



FAMILY PLANNING MARKET REPORT

OCTOBER 2017

ACKNOWLEDGEMENTS:

This report was produced as part of the landmark FP2020 Global Markets Visibility Project that CHAI launched in early 2014 in conjunction with the Reproductive Health Supplies Coalition (RHSC).

The shipment data provided by suppliers was pivotal to addressing information gaps and constructing a more comprehensive view of the reproductive health commodities market. We would like to thank current participating suppliers (Bayer, CR Zizhu, Cipla, Cupid, Mylan, Helm AG, Female Health Company, Merck/MSD, Pfizer, Pregna, PT Tungal, Shanghai Dahua, SMB and Techno Drugs) as well as our partner, the Concept Foundation, for their support in collecting and aggregating data from the Generic Manufacturers for Reproductive Health (the GEMS Caucus).

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The 2017 Family Planning Market Report covers the total FP2020 public sector market— defined as volumes purchased by institutional buyers (USAID, UNFPA, SMOs, etc.) and Ministries of Health (MOHs) or government-affiliated procurers for the 69 FP2020 focus countries (defined as countries with a 2010 gross national income per capita less than or equal to US\$2,500). The report covers all product-based modern methods using historical supplier-reported shipment data collected from 14 suppliers¹ for female condoms, implants, injectables, IUDs, orals (combined and progestin only), and emergency contraceptives, and data from the Reproductive Health Interchange (for male condoms).

THE FP2020 PUBLIC SECTOR MARKET VALUE DECLINED SHARPLY FROM 2015 TO 2016, WHILST THE CYP² MIX³ CONTINUED TO SHIFT TOWARDS LONG-ACTING REVERSIBLE CONTRACEPTIVES, OFFSETTING SOME OF THE DECLINE IN TOTAL CYPs SHIPPED.

From 2015 to 2016, there was a 28 percent decline⁴, US\$274 million to US\$196 million, in the value⁵ of the public sector market in the 69 FP2020 focus countries. This substantial decrease in market value was primarily driven by a sharp decline in the shipments of injectables and orals (combined and progestin only), 49 percent and 34 percent decline respectively, to the 69 FP2020 countries. Consequently, the total couple years of protection (CYPs) shipped, an estimate of the duration of contraceptive protection provided through products shipped, fell from 123 million in 2015 to 104 million in 2016. This significant decrease of the total FP2020 public sector market value, as implied by supplier shipment data, aligns to the sizeable decline also observed in the donor-funded shipments tracked by the Reproductive Health Interchange (RHI).⁶

Though the value of the FP2020 public sector market remained relatively stable since 2011⁷, the sharp decrease from 2015 to 2016 offset the gains of prior years and caused a net annual decline in value of seven percent from 2011 to 2016. Despite this significant decline, the total CYPs shipped only decreased by one percent over the same period. This was mainly driven by the shift in CYP mix towards implants⁸, which accounted for 9 percent of all CYPs shipped in 2011 compared to 27 percent in 2016.

There are a number of possible reasons for the declined market value from 2015 to 2016. Though further investigation beyond the scope of this report would be required to affirm these reasons, they could include:

- The decline in donor spending may have led to a decline in total public sector procurement as other procurers⁹ may not have fully covered the shortfall.
- Some shipments may have shifted to local and regional non donor-supported suppliers that are not captured in this report.
- Procurement patterns fluctuate and 2016 might be an outlier year in which procurers intentionally procured less and instead consumed more of their inventories.

Moving forward, the availability of funding for contraceptive commodities could significantly impact the family planning commodity market. A number of recent analyses, including RHSC's 2016 Global Contraceptive Commodity Gap Analysis, have identified significant funding gaps based on current and existing family planning spending levels.¹⁰ In addition, there is continued uncertainty with regard to the future of the U.S. government's financial commitment to family planning. Should the funding challenges remain unaddressed, there could be a decline in the family planning commodity market and subsequently in the number of users on modern methods of contraception.

1. Participating suppliers represent >95% of volumes within each method of the Reproductive Health Interchange except for IUDs and male condoms.

2. Couple Years of Protection (CYP) is the estimated protection provided by contraceptive methods during a one-year period e.g. 120 condoms provide a couple protection for one year. See Appendix C for further details.

3. CYP mix refers to the percentage distribution of CYPs shipped by method.

4. Where percentage changes are discussed, the Compound Annual Growth Rate (CAGR) is used unless otherwise noted.

5. Market value and spend refers to the supplier-reported shipment volume multiplied by the average prices of UNFPA and USAID for the specific years.

6. Reproductive Health Interchange, available at <https://www.unfpaprocedurement.org/rhi-home>. See Appendix B for more details.

7. Except for a 2012 increase driven by higher implant shipment levels prior to the 50 percent reduction prices in 2013 as part of the Implant Access Program (IAP).

8. Since the price reductions, the implant unit cost remains higher relative to other methods, but lower on a cost per couple-years of protection (CYP) basis. See Exhibit 4 for further details.

9. Examples of other procurers include MOHs and SMOs.

10. RHSC Global Contraceptive Commodity Gap Analysis, available at https://www.rhsupplies.org/uploads/tx_rhscpublications/Global_Contraceptive_Commodity_Gap_Analysis_2016.pdf

FROM 2015 TO 2016, THERE WAS A SUBSTANTIAL DECREASE IN THE MARKET VALUE OF THE FP2020 PUBLIC SECTOR MARKET, PRIMARILY DRIVEN BY A DECLINE IN THE SHIPMENTS OF INJECTABLES AND ORALS (COMBINED AND PROGESTIN ONLY). PRIOR TO 2016, THE VALUE OF THE FP2020 PUBLIC SECTOR MARKET REMAINED RELATIVELY STABLE. THE SHIFT IN CYP MIX TOWARDS IMPLANTS FROM 2011 TO 2016 HELPED OFFSET SOME OF THE DECLINE IN CYPS SHIPPED OVER THE SAME PERIOD.

This section analyzes shipment, market value, and CYPs shipped trends in the total FP2020 public sector market from 2011 to 2016, with a focus on significant new findings from 2015 to 2016. Analyses are based on the supplier shipment data of the 14 participating suppliers (one additional supplier from the previous report) for all product-based methods except for male condoms, which are derived from the Reproductive Health Interchange (RHI) database.

A 28 percent decline in market value from 2015 to 2016 led to an overall annual decline of 7 percent from 2011 to 2016.

The total FP2020 public sector market value declined from US\$277 million in 2011 to US\$196 million in 2016; from 2011 to 2015 the market value remained relatively stable, with the exception of an increase in 2012 driven by increased implant shipments prior to the 2013 reduced price.

From 2011 to 2016, the market value of long-acting reversible contraceptives (LARCs)¹¹ increased by 6 percent annually, propelled by an annual increase of 24 percent in implant shipments during this period¹². Conversely, the market value of all short-acting methods¹³ decreased by 12 percent annually over this period, including a 21 percent annual decrease among orals (combined and progestin only) products, offsetting the overall market value.¹⁴

The largest decline in the overall market value in a single year was recorded from 2015 to 2016, with a decrease of US\$78 million, from US\$274 million to US\$196 million. This was due to a decline in shipments across all methods (with the exception of IUDs), and most notably a sharp decline among injectables¹⁵. (Exhibits 1 & 2).

The total number of CYPs shipped decreased from 110 million in 2011 to 104 million in 2016, at an annual rate of 1 percent for the period. This decrease in CYPs is lower than the 7 percent annual decline of the market value for the period due to the continued shift towards long-acting implants.

From 2011 to 2016, the annual decrease of 12 percent derived from short-acting method CYPs shipped – particularly orals (combined and progestin only) – is the main cause for the overall decline in the number of CYPs shipped from product-based modern methods of

contraception. Specifically, from 2015 to 2016, the decline related to injectables and orals (combined and progestin only) is most notable, with 48 percent and 34 percent decreases in CYPs shipped respectively. By contrast, CYPs shipped from long-acting implants and IUDs increased by 6 percent annually from 2011 to 2016, and remained relatively stable from 2015 to 2016, decreasing by 1 percent.

Although contraceptive implant shipments declined slightly by 10 percent from 2015 to 2016, LARCs continued to increase as a proportion of the market value and dominated in the CYP mix.

After a period of continued growth from three million units in 2011 to 10 million units in 2015, annual implant shipments decreased by 10 percent to 9 million units in 2016. Short-acting methods, which saw steady shipment declines year over year, experienced the largest decline observed at 30 percent from 2015 to 2016. As a result, the 2016 proportion of market share and CYP mix represented by LARCs increased relative to 2015, with LARCs making up 42 percent of the total FP2020 public sector market value and 73 percent of the CYP mix in 2016. (Exhibits 1-3, 5)

In 2016, 10 countries represented just over half of the total FP2020 public sector market value.

The market for contraceptives is fairly concentrated with 10 high volume countries (Ethiopia, Tanzania, Zimbabwe, Nigeria, Kenya, Bangladesh, the Democratic Republic of Congo, Ghana, Uganda, and Burkina Faso) accounting for US\$101 million, or 52 percent of the total FP2020 public sector market value in 2016¹⁶. This trend, which includes five core countries¹⁷, has remained relatively stable over the past four years. (Exhibits 6, 7, 8)

11. Long-acting and reversible contraceptive methods include IUDs and implants.

12. From 2011 to 2016, the implant market value saw an annual increase of only 6 percent compared to the annual increase of 24 percent in shipment quantities because of the implant price reductions in 2013 allowing more implants to be purchased with the same amount of funding.

13. Short-acting methods include male and female condoms, injectables, orals (combined & progestin only) and emergency contraceptives.

14. The prices for orals (combined and progestin only) have remained relatively stable from 2011 to 2016, indicating the decrease is driven by volume.

15. The prices for injectables have remained relatively stable from 2015 to 2016 indicating the decrease is being driven by volume.

16. Pakistan, Malawi and Madagascar were part of the top 11 countries which accounted for

over 50 percent of the 2015 FP2020 public sector market value in 2015, but they are no longer on this list. CHAI has identified through consultations with stakeholders that donor funding for Pakistan has shifted away from commodity procurement. Further research is needed to determine if other sectors in Pakistan are covering the shortfall resulting from the decline in donor-funded shipments, as in the case of Bangladesh, India, and Indonesia, which is further described on page 13.

17. (in alphabetical order) Bangladesh, Ethiopia, Nigeria, Uganda and Zimbabwe have consistently appeared in the top 10 markets from 2013 to 2016.

EXHIBIT 1: TOTAL FP2020 MARKET SIZE (USD)

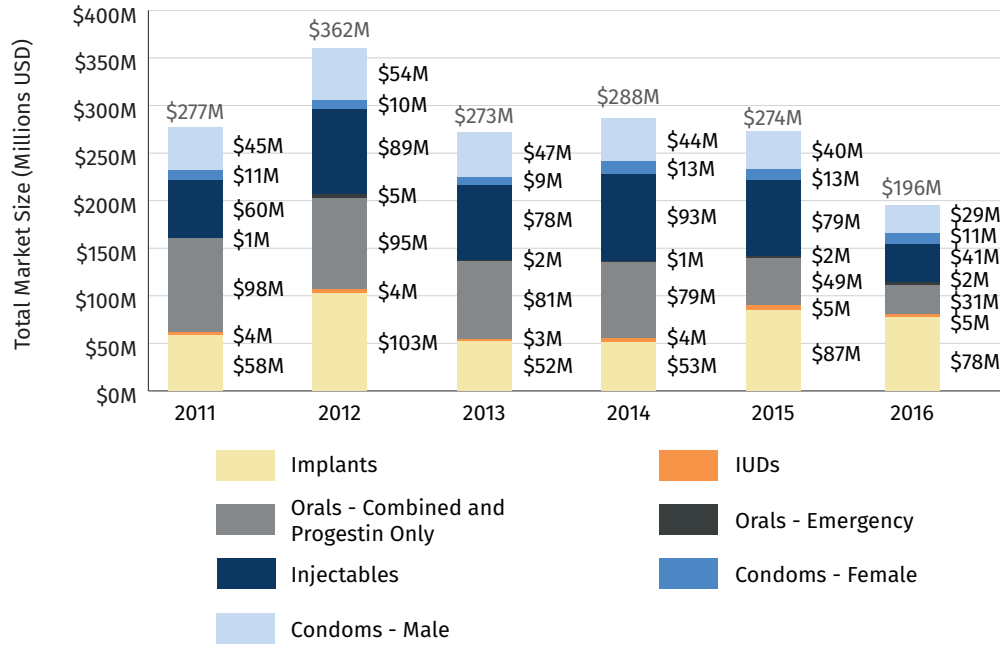
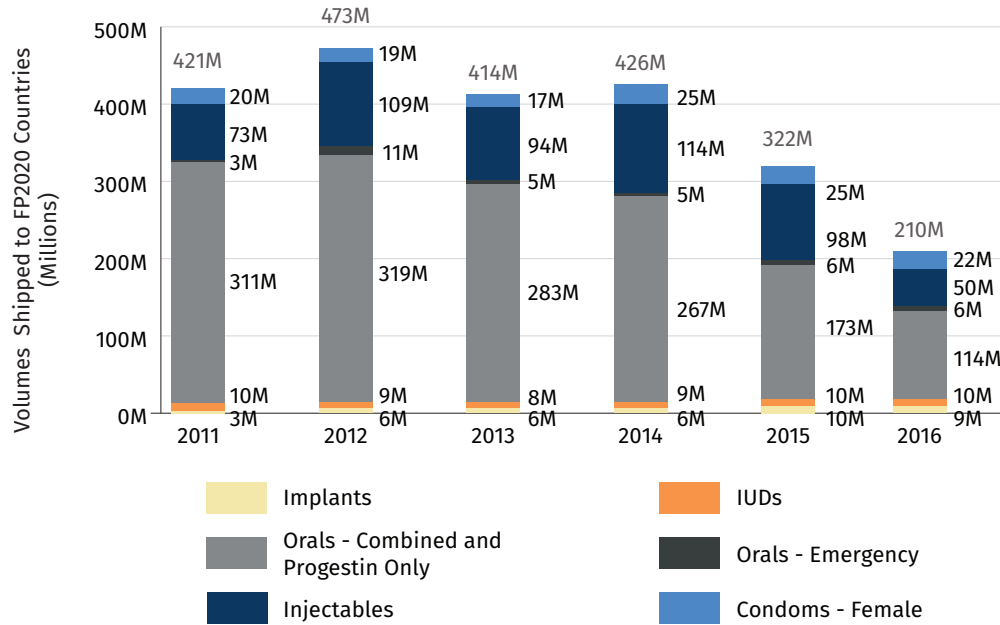


EXHIBIT 2: TOTAL FP2020 MARKET VOLUMES (MALE CONDOMS EXCLUDED)*



*Male condoms are shown separately because the source of the shipment data is from RHI whereas all other methods are supplier-reported. See Appendix C for further details.

MALE CONDOM SHIPMENT VOLUMES (BILLIONS)						
2011	2012	2013	2014	2015	2016	
1.62	1.84	1.57	1.49	1.36	0.97	

Note: The sum of individual stacked bars for all exhibits may differ slightly from totals due to rounding

EXHIBIT 3: TOTAL FP2020 CYPs SHIPPED

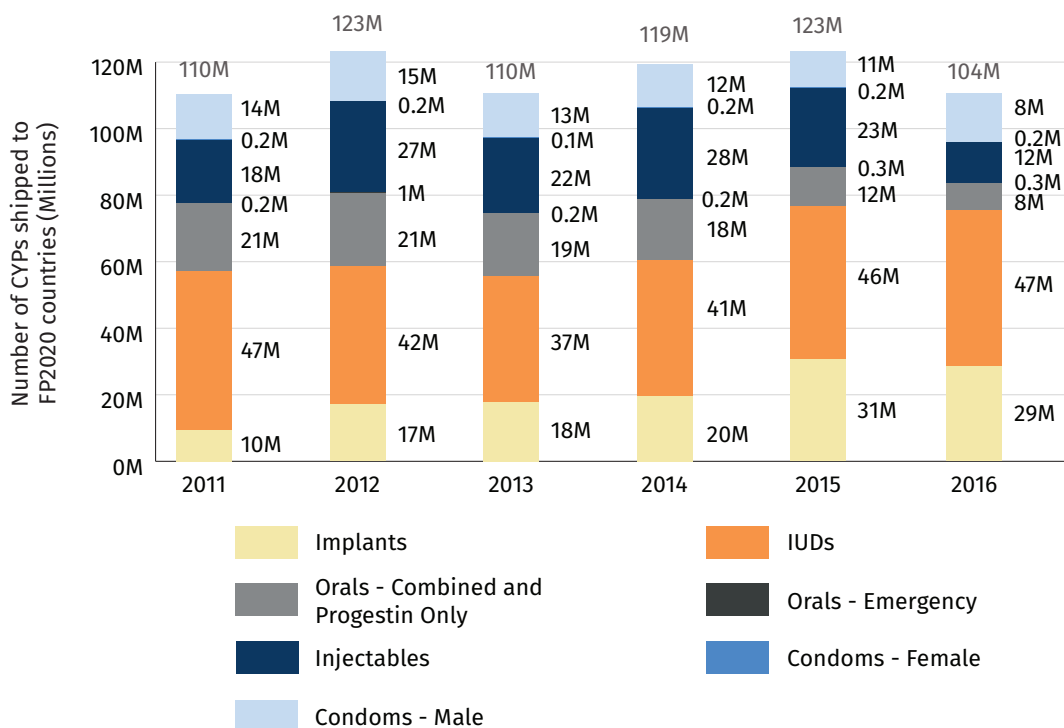


EXHIBIT 4: COST PER CYP BY METHOD (USD)

METHOD	UNITS PER CYP	UNIT COST						COST PER CYP					
		2011	2012	2013	2014	2015	2016	2011	2012	2013	2014	2015	2016
Condoms - Female	120.00	\$0.56	\$0.55	\$0.54	\$0.53	\$0.52	\$0.49	\$67.02	\$66.42	\$65.04	\$63.36	\$62.40	\$59.28
Condoms - Male	120.00	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$3.34	\$3.52	\$3.56	\$3.57	\$3.51	\$3.64
Injectables - 1 month	13.00	\$0.82	\$0.82	\$0.83	\$0.81	\$0.81	\$0.82	\$10.61	\$10.64	\$10.82	\$10.58	\$10.47	\$10.70
Injectables - 2 month	6.00	\$0.82	\$0.82	\$0.83	\$0.81	\$0.81	\$0.82	\$4.90	\$4.91	\$5.00	\$4.88	\$4.83	\$4.94
Injectables - 3 month	4.00	\$0.82	\$0.82	\$0.83	\$0.81	\$0.81	\$0.82	\$3.27	\$3.27	\$3.33	\$3.26	\$3.22	\$3.29
Orals - Combined	15.00	\$0.31	\$0.30	\$0.28	\$0.30	\$0.28	\$0.26	\$4.70	\$4.44	\$4.26	\$4.43	\$4.20	\$3.95
Orals - Progestin Only	15.00	\$0.32	\$0.32	\$0.31	\$0.31	\$0.32	\$0.33	\$4.84	\$4.85	\$4.64	\$4.60	\$4.80	\$4.92
Orals - Emergency	20.00	\$0.34	\$0.49	\$0.44	\$0.30	\$0.37	\$0.35	\$6.74	\$9.74	\$8.84	\$5.92	\$7.40	\$7.02
Implants - 3 Year	0.40	\$18.65	\$17.98	\$8.50	\$8.50	\$8.50	\$8.50	\$7.46	\$7.19	\$3.40	\$3.40	\$3.40	\$3.40
Implants - 4 Year	0.31	\$18.65	\$17.98	\$8.50	\$8.50	\$8.50	\$8.50	\$5.83	\$5.62	\$2.66	\$2.66	\$2.66	\$2.66
Implants - 5 Year	0.26	\$18.65	\$17.98	\$8.50	\$8.50	\$8.50	\$8.50	\$4.91	\$4.73	\$2.24	\$2.24	\$2.24	\$2.24
IUDs	0.22	\$0.43	\$0.43	\$0.43	\$0.48	\$0.47	\$0.46	\$0.09	\$0.09	\$0.09	\$0.10	\$0.10	\$0.10

Note: The sum of individual stacked bars for all exhibits may differ slightly from totals due to rounding

EXHIBIT 4: COST PER CYP BY METHOD (USD) (CONTINUED)

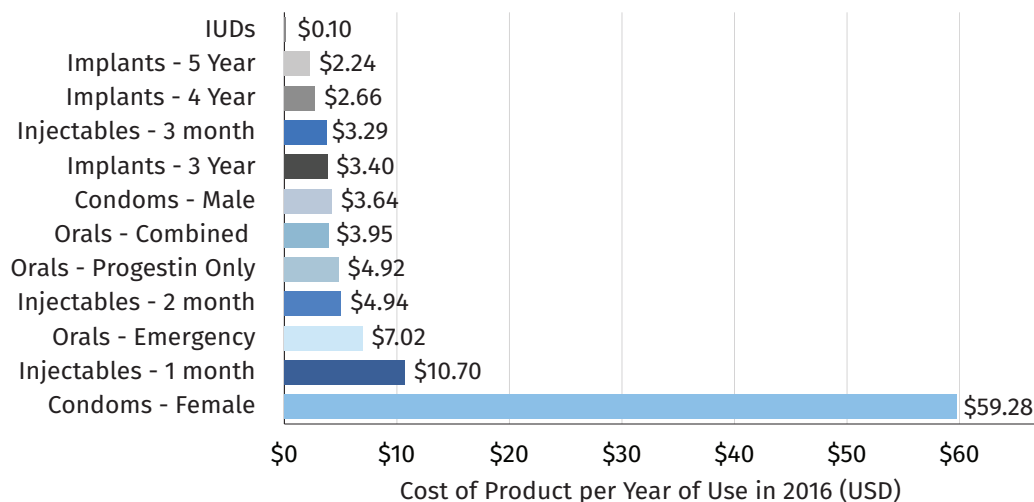
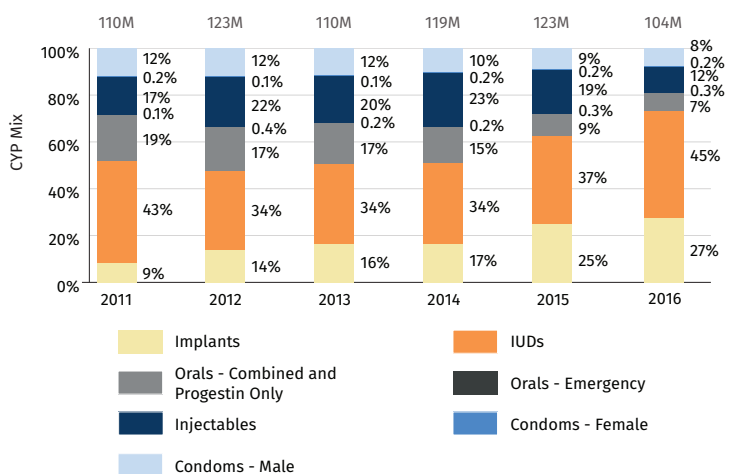
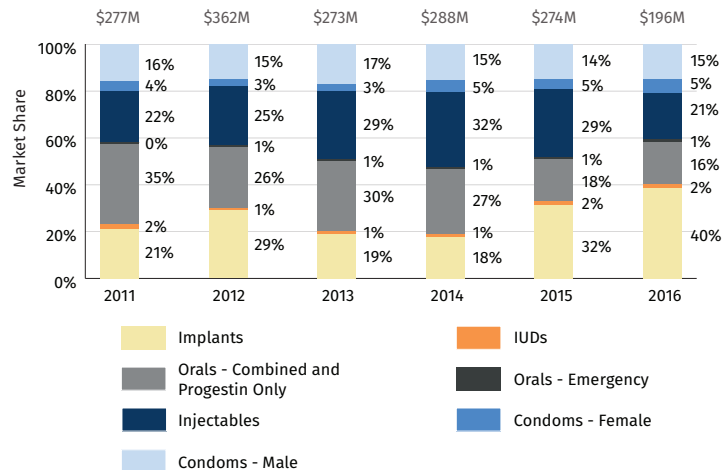


EXHIBIT 5: FP2020 CONTRACEPTIVE SHIPMENT MIX (IN TERMS OF VOLUMES), CYP MIX (IN TERMS OF CYPS SHIPPED), AND MARKET SHARE (IN TERMS OF DOLLARS) BY YEAR

CYP MIX (IN TERMS OF CYPS SHIPPED)

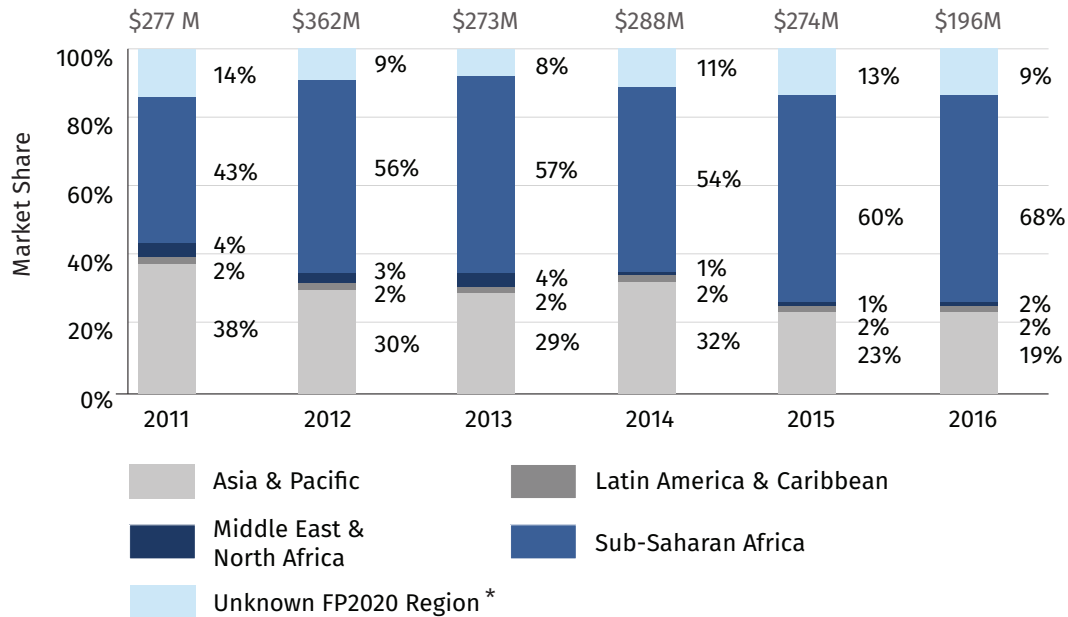


MARKET SHARE (IN TERMS OF USD)



SHIPMENT MIX (IN TERMS OF VOLUMES)	2011	2012	2013	2014	2015	2016
Condoms - Female	1.0%	0.8%	0.9%	1.3%	1.5%	1.8%
Condoms - Male	79%	80%	79%	78%	81%	82%
Implants	0.2%	0.2%	0.3%	0.3%	0.6%	0.8%
Injectables	3.6%	4.7%	4.7%	5.9%	5.8%	4.2%
IUDs	0.5%	0.4%	0.4%	0.5%	0.6%	0.9%
Orals - Combined & Progestin Only	15%	14%	14%	14%	10%	10%
Orals - Emergency	0.1%	0.5%	0.2%	0.3%	0.4%	0.5%
Total Volumes	2.04 B	2.32 B	1.98 B	1.92 B	1.68 B	1.18 B

**EXHIBIT 6: TOTAL FP2020 MARKET SHARE
BY REGION**



*The "Unknown FP2020 Region" represents the proportion of shipment volumes to procurer warehouses where the final FP2020 destination is unknown. See Appendix C for further details.

MARKET VALUE BY REGION (USD)	2011	2012	2013	2014	2015	2016
Asia & Pacific	\$105M	\$110M	\$80M	\$93M	\$64M	\$37M
Latin America & Caribbean	\$4M	\$6M	\$6M	\$5M	\$6M	\$5M
Middle East & North Africa	\$10M	\$9M	\$10M	\$4M	\$3M	\$4M
Sub-Saharan Africa	\$120M	\$202M	\$155M	\$154M	\$165M	\$134M
Known Regions	\$239M	\$328M	\$251M	\$256M	\$238M	\$179M
Unknown FP2020 Region	\$38M	\$34M	\$21M	\$32M	\$37M	\$17M
Total	\$277M	\$362M	\$273M	\$288M	\$274M	\$196M

Note: The sum of individual stacked bars for all exhibits may differ slightly from totals due to rounding

EXHIBIT 7: TOP 10 COUNTRIES IN TERMS OF MARKET SIZE, 2016

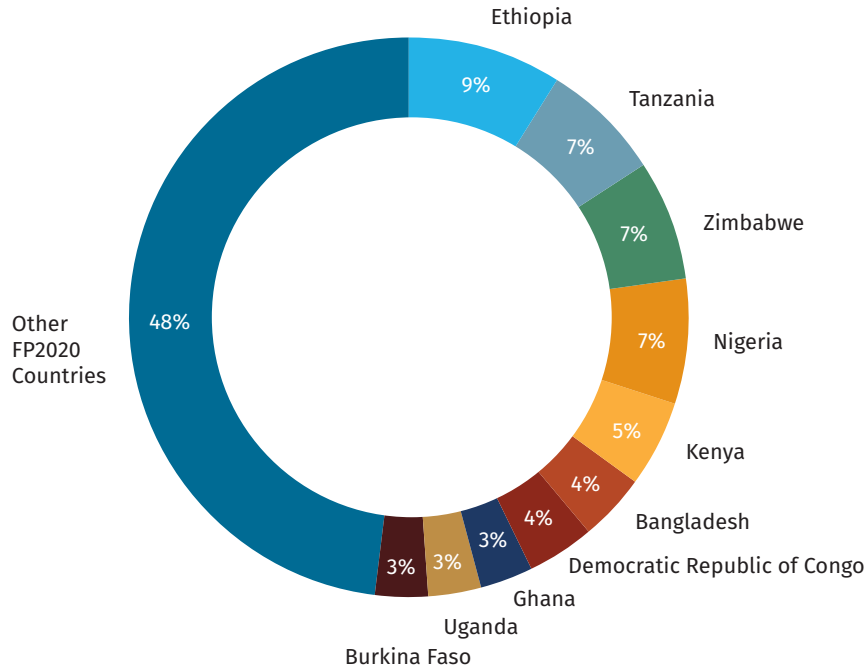
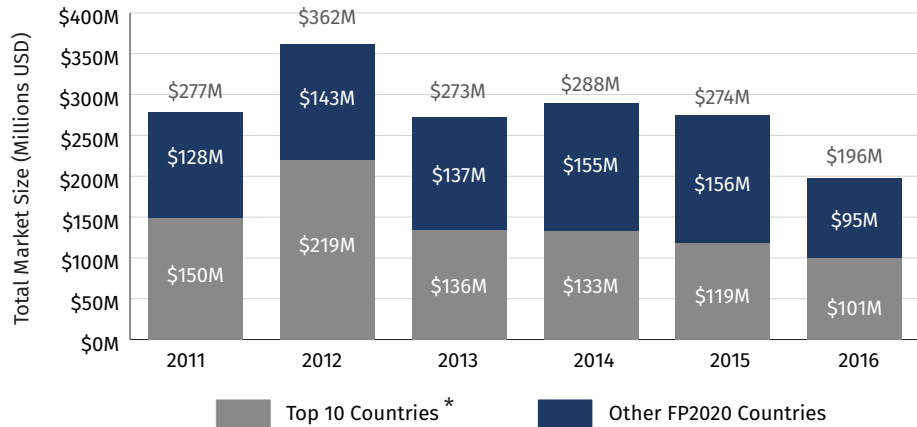


EXHIBIT 8: TOP 10 MARKETS IN TERMS OF MARKET VALUE (DETERMINED BY 2016 DATA) AND OTHER FP2020 MARKETS



* Top 10 countries include Ethiopia, Tanzania, Zimbabwe, Nigeria, Kenya, Bangladesh, Democratic Republic of Congo, Ghana, Uganda and Burkina Faso.

Note: The sum of individual stacked bars for all exhibits may differ slightly from totals due to rounding

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017; [3] USAID, "Couple-Years of Protection (CYP)," May 2017

FROM 2015 TO 2016 THERE WAS A SUBSTANTIAL DECREASE IN DONOR SPENDING¹⁸ IN THE 69 FP2020 COUNTRIES, AS RECORDED IN RHI¹⁹. PRIOR TO 2016, DONOR SPENDING WAS RELATIVELY STABLE FROM YEAR TO YEAR. THESE TRENDS ARE CONSISTENT WITH THE SUPPLIER SHIPMENT ANALYSIS FOR THE PERIOD OF 2011 TO 2016.

FROM 2015 TO 2016, DONOR SPENDING DECREASED FROM US\$186 MILLION TO US\$137 MILLION. CONSEQUENTLY, TOTAL CYPS FROM DONOR-FUNDED SHIPMENTS DECREASED BY 9 MILLION CYPS, FROM 65 MILLION CYPS IN 2015 TO 56 MILLION CYPS IN 2016.

This section uses shipment data from RHI to construct and analyze the donor-funded, FP2020 market for product-based modern methods, defined as volumes shipped from USAID, UNFPA, and other donors²⁰, for the 69 FP2020 focus countries. It analyzes donor spending and donor-funded CYP trends from 2011 to 2016 as a subset of the overall FP2020 public sector market, as defined in the Supplier Shipment Analysis.

Despite an annual decrease of 4 percent in donor spending between 2011 and 2016, donor-funded CYPs declined only by 1 percent annually during that period due to the CYP mix shift towards implants.

Donor spending decreased from US\$172 million in 2011 to US\$137 million in 2016, driven by the decline of donor-funded shipments across all methods, with the exception of implants. As a result, total CYPs shipped from donor-funded shipments remained relatively flat during this period, from 59 million CYPs shipped in 2011 to 56 million in 2016. (Exhibits 9, 10)

The value of donor-funded shipments declined significantly between 2015 and 2016, with USAID showing a particularly noticeable decrease, potentially related to procurement patterns, which is explored further on page 14. A decrease in non-donor funded shipments was also apparent.

UNFPA's spending for the total FP2020 public sector market was US\$80 million in 2016 compared to US\$92 million in 2015²¹, a decrease of 13 percent. The value for USAID's funded shipments declined from US\$89 million in 2015 to US\$53 million in 2016, a decrease of 40 percent. Other donors' spending decreased as well by 17 percent, from US\$5 million to US\$4 million, over the period. Finally, additional global markets visibility volumes²¹, which represent non-donor funded shipments in the total FP2020 public sector market as implied by supplier shipment data, decreased by 33 percent, from US\$89 million in 2015 to US\$59 million in 2016. (Exhibit 9)

The purchasing patterns of both USAID and UNFPA reflect a notable shift in the CYP mix towards LARCs between 2011 and 2016.

As USAID's CYP mix moved towards LARCs, USAID's shipments of short-acting methods decreased, from 66 percent of the CYP mix in 2011 to just over 50 percent in 2016. UNFPA's CYP mix also shifted to LARCs from short-acting methods. Short-acting methods made up half of UNFPA's CYP mix in 2011 and were only a third of the CYP mix in 2016. (Exhibit 11)

LARCs now account for 63 percent of the donor-funded shipments CYP mix, but only 40 percent of donor spending.

Although there was a decrease in donor-funded implants shipments from eight million in 2015 to six million in 2016, implants continued to rank first in terms of donor spending for contraceptive methods and CYPs shipped. Implants accounted for 39 percent of the total market value and 35 percent of the total donor-funded CYPs shipped in 2016. By contrast, the next two highest ranked methods, injectables and male condoms, each represented approximately 20 percent of the 2016 donor spending and around 15 percent of the donor-funded CYPs shipped.

18. Donor spending and value represented by donor-funded shipments is calculated as the average of UNFPA and USAID prices multiplied by the total units shipped in a particular year.
19. RHI data is supplemented with data from USAID/ PSM systems to include the USAID-funded shipments not currently captured in RHI due to data integration issues.

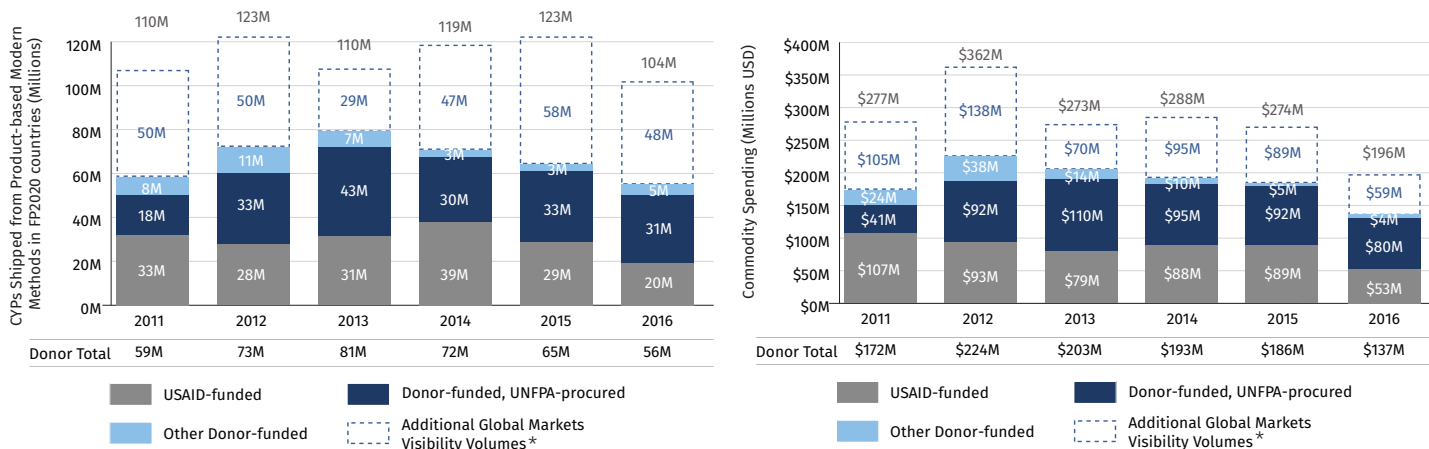
20. See Appendix D for further details on donors included.
21. The previous Family Planning Market Report (2016) stated that UNFPA spent US\$94 million in 2015; the figure reported here is likely the result of data updates in RHI.

Although 2016 donor-funded shipments still accounted for 54 percent of the total CYPs shipped to the FP2020 public sector market compared to 53 percent in 2015, donor-funded CYPs declined by 14 percent between 2015 to 2016.

The total number of CYPs shipped from UNFPA remained relatively flat between 2015 and 2016; UNFPA shipped 31 million in total CYPs in 2016 compared to 33 million in 2015. USAID's total CYPs shipped declined

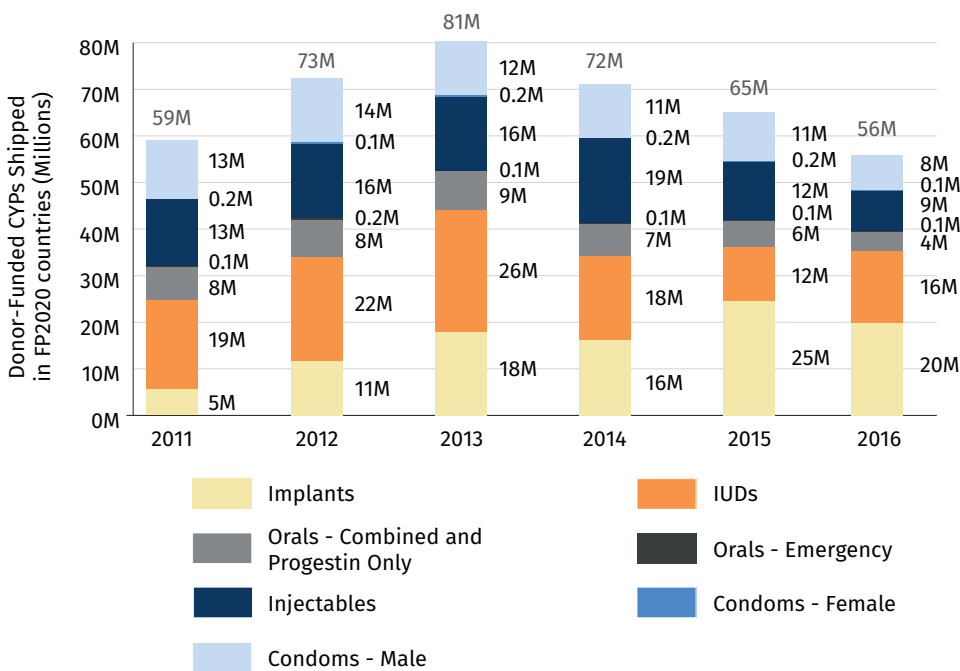
sharply from 29 million in 2015 to 20 million in 2016, a 33 percent decrease for the year. Other donor-funded CYPs increased by 54 percent, from three million to five million from 2015 to 2016, while the additional global markets visibility CYPs, which represent non donor-funded CYPs in the total FP2020 public sector market as implied by the supplier-reported data, decreased by 17 percent, from 58 million in 2015 to 48 million in 2016. (Exhibits 9, 10)

EXHIBIT 9: DONOR-SUPPORTED CYPs & COMMODITY SPEND



*Additional global markets visibility volumes is derived from subtracting the donor-funded volumes as seen in RHI from the supplier-reported data. This high-level calculation assumes the supplier-reported data includes the majority of donor-funded volumes and thus the remainder can be attributed to other donor volumes not captured by RHI, and/or other public and social sector volumes.

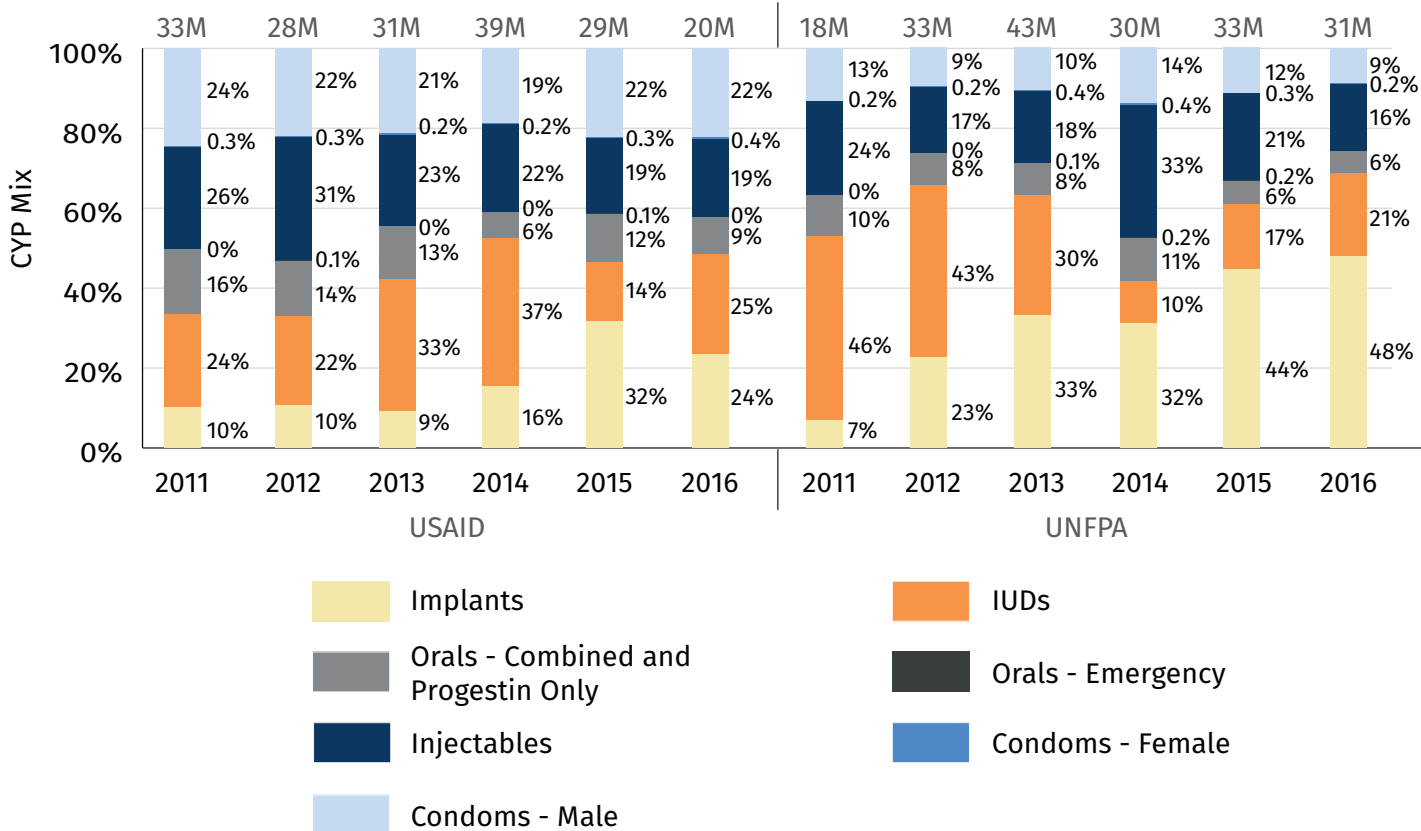
EXHIBIT 10: CYPs IMPLIED BY DONOR-FUNDED SHIPMENTS BY METHOD



Note: The sum of individual stacked bars for all exhibits may differ slightly from totals due to rounding

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017 [3] UNFPA Contraceptive Price Indicator, 2011–2016; [4] USAID, "Couple-Years of Protection (CYP)," May 2017; [6] IAP Implant Price

EXHIBIT 11: CYP MIX IMPLIED BY USAID & UNFPA PROCUREMENT



Sources: [1] RHI Shipment Data, May 2017 [2] USAID, "Couple-Years of Protection (CYP)," May 2017

PUBLICLY AVAILABLE DATA FROM BANGLADESH, INDIA, AND INDONESIA SUPPORTS THE HYPOTHESIS THAT NON DONOR-FUNDED LOCAL/REGIONAL SUPPLIERS²² ARE PLAYING A LARGER ROLE IN PROCUREMENT IN THESE COUNTRIES.

This section uses publicly available data sources, e.g. MOHFW or government tender documents, to further examine high volume countries, as previously published in the 2016 Family Planning Market Report.

In Bangladesh, the procurement of product-based modern contraceptives has decreased from 13 million CYPs to eight million CYPs from 2015 to 2016. However, consumption has remained steady over the same period.

The Bangladesh Ministry of Health and Family Welfare (MOHFW) procured 13 million CYPs for the 2015 calendar year, as compared to eight million CYPs²³ for the 2016 calendar year. Procurement contracts for product-based contraceptives were awarded primarily to regional and local suppliers, including (but not limited to): Essential Drugs Co. Ltd., Helm AG, HLL Lifecare Limited, Khulna Essential Latex Plant (KELP), Maneesh Pharma, MSD/Organon (India) Pvt Ltd.²⁴, MSD B.V.²⁵, M/S, Reneta Ltd., Popular Pharma, Sarban International Ltd., and Techno Drugs from Bangladesh. As noted, since coverage for this report is limited to those participating suppliers, only the data from a subset of these manufacturers²⁶ is included in the current calculation of market value derived from the supplier shipment data. By applying the same prices²⁷ used for 2015 and 2016 supplier shipment volumes to the volumes from the Bangladesh MOHFW procurement contracts, we estimated the implied value from those contracts to be US\$41 million and US\$31 million for 2015 and 2016, as compared to the US\$19 million to US\$9 million implied by the 2015 and 2016 supplier shipment data.

In addition, a review of Bangladesh's supply chain reports revealed that consumption of contraceptive commodities has been fairly consistent, between 13 and 14 million CYPs from 2011 to 2016, and that the lower 2016 procurement levels did correspond to a decrease in year-end stock levels, but that it did not affect the level of consumption.

In India, there was a slight increase in the number of CYPs procured from product-based modern methods between the 2010/2011 fiscal year and the 2014/2015 fiscal year, while sterilization remained constant at around four million operations per year.

Based on India's Ministry of Health and Family Welfare (MOHFW) Annual Report²⁸ for the 2014/2015 fiscal year, which ends on March 31, CYPs from product-based modern methods²⁹ totaled 58 million for that fiscal

year, compared to 54 million in the 2010/2011 fiscal year while sterilizations remained steady at four million performed for the 2014/2015 fiscal year. While the MOHFW annual report shipment volumes are based on the 2014/2015 fiscal year instead of the calendar year used in this report, by applying the same prices²⁷ used for 2014 and 2015 supplier shipment volumes, we estimate that implied market value from the annual reports is approximately US\$68 million in 2014/2015 fiscal year, as compared to the US\$1 to US\$5 million implied by the 2014 and 2015 supplier shipment data³⁰.

In Indonesia, CYPs procured from product-based modern methods increased from 17 million in 2015 to 23 million in 2016.

Data from public tender documents published by National Family Planning Coordinating Body (BKKBN) indicated an increase in CYPs procured from product-based methods³¹, from 17 million in 2015 to 23 million in 2016. By applying the same prices²⁷ used for the 2015 and 2016 supplier shipment volumes, we estimate that the total implied market value from these tender documents is US\$57 million in 2015 and US\$75 million in 2016, as compared to the less than US\$1 million and US\$3 million implied by the 2015 and 2016 supplier shipment data.

The data also shows that the Indonesian procurement contracts were awarded primarily to regional and local suppliers, including: PT Catur Dakwah Crane Farmasi, PT Harsen Laboratories, PT Kimia Farma, PT Triyasa Nagamas Farma, PT Pratapa Nirmala, PT Sunthi Sepuri, and PT Tunggal. Among them, PT Tunggal is the only supplier currently participating in this report, as part of the GEMs Caucus³².

Additional information about these three markets can be found in Appendix E.

22. Many of these suppliers are not participating in this report; CHAI is actively seeking the participation of relevant suppliers to increase market visibility.

23. Procured methods from Bangladesh's MOHFW report include male condoms, orals, injectables and implants.

24. MSD/Organon (India) Pvt Ltd. is a Merck/MSD company and therefore not a regional or local supplier.

25. MSD B.V. is a Merck/MSD company and therefore not a regional or local supplier.

26. Manufacturers participating in this report include Helm AG from Germany, Merck/MSD from the Netherlands, and Techno Drugs from Bangladesh.

27. See Appendix C for more details on unit prices used for market value calculations.

28. While the MOHFW Annual Reports do not record identities of the awarded suppliers, a US-AID report has enabled the identification of local suppliers and the contraceptives that supply to the government and SMO programs as of 2006, including (but not limited to): Indian Drug and Pharmaceutical Ltd. (IDPL), HLL Lifecare Limited, Phaarmasia, Pregna International, SMB

Corporation, Cipla, Win-Medicare, and Famy Care, now known as Mylan. This list was further validated by in-country partners. Of these suppliers, Pregna International, SMB Corporation, Cipla, and Mylan currently participate in this report.

29. Procured methods from India's MOHFW reports include male condoms, IUDs, orals, and emergency contraception.

30. The latest data from India referenced in this report is from the 2014 to 2015 fiscal year and thus is compared to the corresponding supplier shipment data from 2014 and 2015.

31. Procured methods from Indonesia's MOHFW reports include implants, injectables, and orals.

32. The Generic Manufacturers Caucus for Reproductive Health (GEMS Caucus) comprises generic pharmaceutical manufacturers throughout Asia, Africa, and Europe, united in their commitment to provide safe, quality-assured family planning products that enable women to make choices about their reproductive health; available at <https://www.rhsupplies.org/activities-resources/groups/generic-manufacturers-caucus/>.

CHAI CONSULTED KEY PARTICIPATING SUPPLIERS AS WELL AS OTHER FAMILY PLANNING PARTNERS AND STAKEHOLDERS TO IDENTIFY POTENTIAL REASONS FOR THE 2015 TO 2016 FP2020 PUBLIC SECTOR MARKET DECLINE, THE MOST COMMON OF WHICH ARE DISCUSSED HERE. FURTHER RESEARCH BEYOND THE SCOPE OF THIS REPORT WOULD BE REQUIRED TO CONFIRM THESE HYPOTHESES.

Hypothesis #1: The decline in overall FP2020 public sector shipments may be a real decline driven by decreased donor-funded shipments. Governments and other procurers may not be sufficiently covering the shortfall.

From 2012 to 2016, CYPs shipped to the total FP2020 public sector decreased by 19 million, and donor-funded CYPs shipped also declined by a similar amount of 17 million, which could indicate that there is direct correlation between the lower volumes of donor-funded contraceptives shipped and the decline in overall FP2020 public sector shipments.

Hypothesis #2: A greater share of public sector procurement may have shifted to local and regional suppliers not yet participating in this report.

Certain currently participating suppliers contend that, in large countries such as Bangladesh, India, Indonesia, and Pakistan, procurement is shifting from donor-supported suppliers to local and regional suppliers who are not donor-supported. CHAI refreshed its 2016 analysis of Bangladesh, India, and Indonesia for this report, and the data derived from purchase orders and procurement reports from these three countries' governments seem to support this hypothesis.³³

CHAI's work to expand market visibility in such large countries has enabled the identification of these local and regional suppliers and provided CHAI with the opportunity to solicit their participation in the report. So far, one additional supplier has signed on and its data is included in this year's report. Moving forward, CHAI will continue to engage and actively seek the participation of relevant suppliers to increase visibility.

Hypothesis #3: The significant decline in shipment volume from 2015 to 2016 may have been part of the natural fluctuation in procurement patterns from year to year and may not necessarily be indicative of current consumption trends.

It is widely understood among supply chain and procurement professionals that countries procure stock based on their unique in-country supply chains and in-country demand, both of which may vary year to year as programs are scaled up or down. Therefore, some plausible explanations for the 2016 shipment decline could include: there were sufficient inventory levels at the end of year 2015 in certain countries, thus said countries decided to procure less in 2016; some countries may have decided to procure the bulk of their shipments in late 2015 and early 2017 (Bangladesh appears to be one such example based on the government procurement reports); and, 2016 was a transition year for USAID as it moved from one procurement agent, USAID | DELIVER, to another, USAID Procurement and Supply Management (PSM), which may have contributed to overstocking in prior years and under-procurement in 2016.

Procurement Planning and Monitoring Report (PPMR) data³⁴ for 34 countries provides an encouraging picture, with overall consumption remaining relatively stable from 2015 to 2016 in addition to a stable trend reflected in the Bangladesh MOHFW supply chain reports from 2011 to 2016 specifically. This evidence could thus indicate that procurement patterns are indeed simply following their natural fluctuation.

33. In the 2016 FP Market Report, CHAI conducted additional markets visibility analyses into three of these countries, Bangladesh, India, and Indonesia. This analysis has been refreshed and the outcomes detailed on page 13 of this report.

34. Procurement Planning and Monitoring Report is available at <http://ppmr.rhsupplies.org/content?id=1>. See Appendix B for more details.

THE AVAILABILITY OF FUTURE FUNDING FOR CONTRACEPTIVE COMMODITIES COULD SIGNIFICANTLY IMPACT THE FAMILY PLANNING COMMODITY MARKET.

A number of recent analyses, including RHSC's 2016 Global Contraceptive Commodity Gap Analysis³⁵, have identified significant funding gaps based on current and existing family planning spending levels. US\$500 million would be needed from 2017 to 2020 to address the public sector funding gaps in 20³⁶ of the largest FP2020 countries alone³⁷. In addition, there is continued uncertainty with regard to the U.S. government's financial commitment to family planning moving forward³⁸. Any significant funding cuts could exacerbate the funding constraint as USAID's estimated contribution to family planning accounts for 28 percent of

the direct funding for contraceptives and distribution in the developing world³⁹. Further, it is unclear whether the committed funding stemming from new initiatives such as SHE DECIDES and the recent 2017 London Family Planning Summit will be sufficient to cover the funding gaps. Should the funding challenges remain unaddressed, there could be a decline in the public sector family planning commodity market and subsequently, in the number of users of modern methods of contraception.

35. RHSC Global Contraceptive Commodity Gap Analysis, available at https://www.rhsupplies.org/uploads/bx_rhscpublications/Global_Contraceptive_Commodity_Gap_Analysis_2016.pdf

36. The 20 countries include: Bangladesh, Burkina Faso, Cameroon, Democratic Republic of Congo, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Lao PDR, Liberia, Malawi, Mauritania, Mozambique, Niger, Nigeria, Rwanda, Senegal, Tanzania, Togo, and Uganda.

37. In 2016, these countries represented ~57 percent of the 69 FP2020 public sector market, as defined by this report.

38. In May 2017, the current U.S. administration proposed to eliminate funding for international family planning programs for fiscal year 2018 (FY 2018). (<https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/msar.pdf>, accessed July 17th 2017). In July 2017, the

House Committee on Appropriations approved the FY 2018 State & Foreign Operations (SFOPs) Bill. (<https://appropriations.house.gov/uploadedfiles/bills-115hr-sc-ap--stateforop-fy2018state-foreignoperationsappropriations.pdf>, accessed September 22nd, 2017). In September 2017, the Senate Committee on Appropriations approved the FY 2018 SFOPs Bill. (<https://www.appropriations.senate.gov/imo/media/doc/FY2018%20State%20Foreign%20Operations%20Appropriations%20Bill%20-%20S1780.pdf>, accessed September 22nd 2017).

39. Available at <https://www.vox.com/policy-and-politics/2017/5/24/15681216/trump-budget-cuts-funding-global-family-planning-famine-relief>

About the Global Markets Visibility Project

The Global Markets Visibility Project is a landmark initiative that resulted in the publication of the first Family Planning Market Report in May 2015, which provided the community with its first detailed glimpse into the public sector family planning market across the 69 FP2020 countries. This is the third iteration of the report. The initiative provides insightful and strategic outputs for donors, MOHs, implementing organizations, and suppliers to develop and implement more effective strategies aimed at ensuring that an additional 120 million women in the world's 69 poorest countries are enabled to use family planning products and services by 2020. This report is a joint collaboration with the Reproductive Health Supplies Coalition (RHSC). The initial 2015 report comprised data from 11 manufacturers. Each manufacturer entered into a formal MOU with CHAI or provided their information through collaborations with the Generic Manufacturers Caucus for Reproductive Health (GEMs) and i+solutions. Coverage has expanded since the publication of the initial report, with 14 suppliers currently participating in the project. Donors, suppliers, and partners expressed strong interest to continue this project, build on our progress, and strengthen the family planning community's market knowledge.

About the Participating Suppliers

Bayer

Bayer is a Germany-based life science company with core competencies in health care and agriculture. Its contraceptive product portfolio includes contraceptive implants, LNG-IUS, combined oral contraceptives, and injectables.

CR Zizhu

China Resources Zizhu Pharmaceutical Co., Ltd. (CR Zizhu) is a manufacturer of reproductive health products based in China. Its contraceptive product portfolio includes emergency oral contraceptives and combined oral contraceptives.

Cipla

Cipla Limited is an India-based generic manufacturer with over 1,500 products in the areas of respiratory diseases, HIV/AIDS, malaria, MDRTB, and reproductive health. Its contraceptive product portfolio includes emergency contraceptives and combined oral contraceptives.

Cupid

Cupid Limited is a manufacturer of both male and female condoms based in India. Its services include contract manufacturing (e.g., Playboy condoms, Trust condoms) and research and development, as well as the marketing and manufacturing of its own branded products.

Mylan

Mylan is a U.S. based healthcare company with over 7,500 marketed products. Its contraceptive product portfolio includes orals (combined, progestin only, and emergency) and injectable contraceptives, IUDs, and tubal rings used for female sterilization⁴⁰.

Helm AG

Helm AG is a Germany-based family owned multifunctional distribution company specializing in: Chemicals (Feedstocks and Derivatives), Crop Protection, Active Pharmaceutical Ingredients, Pharmaceuticals and Medical Products, and Fertilizers. Its main contraceptive product is a 3-month injectable DMPA IM.

Market Definition, Scope, and Coverage

The total FP2020 public sector market referenced in this report only includes data for the public sector in the 69 FP2020 countries, which is defined as volumes purchased by institutional buyers (USAID, UNFPA, SMOs, etc.) and MOH or government-affiliated procurers.

Although significant efforts have been deployed to collect as much data as possible, it should be noted that this report may not represent the entirety of institutional purchases for the FP2020 public sector, as it includes data from the majority, but not all of the suppliers associated with these markets.

Merck/MSD

Merck/ MSD is a U.S. based healthcare company. Its contraceptive product portfolio includes contraceptive implants (Implanon) NXT, oral contraceptives (Exluton, Marvelon, Cerazette), and the contraceptive vaginal ring (NuvaRing).

Pfizer

Pfizer is a U.S. based healthcare company. Its contraceptive product portfolio includes 3-month injectable DMPA IM (Depo-Provera) and 3-month injectable DMPA SC (Sayana Press).

Pregna

Pregna is a manufacturer of contraceptive products based in India. Its contraceptive product portfolio includes LNG-IUS (Eloira), IUDs, and tubal rings used for female sterilization.

PT Tunggall

PT. Tunggall Idaman Abdi (PT Tunggall) is a pharmaceutical manufacturer focusing on reproductive healthcare based in Indonesia. Its contraceptive product portfolio includes a monthly injectable, a 3-month injectable, a combined oral contraceptive, and an emergency oral contraceptive.

Shanghai Dahua

Shanghai Dahua Pharmaceutical Co., Ltd (Dahua) is a manufacturer of contraceptive implants based in China. On June 30th, 2017, the World Health Organization (WHO) pre-qualified Dahua's Levoplant (formerly known as Sino Implant II).

SMB

SMB is a manufacturer of medical devices, including IUDs and surgical sutures, based in India. Its key contraceptive product is IUDs, including its Copper T 380A, TCu 380Ag, TCu 380 Plus, and SMB Cu 375.

40. The procurement of products used for sterilization such as tubal rings are not covered in this report as the scope is limited to product-based modern methods of contraception.

Techno Drugs

Techno Drugs Ltd. is a manufacturer of both human and veterinary medicines based in Bangladesh. Its contraceptive product portfolio includes combined oral contraceptives and injectables. For injectables, Techno Drugs has also served as a supplier to Helm AG previously.

Veru Healthcare

Veru Healthcare, formerly known as the Female Health Company prior to the merger with Aspen Park Pharmaceuticals, Inc., is a biopharmaceutical company based in the US, focusing on urology and oncology. The company's division, the Female Health Company, is focusing on the global public health sector business with its FC2 female condom. FC2 is approved by FDA and WHO pre-qualified for offering dual protection against sexually transmitted infections and unintended pregnancy.

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APPENDIX A69 FP2020 COUNTRIES MARKET VOLUMES BY METHOD⁴¹ AND COUNTRY⁴², 2011–2016

EXHIBIT A.1: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2011					
COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Afghanistan	19,572,826	0	1,395,200	67,000	807,674
Bangladesh	112,426,800	422,109	18,984,000	475,000	138,631,121
Benin	13,249,064	48,600	10,300	21,000	0
Bhutan	2,880,000	0	475,200	1,600	88,002
Bolivia	1,570,360	2,350	0	35,000	210,000
Burkina Faso	0	2,000	0	0	1,597,501
Burundi	14,673,200	44,600	0	39,000	33,335
Cambodia	1,764,000	19,000	0	20,000	20,000
Cameroon	0	11,500	0	31,000	50,200
Central African Republic	6,410,600	500	200	0	91,403
Chad	1,567,600	15,000	52,000	1,000	0
Comoros	1,008,000	1,024	26,800	100	0
Democratic Republic of Congo	73,252,800	8,500	350,000	26,000	1,295,595
Congo Rep	20,566,352	10	1,412,400	500	391,905
Cote d'Ivoire	34,967,400	0	630,800	10,000	2,613,145
Djibouti	590,240	0	0	1,500	0
Egypt Arab Rep	50,400	17,500	4,780,000	2,135,000	3,000,000
Eritrea	7,804,000	5,100	0	5,500	61,672
Ethiopia	146,223,384	382,704	5,471,200	420,000	7,752,440
Gambia	1,585,000	100	10,000	500	433,337
Ghana	5,514,000	57,674	3,044,000	0	0
Guinea	7,932,400	1,000	546,240	11,000	233,335
Guinea-Bissau	1,555,000	5,000	0	0	5,001
Haiti	54,534,096	0	976,800	0	200,001
Honduras	19,202,400	0	148,000	22,453	943,300
India	0	0	193,201	1,959,570	8,661,563
Indonesia	210,000	0	0	316,721	50,001
Iraq	0	0	0	75,000	2,633,250
Kenya	48,266,720	505,209	1,370,032	0	15,136,914
Korea Dem Rep	1,267,200	0	0	36,150	139,500
Kyrgyz Republic	5,202,600	0	0	160,000	0
Lao PDR	8,484,208	6,200	650,000	0	922,112
Lesotho	8,356,936	2,000	65,000	0	63,000

41. Female condoms are aggregated with male condoms by country in order to protect data confidentiality.

42. Other FP2020 shipment volumes include shipments to procurer (USAID, UNFPA, SMOs) warehouses in non-FP2020 countries, such as Belgium, Denmark, France, Germany, Netherlands, Norway, Sweden, Switzerland, UK, and US. Although these volumes were shipped to

non-FP2020 countries, the end shipment destination of these volumes would likely be the 69 FP2020. As a result, these non-FP2020 volumes were included in the total shipments to 69 FP2020 countries after it was confirmed that the specific non-FP2020 volumes were associated with institutional purchases.

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EXHIBIT A.1: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2011					
COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Liberia	22,048,800	3,000	423,200	0	0
Madagascar	24,254,800	124,318	1,913,600	4,500	324,550
Malawi	11,886,001	46,452	540,000	0	50,000
Mali	1,000	53,600	1,292,625	41,501	0
Mauritania	3,600,000	3,728	6,000	5,500	533,336
Mongolia	10,002,880	1,000	0	0	321,000
Mozambique	96,394,000	5,010	1,241,400	41,000	5,393,262
Myanmar	56,563,712	4,000	0	0	6,918,499
Nepal	33,641,000	0	327,600	10,000	250,000
Nicaragua	13,356,000	0	332,100	50,000	842,001
Niger	10,000	4,612	814,000	2,800	400,000
Nigeria	78,948,652	32,900	3,157,500	209,000	1,055,335
Pakistan	249,431,800	25,300	5,862,000	200,000	400,299
Papua New Guinea	2,500,000	2,000	0	0	1,663,200
Philippines	740,800	0	0	0	6,639,745
Rwanda	30,211,488	0	1,768,400	18,600	0
Sao Tome and Principe	2,190,600	0	852,075	200	47,129
Senegal	11,400,000	10,350	0	3,000	220,000
Sierra Leone	4,515,800	91,700	0	35,500	1,206,269
Solomon Islands	30,000	0	0	0	24,000
Somalia	0	0	0	0	0
South Sudan	4,161,000	0	0	0	0
Sri Lanka	779,600	10,000	0	80,000	2,191,240
Sudan	10,591,344	3,500	0	2,000	1,167,875
Tajikistan	10,105,072	5,440	0	150,000	0
Tanzania	29,772,456	240,104	6,176,400	25,000	1,410,170
Timor-Leste	57,600	1,100	0	3,500	145,002
Togo	14,392,368	16,500	0	6,400	12,663
Uganda	82,319,600	86,688	2,089,800	83,785	334,220
Uzbekistan	5,414,112	0	0	1,500,000	600,000
Vietnam	15,049,000	9,000	1,180,000	1,772,000	0
West Bank and Gaza	4,521,600	0	0	0	0
Western Sahara	0	0	0	0	0
Yemen Rep	829,440	6,625	2,001,875	30,000	3,971,120
Zambia	58,807,168	0	1,544,200	0	748,000
Zimbabwe	126,944,000	61,900	782,500	2,600	14,836,223
Other FP2020 Shipment Volumes	6,937,864	692,800	385,700	145,850	76,285,355

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

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EXHIBIT A.2: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2012

COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Afghanistan	12,418,680	3,000	619,300	30,000	199,470
Bangladesh	26,736,000	512,800	18,562,000	515,000	146,646,964
Benin	21,806,400	16,500	0	19,000	0
Bhutan	3,456,000	0	70,000	0	97,899
Bolivia	121,000	25,300	0	6,000	3,000
Burkina Faso	16,741,200	117,100	1,369,900	16,500	2,348,935
Burundi	6,272,000	120,000	996,000	175,000	608,160
Cambodia	748,656	29,676	307,600	58,650	1,125,338
Cameroon	3,162,000	12,300	0	20,000	17,840
Central African Republic	3,415,400	13,600	198,400	1,000	1,031,664
Chad	70,000	25,800	30,000	3,000	0
Comoros	576,000	500	15,000	0	17,199
Democratic Republic of Congo	148,830,600	46,800	1,344,000	39,000	4,210,965
Congo Rep	7,018,400	300	800,000	0	0
Cote d'Ivoire	37,371,000	16,456	700,000	0	2,455,000
Djibouti	519,680	0	0	500	96,000
Egypt Arab Rep	2,185,920	45,000	5,000,000	338,000	4,746,366
Eritrea	100,000	100	0	0	21,600
Ethiopia	173,877,714	1,471,188	16,429,200	257,200	8,545,593
Gambia	1,000	5,000	1,000	0	24,000
Ghana	7,605,000	196,460	2,172,000	0	120,000
Guinea	4,428,640	7,000	713,000	2,600	1,650,800
Guinea-Bissau	730,000	10,000	14,000	22,000	4,641
Haiti	69,799,680	6,000	1,607,200	1,000	346,560
Honduras	9,772,992	0	691,900	19,400	1,810,800
India	0	0	134,494	2,973,600	5,750,000
Indonesia	250,000	0	0	588,850	0
Iraq	0	0	0	0	3,252,000
Kenya	151,368,000	176,556	9,631,025	25,000	4,503,281
Korea Dem Rep	2,592,000	0	51,000	30,000	351,999
Kyrgyz Republic	26,602,800	0	5,600	255,000	482,880
Lao PDR	2,865,600	1,600	605,000	13,000	2,676,480
Lesotho	1,749,200	0	110,000	0	0
Liberia	6,286,945	18,000	0	0	4,860
Madagascar	3,151,400	174,336	2,896,200	0	2,881,680
Malawi	19,956,960	182,744	4,922,400	6,000	125,791
Mali	6,433,920	55,000	168,800	18,000	2,314,375

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EXHIBIT A.2: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2012					
COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Mauritania	20,000	0	13,400	0	0
Mongolia	6,073,000	5,120	120,000	0	652,797
Mozambique	98,478,960	30,000	2,490,000	0	6,419,170
Myanmar	9,785,112	0	1,501,600	18,000	6,864,858
Nepal	66,400,720	88,000	237,600	104,600	0
Nicaragua	4,229,280	0	450,400	11,896	822,055
Niger	24,400	3,108	200,600	10,000	740,850
Nigeria	199,399,440	328,212	14,321,300	872,634	3,025,137
Pakistan	252,501,000	70,768	857,600	90,700	226,701
Papua New Guinea	600,000	26,500	800,000	600	6,335
Philippines	2,001,600	1,536	200,000	447,514	14,565,234
Rwanda	15,724,568	20,060	776,400	0	105,000
Sao Tome and Principe	1,682,600	6,100	15,000	5,000	125,400
Senegal	14,407,000	77,056	1,478,400	14,000	1,002
Sierra Leone	1,122,000	0	250,000	15,990	739,073
Solomon Islands	0	0	0	0	0
Somalia	0	2,000	0	0	20,000
South Sudan	2,400,000	5,004	0	0	0
Sri Lanka	0	74,800	250,000	1,800	2,167,010
Sudan	3,335,968	25,040	0	9,000	3,968,200
Tajikistan	1,800,600	0	41,500	140,000	432,480
Tanzania	52,549,408	351,500	4,155,900	47,000	2,105,540
Timor-Leste	2,592,000	5,450	0	2,000	128,571
Togo	43,054,408	26,000	322,400	0	27,000
Uganda	89,421,536	396,829	6,249,200	76,896	114,400
Uzbekistan	3,635,000	0	445,000	800,000	1,121,280
Vietnam	52,546,800	23,976	900,000	800,000	138,999
West Bank and Gaza	0	0	0	0	0
Western Sahara	0	0	0	0	0
Yemen Rep	3,801,888	24,000	180,000	95,000	3,443,504
Zambia	39,274,440	38,300	2,010,800	0	1,655,200
Zimbabwe	99,270,000	113,600	634,200	6,050	14,254,948
Other FP2020 Shipment Volumes	15,667,176	721,200	12,500	84,400	51,712,916

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

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EXHIBIT A.3: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2013

COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Afghanistan	23,181,800	0	1,550,000	0	17,001
Bangladesh	10,111,950	0	14,200,000	0	76,298,840
Benin	6,790,800	44,200	32,400	32,000	180,000
Bhutan	295,200	0	0	2,000	126,420
Bolivia	3,457,460	34,500	500,000	70,000	429,840
Burkina Faso	1,411,200	257,196	215,650	28,000	565,200
Burundi	640,833	0	1,000,000	0	574,080
Cambodia	2,160,000	51,399	0	2,000	4,320,008
Cameroon	0	30,300	12,800	57,659	1,494,720
Central African Republic	10,449,800	6,000	183,000	1,500	1,003,797
Chad	1,337,200	44,100	628,400	13,000	2,701,920
Comoros	1,252,800	1,600	93,300	500	48,720
Congo Dem Rep	81,658,344	187,168	1,219,300	118,000	2,384,472
Congo Rep	20,000	800	273,500	500	2,457,988
Cote d'Ivoire	18,607,800	14,000	240,000	2,500	4,584,370
Djibouti	2,288,000	0	7,600	500	8,640
Egypt Arab Rep	100,800	10,801	1,000,164	2,340,100	0
Eritrea	100,000	600	0	0	50,400
Ethiopia	75,766,296	981,740	6,159,396	160,000	15,082,178
Gambia	1,001,800	5,000	110,000	0	253,160
Ghana	34,302,000	144,348	1,025,500	10,000	451,280
Guinea	9,150,400	13,000	0	4,000	0
Guinea-Bissau	1,759,600	21,400	20,600	5,500	42,840
Haiti	51,940,800	1,700	1,646,400	2,000	223,920
Honduras	11,505,600	5,056	670,000	0	1,879,920
India	0	0	18,260	650,800	17,671,399
Indonesia	0	113,500	0	727,409	0
Iraq	0	0	0	0	3,000,000
Kenya	945,600	635,043	12,635,755	1,250	6,269,302
Korea Dem Rep	2,462,400	0	0	15,000	96,000
Kyrgyz Republic	5,299,200	0	15,000	0	570,300
Lao PDR	655,200	0	279,200	5,000	178,962
Lesotho	37,442,000	100	120,000	15,000	238,800
Liberia	17,500,000	15,200	244,800	0	400,320
Madagascar	4,547,768	239,980	5,733,542	0	2,376,836
Malawi	74,791,080	193,048	1,742,327	15,610	1,590,523
Mali	20,041,008	87,700	1,197,198	0	0

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EXHIBIT A.3: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2013

COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Mauritania	12,548,900	5,120	156,700	0	726,480
Mongolia	4,633,152	17,744	80,000	35,000	435,482
Mozambique	30,528,579	127,000	3,072,000	16,000	8,425,200
Myanmar	5,459,032	0	821,000	23,000	10,240,559
Nepal	6,370,788	10,000	655,200	30,000	0
Nicaragua	4,003,200	300	339,000	7,500	1,094,813
Niger	3,394,000	90,016	503,400	0	3,183,760
Nigeria	88,696,740	344,663	2,142,300	0	2,303,072
Pakistan	315,871,100	45,492	9,151,200	200,400	0
Papua New Guinea	19,924,800	38,790	0	4,000	1,313,583
Philippines	0	85,056	1,485,000	0	9,331,385
Rwanda	14,132,000	27,000	928,000	0	1,477,200
Sao Tome and Principe	5,000	500	0	0	6,000
Senegal	10,385,200	0	1,159,000	26,000	0
Sierra Leone	11,122,800	36,600	733,000	18,000	1,652,870
Solomon Islands	0	0	0	500	0
Somalia	0	1,000	0	0	148,700
South Sudan	8,601,000	10,940	0	500	775,200
Sri Lanka	0	93,000	233,500	110,000	2,068,050
Sudan	2,389,600	30,572	0	0	2,456,292
Tajikistan	7,096,200	0	0	105,000	0
Tanzania	29,769,000	309,621	0	55,000	2,009,270
Timor-Leste	57,600	2,100	0	0	225,863
Togo	11,465,520	68,000	606,500	0	108,960
Uganda	185,409,800	471,635	12,243,775	143,000	142,000
Uzbekistan	9,553,400	0	300,000	800,000	1,367,760
Vietnam	31,968,000	56,136	870,000	1,700,000	71,665
West Bank and Gaza	3,998,304	0	0	0	0
Western Sahara	0	0	0	0	0
Yemen Rep	6,082,704	56,192	1,126,284	471,459	17,423,472
Zambia	86,409,000	75,000	1,656,900	0	2,669,480
Zimbabwe	111,075,000	244,180	2,460,400	3,500	24,101,441
Other FP2020 Shipment Volumes	54,175,200	678,000	251,400	84,430	72,725,087

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

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EXHIBIT A.4: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2014

COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Afghanistan	17,329,040	3,000	109,600	5,500	424,560
Bangladesh	0	0	15,500,000	400,000	88,795,560
Benin	3,993,400	61,300	462,400	50,500	1,011,681
Bhutan	1,440,000	0	0	0	156,150
Bolivia	877,250	27,500	0	0	0
Burkina Faso	12,588,200	298,500	1,476,400	12,900	2,346,480
Burundi	0	207,900	1,500,200	6,860	470,200
Cambodia	2,995,200	30,588	520,000	55,000	4,417,848
Cameroon	10,545,460	69,400	0	2,000	639,339
Central African Republic	200,000	3,500	142,300	0	155,024
Chad	3,738,240	41,100	644,800	0	0
Comoros	0	500	0	0	59,997
Democratic Republic of Congo	163,406,800	50,212	267,600	14,000	964,695
Congo Rep	9,243,540	2,108	21,400	105,000	468,597
Cote d'Ivoire	21,745,600	75,700	1,698,200	15,500	4,770,310
Djibouti	0	0	3,800	0	15,000
Egypt Arab Rep	468,000	140,032	365,000	591,111	0
Eritrea	0	500	20,000	0	108,000
Ethiopia	44,350,736	495,112	12,226,888	430,500	5,894,456
Gambia	1,440,000	9,048	160,000	0	67,860
Ghana	45,105,600	120,696	6,003,800	20,250	2,630,160
Guinea	8,955,000	20,800	45,800	0	194,400
Guinea-Bissau	2,426,400	31,000	25,000	0	8,280
Haiti	57,184,080	0	1,199,200	4,000	0
Honduras	18,254,736	40,000	119,400	21,500	2,860,830
India	0	0	10,094	2,039,273	13,244,150
Indonesia	12,000	0	0	768,575	0
Iraq	5,078,880	0	0	5,039	1,513,029
Kenya	36,198,800	481,336	2,681,620	0	3,617,640
Korea Dem Rep	0	0	0	0	96,000
Kyrgyz Republic	0	0	40,000	0	0
Lao PDR	2,793,456	3,024	382,000	0	1,141,200
Lesotho	44,934,736	600	1,000	0	26,640
Liberia	9,574,000	0	457,000	0	352,080
Madagascar	27,001,200	77,440	8,058,500	0	1,057,362
Malawi	55,827,800	104,324	6,531,650	0	630,006
Mali	32,271,400	100,600	1,190,600	21,000	2,673,306

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EXHIBIT A.4: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2014

COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Mauritania	43,000	1,200	35,000	0	83,520
Mongolia	882,720	0	0	25,000	158,420
Mozambique	44,553,600	22,000	6,868,050	0	129,600
Myanmar	14,708,640	5,000	6,087,300	20,000	13,108,816
Nepal	13,462,400	44,700	3,795,800	35,149	2,558,000
Nicaragua	0	0	95,150	0	0
Niger	504,000	171,024	762,200	3,500	1,918,800
Nigeria	68,370,144	323,168	7,747,600	141,100	920,802
Pakistan	253,485,000	34,080	10,367,600	2,163,550	0
Papua New Guinea	11,238,800	42,000	1,322,400	10,000	1,125,519
Philippines	0	149,023	2,000	0	18,456,458
Rwanda	5,403,000	32,816	1,727,200	0	60,480
Sao Tome and Principe	7,160	0	0	0	39,600
Senegal	30,213,112	33,600	1,149,600	42,000	691,000
Sierra Leone	6,756,880	0	414,600	0	549,360
Solomon Islands	7,000	0	0	0	34,560
Somalia	28,800	28,000	60,000	8,500	68,880
South Sudan	5,205,600	15,000	0	0	24,999
Sri Lanka	0	63,000	406,800	0	6,619,680
Sudan	2,628,000	29,440	6,600	0	1,589,396
Tajikistan	7,438,096	0	43,600	40,000	193,440
Tanzania	31,370,600	458,644	1,492,400	75,000	2,421,591
Timor-Leste	0	10,500	181,400	0	205,359
Togo	7,278,801	48,200	63,000	0	69,104
Uganda	134,701,296	479,202	6,172,050	0	533,130
Uzbekistan	4,809,600	0	0	1,457,500	0
Vietnam	0	43,322	0	0	0
West Bank and Gaza	0	0	0	0	0
Western Sahara	0	0	0	0	0
Yemen Rep	2,367,360	25,088	306,500	48,000	2,338,860
Zambia	54,777,800	136,600	2,532,100	3,500	1,576,800
Zimbabwe	129,833,000	149,100	0	3,000	14,795,070
Other FP2020 Shipment Volumes	47,544,044	1,405,100	390,400	171,201	102,973,716

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

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EXHIBIT A.5: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2015

COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Afghanistan	4,728,000	4,500	0	30,000	300,000
Bangladesh	0	50,000	15,100,000	0	24,000,000
Benin	12,169,800	222,536	125,500	66,500	525,600
Bhutan	1,936,800	0	111,000	0	129,999
Bolivia	0	3,500	0	0	0
Burkina Faso	19,747,510	244,044	564,000	35,500	3,559,057
Burundi	5,760,000	134,500	1,639,267	0	594,600
Cambodia	5,730,480	11,000	200,000	30,000	9,551,557
Cameroon	26,245,443	125,052	10,000	46,550	48,465
Central African Republic	0	500	37,900	0	23,841
Chad	100,000	7,600	0	0	0
Comoros	1,303,200	1,008	78,400	0	35,001
Democratic Republic of Congo	65,606,368	308,230	1,189,200	0	3,124,218
Congo Rep	7,104,840	11,000	622,360	0	0
Cote d'Ivoire	100,000	15,664	212,000	0	5,224,561
Djibouti	0	500	296,667	0	93,327
Egypt Arab Rep	0	0	0	258,200	0
Eritrea	0	0	120,000	0	108,000
Ethiopia	31,052,091	1,180,607	2,000,000	650,000	8,478,983
Gambia	2,900	30,048	265,000	0	156,240
Ghana	13,995,000	403,236	1,992,000	0	1,993,464
Guinea	10,080,000	32,500	907,448	0	484,880
Guinea-Bissau	3,384,720	59,400	27,500	0	78,000
Haiti	60,014,400	9,300	421,400	0	228,571
Honduras	10,000,800	93,656	1,725,800	62,000	3,505,905
India	0	0	795,252	1,273,927	325,000
Indonesia	20,000	25,086	0	171,000	0
Iraq	0	0	0	0	0
Kenya	45,779,200	905,900	2,231,000	70,000	3,142,535
Korea Dem Rep	0	0	0	0	0
Kyrgyz Republic	1,527,264	0	80,000	0	0
Lao PDR	10,875,960	20,000	333,000	0	1,530,720
Lesotho	21,016,000	1,500	81,800	0	124,369
Liberia	9,009,780	44,600	846,800	0	459,270
Madagascar	1,500,000	72,722	9,349,250	35,996	595,605
Malawi	68,274,192	278,786	6,099,200	0	552,795
Mali	39,764,195	195,805	432,840	18,393	948,953

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EXHIBIT A.5: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2015					
COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Mauritania	0	86,264	41,200	0	140,640
Mongolia	5,752,800	0	90,000	0	242,382
Mozambique	41,712,000	95,000	3,025,500	0	0
Myanmar	42,282,008	108,156	7,231,700	900	1,134,860
Nepal	8,304,000	127,500	1,067,000	0	2,304,779
Nicaragua	0	2,000	65,050	3,000	188,640
Niger	0	12,700	820,800	10,425	2,495,670
Nigeria	97,478,368	379,591	8,132,250	75,000	2,725,901
Pakistan	290,853,000	210,484	0	3,024,116	0
Papua New Guinea	3,480	100,800	1,327,200	0	16,399
Philippines	0	731,244	0	82,336	4,135,001
Rwanda	18,626,900	28,752	727,667	5,768	334,166
Sao Tome and Principe	0	0	9,400	0	66,329
Senegal	18,858,530	65,384	760,000	0	1,471,680
Sierra Leone	7,926,120	68,500	726,800	0	1,214,340
Solomon Islands	0	0	15,000	0	0
Somalia	151,200	52,016	158,900	0	262,080
South Sudan	9,036,000	53,100	89,350	0	147,902
Sri Lanka	0	56,000	574,000	130,000	1,589,760
Sudan	3,000	30,568	474,200	0	3,851,868
Tajikistan	24,812,640	3,500	90,000	0	270,000
Tanzania	846,800	1,241,695	9,935,400	194,124	150,195
Timor-Leste	0	12,000	240,000	2,000	79,902
Togo	4,810,000	59,672	495,400	0	261,468
Uganda	35,316,096	258,060	8,235,050	48,300	258,123
Uzbekistan	0	0	701,600	2,408,900	1,989,949
Vietnam	0	0	0	1,005,000	0
West Bank and Gaza	0	0	0	0	0
Western Sahara	0	0	0	0	0
Yemen Rep	5,256,000	25,536	14,300	75,000	8,386,917
Zambia	66,167,400	245,900	3,399,400	13,000	3,770,375
Zimbabwe	141,429,280	98,500	889,100	1,900	9,400,083
Other FP2020 Shipment Volumes	85,564,584	1,564,900	352,600	113,550	197,242,875

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

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EXHIBIT A.6: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2016

COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Afghanistan	1,010,880	14,200	19,000	20,000	211,440
Bangladesh	0	150,000	8,200,000	0	0
Benin	3,708,000	277,028	70,000	27,000	5,040
Bhutan	0	0	237,000	0	0
Bolivia	50,400	67,800	3,000	0	5,760
Burkina Faso	12,911,000	427,800	1,123,500	0	1,600,971
Burundi	14,555,999	1,600	0	0	70,240
Cambodia	5,719,248	58,960	1,000,000	30,000	10,539,359
Cameroon	18,205,048	82,488	482,975	0	500,000
Central African Republic	3,628,800	6,200	147,600	500	262,296
Chad	0	41,024	15,600	0	0
Comoros	1,442,448	1,972	113,000	0	77,040
Democratic Republic of Congo	12,148,999	688,089	0	10,000	1,026,756
Congo Rep	3,600,000	1,008	6,720	29,650	2,880
Cote d'Ivoire	16,569,000	97,256	3,023,395	10,000	997,500
Djibouti	0	0	663,000	0	44,280
Egypt Arab Rep	0	140,000	0	2,680,434	0
Eritrea	0	0	100,000	0	126,640
Ethiopia	36,840,000	1,022,105	7,570,056	751,144	6,625,921
Gambia	2,880,000	20,016	313,000	0	565,200
Ghana	32,898,960	141,432	3,889,100	15,410	2,751,660
Guinea	7,488,000	77,000	90,000	0	512,644
Guinea-Bissau	0	50,000	13,000	0	10,080
Haiti	38,349,000	5,300	0	1,500	30,240
Honduras	25,005,600	0	1,977,000	0	1,385,280
India	5,000	0	23,984	865,062	6,137,520
Indonesia	5,000	350,000	0	120,074	0
Iraq	0	1,000	0	0	0
Kenya	54,090,024	742,864	95,000	37,500	3,403,080
Korea Dem Rep	0	0	905,200	0	0
Kyrgyz Republic	2,440,080	0	0	0	0
Lao PDR	0	53,200	850,600	0	1,405,440
Lesotho	11,262,000	23,452	260,400	0	218,160
Liberia	12,461,280	44,600	0	0	251,040
Madagascar	4,500,000	303,932	1,440,600	0	849,600
Malawi	12,520,000	33,700	2,475,200	0	0
Mali	12,604,704	27,072	25,000	17,300	20,160

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EXHIBIT A.6: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2016					
COUNTRY	CONDOMS MALE & FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Mauritania	3,110,400	2,500	39,000	0	164,160
Mongolia	6,796,800	3,100	30,000	0	405,108
Mozambique	59,034,000	0	90,000	13,000	205,920
Myanmar	16,169,472	147,348	1,800	0	7,560,366
Nepal	32,161,800	98,400	25,400	31,950	228,066
Nicaragua	1,500,000	4,008	0	15,000	0
Niger	0	50,400	1,317,700	0	3,141,960
Nigeria	149,734,200	771,763	1,278,600	90,030	3,320,703
Pakistan	109,244,976	800	0	1,872,716	15,120
Papua New Guinea	1,994,400	103,000	22,600	0	11,520
Philippines	0	0	0	1,070,737	0
Rwanda	16,056,000	65,294	1,734,900	0	2,439,900
Sao Tome and Principe	0	0	0	0	63,360
Senegal	5,094,000	179,864	10,000	32,675	860,949
Sierra Leone	1,080,000	73,000	280,200	5,500	955,860
Solomon Islands	0	0	0	0	0
Somalia	0	0	1,950	0	19,000
South Sudan	9,681,120	30,000	150,000	0	172,080
Sri Lanka	0	50,500	650,000	100,000	6,049,600
Sudan	7,216,992	49,104	29,800	3,500	338,345
Tajikistan	17,392,200	0	93,000	25,000	415,440
Tanzania	428,800	986,112	4,741,200	486,000	5,621,360
Timor-Leste	0	10,500	0	0	0
Togo	14,036,128	46,656	315,800	0	27,360
Uganda	19,200,000	234,524	1,184,250	45,200	5,740,520
Uzbekistan	6,228,720	0	848,400	432,800	0
Vietnam	0	0	0	1,096,080	0
West Bank and Gaza	0	0	800	0	0
Western Sahara	0	0	0	0	0
Yemen Rep	8,102,880	0	157,000	75,000	1,141,120
Zambia	32,762,600	142,000	443,000	0	0
Zimbabwe	106,975,000	140,656	661,800	1,800	19,521,550
Other FP2020 Shipment Volumes	20,389,000	1,016,700	392,800	198,850	216,000,206

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

APPENDIX B — DATA SOURCES

Prior to the development of market analyses, CHAI reviewed various data sources from partner organizations that provide family planning market data at the global level. CHAI assessed these databases based on available metrics, coverage of countries, frequency of updates, and ease of access to identify the most appropriate sources for sustainable analyses, with the ability to be updated as new data became available. The following provides an overview of the data sources CHAI relied upon for market analyses:

FP2020 Global Markets Visibility Project

In early 2014, CHAI, in partnership with RHSC and the FP2020 Market Dynamics Working Group, launched the Global Markets Visibility Project to help various donors, suppliers, and partners improve their understanding of the current market size and trends for key contraceptive markets. CHAI signed MOUs with contraceptive manufacturers and received historical shipment data by product and country for each of the 69 FP2020 focus countries. CHAI has partnered with Concept Foundation to collect and aggregate shipment data from participating members of the RHSC Generic Manufacturers for Reproductive Health Caucus (GEMs). To date, the Global Markets Visibility Project has collected historical shipment data that covers institutional sales (USAID, UNFPA, MSI, etc.) and MOH tender volumes from 14 manufacturers across five family planning product categories.

Reproductive Health Interchange (RHI)⁴³

Hosted by UNFPA, RHI collects data on past and upcoming contraceptive volume shipments for over 140 countries from the central procurement offices of major contraceptive donors and procurers. This database is updated at variable times that depend on the frequency of data submissions from the data provider. RHI reflects all of UNFPA's and USAID's contraceptive purchases, MSI's and IPPF's central procurements, and a few other procuring organizations' purchases. For this report, the full RHI data was downloaded in May 2017 and supplemented with data from USAID/ PSM systems to include the USAID-funded shipments not currently captured in RHI due to data integration issues.

43. RHI, available at <https://www.unfpaprocedurement.org/rhi-home>.

APPENDIX C — ESTIMATING THE TOTAL FP2020 PUBLIC SECTOR MARKET SIZE

The FP2020 public sector market size was constructed using the best available data sources: historical supplier-reported shipment data and RHI shipment data.

Participating Suppliers' Representation of the RHI Market

Within the RHI shipment data, the suppliers participating in the Global Markets Visibility Project held 96 percent or more of shipment volumes⁴⁴ in every category with the exception of IUDs, where suppliers held 51 percent of the volumes (Exhibit C.1).

The historical supplier-reported shipment data captured a more comprehensive view of the FP2020 public sector market for female condoms, implants, injectables, IUDs, and orals relative to RHI, and thus served as the primary data source for these product markets. Because

CHAI has not yet received male condom data from any suppliers, RHI data was relied upon for the male condom volumes. The data is quantified by the units of measurement outlined in Exhibit C.2.

The following section describes the data source and market size estimation in more detail.

Historical Supplier-Reported Data

To date, the Global Markets Visibility Project has collected historical supplier-reported shipment data from 14 manufacturers – Bayer, Cipla, CR Zizhu, Cupid, Helm AG, Mylan, Merck/MSD, Pfizer, Pregna, PT Tunggal, Shanghai Dahua, SMB, Techno Drugs, and Veru Healthcare⁴⁵. Collectively, the total volumes cover institutional sales (USAID, UNFPA, MSI, etc.) and MOH tenders across five family planning product categories.⁴⁶

EXHIBIT C.1: GLOBAL MARKETS VISIBILITY PROJECT PARTICIPATING SUPPLIER VOLUMES WITHIN RHI BY METHOD FOR THE FP2020 PUBLIC SECTOR MARKET

METHOD	PARTICIPATING SUPPLIER VOLUMES IN RHI 2011 – 2016	ALL SUPPLIERS VOLUMES IN RHI 2011 – 2016	% OF TOTAL METHOD VOLUMES
Condoms - Female	129 M	133 M	97%
Implants	31 M	32 M	98%
Injectables	350 M	363 M	96%
IUDs	13 M	26 M	51%
Orals	652 M	672 M	97%
Total	1.17B	1.23 B	96%

EXHIBIT C.2: UNIT OF MEASUREMENT

METHOD	UNIT OF MEASURE
Condoms - Female	Piece
Condoms - Male	Piece
Implants	Set
Injectables	Vial
IUDs	Piece
Orals - Combined	Cycle
Orals - Progestin Only	Cycle
Orals - Emergency	Doses

EXHIBIT C.3: GLOBAL MARKETS VISIBILITY PROJECT PARTICIPANTS AND PRODUCTS

MANUFACTURER	CONDOMS - FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Bayer		•	•		•
Cipla					•
CR Zizhu					•
Cupid	•				
Helm AG	•		•		
Mylan			•	•	•
Merck/MSD		•			•
Pfizer			•		
Pregna				•	
PT Tunggal			•		•
Shanghai Dahua		•			
SMB				•	
Techno Drugs			•		•
Veru Healthcare	•				

Source: [1] Historical Supplier-Reported Shipment Data.

44. Shipment volumes were calculated as cumulative from 2011 to 2016.

45. Female Health Company was acquired by Veru Healthcare in 2016.

46. Total shipment of oral contraceptives includes combined, progestin-only, and emergency oral contraceptives.

APPENDIX C — ESTIMATING THE TOTAL FP2020 PUBLIC SECTOR MARKET SIZE

Aggregating across female condoms, implants, injectables, IUDs, and orals in the 69 FP2020 countries and methods, suppliers have shipped an average of 378 million units of family planning commodities annually from 2011 to 2016.⁴⁷

It is important to note that there were several shipments to procurer (USAID, UNFPA, SMOs) warehouses in non-FP2020 countries, such as Belgium, Denmark, France, Germany, Netherlands, Norway, Sweden, Switzerland, UK, and US. Although these volumes were shipped to non-FP2020 countries, the end shipment destination of these volumes would likely be the 69 FP2020 countries. As a result, these non-FP2020 country volumes were included in the total shipments to 69 FP2020 countries after it was confirmed that the specific non-FP2020 country volumes were associated with institutional purchases.

CHAI analyzed and assessed the aggregated historical supplier-reported shipment data to confirm the coverage across various FP2020 product markets was greater relative to RHI shipment data for the 69 FP2020 countries. The aim of collecting historical volumes of all institutional purchases and MOH tenders directly from suppliers was to address data gaps observed in RHI shipment data which only captures a subset of procurers who choose to submit historical procurement data. Further, although some countries report national procurements, most national procurements are not reported into the RHI database. Compared to RHI, the total historical supplier-reported shipment volumes to 69 FP2020 countries and procurer warehouses is consistently greater than RHI volumes across four family planning methods: implants, injectables, IUDs, and orals.⁴⁸ Thus, for these product markets, the supplier-reported shipment data captures a more comprehensive view of the family planning market in the 69 FP2020 countries. For female condoms, the RHI volumes are actually greater than supplier shipment data in 2013 and 2014; however, the difference is relatively small in 2014.

EXHIBIT C.4: SUPPLIER-REPORTED SHIPMENT VOLUMES TO FP2020 COUNTRIES BY METHOD, 2011–2016

METHOD	2011	2012	2013	2014	2015	2016
Condoms – Female	20.0 M	18.9 M	17.4 M	25.1 M	25.3 M	21.7 M
Implants	3.1 M	5.8 M	6.1 M	6.2 M	10.2 M	9.2 M
Injectables	73.3 M	109.1 M	93.7 M	113.9 M	97.6 M	49.6 M
IUDs	10.3 M	9.1 M	8.1 M	8.8 M	9.9 M	10.2 M
Orals - Combined & Progestin Only	311.0 M	319.5 M	283.4 M	267.5 M	172.6 M	113.7 M
Orals - Emergency	3.0 M	10.9 M	4.9 M	4.9 M	6.5 M	6.1 M
Total	420.7 M	473.1 M	413.6 M	426.4 M	322.1 M	210.5 M

Source: [1] Historical Supplier-Reported Shipment Data.

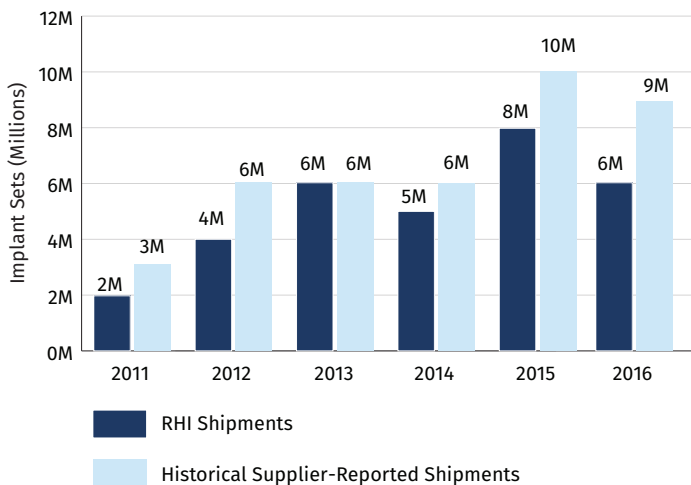
47. Negative volumes and volumes with no associated shipment destination have been excluded.

48. Similar to the historical supplier-reported shipment totals, RHI volumes to Belgium, Denmark, Germany, France, Netherlands, Norway, Sweden, Switzerland, UK, and the US are included in the total. For the UK, shipments to IPPF or MSI warehouses are included in total

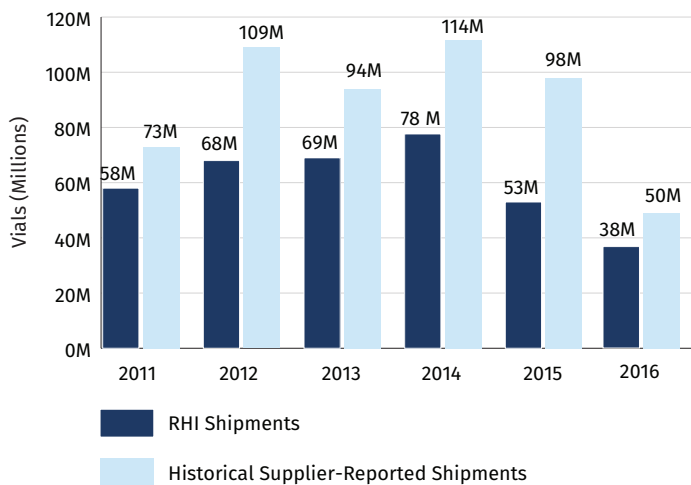
volumes. For Belgium, Denmark, Germany, France, Netherlands, Norway, Sweden, Switzerland, UK, and the US, shipments funded or procured by USAID and UNFPA are included in total volumes. We assume the end shipments destination of these volumes are likely to the 69 FP2020 countries and thus, include the volumes in the total FP2020 market estimate.

EXHIBIT C.5: RHI VS. SUPPLIER-REPORTED SHIPMENT VOLUMES TO FP2020 COUNTRIES BY METHOD, 2011-2016

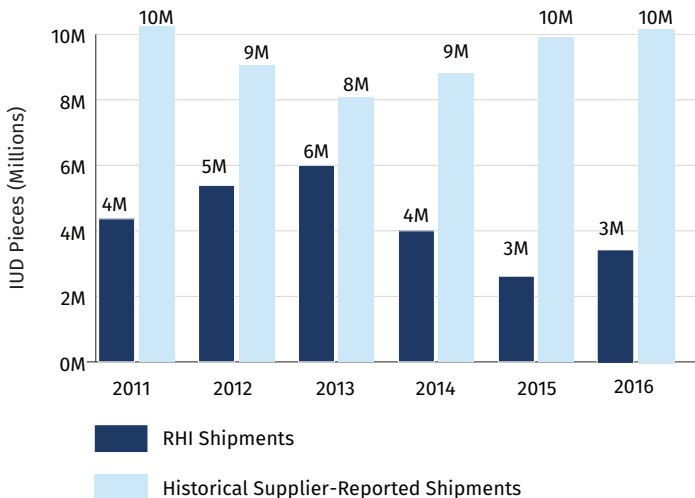
IMPLANTS



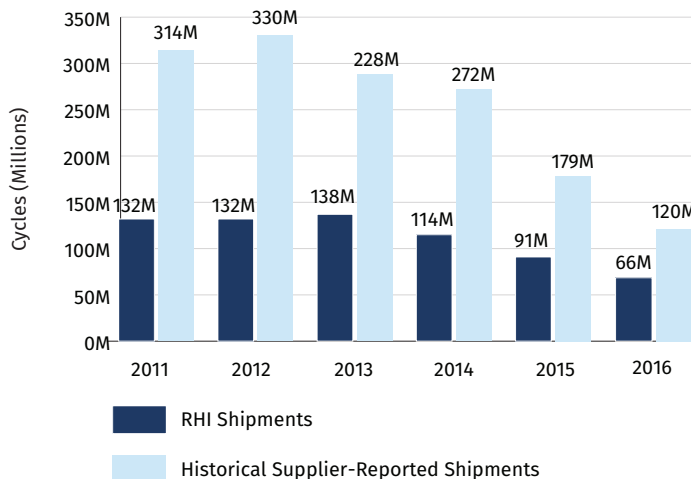
INJECTABLES



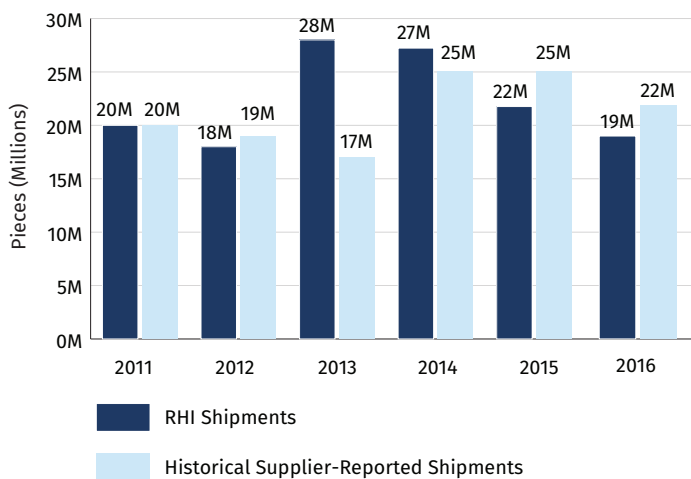
IUDS



ORALS



CONDOMS - FEMALE



Sources: [1] Historical Supplier Shipment Data; [2] RHI Shipment Data, May 2017.

APPENDIX C — ESTIMATING THE TOTAL FP2020 PUBLIC SECTOR MARKET SIZE

Male Condom Market

Because CHAI has not yet received data from male condom suppliers, historical RHI shipment data for male condoms was used to capture a more comprehensive view of the family planning market for the 69 FP2020 countries. We used RHI shipment volume data from 2011 to 2016 and included all male condom shipment volumes to 69 FP2020 countries as well as volumes associated with procurer warehouses in non-FP2020 focus countries.⁴⁹ The male condom market reflected by the RHI data includes 21 manufacturers and 18 funding sources.

The historical supplier-reported volumes for female condoms, implants, injectables, IUDs, and orals, together with RHI shipment volumes for male condoms, represent the estimated FP2020 public sector market from 2011 to 2016.

EXHIBIT C.6: RHI MALE CONDOM SHIPMENT VOLUMES, 2011–2016

METHOD	2011	2012	2013	2014	2015	2016
Condoms - Male	1.62 B	1.84 B	1.57 B	1.49 B	1.36 B	0.97 B

EXHIBIT C.7: 69 FP2020 CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2011–2016

METHOD	2011	2012	2013	2014	2015	2016
Condoms – Female	20.0 M	18.9 M	17.4 M	25.1 M	25.3 M	21.7 M
Condoms – Male (RHI)	1.62 B	1.84 B	1.57 B	1.49 B	1.36 B	0.97 B
Implants	3.1 M	5.8 M	6.1 M	6.2 M	10.2 M	9.2 M
Injectables	73.3 M	109.1 M	93.7 M	113.9 M	97.6 M	49.6 M
IUDs	10.3 M	9.1 M	8.1 M	8.8 M	9.9 M	10.2 M
Orals – Combined & Progestin Only	311.0 M	319.5 M	283.4 M	267.5 M	172.6 M	113.7 M
Orals – Emergency	3.0 M	10.9 M	4.9 M	4.9 M	6.5 M	6.1 M
Total	2.04 B	2.32 B	1.98 B	1.92 B	1.68 B	1.18 B

Source: [Exhibit C.6] RHI Shipment Data, May 2017. Source: [Exhibit C.7] Historical Supplier-Reported Shipment Data; RHI Shipment Data, May 2017.

49. Total yearly volumes are based on the year that the product was shipped.

APPENDIX C — ESTIMATING THE TOTAL FP2020 PUBLIC SECTOR MARKET SIZE

Total FP2020 Public Sector Market In Terms of Total FP2020 Public Sector Market In Terms of CYPs

CHAI translated shipment volumes to CYPs by dividing shipment volumes by each method's corresponding couple-years of protection (CYP) factor.

CHAI divided all shipment volumes by the corresponding CYP factor published by USAID. CYP is the estimated protection provided by contraceptive methods during a one-year period based upon the volume of all methods sold or distributed for free to clients during that period of time.⁵⁰ Because various methods may have different CYPs associated with different sub-types of that method (e.g. there are different CYP factors for three-, four-, and five-year implants), the corresponding CYP of the method sub-type is used. The following exhibit shows the conversion factors used to translate volumes to CYPs.

EXHIBIT C.8: VOLUMES TO CYPs SHIPPED CONVERSION FACTORS, 2011–2016

METHOD	UNITS PER CYP
Condoms - Female	120.00
Condoms - Male	120.00
Implants - 3 Year	0.40
Implants - 4 Year	0.31
Implants - 5 Year	0.26
Injectables - 1 month	13.00
Injectables - 2 month	6.00
Injectables - 3 month	4.00
IUDs	0.22
Orals - Combined	15.00
Orals - Progestin Only	15.00
Orals - Emergency	20.00

Source: [1] USAID, "Couple-Years of Protection (CYP)," May 2017.

50. USAID, "Couple-Years of Protection (CYP)", April 2014, available at <http://www.usaid.gov/what-we-do/global-health/family-planning/couple-years-protection-cyp>.

APPENDIX C — ESTIMATING THE TOTAL FP2020 PUBLIC SECTOR MARKET SIZE

Total FP2020 Public Sector Market Size

The total value of contraceptives was calculated by applying average unit prices to total shipment volumes. Average unit prices by method and year are based on the average price between USAID and UNFPA as reported in UNFPA's Contraceptive Price Indicator. Although there are different prices for different products and markets, we estimate implied spend using UNFPA's Contraceptive Price Indicator prices for simplicity.⁵¹ Finally, the Implant Access Program price of US\$8.50 was applied to

implant volumes from 2013 to 2016. The average price only includes the cost of the product and does not account for additional costs associated with procurement such as testing, insurance, and shipping costs.

To maintain consistency across dollar-value comparisons, this average pricing was applied to all market size and donor-funding trends across supplier-reported and RHI reported volumes. As a result, numbers may differ from the RHI reported value field.

EXHIBIT C.9: AVERAGE UNIT PRICE

Method	PRICE RANGE		2011	2012	2013	2014	2015 ⁵²	2016 ⁵³
	Minimum	Maximum	Unit Price	Unit Price	Unit Price	Unit Price	Unit Price	Unit Price
Condoms - Female	\$0.49	\$0.56	\$0.56	\$0.55	\$0.54	\$0.53	\$0.52	\$0.49
Condoms - Male	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03
Implants	\$8.50	\$18.65	\$18.65	\$17.98	\$8.50	\$8.50	\$8.50	\$8.50
Injectables	\$0.81	\$0.83	\$0.82	\$0.82	\$0.83	\$0.81	\$0.81	\$0.82
IUDs	\$0.43	\$0.48	\$0.43	\$0.43	\$0.43	\$0.48	\$0.47	\$0.46
Orals - Combined	\$0.26	\$0.31	\$0.31	\$0.30	\$0.28	\$0.30	\$0.28	\$0.26
Orals - Progestin Only	\$0.31	\$0.33	\$0.32	\$0.32	\$0.31	\$0.31	\$0.32	\$0.33
Orals - Emergency	\$0.30	\$0.49	\$0.34	\$0.49	\$0.44	\$0.30	\$0.37	\$0.35

Notes: [1] For 2013-2016 implants, the Implant Access Program price is used; [2] The range and average unit price in each corresponding is based on average USAID and UNFPA prices via UNFPA's Contraceptive Price Indicators.

Sources: [1] UNFPA Contraceptive Price Indicator, 2011–2016; [2] IAP Implant Prices.

51. UNFPA, "UNFPA Contraceptive Price Indicator—Year 2016", available at http://www.unfpa.org/sites/default/files/resource-pdf/UNFPA_Contraceptives_Price_Indicator_2016_Published.pdf, UNFPA Contraceptive Price Indicator—Year 2015," available at: https://www.unfpa.org/sites/default/files/resource-pdf/UNFPA_Contraceptive_Price_Indicators.pdf, "UNFPA Contraceptive Price Indicator—Year 2014," available at <http://www.unfpa.org/resources/contraceptive-price-indicator-2014>, "UNFPA Contraceptive Price Indicators—2013," available at <http://www.unfpa.org/sites/default/files/resource-pdf/UNFPA%20Contraceptive%20Price%20Indicators%20-%202013.pdf>, "UNFPA Contraceptive Price Indicators—2012," available at <http://www.unfpa.org/sites/default/files/resource-pdf/UNFPA%20Contraceptive%20Price%20Indicators%20-%202012.pdf>, "UNFPA Contraceptive Price Indicators—2011", UNFPA.

52. The 2015 unit pricing is an average of UNFPA 2015 prices and USAID 2014 prices as USAID 2015 prices were unavailable.

53. The 2016 unit pricing is UNFPA 2016 price only as USAID 2016 pricing is unavailable, with the exception of IUDs where the average of USAID 2014 price and UNFPA 2016 price was taken to avoid significant fluctuations.

APPENDIX D – ESTIMATING TOTAL FP2020 DONOR-FUNDED VOLUMES

To protect customer confidentiality, suppliers were not asked to disclose customer information associated with shipment volumes. Instead, CHAI relied upon RHI to estimate the donor-funded volumes and in turn, CYPs and costs. RHI data contains shipment volume data reported by central procurement offices of major contraceptive orders and other organizations that procure contraceptives. This includes organizations such as IPPF, MSI, PSI, USAID, and UNFPA. From 2011 to 2016, the following funding sources were associated with shipment volumes to 69 FP2020 countries and shipment volumes to procurer warehouses that are reported into RHI:

For the purposes of this analysis, national procurements identified as “OTHERGOV” and “MOH” as well as unknown funding sources identified as “OTHER” have been excluded. These may include volumes associated with UNFPA third party procurements or SMOs procurements using unidentified funding sources. It is important to note that RHI only includes data for procurement agencies that are data providers. There may be other donor-funded procurements that are not reported into RHI.

EXHIBIT D.1: FP2020 FUNDING SOURCES REPORTING TO RHI, 2011–2016

FUNDING SOURCES		
AFDB	IPPF	PSI
BMGF	KFW	UNDP
CDC	MOH	UNFPA
DFID	MSI	UNPEACE
DKT	NETHERLANDS	USAID
GLOBALFUND	OTHER	USDOD
ICA	OTHERGOV	WORLDBANK

APPENDIX E – ADDITIONAL MARKETS VISIBILITY

CHAI conducted supplementary research and analysis using publicly available sources of data in three large markets: Bangladesh, India, and Indonesia—key countries where it was identified in the 2016 Family Planning Market Report that there may be significant public sector local and regional procurement not captured in the Global Markets Visibility Volumes. Due to the limitations of these data sources, CHAI cannot confirm comprehensive coverage of the public sector markets in these countries. Rather, the data is meant to be used as initial confirmation of local and regional procurement in these markets that are not covered by the suppliers participating in this report.

Bangladesh

CHAI used data from the government of Bangladesh’s Ministry of Health and Family Welfare (MOHFW)⁵⁴ for 2015 and 2016.⁵⁵

EXHIBIT E.1: MOHFW SUPPLY CHAIN CONTRACEPTIVE SHIPMENT RECEIPT DETAILS			
PRODUCT NAME	SUPPLIER NAME	2015	2016
CONDOM	ESSENTIAL DRUGS CO. LTD.	50,000,000	68,850,000
CONDOM	KHULNA ESSENTIAL LATEX PLANT((KELP)	100,000,000	35,000,000
ECP (2 TAB/PACK)	M/S, RENETA LTD.	100,000	100,000
IMPLANT (2 ROD)	SOCIAL MARKETING COMPANY (SMC)	-	17,000
IMPLANT (SINGLE ROD)	JAMES INTERNATIONAL	-	5
IMPLANT (SINGLE ROD)	Merck Sharp & Dohme B.V.(MSD B.V.)	-	150,000
IMPLANT (SINGLE ROD)	MSD-NV Organon, Organon(India) Private Ltd.	50,000	-
INJECTABLES (DMPA IM)	Helm-AG	14,000,000	-
INJECTABLES (DMPA IM)	TECHNO DRUGS Ltd	2,500,000	8,100,000
IUD (CT-380A)	SARBAN INTERNATIONAL LTD.	400,000	-
IUD (CT-380A)	SOCIAL MARKETING COMPANY (SMC)	73,679	-
ORAL CONTRACEPTIVE PILL (SHUKHI)	HLL Lifecare Limited	22,469,025	-
ORAL CONTRACEPTIVE PILL (SHUKHI)	M/S, RENETA LTD.	20,730,975	54,750,000
ORAL CONTRACEPTIVE PILL (SHUKHI)	Maneesh Pharmaceuticals Limited	22,289,280	-
ORAL CONTRACEPTIVE PILL (SHUKHI)	Popular Pharmaceuticals Ltd.	10,800,000	14,250,000
ORAL CONTRACEPTIVE PILL (SHUKHI)	TECHNO DRUGS Ltd	1,710,720	-
ORAL PILL APON	M/S, RENETA LTD.	1,000,000	3,500,000

Source: Bangladesh MOHFW, Supply Chain Management Portal, 2017.

54. Government of Bangladesh, Ministry of Health and Family Welfare, “MOHFW Supply Chain Management Portal – National Receive Details; Product Group: Contraceptive; Product Name: ALL; Warehouse: ALL” available at: <https://scmpbd.org/index.php/wims-reports/national-receive-details>

55. The fiscal year for Bangladesh runs from July 1 to June 30, but for the purposes of this analysis, CHAI summed up the monthly data by calendar year for 2015 and 2016. Data is not reported prior to February 2015, thus the 2015 calendar year may be missing data for the month of January.

APPENDIX E – ADDITIONAL MARKETS VISIBILITY

India

CHAI looked at data from the Indian government's MOHFW Annual Reports⁵⁶ for fiscal years 2013/2014, and 2014/2015⁵⁷ for the India market. The MOHFW distributes contraceptives to the states/UTs through Free Supply Scheme and Social Marketing Scheme; only modern contraceptive methods including condoms,⁵⁸ oral pills (orals – combined), IUDs, and ECPs (orals – emergency) are included in this analysis. While the

MOHFW Annual Reports do not record who the awarded suppliers are, a report from USAID has identified local suppliers and the contraceptives they supply to the government and SMO programs as of 2006, including Indian Drug and Pharmaceutical Ltd. (IDPL), HLL Lifecare Limited, Pharmasia, Pregna International, SMB Corporation, Cipla, Win-Medicare, and Famy Care, which is now Mylan.

EXHIBIT E.2: ANNUAL REPORT OF DEPARTMENT OF HEALTH & FAMILY WELFARE FOR THE YEAR OF 2015-16 (INCLUDES FULL FISCAL YEARS 2013-14 TO 2014-15)

EXHIBIT E.2.1: QUANTITIES SUPPLIED TO STATES/UTS			
CONTRACEPTIVES	2013-14	2014-15	2015-16 (UP TO NOV. 15)
Condoms (In million pieces)	394	350.9	465.4
Oral Pills (In lakh cycles)	361.24	551.32	255.2
IUDs (In lakh pieces)	60.42	88.244	37.62
Tubal Rings (In lakh pairs)	19	27145	7.82
ECP(in lakh packs)	75.8	75.8	41.92
Pregnancy Test Kits (in lakhs)	100.14	122.4	166.12*

*Figures are Provisional

EXHIBIT E.2.2: PERFORMANCE OF SOCIAL MARKETING PROGRAMME IN THE SALE OF CONTRACEPTIVE				
CONTRACEPTIVES	2012-13	2013-14	2014-15	2015-16 (UP TO NOV. 2015)
Condoms (Million pieces)	618.18	698.33	683.93	157.05
Oral Pills (Social Marketing) (lakh cycles)	376.82	290.27	276.44	80.23
SAHELI (in Lakh tablets)	270.76	279.35	314.6	8.787*

EXHIBIT E.2.3: EMERGENCY CONTRACEPTIVE PILLS [ECP]			
ITEM	2013-14	2014-15	2015-16 (NOV.2015)
ECP	75.80	75.80	41.92

Source: India MOHFW Annual Report, 2015-2016.

56. Government of India, Ministry of Health and Family Welfare, "Annual Report of Department of Health & Family Welfare for the year of 2015-16", "Annual Report of Department of Health & Family Welfare for the year of 2014-15", "Annual Report of Department of Health & Family Welfare for the year of 2013-14" available at: <http://www.mohfw.nic.in/documents/publications>

57. The fiscal year for India runs from April 1 to March 31, as such 2015/2016 figures were not included in this analysis as the reported data is not a full fiscal year.

58. Condoms are reported in millions whereas all other methods are reported as "lakh" – the Indian unit of 100,000.

APPENDIX E – ADDITIONAL MARKETS VISIBILITY

EXHIBIT E.3: ANNUAL REPORT OF DEPARTMENT OF HEALTH & FAMILY WELFARE FOR THE YEAR OF 2013-14 (INCLUDES FULL FISCAL YEARS 2010-11 TO 2012-13)

EXHIBIT E.3.1: QUANTITIES SUPPLIED TO STATES/UTS				
CONTRACEPTIVES	2010-11	2011-12	2012-13	2013-14 (UP TO SEPT. 2013)
Condoms (In million pieces)	290.137	295.000	367.866	234.271
Oral Pills (In lakh cycles)	237.998	298.135	226.793	205.573
IUDs (In lakh pieces)	90.000	73.500	87.508	34.005
Tubal Rings (In lakh pairs)	34.534	30.359	31.22	18.274
ECP (in lakh packs)	21.540	18.300	75.919	14.098
Pregnancy Test Kits (in lakhs)	211.74	21174	222.186	0.00

EXHIBIT E.3.2: QUANTITIES SUPPLIED TO STATES/UTS				
CONTRACEPTIVES	2010-11	2011-12	2012-13	2013-14 (UP TO SEPT. 2013)
Condoms (Million pieces)	581.44	677.91	618.18	315.19
Oral Pills (Social Marketing) (lakh cycles)	358.08	471.975	376.82	124.79
SAHELI Weekly Oral Pill (in lakh tablet)	234.31904	244.56	270.76	0.042*

*Figures are Provisional

EXHIBIT E.3.3: EMERGENCY CONTRACEPTIVE PILLS [ECP]				
CONTRACEPTIVES	2010-11	2011-12	2012-13	2013-14 (UP TO SEPT. 2013)*
ECP	21.54	18.30	75.919	14.098

*Figures are Provisional

EXHIBIT E.4: LOCAL MANUFACTURERS & THEIR PRODUCTS IN INDIA*	
METHOD	SUPPLIER NAME
Condoms	HLL Lifecare Limited
Injectables	HLL Lifecare Limited
	Famy Care (Mylan)
IUDs	Pregna International
	SMB Corporation
	Famy Care (Mylan)
Orals	Indian Drug and Pharmaceutical Ltd. (IDPL)
	HLL Lifecare Limited
	Phaarmasia
	Famy Care (Mylan)
	Win-Medicare
	Cipla

* USAID, "Assessment of India's locally manufactured contraceptive product supply", 2006, available at: http://pdf.usaid.gov/pdf_docs/Pnadf989.pdf

APPENDIX E – ADDITIONAL MARKETS VISIBILITY

Indonesia

For the Indonesian market, CHAI looked at the awarded government tender documents from the National Family Planning Coordinating Body (BKKBN)⁶⁰ for 2015⁶¹ and 2016⁶² to sum up the quantities by method. The 2016 tender documents indicate the manufacturer; however, the 2015 documents refer only to distributors.

EXHIBIT E.5: MULTIPLE TENDER WINNER ANNOUNCEMENTS			
YEAR	PRODUCT	DISTRIBUTOR	QUANTITY
2015	Combination Pills	PT Indofarma Global Medika	11,776,656
2015	Combination Pills	PT Perintis Bina Utama Farmasi	15,114,124
2015	Combination Pills	PT Kimia Farma Trading & Distribution	4,042,768
2015	3-month Injectables	PT Indofarma Global Medika	13,019,861
2015	3-month Injectables	PT Trijaya Medika Farma	12,950,506
2015	3-month Injectables	PT Trijaya Medika Farma	13,067,747
2015	3-month Injectables	PT Trijaya Medika Farma	13,497,338
2015	2-rod implants w/ inserters	PT Djaja Bima Agung	164,710
2015	2-rod implants w/ inserters	PT Djaja Bima Agung	166,270
2015	2-rod implants w/ inserters	PT Djaja Bima Agung	192,793
2015	2-rod implants w/ inserters	PT Djaja Bima Agung	172,010

EXHIBIT E.6: MULTIPLE TENDER WINNER ANNOUNCEMENTS			
YEAR	PRODUCT	DISTRIBUTOR	QUANTITY
2016	Combination Pills	PT Harsen Laboratories	11,648,300
2016	Combination Pills	PT Kimia Farma	17,626,000
2016	Combination Pills	PT Pratapa Nirmala	8,793,200
2016	Combination Pills	PT Sunthi Sepuri	8,829,100
2016	Combination Pills	PT Triyasa Nagamas Farma	17,540,300
2016	3-month Injectables	PT Catur Dakhwah Crane Farmasi	7,289,160
2016	3-month Injectables	PT Harsen Laboratories	21,895,860
2016	3-month Injectables	PT Triyasa Nagamas Farma	14,474,540
2016	3-month Injectables	PT Tunggal Idaman Abadi	7,348,980
2016	2-rod implants w/ inserters	PT Catur Dakhwah Crane Farmasi	633,680
2016	2-rod implants w/ inserters	PT Harsen Laboratories	633,660
2016	2-rod implants w/ inserters	PT Triyasa Nagamas Farma	633,660

Sources: [Exhibit E.5] BKKBN Tender Documents, 2015. [Exhibit E.6] BKKBN Tender Documents, 2016.

60. Family Planning and Reproductive Health Unit, National Family Planning Coordinating Body (BKKBN)

61. Tender Winner Announcement documents available at <http://lpse.bkkbn.go.id/eproc/>

62. Tender Winner Announcement documents available at https://e-katalog.lkpp.go.id/backend/katalog/list_produk/63

APPENDIX F – EXPLORING POTENTIAL CONTRIBUTING FACTORS TO THE 2015 TO 2016 MARKET DECLINE

CHAI analyzed consumption data from the Procurement Planning and Monitoring Report (PPMR)⁶³ for 34 countries. First, CHAI estimated the annual consumption of products using the average monthly consumption (AMC) figures by country by method for each year. Then, CHAI divided the product volumes for each method by the corresponding CYP per unit to derive the annual consumption in total CYPs. The exhibit F.1 shows annual consumption data by method.

EXHIBIT F.1: ANNUAL PPMR CONSUMPTION DATA		
METHOD (CONSUMPTION IN MILLIONS OF CYPs)	2015	2016
Implants	15.0 M	16.2 M
IUDs	13.8 M	13.5 M
Injectables	19.5 M	19.0 M
Condoms - Male	13.6 M	12.0 M
Condoms - Female	0.2 M	0.2 M
Orals - Combined & Progestin Only	12.9 M	11.9 M
Orals - Emergency	12.0 M	11.1 M
Total	75.1M	73.1M

CHAI also analyzed consumption data for Bangladesh from the MOHFW supply chain reports⁶⁴. CHAI summed up the data by year to get annual consumption in product volumes and divided the volumes for each method by the corresponding CYP per unit to derive the annual consumption in total CYPs. The table below shows annual consumption data by method.

EXHIBIT F.2: ANNUAL MOHFW BANGLADESH CONSUMPTION						
METHOD (CONSUMPTION IN MILLIONS OF CYPs)	2011	2012	2013	2014	2015	2016
Condoms	0.8 M	0.8 M	0.8 M	1.0 M	1.1 M	1.1 M
Implants	1.3 M	1.3 M	1.2 M	1.1 M	1.1 M	1.1 M
Injectables	3.4 M	3.4 M	3.3 M	3.4 M	3.3 M	3.2 M
IUDs	1.1 M	1.1 M	1.2 M	1.2 M	1.2 M	1.2 M
Orals	7.3 M	7.3 M	7.1 M	7.1 M	6.9 M	6.6 M
Total	13.8 M	13.9 M	13.6 M	13.8 M	13.5 M	13.3 M

Sources: [Exhibit F.1] Procurement Planning and Monitoring Report (PPMR), May 2017. [Exhibit F.2] Bangladesh MOHFW Supply Chain Management Portal

63. Procurement Planning and Monitoring Report (PPMR): Produced monthly by the USAID | Global Health Supply Chain Program-Procurement and Supply Management (GHSCP-PSM), this online database provides information on consumption and current/desired stock levels of contraceptive products on a country-by-country basis for 34 countries as of June 2015. Data is provided by MOHs, partners such as MSH, SMOs (MSI, PSI, DKT), and UNFPA. Available at <http://ppmr.rhsupplies.org/content?id=1>

64. Available at <https://scmpbd.org/index.php/lmis-report/month-wise-consumption>

APPENDIX G – KEY TERMS AND DEFINITIONS

CYP

Couple Years of Protection (CYP) is the estimated protection provided by contraceptive methods during a one-year period e.g. 120 condoms provide a couple protection for one year.

CYP mix

CYP mix refers to the percentage distribution of CYPs shipped by method.

Market Value

Market value refers to the supplier-reported shipment volume multiplied by the average prices of UNFPA and USAID for the specific years.

Market Share

Market share is the percentage of total value of shipment volumes in a market captured by a certain contraceptive method.

Shipments or Shipment Volumes

Shipment volumes refers to the amount of a particular contraceptive method that has been transported.

Total FP2020 Public Sector Market

The total FP2020 public sector market is based on volumes purchased by institutional buyers and MOH or government-affiliated procurers based on RHI data (male condoms) and historical supplier-reported shipment data (female condoms, implants, injectables, IUDs, and orals) for the 69 FP2020 focus countries, defined as countries with a 2010 gross national per capita annual income (GNI) less than or equal to US\$2,500. Although South Africa made an FP2020 commitment, its GNI was greater than US\$2,500.

APPENDIX H – ACRONYMS

CHAI	CLINTON HEALTH ACCESS INITIATIVE
CYP	COUPLE-YEARS OF PROTECTION
FP	FAMILY PLANNING
FP2020	FAMILY PLANNING 2020
GEMS	GENERIC MANUFACTURERS FOR REPRODUCTIVE HEALTH
IUD	INTRA-UTERINE DEVICE
LAM	LACTATIONAL AMENORRHEA METHOD
LARC	LONG-ACTING REVERSIBLE CONTRACEPTIVES
MOH	MINISTRY OF HEALTH
MOHFW	MINISTRY OF HEALTH AND FAMILY WELFARE
RHSC	REPRODUCTIVE HEALTH SUPPLIES COALITION
RHI	REPRODUCTIVE HEALTH INTERCHANGE
SMO	SOCIAL MARKETING ORGANIZATION
USAID	UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
UNFPA	UNITED NATIONS POPULATION FUND