September 2005

Contraceptive Availability Study: Methodology and Key Findings

Report to the Reproductive Health Field

MERCER
Management Consulting

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1.) Executive Summary

This paper summarizes our findings related to a study on contraceptive commodity availability commissioned by the Bill & Melinda Gates Foundation ("Gates Foundation"). The study was conducted during the period February 2005 to June 2005, with the purpose of identifying and evaluating key issues impacting the availability of contraceptive commodities in developing countries and suggesting potential solutions to address these issues.

The study was led by the authors of the paper, but included the close participation of Gates Foundation staff throughout the process and input from many key constituents from the reproductive health field. The views represented in this paper are those of the authors (and any questions about the analysis or recommendations should be directed to the authors).

We would like to thank all of those constituents in the reproductive health field who graciously dedicated their time to this effort and whose input was invaluable.

Summary of Findings:

- While contraceptive prevalence rates have increased in the past decade, significant opportunity exists to improve the quality of health in developing countries through the further reduction of unintended pregnancies

- Enhancing the availability of contraceptive commodities is an important lever to achieving this objective

- Four primary issues constrain contraceptive commodity availability today:
  - Donor funding allocation and procurement activities are inefficient
  - Country planning and procurement is fragmented and slow
  - Underserved areas exist across and within countries
  - Public funds subsidize certain populations who can afford to pay

- Fully addressing all of these availability issues has the potential to reduce unintended pregnancies by approximately 18 million, roughly 1/3 of the number occurring annually in developing countries (excluding China)

- Key recommendations for addressing these issue areas:
  - Improved coordination of funding and procurement activities amongst donors and countries, including initiatives such as a Stability Fund to smooth funding cycles and further development of the Reproductive Health Supplies Coalition
  - Improvement of donor and country procurement and planning efficiency through mechanisms such as an Electronic Procurement Exchange and/or the

creation of Buyer Groups, as well as the development of more consistent supplier prequalification practices

– Addressing country-specific issues, such as enhancing distribution network capacity to reach underserved populations and improving public sector targeting of funds through programs such as an Innovation Fund(s) and/or the initiation of pilots to develop and test innovative ideas

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2.) Study Background

2.1 Study Context

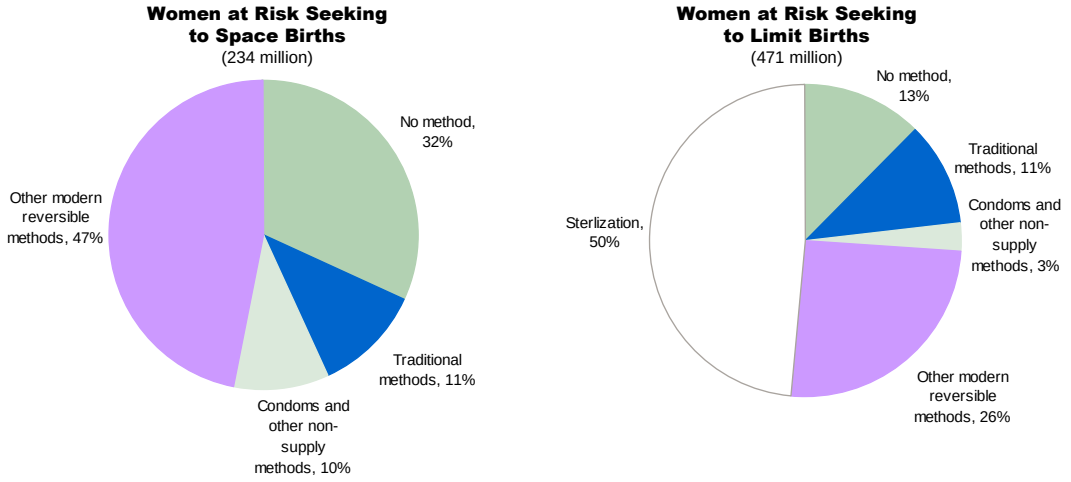
The Gates Foundation engaged Mercer Management Consulting to identify and evaluate key issues impacting the availability of contraceptive commodities in developing countries and to suggest potential solutions to address these issues. This report will summarize our findings from the study.

2.2 Impetus for Study

Contraceptive use has increased in many developing countries in the past decade, but significant challenges still exist. The leading indicators suggest that there is much progress to still be made:

- 76 million (4 out of 10) pregnancies in developing countries are unintended (Vlassoff M et al., Assessing Costs and Benefits of Sexual and Reproductive Health Interventions: Occasional Report, New York: The Alan Guttmacher Institute, 2004, No. 11.)
  - Approximately 35 million are terminated through induced abortion
  - One third of maternal deaths occur among women with unintended pregnancies
- The majority of unintended pregnancies are caused by non-use of modern family planning practices
  - As many as 200 million sexually active and fertile women in developing countries report interest in spacing or limiting births (i.e., are at risk of unintended pregnancies), but do not practice modern family planning practices (as seen in figure 1)
  - Reasons range from limited availability of contraceptive methods to issues in accessing services to lack of information about contraception and pregnancy risk

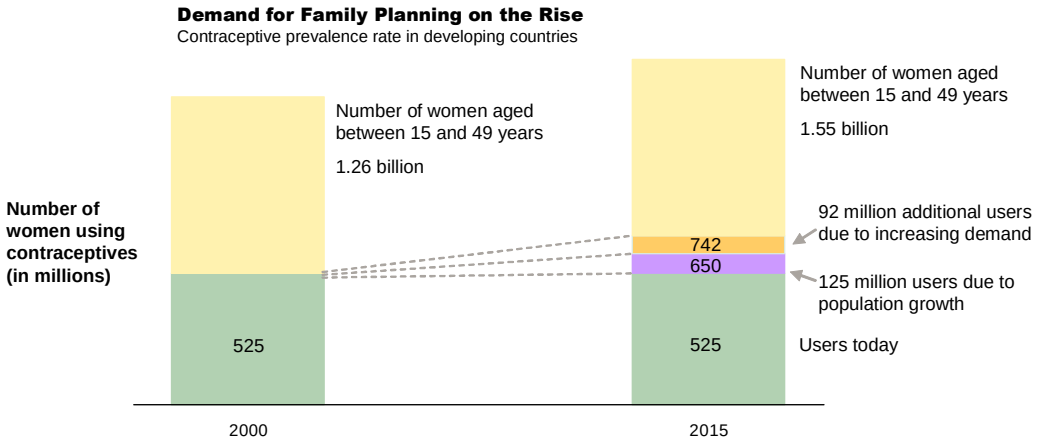
Figure 1: Women at Risk Breakdown



Source: Singh S. et al., Adding it Up: The Benefits of Investing in Sexual and Reproductive Health Care, The Alan Guttmacher Institute, 2003

Anecdotal evidence pointed to constrained supply availability (defined further in Section 2.4) as a large contributing factor to current contraceptive non-use and suggested that it will only become more important in the future, given projections of increasing demand. As seen in figure 2, the numbers of women of reproductive age and the proportion who use modern contraceptives are both expected to rise substantially, placing additional strain on the system.

Figure 2: Demand Projections For Family Planning



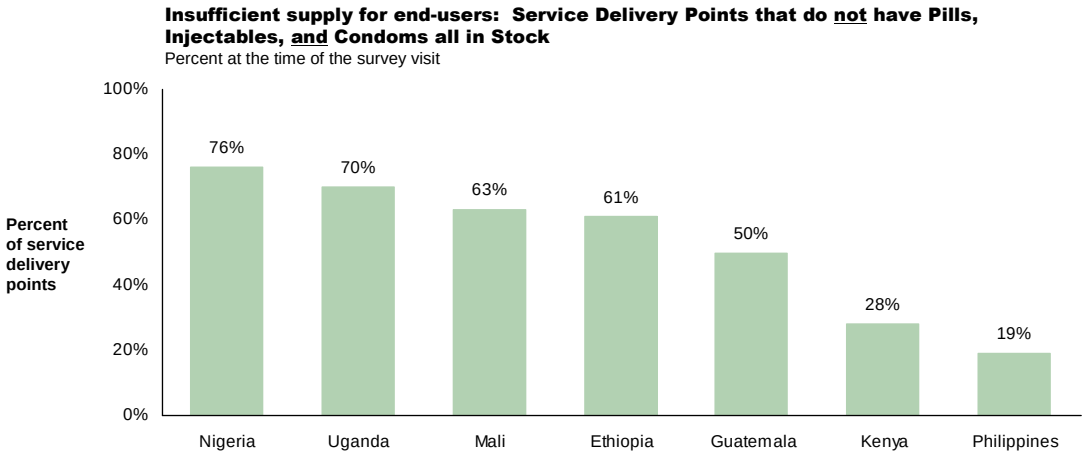
Source: Supply Initiative; UN Population Division, World Population Prospects: The 1998 Revision.

The following concrete examples (cited in "Countries and Risk" meeting notes, UNFPA reports, and interviews) have spurred concern throughout the field:

- In early 2005, Ethiopia was at risk of running out of all the major contraceptives in the country

- In one district of India, only 29% of ever-married women who currently used condoms had a regular source of supplies during the previous three months; 59% had an irregular supply and 12% received no condoms
- In May of 2002, Tanzania was left with 1 millions condoms – enough for about 1 week – after UNFPA withdrew 10 million condoms due to quality problems
- During site visits to service delivery points, as much as 76% of sites in some countries lacked a supply of pills, condoms, and injectables (as shown in figure 3)

Figure 3: Evidence of An Availability Problem



Source: JSI/DELIVER. "Overview: Monitoring and evaluation strategies for DELIVER." 2003.

At the time this study began, the reproductive health field was pursuing many different efforts to address availability concerns:

- A range of organizations had identified that addressing supply issues would be important to meeting their reproductive health goals and had been pursuing their own set of initiatives based on their individual perspectives and strengths.
- Many of these organization had come together to establish the Reproductive Health Supplies Coalition ("Coalition") to work together toward improving availability of contraceptives and other reproductive health supplies in developing countries. The Coalition has already held several meetings and formed working groups.
- Regular "Countries at Risk" conference calls had been established to discuss countries that were facing contraceptive supply issues and to identify possible short-term solutions.

While each of these efforts was progressing, a well articulated, shared vision among the participants (on how to address the problem) and a solid analytical fact base (evaluating the drivers of the problem) were not yet evident.

The Gates Foundation commissioned this study as a means of stepping back from the current work and activities in the field in order to build a broad analytic fact base and to propose high priority solutions toward addressing key problems.

2.3 Study Objectives

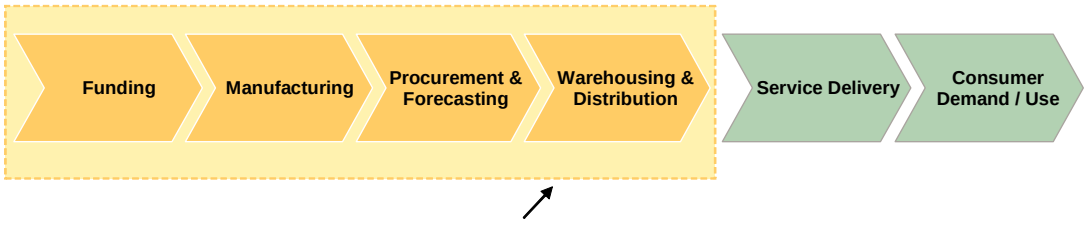
The following objectives were agreed upon at the beginning of the study:

- A description and fact base of the key issues impacting contraceptive availability, including a sizing / prioritization of the major issues
- An identification and evaluation of potential solutions to address the major issue areas

2.4 Study Scope and Constraints

As the term "availability" is used with different meanings, it is important for us to set the context for how we defined availability for the purpose of this study. As shown in figure 4, we have defined availability as the set of activities which result in consistently providing the right amount of contraceptives to the existing delivery points. This requires that activities conducted prior to those at the service delivery step (i.e., funding mechanisms throughout warehousing / distribution) are executed efficiently and effectively.

Figure 4: Study Scope (Activity Chain View)



Scope of Study

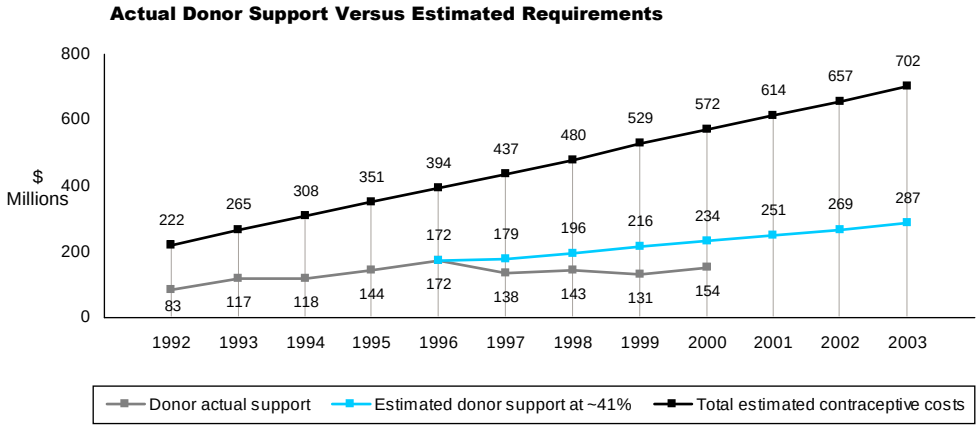
Definition of Availability: The set of activities which result in consistently providing the right amount of contraceptives to the existing delivery points

Source: Mercer analysis.

It is equally important for us to define what is not included in this definition, as it will help clarify the bounds of the study:

- We have not assessed solutions to increase the capacity (i.e., the number) or performance of contraceptive delivery points. We have, however, considered solutions that may leverage other non-contraceptive distribution / delivery networks (e.g., food distribution).
- We did not do a detailed analysis of warehousing and distribution, but have attempted to understand where this set of activities may cause constraints for the rest of the system.
- We did not examine opportunities for increasing the funding levels (i.e., "more money" into the system) for reproductive health commodities as a lever for improving availability. The field has conducted considerable analysis on the level of funds that are available for contraceptive purchases, and has estimated that a significant funding gap will emerge (as show in figure 5). At ICPD Cairo in 1994, donors committed to providing approximately 41% of total contraceptive costs, but with each passing year the gap between donor support need and actual donor support widens. While this funding gap is a clear contributor to availability issues, overcoming the funding gap can be achieved through two channels, both of which are important: "more" money and "better use" of existing money. This study has focused on the latter. We have evaluated how to address issues in the upstream activity chain (discussed above in figure 4), operating under existing funding constraints.
- We did not assess issues or potential solutions related to demand-stimulation activities. We have operated under the constraints of the existing demand levels and the field's projections for future levels.
- We focused on assessing availability issues for contraceptive commodities, including the following methods: male condoms, females condoms, oral contraceptives, IUDs, injectables, implants, and vaginals. We did not analyze the system for HIV condoms and other RH supplies.

Figure 5: Donor Funding Gap



Source: UNFPA, "Global Estimates of Contraceptive Commodities and Condoms for STI/HIV Prevention 2000-2015.

2.5 Study Methodology

The overall study methodology was structured around the major objectives of the study. We first conducted an "issue diagnostic" to identify the major issues impacting availability. As part of this diagnostic, we segmented the issues into four major issue areas (discussed in Section 3), identified the underlying drivers of those issue areas, and sized their relative impact. The goal of this diagnostic was not to profile in-detail the current state of the activity chain (e.g., detailed steps of the global procurement architecture), but simply to identify the highest priority issues to address. After completing the diagnostic, we identified and evaluated solutions to address each of the major issue areas and ultimately developed several prioritized recommendations (discussed in Section 4).

We pursued six major sets of research and analytic activities to support this process:

- Review of Existing Research – As a starting point, we comprehensively reviewed publicly available research and data that the field had generated (100+ studies and papers).

- Interviews - We conducted a wide-ranging set of interviews, covering 50+ individuals across the broad set of RH stakeholders (see figure 6 for the list of interviewees):
  - Bilateral and multilateral donors
  - Developing country representatives
  - Contraceptive commodity manufacturers
  - Social marketing organizations
  - NGOs
  - Others

- Sounding Board – We maintained a Sounding Board of 6 individuals, characterized by reproductive health expertise and broader health experience, to provide ongoing feedback throughout the study (see figure 6 for the list of Sounding Board members).

- Targeted Analysis – We conducted targeted analysis of global-level data (e.g., donor funding data) and cross-country data sets (e.g., JSI / Futures Group contraceptive security index data, demographic and health surveys, Alan Guttmacher Institute data sets, etc.) to support/refute the qualitative evidence collected. We did not collect detailed data in country.

- Incorporation of Past Mercer Experience – We leveraged Mercer knowledge and expertise to place the issues faced within this field in the broader context of supply-side issues encountered by other relevant public health fields and sectors. As part of our assessment of the impact of various issues and solutions, we analyzed analogous experiences in other fields.

- Model of Issue/Solution Impact – We built a driver-based model of the contraceptive availability system, identifying and quantifying the key issues (and causal factors) impacting availability (discussed in section 3). We first estimated the potential

impact on costs of fully addressing each issue within the current system, based on evidence within the RH field and analogies from other fields. We then translated the impact on costs into "couple years of protection" based on existing method-mix and cost for commodities. Finally, we translated couple years of protection into the level of new users that could potentially be served by the system and estimated the impact on unintended pregnancies. Once we established this picture of the current system (and the impact of addressing each underlying issue), we were able to quantify the impact of solutions based on the issues that the solution would address.

Figure 6: Sounding Board and Interviewees

Interviews Conducted

Sounding Board:

- Futures: Karen Foreit
- FHI: Barbara Janowitz
- Center for Global Development: Ruth Levine
- USAID: Margaret Neuse
- MSH: Jono Quick
- Chemonics: Jeff Sine

Sounding Board members have been consulted throughout the process to provide reaction to ideas and input based on their broad experiences beyond reproductive health

Additional perspectives:

- Crown Agents: Hilary Vaughn, Lee Chacksfield
- DFID: John Worley, Georgia Taylor
- Futures: Bill Winfrey, John Ross, Bill McGreevey
- Harvard (researcher in Malawi): Rebecca Thornton
- Hewlett: Tamara Fox
- Hindustan Latex Limited: M. Ayappan
- IPPF: Steve Sinding, Lester Chinery (ICON)
- JSI: Carolyn Hart, Rich Owens, David Sarley, Dana Aronovich, Mimi Whitehouse (RHInterchange)
- KfW: Wolfgang Bichmann
- Organon: Frank Roijmans, Frans van Birgelen
- PATH: Todd Dickens, Jane Hutchings
- Population Council: John Townsend
- PSI: Francoise Armand (Private Sector Project), Lisa Simutami, Claire Stokes, Alex Brown
- Sub-Saharan Africa Population Council: Ayo Ajayi
- UNFPA: David Smith, Jagdish Upadhyay, Ton de Jong, Trevor Lessey, Elizabeth Calderone
- USAID: Alan Bornbusch, Nomi Fuchs, Scott Radloff, Mark Rilling, Jim Shelton, Joan Robertson, Sonali Korde, M. Ferrell
- USAID-Mali: Ann Hirschey, Christine Sow
- West Africa Health Organization: Kabba Joiner
- World Bank: Sangeeta Raja, Elizabeth Lule

Preliminary results of this study were also shared with the Reproductive Health Supplies Coalition in May

2.6 Study Limitations

There are limitations to this study, dictated by the tight project time frame and resulting scope choices as well as the quality and availability of data.

- Scope Choices – As described earlier, we made several scope choices that narrowed the field of view for this study. The most significant scope choice relates to the country-level research. While we interviewed people involved in the country-level systems to incorporate this important perspective, we did not have the benefit of visiting countries or collecting primary research in-country. We have worked with DFID and the EU to incorporate the results of this study into the research / analysis that they are currently conducting in-country on similar issues. In addition, as the field considers implementation of the recommendations from this study it should conduct further research within the countries that are most impacted by each recommendation.

- Analytic Choices – The analysis in this study is intended to represent directional estimates for the purpose of identifying and prioritizing key issues. The goal was to reach enough certainty in our estimates to allow us to make decisions, but not to reach precise estimates for any individual piece of analysis. To that end, we have made

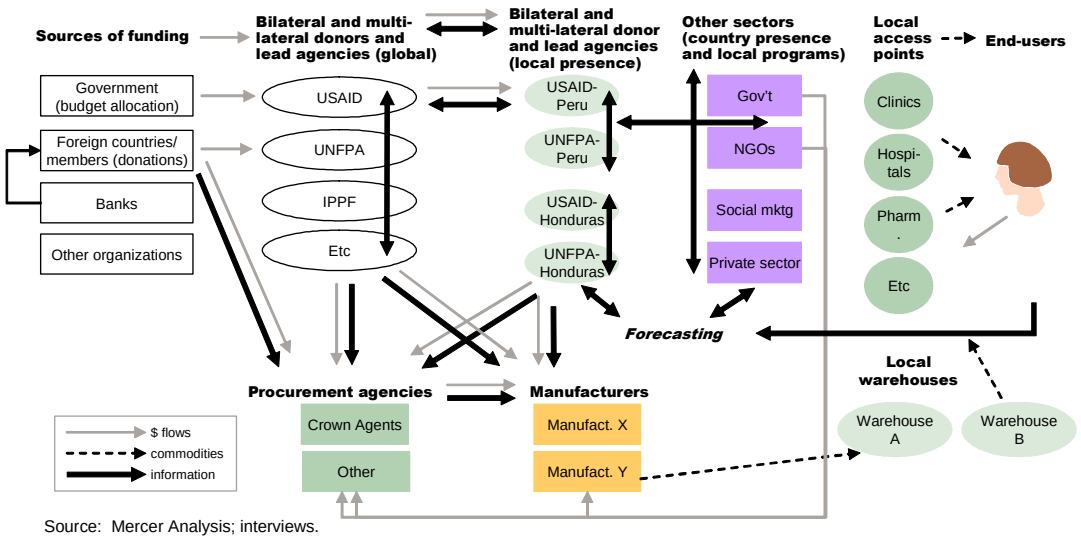
simplifying assumptions in parts of the analysis. For example, we have assumed that as the system becomes more efficient and additional users are served, the modern method mix will remain constant at the country-level (for the purpose of estimating impact on cost and unintended pregnancies).

- Data Availability / Quality – The data that feed our analysis were taken from reports and sources that were deemed most appropriate by experts in the reproductive health field during the course of the study. However, we have found several significant limitations in these data. First, there is a general lack of data on country-level activities (e.g., commercial sector versus public sector market sizes, stock-out levels, etc.). Second, the data that are available are often not of consistent quality (e.g., some of the donor funding data do not reflect direct budgetary support). We have, therefore, attempted to work with the creators of each data source to understand the individual limitations and to qualify the findings related to our analysis of that data accordingly.

3.) Issue Diagnostic

In order to identify key issues impacting availability, we initially mapped out the flows of money, commodities, and information throughout the supply system (as summarized in figure 7), paying careful attention to differences that occur across countries and agencies.

Figure 7: Contraceptive Supply System



Source: Mercer Analysis; interviews.

We categorized issues impacting availability (identified through our research and analytic paths) into four distinct areas. These include:

1. Donor funding allocation and procurement activities are inefficient
2. Country planning and procurement is fragmented and slow
3. Underserved areas exist across and within countries
4. Public funds subsidize certain populations who can afford to pay

While the focus of this effort was to identify key availability issues and identify ways to address them, it is also important to discuss areas where we did not identify major issues. The primary area where one may initially hypothesize potential issues, based on problems faced for other products, is manufacturing capacity. However, evidence suggests that overall, manufacturing capacity is not a major concern – considerable global capacity exists to serve current demand. The condom market, for example, is extremely mature with over 80+ suppliers, many of which operate far below capacity. In addition, unlike many other markets (like vaccines), capital requirements do not pose a significant entry barrier. Some of the lower prevalence methods (e.g., IUDs) do face a tighter supply situation (~2-3 suppliers), for reasons such as patent protection, brand sensitivity / marketing, and consumer interests / demand levels. However, relative to the four main issues areas identified, this issue was not deemed to be a top priority for improving availability.

3.1 Issue Area 1 - Donor Funding and Procurement

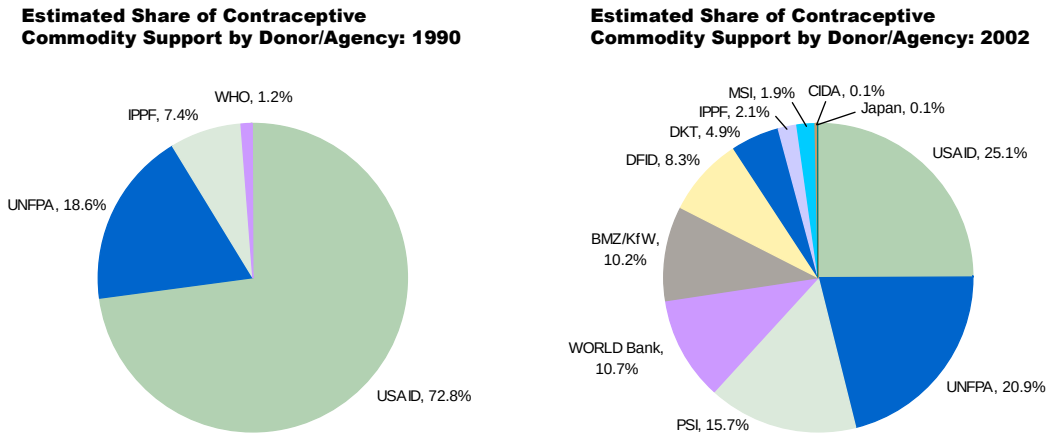
According to the UNFPA, the global donor market for contraceptive commodities in 2002 was estimated at approximately $200 million of annual expenditures. The global donor market comprises a range of participants, including bilaterals (such as USAID), multilaterals (such as UNFPA), NGOs, etc. This group represents approximately 25% of the overall contraceptive commodity market in developing countries, with the rest being funded by country governments, being purchased in the commercial market, or being sold at subsidized levels by social marketing organizations (such as PSI). While not a large portion of total contraceptive supply expenditures across developing countries, donor funds are extremely important for commodity availability for three main reasons. First, donors often support the most needy populations, precisely the populations that have low prevalence levels and suffer from the most problematic availability constraints. Second, decisions around donor funds impact the remainder of the system. Country governments adjust their funding decision based on the level of donor funding they expect to receive. In addition, users who could afford to pay for commodities in the commercial market adjust their purchase decisions based upon the degree to which contraceptive commodities are provide free (or at subsidized levels). Third, the largest donors, such as USAID and UNFPA, provide contraceptive commodities in the context of broader technical assistance and financial assistance for family planning programs (that impact availability as well). This study, however, focused only on the commodity programs of these agencies.

Historically, funding and resulting expenditures related to the global donor base were concentrated within several entities (as seen in figure 8, left panel), and as a result, the activities and procedures of this group were easier to track and coordinate. Over the past 15 years, however, the global donor market has become considerably more fragmented, posing new challenges for coordination and consistency (see figure 8, right panel). This fragmentation is both a function of reduced funding by the largest historical donor, USAID (funding for contraceptive commodities of approximately $58 million in 1990 vs. $50 million in 2002 in nominal terms) and the increased participation of other donors in this area.

Overall, we identified four primary contributing factors to the broad issue of inefficiency in the allocation of donor funds and donor procurement activities:

- Lack of coordinated action/financing plans across donor organizations
- Inadequate information systems to enable coordination
- Insufficient and unreliable funding
- Procurement inefficiencies

Figure 8: Donor Funding for Commodities



Source: Donor Support for Contraceptives and Condoms for STI/HIV Prevention, UNFPA 2002.

3.1.1 Lack of Coordinated Action/Financing Plans Across Donor Organizations

Our research revealed that donors perceive very limited consensus among themselves and across other actors (e.g., governments, NGOs, etc.) as to the appropriate approach to the required set of activities by country. Much of this is driven by strategic differences and organizational constraints at the policy-level, often complicated by political interests, legacy behavior, and limited coordination. These differences are manifest at each step of the activity chain.

For example, at the funding step, USAID may graduate countries after discussing sustainable financing plans with countries. However, these agreements may not reflect the funding arrangements organized between other donors (e.g., UNFPA) and the country. In addition, some donors provide commodities, while others provide money (sometimes in the form of budgetary support) to recipient countries who conduct the procurement of commodities themselves. At the procurement step, some donors have expressed an interest in pooling funds to achieve efficiencies, while others are resistant. At the storage and distribution step, several actors maintain their own independent buffer stocks while others utilize aggregated stocks. Furthermore, USAID maintains a parallel distribution system in many countries.

This lack of a shared, coordinated action plan causes several problems within the system. First, it creates confusion and disruptions at the local-level. For example, the lack of consensus about graduation policies has resulted in significant disruption in some countries, sometimes requiring intervention by other donors post-USAID graduation to address commodity shortages (as shown in figure 9). In recent years, USAID graduated two countries – Turkey and Mexico – that experienced availability disruptions during the "graduation process." Turkey faced shortages as the government reacted with policy

changes and Mexico faced procurement and forecasting issues as the technical capabilities were no longer in place.

Figure 9: Lack of Consensus – Disruptions at the Local Level

Examples of sector responses to USAID graduation of countries

	Turkey	Mexico
Other donor response	• Contributed family planning funding during phase-out	• Programs were able to secure increased funding from UNFPA and other donors
Government response	• Initially increased funding as USAID support ended • Eventual policy change to end the donation policy that was a revenue generator for NGOs	• Government policy that contraceptives must be available at no cost • Consistent government support for reproductive health and family planning
Other sector response	• Increased NGO activity to promote government support for contraceptives	• Shift in focus as organizations attempt to achieve self-sustainability • Increase in social marketing programs to generate revenue
Cross-sector collaboration	• Increased collaboration between NGOs, donors, and government during phase-out to ensure a successful transition	• Decrease in coordination mechanisms and cross sector collaboration as USAID had spearheaded many of these efforts

Shortages experienced as new government instituted policy changes

Forecasting and procurement issues, as technical capabilities were not in place

A successful graduation requires a clear implementation plan, increased cross-sector communication, and a country-level understanding of key technical areas.

Source: USAID. USAID Graduation: Sharpening the Policy on When and How to End Assistance. July 1999.
Population Technical Assistance Project. "The Family Planning Graduation Experience: Lessons for the Future." 2004.

Second, this lack of a shared action plan leads to redundancy across the activity chain, and additional spending beyond the level that is required. As already discussed, some organizations maintain separate safety stocks, USAID maintains a parallel distribution system in some countries, and procurement is conducted individually by many organizations. In addition, pre-qualification activity is redundant across donors. Donors operate under different standards / criteria for pre-qualification and therefore require separate pre-qualifications processes. As a result, each donor pre-qualifies a set of manufacturers for each product, with multiple donors conducting pre-qualification for the same manufacturers. One third party agent reported that in some instances, it has assessed the same manufacturing site multiple times for different donors.

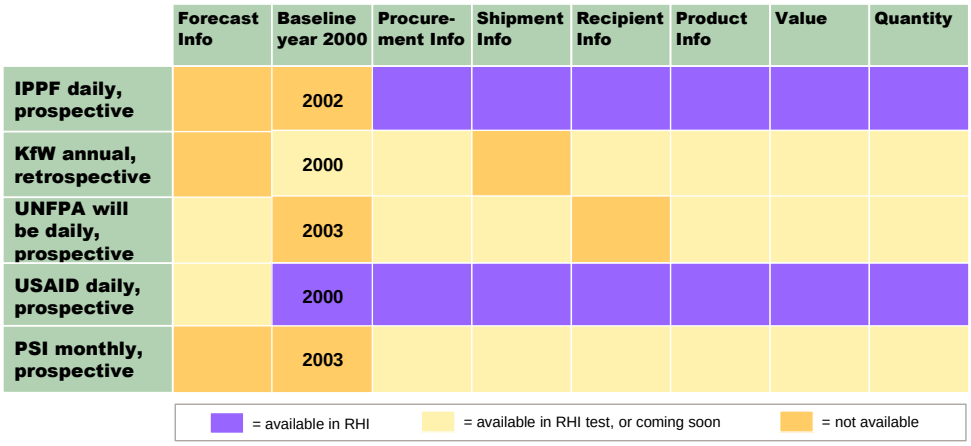
Third, without a shared action plan, it is unclear whether donors and countries are prioritizing their expenditures effectively to address the most significant problems. Rather than acting independently, the actors could be collaborating to identify bottlenecks and then to assess which ones to tackle and in what order. Such assessment and prioritization could be pursued not only in supporting countries but also in commissioning research or solving global procurement inefficiencies.

3.1.2 Inadequate Information Systems to Enable Coordination

One area in which many donors have expressed interest in improved coordination relates to the tactical execution of commodity procurement and planning. For example, some donors revealed an interest in sharing information related to their procurement activities (e.g., shipments, suppliers, pricing, etc.). However, the information systems and communication processes needed to share the requisite information are limited or lacking.

The field is working on expanding the functionality of a web-based information system for procurement and shipment activity, the RHInterchange. While progress has been made, the system is still in its development phase and some information has been very difficult to access (as shown in figure 10). Full development of such a system will require overcoming a broad range of challenges. At the most tactical-level, individual donor systems are incompatible or outdated and often require extremely manual processes to pull information. At more of a policy-level, information gaps are caused by organizational approaches and constraints - for example, USAID conducts three-year forward planning, while UNFPA only procures when funds become available. In addition, some donors have been skeptical of the usefulness of the information at the country-level and others have raised concerns about who will have access to details of their procurement information.

Figure 10: RHInterchange Data Availability Issues (as of early 2005)



Source: Supply Initiative; primary interviews

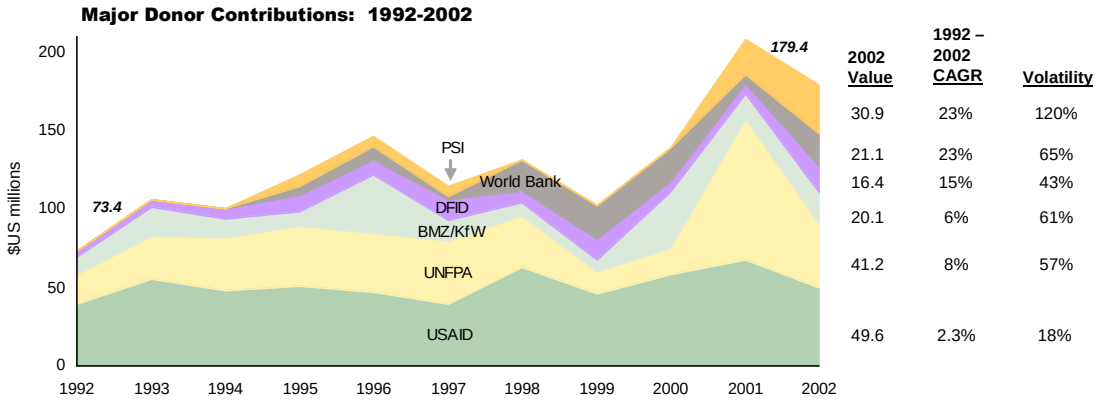
Improving information sharing may ultimately lead to benefits beyond tactical coordination, helping make headway towards broader alignment of donors' strategies and policies. Coordination is not always easy and challenges are to be expected, but once actors become used to coordinating on tactical issues, hurdles may be lowered for broader future coordination. Until information systems are improved and made more consistent, however, the first links in this chain cannot be established.

3.1.3 Insufficient and Unreliable Funding

At an aggregate-level, donor funding levels are highly variable year to year as seen in figure 11. At the individual donor-level, and at the country-level, the volatility is magnified – the average volatility for some donors is as high as 120% (measured as average standard deviation percentage). Much of the volatility is driven by budget and financing cycles, often outside the control of the donor agency or the commodities officers and subject to lengthy approval processes. Bilateral donors (e.g., USAID) are funded by taxes / budget allocations of their country government, while multilaterals (e.g.,

UNFPA) are often funded by numerous countries. As one donor stated, "we have a decent idea of what demand is, but we never know how much money we'll have. If I knew with certainty how much money I'd have, I'd be all set."

Figure 11: Donor Funding Levels



Source: Donor Support for Contraceptives and Condoms for STI/HIV Prevention, UNFPA 2002
Note: Volatility is defined as average standard deviation of donor contributions; PSI and World Bank CAGR and Volatility values are for 1995 to 2002; CAGR is compound annual growth rate.

The level of volatility becomes exacerbated as you move further downstream in the activity chain - this phenomenon is consistent with the well-studied bullwhip effect seen throughout supply chains. Since the donor agencies themselves are subject to uncertain and volatile funding, the funds they provide are even more volatile (as additional allocation decisions must be made). The in-country actors are hardest hit as they face unpredictable funding across donors, and are unable to plan and run an efficient supply chain operation - for example, determining the amount of distribution capacity and planning inventory by commodity matched to weeks of supply targets. As one donor stated, "everything stems from an inability to smooth the supply of funds, and by extension, of commodities…once you solve that, you can adapt the local supply chain." An in-country actor added, "with the donors, there's no long-term funding…it's all short-term, and we never know what to expect."

3.1.4 Procurement Inefficiencies

In addition to redundancies across donors (i.e., duplicative procurement activities conducted by each donor), the procurement activity of individual donors is complicated by several factors:

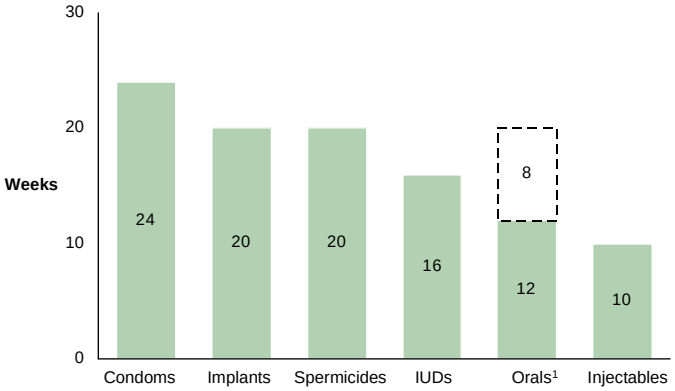
- The volatility and uncertainty of funding described previously creates inefficiency in the procurement of commodities with those funds (procurement execution being the proximate cause in this case). For example, some procurers wait until funding is received (sometimes at the last minute) to place orders, creating inefficiency for the supplier (that is passed onto the buyer) and precluding the opportunity to negotiate advance contracts at favorable prices.

- Forecasts are typically conducted only once every 1-2 years, and may be very inaccurate – JSI reported that some countries had forecast errors as high as 70% prior to using the Pipeline system.
- The lead time between procurement and commodity delivery can be quite long – for example, ranging from 10 to 24 weeks for UNFPA as seen in figure 12.

Figure 12: Supplier Lead Times

Average Delivery Times for Commodities: UNFPA

Lead times under normal circumstances



Manufacturing / Procurement Issues

- *"Timing means a great deal when it comes to contraceptive procurement. The **procurement process must begin at least 12 months before a product is needed in-country** (except for emergency procurement) regardless of the entity that makes the purchase, and must run smoothly with minimal delays"* – PAI
- *"We are **limited in our supply options at any point in time**. We are not able to quickly identify and use new ones."*
  – Large donor

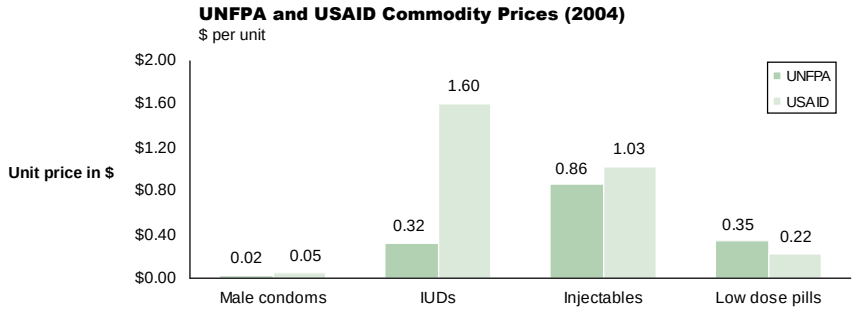
Source: UNFPA website.

1 Oral Contraceptive lead time was given as 12-20 weeks. The others were given as precise estimates, not ranges.

The combination of these factors results in a very difficult procurement environment to manage. Many procurers place infrequent, inconsistent orders and attempt to manage the situation by holding enough buffer stock, often at a significant level (given long lead times, high forecast error, and the infrequency of procurement). Interviewees stated that as much as 12-24 months of supply sits within warehouses (central or local) for many countries, risking expiration and leakage. While only anecdotal, several countries reported that inventory losses can be substantial. For example, one country representative stated, "people may want to look the other way, but we face serious issues with leakage and expiration…sometimes in excess of 50%."

Institutional policies further complicate procurement for some agencies. For example, USAID following a "Buy America" policy that sometimes results in the procurement of product at higher prices than that achieved by other agencies. Only recently, when demand exceeded their suppliers' capacity, has USAID been able to secure waivers on an isolated basis to violate this policy. On average, USAID prices still remain considerably higher for some methods (as seen in figure 13).

Figure 13: Prices by Commodity for Different Procurers



	Male condoms	IUDs	Injectables	Low dose pills
USAID Units (2004)	463.0 million	2.0 million	18.5 million	1.8 million
Potential Savings if USAID had procured at UNFPA price[3]	$11.7 million	$2.5 million	$0.8 million	N/A

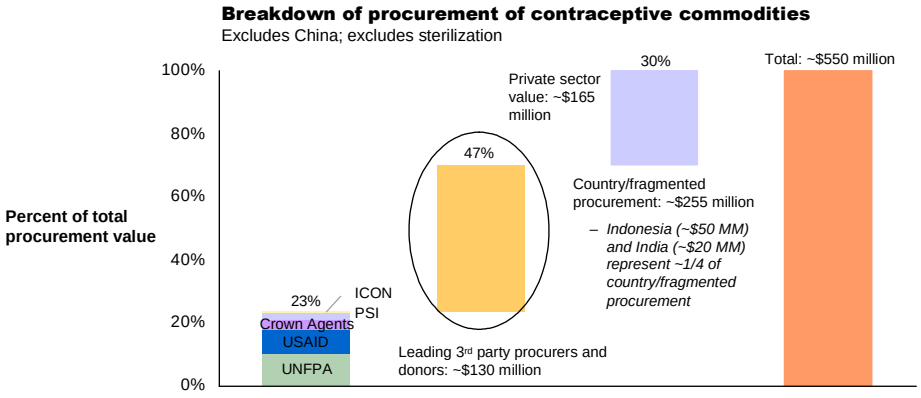
Hypothetical Savings: **$15.0 Million[1]**

Source: UNFPA website; USAID "Contraceptive Procurement Guide and Product Catalog." 2004; Supply Iniative.
1 Assumes USAID could get UNFPA prices; does not factor in whether that would require USAID to source from manufacturers outside of the US. Does not account for price/quality tradeoff.

3.2 Issue Area 2 – Country Planning and Procurement

While procurement inefficiencies exist at the donor-level, these issues are exacerbated at the country-level for several reasons. The overall level of procurement expenditures is almost double that of the major donor agencies (as seen in figure 14). In addition, the total number of procurers is even more fragmented – one agency for each country versus a handful of major donor agencies. Finally, country expenditures include both funding that countries receive from donor agencies and their own budget allotments. As a result, they may also need to follow procurement policies set by a variety of original donors.

Figure 14: Procurement Breakdown



Sources: 3rd party procurer/donor data from personal communication with John Ross, PSI, Crown Agents, and UNFPA. USAID data from USAID's FY 2003 USAID Managers Report. Rosen's Getting Down to Business for private sector data. UNFPA's Donor Support for Contraceptives and Condoms for STI and HIV/AIDS was also used for donor data.
Note: The private sector share has been scaled down to reflect social marketing commodities that are considered private (because they are purchased in a commercial venue), but are actually procured by donors and/or governments. To do this, data was used from major international social marketers: PSI, DKT, and MSI. Private sector box is likely still inflated by other social marketing programs.

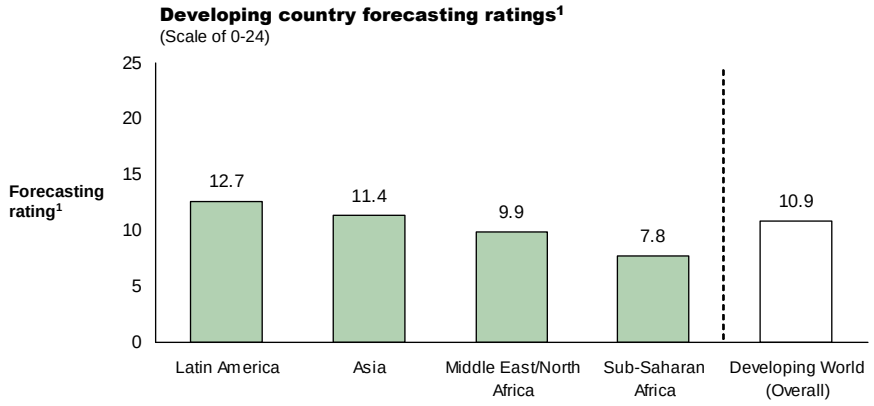
The interaction of these factors has caused three major issues for country planning and procurement:

- Countries lack adequate planning capacity for procurement
- Redundancy/fragmentation of effort
- Quality control is not always sufficient

3.2.1 Countries Lack Adequate Planning Capacity for Procurement

Individual countries often lack the funding, technical capacity, and training to effectively operate a rigorous procurement regimen – ranging from forecasting activities to inventory management to order placement. These activities are extremely important as they enable the smooth operation of the supply chain and are essential activities in maintaining available supply of commodities. For example, JSI rated countries on their forecasting capabilities - on a scale of 1 to 24, country rankings averaged 10.9, with many countries falling far below 10 (as seen in figure 15).

Figure 15: Forecast Accuracy



Source: JSI Contraceptive Security Index, 2002.

1 The forecasting indicator assesses how forecasts of consumption are prepared, updated, validated, and incorporated into cost analysis and budgetary planning.

3.2.2 Redundancy/Fragmentation of Effort

Not only are the planning capacities inadequate, but each country also conducts its own process. As a result of this fragmentation of procurement efforts, most countries are unable to achieve reasonable scale in sourcing supply, and thus do not benefit from price efficiencies achieved by larger procurers. In addition, considerable redundancy of activity exists throughout the system – from initial sourcing all the way to order processing. Interviews with procurement agencies/experts and analogies from other fields suggest that as much as 30-50% reduction in administrative costs could be achieved by reducing such redundancies.

3.2.3 Quality Control is Not Always Sufficient

Countries utilize varying policies with regard to quality control. However, evidence from interviews suggests that the cost/quality tradeoff for country procurement is tipped further towards cost (relative to larger donor agencies that maintain a more balanced equation). One procurer stated, "Country governments think they're getting good prices when they procure on their own, but the question is 'at what quality?'"

As one would expect, pre-qualification processes mirror the country's policy towards quality control. At the extreme, some countries do not have pre-qualified manufacturers and must, therefore, qualify manufacturers for individual tenders (when mandated to do so for donor-funded product). For products that these countries fund themselves, they may not conduct any formal qualification process. Among the set of countries that do pre-qualify manufacturers, the processes are conducted separately by country and are inconsistent. This raises issues (of efficiency and redundancy) about pre-qualification similar to those discussed in sections 3.2.1 and 3.2.2 about planning and procurement processes.

3.3 Issue Area 3 – Reaching the Underserved

In order to identify countries and populations most likely to be underserved in terms of contraceptive availability and use, we segmented developing countries based upon their relative need, contraceptive system performance, and reliance on donor funding.

As seen in figure 16, countries clearly cluster according to these metrics. Those in group 1 (predominantly Sub-Saharan Africa) have low scores, those in group 2 have medium-level scores, while the more advanced countries of group 3 score the best. The groupings are quite consistent across a variety of additional measures, and are also similar to segmentation results from USAID and others.

Figure 16: Country Segmentation

Average country metrics

Relative need:	**Group 1: "Low"**	**Group 2: "Medium"**	**Group 3: "High"**
TFR	5.6	3.8	2.9
CPR	13%	34%	52%
% of Need Unmet	27%	23%	14%
GNI/capita ($)	$354	$730	$1805
Performance:			
JSI/Futures Contraceptive Security Index[1]	41.5	52.5	60.7
JSI/Futures Access Index[2]	1.4	2.4	2.9
External funding reliance:			
% Donor Reliance[3]	~70%	~50%	~20%
	Typically Sub-Saharan Africa	**E.g. Bolivia, Bangladesh**	**E.g. Brazil, Jordan, Indonesia**

1 "Contraceptive Security Index": Aggregates a series of scores pertaining to contraceptive security, weighting supply, finance, health and environment, access, and utilization factors equally Scale is 0-100; highest scoring country is Brazil (68.1); lowest scoring country is Cote d'Ivoire (28.1).
2 "Access index": This indicator measures the percentage of a country's population that has ready and easy access to male and female sterilization, pills, injectables, condoms, spermicides, and IUDs. Scale is 0-4; highest scoring country is Brazil (4.0); lowest scoring country is Cameroon (0.4)
3 UNFPA; Excludes budget support and loans; Mercer Analysis.
Other sources: JSI; UNFPA; USAID.

3.3.1 Sub-Saharan Africa

Based on all leading indicators, Sub-Saharan Africa has the greatest need for donor assistance – on average, these countries are poor, have contraceptive prevalence rates (CPR) that are considerably below countries in the other two groups, and have weak supply systems. While this group already relies heavily upon donors, one can argue that it is actually still underserved given the range and levels of improvements needed. For example, although Groups 1 and 2 (as seen in figure 17) are similar in overall size (~25% of WRA), Group 1 has 13% CPR and Group 2 has 34% CPR. One might, therefore, expect that Group 1 should receive a disproportionate share of donor support in an attempt to raise contraceptive prevalence rates (by satisfying additional unmet need and stimulating demand). However, Group 2 countries collectively receive 43% of total donor support, while Group 1 countries collectively receive 28%. It is possible that the Group 2 countries require the additional funding support to maintain the higher CPR rates, but Group 1 countries are still underserved.

Figure 17: Support by Group

Size and absolute need of countries

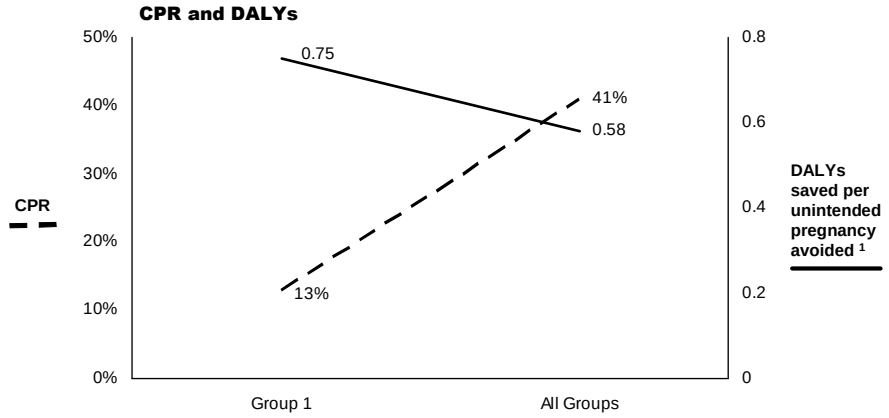
		Group 1 (e.g., Cameroon, Mali, Rwanda)	Group 2 (e.g., Bolivia, Bangladesh, Nepal)	Group 3 (e.g., Brazil, Indonesia, Jordan)
Size of Each Group (%s add across to 100%)	% of donor funding	28%	43%	29%
	% of WRA[1]	23%	24%	53%
	CPR Rate	13%	34%	52%

Source: JSI. Contraceptive Security Index. 2003; UNFPA; Mercer analysis; U.S. Census Bureau, Global Population Profile: 2002.
1 88 countries studied compose ~90% of developing world WRA (excluding China and India). Data does not include India and China. If India were included, Stage 3 % of WRA would be 69%, and % of unintended pregnancies would be 64%.

We can extend the argument further by analyzing the cost of being underserved, in terms of women's and infants' risks of morbidity and mortality. Figure 18 shows that the health cost of an unintended pregnancy is highest for Group 1, with .75 DALYs saved per unintended pregnancy avoided versus .58 for all other groups.

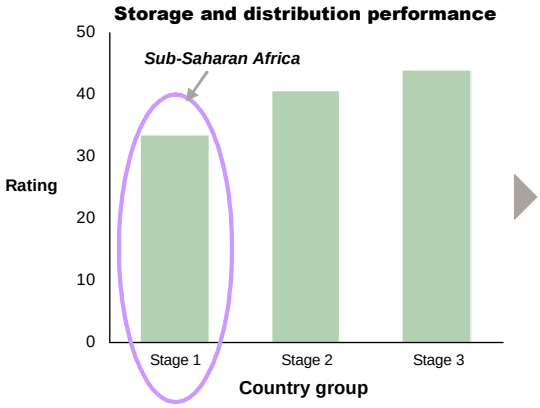
One of the main challenges for countries in Sub-Saharan Africa, however, is that the in-country distribution infrastructure is insufficient (as shown in figure 19) to support large increases in prevalence. Improving the infrastructure must be a prerequisite to reaching this underserved population – other activities, such as education and demand stimulation, will provide little leverage if women and men are not able to obtain contraceptives.

Figure 18: Cost of Being Underserved



Source: AGI.
1 includes maternal, infant, and DALYs from induced abortion;.
Notes: DALYs per unintended pregnancy was calculated by summing the total number of maternal DALYs, DALYs due to induced abortions, and infant DALYs by country and dividing this sum by the total number of unintended pregnancies.

Figure 19: Level of Infrastructure



Perspectives/Implications

Unpredictability of upstream supply strains the distribution system

"It's such a haphazard way that funding comes in, and procurement only happens when you have the money. So, we're ***not used to having the product around, so we don't make the appropriate arrangements for distribution*** *once it gets there" – Country-level actor*

When contraceptives are included in broader distribution systems, they may get lost in the shuffle

"In [my country], contraceptive commodities are distributed in the same system with drugs and other health products. ***Contraceptives are the lowest priority, so may just be forgotten****." – Country-level actor*

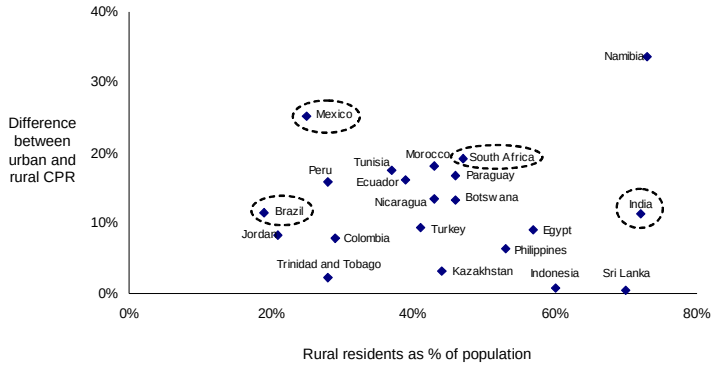
Source: JSI. Contraceptive Security Index. 2003.
Definitions: Storage and distribution: This indicator assesses storage capacity and conditions, standards for maintaining product quality, inventory control, stockouts, tracking system losses, and distribution and transportation systems.

3.3.2 Rural and Poor

Underserved populations not only exist across countries, but exist within countries as well. On a relative-basis, the countries in Group 3 (and to some extent the countries in Group 2) are "better served" from a whole-country perspective. However, within these countries, substantial underserved populations still exist among potential users in rural and poor communities. For example, as shown in figure 20, large gaps in contraceptive use exist between rural and urban populations and the absolute size of these underserved populations are quite large (as the Group 3 countries tend to be big). In addition, numerous studies have documented similarly wide variations by income. Like Sub-Saharan Africa, reaching these underserved populations requires addressing infrastructure issues in rural and poorer areas.

Figure 20: Rural and Poor

Differential in Urban vs. Rural CPR, vs. Rural % of Population
(Representative Group 3 countries)



Countries with greatest number of women impacted

Country	CPR differential stated as # of women
India	~22 MM
Mexico	~2 MM
Brazil	~1 MM
South Africa	~1 MM

Source: DHS studies; PRB's 2003 World Data Sheet.

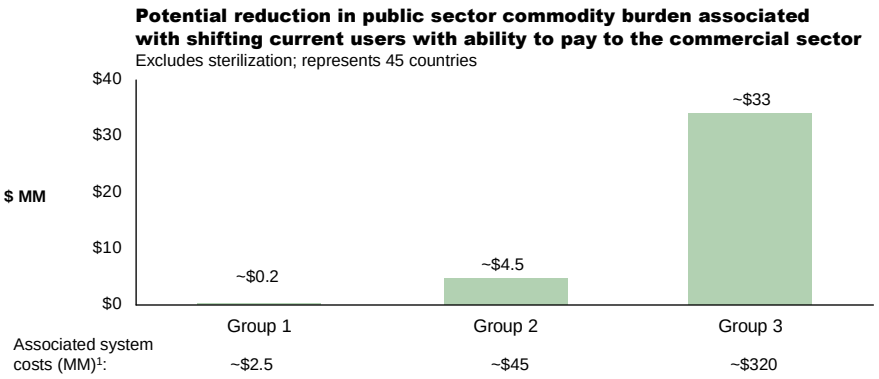
3.4 Issue Area 4 – Targeting Public Funding

Public sector family planning programs serve some users who, on their own, could pay (some or all of) the service costs. This can occur for numerous personal and programmatic reasons. In these situations, scarce public funds are diverted away from those most in need of them.

Serving end-users who could afford to pay through the public sector system may also negatively impact the market dynamics within a country. The incentive for commercial sector participation (both manufacturers and delivery organizations) may be reduced as potential buyers turn away from the commercial market. Commercial sector participation is therefore scaled back (i.e., crowded-out), further reducing the availability of product for those that would have actually bought on the commercial market.

As shown in figure 21, shifting public sector users who could afford to pay to the commercial sector could reduce annual public sector commodity costs by as much as ~$40 million, with an associated decrease of as much as $350 million in supply chain system costs. These funds could be re-allocated to those less able to pay, thereby raising the effectiveness of the expenditures (as defined by impact on overall CPR).

Figure 21: Commercial sector potential



Source: Ability to pay data from Green, Russell. "Empty Pockets: Estimating Ability to Pay for Family Planning." 2002. Green's % able to pay by country were applied to the # of WRA (from US Census 2002) by country. This chart shows the calculation of the resulting number of women able to pay - and presumed able to shift to private sector--multiplied by the average system cost per user by country. The country savings were then summed across groups.

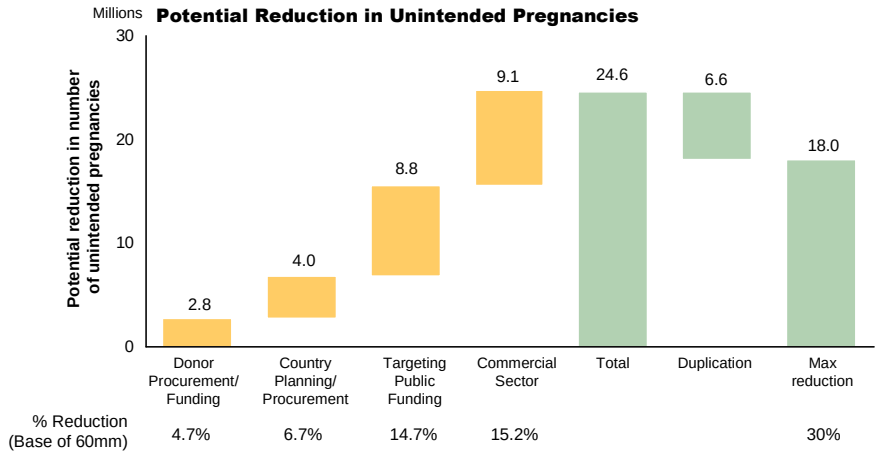
1 Based on average system costs today (procurement admin cost, freight, storage/warehouse costs, transport from warehouse to service delivery point, and costs of service delivery); UNFPA.

3.5 Impact of Issue Areas

Fully addressing all of the availability issues described has the potential to reduce unintended pregnancies by approximately 18 million unintended pregnancies, roughly 1/3 of the number occurring annually in developing countries (excluding China), as shown in figure 22. As described earlier, these figures were estimated by translating savings and the purchase of additional commodities into couple years of protection and pregnancies averted. It is probably not surprising that "reaching the underserved" and "better targeting public funding" would provide the greatest leverage. These areas are still in their infancy and have the potential to reach a considerable number of new users. "Donor funding and procurement" and "country planning and procurement," have smaller direct leverage as attention has already been focused on these areas for years. However, addressing the issues within these areas will be crucial to establishing a well functioning public sector system that will effectively work across all four issue areas (and will contribute to the success of solutions in the higher-impact areas).

While addressing availability issues would have a considerable impact on contraceptive use, it is important to note that addressing availability alone will not solve the entire problem – in fact, it will only impact 1/3 of the problem. Other activities (demand-stimulation, education, etc.) should be pursued in parallel to address the remaining drivers of the problem.

Figure 22: Issue Area Impact



Source: Mercer Analysis.

4.) Findings / Recommendations

We will not discuss individual solutions to each of the issue areas since many of the issues are interrelated and, to be successful, solutions will require a more integrated approach. As we look across the issue areas, three major findings emerge:

- Finding #1: Donors are not ready for a centralized formal collaboration body, so short-term fixes are required to enable greater coordination

- Finding #2: Some of the procurement inefficiencies (both donor and country) can be addressed cross-country

- Finding #3: Country planning inefficiencies, reaching the underserved, and better targeting public sector funding largely need to be addressed through country-tailored initiatives

4.1 Finding #1: Initiatives to Enhance Donor Coordination Will be Crucial

All evidence suggests that donors are not ready to establish a formal collaboration body for funding and procurement – structures such as GAVI for vaccines or the Global Fund for AIDS, Tuberculosis, and Malaria. Unlike these other fields, donors in reproductive health already have established systems and procedures for funding and procuring contraceptives. Developing a formal collaboration body, in which funds would be pooled and decisions would made jointly, would require considerable changes to the current system. Not only does a system already exist, but this is not an easy system to change – political agendas, resource commitments, and organizational interests to control the flow of funds (and to track the impact individually) have created a well-entrenched system. Such constraints were communicated by the donors themselves, as well as by other participants within the system viewing the donors. For example, one donor stated, "There are political factors…agencies take a parochial view of their own turf and each defends its turf with vigor." A country-level actor further enforced the message by stating, "There has always been resistance to pooling amongst the global donors because there's a 'flag-waving' syndrome…each want to identify the money as their own."

We recommend several initiatives to address the underlying causes of the major issues within the existing system, while setting the stage for improved formal coordination in the future.

4.1.1 Create a Stability Fund

As donor funding cycles are the cause of much of the volatility in the system, a mechanism should be established to stabilize funding levels. Such a mechanism would address the following:

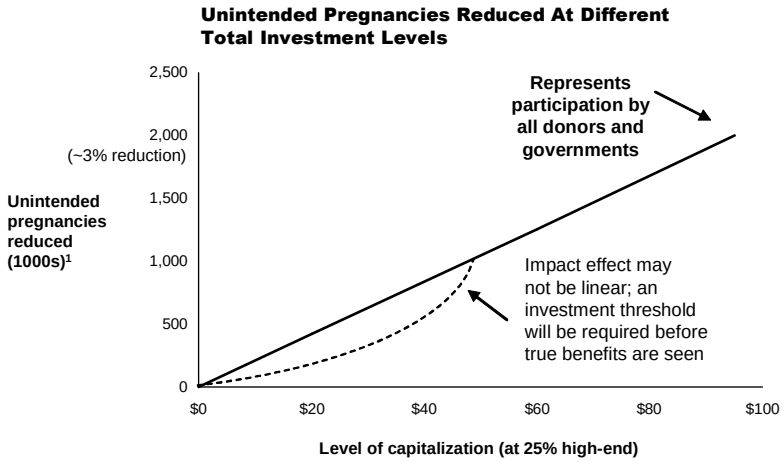
- *Smooth country commitments* – Provide a security mechanism for donors, thereby enabling them to commit a steady stream of funds to countries prior to the arrival of their own funding sources.
- *Enhance donor procurement* – Enable donors to source on an aggregated-basis in advance and provide steady procurement commitments to their suppliers.
- *Reduce country emergencies* – Enable countries to borrow funds (for commodities they are financing on their own) as they see shortages arising.
- *Enhance country procurement* – Enable countries to source on an aggregated basis in advance (for commodities they are financing on their own) and provide steady procurement commitments to their suppliers.

We recommend creating a separate "Stability Fund" that would be managed externally to the donors and countries. Donors and countries would apply to the stability fund for short-term financing and loan guarantees until their own sources of funds arrive, at which point they would pay back their loans. In addition, donors and countries could be given an incentive (in the form of interest and future loan guarantees) to lend to the fund if their own sources arrive early or above expectations.

Based on analogous funds, e.g. the PAHO revolving fund, we estimate that a stability fund would require approximately 15-25% capitalization levels (i.e., the size of the fund would be equal to 15-25% of the total expenditures of the participating donors / countries). The impact of the fund (and the required level of capitalization) would depend heavily on its use by donors and countries. Assuming that all donors participated, the required capitalization would be US$27-45 million (15-25% times ~$180 million of donor commodity expenditures). Assuming that all countries would use the fund, the required capitalization would increase by another US$36-60 million (15-25% times ~US$240 million of donor commodity expenditures in 2006). The estimated impact of varying levels of capitalization (and participation) is shown in figure 23. We estimate that at full participation, approximately 2 million (3%) annual unintended pregnancies would be averted as a result of better procurement prices for commodities, lower inventory costs / leakage, and reduced stock-outs. This solution would address a large portion of the unintended pregnancies in Issue Area 1 (3% of the 4.6% of unintended pregnancies), but will not address everything.

Despite the apparent merits of a Stability Fund, there is clear risk of misuse. Those funding the initiative will in effect create exposure to borrowers (donors and countries), and therefore face all the issues of any creditor. In addition, borrowings from the fund could be used to substitute or delay employment of the borrowers' own resources. Clearly, the design of the mechanics and administration of such a fund will need to be conducted carefully and thoughtfully. Further, such a fund will only be successful if strong enforcement mechanisms are put in place to ensure that loans are repaid – for example, restrictions can be set on borrowing levels. Also, enforcement mechanisms can be established as tradeoffs across the solutions that we will discuss – for example, if a country does not repay its loan, it will not receive future funding from the Innovation Fund (discussed later).

Figure 23: Potential Impact of Stability Fund



Source: Mercer analysis.
1 % reduction is relative to 60MM unintended pregnancies in the developing world (excluding China).

4.1.2 Further Enhance Coordination Through the RH Supplies Coalition

Even though the field may not be ready for a formal collaboration body, it can further empower and enable the Reproductive Health Supplies Coalition to create a successful, informal coordination body. Over the past several years, the field has begun to show a willingness to cooperate, evidenced by representation of the major donor agencies within the Coalition. However, opportunities exist to continue to improve the Coalition on several levels:

- *Instill coordination as a critical element from problem-identification to problem-solving:* The Coalition should evolve into a body that can systematically identify key problems to efficient ongoing supply of quality contraceptive commodities and develop solutions to be pursued by one or more partners in a coordinated fashion.
- *Define specific, measurable objectives:* In order to prioritize and align its efforts/resources most effectively, the Coalition should not only provide a forum for communication across organizations, but should identify the problems which it aims to impact and pursue activities that will clearly address those problems.
- *Enhance Coalition decision-making and authority within the field:* Establish a strong Executive Director and Secretariat with decision-making authority. The goal should be to ensure that information is not only shared, but acted upon.
- *Increase working group responsibility and accountability:* Obtain funding for working group activities that are in line with Coalition priorities and involve them directly in decision-making functions on behalf of the Coalition. For example, the working group associated with the "Countries at Risk" could be empowered to make recommendations for approval of country loans (from the Stability Fund).
- *Improve information-sharing systems:* Accelerate the development of the existing plan for the RHInterchange, addressing issues described earlier. In addition, consider enhancing the capabilities of the RHInterchange to include common

forecasting systems/data and sharing of procurement information (e.g., prices, suppliers, etc.).

On an ongoing basis, the Coalition should evaluate whether the time is right for a more formal collaboration body. If many of the issues are addressed through informal coordination, there may not be a need to pursue a formal mechanism.

4.2 Finding #2: Some Procurement Inefficiencies Can be Addressed Cross-Country

In addition to the impact of smoothed funding on procurement, a portion of the remaining procurement inefficiencies (for both donors and countries) can also be addressed cross-country. However, many of the country procurement issues need to be addressed on an individual country-by-country basis. As discussed previously, much of the inefficiency stems from insufficient procurement and planning capacity at the country-level, something that is difficult to address cross-country. We will discuss recommendations for addressing individual country procurement/planning issues in finding #3, but will focus this portion of the report on cross-country initiatives.

4.2.1 Develop an Electronic Procurement Exchange

Given the fragmentation of procurement activity (among both donors and countries), the field could benefit considerably from an electronic procurement exchange. Such an exchange would provide countries and donors with the ability to buy from a set of suppliers listed on the exchange. A procurement exchange would address many of the existing procurement inefficiencies:

- *Improved buyer leverage*: Buyers would be able to virtually "pool" their orders and achieve lower pricing
- *Reduced redundancies:* Reduces redundancies related to sourcing activities, supplier negotiations, etc.
- *Reduced administrative costs:* Reduces supplier search/negotiation costs and enables easier and more timely transactions through an electronic interface
- *Improves supplier visibility:* Enables suppliers to receive purchase information from buyers on a continuous basis

The RH field should investigate how to best establish an electronic exchange. One option is for the RH field to develop an independent exchange, either incorporating it into the RHInterchange or running it as stand-alone entity. Another option is to leverage other exchanges that are currently being built within other health fields. For example, this exchange could be built into the Global Electronic Marketplace, currently being developed by the Global Fund. The cost of developing the exchange will vary based upon which option proves most viable - the cost to link this effort into another exchange is likely to be several million US dollars and the cost of developing an exchange from the ground-up is likely to be in the tens-of-millions of US dollars.

There is considerable precedent already established for electronic exchanges, and the RH field should make sure to learn from their lessons. One key lesson is that exchanges established by the participants (buyers and/or suppliers) themselves have proven most effective. These exchanges have eliminated any distrust that may exist of a third party operator and have also removed the requirements of that operator to make money off the exchange. For example, in the U.S., "Rail Marketplace" has proven successful as an established transactional exchange between the railroads and their suppliers.

4.2.2 Investigate Buyer Groups

As an alternative to the electronic procurement exchange for countries, actors in the RH field could investigate the potential for consolidated buyer groups – either regional or cross-region. Each buying group would establish a central body (either a separate entity or a lead country) to conduct procurement activities for the group. If technical/political barriers prevent the exchange from being successful, buying groups may serve a similar purpose.

This concept needs to be tested further at the country-level as political pressures (i.e., not wanting to work with other countries) could prevent buying groups from being viable in practice.

4.2.3 Develop More Consistent Prequalification Practices

At both the donor and country-level, prequalification is conducted in an inconsistent fashion. At a minimum, an effort should be undertaken to categorize the current state of prequalification activities, identifying best practices and developing recommended procedures/guidelines. In addition, consistent pre-qualification activities and information sharing will need to be integrated into the electronic procurement exchange and/or buyer groups. Without consistent (and transparent) prequalification, it will be difficult for buyers to understand what they are buying.

Beyond facilitating harmonization of prequalification standards and practices, the field should explore the possibility of formally establishing a body to administer prequalification activities on behalf of donors and/or countries (either by method or across all contraceptives). Rather than placing the burden on individual buyers to maintain prequalification standards, this body would assume the responsibility (much like the role that the WHO plays within vaccines).

4.3 Finding #3: Country-Tailored Initiatives Are Also Necessary

The remaining three issues (some country planning and procurement inefficiencies, reaching the underserved, and public sector targeting) can only effectively be addressed on a country-by-country basis as they require activities at the country-level that depend on the specific circumstances of the country. For example, solutions to reach the underserved populations will depend on the specific infrastructure that is place within the country. In a country that has a deep distribution network for other products into

underserved areas (e.g., food distribution or cell phone distribution), opportunities may exist to form partnerships for distribution of contraceptives. In countries that lack basic infrastructure, however, other solutions will need to be employed – either searching for low infrastructure-intensive methods or attempting to build out infrastructure. Further, solutions may differ for provider-dependent contraceptives, such as IUDs, and those that can be obtained directly by the user, such as condoms. Regardless, these are not initiatives that can be executed cross-country (although research can be conducted and lessons can be shared cross-country).

4.3.1 Establish Innovation Fund(s)

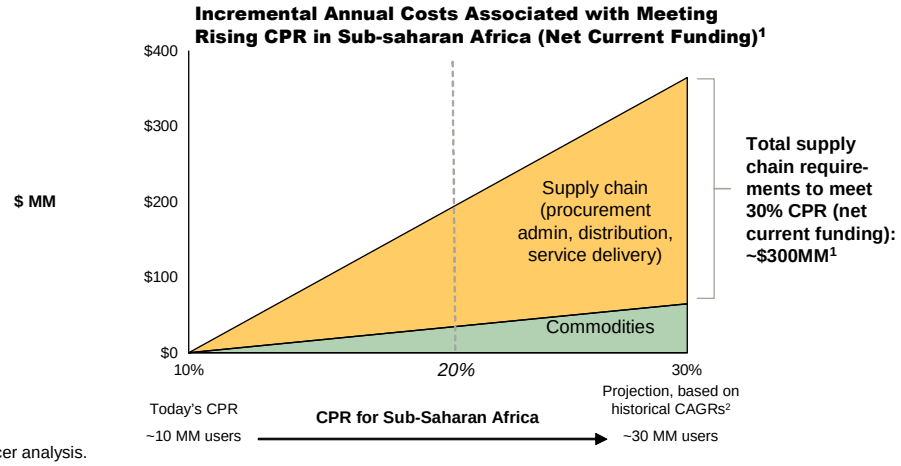
We recommend that these issues be addressed at the country-level by the country governments themselves. However, we believe that the donor community can influence and support these activities by establishing an "Innovation Fund" (or a series of Innovation Funds focused on the three country-specific areas discussed previously). The Innovation Fund(s) would be established with the purpose of providing short-term funding to countries for innovative investments in these areas. Listing a few examples, countries could use the funds to:

- Build technical capacity in forecasting
- Develop a partnership with a food distribution network to bring contraceptives to rural areas
- Conduct a market segmentation experiment to encourage commercial sector participation

In return, participating countries would need to develop and execute a unified development plan for addressing contraceptive availability issues. This plan could be the equivalent of the "Three Ones" adopted by countries for HIV/AIDS prevention. As described by UNAIDS, the country would establish "one framework that provides the basis for coordinating the work of all partners…one national coordinating authority…and one country-level monitoring and evaluation system." In addition, the fund would establish key performance metrics that the country would need to meet in order to continue receiving funding.

The level of capital required for the Innovation Fund(s) would depend on the number of countries served and the type of innovation project pursued. Benchmarks (from the contraceptive field and analogous fields) suggest that capacity building projects for procurement and planning will cost approximately $1-2 million per country. On the other hand, initiatives to reach the underserved are likely to be much costlier, as they usually rely heavily on infrastructure improvements. For example, given average current spending on commodities and infrastructure, each additional percentage point of CPR improvements in Sub-Saharan Africa would require US$50 million of incremental annual expenditures. Even if we believe that reaching the underserved populations could piggy-back on existing infrastructure and cost below current averages, each percentage point is still likely to be costly. At an efficiency gain of 2/3 (i.e., infrastructure only costs 1/3 of existing levels per user), each percentage point improvement in CPR would still cost US$18 million. Figure 24 shows the cumulative investment requirements to raise the CPR in Sub-Saharan Africa (given the assumptions just described).

Figure 24: Innovation Fund Requirements for Sub-Saharan Africa



Source: Mercer analysis.

1 Assumes that current levels of spending on commodities and supply chain would remain at their current levels; thus, in order to increase CPR to desired levels, a funding gap would exist; assumes other sector infrastructure can be leveraged (reduces supply chain costs by ~2/3).

2Compound Annual Growth Rate.

4.3.2 Conduct Pilots to Develop and Test Innovative Ideas

In addition to establishing the Innovation Fund(s), the donor community can play an important role in testing (and demonstrating) the effectiveness of innovative ideas. We recommend that the field fund pilots within each of the three areas (described above) to continue to develop and test innovative ideas that can later feed the Innovation Fund(s). The following are a few examples of innovative solutions that the field could test:

- *Real-time procurement models* – For more advanced countries, develop the information systems and planning processes to enable real-time tracking of inventory and more consistent replenishment.

- *Social franchising models* – Develop a network of affiliated delivery sites (i.e., individual franchises) to reach underserved areas with minimal infrastructure investments.

- *Consumer voucher models* – Transition the public-sector system to a voucher model, whereby users could "buy" commodities with their vouchers at either commercial or public delivery sites. A system like this would reduce the commercial-sector crowding-out issues described earlier and would begin to shift the mindset of the user (towards "purchasing" commodities).

4.4 Summary Conclusions

Significant progress has been made in the preceding decades with regard to raising contraceptive prevalence rates, thereby improving quality of life, reducing morbidity and mortality, and relieving the economic burden related to unintended pregnancies in the

developing world. That said, based on an independent review of the facts, we believe that significant opportunities exist to further this progress through new initiatives that improve availability of contraceptive commodities. As referenced multiple times in the description of these recommendations, there are also key interaction effects among initiatives, whereby pursuit of one reinforces the effectiveness of others. As such, the field should consider the appropriate staging of these initiatives if consensus exists that they have merit. Furthermore, pursuit of the recommendations proposed in this study will require an unprecedented level of cooperation and coordination among participants in a field which have historically acted on a relatively autonomous basis. This, above all else, will be a key challenge for making further progress.