USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM

PROCUREMENT AND SUPPLY MANAGEMENT

Situation analysis:

Contraceptive Manufacturing in Sindh

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Chemonics Contact:

Muhammad Tariq
Country Director – GHSC-PSM Pakistan
20th Floor, PTML Tower
Jinnah Avenue, Blue Area
Islamabad, 44000
P [+91 51-835-0530]
mtariq@ghsc-psm.org

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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.

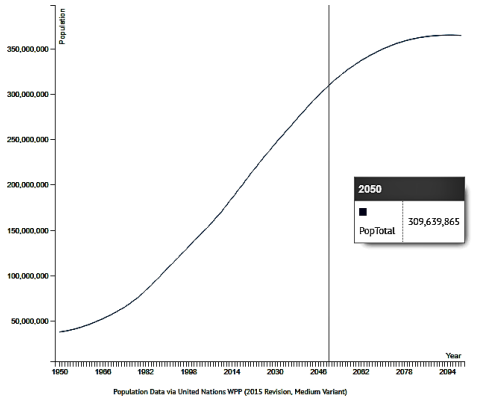

Figure 1: Pakistan Population Growth (Source: Population Data via United Nations WPP (2015 Revision, Medium Variant))

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: <25per 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) 45% for Sindh	CPR 29.5%	15.5%

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

[1] Economic Survey of Pakistan 2016-17
[2] Pakistan Demographic and Health Survey 2012-13

FY2020. The federal and provincial governments in Pakistan have responded with political commitment 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.

Cost in million

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

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.

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 bourgeoning 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 48 million inhabitants, Sindh has become the second most populous province after Punjab. Additionally, more than half of its population resides in urban centers. The current contraceptives prevalence rate stands at 30% as against of FP2020 commitment of 45% by Government of Sindh[3]. Sindh has traditionally been a trendsetter in pioneering new FP methods using creative approaches to increase uptake of long acting contraceptive methods. Population Welfare Department of Government of Sindh was the first one to make sure this innovation of long acting method succeeds. Sindh PWD devised and sponsored strategies by creating champions for innovation, provided training to the healthcare providers and managed conflicting priorities and molds of the groups through communication techniques and social marketing.

[3] http://pwdsindh.gov.pk/Publications/e-books/CIP%20Sindh-03%2015%2016-final.pdf

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 Sindh 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%[4]. 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 around 70% of the country's demand[5] of medicines.

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

Presently, only a few pharmaceutical industries including ZAFA 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), Sindh 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 175.38 m ($1.67m):

Year 2015-16: Savings- PKR 78 m

Products	Sindh (2015-16)		
	Intl. Market	Local Market	Savings
DMPA	169,342,068	144,142,356	25,199,713
COC	181,165,345	129,403,798	51,761,547
ECP	1,304,015	551,964	752,051
Total	**351,811,428**	**274,098,117**	**77,713,311**

Year 2016-17: Savings- PKR 98 m

Products	Sindh (2016-17)		
	Intl. Market	Local Market	Savings
DMPA	214,210,080	182,333,580	31,876,500
COC	229,174,142	164,504,190	64,669,952
ECP	1,649,545	523,665	1,125,880
Total	**445,033,767**	**347,361,435**	**97,672,332**

Provincial Savings

Province[6]	2015-16	2016-17
Sindh	77,713,311	97,672,332
Total	77,713,311	97,672,332

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

[6] Sindh and KP couldn't procure contraceptives in 2014-15 and Balochistan in 2014-15 and 2015-16

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 into 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.

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

Sindh Public Sector* Contraceptives Forecast with Cost for the Period 2017-18 to 2029-30																				
Rationale for Foreast / 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	62,585,438	123,293,313	36,869	1,216,672	3,386,955	68,924,527	513,242	4,619,181	308,954	11,400,397	37,319	3,731,870	72,124	10,818,669	1,254,504	89,697,057	6,340	6,365,787	15,857	17,442,150
2018 - 19	64,463,001	133,341,718	37,975	1,315,831	3,590,172	76,712,999	528,640	4,995,644	324,402	12,568,937	38,438	4,036,018	74,288	11,700,391	1,317,230	98,891,006	6,657	7,018,280	17,442	20,145,683
2019 -20	66,396,891	144,209,068	39,114	1,423,071	3,805,582	85,381,568	544,499	5,402,789	340,622	13,857,253	39,591	4,364,953	76,517	12,653,973	1,383,091	109,027,334	6,990	7,737,654	19,186	23,268,264
2020 -21	68,388,798	155,962,107	40,288	1,539,051	4,033,917	95,029,685	560,834	5,843,116	357,653	15,277,622	40,779	4,720,697	78,812	13,685,272	1,452,246	120,202,636	7,340	8,530,763	21,105	26,874,845
2021 -22	70,440,462	168,673,019	41,496	1,664,484	4,275,952	105,768,040	577,659	6,319,330	375,535	16,843,578	42,003	5,105,434	81,177	14,800,621	1,524,858	132,523,406	7,707	9,405,166	23,216	31,040,446
2022 -23	72,553,676	182,419,870	42,741	1,800,139	4,532,509	117,719,828	594,988	6,834,356	394,312	18,570,045	43,263	5,521,526	83,612	16,006,872	1,601,101	146,107,055	8,092	10,369,196	25,537	35,851,715
2023 -24	74,730,286	197,287,089	44,023	1,946,851	4,804,460	131,022,169	612,838	7,391,356	414,028	20,473,474	44,560	5,971,531	86,120	17,311,432	1,681,156	161,083,028	8,497	11,432,038	28,091	41,408,731
2024 -25	76,972,195	213,365,987	45,344	2,105,519	5,092,728	145,827,674	631,223	7,993,751	434,729	22,572,005	45,897	6,458,211	88,704	18,722,314	1,765,214	177,594,038	8,922	12,603,822	30,900	47,827,084
2025 -26	79,281,360	230,755,315	46,704	2,277,119	5,398,291	162,306,201	650,160	8,645,242	456,466	24,885,636	47,274	6,984,555	91,365	20,248,182	1,853,474	195,797,427	9,368	13,895,714	33,990	55,240,282
2026 -27	81,659,801	249,561,873	48,105	2,462,704	5,722,189	180,646,801	669,665	9,349,829	479,289	27,436,414	48,692	7,553,796	94,106	21,898,409	1,946,148	215,866,664	9,836	15,320,025	37,389	63,802,526
2027 -28	84,109,595	269,901,166	49,549	2,663,415	6,065,520	201,059,890	689,755	10,111,840	503,253	30,248,646	50,153	8,169,430	96,929	23,683,129	2,043,455	237,992,997	10,328	16,890,327	41,128	73,691,918
2028 -29	86,632,883	291,898,111	51,035	2,880,483	6,429,451	223,779,658	710,447	10,935,955	528,416	33,349,132	51,658	8,835,239	99,837	25,613,304	2,145,628	262,387,279	10,844	18,621,586	45,240	85,114,165
2029 - 30	89,231,870	315,687,807	52,566	3,115,242	6,815,218	249,066,759	731,761	11,827,235	554,837	36,767,418	53,208	9,555,311	102,832	27,700,789	2,252,909	289,281,975	11,386	20,530,298	49,764	98,306,861
Cost (PKR)	977,446,257	2,676,356,443	575,810	26,410,581	63,952,944	1,843,245,797	8,015,711	100,269,624	5,472,494	284,250,558	582,836	81,008,570	1,126,425	234,843,357	22,221,013	2,236,451,902	112,308	158,720,656	388,844	620,014,672
																		Total Cost (PKR)		8,261,572,160
																		Total Cost (PKR) in Millions		8,262
																		Total Cost (USD) in Millions		$79

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

Sindh Private Sector* Contraceptives Forecast with Cost for the Period 2017-18 to 2029-30

Rationale for Foreast / 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	37,987,688	74,835,745	14,205	468,752	381,524	7,764,015	623,093	5,607,833	86,110	3,177,464	100,085	10,008,524	135,692	20,353,858	166,529	11,906,839	1,706	1,712,917	1,426	1,569,068	627	629,871	42,115	3,011,228	8,155	8,187,714
2018 - 19	41,786,457	86,435,286	14,915	516,799	419,676	8,967,437	685,402	6,477,047	94,721	3,669,971	101,086	10,614,040	138,406	21,798,982	183,182	13,752,399	1,791	1,888,491	1,569	1,812,273	634	667,978	42,536	3,193,408	8,237	8,683,071
2019 -20	45,965,102	99,832,755	15,661	569,771	461,644	10,357,389	753,942	7,480,989	104,193	4,238,817	102,097	11,256,189	141,174	23,346,709	201,500	15,884,021	1,881	2,082,061	1,726	2,093,175	640	708,391	42,962	3,386,609	8,319	9,208,396
2020 -21	50,561,613	115,306,832	16,444	628,173	507,809	11,962,785	829,336	8,640,542	114,613	4,895,833	103,118	11,937,189	143,998	25,004,326	221,650	18,346,044	1,975	2,295,472	1,899	2,417,617	646	751,248	43,391	3,591,499	8,402	9,765,504
2021 -22	55,617,774	133,179,391	17,266	692,560	558,589	13,817,016	912,270	9,979,826	126,074	5,654,688	104,149	12,659,389	146,878	26,779,633	243,815	21,189,681	2,074	2,530,758	2,088	2,792,348	653	796,699	43,825	3,808,784	8,486	10,356,317
2022 -23	61,179,551	153,822,197	18,129	763,548	614,448	15,958,654	1,003,497	11,526,700	138,681	6,531,164	105,191	13,425,282	149,815	28,680,987	268,197	24,474,082	2,177	2,790,161	2,297	3,225,162	659	844,899	44,263	4,039,216	8,571	10,982,875
2023 -24	67,297,507	177,664,637	19,036	841,811	675,893	18,432,245	1,103,846	13,313,338	152,549	7,543,495	106,243	14,237,511	152,812	30,717,337	295,017	28,267,565	2,286	3,076,153	2,527	3,725,062	666	896,016	44,706	4,283,588	8,657	11,647,338
2024 -25	74,027,257	205,202,656	19,987	928,097	743,482	21,289,243	1,214,231	15,376,905	167,804	8,712,736	107,305	15,098,881	155,868	32,898,268	324,518	32,649,037	2,401	3,391,458	2,780	4,302,447	673	950,225	45,153	4,542,745	8,743	12,352,002
2025 -26	81,429,983	237,009,068	20,987	1,023,227	817,831	24,589,076	1,335,654	17,760,326	184,585	10,063,211	108,378	16,012,363	158,985	35,234,045	356,970	37,709,638	2,521	3,739,083	3,058	4,969,326	679	1,007,713	45,605	4,817,581	8,831	13,099,299
2026 -27	89,572,981	273,745,473	22,036	1,128,108	899,614	28,400,383	1,469,220	20,513,176	203,043	11,623,008	109,462	16,981,111	162,165	37,735,662	392,667	43,554,632	2,647	4,122,339	3,363	5,739,572	686	1,068,680	46,061	5,109,045	8,919	13,891,806
2027 -28	98,530,279	316,176,022	23,138	1,243,739	989,575	32,802,442	1,616,142	23,692,718	223,348	13,424,574	110,556	18,008,468	165,408	40,414,894	431,934	50,305,600	2,779	4,544,878	3,700	6,629,205	693	1,133,335	46,521	5,418,142	9,008	14,732,260
2028 -29	108,383,307	365,183,305	24,295	1,371,222	1,088,533	37,886,821	1,777,756	27,365,090	245,682	15,505,384	111,662	19,097,981	168,716	43,284,351	475,127	58,102,968	2,918	5,010,728	4,070	7,656,732	700	1,201,902	46,986	5,745,940	9,098	15,623,562
2029 - 30	119,221,638	421,786,717	25,509	1,511,772	1,197,386	43,759,278	1,955,531	31,606,679	270,251	17,908,718	112,779	20,253,408	172,091	46,357,540	522,640	67,108,928	3,064	5,524,328	4,477	8,843,526	707	1,274,617	47,456	6,093,569	9,189	16,568,788
Total Cost (PKR)		2,660,180,085		11,687,581		275,986,786		199,341,169		112,949,064		189,590,337		412,606,591		423,251,435		42,708,828		55,775,513		11,931,574		57,041,355		155,098,933
																								Total Cost (PKR)		4,608,149,250
																								Total Cost (PKR) in Millions		4,608
																								Total Cost (USD) in Millions		$43.89

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 Sindh Province as well as the entire country.

Projected market till 2030 – Sindh province

Description	PKR in million	USD in Million
Public Sector	8,262	$79
Private Sector/NGOs	4,608	$44
Commercial Sector	1,673	$16
Total	**14,543**	**$139**

Projected market till 2030 – Entire Country

Description	PKR in million	USD in Million
Public Sector	33,046	315
Private Sector/NGOs	18,433	175
Commercial Sector	6,692	64
Total	**58,171**	**554**

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 Sindh 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 68 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 16 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*									
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	977,446,257	2,676	25	931,561,137	2,660	25	1,013	10
2	POP	575,810	26	0.3	251,606	12	0.1		
3	2 Month Inj.	1,126,425	235	2	1,992,009	413	4		
4	1 Month Inj.	0	0	0	581,581	57	1		
2	Cu-T	5,472,494	284	3	2,111,654	113	1		
3	Multiload	582,836	81	1	1,382,110	190	2		
7	Safeload	0	0	0	112,616	155	1		
8	Femplant	0	0	0	8,663	12	0.1		
4	Implanon	112,308	159	2	30,220	42.7	0.4		
5	Jadelle	388,844	620	6	34,980	56	1		
Total			**4,082**	**39**		**3,710**	**35**	**1,013**	**10**
Estimated production value Sindh market alone			**PKR 8,804million ($84 million)**						
**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*									
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	63,952,944	1,843	18	9,356,005	276	3	660	6
2	ECP	8,015,711	100	1	15,279,919	199	2		
3	DMPA	22,221,013	2,236	21	4,083,748	423	4		
Total			**4,180**	**40**		**899**	**9**	**660**	**6**
Estimated Sindh total market for existing local production			**PKR 5,739 million ($55 million)**						
**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 52.8 million USD for Sindh 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 2015/16 and 2016/17. Sindh procured the products of worth 621 million PKR during 2016-17.

Year	PKR in million	USD in million
2015-16	274	2.6
2016-17	347	3.3
Total	621	5.9

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 Sindh 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 Sindh aims to achieve targets of universal access of FP commodities to be able to comply with 45% 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 Sindh 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 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 GHAFFAR KHAN)
Director General (P)
Ph.9216280

Ms. Monica Villanueva
MCH Team Leader
USAID Office
Islamabad

Copy to:-

1. SPS to Secretary, M/o NHSR&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 Ghaffar 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. Sangita 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