facilitate such change. As such, we applied private sector utilization rates from Kenya as an aspirational example. Fourth, due to measurement challenges around EC, we were unable to provide an estimate for the potential market using this method. Lastly, the market value estimations produced were based on retail surveys conducted in Dar es Salaam, which are not necessarily representative of national retail prices of the various brands of contraceptive products in Tanzania.

Conclusions and next steps

Private sector actors in the contraceptive product market in Tanzania have a critical need for accurate and comprehensive market intelligence data. This information is essential not only for understanding the size and geographic distribution of their existing clientele but also for identifying potential new clients. By harnessing the power of robust market intelligence, these organizations can optimize their product targeting strategies and resource allocation, ultimately enabling them to better serve the diverse needs of their clients. FHM Engage has the important task of facilitating this process, thereby promoting increased contraceptive utilization in Tanzania. However, the challenge lies in the often sparse or poor-quality nature of the market data, underscoring the pressing need for a novel estimation approach to better estimate market size.

Our novel approach to producing market sizing information for the private sector contraceptive market in Tanzania utilizes Bayesian small area estimation methods in combination with nationally representative data. This innovative methodology enables us to generate subnational estimates, offering insights at either the district or regional level, for a range of key contraceptive utilization indicators. By combining these subnational rates with population metrics, we enabled a deeper understanding of the geographical distribution of contraceptive users in Tanzania. Additionally, our approach provides national-level estimates of both client and product volumes, shedding light on the value of the private sector market for key contraceptive products.

Importantly, our process emphasizes collaboration and consultation with local private sector stakeholders. This ensures that the information we produce aligns with their specific market intelligence requirements, fostering a more tailored and effective approach to meeting the contraceptive needs of the population in Tanzania. In the case of this study, private sector partners were consulted during the development phase and will be provided with this study's final results.

While our data linkage and estimation process represents a step forward in FHM Engage's mission to facilitate market intelligence access and use by the private sector contraceptive market in Tanzania, there are several areas where further enhancements are possible. The static images of our small area estimation maps and market volume and value tables featured in an earlier PowerPoint presentation and this report are somewhat uninspired forms of visualization. Instead, a more fitting approach would be to create dynamic indicator maps and tables that allow users to interact with the data. A series of interactive maps would improve their overall appearance and facilitate the discovery of new insights as users toggle between and scroll across detailed, information-rich maps. Interactive tables would empower users to learn more about potential changes in the contraceptive market environment as they explore various market scenarios by adjusting factors such as method price and adoption rates, making it easier to delve into the data and its implications. Importantly, interactive maps and tables would provide end-users with the ability to pinpoint the specific data that matters most to them, whether social marketers identifying regions with high proportions of young women with an unmet need, for-profit firms targeting areas with substantial numbers of women with the capacity to pay for contraceptive products, policymakers leveraging insights into how the distribution and density of private health facilities impact method adoption, or multilateral and donor organizations gaining a clearer understanding of geographic trends in method-specific use. Such an interactive platform promises a more dynamic and informed approach to addressing the unique needs of various stakeholders. Initial

investigations indicate that developing an interactive results platform would be both feasible and, as detailed here, highly beneficial.

While prior studies have noted the shortcomings of using DHS to estimate EC use, consultations with private sector stakeholders and subsequent reviews of private sector distribution data made evident that Tanzania DHS data likely significantly underestimates EC usage. This underestimation may stem from respondents' interpretation of "current" user status.³¹ Given that EC is not used during every sexual encounter or regularly, women may not report themselves as current users. Consequently, the mismeasurement of EC results in inaccurate usage estimates that fail to capture the true extent of EC users. From programmatic and policy perspectives, this undercounting could lead to inadequate investments in ensuring its accessibility. Underinvestment would impact those most likely to use EC, such as unmarried sexually active women and women in their early twenties.^{32,36,37} Based on reported private sector sales volume, underestimations in EC also present a major obstacle to clearly understanding the important role the private sector plays in its provision. To gain a more systematic accurate understanding of the size of the population who uses EC, their pattern of usage, and where they obtain the method, it is imperative to identify alternative measurement approaches that accurately capture these aspects. Further research may include a systematic review of the literature on measurement methods of EC. If there is a lack of robust evidence on effective alternative measures, more research should be conducted to test various alternative measurement techniques. FHM Engage can advance the understanding of emergency contraception usage and offer private markets new tools to understand their role in serving this area of reproductive health.

In conclusion, this innovative approach has generated valuable market intelligence insights, shedding light on the private sector contraceptive market in Tanzania. The success of this approach suggests its potential applicability in other FHM Engage partner countries and across various global health domains where market data is limited, promising enhanced insights to drive positive change and optimize service delivery in diverse regions and health sectors worldwide.

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Annex I. Lists of private sector stakeholders consulted

Stakeholders consulted during market intelligence information gathering and feedback sessions
September 2022 information gathering activities
Bariki Pharmacy
DKT Tanzania
Jilichem Tanzania Ltd
JD Pharmacy
Heko Pharmacy
MSI Tanzania
Redy's Pharmacy
Salama Pharmaceuticals
Sciex
Synermed
August 2023 Tanzania market estimation
Abacus Pharma
Holley Pharm
Jilichem Tanzania Ltd
Salama Pharmaceuticals

Annex 2. Subnational maps of indicators for young women aged 15 to 24

→ Current modern contraceptive users

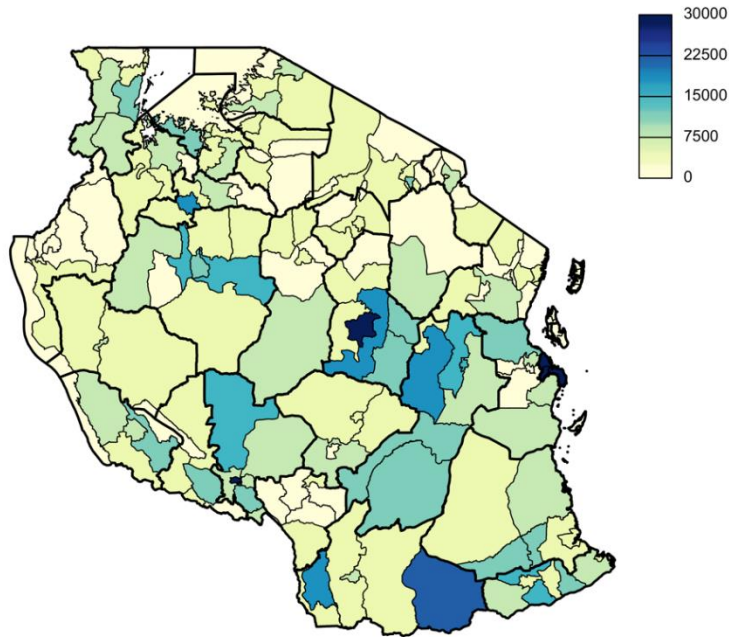


FIGURE 11: NUMBER OF YOUNG WOMEN USING A MODERN CONTRACEPTIVE METHOD BY DISTRICT.

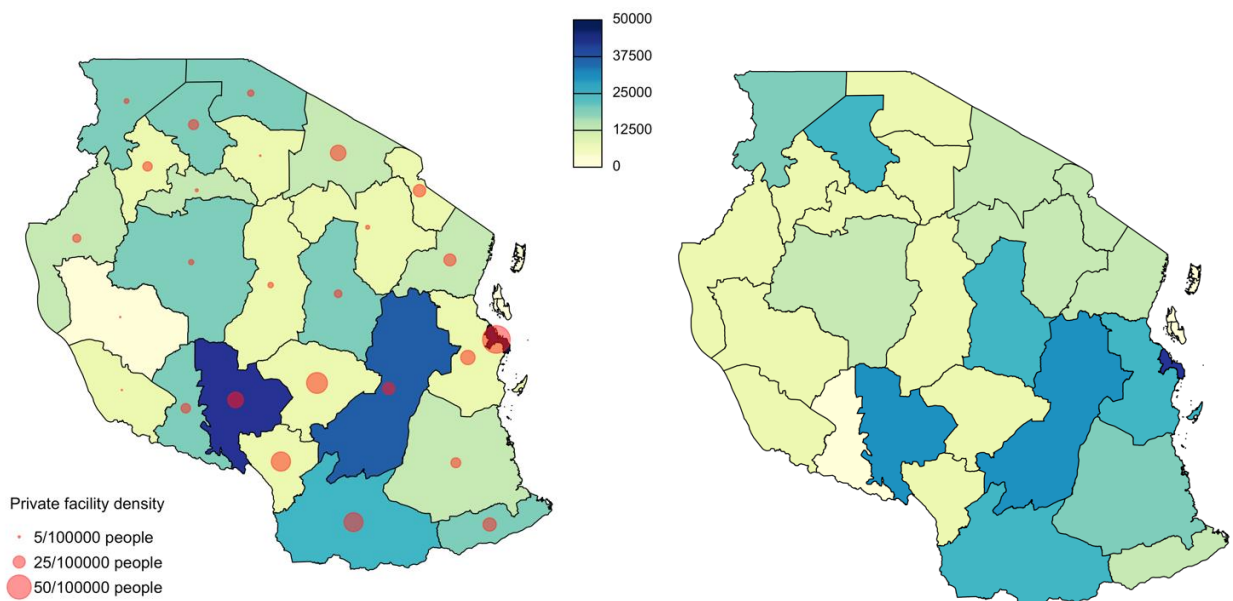


FIGURE 12: NUMBER OF YOUNG WOMEN USING A MODERN CONTRACEPTIVE METHOD A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE SECTOR FACILITY DENSITY (LEFT), B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY BY REGION (RIGHT).

→ Current modern contraceptive users – Short-term methods

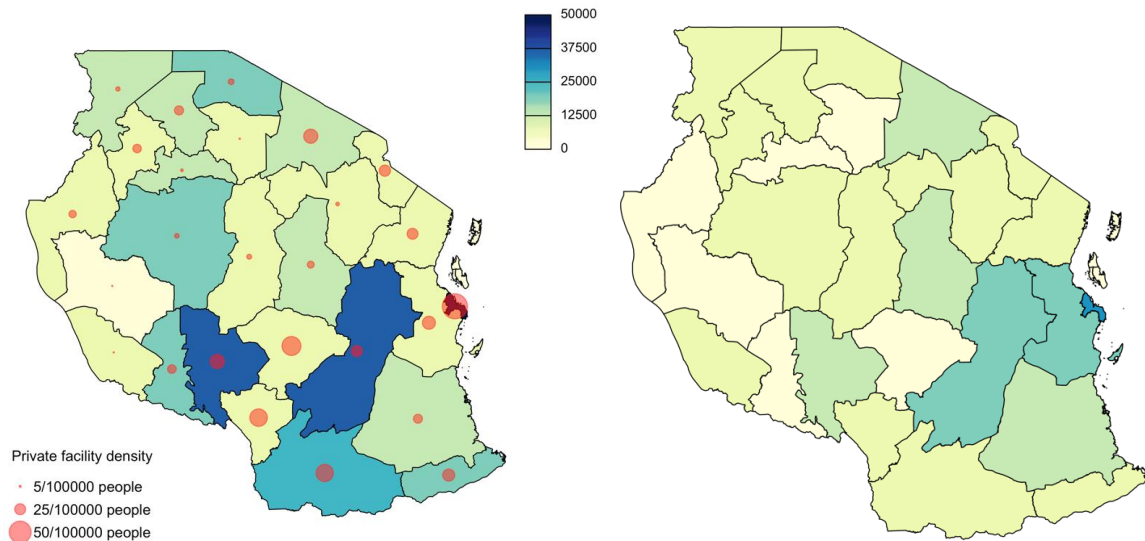


FIGURE 13: NUMBER OF YOUNG WOMEN USING SHORT-TERM CONTRACEPTIVE METHODS A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE SECTOR FACILITY DENSITY (LEFT), B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY BY REGION (RIGHT).

→ Current modern contraceptive users – Injectable contraceptives

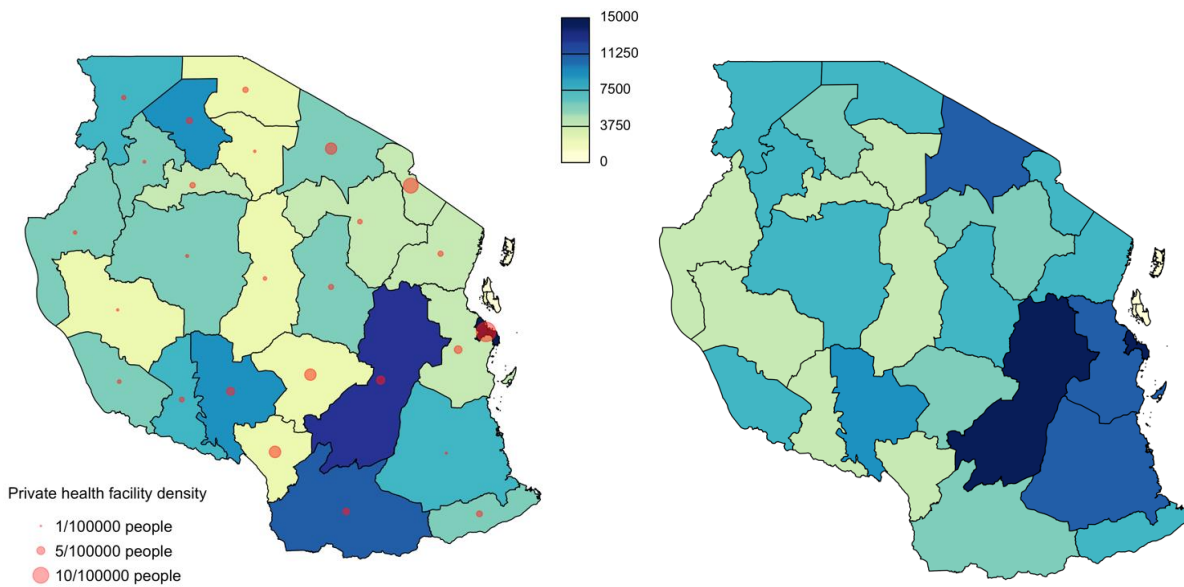


FIGURE 14: NUMBER OF YOUNG WOMEN USING INJECTABLE CONTRACEPTIVES A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE HEALTH FACILITY DENSITY (LEFT), B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY BY REGION (RIGHT).

→ Current contraceptive method users – Oral contraceptive pills

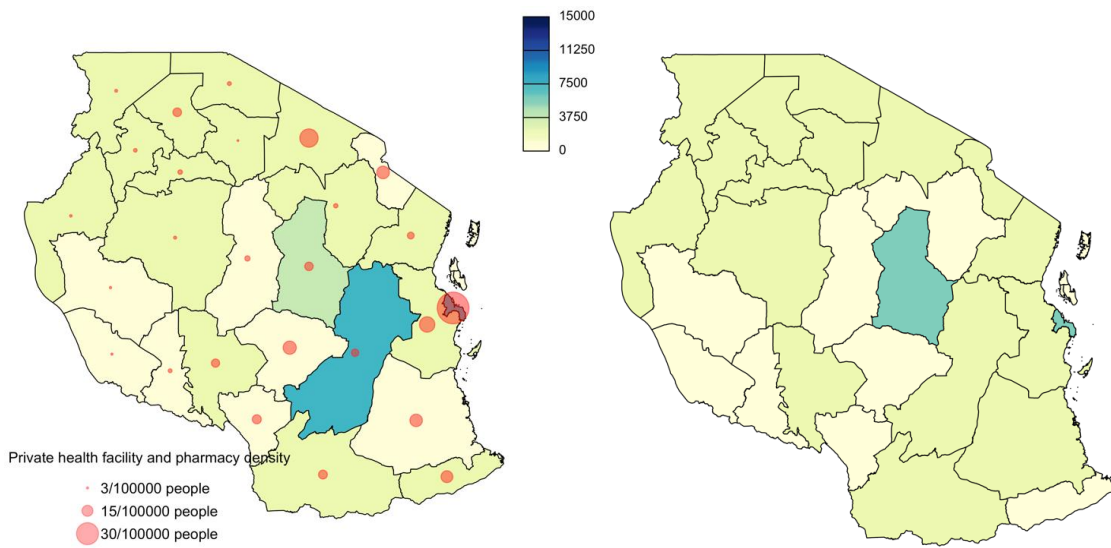


FIGURE 15: NUMBER OF YOUNG WOMEN USING ORAL CONTRACEPTIVE PILLS A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE HEALTH FACILITY AND PHARMACY DENSITY (LEFT), B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY BY REGION (RIGHT).

→ Current contraceptive method users – Long-acting reversible contraceptives

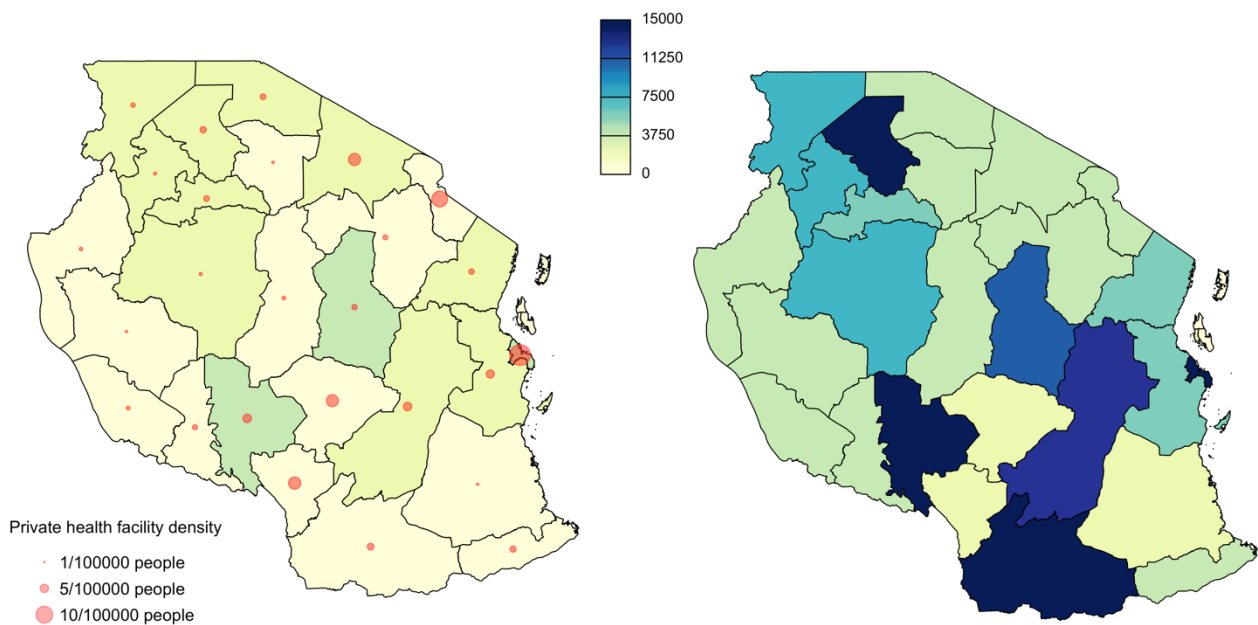


FIGURE 16: NUMBER OF YOUNG WOMEN USING LARCS A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE HEALTH FACILITY DENSITY (LEFT), B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY BY REGION (RIGHT).

→ Current contraceptive method users – implants

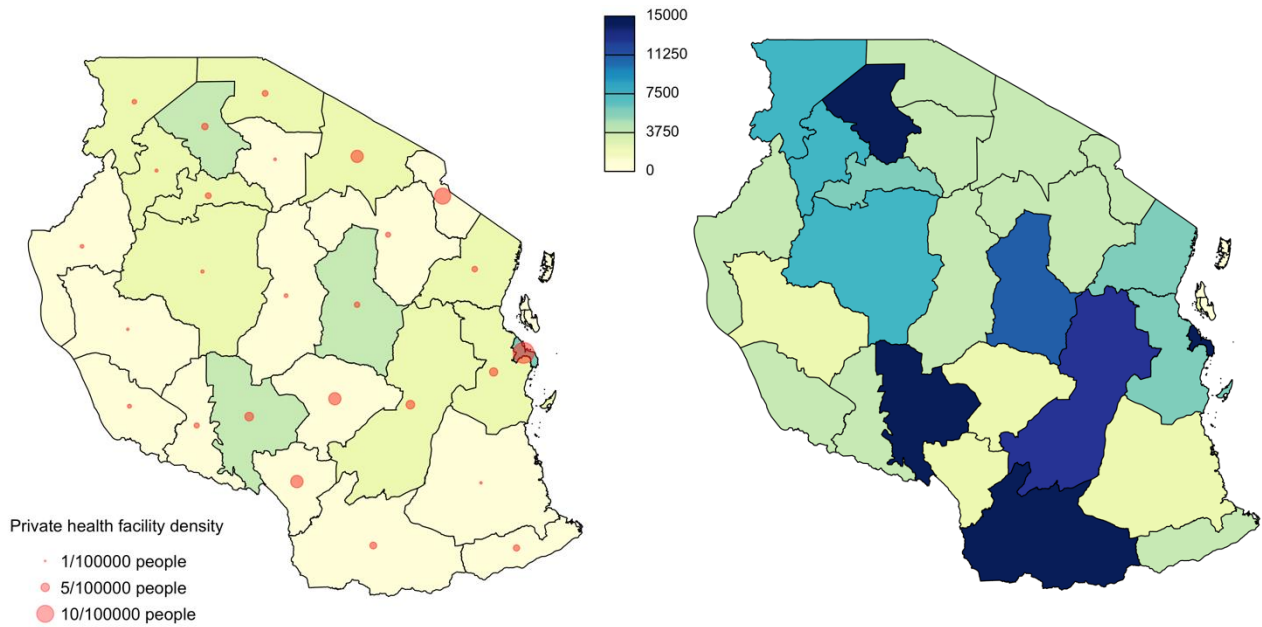


FIGURE 17: NUMBER OF YOUNG WOMEN USING IMPLANTS A) FROM A PRIVATE SECTOR SOURCE OVERLAYED WITH PRIVATE HEALTH FACILITY DENSITY (LEFT), B) FROM A PUBLIC SECTOR SOURCE WITH FINANCIAL CAPACITY BY REGION (RIGHT).

→ Potential modern contraceptive users – young women with an unmet need for contraception or using a traditional method

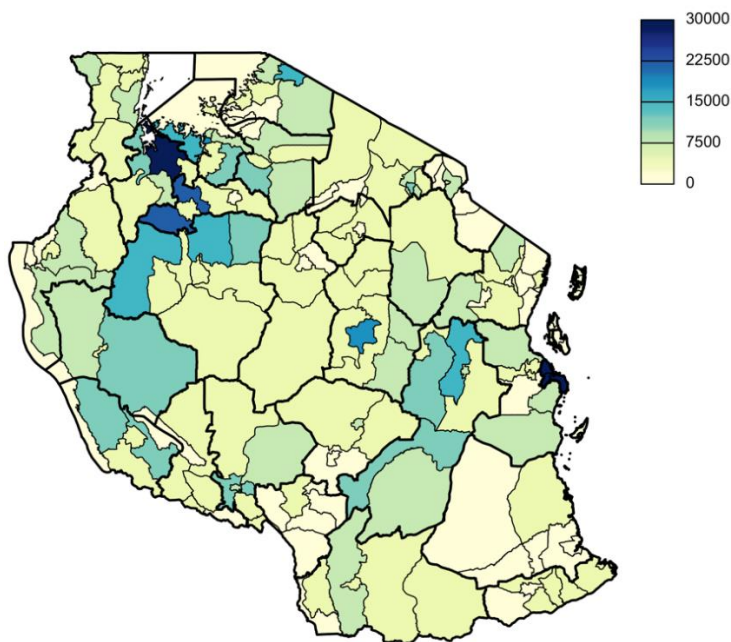


FIGURE 18: NUMBER OF YOUNG WOMEN WITH AN UNMET NEED FOR CONTRACEPTION OR USING A TRADITIONAL METHOD BY DISTRICT.

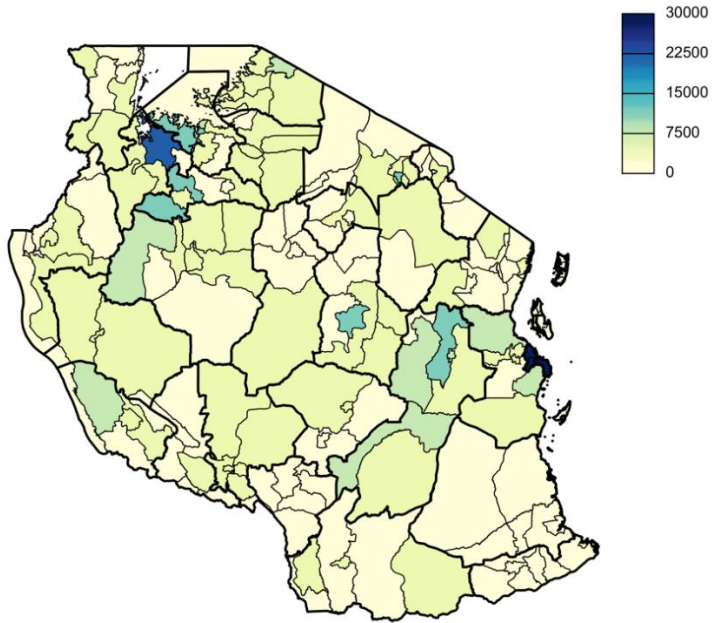


FIGURE 19: NUMBER OF YOUNG WOMEN WITH AN UNMET NEED FOR CONTRACEPTION OR USING A TRADITIONAL METHOD WITH FINANCIAL CAPACITY BY DISTRICT.

Annex 3. Private market volume and value estimates for young women aged 15 to 24

TABLE 9: ESTIMATED CURRENT TANZANIA PRIVATE SECTOR CONTRACEPTIVE MARKET VOLUME AND VALUE AMONG YOUNG WOMEN.

Contraceptive Product	Estimated number of current private sector client	Estimated annual private sector product volume	Estimated annual private sector product value
Short-term methods			
Injectable methods	148,583	594,000	\$731,000
Oral contraceptive pills	52,623	789,000	\$679,000
Long-term methods			
Implants	29,717	29,717	\$253,000
IUDs	3,095	3,095	\$32,000
Total			\$1,695,000

TABLE 10: ESTIMATED POTENTIAL INCREASE IN TANZANIA PRIVATE SECTOR CONTRACEPTIVE MARKET VOLUME AND VALUE AMONG YOUNG WOMEN.

Contraceptive Product	Estimated potential increase in number of private sector client	Estimated potential private sector product volume increase	Estimated potential private sector product value increase
Short-term methods			
Injectable methods	19,343	77,372	\$95,000
Oral contraceptive pills	6,766	101,490	\$87,000
Long-term methods			
Implants	3,720	3,720	\$32,000
IUDs	209	209	\$2,000
Total			\$216,000

*The estimated potential product volume and value increase with the conversion of all new private sector clients to achieve at least one CYP following the assumptions described in the earlier section.

TABLE 11: ESTIMATED TOTAL TANZANIA PRIVATE SECTOR CONTRACEPTIVE MARKET VOLUME AND VALUE AMONG YOUNG WOMEN UNDER ALTERNATIVE SCENARIO.

Contraceptive Product	Estimated current annual private sector product value	Estimated potential private sector value increase*	Estimated total private sector value
Short-term methods			
Injectable methods	\$731,000	\$95,000	\$856,000
Oral contraceptive pills	\$679,000	\$87,000	\$766,000
Long-term methods			
Implants	\$253,000	\$32,000	\$285,000
IUDs	\$32,000	\$2,000	\$34,000
Total			\$1,941,000

*The estimated potential private sector value increase with the conversion of all new private sector clients to achieve at least one CYP following the assumptions described in the earlier section.

About FHM Engage

Frontier Health Markets (FHM) Engage is a five-year cooperative agreement (7200AA21CA00027) funded by the United States Agency for International Development. We work to improve the market environment for greater private sector participation in the delivery of health products and services and to improve equal access to and uptake of high-quality consumer driven health products, services, and information. Chemonics International implements FHM Engage in collaboration with Core Partners: Results for Development (co-technical lead), Pathfinder and Zenysis. FHM Engage Network Implementation Partners include ACCESS Health India, Africa Christian Health Association Platform, Africa Healthcare Federation, Amref Health Africa, Ariadne Labs, CERRHUD, Insight Health Advisors, Makerere University School of Public Health, Metrics for Management, Solina Group, Strategic Purchasing Africa Resource Center, Scope Impact, Stage Six, Strathmore University, Total Family Health Organization, and Uboru Institute.

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1275 New Jersey Ave. SE, Ste 200,
Washington, DC 20003