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The Impact of Condom Prices on Sales in Social Marketing Programs

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The issue of pricing contraceptives in family planning programs is becoming more and more important. What is the relationship between consumer prices and demand, and how can we strike the correct balance between the two? This report examines the correlation between consumer prices for condoms, expressed as a percentage of per-capita gross national product, and per-capita sales of condoms in 24 social marketing programs. The correlation that emerges is strong and negative: Even when the data are controlled for age of program and other independent variables, there is a clear negative correlation between prices and contraceptive sales in these programs. The conclusion is clear that condom prices must be set very low-well below the equivalent of 1 percent of per-capita gross national product for a year's supply-in order to achieve satisfactory prevalence for condoms in either family-planning or an AIDS-prevention context. (STUDIES IN FAMILY PLANNING, 1994; 25, 1:52-58)

The issue of pricing contraceptives in family planning programs has become increasingly contentious in the 1990s. In the early days of international family planning assistance, the assumption was made that most products and services would be provided free of charge and that when a price was to be charged, it should be very low in order to be affordable to even the poorest program participants. But as family planning programs expanded during the 1980s and as the funds available to pay for them became more and more scarce relative to the growing demand, the pressure to raise prices intensified. Programmers were increasingly exhorted by donors to raise the prices of contraceptives and contraceptive services in order to recover as much as possible of program costs from the consumer, thus reducing dependence on donor subsidies. A debate has ensued between those who advocate an emphasis on "self-sufficiency" for family planning programs and those who insist that such programs, first and foremost, must serve the poor (see, for example, Harvey, 1991) .

Early reviews of the experience with contraceptive prices indicated that at least some of the earliest pricing policies, including some that made products and services available free of charge, may have been too generous. That is, the charging of a modest price seemed to result in little if any diminution in demand for the products or services offered. In a 1986 review, Maureen Lewis commented that "little difference in demand exists between free and moderately priced services." (P.126) More recently, a review in Population Reports (1991) reached a similar conclusion with respect to "affordable" pricing. However, both reviews pointed out that reductions in price always seemed to stimulate demand, and Lewis was careful to assert that price high enough for full cost recovery would probably "pose a deterrent to low- and moderate-income couples." (P. 126) Still, the early evidence favored those who felt that prices were generally too low.

PRICES IN SOCIAL MARKETING PROGRAMS

In accordance with the general pattern of family planning programs, the price set for products in social marketing programs in the 1970s were very low. The Nirodh condom in India, the first socially marketed contraceptive, has consistently been sold for less than 1 US cent per condom since its introduction in the late 1960s. After Nirodh, the second largest brand--Bangladesh's Raja condom--has similarly been priced at less than 1 US cent each throughout most of the program's 15-year history. In Jamaica, where the social marketing program began in 1974, both condoms oral contraceptives have been priced similarly to cost the consumer less than US$1 per couple-year of protection, (CYP), which is the approximate equivalent of 1 US cent per condom.

But even in the early days, some social marketing programs priced their products with income in mind. Both the Colombian and Thai social marketing projects sold several brands that were designed from the outset to make money, and in Sri Lanka, prices that originally had been set to be affordable for the maximum number of people were raised substantially in the mid-1970s as the result of a cutoff in donor support.

But the turn toward higher prices in recent years has been much more pronounced. For social marketing projects started since 1985, condoms have generally been priced at the equivalent of 3 or 4 US cents each or even higher, reflecting donors' increasing insistence that these projects generate more income, or, in some cases, just because the new "normal" price range seems to have been established at a higher level. In relatively new programs in Benin, Burkina Faso, Cameroon, Ivory Coast, Guinea, Kenya, Nigeria, Zimbabwe, Indonesia, and Mexico, for example, condoms were priced in the range of 4 to 32 US cents each, the lowest price being four

times the norm for the older programs. This increase has occurred despite the fact that the gross national product (GNP) per capita in many of these countries is less than that of the Asian countries where lower prices, which were set in the 1970s, continue to be maintained.

The Significance of AIDS

Concomitant with the trend toward increasing contraceptive prices has come the AIDS epidemic. This conjunction has led to more questions about the advisability of charging higher prices for condoms, particularly in countries where the AIDS epidemic is most serious. Many people who favor charging higher prices in family planning programs are inclined to agree that lower prices may be justified in the context of AIDS prevention. The AIDS issue has thus further fueled the controversy over contraceptive pricing and makes disagreements about the tension between contraceptive prices and contraceptive sales/prevalence all the more urgent and relevant for today's family planning and AIDS-prevention programmers.

For these and other reasons, conducting a systematic examination of the relationship between condom prices and per-capita sales of condoms in social marketing programs seemed particularly appropriate. If the primary object of such programs is to increase contraceptive prevalence (whether for family planning or AIDS prevention), then per-capita sales provide a ready intermediate index of success. If per-capita sales (annual sales of condoms divided by the total country population) are relatively high, then prevalence of that method will be high.

Reviewing the Numbers

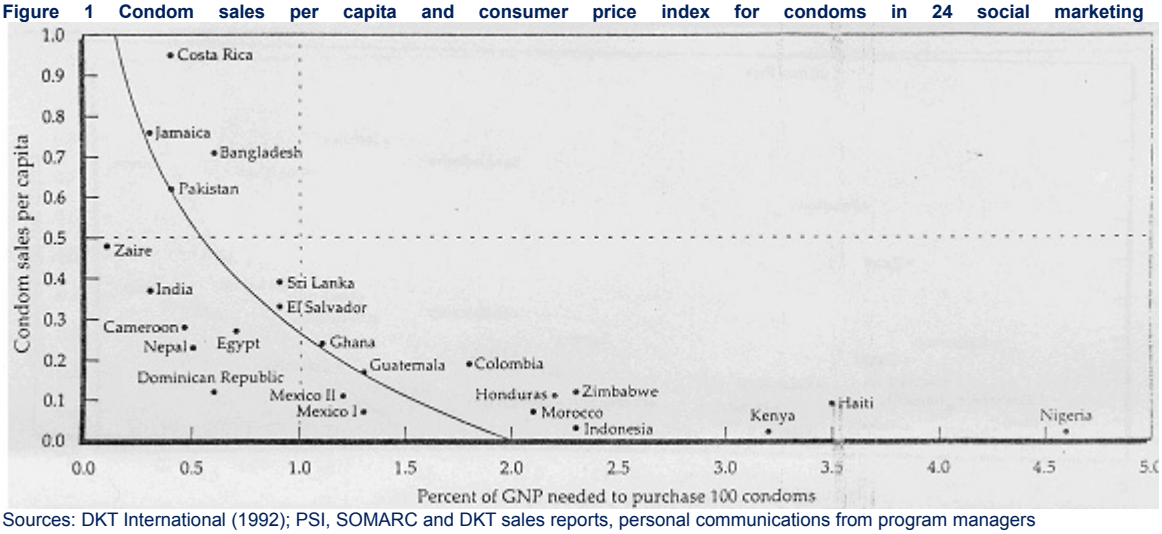
Because pricing and sales data for social marketing programs are generally available and accurate, pricing variable and per-capita sales for nearly all major social marketing programs in both 1990 and 1991 can be reconstructed with some precision; The analysis for the calendar year 1990 found a strong negative correlation between consumer prices and per-capita sales. The analysis included 17 of the 19 major programs extant in 1990, and none of the 17 showed high per-capita sales for condoms that were priced relatively high (see Harvey, 1992).

This report analyzes 24 programs for 1991. In order to be included in the analysis, a condom marketing program had to have peen operating long enough to get through the distortions that sometimes accompany the start-up phase. This analysis, therefore, includes only programs that had on functioning at a distribution level of at least 150,000 condoms per annum for a minimum of three years. Six new programs (those in Cameroon, the Dominican Republic, Haiti, Kenya, Morocco, and Zimbabwe} met this definition for the first time in 1991, reflecting the high level of social marketing start-ups in 1989. The Nigeria and Mexico II projects are also included for 1991; insufficient data were available to include these in the earlier review. The Thai project was dropped because it ceased selling condoms. A final group of 24 social marketing projects met the age/sales standard for 1991. To the author's knowledge, these programs constitute all of the social marketing programs operating in 1991, as defined above.

Results

The results of the price sales examination are presented, in Figure 1. The vertical axis represents the number of condoms sold per capita in 1991 in each of the 23 countries (Mexico had two programs). This measure consists of the total number of condoms sold during the year divided by the country's population as listed in the Population Reference Bureau's "World Population Data Sheet for 1991." A supplementary axis has been drawn at 0.5 condoms per capita which represents a highly satisfactory performance, roughly equivalent to 2.5 percent nationwide prevalence for this method for a typical developing country.

Figure 1 Condom sales per capita and consumer price index for condoms in 24 social marketing programs, 1991.



Sources: DKT International (1992); PSI, SOMARC and DKT sales reports, personal communications from program managers

The horizontal axis is a consumer price scale using the 1991 price of a condom in each program times 100 (100 condoms = one year's, requirement) divided by the country's gross national product per capita for 1991. The percentage figures on the scale thus represent the fraction of the country's gross national product per capita required to purchase a year's supply of condoms. This indeed different target segments of the market and is only a crude predictor of the cash available to purchase contraceptives. However, it represents a consistent way to apply a wealth-related index to the cost of contraceptives in developing countries and is a satisfactory method for comparing the relative affordability of variously priced contraceptives. To be useful here, the index need only reflect the fact that consumers, on average, have less disposable income in countries with a low GNP than they do in countries with a comparatively higher GNP, a reasonable assumption.

In the figure, the higher the number on the horizontal axis, the more expensive the condoms. For example, the prices charged in the Kenya, Haiti, and Nigeria pro- grams all required more than 3 percent of the GNP per capita to purchase a year's supply of condoms. These are the highest-priced condoms in the study, relative to income per capita.

The correlation between prices and sales is strong, with the pattern even clearer than in the 1990 analysis. Of the 12 low-priced condoms (below 1 percent on the scale), 11 achieved sales levels in excess of .2 per capita, while all but one of the 12 higher-priced condoms fall below the .2 mark, the only exception being Ghana, which is near the borderline. Seen in terms of good versus poor sales, the 10 best performers (those above .25 in sales per capita) all fall below 1 percent on the price scale. Contrariwise, the six worst performers (below .1 on the per-capita scale) are all above 1 percent on the price scale.

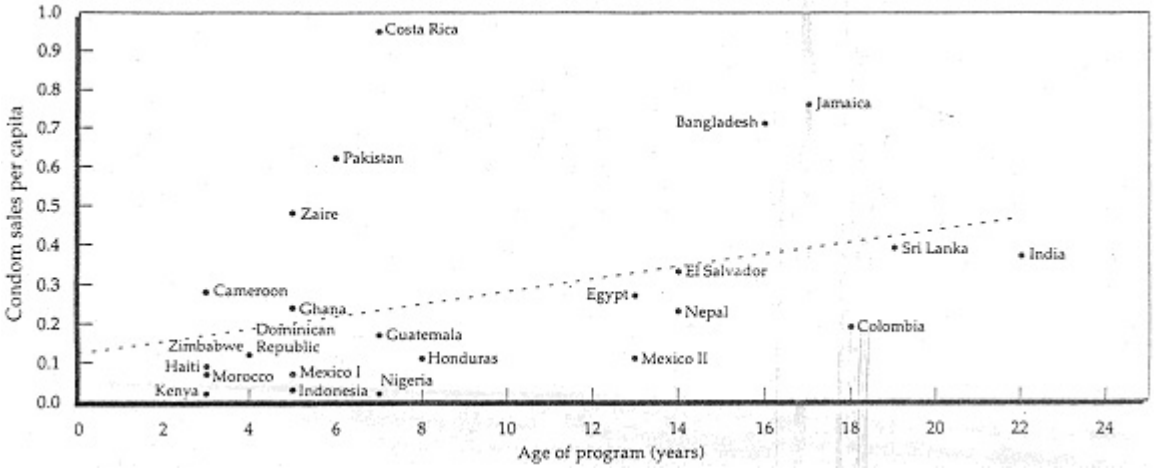
The absence of any programs in the upper right-hand quadrant of the figure is striking. Programs with both high per-capita sales and high prices would fall within this quadrant, and there are none. Indeed, no program comes close to the borders of this quadrant in the figure, strongly suggesting that high prices make high per-capita sales impossible.

On the other hand, programs in which condoms are priced low (the left-hand quadrants) are represented not just in the high-sales area, but also in the lower left quadrant where low sales and low prices coincide. While the programs within this quadrant still fit the overall pattern with, for example, the project with low condom prices in Zaire showing much better sales results than the programs with some what higher-priced condoms in El Salvador and Egypt) it is clear that low prices are not a sufficient condition for satisfactory per-capita sales; low sales can be the result of many other factors besides price. These include basic management and, almost certainly, funding level. Low price, apparently, is a necessary but not a sufficient condition for satisfactory per capita sales.

Program Age Bias?

Bias could exist in these figures as a result of the differing ages of these programs. Therefore, an additional examination was made to see if per-capita sales would correlate as positively with program age as they did negatively with price. The oldest programs, as noted above, tended to charge lower prices for condoms than the new program, and order programs generally have higher per-capita sales.

Figure 2. Relationship of age of program and condom sales per capita in 24 condom social marketing programs, 1991



Sources: DKT International (1992); PSI, SOMARC and DKT sales reports, personal communications from program managers

The results of this "age versus sales" analysis are shown in Figure 2: As expected, a definite correlation exists between programming and per-capita sales. However, it is not distributed as uniformly nor is it as strong as the correlation between price and per-capita sales.

Furthermore, exceptions abound. Three relatively young programs--Costa Rica, Pakistan, Zaire--all achieved relatively high levels of sales, considerably higher than the much older programs in Sri Lanka and India, for example.

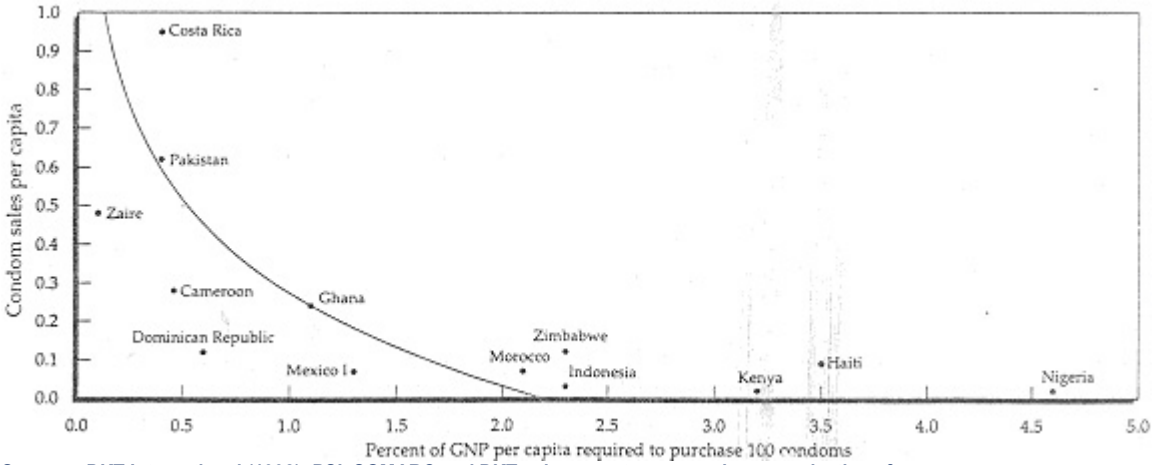
Nonetheless, this correlation called for an additional look. Price/sales correlates were therefore plotted separately for the younger programs alone (those six years old or younger; see Figure 3) and the older programs (more than six years old; see Figure 4) to see if any break in the pattern emerged. It did not: As shown in the two figures, the correlation is strong in both the newer and older programs. The correlation is especially striking in the newer programs. A break in the price scale line of the older programs reflects the low-price policies of the 1970s. None of these programs has a consumer price above 2.2 percent on the price index, whereas five of the newer programs exceed this level.

Substitution

Another variable that might have affected these results is the influence of the availability of other methods or competition from other programs. If condoms obtained through social marketing represented the only--or even a dominant-method, for example, higher per-capita sales might be expected.

While a detailed examination of the availability of other methods in each of these 23 countries is beyond the scope of this report, a brief review reveals no pattern that might have had a significant impact upon the results presented here. The programs with high per-capita

Figure 3 Sales per capita and consumer prices of condoms in 13 newer social marketing programs, 1991

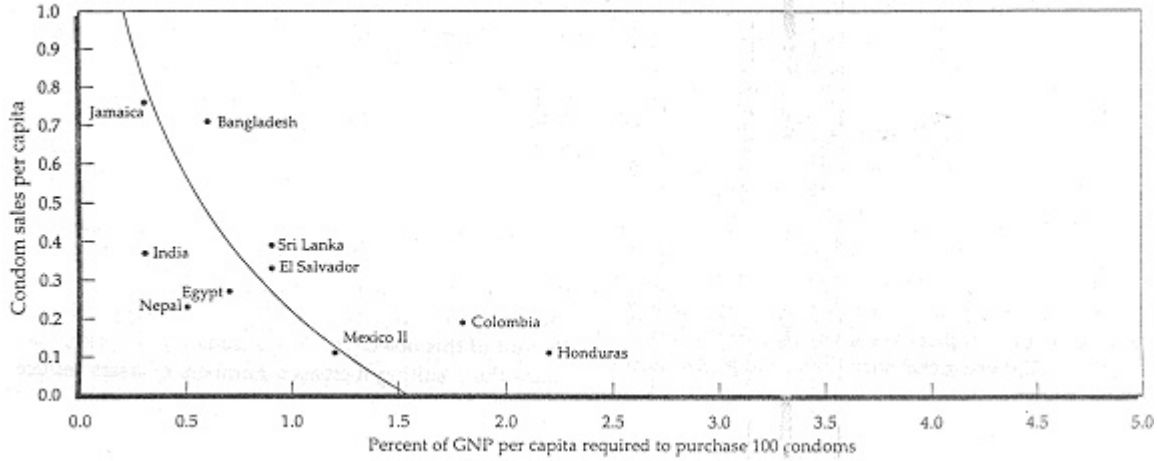


Sources: DKT International (1992); PSI, SOMARC and DKT sales reports, personal communications from program managers

condom sales do not appear to have either greater than average or less than average competition from other

methods and other programs; similarly, there is no evidence that those condom social marketing programs with particularly low per capita sales are in countries with a pattern of lesser or greater competition from other methods. For example, the lowest per-capita sales were reported in Nigeria, Kenya, Indonesia, and Mexico. Two of these countries have well-developed, subsidized family planning programs (Indonesia, Mexico) while another (Nigeria) has only the beginnings of such a program. Likewise, of the

Figure 4 Sales per capita and consumer prices of condoms in 11 older social marketing programs, 1991



Sources: DKT International (1992); PSI, SOMARC and DKT sales reports, personal communications from program managers

most successful of the condom social marketing projects-those in Costa Rica, Jamaica, Bangladesh, and Pakistan--one coexists in a country with a long-established, multi-method, heavily subsidized government program (Bangladesh), while another is in a country where competition from other methods is minimal (Pakistan). Therefore, it seems highly unlikely that substitution or the availability of other methods has seriously influenced the results of this examination.

It has also beep suggested that some of the differences in these price/sales figures may be attributable to the variation in programs' scope: Some social marketing programs are based in cities, while others are conducted nationally and include rural areas. However, social marketing programs are not deliberately designed to be confined to urban areas. While some may focus initially on urban markets, the extent of urban concentration is itself a function of contraceptive price. That is, lower- priced condoms will automatically tend to find their way into the more widely dispersed rural markets because the people in those markets can afford them; the more affluent city dwellers provide a market for the higher-priced condoms, which are, therefore, more likely to remain concentrated in urban areas. This factor does not appear to be a source of bias in these results.

Implications for Current and Future Programs

Clearly, the principal policy implication of these results, especially when combined with a growing body of evidence from other sources, is that condom prices must be kept low. One percent of per capita GNP for a year's supply of condoms appears to be the highest price feasible for programs designed to maximize condom use and prevalence. While low prices for condoms do not guarantee high per-capita sales {several programs show both low prices and low sales), these data clearly indicate that low prices are a necessary condition for a successful program. The empty upper right-hand quadrant of Figure 1 constitutes powerful evidence that high prices and high per-capita sales cannot coexist. Since the highest prices charged in the best programs are only 0.6 percent on the per-capita income scale, an ideal price is probably 0.5 percent or less, with 1 percent the-maximum price for an effective program.

Switching from Government Programs

Another reason for maintaining low prices for socially marketed condoms (and other contraceptives) is that people should be encouraged to switch from using free government supplies to using those obtainable from Social marketing programs. Such a switch is desirable because the program is thereby able to recover at least some costs and to reduce the wastage that can accompany contraceptive giveaway programs. The availability of very low priced contraceptives is likely to encourage such switching. Higher-priced social marketing contraceptives, on the other hand, are increasingly likely to attract users from the commercial sector, which is not a desirable outcome, because these purchasers can afford unsubsidized products.

Price elasticity decreases at the lowest end of the income scale. As Lewis (1992) has pointed out, the poor are much more sensitive to fluctuations in price than are the more affluent. She cites evidence from Indonesia in which higher prices led to "decreased contraception among the poor, but switching across methods among the

better off." (P. 16) Price increases of less than one penny per condom, for example, have eliminated the poor from an otherwise good program, with surprisingly dramatic effect (see Ciszewski and Harvey, 1994).

Lowering Current Prices

An immediate policy implication of the data from this study for today's family planners--especially for those involved in programs in Africa--is the potential impact of reducing contraceptive prices. A great many of the newer social marketing programs (and a few older ones as well) are charging prices so high as to preclude satisfactory growth in sales and prevalence. Since lowering prices always seems to increase sales or use of services, the potential for improved coverage by the simple act of lowering prices is considerable. Program managers in Indonesia, Kenya, Nigeria, Mexico, and Colombia, in particular, would do well to consider lowering condom prices.[5]

Self-sufficiency

The conclusion that low prices for condoms are required to achieve satisfactory prevalence immediately runs up against the concept of programs' financial self-sufficiency. Social marketing programs have been subjected to intense pressures from donors to generate income in order to lower net donor costs. While charging higher prices for contraceptive results in lower costs to donors, it also results in the contraceptives' reaching fewer people. Fundamental goals of family planning and AIDS-prevention programs cannot be achieved if contraceptives are priced so high that increased prevalence becomes impossible. Charging prices that keep large numbers of consumers beyond the reach of contraceptive programs is self-defeating, whatever the implications for self-sufficiency. Some argue that a "modest" price may be charged to stoke a balance between prevalence and income. This sort of balance is a chimera. The appropriate balance is one that results in reaching the largest number of people at the lowest cost per beneficiary. Pursuit of this objective always leads to low prices, because the resulting increased numbers of users reduce costs per client through economies of scale.

To reach large numbers of poor people, contraceptive prices, especially the price of condoms, must be kept low. Condom use is critically important for slowing the dreadful scourge of AIDS and for a substantial number of the beneficiaries of nearly every family planning program. We will save more lives--and enable more couples to plan their families--if condoms are affordable.

Notes

1.The performance of social marketing programs nearly always improves as projects mature. See, for example, SOMARC, 1992.

2. See, for example, Ciszewski and Harvey (1994), Donald and Harvey (1992), and Davies (1992).

3. This standard of 1 percent of per-capita GNP is also cited in Population Action International's 1992 wall chart Access to Affordable Contraception: "Research suggests that one percent of ...income is as much as anyone should have to pay for contraception."

4. There appears to be no exception to this rule. Lewis (1986) and Population Reports (1991) report this result for all programs reviewed.

5. Prices for condoms in Kenya may have been lowered by the time this report is published.

6. Condoms appear to be more price sensitive than oral contraceptives (see Ciszewski and Harvey,1994, p. 33).

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