USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM

PROCUREMENT AND SUPPLY MANAGEMENT

Situation analysis:

Contraceptive Manufacturing in Khyber Pakhtunkhwa

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This publication was produced for review by the United States Agency for International Development. It was prepared by Chemonics International Inc.

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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.

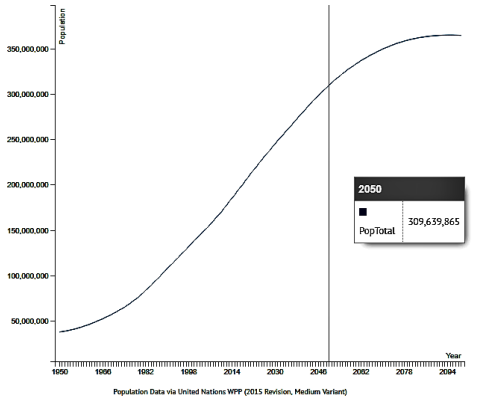

Figure 1: Pakistan Population Growth (Source: Population Data via United Nations WPP (2015 Revision, Medium Variant))

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) 42% for Khyber Pakhtunkhwa	CPR 28.1%	13.9%

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.

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 approximately 30.5 million inhabitants, Khyber Pakhtunkhwa has become the third most populous province after Punjab and Sindh with a population growth rate of 2.89. The current contraceptives prevalence rate stands at 28% as against of FP2020 commitment of 42%[3] by Government of Sindh[4].

[3] http://kp.gov.pk/uploads/2017/03/CIP_on_Family_Planning_for_Khyber_Pakhtunkhwa_2017-21_Final_Draft.pdf
[4] Pakistan Demographic and Health Survey 2012-13

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 Khyber Pakhtunkhwa 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 demand[6] of medicines.

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 two years of local contraceptive procurement (2015-16 and 2016-17), Khyber Pakhtunkhwa 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 80 m ($0.75m):

Year 2015-16: Savings- PKR 39.91 m

Commodity	KPK (2015-16)		
	Intl. Market	Local Market	Savings
DMPA	91,206,444	77,634,057	13,572,388
COC	91,840,902	65,600,645	26,240,258
ECP	176,876	77,988	98,888
Total	**183,224,222**	**143,312,689**	**39,911,533**

Year 2016-17: Savings- PKR 39.60 m

Commodity	KPK (2016-17)		
	Intl. Market	Local Market	Savings
DMPA	91,206,444	77,634,057	13,572,388
COC	91,840,902	65,924,598	25,916,304
ECP	176,876	56,151	120,725
Total	**183,224,222**	**143,614,806**	**39,609,416**

Provincial Savings

Province	2015-16	2016-17
KP	39,911,533	39,609,416
Total	**39,911,533**	**39,609,416**

[6] http://www.ppma.org.pk

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 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.

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

Khyber Pakhtunkhwa 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	36,599,964	72,101,929	21,561	711,510	1,980,691	40,307,064	300,144	2,701,297	180,676	6,666,952	21,824	2,182,398	42,178	6,326,758	733,634	52,454,839	3,708	3,722,712	9,273	10,200,169
2018 - 19	37,697,963	77,978,237	22,208	769,498	2,099,533	44,861,762	309,148	2,921,453	189,710	7,350,315	22,479	2,360,263	43,444	6,842,389	770,316	57,831,460	3,893	4,104,290	10,200	11,781,196
2019 - 20	38,828,902	84,333,463	22,874	832,212	2,225,505	49,931,141	318,423	3,159,551	199,196	8,103,722	23,153	2,552,625	44,747	7,400,043	808,832	63,759,185	4,088	4,524,980	11,220	13,607,281
2020 - 21	39,993,769	91,206,640	23,560	900,037	2,359,035	55,573,360	327,976	3,417,054	209,155	8,934,353	23,848	2,760,663	46,089	8,003,147	849,273	70,294,501	4,292	4,988,790	12,342	15,716,409
2021 - 22	41,193,582	98,639,981	24,267	973,390	2,500,577	61,853,150	337,815	3,695,544	219,613	9,850,124	24,563	2,985,658	47,472	8,655,403	891,737	77,499,688	4,507	5,500,141	13,576	18,152,453
2022 - 23	42,429,390	106,679,140	24,995	1,052,722	2,650,611	68,842,555	347,949	3,996,731	230,594	10,859,762	25,300	3,228,989	48,896	9,360,819	936,324	85,443,406	4,732	6,063,906	14,934	20,966,083
2023 - 24	43,702,271	115,373,490	25,745	1,138,518	2,809,648	76,621,764	358,388	4,322,465	242,123	11,972,888	26,059	3,492,151	50,363	10,123,725	983,140	94,201,355	4,969	6,685,456	16,427	24,215,826
2024 - 25	45,013,339	124,776,429	26,517	1,231,308	2,978,227	85,280,024	369,139	4,674,746	254,230	13,200,109	26,841	3,776,762	51,874	10,948,809	1,032,297	103,856,994	5,217	7,370,715	18,070	27,969,279
2025 - 26	46,363,740	134,945,708	27,313	1,331,659	3,156,921	94,916,666	380,214	5,055,737	266,941	14,553,120	27,646	4,084,568	53,430	11,841,137	1,083,912	114,502,336	5,478	8,126,214	19,877	32,304,517
2026 - 27	47,754,652	145,943,783	28,132	1,440,189	3,346,336	105,642,249	391,620	5,467,780	280,288	16,044,815	28,475	4,417,460	55,033	12,806,190	1,138,107	126,238,825	5,752	8,959,150	21,865	37,311,717
2027 - 28	49,187,291	157,838,202	28,976	1,557,565	3,547,116	117,579,824	403,369	5,913,404	294,302	17,689,408	29,330	4,777,483	56,684	13,849,894	1,195,013	139,178,304	6,040	9,877,463	24,051	43,095,034
2028 - 29	50,662,910	170,702,015	29,845	1,684,506	3,759,943	130,866,344	415,470	6,395,347	309,018	19,502,573	30,209	5,166,848	58,385	14,978,660	1,254,763	153,444,081	6,342	10,889,903	26,457	49,774,764
2029 - 30	52,182,797	184,614,229	30,741	1,821,794	3,985,540	145,654,241	427,934	6,916,567	324,469	21,501,586	31,116	5,587,946	60,136	16,199,421	1,317,501	169,172,099	6,659	12,006,118	29,102	57,489,852
Total Cost (PKR)	571,610,571	1,565,133,248	336,734	15,444,908	37,399,682	1,077,930,142	4,687,588	58,637,676	3,200,315	166,229,727	340,842	47,373,812	658,733	137,336,395	12,994,848	1,307,877,072	65,678	92,819,839	227,396	362,584,580
																		Total Cost (PKR)		4,831,367,399
																		Total Cost (PKR) in Millions		4,831
																		Total Cost (USD) in Millions		$46

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

Khyber Pakhtunkhwa 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	22,215,200	43,763,944	8,307	274,126	223,115	4,540,396	364,385	3,279,461	50,357	1,858,181	58,530	5,852,985	79,353	11,902,936	97,386	6,963,120	998	1,001,714	834	917,591	367	368,349	24,629	1,760,966	4,769	4,788,175
2018 - 19	24,436,720	50,547,355	8,722	302,224	245,427	5,244,157	400,823	3,787,777	55,393	2,146,199	59,115	6,207,091	80,940	12,748,044	107,125	8,042,403	1,048	1,104,389	918	1,059,817	371	390,634	24,875	1,867,505	4,817	5,077,860
2019 - 20	26,880,392	58,382,195	9,158	333,202	269,969	6,057,001	440,905	4,374,882	60,932	2,478,860	59,706	6,582,620	82,559	13,653,156	117,837	9,288,976	1,100	1,217,589	1,009	1,224,089	374	414,267	25,124	1,980,489	4,865	5,385,070
2020 - 21	29,568,431	67,431,435	9,616	367,355	296,966	6,995,837	484,996	5,052,989	67,025	2,863,083	60,303	6,980,868	84,210	14,622,530	129,621	10,728,767	1,155	1,342,392	1,110	1,413,823	378	439,330	25,375	2,100,308	4,914	5,710,867
2021 - 22	32,525,274	77,883,308	10,097	405,009	326,663	8,080,191	533,495	5,836,202	73,728	3,306,861	60,906	7,403,211	85,894	15,660,729	142,583	12,391,726	1,213	1,479,987	1,221	1,632,965	382	465,910	25,629	2,227,377	4,963	6,056,374
2022 - 23	35,777,802	89,955,221	10,602	446,523	359,329	9,332,621	586,845	6,740,814	81,101	3,819,425	61,515	7,851,105	87,612	16,772,641	156,842	14,312,443	1,273	1,631,686	1,343	1,886,075	386	494,097	25,885	2,362,133	5,012	6,422,785
2023 - 24	39,355,582	103,898,280	11,132	492,291	395,262	10,779,177	645,529	7,785,640	89,211	4,411,436	62,131	8,326,097	89,364	17,963,499	172,526	16,530,872	1,337	1,798,934	1,478	2,178,416	389	523,990	26,144	2,505,042	5,062	6,811,364
2024 - 25	43,291,140	120,002,513	11,689	542,751	434,789	12,449,950	710,082	8,992,414	98,132	5,095,208	62,752	8,829,826	91,152	19,238,907	189,778	19,093,157	1,404	1,983,325	1,626	2,516,071	393	555,691	26,406	2,656,597	5,113	7,223,451
2025 - 26	47,620,254	138,602,903	12,273	598,383	478,267	14,379,692	781,091	10,386,238	107,945	5,884,966	63,379	9,364,030	92,975	20,604,869	208,756	22,052,596	1,474	2,186,616	1,788	2,906,062	397	589,311	26,670	2,817,322	5,164	7,660,470
2026 - 27	52,382,279	160,086,353	12,887	659,717	526,094	16,608,544	859,200	11,996,105	118,740	6,797,135	64,013	9,930,554	94,834	22,067,815	229,632	25,470,749	1,548	2,410,744	1,967	3,356,502	401	624,964	26,936	2,987,770	5,216	8,123,928
2027 - 28	57,620,507	184,899,737	13,531	727,339	578,704	19,182,868	945,120	13,855,502	130,614	7,850,691	64,653	10,531,352	96,731	23,634,630	252,595	29,418,715	1,625	2,657,845	2,164	3,876,759	405	662,774	27,206	3,168,530	5,268	8,615,426
2028 - 29	63,382,558	213,559,197	14,208	801,891	636,574	22,156,213	1,039,632	16,003,104	143,675	9,067,548	65,300	11,168,499	98,665	25,312,689	277,854	33,978,616	1,706	2,930,274	2,380	4,477,657	409	702,872	27,478	3,360,226	5,321	9,136,659
2029 - 30	69,720,814	246,660,872	14,918	884,085	700,231	25,590,426	1,143,595	18,483,586	158,043	10,473,018	65,953	11,844,193	100,639	27,109,890	305,640	39,245,301	1,792	3,230,627	2,618	5,171,694	413	745,396	27,752	3,563,519	5,374	9,689,427
Total Cost (PKR)	544,776,953	1,555,673,314	147,139	6,834,897	5,471,391	161,397,072	8,935,696	116,574,715	1,234,895	66,052,613	808,258	110,872,429	1,164,927	241,292,334	2,388,176	247,517,439	17,673	24,976,123	20,456	32,617,520	5,066	6,977,584	340,109	33,357,784	65,858	90,701,856
																								Total Cost (PKR)		2,694,845,682
																								Total Cost (PKR) in Millions		2,695
																								Total Cost (USD) in Millions		$25.67

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 – Khyber Pakhtunkhwa province

Description	PKR in million	USD in Million
Public Sector	4,831	$46
Private Sector/NGOs	2,695	$26
Commercial Sector	978	$9
Total	**8,505**	**$81**

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 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 30 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 10 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	571,610,571	1,565	15	544,776,953	1,556	14.82	592	6
2	POP	336,734	15	0.1	147,139	6.8	0.07		
3	2 Month Inj.	658,733	137	1	1,164,927	241	2.30		
4	1 Month Inj.	0	0	0	340,109	33	0.32		
2	Cu-T	3,200,315	166	2	1,234,895	66	0.63		
3	Multiload	340,842	47	0.5	808,258	111	1.06		
7	Safeload	0	0	0	65,858	91	0.86		
8	Femplant	0	0	0	5,066	7	0.07		
4	Implanon	65,678	93	1	17,673	25	0.24		
5	Jadelle	227,396	363	3	20,456	33	0.31		
Total			**2,387**	**23**		**2,169**	**21**	**592**	**6**
Estimated production value Khyber Pakhtunkhwa market		**PKR 5,149million ($49million)**							

[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	37,399,682	1,078	10	5,471,391	161	1.5	386	4
2	ECP	4,687,588	59	1	8,935,696	117	1.1		
3	DMPA	12,994,848	1,308	12	2,388,176	248	2.4		
Total			**2,444**	**23**		**525**	**5.0**	**386**	**4**
Estimated total market KP for existing local production		**PKR3,356million ($32million)**							

[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 32 million USD for Khyber Pakhtunkhwa 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. Khyber Pakhtunkhwa procured the products of worth 79 million PKR during 2015-16 and 2016-17.

Year	PKR in million	USD in million
2015-16	40	0.38
2016-17	39	0.37
Total	79	0.75

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 Khyber Pakhtunkhwa aims to achieve targets of universal access of FP commodities to be able to comply with 42% 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 Khyber Pakhtunkhwa 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