

USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM
PROCUREMENT AND SUPPLY MANAGEMENT

Situation analysis:

Contraceptive Manufacturing in Punjab

November 2017

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Acronyms

COC	Combined Oral Contraceptive
DMPA	Depot Medroxyprogesterone Acetate
DOH	Department of Health
ECP	Emergency Contraceptive Pill
FP	Family Planning
GoP	Government of Pakistan
GHSC	Global Health Supply Chain
GHSC-PSM	Global Health Supply Chain – Procurement and Supply Management
IDIQ	Indefinite Delivery Indefinite Quantity Contract
IMR	Infant Mortality Rate
IUD	Intrauterine Device
LMIS	Logistics Management Information Systems
MoNHSR&C	Ministry of National Health Services Regulations & Coordination
MMR	Maternal Mortality Rate
NGO	None Governmental Organization
POP	Progesterone Only Pill
PPW	Population Program Wing
PSM	Procurement and Supply Management
ROI	Return on Investment
TO	Task Order
U5MR	Under 5 Mortality Rate
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development

CONTEXT

In 1950, Pakistan's population reached 37 million people, making it the world's 13th most populous country. By 1998, Pakistan was ranked as world's sixth most populous country. The provisional data of Census 2017 shared by the Pakistan Bureau of Statistics records 207.7 million habitants within Pakistan, placing it now as the fifth most populous country in the world. As per UN estimates, Pakistan's population is geared to rise to 380 million by 2050 (Figure-1) and is likely to surpass Indonesia, Brazil, Russia, and the United States. This projected growth would further strain water, forests, and arable land resources as well as reverse the economic gains made in recent years.

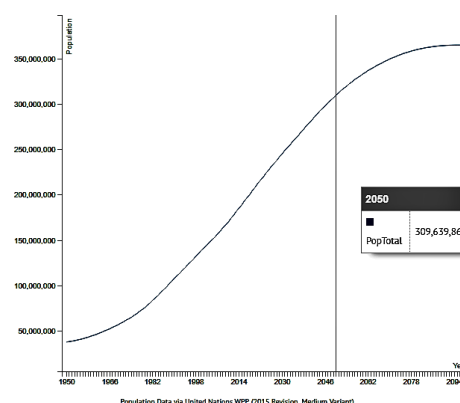


Figure 1: Pakistan Population Growth (Source: Population Data via [United Nations WPP](#) (2015 Revision, Medium Variant))

The federal as well as provincial governments are cognizant of the fact that some pregnancy-related mortality and complications are preventable and that the solution lies in increased contraceptive use. Contraceptive use reduces overall maternal mortality and improves women's health by preventing unwanted and high-risk pregnancies and reducing the need for unsafe abortions. This has a direct correlation with child and family well-being by reducing the economic and emotional burden of parenthood and affording increased opportunities for participation in educational, economic, and social activities.

As per the Economic Survey of Pakistan 2016-17 and FP2020 Commitment, Pakistan fares poorly on some of the key indicators are listed in the table below:

SDG (target by 2030)	Current standing ¹	Percentage outside of target
MMR: < 70 per 100,000 live births	170/100,000	242%
IMR: < 12 per 1,000 live births	62/1000	517%
U5MR: < 25 per 1,000 live births	81/1000	324%
FP2020 (target by 2020)	Current standing ²	
Contraceptives Prevalence Rate (CPR) 50% for Pakistan	CPR 35%	15%
Contraceptives Prevalence Rate (CPR) 55% for Punjab	CPR 40.7%	14.3%

Pakistan has embarked upon an ambitious, yet attainable, path towards ensuring universal access to reproductive health commodities and hopes to raise the contraceptive prevalence rate to 50% by FY2020. The federal and provincial governments in Pakistan have responded with political commitment

¹ Economic Survey of Pakistan 2016-17

² Pakistan Demographic and Health Survey 2012-13

by mobilizing sufficient allocation of \$110m so far until FY2019-20. Pakistan is also committed to accomplishing SDGs by reducing MMR, IMR, U5MR and ensuring universal access of reproductive health care services which include integration of reproductive health into national strategies and programs. Contraceptive services are now included in the essential package of health services, developed by provinces to improve service delivery and include facility-based and outreach services.

Although Pakistan was one of the first Asian countries to begin a family planning program with some help from international donors, fertility declined slower than in neighboring countries. Through the commodity assistance provided by the United Nation Population Fund (UNFPA) in the 1990s, Pakistan strived to reduce the population growth and brought it down from 4.5% per year to 2.9%. This support lasted until FY1999.

Subsequently, from FY2000 to FY2004, the Government of Pakistan (GoP) started sourcing contraceptives from UNFPA using the World Bank's withdrawal application procedure. With the enactment of public procurement rules in FY2004, the former health and population ministries embarked upon procurement of contraceptives through open competitive bidding for the locally manufactured contraceptive products; however, they continued using UNFPA platform for commodities not manufactured in Pakistan. The GoP's annual investment on family planning commodities during FY2000 - FY2009 remained steady at \$5-6 million, which was far below the actual requirements.

From FY2010 - 2015, USAID worked with the GoP and donated contraceptive commodities worth \$108m through supply chain programs to relevant public and private sector stakeholders across the country. Table 1 indicates USAID's yearly cost of commodity support to the GoP.

During FY2012 - FY2015, USAID also provided financial support worth \$1.5m to federal and provincial governments for transportation of contraceptive commodities from the Central Warehouse, Karachi to district stores across the country.

Owing to the total commodity support provided by USAID during the period indicated above (2010 to 2015) and recognizing the needs of forecasting and supply planning for concrete domestic financing, USAID initiated country-wide technical assistance on procurement and supply management. The GoP took this support positively and initiated domestic financing starting with Sindh and Punjab provinces in 2015. The commercial sector's share shrunk as they were not able to liquidate their business during 2010-2014. However, by 2015 local manufacturers and transporters were benefitting from the domestic financing of contraceptives by the provincial governments.

Another important stakeholder in the distribution of contraceptives has been the private sector i.e. NGOs who were historically supported by the Government of Pakistan. Their FP commodities future requirement until 2030 out of the total contraceptive ecology in Pakistan is presented in the private sector projection table appearing later in this document.

<i>Cost in million</i>	
Fiscal Years	Support
2010-11	\$10
2011-12	\$20
2012-13	\$20
2013-14	\$20
2014-15	\$38
Total	\$108

Table 1: USAID's commodity support from 2010 till 2015

Year	GoP Financing
2014-15	\$16.09m
2015-16	\$18.25m
2016-17	\$22.10m
2017-18	\$23.94m
2018-19	\$13.00m
2019-20	\$16.00m
Total	\$109.38m

Table 2: GoP committed financing till FY 2020

Realizing the significance of investments in family planning (FP) commodities, all provincial governments have clearly demonstrated their commitments by making allocation for FP commodities procurement as an integral part of their financial planning. Table 2 contains funds planned by the respective provinces of the Government of Pakistan who have so far committed ~\$110m for procurement and transportation of FP commodities until 2020.

With a burgeoning population as well as the contextual situation narrated above, the Population Program Wing (PPW) of the Ministry of National Health Services Regulations and

Coordination (MoNHSR&C) has sought technical assistance from the United States Agency for International Development (USAID) mission in Islamabad to support them in conducting a situation analysis on feasibility to explore the potential of local production of contraceptives in Pakistan. USAID/Pakistan tasked the Global Health Supply Chain Program – Procurement and Supply Management (GHSC-PSM) project with the provision of this technical assistance along the lines mutually agreed upon in a tripartite meeting between PPW, USAID/Pakistan, and the GHSC-PSM project held on March 16, 2017 in Islamabad.

As per provisional census results of 2017 census, with 110 million inhabitants, Punjab has become the most populous province of Pakistan. Additionally, more than half of its population resides in urban centers. The current contraceptives prevalence rate stands at 41%³ as against of FP2020 commitment of 55% by the Government of Punjab⁴.

³ Pakistan Demographic and Health Survey 2012-13

⁴ <http://www.pwd.punjab.gov.pk/fp2020>

BACKGROUND

The PPW of MoNHSR&C had initiated a request to the USAID Pakistan Mission in Islamabad to provide technical assistance to commission a feasibility study on local manufacturing of contraceptives in Pakistan. A formal request and action plan was sent by PPW to USAID/Pakistan through letter No. 12-2/2017-P&S dated April 26, 2017 (Annexure A) citing a meeting held with the USAID Pakistan Mission on March 16, 2017 which was followed by meeting with GHSC-PSM project on March 22, 2017. USAID/Pakistan agreed and informed PPW through letter dated May 9, 2017 (Annexure B) about assigning the provision of the assistance through the GHSC-PSM project.

To follow up on the TA, the GHSC-PSM project team started working on extracting contraceptive logistics data from government owned web-based logistics management information system (LMIS) from 2010 through 2017. As data for the study was required from 2007, the project team met with the PPW on June 15, 2017 to devise a plan of action for conducting the feasibility study which included a desk review of existing FP practices including method mix, quantities ordered, and consumption over the past 10 years. PPW was to develop a data acquisition template to obtain data from all provinces and was to share contraceptive procurement and consumption data from 2007 - 2010. Procurement and consumption data from 2010 onwards was extracted by GHSC-PSM project from USAID-funded annual contraceptive procurement tables and contraceptive LMIS, respectively.

In order to present an informed economic case to potential manufacturers, PPW, USAID/Pakistan, and GHSC-PSM devised a strategy to garner accurate procurement and consumption data for the past ten years, focusing on the projection of demand of the method mix through 2030 in light of Pakistan's international level commitments to FP2020 and targets identified in the National Health Vision-2025 as well as Sustainable Development Goals-3. FP 2020 commitments included working toward achieving universal access to reproductive health and raising the contraceptive prevalence rate to 50% by 2020.

The report at hand contains the demand projection of the method mix through 2030 with annual and total costing. The statistics here present plausible justification to expect that the sheer population size and the demand for contraceptives in view of the foregoing commitments are sufficient to lure investors to venture into local production of contraceptives.

In addition to delineating a holistic landscape of contraceptives consumption for the entire country, the provincially desegregated quantities and financial outlays have also been made available for the respective provincial governments in order that they look at their indicative share in the overall market. The analysis at hand also contains the projections for the province of Punjab for public, private and commercial sector till 2030 based on the method mix. A variety of data sources have been tapped into which have been adequately referenced in the footnotes.

Pharmaceutical Industry in Pakistan:

The pharmaceutical sector in the country is a sizeable industry with an annual turnover of more than PKR 336 billion (\$3.2 billion) and a double digit annual growth rate of 15%⁵. Currently, the industry has approximately 700 pharmaceutical manufacturing units including those operated by 21 multinational organizations. According to Pakistan Pharmaceutical Manufacturers' Association, their industry meets

⁵ http://www.ppma.org.pk/wp-content/uploads/2017/09/Final-Report-Pharma-Industry_August-10.pdf

around 70% of the country's demand⁶ of medicines.

Presently, only a few pharmaceutical industries including ZAFPA Pharmaceutical, Karachi and HENSEL Pharmaceutical, Lahore are producing 3-month injectable (Depot Medroxyprogesterone Acetate), combined oral pill (COC), and emergency contraceptive pill (ECP). Unfortunately, no industry is producing condoms, intra-uterine devices (IUDs), and implants (single rod and two rod), which are being imported to meet the contraceptive requirements.

Cost Benefits - Local vs. International procurement:

During last three years of local contraceptive procurement (2014-15, 2015-16 and 2016-17), Punjab procured contraceptives including those of three products being manufactured in Pakistan. In order to have cost comparison between locally procured three commodities (3- months injection, oral contraceptive pills and emergency contraceptive pills) vis-à-vis international market prices, below tables depict year-wise as well as total cost savings which is PKR 284 m (\$2.70m):

Year 2014-15: Savings - PKR 176.7 m

Products	Punjab (2014-15)		
	International Market ⁷	Local Market ⁸	Savings
DMPA	378,730,296	315,608,580	63,121,716
COC	387,920,790	277,758,769	110,162,020
ECP	5,233,694	1,811,490	3,422,204
Total	771,884,779	595,178,839	176,705,940

Year 2015-16: Savings- PKR 32.34 m

Products	Punjab (2015-16)		
	Intl. Market	Local Market	Savings
DMPA	76,889,820	65,447,882	11,441,938
COC	37,040,693	26,588,292	10,452,401
ECP	37,040,693	26,588,292	10,452,401
Total	150,971,205	118,624,466	32,346,739

Year 2016-17: Savings- PKR 75.02 m

Products	Punjab (2016-17)		
	Intl. Market	Local Market	Savings
DMPA	119,943,180	102,094,493	17,848,688
COC	171,972,347.4	123,443,995	48,528,352
ECP	12,675,029.85	4,023,819	8,651,211
Total	304,590,557	229,562,307	75,028,250

⁶ <http://www.ppma.org.pk>

⁷ International rates have been taken from USAID Contraceptive and Condom Catalog 2013-14

⁸ Local rates are actual rates of locally manufactured products procured by provinces

Provincial Savings

Punjab	Savings
2014-15	176,705,940
2015-16	32,346,739
2016-17	75,028,250
Total	284,080,929

The savings achieved through local procurement of DMPA, COC, and ECP can afford the provincial government to re-allocate these resources to other components of the supply chain, including transportation from Central Warehouse to districts and SDP-level stores as well as robust monitoring.

In view of the cost savings achieved through local procurement of DMPA, COC, and ECP, enhancing the pharmaceutical industry's capacity to manufacture condoms, IUDs, and implants would further contribute towards cost savings.

The federal and provincial governments of Pakistan are cognizant of the whole gamut of challenges encountered by provinces in procuring internationally manufactured contraceptives during the last few years i.e. delays in international procurement owing to increased lead time, payment modalities to international manufacturers, transfer of huge foreign exchange, and finally non-existence of WHO prequalified firm and testing laboratories in Pakistan.

The potential benefits of local manufacturing of contraceptives include:

- Increased product availability, leading to improved CPR
- Efficient and timely procurement by decreased procurement timelines and procedures due to local procurement
- More efficiently/expediently meeting emergency requirements
- Increased efficiency and quality of locally manufactured products
- Improved pricing controls as Drug Regulatory Authority of Pakistan (DRAP) has full control over drugs pricing in the country.
- Easier product recalls
- Increased export of pharmaceutical products and boost to the local economy

There are multiple factors influencing the investment in contraceptives production, as it is capital-intensive and enjoys significant and increasing returns to scale i.e. unit production costs decrease as the volume of production increases. Hence, the production volumes must be sufficient to keep the costs – and by extension price to consumers/buyers – low enough to be competitive in the market.

As per Pakistan Customs Tariff (PCT) Code number 9927 regarding Contraceptives and accessories thereof, all pharmaceutical raw materials if imported for manufacture of contraceptives in accordance with the input/output ratios determined by the Directorate of Input Output Co-efficient Organization will be zero-rated. However, there is an applicability of 17% sales tax.

- 3% duty on Chemical contraceptive preparations based on hormones, spermicides
- 3% duty on Coils of plastics (contraceptives and accessories therefor)
- 3% duty on Sheath contraceptives

METHODOLOGY

It was agreed that GHSC-PSM project would undertake a desk review of the existing family planning procurement practices, including method mix, quantities ordered, and consumption over the past 10 years. PPW obtained data on the prescribed format from all provinces and shared contraceptives procurement and consumption data from 2007 till 2010 with the project (Annexure-III).

The GHSC-PSM project team extracted province-specific procurement and consumption data from 2010 onwards from USAID supported annual contraceptive procurement tables (2010-2014) and contraceptive LMIS respectively. The project further worked on the data and generated projection of the demand including method mix till 2030 in view of Pakistan's FP2020 commitments (and provincial share therein), and National Health Vision-2025 and SDG-3 targets. The latest Pakistan Demographic and Health Survey was conducted in 2012-13. It is believed that the reliability of the demographic data alone to forecast business, without undertaking other important variables, would be unrealistic. Hence the project used forecast modelling based on all possible factors operating in the ecology of Pakistan. The methodology included the demographics, logistics and method mix.

While carrying out the analysis of the data, it was observed that over the years, data has shown fluctuating trends in terms of consumption of contraceptives. There may be different factors attributable to the fluctuation which include but are not limited to a shift from short-acting to long acting methods, promotions, and accessibility trends.

In view of the above, different forecast growth factors have been applied for different FP products. For accuracy purposes, more recent LMIS consumption data trends of FY 2016 have been selected for extrapolation. It is pertinent to note that based on consumption trends, growth factors for method mix have been estimated leading to projections for 2017-18.

Once the factors were accounted for and a country-wide as well as province specific forecast for 2017-18 developed, then a flat 10% yearly increase was used for demand projections till 2030. This 10% annual increase will cater to the yearly population growth and the gradual improvements that would be registered in reporting rate of contraceptives use (currently the reporting rate of DOH and other stakeholder hovers around 60% and is likely to improve in the years to come.)

Similarly, analysis of the data for private sector was carried out and it has been observed that the trends for consumption have a tendency to fluctuate. The data is not representative of the entirety of the private sector as it mainly focuses three organizations, Greenstar Social Marketing, Marie Stope Society, and Family Planning Association of Pakistan, who are reporting into the cLMIS. There may be different factors attributable to the fluctuation which include but are not limited to a shift from short-acting to long acting methods, promotions of any method by private sector stakeholders, and accessibility trends which cover different options of product availability for FP clients.

The costing for the projected demands has been carried out on the basis of the unit costs of Punjab's procurement of contraceptives for 2016/17, and a 5% yearly inflation in prices (calculated on recent years' inflation) has been factored in to arrive at the final cost. The highly diverse and disorganized structure of the private and commercial market operators poses a serious challenge to obtain accurate data for future projections. However, we have used PDHS to obtain our estimates which are given below. The table below contains the demand projections through 2030.

Punjab - Public Sector Contraceptive Projection with Costing (2017-18 to 2029-30)

Punjab Public Sector* Contraceptives Forecast with Cost for the Period 2017-18 to 2029-30																				
Rationale for Forecast / Projections (based on July 2016 - June 2017 Consumption trend)																				
Products	Condom		POP		COC		ECP		Copper-T-380A		Multiload		2-Month Inj		3-Month Inj		Implanon		Jadelle	
1-yr AVG	20,254,187		11,932		1,065,080		166,098		98,081		12,077		23,341		398,255		2,013		4,805	
3-month AVG	11,722,544		5,424		834,016		6,912		68,862		290		934		296,993		1,392		3,597	
% growth 1 yr to 3-month	-42.1%		-54.5%		-21.7%		-95.8%		-29.8%		-97.6%		-96.0%		-25.4%		-30.9%		-25.1%	
forecast growth factor	1.03		1.03		1.06		1.03		1.05		1.03		1.03		1.05		1.05		1.10	
1-yr avg*growth factor	20,861,813		12,290		1,128,985		171,081		102,985		12,440		24,041		418,168		2,113		5,286	
Year	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)
2017 - 18	129,526,823	255,167,841	76,304	2,518,024	7,009,641	142,646,202	1,062,206	9,559,856	639,411	23,594,261	77,235	7,723,479	149,269	22,390,318	2,596,322	185,637,030	13,122	13,174,632	32,817	36,098,274
2018 - 19	133,412,627	275,964,020	78,593	2,723,243	7,430,220	158,765,223	1,094,072	10,338,985	671,381	26,012,673	79,552	8,352,942	153,747	24,215,129	2,726,138	204,664,826	13,778	14,525,032	36,098	41,693,506
2019 -20	137,415,006	298,455,087	80,951	2,945,188	7,876,033	176,705,693	1,126,895	11,181,612	704,950	28,678,971	81,938	9,033,707	158,359	26,188,662	2,862,445	225,642,970	14,467	16,013,848	39,708	48,155,999
2020 -21	141,537,456	322,779,177	83,379	3,185,221	8,348,595	196,673,436	1,160,701	12,092,913	740,198	31,618,566	84,397	9,769,954	163,110	28,323,038	3,005,567	248,771,375	15,191	17,655,267	43,679	55,620,179
2021 -22	145,783,580	349,085,680	85,881	3,444,816	8,849,511	218,897,535	1,195,523	13,078,486	777,208	34,859,469	86,928	10,566,205	168,003	30,631,366	3,155,846	274,270,441	15,950	19,464,932	48,047	64,241,307
2022 -23	150,157,087	377,536,163	88,457	3,725,569	9,380,481	243,632,956	1,231,388	14,144,382	816,068	38,432,565	89,536	11,427,351	173,043	33,127,822	3,313,638	302,383,161	16,748	21,460,088	52,851	74,198,710
2023 -24	154,661,800	408,305,360	91,111	4,029,202	9,943,310	271,163,480	1,268,330	15,297,150	856,872	42,371,903	92,222	12,358,680	178,235	35,827,739	3,479,320	333,377,435	17,585	23,659,746	58,137	85,699,510
2024 -25	159,301,654	441,582,247	93,844	4,357,582	10,539,909	301,804,953	1,306,380	16,543,867	899,715	46,715,023	94,989	13,365,913	183,582	38,747,700	3,653,286	367,548,622	18,464	26,084,871	63,950	98,982,934
2025 -26	164,080,704	477,571,200	96,659	4,712,725	11,172,303	335,908,913	1,345,571	17,892,193	944,701	51,503,312	97,839	14,455,235	189,089	41,905,638	3,835,950	405,222,356	19,387	28,758,570	70,345	114,325,289
2026 -27	169,003,125	516,493,253	99,559	5,096,813	11,842,642	373,866,620	1,385,938	19,350,406	991,936	56,782,402	100,774	15,633,336	194,762	45,320,947	4,027,748	446,757,647	20,357	31,706,323	77,380	132,045,708
2027 -28	174,073,219	558,587,453	102,546	5,512,203	12,553,200	416,113,548	1,427,516	20,927,464	1,041,533	62,602,598	103,797	16,907,453	200,605	49,014,604	4,229,135	492,550,306	21,375	34,956,221	85,118	152,512,793
2028 -29	179,295,415	604,112,330	105,622	5,961,447	13,306,392	463,134,379	1,470,342	22,633,053	1,093,610	69,019,364	106,911	18,285,410	206,623	53,009,295	4,440,592	543,036,712	22,443	38,539,234	93,630	176,152,276
2029 - 30	184,674,278	653,347,485	108,791	6,447,305	14,104,776	515,468,564	1,514,452	24,477,646	1,148,290	76,093,849	110,118	19,775,671	212,822	57,329,552	4,662,621	598,697,975	23,565	42,489,505	102,993	203,455,879
Total Cost (PKR)	2,022,922,774	5,538,987,294	1,191,696.32	54,659,339	132,357,013	3,814,781,502	16,589,315	207,518,014	11,325,874	588,284,956	1,206,237	167,655,337	2,331,249	486,031,811	45,988,609	4,628,560,856	232,432	328,488,269	804,752	1,283,182,365
Total Cost (PKR)																			17,098,149,742	
Total Cost (PKR) in Millions																			17,098	
Total Cost (USD) in Millions																			\$163	

PUNJAB - PRIVATE SECTOR CONTRACEPTIVE PROJECTION WITH COSTING (2017-18 TO 2029-30)

Punjab Private Sector* Contraceptives Forecast with Cost for the Period 2017-18 to 2029-30																										
Rationale for Forecast / Projections (based on 2012 - 2016 Consumption trend)																										
Products	Condom		POP		COC		ECP		Copper-T-380A		Multiload		2-Month Inj		3-Month Inj		Implanon		Jadelle		Femplant		1-Month Inj		Safe Load	
5-yr AVG	11,511,421		4,509		115,613		188,816		26,094		33,031		44,344		50,463		542		432		207		13,899		2,691	
1 Yr AVG	10,398,761		10,118		82,084		191,461		35,634		13,245		27,323		41,568		23		648		92		9,858		5,032	
% growth 5 to 1 Yr	-9.7%		124.4%		-29.0%		1.4%		36.6%		-59.9%		-38.4%		-17.6%		-95.8%		49.8%		-55.5%		-29.1%		86.9%	
forecast growth factor	1.10		1.05		1.10		1.10		1.10		1.01		1.02		1.10		1.05		1.10		1.01		1.01		1.01	
5 yr avg*growth factor	12,662,563		4,735		127,175		207,698		28,703		33,362		45,231		55,510		569		475		209		14,038		2,718	
Year	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)	Quantity	Cost(PKR)
2017 - 18	78,619,319	154,880,059	29,398	970,129	789,602	16,068,404	1,289,552	11,605,971	178,214	6,576,080	207,136	20,713,642	280,829	42,124,344	344,649	24,642,394	3,531	3,545,053	2,952	3,247,342	1,298	1,303,581	87,161	6,232,038	16,878	16,945,293
2018 - 19	86,481,251	178,886,468	30,868	1,069,568	868,562	18,559,007	1,418,508	13,404,896	196,035	7,595,373	209,208	21,966,817	286,446	45,115,172	379,114	28,461,966	3,707	3,908,421	3,247	3,750,680	1,311	1,382,448	88,033	6,609,076	17,047	17,970,483
2019 - 20	95,129,376	206,613,870	32,411	1,179,198	955,419	21,435,653	1,560,358	15,482,655	215,638	8,772,655	211,300	23,295,810	292,174	48,318,350	417,025	32,873,570	3,893	4,309,034	3,572	4,332,036	1,324	1,466,086	88,913	7,008,925	17,217	19,057,697
2020 - 21	104,642,314	238,639,020	34,032	1,300,066	1,050,961	24,758,179	1,716,394	17,882,466	237,202	10,132,417	213,413	24,705,206	298,018	51,748,952	458,728	37,968,974	4,087	4,750,710	3,929	5,003,501	1,338	1,554,784	89,802	7,432,965	17,389	20,210,688
2021 - 22	115,106,545	275,628,068	35,733	1,433,323	1,156,057	28,595,697	1,888,034	20,654,249	260,922	11,702,942	215,547	26,199,871	303,978	55,423,128	504,600	43,854,165	4,292	5,237,657	4,322	5,779,044	1,351	1,648,848	90,700	7,882,660	17,563	21,433,434
2022 - 23	126,617,200	318,350,419	37,520	1,580,239	1,271,662	33,028,030	2,076,837	23,855,657	287,015	13,516,898	217,702	27,784,963	310,058	59,358,170	555,060	50,651,560	4,506	5,774,517	4,754	6,674,795	1,365	1,748,604	91,607	8,359,561	17,739	22,730,157
2023 - 24	139,278,919	367,694,733	39,396	1,742,213	1,398,828	38,147,375	2,284,521	27,553,284	315,716	15,612,017	219,879	29,465,954	316,259	63,572,600	610,567	58,502,552	4,732	6,366,405	5,230	7,709,389	1,378	1,854,394	92,524	8,865,314	17,916	24,105,332
2024 - 25	153,206,811	424,687,417	41,366	1,920,790	1,538,711	44,060,218	2,512,973	31,824,043	347,288	18,031,879	222,078	31,248,644	322,584	68,086,255	671,623	67,570,447	4,968	7,018,962	5,753	8,904,344	1,392	1,966,585	93,449	9,401,666	18,095	25,563,704
2025 - 26	168,527,493	490,513,967	43,434	2,117,671	1,692,582	50,889,552	2,764,270	36,756,770	382,017	20,826,821	224,299	33,139,187	329,036	72,920,379	738,785	78,043,867	5,217	7,738,406	6,328	10,284,517	1,406	2,085,563	94,383	9,970,467	18,276	27,110,308
2026 - 27	185,380,242	566,543,632	45,606	2,334,732	1,861,841	58,777,433	3,040,697	42,454,069	420,218	24,054,978	226,542	35,144,108	335,617	78,097,726	812,664	90,140,666	5,478	8,531,592	6,961	11,878,618	1,420	2,211,740	95,327	10,573,680	18,459	28,750,482
2027 - 28	203,918,266	654,357,895	47,886	2,574,042	2,048,025	67,887,935	3,344,767	49,034,450	462,240	27,783,499	228,807	37,270,326	342,329	83,642,664	893,930	104,112,469	5,752	9,406,080	7,657	13,719,803	1,434	2,345,550	96,280	11,213,387	18,644	30,489,886
2028 - 29	224,310,093	755,783,368	50,280	2,837,881	2,252,827	78,410,565	3,679,243	56,634,790	508,464	32,089,942	231,096	39,525,181	349,176	89,581,294	983,323	120,249,902	6,039	10,370,204	8,423	15,846,373	1,449	2,487,456	97,243	11,891,797	18,830	32,334,524
2029 - 30	246,741,102	872,929,790	52,794	3,128,764	2,478,110	90,564,202	4,047,167	65,413,182	559,310	37,063,883	233,407	41,916,454	356,159	95,941,565	1,081,656	138,888,637	6,341	11,433,149	9,265	18,302,561	1,463	2,637,947	98,216	12,611,251	19,018	34,290,763
Total Cost (PKR)	1,927,958,930	5,505,508,704	520,724	24,188,617	19,363,187	571,182,252	31,623,320	412,556,483	4,370,280	233,759,383	2,860,415	392,376,162	4,122,662	853,930,601	8,451,725	875,961,170	62,543	88,390,190	72,394	115,433,003	17,930	24,693,585	1,203,640	118,052,788	233,071	320,992,751
Total Cost (PKR)																								9,537,025,688		
Total Cost (PKR) in Millions																								9,537		
Total Cost (USD) in Millions																								\$90.83		

The highly diverse and disorganized structure of the private and commercial market operators poses a serious challenge in obtaining accurate data for future projections. The highlighted portion of the table below pertains to the commercial sector's contribution in percentage terms. However, in the wake of rapid urbanization in the last five years, these figures are likely to change and the commercial sector's share in contraceptives market may be increased. The table below has been copied from PDHS 2012-13 and the data pertaining to commercial enterprises is highlighted in yellow.

Table 7.7 Source of modern contraception methods

Percent distribution of users of modern contraceptive methods age 15-49 by most recent source of method, according to method, Pakistan 2012-13

Source	Female sterilization	Pill	IUD	Injectables	Condom	Total
Public sector	66.5	47.5	53.3	56.3	17.7	45.6
Public government hospital (RHSC)	65.2	15.2	27.3	22.5	2.6	31.3
Rural health center	1.0	0.4	2.9	3.5	0.2	1.1
Family welfare center (FWW)	0.0	2.4	4.8	2.9	0.2	1.0
Mother-child health center	0.2	0.1	3.1	4.1	0.0	0.9
Lady health worker	0.0	28.8	4.3	21.1	13.9	9.7
Lady health visitor	0.0	0.5	6.6	1.8	0.6	1.1
Basic health unit	0.0	0.1	3.3	0.3	0.1	0.4
Other public	0.1	0.0	0.9	0.1	0.1	0.1
Private medical sector	33.0	36.1	40.8	40.0	34.7	35.0
Private/NGO hospital/clinic	33.0	5.6	35.8	23.7	1.7	18.9
Private pharmacy, chemist	0.0	23.1	0.4	2.5	30.9	13.0
Private doctor	0.0	2.2	4.5	6.4	0.5	1.5
Dispensary/compounder	0.0	4.8	0.0	7.4	1.0	1.5
Other private	0.0	0.4	0.0	0.0	0.6	0.2
Other source	0.0	13.5	5.9	3.4	31.9	13.3
Shop	0.0	10.5	0.0	1.4	26.8	10.5
Friend/relative	0.0	3.0	0.2	0.1	4.9	2.0
Hakim	0.0	0.0	0.0	0.0	0.2	0.1
Dai/traditional birth attendant	0.0	0.0	5.7	1.9	0.0	0.8
Other	0.3	1.4	0.0	0.0	8.3	3.2
Don't know	0.0	1.1	0.0	0.0	6.9	2.5
Missing	0.1	0.5	0.0	0.3	0.5	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	1,120	204	299	357	1,140	3,160

Note: Total includes 32 women whose husbands are sterilized and 8 women who are using implants and are not shown separately but excludes women using the lactational amenorrhea method (LAM).

RHSC = Reproductive health service center

FWW = Family welfare worker

INVESTMENT GROWTH POTENTIAL

On the basis of the above tabular analysis for public, private, and commercial sectors, it is evident that there is huge potential for venture capitalists, pharmaceutical industry investors, and existing suppliers to benefit from the high return on investment (ROI) besides affording opportunity to attract foreign investment. The projections conducted above offer a promising ROI to the new entrants as well. The tables below summarize projected revenues till 2030 for Punjab Province as well as the entire country.

Projected market till 2030 – Punjab province

Description	PKR in million	USD in Million
Public Sector	17,098	\$164
Private Sector/NGOs	9,537	\$92
Commercial Sector	3,463	\$33
Total	30,098	\$289

Projected market till 2030 – Entire Country

Description	PKR in million	USD in Million
Public Sector	33046.3	314.73
Private Sector/NGOs	18432.6	175.55
Commercial Sector	6692.26	63.74
Total	58171.16	554.01

It would be a prudent economic decision for the investors to tap into a largely expanding consumer market whose family planning needs must be domestically met through local production. It is a promising opportunity for the national pharmaceutical companies to step forward mobilize their resources.

The tables below contain projected commodities and their financial impact till 2030. The first table contains the commodities that are currently being procured from international market by Punjab which includes condoms, intrauterine devices and implants. A quick scan of the tabular analysis reveals that condoms alone are the big ticket items and a huge amount of financial allocation is required in the years to come to fulfil the requirements of the population using barrier method. Approximately 106 million USD would be required to provide condoms to the users. Though the share of intrauterine devices and implants in the table below is not substantial, however, the current shift from short acting method to long acting methods may significantly impact the cost estimation which has been currently calculated at approximately 31 million USD. Given the foregoing scenario, it is evident that a sizeable amount of business opportunity exists for the potential investors, pharmaceutical industry and other entrepreneurs. It could also accrue financial benefits to the provincial and regional governments through local manufacturing of these commodities. The local manufacturing will help in forestalling the incidence of stock-out and would ensure availability of supplies at the last mile besides contributing the national exchequer.

Internationally Procured Contraceptive Requirement with Cost -- 2017 to 2030 ^[1]									
S.No	Product	Public Sector			Private Sector			Commercial Sector@13%	
		Quantity	Cost PKR millions	Cost USD millions	Quantity	Cost PKR millions	Cost USD millions	Cost PKR millions	Cost USD millions
1	Condom	2,022,922,774	5,539	53	1,927,958,930	5,506	53	2,096	20
2	POP	1,191,696	55	0.5	520,724	24	0.2		
3	2 Month Inj.	2,331,249	486	5	4,122,662	854	8		
4	1 Month Inj.	0	0	0	1,203,640	118	1		
2	Cu-T	11,325,874	588	6	4,370,280	234	2		
3	Multiload	1,206,237	168	2	2,860,415	392	4		
7	Safeload	0	0	0	233,071	321	3		
8	Femplant	0	0	0	17,930	25	0.2		
4	Implanon	232,432	328	3	62,543	88	1		
5	Jadelle	804,752	1,283	12	72,394	115	1		
Total			8,447	81		7,677	74	2,096	20
Estimated production value Punjab market alone			PKR 17,814million (\$171.3million)						

[1] New method e.g., SayanaPress or change in method mix or production needs for other regional countries and markets will require adjustment

Locally Manufactured Contraceptive Requirement with Cost -- 2017 to 2030 ^[2]									
S.No	Product	Public Sector			Private Sector			Commercial Sector@13%	
		Quantity	Cost PKR millions	Cost USD millions	Quantity	Cost PKR millions	Cost USD millions	Cost PKR millions	Cost USD millions
1	COC	132,357,013	3,815	37	19,363,187	571	5	1,366	13.1
2	ECP	16,589,315	208	2	31,623,320	413	4		
3	DMPA	45,988,609	4,629	45	8,451,725	876	8		
Total			8,651	83		1,860	18	1,366	13
Estimated Punjab total market for existing local production			PKR 11,374 million (\$109.4million)						

[2] Change in method mix, local market trend, and needs of exports will require adjustments

The above tables represent the commodities requirement till 2030 which are currently being produced in Pakistan whose estimated cost is approximately 113 million USD for Punjab province. Whereas the table below contains analysis of local production of COC, ECP, and DMPA by Zafa and Hensel which has resulted in the following yearly sale in 2014/15, 2015/16 and 2016/17. Punjab procured the products of worth 943.36 million PKR during 2014/15 to 2016-17.

Year	PKR in million	USD in million
2014-15	595	5.66
2015-16	119	1.12
2016-17	229	2.18
Total	943	8.96

The main barriers impeding local production have been a high-dependency on external aid for contraceptives and fragmentary cooperation between local manufacturers, technical and development partners, and national authorities. Therefore, a significant degree of coherence across health, trade, investment and intellectual property areas is essential for Punjab to reap the maximum benefit of a viable pharmaceutical sector particularly in family planning commodities. This would result in significant saving in public funds and would ensure sustainable and uninterrupted supply of FP commodities.

Restraining the unprecedented population growth, and ultimately harmonizing it to a tolerable level requires multipronged strategies focused on ensuring commodity security of FP goods. Since Punjab aims to achieve targets of universal access of FP commodities to be able to comply with 50% CPR by 2020, so it has ramped up their financial allocations for the procurement of contraceptives. Other concomitant efforts of removing structural barriers to access and strengthening of overall health systems are also underway.

Producing a full range of the family planning commodities to be procured by Punjab in the years to come is economically viable and less risky from a market niche perspective. In the wake of the new census figures ringing alarm bells in terms of unprecedented growth, the investment climate for such investment seems highly conducive for local production of contraceptives that are currently being imported from the international market.

WAY FORWARD

1. The local production of FP commodities could be highly lucrative for investors; therefore, upon endorsement of contraceptive commodity projection report, the PPW should arrange a seminar for potential local manufacturers and pharmaceutical industries to disseminate the projected data to stir private sector interest and attract investments in local production of contraceptives. The GHSC-PSM project will provide technical support to the PPW for arranging the event.
2. The PPW should coordinate with all provincial governments to partner with them and to solicit their commitments to purchase the contraceptives from the potential local investors. If there is no commitment on the part of the provincial governments to give confirmed business to the potential investors, the likelihood of investment in local manufacturing of contraceptives would be minimal.
3. The GHSC-PSM project will work with the PPW team to incorporate feedback, if any, from the seminar into the data / report and will prepare future roadmap. The roadmap will aim on how the MoNHSR&C / PPW can facilitate and assist the local interested manufacturers in registration, licensing of contraceptive products, rebates on import of machinery and equipment, and waivers on commercial taxes.

ANNEXURE-I: PPW REQUEST FOR COMMISSIONING STUDY

No.12-2/2017-P&S
GOVERNMENT OF PAKISTAN
M/O NATIONAL HEALTH SERVICES, REGULATIONS & COORDINATION
(Population Programme Wing)
10th Floor, Shaheed-e-Millat Secretariat

Islamabad, the 26th April 2017

Subject:- **REQUEST FOR COMMISSIONING OF FEASIBILITY STUDY ON
THE MANUFACTURING OF CONTRACEPTIVES IN PAKISTAN**

Dear Ms. Monica Villanueva,

Please recall our meeting of 16th March 2017. This meeting was followed up by another meeting with the Technical Team of USAID Global Health Supply Chain Programme on 22nd March 2017. As an outcome of the aforesaid meetings, the following are identified components / dimensions of the feasibility study:-

S.No.	Area of Technical Assistance	Responsibility
i.	Desk review outlining existing method mix, including quantities ordered and consumed over the past 10 years.	Global Health Supply Chain Programme (GHSCP).
ii.	The projection of the demand of the method mix till 2030 while keeping in view: a. Pakistan commitments in FP 2020; b. Vision 20205 and SDGs;	
iii.	Provincial preparedness for procurement in terms of their choice, method-mix requirements and funding allocation for contraceptive procurement as reflected in their CIPs.	
iv.	Writing a letter of intent to private sector / pharmaceutical companies.	Population Programme Wing (PPW)
v.	Holding a briefing session with short-listed / interested organizations and invite their technical proposals to determine potential investments to gain access to internal and external markets and commercial advantage.	Population Programme Wing supported by Global Health Supply Chain Programme.
vi.	Evaluation of Technical proposal and award of contract. Coordinate and sign MoUs with the Provincial Government(s) for obtaining of commitment to purchase contraceptives from potential investors.	Committee chaired by: * Additional Secretary Members: * DG (Population) * DG (Health) * Country Director (GHSCP).
vii.	Facilitate interested firms on the following: a. Facilitating registration and licensing. b. Rebate on import of machinery / equipment.	
viii.	Concession / waivers on commercial taxes.	

2. We will appreciate if USAID may engage an appropriate organization / consultant to carry out the feasibility study.

With best regards,

Yours faithfully,


(ABDUL GHAFAR KHAN)
Director General (P)
Ph.9216280

Ms. Monica Villanueva

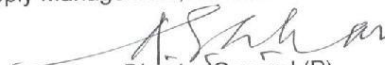
MCH Team Leader

USAID Office

Islamabad

Copy to:-

1. SPS to Secretary, M/o NHR&C, Islamabad
2. Dr. Muhammad Tariq, Country Director, Global Health Supply Chair
Programme – Procurement and Supply Management, Islamabad


Director General (P)

ANNEXURE- II: USAID PAKISTAN CONCURRENCE TO THE PPW REQUEST



USAID | PAKISTAN
FROM THE AMERICAN PEOPLE

May 09, 2016

Mr. Abdul Ghaflar Khan
Director General,
Population Program Wing
Ministry of National Health Services, Regulations and Coordination
LG&RD Complex, G-5/2,
Islamabad

Subject: Request for Commissioning of Feasibility Study on the Manufacturing of Contraceptives in Pakistan

Dear Mr. Khan,

Thank you for your letter dated April 26, 2017 requesting USAID to engage an appropriate consultant to carry out the feasibility study on the manufacturing of contraceptives in Pakistan. USAID is happy to provide technical assistance for this request through the Procurement & Supply Management (PSM) project. We have advised the PSM project to work closely with you and the Population Programme Wing (PPW) to carry out and complete the requested feasibility study as outlined in your letter.

We look forward to greater future collaboration.

Sincerely,

Monica Villanueva
MCH Team Lead/USAID Pakistan

Copy for information:

1. Dr. Assad Hafeez, Director General, MoNHSR&C, Islamabad
2. Sargita Patel, Director Health Office, USAID Pakistan, Islamabad
3. Dr. Muhammad Tariq, Country Director, USAID GHSC-PSM, Islamabad

ANNEXURE- III: PUBLIC SECTOR CONTRACEPTIVE DATA (2007 – 2010)

Total Consumption of Contraceptives of Provincial / Regional Population Welfare Departments for the Period July-2007 to June 2010										
Year	Condom	COC	POP	EC-Pills	Copper-T	Multi load	Norigest	DMPA	Norplant	Implanon
2007-08	55502062	2701914	150841	50706	57948	519733	1527729	511692	1400	
2008-09	66358006	3305675	144000	76703	728354	823811	1561595	758495	1545	886
2009-10	41364808	3343099	68817	48887	662887	96508	1336905	905182	0	2171
2010-11	71383308	3356055	120068	52678	782922	291453	946500	857025	1192	426
TOTAL	234608184	12706743	483726	228974	2232111	1731505	5372729	3032394	4137	3483

Total Consumption Of Provincial Health Program (PHC Project) For The Period Of July-2007 To June 2010			
Year	Condom	COC	DMPA
2007-08	163368000	4993200	0
2008-09	168984000		
2009-10	10544976	3455500	75500
2010-11	100649884	6503040	1030400
Total	443546860	14951740	1105900

Amount Allocated By Provincial/ Regional PWD For Contraceptive Procurement For Next Three Year 2017-20		
S.#	Province / Region	Amount
1.	PWD Punjab	2.943 Billion
2.	Sindh	2.700 Billion
3.	KPK	2.000 Billion
4.	Balochistan	120.00 Million
5.	AJK	60.00 Million
6.	G.B	55.348 Million
7.	FATA	59.179 Million

Private Sector 5 Years consumption data as extracted from cLMIS

Private Sector Yearly Report for Stakeholder(s) = 'All' And Indicator = 'Consumption' (2012-16)												
Year	Condom	POP	COC	ECP	Copper-T-380A	Safe Load	1-Month Inj	3-Month Inj	Implants	Multiload	2-Month Inj	
2016	10,398,761	0	82,084	191,461	35,634	5,032	9,858	41,568	763	13,245	27,323	
2015	11,177,743	0	93,321	181,418	37,300	1,743	10,261	42,966	1,269	20,413	31,943	
2014	11,187,177	10,118	109,568	200,169	25,322	1,961	14,042	52,027	2,219	34,720	37,503	
2013	16,096,454	3,094	183,355	238,990	14,932	3,070	19,904	67,443	699	66,891	65,918	
2012	8,696,968	9,335	109,739	132,042	17,283	1,651	15,431	48,314	955	29,888	59,032	