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PN-ABR-646

PROJECT PERFORMED FOR

U.S. Agency for International Development *(Office of Population)*

Deloitte & Touche

Deloitte Touche Tohmatsu International
In association with
Boston University Center for International Health Multinational Strategies, Inc Development Associates, Inc Family Health International

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LOCAL CONDOM TESTING AND PACKAGING IN ZIMBABWE

A COST ANALYSIS

by

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Contract No.: DPE-3056-C-00-1040-00

September 15, 1993

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I. INTRODUCTION/BACKGROUND

PROFIT was invited by the USAID/Harare to conduct a study of the feasibility of processing imported raw condoms in Zimbabwe for local and regional markets. PROFIT Project Director, Donald R. Nicholson, II and Marketing Director, Susan Mitchell visited Harare between August 14-21 and met with a broad range of public and private sector contacts to assess the possibility of establishing a facility in Zimbabwe to test, lubricate, and package raw condoms sourced from the U.S. and internationally[1].

Initial interest in local production and processing of contraceptives in Zimbabwe was expressed by the Government of Zimbabwe (GOZ) because of the apparent benefits including control of contraceptive supply, decreased expenditure of foreign exchange, and promotion of the local economy. Reportedly, Ministry of Health (MOH) Minister, Dr. Timothy Stamps is a strong advocate for local contraceptive manufacturing. There are several existing studies which assess the environment for investment in and operation of contraceptive production facilities in Zimbabwe, the most notable being "Local Production of Contraceptives in Zimbabwe" (Halpert, 1993) and "Zimbabwe Family Planning Program Sustainability Study" (Gorash and Murahwa, 1992). These studies were invaluable in assisting PROFIT in the above mentioned analysis.

Two recent events precipitated the need for a more detailed study of local condom processing in Zimbabwe. These were the U.S. Government phase-out of donated condom supplies and the proposal issued by the British Overseas Development Administration (ODA) and World Bank for the donation of $12.8 million to the GOZ for condom procurement. Given that condoms originally provided by USAID would now be procured by the GOZ through an international bidding process, the focus of the PROFIT team's assessment was the cost comparison of local processing of imported raw condoms versus directly importing finished product.

To that end, the PROFIT team met with public and private sector distributors of condoms to determine the actual size of the market. Meetings were also held with commercial entities involved in the importation, distribution, marketing and manufacture of condoms and related products to develop a detailed cost analysis of local condom processing. The PROFIT team also conducted interviews of private firms as well as the government agencies that regulate and manage foreign trade and investment to ascertain the climate for investment and commercial operation in Zimbabwe. Based on the information collected during these meetings and research conducted prior to the Zimbabwe visit PROFIT submits the following analysis.

1 PROFIT did not explore the potential for full manufacture of condoms in Zimbabwe because current demand would not meet the minimum production capacity for such a condom production facility.

II. STUDY RESULTS

An analysis of the cost of processing raw condoms in Zimbabwe (see Attachment 1) demonstrates that the price of locally processed (lubricated and packaged) condoms could be competitive with that of imported finished condoms. However, this would only be the case if the raw condoms were sourced from Asia. The following are PROFIT's main conclusions based on the condom cost analysis and assumptions found in Attachment 1 and 2.

- PROFIT found that US sourced raw condoms are not competitive at the prices quoted ($.026 for untested and $.035 for pretested) given that they are higher than the imported finished condoms ($.025) before any processing. Industry sources explained that their manufacturing costs are higher primarily due to labor and environmental control costs, and the fact that they must import raw latex from Asia. Although raw pretested condoms sourced in Asia and finished in Zimbabwe cost less ($.023) than the imported finished product, taxes levied on the raw materials and local expectations for a return on investment must also be added to the final cost.

- The above conclusions assume that the raw materials necessary for processing (lubricant and foil) are exempt from import duties. However, PROFIT's discussions with trade regulation officials indicated that duty-free status for lubricant and foil would be difficult to obtain under current tariff structure (See **Regulatory and Policy Environment** section below). Given that finished condoms are imported duty-free, the current schedule of tariffs puts local manufacturers at a distinct disadvantage.

- Another assumption made in the cost analysis is the exclusion of certain capital expenditures and a profit margin (see Attachment 2, Assumption 2). According to industry standards, an acceptable profit margin is approximately 20 percent. The analysis shows that the locally processed condom is only 8.7 percent cheaper than the imported finished condom, allowing for a very limited margin for profit. Under these conditions, attracting investors to participate in a venture of this kind would be difficult.

- PROFIT found that all the raw materials necessary for lubricating and packaging condoms, including condoms, packaging materials, and lubricant, would need to be imported. The cost analysis highlights the minimal value added involved in finished goods processing of raw condoms in Zimbabwe. The value added ranges from 3% to 4% and is based on labor costs, local overhead and internal testing.

- One of the main objectives of establishing local production is job creation. Information provided by a U.S. condom manufacturer on the testing and packaging process indicated that the proposed testing and packaging facility would initially only generate between 8 and 14 jobs (see Attachment 2, Assumption 9).

- Finally, even if it is possible for a local company to produce condoms at a competitive price, several other nonfinancial factors in Zimbabwe diminish the local producer's ability to compete. They include the current regulatory and policy environment, market limitations, competition in the market, and unfavorable investment climate. These factors are described in detail below.

Regulatory and Policy Environment

PROFIT has identified specific regulatory and policy conditions in Zimbabwe which make it difficult for local manufacturers to be competitive.

Import Duties - The GOZ has instituted an extensive system of import controls and regulations to contain foreign exchange spending due to shortages of hard currency. An import license is required and a 10 percent customs duty, 15 percent import tax and 20 percent surtax are levied on many imported products. However, the existence of the Open General Import License (OGIL) allows for the importation of specific goods and raw materials without a license and offers a less stringent duty structure; duties are limited to a general surcharge of 10 percent and a minimum import tariff of 10 percent.

Recently, contraceptive products including condoms were placed on the OGIL, as well as raw materials necessary for contraceptive production. Theoretically, the raw condoms, foil and lubricant necessary to package condoms would also be placed on the OGIL. PROFIT's discussions with the Zimbabwe Investment Center (ZIC) indicated that raw condoms would have a high priority in getting put on the OGIL but foil and lubricant would most likely be subject to the full battery of import duties. Due to the high cost of importing these materials, local packaging becomes cost inefficient. Given that finished condoms enter the country duty free but not the raw materials for condom production, it is clear that the current tariff structure creates a disincentive to local production.

The Tendering Process - The procurement of products for all GOZ agencies and parastatals including the Zimbabwe National Family Planning Council (ZNFPC) and the MOH is handled through the Tender Board of the Ministry of Finance. The tendering process gives some inducement to local producers through a customary 10 percent cost preference but gives them no explicit guarantee that their product will be purchased. This has been a major hindrance to the development of local contraceptive production in Zimbabwe.

Although the MOH officially advocates local contraceptive production, PROFIT 's discussions with government health officials did not support this. During interviews and meetings with representatives of the MOH and ZNFPC, specific questions were asked regarding provisions for local preference and interest in sourcing local suppliers. Overall, the response was that even limited preferences to local producers were unacceptable if condoms could be sourced elsewhere at a lower cost. Although the Tender Board ultimately has authority over the tendering process, the general policy environment towards supporting local production is unfavorable. PROFIT concludes that without the existence of a specific price advantage, the local preference is not sufficient to make locally processed condoms competitive with imported finished product.

Market Limitations

PROFIT concurs with Peter Halpert's conclusion, stated in the background study "Local Production of Contraceptives in Zimbabwe" that without a commitment for government procurement, local packaging and testing of condoms would not be feasible, since the GOZ is the primary client.

The public sector health care system provides 95 percent of contraceptives free of charge and most of these commodities are donated by international donor agencies. According to the 1988 Demographic and Health Survey, almost 75 percent of condoms for family planning are provided through the public sector. No study to date has looked at distribution of condoms specifically for AIDS and sexually transmitted disease (STD) prevention. Overall, the bulk of condoms are being distributed at no cost, through an extensive network of MOH and ZNFPC clinics, mobile units and community based distribution programs. Commercial demand is quite limited with approximately 15 percent of all condom users accessing private physicians, health facilities or pharmacists. Social marketing of condoms has generated only negligible condom distribution and the remainder is unknown.

The figures for actual condom consumption vary. According to projections Mr. Halpert conducted for the World Bank and Overseas Development Administration, the current size of Zimbabwe's public sector market is estimated to be 50 million units. PROFIT's interviews with both public and private sector contacts indicated that the number is closer to 20 million. Current distribution of condoms through the private sector is estimated between 2 and 5 million. Based on discussions with those in the industry, PROFIT has assumed an annual production capacity of 30 million for the proposed packaging facility; therefore the manufacturer must secure the government tender to justify local packaging of condoms.

Several studies have looked at the viability of local production of contraceptives for the regional market. Most agree that although the Preferential Trade Area, which includes many of the countries in Southern Africa, allows for some reduction in import duties, most of these countries have very low contraceptive prevalence rates. Also most of these countries are dependent on international donors for their contraceptive supply. PROFIT's discussions with commercial suppliers indicated that the regional market is highly uncertain particularly with the potential for growth of South Africa's role in manufacturing. PROFIT recommends that opportunities for export of condoms to the region should be considered as ancillary to the local market.

Market Competition

Competition from donated product and other manufacturers in the region presents a strong challenge to potential local suppliers of condoms who have long been protected by high import tariff and non-tariff barriers.

Currently there are no manufacturing or processing facilities for condoms in Zimbabwe. One local firm and several foreign investors have explored the possibility but declined when they could not secure government commitment to purchase from their facility. There are four manufacturers capable of condom manufacture located in South Africa. London Rubber, the world's largest condom manufacturer, has reportedly purchased one of the facilities and is equipping it for production of its Durex brand condoms. A 1992 report by GEDDES, a local condom distributor, indicates that the market for condoms, which currently consists of Durex, Gallant and Rosetex, will be increasingly competitive now that condoms have been included on the OGIL. In general, a local supplier of condoms will most likely face tight competition from manufacturers in the region and internationally.

In addition, according to the study by Martin Gorosh and Lazarus Murahwa, the market for condoms is "flooded" with free product from international donor agencies. A 1992 UNFPA study reports that international donors have committed a total of over 73 million condoms for 1993 (see Attachment 3 for a delineation of contraceptive commitments between 1992 and 1995). The report also indicates that the development agencies of Canada, Sweden, Norway, as well as the European Community would be willing to donate condoms to Zimbabwe in the future.

Zimbabwe's condom supply is guaranteed for the next five years through an agreement currently being brokered by the World Bank between the British Overseas Development Administration (ODA) and the GOZ to provide the GOZ with over US$ 12 million for the purchase of condoms. This allows for an approximate cost of Z$ 22 or $.037 per unit. See Figure 1 for the projected number of condoms and their dollar amount donated over the five year period.

Figure 1.

CONDOMS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
# OF PIECES (IN MILLIONS)	50.70	56.55	61.31	66.41	71.91	306.88
$ AMOUNT (IN MILLIONS)	1.892	2.176	2.432	2.716	3.032	12.248

The contract will go to the lowest bidder and given the highly competitive international market for condoms, a preference would be essential to a local firm to win the tender. In PROFIT's discussions with GOZ health officials, they would not accept the preferential treatment of a local producer even though the tender process authorizes a preference.

Investment Climate

Current adverse economic conditions, the impact of the economic reform program, and continued heavy regulation of trade and investment by the GOZ, create an unfavorable and uncertain climate for investment.

Despite the GOZ's efforts to liberalize trade and investment regulations through the Economic Structural Adjustment Program (ESAP), the investor in Zimbabwe still faces stringent pricing and foreign exchange controls, extensive regulation of the investment process, and substantial barriers to international trade. The ESAP's emphasis on deregulating private investment actually compounds investors' sense of uncertainty over the current conditions for investment. Discussions with private firms indicated that trade and investment regulations are constantly changing and among those promulgated, implementation is inconsistent. The economic instability brought on by the ESAP coupled with the current recession and drought have also dampened investors interest. The GOZ is currently faced growing unemployment (over 30 percent), rising inflation, currency devaluation, and continued deterioration in the balance of trade. In general, new investment decisions are being delayed or postponed until a clearer picture of the regulatory environment emerges and economic conditions are more favorable.

III. CONCLUSION

At this time, PROFIT cannot recommend investment in a condom processing facility in Zimbabwe. Although the cost analysis indicated that, raw condoms sourced in Asia and packaged in Zimbabwe could be cost competitive with imported finished condoms, certain conditions would have to be present. Based on PROFIT's research, the elements essential to making local processing feasible, were not present. The GOZ's unwillingness to offer preferential support for local manufacturers is an important factor but the overall conditions for investment, the competition posed by regional producers and free product, and limited profit opportunities also reduce the attractiveness of such an investment.

Ultimately, the common advantages attributed to local production and processing (local economic development and reduced foreign exchange expenditure) do not result in this case. The impact of local economic development is limited because so few jobs are created from the condom packaging process. The value added from the process is minimal because none of the components necessary for production are available in Zimbabwe. Given that in the next several years, Zimbabwe will have no shortage of condom supply, PROFIT concludes that the establishment of a condom processing facility should be delayed until such time as it is necessary and feasible.

ATTACHMENT 1

CONDOM COST ANALYSIS

COST IN US$ PER CONDOM

COST COMPONENT	UNTESTED RAW - US		PRETESTED RAW - US		PRETESTED RAW-ASIA (1)		PACKAGED ASIA	
	$	%	$	%	$	%	$	%
RAW CONDOMS	0.0262	82%	0.0352	87%	0.0175	76%		
LUBRICANT	0.0021	6%	0.0021	5%	0.0021	9%		
FOIL	0.0024	8%	0.0024	6%	0.0024	11%		
DIRECT LABOR	0.0005	1%	0.0003	1%	0.0003	1%		
DIRECT OVERHEAD	0.0006	2%	0.0006	2%	0.0006	3%		
INTERNAL TESTING	0.0003	1%						
TOTAL COST FINISHED GOODS	0.032	100%	0.041	100%	0.023	100%	0.025	100%
EXTERNAL TESTING	0.0008		0.0008		0.0008		0.0008	
GOVT TENDER PRICE	0.033		0.041		0.024		0.026	
DUTY ON RAW MATRLS.	0.002		0.002		0.002			
COST WITH DUTIES	0.035		0.043		0.026		0.026	
ANNUAL VOL. UNITS	30,000,000		30,000,000		30,000,000		MINIMUM 2,000,000	
VALUE ADDED	4%		3%		4%		0%	
EST. JOBS CREATED	14		8		8		0	

(1) Only pretested raw condoms are available from Asia as the manufacturers are unwilling to sell untested condoms because of loss of quality control.

ATTACHMENT 2
ASSUMPTIONS USED FOR CONDOM COST ANALYSIS

1. Exchange rate of Z$6.60 / US$1.00. All amounts are in US$.

2. Analysis does **not** include the following capital expenditures as they could be financed or covered by a development agency: installation and initial start-up of the equipment (est. $40,000), annual maintenance of equipment ($15,000/yr), and working capital needs (est. $50,000 = one month stock of raw condoms). Also not included is any profit margin.

3. All condoms would be imported in bulk, duty-free. All costs were quoted in August 1993 for this analysis and are subject to change. American sourced raw condoms were quoted at $0.0252/condom for untested and $0.0352/condom for pretested (ref: Aladan Corporation). Asian sourced pretested raw condoms were quoted at $0.0175/condom and finished, tested, packaged condoms were quoted at $0.0245/condom (ref: London Rubber Corporation).

4. Direct labor and overhead costs are calculated assuming an annual production level of 30 million condoms reflecting the Zimbabwe market and the typical capacity of a start-up finished goods production facility according to industry sources.

5. It is not known whether the imported raw materials (lubricant and foil) would be subject to duties (45% of FOB cost). Therefore the raw material costs are shown duty free to first calculate an optimistic government tender price without duties, then the duty costs are added separately to calculate a second price with duties. There are three duties on imports which total 45% over the FOB cost: custom duty of 10%, import tax of 15%, surtax of 20%.

6. Lubricant is estimated to cost $0.00207/condom.
Lubricant can be imported for $6,200 for a quantity sufficient for approximately 3 million condoms (ref: London Rubber Corporation). $6200/3M = 0.00207

7. Foil is estimated to cost $0.00243/condom.
Foil for individual packaging can be imported from the U.S. for $7,300 for a quantity sufficient for approximately 3 million condoms. The foil would be cheaper if sourced in Asia or if larger quantities were purchased (ref: London Rubber Corporation).
$7300/3M = 0.002433.

8. Direct labor is estimated to cost $0.0005/untested condom, $0.0003/pretested condom. Assumes two shifts per day, all employees working fulltime (45 hours/week, 52 weeks/year). The labor costs quoted below include 20% for benefits. (ref: Bratex Corporation)

Untested condoms:
Each shift would require 7 workers of three skill levels and pay levels to operate the condom testing and filming machines, plus 1 supervisor.

six unskilled operators,	each paid $16.36/wk = $5104/yr/30M	=	$.00017
six semiskilled operators,	each paid $20.60/wk = $6427/yr/30M	=	$.00021
two skilled supervisors,	each paid $25.75/wk = $2678/yr/30M	=	$.00009
	total direct labor cost/condom		$.0005

Pretested condoms:
Each shift would require 4 workers of two skill levels and pay levels, 3 to operate the filming machine plus 1 supervisor.

six semiskilled operators,	each paid $20.60/wk = $6427/yr/30M	=	$.000214
two skilled supervisors,	each paid $25.75/wk = $2678/yr/30M	=	$.000089
	total direct labor cost/condom		$.000303

9. Direct overhead is estimated to be $0.0006165/condom.
Direct overhead includes rent and depreciation of the filming machine which lubricates and packages each condom in a foil packet. Rent of a 50 square meter space costs $833/month (Z$ 5500) or $9996/year, which includes water and electricity expenses (ref: Bratex Corporation). A filming machine is estimated to cost $85,000. Depreciation expense would be $8500/year on a straight-line basis assuming a 10 year life.

rent plus utilities =	$ 9,996/year
depreciation =	$ 8,500/year
total direct overhead =	$18,496/year / 30M = $0.0006165/condom

10. Internal testing is estimated to be $0.0003/untested condom.
Internal testing, a direct overhead cost, is separated to facilitate price comparisons between pretested and untested raw condoms. Testing equipment is estimated to cost $100,000. Depreciation expense would be $10,000/yr on a straight-line basis assuming a 10 year life. Total internal testing cost is $10,000/30M = $0.0003/condom

11. External testing is estimated to be $0.0008/condom.
All condoms must undergo batch testing by the Zimbabwe Regional Drug Control Laboratory. Current suppliers stated that they are charged $836 (Z$5520) regardless of the batch size. We have assumed a batch size of 1,000,000 condoms. $836/1,000,000 = US$0.000836/condom (ref: Zimbabwe Regional Drug Control Laboratory Price Schedule of August 1992)

ATTACHMENT 3

Current and Future Committed Sources of Condom Supply, 1992-1995

DONOR AGENCY	QUANTITY	ARRIVAL
World Health Organization (WHO)	13,426,400	1992
U.S. Agency for International Development	10,710,000	1992
United Nations Fund for Population Activities (UNFPA)	6,904,000	1992
British Overseas Development Administration (ODA)	12,960,000	1992
ODA	53,039,952	1993
UNFPA	20,592,000	1993

Source: *"Contraceptive Requirements and Logistics Management Needs in Zimbabwe" (UNFPA, 1992)*

ATTACHMENT 4

PERSONS CONTACTED

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