

# Contraceptive Price Changes: The Impact on Sales in Bangladesh

By Robert L. Ciszewski and Philip D. Harvey

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*In April 1990, the Bangladesh social marketing project increased the prices of the contraceptives it sold by an average of about 60%. In the year following these increases, condom sales dropped by 29%, and pill sales fell by 12%, despite a well-established trend of annual increases. When sales had not returned to their previous levels after about two years, the project lowered prices; sales returned to earlier levels within a few months and have increased since. These events occurred in a large and mature program, where major variables affecting project performance are well understood. Therefore, the results appear to constitute strong evidence that, at least in social marketing structures, contraceptive prices, and changes in those prices, have a substantial impact on demand.* (International Family Planning Perspectives, 21:150–154, 1995)

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Social marketing of contraceptives has achieved notable success in creating and satisfying demand for family planning in developing countries.<sup>1</sup> Charging a small price to the consumer, as is always the practice in social marketing programs, has distinct advantages. First, wastage is minimized, since consumers are likely to use products for which they pay. Second, the price charged can motivate retail traders to offer the products over the widest geographic area, thus allowing easy and affordable access to products that might otherwise be inaccessible, too expensive or both.

In family planning programs generally, and particularly in social marketing programs, the issue of contraceptive prices has attracted increasing attention, as demand for family planning in developing countries has outstripped the funds available to supply free or low-cost services. Social marketing programs, perhaps because of the “commercial” connotations of this method of delivering family planning, have been under intense pressure to maximize consumer prices, thus lowering costs to donors.

Yet, when prices are raised, the poorest clients are the first to drop out.<sup>2</sup> As in any other family planning program, low-income consumers are the priority clients for social marketing, and their loss to a program is of substantial concern to planners.

Another reason the pricing issue has become controversial is that there has been little systematic analysis of this subject, and even less practical application of research

findings by those who set contraceptive prices. Indeed, prices vary widely from country to country, and these variations greatly exceed (and sometimes even run counter to) differences in economies and general wage and price levels.

For example, in relatively new social marketing programs in Burkina Faso, Cameroon, Côte d’Ivoire, Guinea, Nigeria and Zimbabwe, condom prices were set at 3–10 times the levels (in U.S. dollars) charged in Bangladesh, India and Pakistan.<sup>3</sup> Yet, per capita gross national product is lower in many of these African countries than in the Asian countries, which have traditionally kept prices low.

How do contraceptive prices influence demand for supplies and services? If prices are being set without regard to either per capita gross national product or available research findings, how are they being set? And could such decisions be made more wisely? The results of price changes in Bangladesh may provide new information to help answer these questions.

## What Is Known?

A study published in 1986 summed up most of what was then known about the effect of contraceptive prices on demand.<sup>4</sup> Reviewing the results of 15 experimental programs, the investigator concluded that charging a modest fee for contraceptive services and products (rather than providing them free) did not have a negative impact on demand. On the other hand, the review found that price reductions consistently led to increases in demand. Furthermore, efforts aimed at full cost recovery seemed to deter low-income and moderate-income couples from obtaining

contraceptive services and supplies.

A 1991 review of the literature on this subject recapitulated the findings of the earlier report and included additional data.<sup>5</sup> The conclusions were consistent with those of the earlier review: A low or moderate price (as opposed to no price) can be charged without significantly decreasing demand; lowering or eliminating fees attracts new users; and price increases have mixed results, but large increases generally dampen demand.

More recent information on condom prices—particularly from social marketing programs in Haiti and Pakistan and from a study that related prices to per capita sales—confirms that large price increases depress demand and that too-high consumer prices impede expansion of contraceptive prevalence.

In Haiti,<sup>6</sup> the program lowered condom prices three times over a period of one and one-half years. First, the cost of one imported brand of commercial condoms was reduced by about 50%; sales increased by 134%. Next, the program introduced a new brand at a consumer price 50% below the (already decreased) price of the other condom; sales grew by 24%. Finally, the price of this cheaper condom was cut in half, and sales rose by 94%.

In Pakistan,<sup>7</sup> the program doubled the price of a four-pack of one brand of condoms in two selected towns and simultaneously increased the price by one-half in the rest of the country. Intercept and follow-up interviews conducted both before and after the price change revealed that in the areas with the smaller increase, 21% of purchasers had discontinued use six months after the price increase, while in the areas with the larger increase, 56% had discontinued (a difference that was statistically significant). This finding confirms the earlier conclusion that drastic price increases may have a seriously detrimental effect, whereas more moderate increases may not.

Finally, a 1991 review of condom distribution in 24 social marketing programs showed a significant inverse correlation between per capita sales and prices (based on an index that took into account per capita gross national product).<sup>8</sup> The four most successful programs (in Bangladesh,

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Robert L. Ciszewski is vice president, Population Services International, Washington, D.C., and Philip D. Harvey is president, DKT International, Washington, D.C.

Costa Rica, Jamaica and Pakistan) had average sales of 0.75 condoms per capita, and all had very low prices. In the seven least successful programs, average sales totaled 0.07 condoms per capita, and prices were more than six times those in the successful programs. While a number of programs had both low per capita sales and low prices, the evidence clearly suggested that high prices dampen sales.

### Social Marketing in Bangladesh

The social marketing project in Bangladesh has long been an integral part of the national family planning program. The government has traditionally provided free contraceptive services, including both condoms and pills supplied by the U. S. Agency for International Development (USAID), and the social marketing project has provided brand-name contraceptives at a very low price through the commercial distribution system. On the assumption that the very poorest family planning clients would avail themselves of the free supplies distributed by the government, but also that government clinics, and even government outreach workers, could never hope to reach all of the rural poor dispersed throughout Bangladesh, prices in the social marketing program have always been set very low.

The Bangladesh social marketing project is a very large and mature program. Begun in 1976, the project has been liberally funded by USAID, and became the second-largest social marketing effort in the world (after the government of India's) shortly after it got under way. It has been widely recognized as a particularly successful effort in terms of per capita coverage and cost per couple-year of protection provided. By the end of 1993, the project—now called the Social Marketing Company (SMC)—was providing 2.2 million couple-years of protection, 60% through condom sales and 40% through sales of oral contraceptives.

The SMC employs almost 500 people, of whom about 150 are salespersons or sales supervisory staff. The company's contraceptives and other health products are available in an estimated 130,000 retail outlets throughout the country, ranging from large urban pharmacies to tiny rural stalls. In addition, over the years, the SMC has created and carried out the most intense mass media campaign in Bangladesh's history (and a massive family planning campaign by any standard) to inform people of the benefits of limiting family size, as well as to advise them about the availability of affordable contraceptives and how to use them.

Because the SMC has such a long history, its sales levels are generally predictable within certain parameters. Targets are set on the basis of long experience, and reflect management's understanding of the market, of the planned magnitude of expanded distribution, and of Bangladeshi men and women's ever-increasing motivation toward family planning. Further, given the size and coverage of the program, transitory actions of the sales force or ordinary, temporary fluctuations in distribution are unlikely to produce sizable, unexpected changes in sales. During the late 1980s, pill and condom sales increased each year by an average of 8–10%. Similar increases were expected in 1990 and 1991.

### Price Changes

Small increases in the prices of consumer goods are normal, and people take them in stride. Thus, periodic price increases for condoms and pills in the social marketing project before 1990, averaging 10% or so, had practically no effect on wholesale or retail sales. In 1990, however, the SMC implemented far larger price increases; two years later, the project rolled prices back. (The pricing histories of the products discussed in this article are given in Table 1.)

### Factors Leading to Increases

From the social marketing project's inception in 1976 through 1993, the 1.4 billion condoms and 60 million cycles of pills it distributed were donated by USAID, at a cost to the donor in excess of \$60 million. Sales revenues—provided, ultimately, by the users of the products—recovered some \$20 million, but the remaining subsidy is a major and continuing consideration.

By 1989, these subsidies had become of great concern to USAID. Because the SMC receives contraceptives at no cost and sells them at below-cost prices, higher sales result in rising costs to the donor. Also, there is no economy of scale in an open-ended

provision of large quantities of contraceptives: Each sale costs the donor a fixed amount for procuring and shipping the product, plus a subsidy to cover the difference between repackaging and marketing costs and funds recovered through wholesale and retail sales.

Thus, with costs rising as sales increase, the volume of sales revenues takes on great im-

portance. And product pricing is a key to acquiring these revenues. If the consumer pays more, the project can charge a higher price to wholesalers and retailers, and thus recoup more to cover other costs, reducing the burden on the donor.

When weighing the pros and cons of a price increase, donor representatives and program managers faced several complex issues. Past research had suggested that charging a "modest" price would not reduce contraceptive demand, and the relatively small price increases in the Bangladesh program throughout the 1980s had had only negligible impact on sales. Further, planners felt that higher prices might actually enhance the image of the SMC's products as consumers and retailers came to recognize the value of the expensive imported contraceptives that the project offered.

On the other hand, because the products were priced so low, program managers were concerned that a change that seemed modest when considered in absolute terms would be large in percentage terms (which is the way retailers characteristically view such matters). Furthermore, a retail price increase that may have seemed small to a Western planner—one U. S. cent or less per condom, or three cents per cycle of pills, for example—could make a considerable difference to the low-income target consumers in a social marketing program.

In looking for guideposts to help direct their pricing decision, managers reluctantly ruled out operations research, such as regional experiments on price elasticity. Bangladesh is a compact and crowded country, and traders are very familiar with the prices of the commodities in which they deal. Attempts to test price elasticity by applying different prices to different areas of the country have not been successful; therefore, the increases under discussion were not tested or otherwise researched.

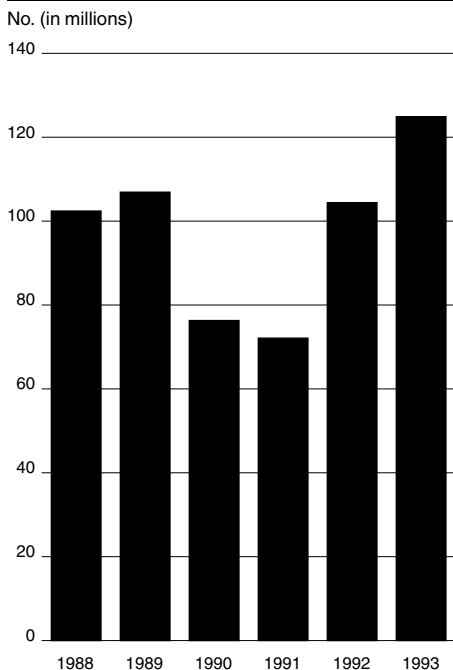
Eventually, as pressure to increase prices

**Table 1. Retail prices (in taka) for contraceptives sold through the Bangladesh social marketing project, 1976–1992**

Year	Condoms*		Pills†	
	Raja	Panther	Maya	Ovacon
1976	0.13	na	0.70	na
1980	0.15	na	1.00	4.00
1983	na	0.50	na	na
1985	0.20–0.25‡	na	1.50	na
1988	na	na	2.00	na
1990	0.33–0.50‡	0.75	3.00	6.00
1992	0.20–0.25‡	0.75	1.00	6.00

\*Price per piece. †Price per cycle. ‡Price range reflects that Raja condoms were sold both singly (or in unpacked strips) and in three-packs. Notes: Prices are shown only for years in which products were introduced or prices were changed. One taka is roughly equivalent to 2.5 U.S. cents. na=not applicable.

**Figure 1. Annual sales of Raja condoms, social marketing project, Bangladesh, 1988–1993**



Source: Population Services International, annual sales reports.

became irresistible, the reservations of some program staff and managers gave way to the perceived need for more revenues. In addition, there was a feeling that at the very least, a significant price elevation across the

board would prove once and for all whether revenues could be increased without losing large numbers of clients. The result was that at the beginning of April 1990, the SMC raised all of its prices. The increases averaged about 60%, but varied somewhat; the price of a three-pack of Raja condoms, for example, doubled (see Table 1).

**Effect of Increases**

The market reaction was immediate and emphatic: Many of the largest-volume retailers and wholesalers refused to buy SMC products, stating they were unwilling to stock supplies whose prices had been unfairly and inappropriately raised. Consumers also resisted the increases. Not only was the extra expense seen as burdensome, but the social marketing project had spent some 15 years establishing the approximate value of condoms, in particular; the sudden, large increases cast doubt on that perception. Retailers reported that the rural poor perceived prices as too high, and sales staff, unable to reach the targets on which their commissions are based, were forgoing considerable income.

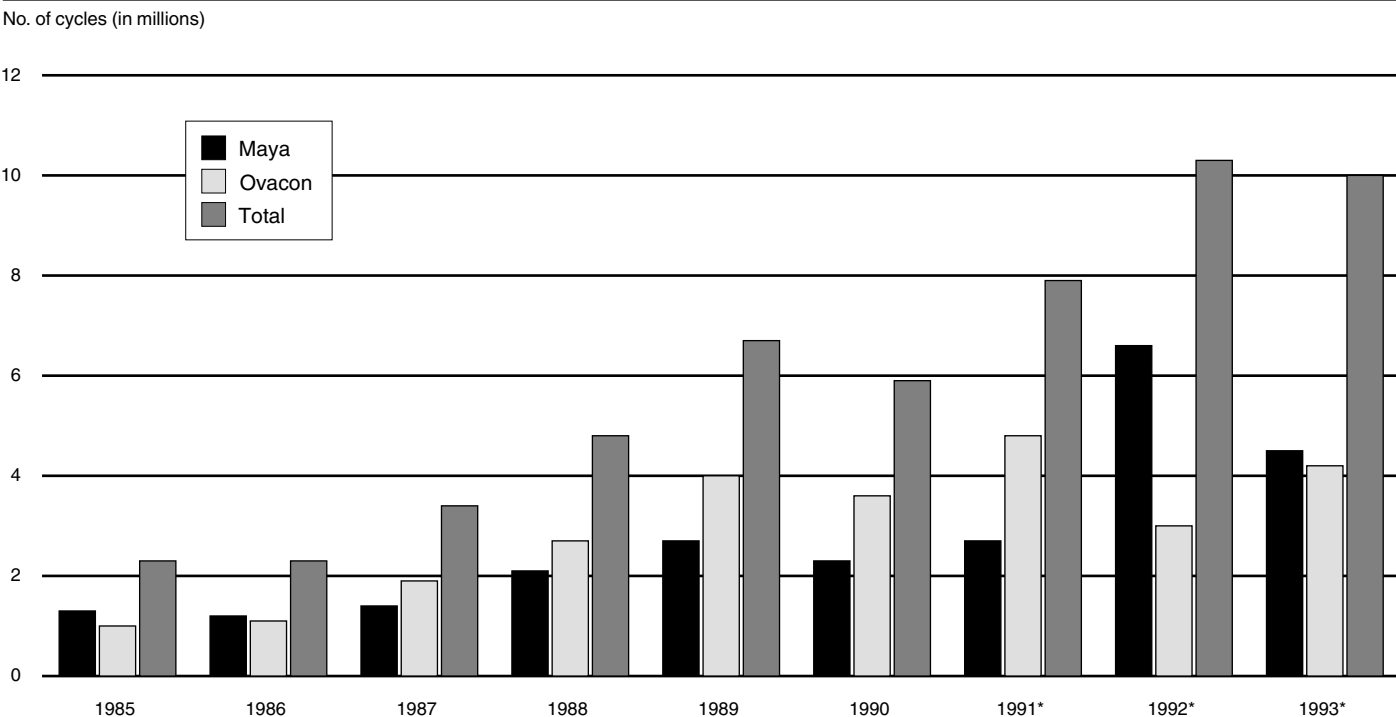
As the consumer and trade resistance became apparent, the SMC attempted to compensate through increased marketing efforts. Short of cutting prices, the company tried everything: Its medical representatives emphasized to doctors the high quality of Maya pills, as well as their low cost

relative to that of other pills; sales personnel reminded traders of the enduring popularity of Raja condoms and Maya pills (the market leaders), and promised that demand would return. Nothing brought the desired results, even a redesigned and expanded mass media campaign, devised to upgrade the products' image to more closely conform with their new prices.

The lowest priced, most popular products were severely affected. Sales of Raja condoms fell the most, declining by 29% between 1989 and 1990 (see Figure 1), while sales of Maya pills declined by 15% (see Figure 2). The smaller decrease in Maya sales may have been at least partially due to the fact—or at least the widely accepted belief—that the pill is likely to be the choice of more strongly motivated (and financially better-off) users. A factor with perhaps greater impact, particularly on condom sales, is the probability that poor families are more profoundly affected by price increases than are those with higher incomes, and therefore react more strongly.<sup>9</sup>

Overall, the effect on project sales and income was severe. Instead of the increases normally anticipated, distribution of the two key products was declining, and revenues grew only marginally, rather than rising to an extent that would provide a noticeable difference in the required subsidy. Meanwhile, hundreds of thousands of the poorest clients were lost to the program.

**Figure 2. Annual sales of oral contraceptives, by brand, social marketing project, Bangladesh, 1985–1993**



\*Total also includes small numbers of cycles of Norquest, another oral contraceptive brand introduced into the social marketing project in 1991. Source: Population Services International, annual sales reports.

During this same period, government pill distribution—through maternal and child health services and family planning clinics, as well as through the door-to-door efforts of more than 40,000 government and nongovernmental organization workers—rose by 25–30% per year. It seemed that pill acceptance had reached a critical mass in Bangladesh, but that because of price considerations, the SMC's potential pill clients remained unwilling (or unable) to take advantage of the convenience of private-sector outlets.

Public-sector condom distribution, on the other hand, declined around the same time, after the government initiated a requirement that its workers collect a small price (Tk 0.50, or about 1.25 cents, per dozen condoms) from acceptors. Field reports from SMC sales staff indicated that some of the condoms and pills distributed through the public sector found their way into shops to fill the vacuum left by shopkeepers' reluctance to stock SMC contraceptives. Also, considerable anecdotal evidence indicates that during this period, significant numbers of contraceptive users switched from condoms, all of which now bore a price, to free government oral contraceptives.

Ultimately, the effect of the price increases on consumers is difficult to assess: On the one hand, contraceptives were still available, although at lower levels and in fewer shops. But with public-sector condom distribution decreasing at the same time that the SMC's sales were down, and with SMC pill distribution also declining, it became apparent that the overall efficiency of the country's contraceptive delivery system was falling. In 1992, fearing that the company was not going to be able to contribute its expected share to the national program under this pricing structure, the SMC staff and board of directors decided to roll prices back to pre-1990 levels.

#### *Effect of the Rollback*

The 1992 reduced-pricing strategy had two objectives: to attract consumers back to the project with prices no higher than the earlier ones; and to allow traders an additional margin in order to win back their loyalty and return SMC products to the shelves. In February 1992, the price of Raja condoms was reduced to the level it had been in the late 1980s (see Table 1); six months later, the price of Maya pills was rolled back to early 1980s levels.\*

The response to the price reductions was dramatic. During the two years of increased prices, Raja condom sales had dropped from more than 100 million pieces per year to fewer than 80 million

(see Figure 1). In 1992, sales rebounded to about 104 million pieces, and the following year, to nearly 125 million, reestablishing the condom sales trends that the price increases had interrupted. Furthermore, sales of Maya pills, with their new low price, reached 6.6 million cycles in 1992, nearly triple the figure for 1990. While this number fell in the following year because of a shift in emphasis to the Ovacon brand, total pill sales remained strong and have maintained a level of more than 10 million cycles per year.

The SMC's more expensive products are aimed at a more affluent target group and therefore had not been greatly affected by the price hikes. A comparison of Maya sales with those of Ovacon—a higher-priced alternative promoted mainly in urban centers—shows that the upward trend of both products was arrested during the period of increased prices, but that Maya sales fell considerably behind (Figure 2). Similarly, sales of the "upmarket" condom brands, Panther and Sensation, maintained their usual, modest levels. Prices were not reduced in 1992, and these products continue to serve their limited target groups.

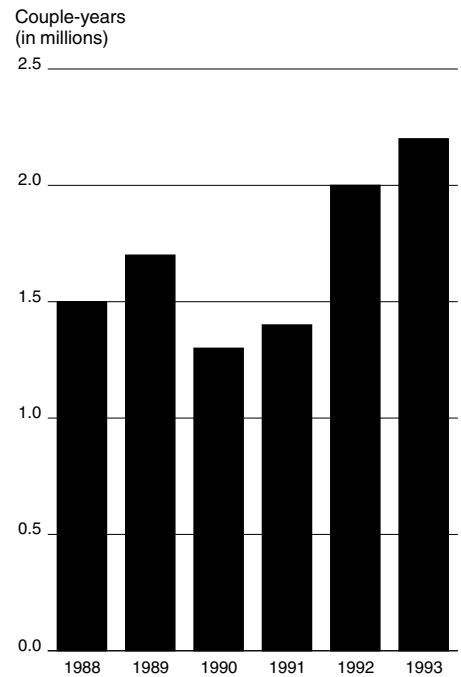
On the basis of this experience, the SMC has concluded that in Bangladesh, prices of low-cost socially marketed contraceptives are not very elastic, and that price increases, while periodically necessary, should be minimal and should be undertaken with great caution. By returning to the lower prices, the project reestablished interest in the SMC's contraceptives (see Figure 3); the number of couple-years of contraceptive protection that the SMC provided rose from 1.3–1.4 million in 1990–1991 to 2.2 million in 1993.

### **Discussion**

The Bangladesh experience bears out previous research findings suggesting that large increases in contraceptive prices will dampen demand. The fact that sales in Bangladesh dropped sharply after the price increases, remained low and rebounded once prices were rolled back lends special credence to this conclusion, particularly because these events occurred in a well-established program where the other variables likely to influence contraceptive sales are well understood.

Although the absolute size of the price increases seemed quite small to program planners, these increases had a dramatic impact. Thus, one lesson to be learned from these events is that program managers should take the relative magnitude as well as the absolute size of an increase into account whenever considering raising prices.

**Figure 3. Annual number of couple-years of protection provided by the Bangladesh social marketing project, 1988–1993**



Note: One couple-year of protection equals 100 condoms or 13 cycles of pills. Source: Population Services International, annual sales reports.

Furthermore, this experience demonstrates that substantial price increases should not be contemplated again for the Bangladesh program in the near future. However, smaller increases, such as those that accompany inflation, need not be ruled out. It would be a mistake to conclude that all price increases will be deleterious, even in Bangladesh. Previous, smaller increases have not been.

This experience also suggests rather strongly that condoms are particularly price-sensitive—more so, at least, than the pill. As we have noted elsewhere,<sup>10</sup> because the condom requires a small individual outlay and is perceived as an item that can be bought only when needed, it is often the contraceptive choice of the poor. Pill users, by contrast, may be more likely to continue using their method because it requires both consistent motivation and a regimen that women may not wish to interrupt. Program planners, therefore, should be especially careful in setting or changing the prices of condoms.

On the other hand, price reductions for all contraceptive products may merit spe-

\*The pricing of Maya was set lower not only because Maya was meant to serve the poorest women, but also because inventories had built up during the slow sales period and some pills would have expired if not consumed quickly.

cial consideration. The fact that Maya pill sales responded dramatically to the price reduction suggests the need for careful attention to this issue. A review of the literature indicates that price reductions have always increased sales of contraceptives.<sup>11</sup> Managers of programs selling contraceptives at relatively high prices should consider the potential for improved coverage by the simple act of lowering their prices.

Although operations research on price changes was not deemed possible in Bangladesh, in most countries—particularly developing countries with significant regional, linguistic and cultural diversity—it may be possible to experiment with price changes in one or two relatively isolated areas before making nationwide changes in the price of family planning products. Such an experiment, indeed, was conducted in Pakistan, as described earlier.<sup>12</sup> Where feasible, such price tests may provide valuable information for decision-makers before they implement nationwide changes.

Another possibility, even in relatively homogeneous societies such as Bangladesh, is to experiment with changing the prices of secondary brands. Even when the secondary brands are priced significantly higher than the major brands, testing their prices may shed some light on trade and consumer response to contraceptive price increases generally.

Finally, when family planning professionals set prices for contraceptives (and, we believe, for contraceptive services), the consumer's ability to pay should be the overriding consideration. While social marketing programs in some countries may not be intended to serve the poorest citizens, low prices for socially marketed products still serve the overall objectives of a national family planning program best. This is true not just because lower prices mean more clients for social marketing, but also because persons who are lured away from free government supplies to the socially marketed brands will be paying at least some part of the cost of their own birth control needs, thus reducing the costs to governments and donors. It is almost always better to have large numbers of clients paying a small fraction of the cost of their contraceptive services than to have small numbers paying the full cost, with the remaining clients availing themselves of free government services or, perhaps, missing out on family planning altogether.

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## Resumen

*En abril de 1990, el proyecto de mercadeo social de Bangladesh aumentó los precios de los anticonceptivos en un promedio de aproximadamente el 60%. Al año siguiente, la venta de condones cayó en un 29% y la de píldoras en un 12%, a pesar de haberse mantenido hasta ese momento una tendencia de aumentos anuales. Cuando después de dos años en los que no se recuperó el nivel de ventas el proyecto redujo los precios, en pocos meses las ventas volvieron a su nivel anterior y desde ese momento se han mantenido en ascenso. Esto ocurrió en un proyecto grande y bien establecido en el que resulta fácil interpretar las variables que afectan su funcionamiento. Por consiguiente, los resultados señalan que hay pruebas fehacientes de que, al menos en un sistema de mercadeo social, los precios de los anticonceptivos y los cambios de los mismos surten un impacto sustancial en la demanda de anticoncepción.*

## Résumé

*En avril 1990, le projet de marketing social au Bangladesh a augmenté, d'environ 60% en moyenne, les prix des contraceptifs qu'il vendait. Durant l'année suivant ces hausses de prix, les ventes de préservatifs ont chuté de 29% et celles de contraceptifs oraux de 12%, en dépit d'une tendance bien établie de hausses annuelles. Les ventes n'étant pas revenues aux niveaux antérieurs après environ deux ans, le projet a baissé les prix; les ventes sont alors revenues aux niveaux précédents dans*

*un délai de quelques mois, et ont augmenté depuis. Ces événements s'inséraient dans le cadre d'un programme étendu et mûr où les principales variables influant sur la performance du projet sont bien comprises. Par conséquent, les résultats semblent démontrer efficacement que les prix des contraceptifs et les changements de ces prix ont un impact considérable sur la demande, du moins dans les structures de marketing social.*