



COMMERCIAL MARKET STRATEGIES  
NEW DIRECTIONS IN REPRODUCTIVE HEALTH

TECHNICAL PAPER SERIES No.3

# BROADENING COMMERCIAL SECTOR PARTICIPATION IN REPRODUCTIVE HEALTH

*The Role of the Public Sector Prices on Markets for Oral Contraceptives*

Karen G Fleischman Foreit, PhD

FEBRUARY 2002





# **Broadening Commercial Sector Participation in Reproductive Health**

*The Role of Public Sector Prices on Markets for Oral Contraceptives*

Karen G Fleischman Foreit, PhD

FEBRUARY 2002



COMMERCIAL MARKET STRATEGIES  
**TECHNICAL PAPER SERIES**





## COMMERCIAL MARKET STRATEGIES

NEW DIRECTIONS IN REPRODUCTIVE HEALTH

---

**Commercial Market Strategies** (CMS) is a USAID-funded project that aims to increase access to and demand for quality reproductive health and family planning in developing countries.

The CMS project is implemented by a consortium of leading-edge organizations in the areas of reproductive health and family planning, social marketing, and research: Deloitte Touche Tohmatsu (prime contractor), Abt Associates, Population Services International, and Meridian Group International, Inc.



## **THE TECHNICAL PAPER SERIES**

The Commercial Market Strategies (CMS) project Technical Paper Series is intended to promote a greater understanding of the current and potential role of the private sector in improving reproductive health in developing countries. The papers are disseminated to a broad reproductive health audience, including donor agency representatives, commercial and private sector partners, policy makers, technical advisors, and researchers. All papers in the series have been reviewed by CMS research staff and selected external reviewers.

*This publication was made possible through support provided by the Office of Population, Center for Population, Health and Nutrition, Bureau for Global Programs, Field Support and Research, US Agency for International Development, under the terms of Contract No. HRN-C-00-98-00039-00. The opinions expressed herein are those of the author(s) and do not necessarily reflect the views of the US Agency for International Development.*



# Table of Contents

Tables.....	ii
Acronyms.....	iii
Executive Summary .....	1
Introduction .....	1
Overview & Definition of the Commercial Sector .....	3
Data & Method of Analysis .....	6
Findings .....	7
Market size and relative market shares.....	7
Prices and market shares.....	9
Impact of promoting free commodities on an existing OC market.....	12
Is there a potential market for commercially-provided products?.....	13
Low-end commercial products are already found in developing country markets.....	15
Who can afford to pay?.....	16
Conclusions .....	18
References .....	19
Appendix A .....	21



# Tables

1. Market Size and Market Shares for Oral Contraceptives .....	8
2. Commercial Market Share and Prevailing Prices .....	9
3. Commercial Market Share and OC Brands.....	11
4. Impact of Promoting Free Commodities on an Existing OC Market.....	13
5. Low-Price Retail Prices for Oral Contraceptives (in US\$, December 1998) .....	15
A1. Oral Contraceptive Brands Available in Developing Countries .....	21
A2. Commercial Brands Reported in Africa.....	21



# Acronyms

AIDS	acquired immunodeficiency syndrome
CMS	Commercial Market Strategies project (USAID-funded; 1998–2003)
DfID	Department for International Development (United Kingdom)
DHS	Demographic and Health Surveys (USAID-funded)
GDP	gross domestic product
HIV	human immunodeficiency virus
ICRG	<i>International Country Risk Guide</i> (World Bank)
IMS	International Market Survey
MWRA	married women of reproductive age (15–49)
NGO	non-government organization
OC	oral contraceptives
PHR <sup>plus</sup>	Partnerships for Health Reform Plus project (USAID-funded; 2001–2005)
POLICY	The Policy Project, I and II (USAID-funded; 1995–2000 and 2000–2005)
PVO	private voluntary organization
SLI	standard-of-living index
SM	social marketing
SOMARC	Social Marketing for Change project (USAID-funded; 1984–1998)
STI	sexually transmitted infection
USAID	United States Agency for International Development



## Executive Summary

The demand for family planning methods in the developing world will increase dramatically as more women enter their child-bearing years and more couples wish to space and limit their births. Encouraging commercial markets for reproductive health commodities may allow more strategic use of donor and government health funding.

This paper focuses on oral contraceptives and addresses whether the commercial sector would be capable of serving some of the users currently receiving their supplies from the public sector. A variety of published reports and data sources are examined, including national demographic surveys and commercial pharmaceutical market surveys. The following conclusions are drawn:

- Outside of South America, the market for OCs is dominated by donated or subsidized product distributed through public outlets.
- Experience from South America shows that introducing or promoting free products into an established commercial market induces users to abandon the commercial sector for these free products without increasing overall use.
- Market segmentation analyses demonstrate that many users of public sources for OCs could afford to pay for a commercial brand in the commercial sector.
- Most developing countries have at least an incipient commercial presence. Even in these poor countries, major pharmaceutical laboratories and/or subsidiaries have already made the initial investment to formally register and manufacture or import low-to-moderately priced OC brands.

Taken together, these findings suggest that many developing countries have two of the basic conditions needed for increased commercial sector provision of oral contraceptives: (1) consumers who can afford to pay but who are currently using public sector products, and (2) moderately-priced commercial products legally registered and in the marketplace. The single policy step of introducing small user fees in public systems which currently provide untargeted free commodities could have significant ramifications in increasing commercial provision of oral contraceptives.



## Introduction

The demand for family planning methods in the developing world will increase dramatically as more women enter their child-bearing years and more couples wish to space and limit their births. In the wake of the 1994 International Conference on Population and Development in Cairo, donors made commitments to increase their assistance to developing countries to improve people's access to reproductive health services, including family planning. The recent "Contraceptive Security" initiative is evidence that donors are still concerned about maintaining and increasing access to reproductive health products and services in developing countries.

Donor contributions have not kept pace either with their own commitments or world need for reproductive health supplies,<sup>1</sup> leading to projections of a donor "gap" of \$140–\$210 million for commodities financing by the year 2015.<sup>2</sup> Most observers agree it is therefore prudent to ask how much privately-financed providers, especially the commercial sector, can contribute to meeting demand. Encouraging commercial markets for reproductive health commodities could free up donor and government resources to serve those for whom price is an issue.

The Interim Working Group on Reproductive Health Commodity Security recently noted that "the commercial sector usually plays an important role in providing contraceptives in low prevalence countries." They go on to state that "untargeted free or heavily subsidized contraceptives in the public sector limit demand for private sector contraceptives and 'poach' potential clients."<sup>3</sup> A previous paper in this series, *The Private Share in Contraceptive Provision*, arrives at the same conclusion: "Chief among the factors affecting the private share is probably the price of private services relative to the public price."

The present paper explores whether the commercial sector would be capable of serving some of the users who are currently receiving subsidized supplies from the public sector, by examining women who are currently contracepting, the family planning outlets and brands they use, and the brands that are locally available. Using available data, it attempts to separate out commercial commodities from donor-subsidized social marketing brands sold in commercial outlets to determine (1) the extent to which moderately priced commercial products are already available in developing country markets and (2) the impact of public sector prices on the use of commercial outlets and commercial brands.

This paper focuses on oral contraceptives (OCs). OCs are a relevant commodity for several reasons:

- they are one of the oldest and most popular temporary family planning methods; and
- they are manufactured by virtually all of the leading pharmaceutical laboratories.

OCs are especially suited for commercial providers — the finished product is easy to ship and store, has a relatively long shelf-life, and can be safely prescribed and distributed by non-medical personnel in non-clinical settings.

---

1 Ross 2001.

2 Population Action International 2001.

3 Fort 2001, p.18.



## Overview & Definition of the Commercial Sector

Most developing countries possess a variety of distribution and financing channels for family planning products. At one end of the spectrum is the public sector, where most costs are underwritten by public funds (government and/or donor): outlets belong to the government and commodities are donated or purchased by the government. Some public programs charge user fees, which seldom recover a significant portion of operating costs. At the other end of the spectrum is the “pure” commercial sector, where costs are privately financed by manufacturers, distributors, retailers, and ultimately clients. Outlets are privately owned and commodities are privately purchased.

Between the extremes of the public and purely commercial sectors lie NGOs and social marketing (in this discussion we consider only local NGOs and classify international NGOs that provide funding to local groups as donors). The NGO and social marketing sectors use varying degrees of donor subsidies. Many NGOs, especially smaller family planning associations in poorer developing countries, require near-total donor subsidies to maintain their outlets and distribute donated product. These are financially equivalent to the public sector (although their costs may be lower). Outside South America, few NGOs purchase commercial commodities, are financially sustainable, or account for more than a small portion of current family planning users.

There are many variants of social marketing. Virtually all use privately-owned outlets such as pharmacies and shops. Many distribute donated product which is sold to users at below cost (i.e., at donor-subsidized prices). In other social marketing models, donor subsidies cover promotion and/or distribution, in return for which manufacturers agree to keep their prices low. These programs do not use donor funds to procure or directly subsidize products.

Figure 1 presents a simplified classification matrix of the family planning provider market; it includes two dimensions (outlets and commodities) and two sources of funding (private and donor/government). Because most NGOs are heavily donor-dependent for operating expenses and commodities, NGOs are grouped with public programs (while recognizing that a few, such as PROFAMILIA/Colombia would be best grouped with the commercial sector). Social marketing programs that distribute donated product are classified into their own category (commercial outlets + donated commodities), while those that do not directly subsidize prices are grouped with the purely commercial sector. One cell in Figure 1 is empty, because commercial distributors do not place commercial product on consignment in public outlets.

Figure 1: Classification of Family Planning providers

		<b>Commodities</b>	
		<b>Commercial</b>	<b>Government / Donor</b>
<b>Outlets</b>	<b>Commercial</b>	1. Purely commercial sector; commercial social marketing	2. Subsidized social marketing
	<b>Government / Donor</b>		3. Public sector; most NGOs

A third dimension (after outlets and commodities) is prices charged to users for methods at different outlets. In categories 1 and 2, we may find different brands at different prices. Some public sector programs may charge user fees for cost recovery; most NGOs are at least beginning to charge fees to improve sustainability.

The higher the proportion (market share) of users served in category 1 (commercial products sold through commercial outlets), the lower the demands on government and donor funding for commodities. This is the focus of reducing the “resource gap” in projected commodity needs through commercial sector participation. Donors encourage social marketing because it should reduce total demands on government and donor funding by using privately financed commercial outlets, which may be a more efficient and effective way to reach people with subsidies than through the public sector. However, as long as social marketing uses donated products (i.e., subsidized social marketing), it does not reduce demands on government and/or donor commodity procurement.<sup>4</sup>

Estimating market shares by the categories presented in Figure 1 requires population-based surveys; service statistics and/or sales data do not give a complete picture. The basic population-based information source is the Demographic and Health Surveys (DHS).<sup>5</sup> While women may not be aware of the origin of their methods, if they acquired the commodities themselves (in some settings, husbands buy for their wives), they know where they obtained their pills, the brand of pills they are using (many DHS surveys ask users to show the actual package of pills), and the price they paid. These three pieces of information allow the analyst to use the classification matrix in Figure 1. However, not all surveys ask for brand and price, and even those that do may have too few pill users in the sample for detailed analysis.

4 A larger issue is the most efficient and effective ways to use subsidies to encourage contraceptive use. This is not the focus of the present paper.

5 The Centers for Disease Control (CDC) also conduct population-based surveys. While the CDC surveys ask the same basic family planning questions as the DHS, they do not include brand information and the data files are not kept in standard formats and are therefore generally not distributed for secondary analysis.

In summary,

- All DHS surveys ask current users where they got their method (source/outlet)
- Most surveys now ask the price paid
- Not all surveys ask for the OC brands
- Small sample sizes, especially in low OC-prevalence countries with low commercial-sector use, means we cannot cross-tabulate brand by price, and in some countries may restrict even univariate analysis of brand-specific use

The limitations of existing data limit potential analyses. For example, in cross-national regression analysis of the determinants/correlates of use of commercial outlets, it is not possible to distinguish categories #1 and #2 (commercial vs. subsidized social marketing brands) because so few surveys collect OC brand information. Using a case-study approach with fewer countries, it is possible to examine the proportion of social marketing within commercial-outlet share and the impact of public prices on use of commercial outlets.

This paper begins by considering market shares by provider source regardless of the brand type. In other words, without distinction between purely commercial transactions (category #1) and subsidized social marketing brands (category #2).<sup>6</sup> Price and brand information are then examined in a smaller number of countries for which those data are available.

---

<sup>6</sup> In addition to subsidized social marketing products, “leaked” donated products intended for public and/or NGO distribution are also often found in commercial outlets.



## Data & Method of Analysis

The analyses reported in this paper include previously published reports, including DHS and CDC surveys and secondary analyses, as well as new secondary analyses of Demographic and Health Surveys (DHS) data sets. Supplementary information on commercial OC brands was taken from an International Market Survey (IMS) health report commissioned in March, 1999.

The paper examines the market for oral contraceptives in 26 developing countries for which recent data are available. It includes:

- total market size (absolute prevalence of oral contraceptives among women in union of reproductive age);
- market shares among the public sector, the commercial outlets and the NGO sector (proportions of pill users citing these sources);
- prices paid for one cycle of pills; and
- brand availability.

Also included are two examples of introducing free commodities in existing markets in Latin America (Brazil, Peru).



## Findings

### Market size and relative market shares

The size of OC markets varies widely across the developing world. Among the sample presented in Table 1, the largest markets are found in Indonesia, Brazil, and Bangladesh — large countries with high OC use. The smallest markets are found in Togo and Bolivia — small countries with low OC prevalence. Commercial sector market shares (the proportion of all OC users who obtain their methods from a commercial outlet such as a pharmacy or private physician), also vary widely — from nine percent in Burkina Faso and Tanzania to 92 percent in Colombia.

Commercial outlets are the predominant force throughout South America, with the exception of Peru. In Central America, Asia, and Africa, the commercial sector is a smaller provider, with the exception of Egypt and Ghana. Table 1 presents market size (overall prevalence) and market shares for OCs in 26 countries, grouped by region. Note that commercial providers may include both commercial and subsidized products (i.e. social marketing and/or brands donated to the public/NGO sectors); this permits the largest number of countries in the analysis.

Across the 26 countries presented in Table 1, commercial outlet share is modestly correlated with OC prevalence ( $r = .22$ ,  $p < .10$ ) and with total users ( $r = .31$ ,  $p = .05$ ). However, if South America is removed from the analysis, these correlations disappear (prevalence:  $r = -.03$ ; users:  $r = .12$ ). In other words, outside of South America, commercial outlets do not systematically tap into the larger OC markets. The next section provides a closer examination of the commercial outlet share.

Table 1: Market Size and Market Shares for Oral Contraceptives

Region	Country/Survey year	Year 2000 Market size*		Provider Shares**		
		Projected prevalence	Projected users (,000)	Public	Commercial	NGO
South America	Bolivia 1998	3.7	49	19.0	78.1	0
	Brazil 1996	20.3	7,462	8.0	89.5	.9
	Colombia 1995	13.0	989	5.3	92.1	1.0
	Ecuador 1999	10.9	220	18.7	72.9	7.1
	Peru 1996	6.8	301	58.1	34.3	3.7
Caribbean	Dom. Rep. 1996	13.2	193	18.3	64.3	12.5
Central America	El Salvador 1998	9.7	107	49.4	13.1	35.0
	Guatemala 1999	4.9	88	20.7	27.8	43.9
	Honduras 1996	10.8	105	19.1	32.1	41.7
	Nicaragua 1998	13.5	105	53.4	34.3	7.8
Asia, Near East	Bangladesh 1997	22.2	6,043	67.1	27.6	0.4 <sup>a</sup>
	Egypt 1998	11.1	1,339	8.0	88.0	.4
	Indonesia 1997	19.5	7,510	60.3	12.0 <sup>b</sup>	1.8
	Philippines 1998	10.3	1,222	76.4	22.3	.1
	Turkey 1998	5.6	699	26.0	73.6	0
	Yemen 1997	3.6	177	49.3	43.1	2.2
Africa	Burkina Faso 1999	4.6	122	85.2	8.9	1.0
	Ghana 1998	4.9	202	34.7	53.2	3.1
	Kenya 1998	9.1	510	52.8	30.5	7.4
	Madagascar	3.2	97	48.6	17.0	23.8
	Mozambique 1997	2.0	98	70.9	16.0	1.5 <sup>c</sup>
	Niger 1998	3.9	85	79.7	18.4	0
	Senegal 1997	4.1	74	73.6	17.8	7.9
	Tanzania 1999	6.5	443	79.3	8.6	9.3
	Togo 1998	2.0	22	36.7	46.9	4.1
	Zambia 1996	8.4	131	74.9	15.6	6.1

\* Prevalence: married women of reproductive age. Users: all women. Source: Ross *et al*, 1999.

\*\* Source: Demographic and Health Surveys (secondary analysis); Centers for Disease Control (published reports: Ecuador, El Salvador, Nicaragua). NGOs include mission hospitals.

<sup>a</sup> Refers exclusively to NGO clinics. "Fieldworkers," which include both public sector and NGOs, have been listed under public sector.

<sup>b</sup> Excludes private midwives, who often obtain donated or government product.

<sup>c</sup> Private "other."

## Prices and market shares

Two recent studies have looked at differences in reproductive health prices in a cross-national context. In regression analyses, Bulatao (2002) and Winfrey *et al* (2000) demonstrated that public sector pricing is an important correlate of the commercial market share for OCs. In this section we extend the analysis to include both prices paid in commercial and public outlets, and brands purchased from commercial providers. Table 2 presents median prices for one cycle of pills, as reported by women using public and commercial sector outlets.<sup>7</sup> The median price paid in the public sector is zero or nearly zero in half the countries for which price information is available.<sup>8</sup>

Table 2: Commercial Market Share and Prevailing Prices

Region	Country	Commercial Outlet Share	Median Price Paid	
			Public	Pharmacy
South America	Bolivia	78.1	3.61	9.03
	Colombia	92.1	0.60	1.01
	Peru	34.3	0.00	2.04
Caribbean	Dominican Republic	64.3	0.00	1.43
Central America	Guatemala	27.8	0.33	2.19
	Nicaragua	34.3	0.00	0.95
Asia, Near East	Bangladesh	27.6	0.00	0.23
	Egypt	88.0	0.19	0.26
	Indonesia	12.0	0.21	0.62
	Philippines	22.3	0.05	1.68
	Yemen	43.1	0.12	0.60
Africa	Burkina Faso	8.9	0.19	*
	Ghana	53.2	0.22	0.22
	Kenya	30.5	0.00	0.34
	Madagascar	17.0	0.00	*
	Mozambique	16.0	0.00	0.67
	Niger	18.4	0.00	0.45
	Togo	46.9	0.34	0.54
	Zambia	15.6	0.00	0.28

Source: DHS, secondary analyses. Prices stated in US\$ as of the survey year.

\* Too few cases to analyze.

Note that the prices shown in the pharmacy column do not distinguish among brands (i.e., commercial brands, social marketing, leaked product). Only Bangladesh and Indonesia have enough commercial sector pills users in the sample to permit a brand x price break-down.

<sup>7</sup> Wherever possible, commercial sector prices are restricted to pharmacy outlets. In some countries, women also report receiving pills from private physicians and clinics. If a sufficient number of pharmacy users was found in the sample, these other commercial sector users were excluded from the price analysis, lest the price they reported also included the provider's services.

<sup>8</sup> At the time of the 1998 Philippine DHS, the official price in the public sector was zero, but clients were asked to make voluntary contributions.

Among these 19 countries for which price information is available, prices paid in the public sector are strongly associated with use of commercial outlets — as public prices increase, higher proportions of OC users obtain their supplies from commercial providers ( $r = .46, p < .025$ ),<sup>9</sup> regardless of prices charged in commercial outlets. Furthermore, there is no correlation between public and commercial provider prices paid; excluding Bolivia the correlation coefficient between median public and private prices is  $r = .09$ . Thus, it cannot be argued that public prices reflect general commercial economic conditions. Also, prices paid in pharmacies show no correlation with either total pill prevalence or use of commercial outlets. These results strongly argue that public sector prices are a major determinant of use of commercial outlets for oral contraceptives, independent of commercial sector activities including social marketing.

Outside Latin America, only two countries show commercial market share greater than 50 percent: Egypt and Ghana.<sup>10</sup> These countries also show similar prices paid between pharmacies and public sector outlets. In Egypt, prices are controlled by the government, and a given brand sells for the same price in all sectors. Ghana commercial outlets are dominated by the social marketing brand, a donated product priced to compete with the public and NGO sectors.

Commercial providers may carry a variety of products, including commercial brands and other brands donated or subsidized by governments or international donors. Except for the larger markets such as China, India, Egypt, Indonesia, and Colombia, most developing countries do not locally manufacture OCs. Commercial brands are imported by the pharmaceutical laboratory or its authorized importer and distributed to outlets by commercial distributors. Most commercial brands have a suggested retail price, although in practice a given outlet may charge a higher or lower price.

Donated and subsidized brands include legitimate social marketing brands and leaked merchandise — brands donated for distribution through the public and/or NGO sectors. Social marketing-brands have specified retail prices that are widely publicized and often posted at participating outlets. Leaked products — because they are not intended for commercial sale — have no specified prices and may be sold at widely varying prices.

The presence of free commodities in the public sector may do more than lure users away from the commercial sector. Leaked donated brands compete with legitimately commercial brands. For example, *Lo Femenal* is the Wyeth brand purchased by USAID for donation to public and NGO programs. Every DHS country distributing *Lo Femenal* through the public sector also found women reporting that they had purchased *Lo Femenal* in commercial pharmacies.

In Table 3, women who reported purchasing their OCs from commercial outlets are classified by their brand: social marketing brands are those whose wholesale price to the commercial provider is subsidized by a donor, and leaked brands are those which were intended for only public and NGO providers (usually *Lo Femenal*). Multiplying the commercial-outlet share by the commercial-brand share within those outlets yields an estimate of the “pure” commercial share: the percentage of all OC users who purchase commercial brands from commercial outlets.

---

9 Bolivia is an extreme outlier for both public and private prices paid. Excluding Bolivia increases the correlation coefficient to  $r = .55$ .

10 Turkey also has high use of commercial outlets (see Table 1). However, the Turkey DHS included neither price nor brand information.

Table 3: Commercial Market Share and OC Brands

Region	Country	Brand type					Pure commercial share
		Commercial	Social marketing		Leaked		
			Share	Brands	Share	Brands	
South America	Bolivia	75%	18%	<i>Duofem</i>	6%	<i>Lo-Femenal</i>	59%
	Colombia	100%	0%		0%		92%
	Peru	83%	***		17%	<i>Lo-Femenal</i>	28%
Caribbean	Dom. Rep.	100%	0%		0%		64%
Central America	Guatemala	73%	10%	<i>Iproday</i>	16%	<i>Lo-Femenal</i>	20%
	Nicaragua	58%	0%		42%	<i>Lo-Femenal</i>	20%
Asia, Near East	Bangladesh	34%	59%	<i>Maya, Ovacon, Norquest, Nordette</i>	7%	<i>Shuki</i>	9%
	Egypt	100%	0%		0%		88%
	Indonesia	73%	21%	<i>Microgynon (Blue Circle)</i>	7%	<i>Microgynon (Kimia Farm)</i>	9%
	Philippines	70%	(a)	<i>Trust</i>	30%	<i>Longetrol</i>	16%
Africa	Burkina Faso	79%	0%		21%	<i>Lo-Femenal</i>	7%
	Ghana	32%	57%	<i>Secure</i>	11%	<i>Lo-Femenal</i>	17%
	Madagascar	*	*		*		
	Mozambique	83%	0%		17%	<i>Lo-Femenal</i>	13%
	Niger	41%	0%		59%	<i>Lo-Femenal</i>	8%
	Togo	30%	0%		70%	<i>Lo-Femenal</i>	14%
	Zambia	*	*		*		

Source: DHS secondary analyses.

Note: \* too few users to classify by brand

\*\*\* social marketing does not subsidize price of commodities

(a) Newly-introduced subsidized social marketing brand; no reported use in the 1998 survey

Pure commercial share is modestly correlated with public sector prices paid ( $r = .33, p < .10$ ). There is no correlation between prices paid and market share of subsidized products (social marketing and/or leaked) sold through commercial outlets. In other words, charging in the public sector is associated with higher use of commercial products sold through commercial outlets.

To encourage non-poor consumers to choose commercial-sector sources, governments could consider increasing the price of contraceptives at public sector outlets. While this might raise concerns about the impact of higher prices on the use of contraception by poor consumers, most research has found that price increases do not reverse gains made in family planning programs. In Indonesia, prices for OCs at public sector outlets quadrupled over the past 10 years, with no decrease in consumption.<sup>11</sup> Lewis notes that when prices for contraceptives increased in Sri Lanka, Jamaica, Columbia, and Thailand, there was no decrease in contraceptive prevalence in those countries.<sup>12</sup> Schwartz *et al* looked at the effect of raising prices for one contraceptive method on the demand for other methods. He found no cross-price effects in the Philippines, Jamaica, or Thailand.<sup>13</sup> The following section strengthens this argument by demonstrating unexpected — and unwanted — impacts of promoting free commodities in Brazil and Peru.

### **Impact of promoting free commodities on an existing OC market**

The findings presented in the previous section show that weak commercial markets might be strengthened by introducing or modestly raising prices in public sector outlets. Data presented in this section demonstrate the converse — that within strong commercial markets for oral contraceptives, making free commodities easily available can induce commercial clients to switch to the public sector.

In 1979, the Secretariat of Health of Piauí, the poorest state in Brazil, began free community-based distribution of oral contraceptives through health posts, community centers, and home posts. Contraceptive prevalence surveys were conducted shortly after the program began and again in 1982. The evaluation showed that pill prevalence (market size) was unchanged after three years of the program — but the commercial market share fell by 39 percent as fewer women purchased supplies from pharmacies and more women turned to the free family planning program.

Similarly, in 1995 the Peruvian government took measures to expand the public family planning program, introducing injectable contraceptives and legalizing surgical contraception. Free methods had always been available at government outlets, but the program embarked on an aggressive promotional campaign — including frequent public statements by the President — to announce that all family planning methods would be available free of charge, at all health facilities, to all who wanted them. Use of modern contraceptives, which had grown by 8 percent in the period 1986–1991, grew by another ten percent in the period 1991–1996. However, the market for oral contraceptives remained unchanged at six percent, and the commercial market share declined by 37 percent.

---

11 Molyneux 2000.

12 Lewis 1994.

13 Schwartz *et al* 1986.

Table 4 summarizes the outcomes of the two family planning program campaigns on the oral contraceptive markets in Brazil and Peru. Note that neither country provided donor-subsidized social marketing brands through commercial outlets.

*Table 4: Impact of Promoting Free Commodities on an Existing OC Market*

Country	Prevalence		Pharmacy Share	
	Before	After	Before	After
Piaui State, Brazil	10%	10%	56%	34%
Peru	6%	6%	49%	31%

Sources: Brazil — cited in World Bank, 1993.

Peru — published DHS final reports.

The findings presented in Table 4 and in the preceding section clearly demonstrate that widespread placement of free commodities in public sector outlets undercuts the ability of the commercial sector to retain users and increases the dependency on donated products. Similar findings have also been reported in Senegal, Honduras, and Mexico (see Fort 2001).

### **Is there a potential market for commercially-provided products?**

It could be argued that women use the public sector because they are too poor to pay for commercial brands. However, throughout Africa and Asia, the private sector share of total health expenses typically exceeds the private sector share of family planning (see Foreit 1992).

One potential market for commercial products are women who could afford to pay for their method, but use low- or no-cost public outlets instead. Market segmentation studies, which examine the characteristics of family planning users who obtain their methods from different sources, clearly show that substantial numbers of family planning users who can afford to pay partially or completely unsubsidized commercial prices for family planning in fact use the public sector.<sup>14</sup> Their choice of public sector outlets as the source for their contraceptives is in fact a rational one. Where public sources are as convenient as private sources, but also less expensive, and where there are no mechanisms to discourage non-poor consumers from obtaining the public sector products, clients rationally gravitate to the public source. The market for OCs is particularly susceptible to this outcome, since consumers can often obtain re-supplies with little waiting time, and given the stringent standards for donor-procured commodities there are no quality differences between the products in the two sectors. In other words, money costs are lower and there are few non-money costs to using the public sector (such as longer waiting time, perceptibly lower quality products) to make the commercial product more attractive.

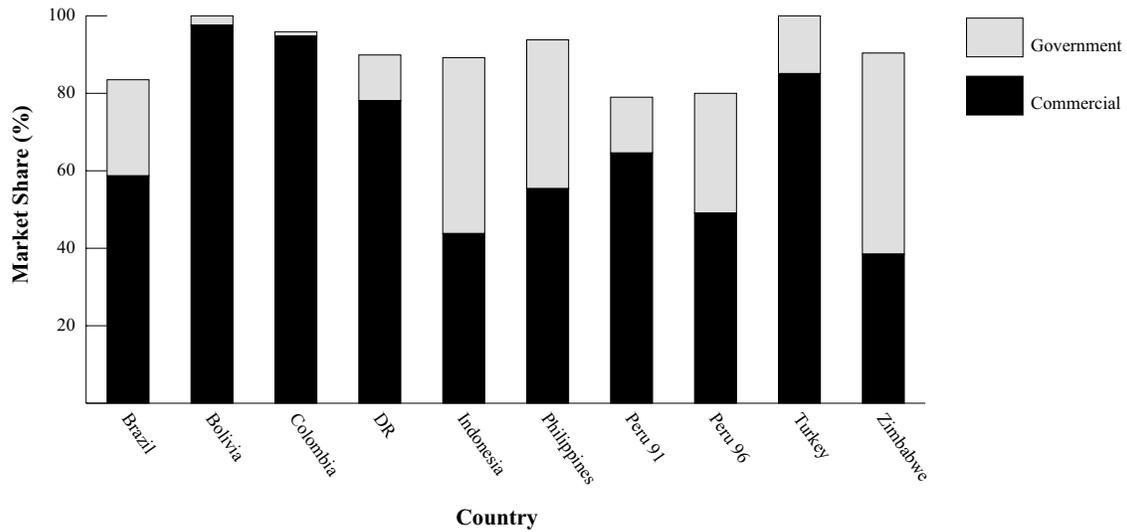
Foreit (1999) used the purchase of private maternal and child health care (MCH — antenatal care and delivery, and/or the treatment for ill children) as a proxy for ability to pay for contraception.

<sup>14</sup> Such studies in Egypt, India, Indonesia, Jordan, Morocco, Philippines, and Turkey have shown that large numbers of women with an ability to pay for family planning products and services are using the highly subsidized services of the public sector.

While many women who can afford to pay do purchase their OCs from commercial outlets, in a number of countries substantial numbers of wealthier OC users obtain their supplies from public sector outlets, as shown in Figure 2. These women represent untapped markets for commercial OCs.

Figure 2: Source of Oral Contraceptives Among Women Who Purchase Private MCH Care

Note: market shares do not sum to 100 percent because NGOs, "other" sources, and "don't know" responses are not included.



Note the large proportions of wealthier OC users who obtain public supplies in Indonesia, the Philippines, Peru, and Zimbabwe. Although women who can afford to pay are a minority of the total OC market, moving them to commercial providers would reduce the burden on the public sector and motivate the growth of commercial markets. To illustrate: in Indonesia, women who pay for private MCH accounted for nine percent of oral contraceptive users (analysis not shown). If all these women were to purchase their supplies privately, the private sector share of the oral contraceptive market would increase by 25 percent and the government burden would decline by six percent. In the Philippines, women who pay for private MCH accounted for 13 percent of oral contraceptive users. If all these women were to purchase their supplies privately, the private sector share of the oral contraceptive market would increase by 22 percent and the government burden would decline by seven percent. And in Zimbabwe, women who pay for private MCH accounted for five percent of oral contraceptive users. If all these women were to purchase their supplies privately, the private sector share of the oral contraceptive market would increase by 26 percent and the government burden would decline by three percent.

## Low-end commercial products are already found in developing country markets

Demonstrating market potential for commercial outlets through market segmentation studies is especially relevant for those countries in which low-priced commercial products are already available in pharmacies. There are several sources of information on commercial OC brands, including the DHS (for those countries which ask for brand), the IMS — a commercial compendium of wholesale sales of ethical products, and occasional situation analyses and retail audits, which survey pharmacies and record products carried and in stock.

The principal manufacturers of oral contraceptives found in developing countries are Wyeth, Schering, and Organon. Some of the brand names supplied by these three laboratories to developing country markets in 1998 are listed in Appendix 1 (many share the same chemical formulation, but are sold under different names in different countries).

In many developing countries, Schering and Wyeth directly compete with at least one low-priced brand apiece, as can be seen in Table 5. While these data are by no means exhaustive, it is important to note that with the exception of Ecuador, every country had at least one commercially marketed brand retailing for under US\$2.00 per cycle and several had fully commercial (i.e., unsubsidized and free from government price controls) brands retailing at less than US\$1.00.

*Table 5: Low-Price Retail Prices for Oral Contraceptives (in US\$, December 1998)*

Region	Country/Region	Wyeth	Schering
<b>South America</b>	Brazil	1.58	1.47
	Colombia	0.74	0.82
	Ecuador	2.24	3.89
	Peru	1.65	1.47
<b>Central America</b>	Mexico	1.69	1.93
	Central America (region)	2.31	1.60
	Dominican Republic	0.67	1.14
<b>Asia/ Near East</b>	Egypt*	0.19	0.13
	Indonesia	0.54	1.25
	Morocco	0.60	0.60
	Philippines	12.75	1.37
	Turkey	1.19	1.32
<b>Africa</b>	French West Africa	0.86	0.67

Source: IMS Global Services, produced for The Futures Group International, 1999.

\*Government price controlled.

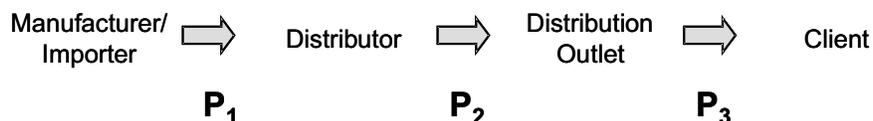
Taken together with the DHS data on brand use discussed above, the IMS surveys clearly demonstrate that commercial companies have already made the initial investment to legally register their products with government regulatory bodies in order to sell contraceptives in the developing world.

## Who can afford to pay?

In most developing countries, there will be a portion of the population who cannot afford to pay even low commercial prices for family planning. How many can and cannot afford to pay in a given country will depend on commercial prices and on the income distribution within the population.<sup>15</sup>

To be commercially viable, OCs must be priced to cover production and delivery costs. Figure 3 presents a generic distribution chain from the manufacturer (or importer) to the client. It requires at least three transactions: from the manufacturer to the distributor, from the distributor to the outlet (e.g., pharmacy), and from the outlet to the client. Each agent incurs real costs for doing business and charges a price to cover these costs and to generate profit. If the price paid by the client (P<sub>3</sub>) is not high enough to cover the costs to the manufacturer, distributor, and outlet, another party must pay them. In the public and NGO sectors, governments and donors subsidize the method by paying commodity and/or distribution costs. Donors subsidize some products in the commercial sector through social marketing programs, by paying for commodity and/or distribution costs (often by providing free product and distribution, rather than going through commercial distributors). In a few countries, most notably Egypt, government-imposed price controls force manufacturers to release product at below cost; the manufacturer then recoups these losses through other, higher-priced, products.

Figure 3: Distribution Chain for Oral Contraceptives



It has been suggested that poor families should pay no more than one percent of their income on family planning,<sup>16</sup> and that countries need a per-capita GDP of US\$750 to afford low-end commercial pills.<sup>17</sup> However, incomes are not evenly distributed across populations and even in very poor countries, many individuals have incomes significantly higher than the national average. Sine (2002) estimated that in Bangladesh (1999 GDP=\$370) and Indonesia (1999 GDP=\$600), at least 20 percent of all women lived in households with per-capita incomes higher than \$750, yet, as shown above in Table 3, commercial brands covered only nine percent of their OC markets. Other donor-relevant countries with very low incomes and at least 20 percent of women living in households with per-capita incomes higher than \$750 include Kenya (1999 GDP=\$360), Senegal (1999 GDP=\$500), and Viet Nam (1999 GDP=\$370). In other words, in

15 Estimating the proportion of the population in any given country who need a subsidy because they cannot afford to pay for their method is the topic of another Commercial Market Strategies technical paper: *How Much Is Enough? Estimating Requirements for Subsidized Contraceptives: Results from a Ten-Country Analysis* (2002) by Dr Jeffrey Sine.

16 See, for example, PD Harvey 1994.

17 Robert Bonardi, personal communication, August 2001. This represents a 125 percent mark-up over 13 cycles at 2001 USAID procurement prices for oral contraceptives (US\$0.2265 per cycle for public sector combined oral contraceptive pills, and US\$0.2490 per cycle for social marketing combined oral contraceptive pills, Mark Rilling, personal communication 6/29/01).

many developing countries — including sub-Saharan Africa — there are more OC users who can afford to pay for commercial products than are currently using purely commercial brands. Continuing to subsidize products for these women places an unnecessary burden on limited donor resources.



## Conclusions

This paper addresses the question of whether the commercial sector — that is, commercial brands sold through commercial outlets — would be capable of serving some of the users who are currently receiving subsidized supplies from the public sector, thereby reducing the drain on donated commodities in developing countries.

### **Does the presence of free public product influence commercial share?**

Outside of South America, the market for OCs is dominated by donated or subsidized product distributed through public outlets. The cross-country comparisons presented in this paper demonstrate that presence of free contraceptives in public outlets is associated with lower commercial market share for oral contraceptives, independent of the presence of subsidized social marketing products. While correlations do not prove causality, the natural experiments in Brazil and Peru demonstrate that even in a well-established commercial market, introducing or promoting easy access to free supplies induced women to abandon their commercial sector providers. It is therefore reasonable to speculate that in other markets, the presence of widely-available free public contraceptives may be holding back the development of the commercial sector.

### **Would the commercial sector be capable of serving some of the users currently receiving subsidized supplies from the public sector?**

The minimum conditions necessary for commercial sector expansion would be users who can afford to pay and commercial brands already in the market. Market segmentation analyses outside of South America demonstrate that many users of public sources for OCs could afford to pay for commercial brands. World Bank estimates of national GDP and income distribution indicate substantial numbers of individuals able to pay commercial prices. DHS data on brand use and IMS surveys clearly demonstrate that commercial companies have already made the initial investment to legally register their products with government regulatory bodies and that commercial outlets do carry low- and moderately-priced commercial OC brands. The geographic reach of commercial outlets and the extent to which low-priced brands are found across commercial outlets require further study.

Long-term contraceptive security eventually requires commercial sector involvement. The findings of this review suggest that many developing countries have both (1) consumers who can afford to pay but who are currently using subsidized products, and (2) moderately-priced commercial products legally registered and in the marketplace. This would satisfy at least the bare minimum for commercial sector development. The single policy step of introducing small user fees in public systems which currently provide untargeted free commodities could have significant ramifications in increasing commercial provision of oral contraceptives.



## References

- Akin, John S. and J. Brad Schwartz. 1988. "The Effect of Economic Factors on Contraceptive Choice in Jamaica and Thailand: A Comparison of Mixed Multinomial Logit Results." *Economic Development and Cultural Change*, 36:3, 503–527.
- Alano, B., E. de Guzman, C. Raymundo, and W. Winfrey. 1998. *Family Planning Use in the Philippines: Market Segmentation Study*. Manila, Philippines: USAID/The POLICY Project.
- Almasarweh, Issa and William Winfrey. 2000. *Segmentation of Family Planning Services by Sector in Jordan*. Washington, DC: The POLICY Project and Jordan/National Population Commission.
- Berg, R., W. Winfrey, and J. Sine. 1995. *Consumer Profiles within Market Segments for Family Planning: An Analysis of the 1992 Egypt Demographic and Health Survey*. Washington, DC: USAID/Options II Project.
- Bulatao, Rodolfo. 2002. *What Influences the Private Provision of Contraceptives?* Washington DC: USAID/Commercial Market Strategies Project.
- Cakir, H. Volkan and Jeffrey J. Sine. 1997. *Segmentation in Turkey's Family Planning Market*. Washington, DC: USAID/The POLICY Project.
- Cakir, Volkan. 1998. *Segmentation Study of The Family Planning Market in Morocco*. Washington, DC: USAID/The POLICY Project.
- de Vargas, Teresa, John H. Bratt, Varuni Dayaratna, James R. Foreit, Daniel H. Kress. April 2–4, 1998. *Estimating Consumer Response to Price Changes in Family Planning and Reproductive Health Services*. Paper presented at the annual meeting of the Population Association of America, Chicago, Illinois.
- Ecuador Center for Population and Social Development Studies. 2001. *Ecuador ENDEMMAIN 1999* (Demographic and Maternal-Child Health Survey). Quito, Ecuador: Ecuador Center for Population and Social Development Studies.
- El Salvador Demographic Association. 2000. *National Family Health Survey 1998*. San Salvador: Asociación Demografica Salvadoreña (ADS).
- Foreit, Karen G. 1992. *Private Sector Approaches to Effective Family Planning*. World Bank working paper WPS 940. Washington, DC: World Bank.
- Foreit, Karen G. 1999. *Use of Commercial and Government Sources of Family Planning and Maternal and Child Health Care*. The POLICY Project Working Paper Series No. 4. Washington, DC: USAID/The POLICY Project.
- Fort, Catherine. 2001. *Meeting the Challenge: Financing Contraceptive Supplies in Developing Countries — Summary of Issues, Options, and Experience*. Washington, DC: Interim Working Group on Reproductive Health Commodity Security.

- Futures Group International, The. 1998. *Background Paper: Market for Condoms and Oral Contraceptives in India/Uttar Pradesh*. Washington, DC: The Futures Group International.
- Harvey, PD. 1994 “The Impact of Condom Prices on Sales in Social Marketing Programs.” *Studies in Family Planning*, 25:1, 52–58.
- Honduras Ministry of Health *et al* 1997. *Encuesta Nacional de Epidemiologia y Salud Familiar 1996* (National Epidemiology and Family Health Survey). Tegucigalpa: Honduras Ministry of Health.
- Jensen, Eric, Neeraj Kak, Kusnadi Satjawinata, Dewa Nyoman Wirawan, Nelly Nangoy and Suproyoko. 1994. “Contraceptive pricing and prevalence: family planning self-sufficiency in Indonesia.” *International Journal of Health Planning and Management*, 9:4, 349–359.
- Molyneaux, Jack. 2000. *The evolution of contraceptive pricing in Indonesia: A final report to the POLICY Project*. Santa Monica, CA: Rand.
- Lewis, Maureen. 1994. *Price Elasticity and Cost Recovery Experience in LDC Family Planning Programs*. USAID.
- Murray, Nancy, William Winfrey, Christine Stevens and Charlotte Colvin. 2001. *Will Adolescents be Differentially Affected by Increased User Fees for Reproductive Health Services?* (draft). Washington, DC: USAID/FOCUS Project.
- Population Action International. 2001. *Meeting the Challenge: Overview — The Need for Security in Reproductive Health Supplies*. Washington, DC: Interim Working Group on Reproductive Health Commodity Security.
- Ross, John, John Stover, and Amy Willard. 1999. *Profiles for Family Planning and Reproductive Health Programs: 116 Countries*. Glastonbury, CT: The Futures Group International.
- Schwartz, JB, Akin JS, Guilkey DK, Paqueo V. 1989. “The Effect of Contraceptive Prices on the Choice of Contraceptive Method: A Three-Country Comparison.” In Bulatao RA, Palmore JA, Ward SE, eds., *Choosing a Contraceptive: Method Choice in Asia and the United States*. Boulder, CO: Westview Press, 78–102.
- Sine, Jeffrey. 2002. *How Much is Enough? Estimating Requirements for Subsidized Contraceptives*. Washington, DC: USAID/Commercial Market Strategies Project.
- Winfrey, William, Tamara Fox, Laura Heaton and Susan Adamchak. 2000. Understanding the Commercial market Sector’s Share in International FP. The POLICY Project Working Paper Series No. 6. Washington, DC: USAID/POLICY Project.
- World Bank. 1993. *Effective Family Planning Programs*. Washington, DC: World Bank.

## Appendix A

Table A1: Oral Contraceptive Brands Available in Developing Countries

Wyeth		Schering		Organon	
<i>Adepal</i>	<i>Noral</i>	<i>Anovlar</i>	<i>Neogynon</i>	<i>Exluton</i>	<i>Lyndiol</i>
<i>Anfertil</i>	<i>Nordette</i>	<i>Eugynon</i>	<i>Neovlar</i>	<i>Gracial</i>	<i>Normophasic</i>
<i>Denoval</i>	<i>Nordiol</i>	<i>Femiane</i>	<i>Phaeva</i>	<i>Marvelon</i>	<i>Ovostat</i>
<i>Evanor</i>	<i>Nortrel</i>	<i>Gynera</i>	<i>Primovlar</i>	<i>Mercilon</i>	<i>Restovar</i>
<i>Femenal</i>	<i>Ovral</i>	<i>Gynovin</i>	<i>Trigynon</i>	<i>Microdiol</i>	<i>Varnoline</i>
<i>Hormonet</i>	<i>Stediril</i>	<i>Gynovlar</i>	<i>Triquilar</i>	<i>Ovanon</i>	<i>Physiostat</i>
<i>Lo-Rondal</i>	<i>Tri-Minulet</i>	<i>Microgynon</i>	<i>Miniphase</i>		
<i>Minidril</i>	<i>Trinordiol</i>	<i>Microlut</i>	<i>Mill Anovlar</i>		
<i>Minulet</i>		<i>Microvlar</i>	<i>Meliane</i>		
		<i>Milligynon</i>	<i>Gynophase</i>		
		<i>Minigynon</i>	<i>Gynovlane</i>		
		<i>Moneva</i>	<i>Nova</i>		

**Other brands:** Janssen Cilag: *Micronor*, *Trinovum*; Sigma Pharma: *Levordiol*, *Megastran*; Cilag: *Cilest*, *Ortho-Novum*, *Trinovum*, *Triella*; Searle: *Norinyl*, *Secuentex*, *Ovulene*, *Cycleane*; Syntex: *Noriday*, *Norminest*; Roche: *Norinyl*, *Norminest*, *Norquest*; and others

Source: IMS Global Services, produced for The Futures Group International, 1999.

Countries include Brazil, Central America [region], Colombia, Dominican Republic, Egypt, Ecuador, French West Africa [region], Indonesia, Jordan, Mexico, Morocco, Pakistan, Peru, Philippines, and Turkey.

Table A2: Commercial Brands Reported in Africa

Country	Manufacturer			
	Wyeth	Schering	Organon	Other
Burkina Faso	<i>Adepal</i>	<i>Miniphase</i>		<i>Micronovum</i>
Ghana		<i>Microgynon</i>		
Madagascar		<i>Microgynon</i>		
Mozambique		<i>Microgynon</i> , <i>Eugynon</i>	<i>Ovanon</i>	
Niger		<i>Miniphase</i>		
Togo	<i>Adepal</i> , <i>Minidril</i>			
Zambia		<i>Microgynon</i> , <i>Neogynon</i>		

Source: DHS secondary analysis.



## Notes















**COMMERCIAL MARKET STRATEGIES**  
NEW DIRECTIONS IN REPRODUCTIVE HEALTH



FUNDED BY:  
US Agency for International Development  
USAID Contract No. HRN-C-00-98-00039-00

**Commercial Market Strategies Office**  
1001 G Street NW, Suite 400W  
Washington DC, 20001-4545  
Telephone: (202) 220-2150  
Fax: (202) 220-2189  
Web: [www.cmsproject.com](http://www.cmsproject.com)

**Deloitte  
Touche  
Tohmatsu**

IN PARTNERSHIP WITH:  
Abt Associates Inc.  
Population Services International  
Meridian Group International, Inc.