



WILLINGNESS TO PAY FOR CONDOMS IN FIVE COUNTRIES: KENYA, NIGERIA, SOUTH AFRICA, ZAMBIA, AND ZIMBABWE

SEPTEMBER 2018



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About AIDSFree

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JSI Research & Training Institute, Inc.

1616 Fort Myer Drive, 16th Floor

Arlington, VA 22209 USA

Phone: 703-528-7474

Fax: 703-528-7480

Web: aidsfree.usaid.gov

Email: info@aids-free.org

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ACRONYMS

AIDSFree	Strengthening High Impact Interventions for an AIDS-Free Generation
CBD	community-based distributor
DHS	Demographic and Health Survey
FBO	faith-based organization
GNI	gross national income
KSH	Kenyan shilling
LSM	Living Standards Measure
NGN	Nigerian naira
NGO	nongovernmental organization
PSM	price sensitivity measure
PSU	primary sampling unit
SM	socially marketed/social marketing
SMO	social marketing organizations
STI	sexually transmitted infection
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
WHO	World Health Organization
ZAR	South African rand
ZMW	Zambian kwacha

EXECUTIVE SUMMARY

Introduction and Survey Rationale

In July 2015, the United Nations Population Fund (UNFPA), the World Health Organization (WHO), and the Joint United Nations Programme on HIV and AIDS (UNAIDS) released a position statement on condoms and the prevention of HIV, other sexually transmitted infections (STIs), and unintended pregnancy. The statement reinforced the critical role of condoms in a comprehensive and sustainable approach for preventing STIs, including HIV, and supporting women's fertility intentions.

Though condom use is now higher than ever before, key gaps remain in countries and in certain populations, where use has stagnated or even decreased. To address these gaps, UNFPA in 2016 spearheaded the creation of the "20 by 20 Initiative," a multisectoral effort to increase the number of condoms in low- and middle-income countries to 20 billion by 2020. The initiative, which focuses on sub-Saharan Africa, seeks to achieve this goal through a total market approach—an approach that increases condom use by combining the unique abilities of private sector marketers, social marketing organizations, and the public sector. To support this initiative, the United States Agency for International Development (USAID) tasked the Strengthening High Impact Interventions for an AIDS-Free Generation (AIDSFree) Project with conducting surveys to assess consumers' willingness to pay for male condoms in five sub-Saharan countries—Kenya, Nigeria, South Africa, Zambia, and Zimbabwe.

The target countries were selected based on their condom retail environments, the pricing of socially marketed (SM) condoms, and the potential for studies on willingness to pay for condoms. In each country, the assessments were designed to evaluate consumer demand and willingness to pay for male condoms, and to determine the impact of price increases on demand. The research team was guided by three primary research questions:

1. If the supply of free condoms were reduced/restricted, would people who currently use these condoms purchase priced condoms or discontinue using condoms?
2. If the price of SM brand(s) of condoms were increased, would those who use these condoms discontinue using condoms, or would they switch to other condom brands?
3. Which of the following actions would increase volume and value share of commercial brands?
 - Increasing the price of SM brands
 - Reducing the price of commercial brands
 - Introducing smaller packaging units for commercial brands

Results from the assessments will help the 20 by 20 Initiative understand condom markets in the five target countries, and will highlight opportunities and needs for increased domestic funding and private sector investment.

Methodology

The survey comprised five standalone national cross-sectional surveys carried out in randomly selected geographical areas. Quantitative data were collected from adult men who purchased or obtained a condom in the three months preceding the surveys. A minimum of 1,200 participants was enrolled for each country, with quotas for urban and rural respondents; and brand types that a user most often used (i.e., free, SM, and commercial).

The surveys applied three complementary approaches to assess respondents' willingness to pay: a bidding game, which estimated the proportion of respondents willing to buy a given brand at or below different price points; a discrete choice model, which yielded estimates on the proportion of respondents who prefer to purchase a product compared to all other options; and a Van Westendorp price sensitivity measure, which determined consumers' willingness to pay for condoms based on the perceived value of condom brands.

Data collection was carried out by Kantar Public, which was responsible for recruiting, training, and overseeing the study's enumerators. To facilitate data collection, field teams used Android-based Samsung tablets equipped with NIPO Nfield 6.0 to facilitate data capture during face-to-face interviews with participants. A pretest of the methodology and collection instrument was undertaken in all five countries before collection began.

All data collection took place in April and May of 2017; additional collection occurred in Kenya in July 2017. IBM's SPSS Statistics 22.0 was used to conduct univariate and bivariate analyses. Price sensitivity simulations for the discrete choice model were conducted with Kantar Public's proprietary software, ValueManager.

Key Findings and Recommendations

The AIDSFree team identified important differences in each of the countries' condom markets. As a result, the recommendations in the report are tailored to each country and presented by country below. The team did, however, note many overarching themes:

1. Supplies of free condoms appear to significantly exceed use of such condoms.

The assessment found that supplies exceeded demand in all five countries except South Africa (the analysis could not be conducted in South Africa due to paucity of data). Further, in three of the countries, supplies of free condoms exceeded their use by a factor of two or

more. The AIDSFree team recognizes that offering free condoms without supportive interventions will be insufficient to bridge the gaps between need and current use in these countries. Instead, the team recommends a better alignment between supply of and demand for free condoms. This approach would free up scarce resources needed to address barriers other than price that inhibit the translation of need to use. It would help increase commercial marketers' interest in investing in condom marketing in these countries.

2. **SM brands should set prices based ability-to-pay trends in country, rather than on trends in costs or available subsidies.**

In cross-country comparisons, AIDSFree's assessment did not find a pattern in the retail price of an SM condom and its market share. However, after adjusting retail price for ability to pay (as measured by per capita gross national income, or GNI), the assessment did find an inverse relationship between price and market share. Thus, SM organizations may benefit from monitoring and adjusting the price of their brands to trends in per capita GNI of a country.

3. **It is not just price—brand appeal and availability are important factors in men's choice of condom brands.**

Multiple cues from this assessment suggest that brand appeal and availability have at least as much influence on men's choice of condom brands. In direct questioning, men who used free condoms in all five countries cited easy availability and perceived quality more often as reasons for choosing these condoms. Among men who used priced condoms, higher-priced, higher-visibility brands (such as Durex and Rough Rider, and in some countries Carex and Trojan) had a larger market share than nearly all lower-priced commercial condom brands. These brands, through their longer presence in the market, or advertising and brand appeal, have overcome some of the price disadvantage. Finally, in all countries, the survey showed that men believe they are value-conscious rather than price-driven in their brand choice.

4. **Low-priced commercial condom brands are emerging, at the same or lower price than SM brands. However, lower awareness and availability appear to limit their market share.**

Particularly in Kenya and Nigeria, and to some extent in other countries, low-priced commercial brands are being sold to consumers at the same or lower price than SM brands. The emergence of these brands could offer sustainable condom supplies to lower- and middle-income users. However, findings in all countries showed that these lower-priced brands may gain greater market share with improved awareness and availability. Innovative financing mechanisms to support entry and growth of such brands in new markets could foster rapid expansion of the commercial condom market.

5. Introducing a single pack of condom brands does not appear to change the market structure significantly.

In all five countries, the assessment found that the effects of introducing a single pack of condoms were marginal in terms of volume growth. The marginal effects appear to be due to low awareness and use of the “mother” brand, as well as lower price sensitivity to condom purchase than anticipated.

Country-specific recommendations and the findings on which they are based are summarized below.

Kenya

1. Align the supply of free condoms to their levels of utilization.

The assessment findings suggest that supplies of free condoms greatly exceed their levels of use. Thus, aligning levels of supply and use of free condoms can improve efficiency, with minimal risks.

2. Gradually restrict the supply of free condoms *further* below their current levels of utilization while closely monitoring condom use.

The assessment suggests that users of free condoms are willing to pay up to 45 KSH (Kenyan shillings) for a 3-pack of condoms. A few commercial and SM brands (from neighboring countries) are being offered to customers within this price range. Therefore, reducing supplies of free condoms below their current levels of utilization appears to carry low risk. Restricting supplies in urban and higher-income areas could test this theory to see if users switch to priced condoms. Restricting free supplies will help change market expectations, and grow sales of priced condom brands.

3. Explore approaches to providing “market-priming” support to low-priced condom marketers to expand awareness and availability of their brands.

As expected, the assessment showed that other factors besides price—brand awareness, appeal, and availability—are important influences on brand choice. Men who use free condoms currently are likely to opt for low-priced condoms (brands being sold to customers below US\$0.20 per unit), but their awareness is low, as is the perceived availability of these brands. Providing limited-time support to marketers of low-priced condoms will mitigate risks that men who use free condoms will stop using condoms when supplies are restricted. Potential approaches could include having SM organizations undertake distribution and retail promotion of low-priced condoms as part of their market-shaping activities; or supporting marketers of such brands through innovative financing mechanisms such as soft loans linked to milestones, impact bonds, or matching grants.

Nigeria

1. Examine reasons for high differentials in condom use by wealth and residence, and develop strategies to address this inequity in use.

In Nigeria, there are high inequities in condom use by wealth and residence. Although these inequities may not be due to low availability of free condoms, it is critical to conduct further research to understand these inequities and enable development of appropriate, evidence-informed strategies.

2. Motivate SM organizations to increase the price of their brands through evidence-informed advocacy.

Increasing prices of all SM brands is the only scenario in which the commercial sector's volume and value share increases. This would not be expected to adversely affect condom use, and would shift consumers' price expectations to align with real market prices. This strategy would likely result in increased market value for SM brands, despite a decline in their market volumes. Advocacy for such a price increase could focus on the main benefits of this strategy: it fosters development of the commercial market, and increases funds available (from increased sales revenue of SM brands) for SM organizations to focus on (other) market failures.

3. Encourage commercial brands, particularly high-priced brands, to reduce prices.

The survey suggested that if high-priced commercial brands decreased their price, their volume sales and market value could substantially increase. Though the increase did not appear to immediately affect the overall share of the commercial sector, this strategy has strong potential to benefit the brands concerned.

South Africa

1. Analyze Demographic and Health Survey (DHS) 2016 data on source of condoms used to align levels of supply and use of free condoms.

The assessment in four countries found that supplies of free condoms exceeded their demand and use. However, AIDSFree did not conduct this analysis in South Africa because DHS datasets were not available during the study. When it becomes available, examining the DHS 2016 would help to understand the share of users who accessed free condoms and whether there is an excess of free supplies. Aligning levels of free supplies to use is the lowest-risk strategy, and therefore should be a priority.

2. Restrict free supplies further in phases, with close monitoring.

AIDSFree's analyses suggested that users of free condoms would be willing to pay up to ZAR14 for a 3-pack of condoms. However, in South Africa, the expectation that free supplies will be consistently and widely available seems to drive the use of free condoms. Restricting supplies in urban and higher-income areas could test users' willingness to pay to see if they switch to priced condoms. Restricting free supplies will help change market expectations and grow sales of SM and commercial brands.

3. Provide evidence from this assessment to motivate marketers of Trust and Lovers Plus to increase the price of Trust in increments.

The assessment suggested that the combined sales volume of Trust and Lovers Plus would be maintained even if price of Trust increased to R12. This increase would likely result in significantly increased revenues from this brand. This would allow the marketers of these brands to invest more resources in (other) market failures.

Zambia

1. Invest in strategies to increase the perceived value of condoms, and stabilize availability of SM brands of condoms.

The Zambian condom market appears to be well-segmented and operating at its upper price thresholds. Restricting supply of free condoms or increasing prices of SM condoms could push users to discontinuation or otherwise adversely affect condom use. Instead, it is recommended to increase investments in category promotion through programs conducted by either nongovernmental organizations (NGOs) or manufacturers, with the aim of increasing use and willingness to pay.

Further, past disruption in supplies of SM condoms in Zambia could have adversely affected Zambian condom users. AIDSFree's assessment found that men who use SM brands of condoms were unwilling to pay the price of mid- and high-priced condoms. Therefore, establishing wide availability of SM brands should be an important consideration in Zambia.

2. Partner with marketers of low-priced commercial condoms.

Some evidence from the assessment suggested that the current price of Maximum is slightly more than men who mainly use SM brands are willing to pay. Strategies to address this should include exploring partnerships to increase availability of commercial, low-priced, quality-assured condom marketers. For example, Deluxe and Dume in Kenya are being sold to customers at below US\$0.20 per condom; facilitating introduction of these brands in Zambia would mitigate risks from disruption of SM brand availability in country.

Zimbabwe

1. Continue providing support to maintain the current price levels of Protector Plus.

The assessment showed that there is room for a marginal increase in the price of Protector Plus, but this increase may not enable the brand to graduate from donor support. The current price of Protector Plus is commensurate with the price the market is able to bear. A substantial price increase would adversely affect the condom market. More importantly, maintaining the current price of Protector Plus would facilitate execution of strategies to enable users of free condoms to graduate to Protector Plus.

2. Align the supply of free condoms to align with levels of their use.

The assessment showed that supplies of free condoms greatly exceed their levels of use. Carefully aligning levels of supply and use of free condoms would likely reduce wastage of free condoms, and reduce the extent to which such condoms end up in retail outlets at the expense of SM and commercial brands.

3. Gradually restrict the supply of free condoms further while closely monitoring condom use.

The assessment found that users of free condoms are willing to pay for condoms. It should be possible for these users to graduate to Protector Plus, as long as this brand continues to be widely available at US\$0.25–0.30 for a 4-pack. This could be tested by restricting supplies of free condoms in urban and higher-income areas, to see if users switch to priced condoms. Restricting supplies of free condoms would help change market expectations, and would grow the sales of priced condom brands.

4. Use evidence from this survey to motivate high-priced condom marketers to reduce their prices.

This assessment showed that if high-priced condom brands reduced their prices, they would gain in volumes and market value.

INTRODUCTION

Background

In July 2015, the United Nations Population Fund (UNFPA), the World Health Organization (WHO), and the Joint United Nations Programme on HIV and AIDS (UNAIDS) released a position statement on condoms and prevention of HIV, other sexually transmitted infections (STIs), and unintended pregnancy. The statement reinforced the critical role of condoms in a comprehensive and sustainable approach for preventing STIs, including HIV, and supporting women's fertility intentions.

Condom use has been and remains an essential intervention in the ongoing struggle to achieve an AIDS-free generation. In addition to being highly effective in preventing the spread of HIV, condoms are also relatively inexpensive at just US\$0.03 per unit (Ganesan 2017a), and cost-effective in their dual protection against STIs and unintended pregnancies. As a result, donor programs and the international AIDS community have called for, and encouraged, promotion of condom use in countries with high HIV prevalence.

These calls have largely been successful. Condom use is now higher than ever before (UNFPA, WHO, and UNAIDS 2015), and has prevented 50 million HIV infections since the 1980s (Stover 2014). Despite this progress, key gaps remain in some countries, where condom use has stagnated or even decreased. This is particularly true in sub-Saharan Africa, home to 12 percent of the world's population and 71 percent of the worldwide burden of HIV. Of the more than 35 million people worldwide living with HIV, 10 countries, located primarily in southern and eastern Africa, account for 81 percent of the world's HIV prevalence—Ethiopia (3%), Kenya (6%), Malawi (4%), Mozambique (6%), Nigeria (13%), South Africa (25%), Tanzania (6%), Uganda (6%), Zambia (4%), and Zimbabwe (6%) (UNAIDS 2014).

Countries with high HIV prevalence and low condom use present important opportunities to strengthen supplies of and demand for condoms. In 2016, UNFPA, in collaboration with the World Bank, the Reproductive Health Suppliers Coalition, the USAID, and the International Labour Organization, launched the "20 by 20 Initiative." The multisectoral initiative, which focuses on sub-Saharan Africa where condoms are in shortest supply and the needs most urgent, aims to reduce new HIV and STI infections and unintended pregnancies and realize universal access to sexual and reproductive health.

Condoms in many countries in sub-Saharan Africa are provided for free by the public sector, which is often heavily dependent on donor support. In addition to being unsustainable in the long term, a condom supply that is heavily driven by donors can impede the private sector from playing an active role in the condom market. In many countries, for instance, young people find commercial condoms more appealing, easier to access, or of better quality than free condoms offered in the

public sector. A total market approach that encompasses public, nonprofit, and for-profit actors is considered critical to leveraging the unique capabilities of private sector marketers, social marketing organizations (SMOs), and the public sector. Maximizing the participation of all such actors can target limited resources efficiently, meet the needs of both underserved and more affluent consumers, and encourage greater advances in reproductive and sexual health.

The goal of the 20 by 20 Initiative is to increase the number of condoms in low- and middle-income countries to 20 billion by 2020. It seeks to do so using a total market approach, taking into account the public, SM, and commercial sectors when evaluating health programs and choices available to the population. To support this initiative, USAID tasked the AIDSFree Project with conducting studies to assess consumers' willingness to pay for male condoms. Five sub-Saharan countries were selected by the initiative for these assessments: Kenya, Nigeria, South Africa, Zambia, and Zimbabwe.

Study Rationale and Objectives

The 20 by 20 Initiative seeks to better understand condom markets and highlight opportunities and needs for increased domestic funding and private sector investment. The initiative prioritized five sub-Saharan countries (Kenya, Nigeria, South Africa, Zambia, and Zimbabwe). The target countries for the assessment were selected by Ministry of Health (MOH) and commercial sector participants attending the second 20 by 20 Workshop (October 2015), based on participants' collective assessment of the size of the potential market for priced condoms and supportiveness of the environment for retail marketing of condoms.

A recent review by the AIDSFree Project studied the per capita GNI, adjusted for inflation and exchange rate variations, in these countries and found that from 2000 to 2015, the GNI increased in three countries: almost doubling in South Africa and Kenya and tripling in Nigeria (Ganesan 2017). Also, periodic price revisions for all SM brands of condoms in these three countries (with increases from 100% to 200% since 2005), did not appear to affect overall demand for condoms. These changes were largely consistent with increases in consumer purchasing power in these countries. Further, Kenya, Nigeria, and South Africa are populous countries, have an established retail infrastructure, and present potential to support greater condom sales and distribution.

The assessments conducted in Kenya, Nigeria, South Africa, Zambia, and Zimbabwe were designed to evaluate consumer demand and willingness to pay for male condoms, and to determine the impact of price increases on demand. Results from the assessments contribute to the body of evidence, helping to conceptualize and implement more comprehensive condom programming. For example, the willingness to pay assessments examine whether subsidies from the public and nonprofit sectors could be targeted differently, while the role of the commercial sector in providing condoms could be increased. Evidence from this and similar studies can advance the move toward sustainability by informing a gradual shrinking of international donor support.

The results of the assessments will allow donors to understand whether consumers are willing and able to bear an increased share of the total costs of delivering condoms, including costs of the commodity itself, packaging, distribution, and promotion. The findings will also provide data on whether subsidies for SM brands adversely affect the potential demand for commercial condom options. Lastly, the assessments shed light on the sensitivity of price points, showing whether users' demand for commercial condom brands would increase if the brands were marketed at lower prices or in fewer units per package.

The survey and findings were structured around three primary research questions:

1. If condoms were reduced/restricted, would people who currently use these condoms purchase priced condoms or discontinue using condoms?
2. If the price of SM brand(s) of condoms were increased, would those who use these condoms discontinue using condoms, or would they switch to other condom brands?
3. Which of the following actions would increase volume and value share of commercial brands?
 - Increasing the price of SM brands
 - Reducing the price of commercial brands
 - Introducing smaller packaging units of commercial brands

METHODOLOGY

Overview of Study Design

The survey comprised five standalone national cross-sectional surveys, one conducted in each of the five countries. The surveys were carried out in randomly selected geographic areas, where quantitative data were collected from adult men who purchased or obtained a condom in the three months preceding the surveys. The desired sample of participants per country was set at 1,200, with quotas for urban versus rural respondents; and brand types that a user most often used (i.e., free, SM, and commercial).

The survey questions were developed by an AIDSFree research team with input from USAID. The surveys applied three complementary approaches to assess respondents' willingness to pay: a *bidding game*, which estimated the proportion of respondents willing to buy a given brand at or below different price points; a *discrete choice model*, which yielded estimates on the proportion of respondents who prefer to purchase a product compared to all other options; and a *Van Westendorp price sensitivity measure (PSM)*, which determined consumers' willingness to pay for condoms based on the perceived value of condom brands.

Data collection was carried out by Kantar Public, which was responsible for recruiting, training, and overseeing the study's enumerators. Data collectors in each of the five countries were trained by experts from Kantar who had previous experience administering similar studies and leading training sessions. Android-based Samsung Galaxy Tab E tablets equipped with the NIPO Nfield application 6.0 were used to facilitate data capture during face-to-face interviews with participants.

A pretest was conducted in all five countries before data collection began to identify and resolve potential operational issues and to test the survey questions and Samsung/Nfield platform in realistic settings. Data collection took place in all countries from April to May 2017; additional collection occurred in Kenya in July 2017. IBM's SPSS Statistics 22.0 was used to conduct univariate and bivariate analyses. Price sensitivity simulations for the discrete choice model were conducted with Kantar Public's proprietary software, ValueManager. Ethical approval was obtained from nationally recognized ethics boards in Kenya and Nigeria. The surveys in South Africa, Zambia, and Zimbabwe were granted exemption from local ethical approval.

Sampling

At the request of USAID and commercial condom manufacturers, the study sampling approach in each of the five countries aimed to attain a nationally representative sample of men 18 years of age or older who used a condom in the three months preceding the survey. Quotas were used to ensure inclusion of an equal number of urban and rural respondents, and of respondents who

primarily used free, SM, or commercial condoms. The sampling plan assumed that most users of commercial brands lived in urban areas, so no quota was set for rural users of commercial brands.

AIDSFree set a minimum standard of 85 percent for proposing policy action. More specifically, if at least 85 percent of free condom users were willing to pay more than the retail price of the least expensive condom, then AIDSFree would recommend a gradual reduction in supplies of free condoms. To measure this with a 6.5 percent confidence interval and an assumed design effect of 1.5, the required sample size for each segment (e.g., free and rural; urban and commercial) was 240. Five different segment permutations were targeted for the survey, resulting in a desired sample size for each country of 1,200 respondents, as shown in Table 1.

Table 1. Desired Sample for Each of the Five Country Surveys

Category of Brand a Respondent Used Most Often				
	Free	SM	Commercial	Total
Urban	240	240	240	720
Rural	240	240	-	480
Total	480	480	240	1,200

A multistage cluster sampling approach was used, whereby each country was first divided into a given number of clusters, based on existing administrative boundaries. Each cluster was then assigned a sample size requirement proportional to the target population (i.e., males 18 years and above) in each cluster as a percentage of the total target population for the country as a whole. This ensured appropriate distribution of the 480 rural and 720 urban respondents for each country's desired sample. Clusters that were entirely urban (e.g., Nairobi) were not assigned a sample for rural respondents.

The study assumed 10 to 15 interviews per sampling point to determine the number of primary sampling units (PSUs) required per cluster. The smallest administrative units were considered as PSUs. If a selected PSU was large (i.e., >200 households for urban areas or >1 km radius for rural areas), the PSU was divided into smaller segments (i.e., 150 households for urban and approximately 1 km radius for rural areas). A smaller segment was then randomly selected to represent the PSU. If a PSU had 200 or fewer households for an urban area, and was less than 1 km in radius for a rural area, it was used as the final PSU. These were segmented into residence (i.e., rural versus urban) prior to random selection of the required number of sampling points. Random selection was mutually exclusive for each cluster and residence type.

Within each PSU visited, the data collection team randomly selected a starting point from a list of at least three prominent landmarks (e.g., school, police station, hospital, and house of worship). From the selected landmark, the closest household in a northeasterly direction was selected as the first household to approach for an interview. After the first household was complete, collectors walked in a northeasterly direction, skipping four households to then include the fifth as part of the

sample. Households were contacted until the appropriate number of eligible respondents were interviewed within the PSU.

Respondents were considered eligible if, at the moment of contact by the data collection team, they:

- Were 18 years of age or older
- Used a condom in the previous three months¹
- Qualified for a quota segment that was not yet complete
- Provided verbal consent.

Respondents were deemed eligible irrespective of the motivation for condom use, partner type, and frequency of use.

At each household visited, the collection team explained the purpose and scope of the survey, the target population, and procedures for and risks of participation. A list was drawn up of all eligible and available males in the household, with a household defined as all those who regularly eat from the same pot. The data collector(s) randomly selected one respondent per household using a Kish grid approach, and obtained verbal consent before initiating an interview.

Country-specific weights were determined by the AIDSFree research team and applied prior to analysis to ensure that the age, residence (i.e., urban and rural), and wealth profile of the sample matched publicly available demographic information for each country (e.g., DHSs).

Survey Approach

Implementing the willingness-to-pay survey entailed application of one survey instrument (see Annex A). The instrument comprises questions about respondents' social and demographic profile, sexual history, condom preferences and use, perceptions of condom brand prices, and willingness to pay for condoms.

To appropriately address the survey's three primary research questions (see "Study Rationale and Objectives" section above), and to improve the validity of and confidence in the survey results and recommendations, the research team employed three distinct price determination approaches—a bidding game, a discrete choice model, and a Van Westendorp price sensitivity measure. Taken together, these approaches afford a more nuanced picture of a country's consumers' willingness to pay for condoms than any one approach on its own. However, not all approaches were applied to all interviews, which meant that some questions were not asked of all respondents.

¹ The primary question examined in the survey was the effect of an increase in condom prices on condom use. The investigators assumed that an increase in condom prices was unlikely to motivate nonusers of condoms to become users. Nonusers were therefore not included in the survey.

Bidding Game Approach

The research team used the bidding game approach to inform a response to research question #1: *If the supply of free condoms were reduced/restricted, would people who currently use these condoms purchase priced condoms or discontinue using condoms?* Accordingly, questions relevant to this approach were only applied to respondents who said that they used free condoms most often.

For the bidding game approach, researchers asked users of free condoms a set of questions about the lowest-priced SM condom brand in the country. They were first asked of their willingness to pay the current median price for the lowest-priced SM condom in the country. Based on their response, they were given two or three more questions to estimate how much a respondent would “bid” for such a condom. The set of questions were applied as follows:

1. Would you be willing to pay X for [brand]?
2. If Yes to #1: Would you be willing to pay X +25% for [brand]?
3. If No to #1: Would you be willing to pay X - 25% for [brand]?
4. If Yes to #2: Would you be willing to pay X +50% for [brand]?
5. If No to #3: Would you be willing to pay X - 50% for [brand]?
6. To all: What is the maximum amount you would be willing to pay for [brand]?

The analysis of these questions yielded a demand curve showing the proportion of respondents willing to buy the brand at or below different price points. The bidding game approach appeals to researchers due to its simplicity (i.e., it is a set of direct questions) and because it produces reasonable estimates of price thresholds for a product—the threshold being the price above which price would significantly affect demand. The approach does, however, have limitations. Some experts believe its application is likely to underestimate the lower threshold, thus yielding a lower-end estimate of a population’s willingness to pay. It is also considered unsuitable for assessing price sensitivity of a brand in a context where consumers have multiple choices in brands and prices.

Discrete Choice Model

A discrete choice model was used to generate evidence in response to research questions #2 and #3: *If the price of SM brand(s) of condoms were increased, would those who use these condoms discontinue using condoms or would they switch to other condom brands? Which actions would increase the volume and value share of commercial brands?* The model was therefore only applied to users of SM and commercial brands.

The discrete choice was used to estimate whether consumers would continue to buy the same brand, switch brands, or stop using condoms if price and/or pack size were changed. Respondents were shown a discrete set of brands, each with pack size and price in random sequence. They were then asked which of the following actions they would take if only the options shown were available:

1. Buy one of the brands at the pack size and price shown.
2. Go to another location where free condoms were available rather than pay for condoms.
3. Neither buy any of these condoms nor obtain free condoms.

Approximately 25 retail outlets selling condoms in rural and urban areas of each country were visited to compile a list of commonly available brands, pack sizes, variants, and price at which they were being sold to customers. The brands were categorized into three groups: low-priced brands (including SM brands), mid-priced, and high-priced brands. Each brand was tested at four price points (i.e., price to customer) in increments of 25–30 percent. In addition to their current price, low-priced brands were tested at three higher price levels; mid-priced brands were tested at one lower and two higher price levels; and high-priced brands were tested at three lower price levels. Two to three brands per country were also tested for smaller pack sizes.

The discrete choice analysis produces a “preference share” estimate (i.e., the proportion of respondents who prefer to purchase a product compared to all other options) of all brands available at retail outlets. As the approach simulates a real market scenario and real purchase situations, results from such models are preferred over those from other approaches, particularly when evaluated along with market share.

Van Westendorp Price Sensitivity Measure

A Van Westendorp price sensitivity measure (PSM) was used to answer questions #1 and #2: 1) If the supply of free condoms were reduced/restricted, would people who currently use these condoms purchase priced condoms or discontinue using condoms? and 2) if the price of SM brand(s) of condoms were increased, would those who use these condoms discontinue using condoms or would they switch to other condom brands? The Van Westendorp measure was applied in all interviews.

In this survey, the Van Westendorp PSM was used to determine consumers’ willingness to pay for condoms based on the perceived value of condom brands. For each brand, respondents are asked a set of four questions:

1. What price do you consider to be so low that you question the condom’s quality?
2. At what price do you think it is a bargain?
3. At what price do you think it is expensive but still worth buying?
4. At what price do you think it is too expensive?

Respondents were asked these questions about all brands of which they expressed awareness. Application of the Van Westendorp results in a price–quality association from respondents. When analyzed in aggregate, the approach produces an optimal price (i.e., the price at which the fewest respondents reject the brand for being too cheap or too expensive) and an indifference price (i.e., the price that is within the limits of a “bargain price” and “expensive but worth it price”). The Van Westendorp is considered a reliable measure of willingness to pay, particularly in a noncompetitive

market context (i.e., when estimating willingness to pay for one brand without considering other brands in the market).

Methodological Assumptions

To appropriately address the primary research questions, the AIDSFree team made a number of methodological assumptions.

1. Only one of the following potential pricing/distribution actions would occur at a given time:
 - a. Reduced supplies of free condoms
 - b. Increased price of SM condom brands
 - c. Reduced price or pack size of commercial condom brands
2. Willingness to pay was assessed at current price expectations, noting that willingness to pay will shift with changes in price expectations (and changes in the brands and their prices).
3. The percentage of those using a given brand was assumed to be equal to the percent volume share of the market. It is, though, more accurately presented this way:

$$\text{Volume share of market} = (\% \text{ current use}) \times (\% \text{ repeat purchase rate}) \times (\text{avg. purchase quantity}).$$

4. Consumer brand preference was assumed to translate to brand purchase. In reality, this would be modified by “retail push” for brands and the extent to which consumers’ brand preferences are expressed at a point of sale.
5. Projections using discrete choice simulations assumed that all brands tested were available at stores a respondent usually visits, and that respondents were aware of all brands tested.

Data Collection

Data Collector Training

Data collection for all five countries was conducted by Kantar Public, which was responsible for recruiting and training the survey team. Before the trainings, data collectors were required to complete training on research ethics. All members of the data collection team then received competency-based training from experts from Kantar Public who had previous experience administering similar studies and leading training sessions. The objectives of the trainings were to ensure understanding of relevant technical concepts and standardization of data collection procedures. Trainings were carried out in January 2017, and lasted two days (with the exception of Zambia, which lasted three days).

Training sessions included background and survey objectives; survey methodology; roles and expectations of team members; questionnaire review; role playing sessions; and general interview guidelines, including travel and logistics, Samsung tablet management, ethical conduct, interview

preparation, screening and consent, and interview and post-interview procedures. The trainings were also used as an opportunity for the research team to obtain feedback from the collectors on the tools, and to refine them for use during the survey. The collectors were brought back together in April 2017 for a two-day refresher training to review the content of the first sessions before they began the data collection.

Pretesting of Collection Tool and Methodology

Prior to the initiation of formal data collection in each country, a pretest was undertaken to identify and resolve potential operational issues and to test the survey approach, tool, and mobile collection device platform in a realistic setting. All members of the collection team, including Kantar Public staff and all data collection teams, participated in the survey pretest, which took place over the course of one day in each country. During this exercise, the data collection team practiced screening participants and administering the data collection instrument to a minimum of eight respondents. Documented experiences from the pretest phases were used to inform adjustments to the survey tool and development of additional training sessions for collectors where needed. Data from the pretest were not used in data analysis, and the localities visited during the pretest phase were not included as part of the final sample.

Data Collection and Transmission

Data collection in the five target countries took place in April and May of 2017. Additional data collection was conducted in Kenya in July of the same year.

Each data collection team comprised data collectors and a supervisor in the field who reviewed and verified data collected by their team. Additional support was provided by a field manager who spent half-time in the field and the other half in the office. An independent Kantar quality control team ensured the overall quality of survey data.

All interviews were conducted with the support of Android-based Samsung Galaxy tablets, with data captured through direct entry into the NIPO Nfield application. At the close of each interview, the interviewer reviewed the completed survey to ensure that all questions had been answered. The interviewer then sought clarifications as needed before moving to another interview or leaving the area. Supervisors reviewed data captured by field teams at the end of each day, and made the final determination of the completeness and overall quality of data submitted by team members. Any corrections were ultimately reflected in the centralized database.

Use of Nfield alleviated the need for data entry following the initial collection phase. Once an interview was finalized, responses were instantly transmitted to a secure server at Kantar Public in Nigeria. Due to connectivity challenges associated with working in rural areas, data that could not be immediately transmitted were stored within the Nfield application until connectivity was no longer an issue, after which the data were uploaded to the master survey database.

Data Management and Analysis

Data Management

The security of all data collected in the survey was guaranteed by Kantar Public, backed by security procedures built around their ISO 27001 accreditation. Data for all countries were initially stored in a password-protected comma-separated values (.csv) database on a secure centralized server. Once data collection for a given country was finished and the dataset finalized, the Kantar Public research team transferred the data into a predefined dataset in SPSS 18.0 for Windows format. The data were then checked for consistency and completeness prior to cleaning. Given the instant data review features of the mobile data collection platform and the straightforward nature of most responses collected, the data required only minor cleaning before analysis.

The survey investigators treated all data collected through the survey as confidential and only used the data for purposes of this survey. The Kenya-based principal investigator served as the prime custodian of the data, with access granted to only the other principal investigator and co-investigators.

Data Analysis

Data were analyzed using descriptive statistics to identify characteristics of users of different types of condoms, including differences in demographics, sexual practices and perceived risk among the different groups, and willingness to pay. Descriptive statistics included mean, median, standard deviation, and frequencies. IBM's SPSS Statistics 22.0 was used to conduct these univariate and bivariate analyses.

Price sensitivity simulations for the discrete choice model were conducted with Kantar Public's proprietary software, ValueManager. Using advanced individual-based utility estimation techniques and algorithms, the models simulated the impact of different product and price scenarios.

Limitations

Though perceived quality was included in one of the research questions evaluating price, the research did not assess actual quality of brands in the market and system regulatory capacity. Such an assessment would need to include the manufacturers' systems and commitment to ensure product quality, and the health system's ability to prevent an influx of nonregistered, fake, or poor quality condoms. These limitations are important to consider, since price changes could increase demand for less expensive (and thus, potentially substandard) condoms. Moreover, in study countries, borders are porous. For example, in Kenya and Zambia, a significant proportion of men use condoms from neighboring countries.

Nor did the assessment include the cost structure of condom marketers. Analysis of cost structure is needed to get a clear understanding of all steps and related costs involved in the pricing of

condoms to end users. Also, analyzing cost structure in marketing SM condom brands would help assess whether the brand is “full-cost recovery” (i.e., whether it is capable of maintaining and growing its market shares without subsidy from donors or the government). As a result, projections were limited to market value (i.e., the volume sales of a brand multiplied by the median price at which it is sold), rather than the net revenue to the marketer. For the purposes of this assessment, the AIDSFree team defined a brand as having achieved full-cost recovery when the revenues from its sales meet or exceed the total cost of sales of the brand—including costs toward commodity purchase, packaging, distribution, advertising and promotion, management overheads, and all applicable duties, levies, and taxes. Thus, an additional activity to assess cost structures would provide additional insight into what price options are feasible.

This study was not designed to assess the potential to grow the condom market overall by enabling more men to use condoms, and use them consistently. Rather, the focus was on examining whether current users could be transitioned to more sustainable sources of supply. Consequently, the study did not investigate the motives and barriers of nonusers of condoms.

It is also notable that in Zambia, supplies of SM condoms were severely disrupted from 2014 to 2016, and the effects of this disruption could have continued into 2017. Since data collection for the willingness-to-pay survey in Zambia was conducted in 2017, it is possible that the findings from this survey were influenced by the disruptions in supplies of SM condoms.

FINDINGS

Kenya

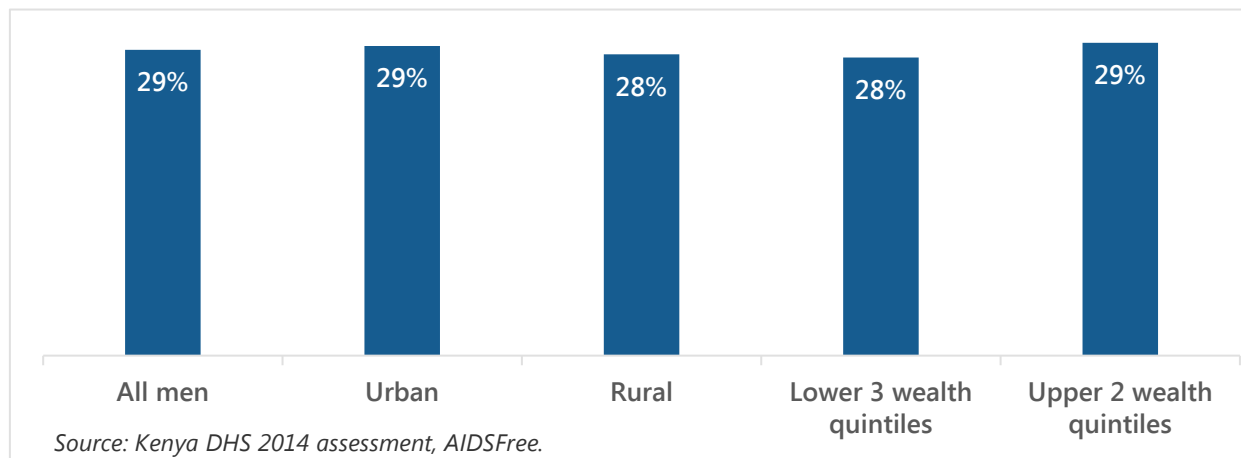
Market Overview

To provide a contextual overview to the Kenya condom market, the AIDSFree research team used secondary data sources and findings from the willingness-to-pay assessment.

Condom Use Differentials

To complement the willingness-to-pay survey findings, AIDSFree analyzed condom use reported by men in the Kenya DHS 2014. This analysis examined men's self-reported condom use with their last sexual partner (irrespective of partner type), and was disaggregated by wealth quintile and residence (urban or rural). Figure 1 highlights the equitable condom use in Kenya: urban and rural men were equally likely to report using condoms, as were men in the lower three and upper two wealth quintiles.

Figure 1. Percentage of Men Reporting Condom Use with Most Recent Partner, Disaggregated by Wealth and Residence

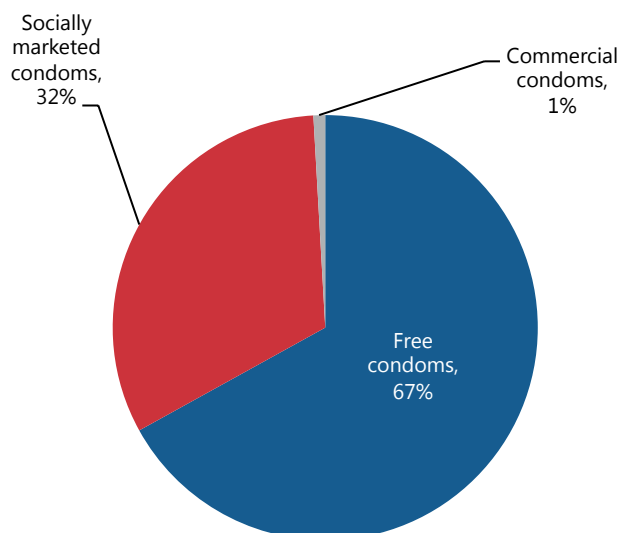


Utilization and Supply of Condoms

Figures 2 and 3 compare use and supply of condoms, respectively, by source of supply. To estimate the utilization of condoms from public- and private sector sources, the research team examined where men who reported using a condom with their most recent partner obtained the condom, according to Kenya DHS 2014. Figure 3 shows that 67 percent of men reported obtaining the condom they used with the most recent partner from a private sector source such as a pharmacy, shop, or kiosk (see Annex B for details); 22 percent from a public sector source; and 11 percent from a faith-based organization (FBO), NGO, or field worker. Assuming that condoms obtained

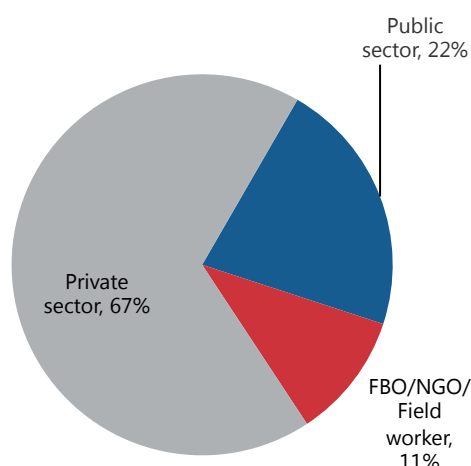
from FBOs, NGOs, and field workers were free of charge, 33 percent of users in Kenya obtained free condoms, and the remaining 67 percent paid for the condoms they obtained.

Figure 2. Percentage Distribution of Source of Condom Used with Most Recent Partner



Source: Kenya DHS 2014.

Figure 3. Percentage Distribution of Condoms Supplied, by Sector



Source: 2016 Kenya market. assessment.

To estimate the supply of condoms, AIDSFree conducted an assessment of free condoms distributed by the public sector and NGOs, and priced condoms distributed by SMOs and commercial marketers in 2015. Figure 2 shows that 67 percent of condoms distributed in Kenya were free condoms, while priced condoms make up just under one-third of the condom market. Estimates of the volume of condoms supplied vary due to lack of reliable data. For example, the 2014 distribution of condom supplies, cited in a 2017 report by Mann Global Health, estimates the share of public, social marketing, and commercial sectors was 84 percent, 14 percent, and 2 percent, respectively. Despite the differences in estimates in volumes of condoms supplied, supply appears to exceed demand—two or three times as many free condoms are made available in country than are chosen by users.

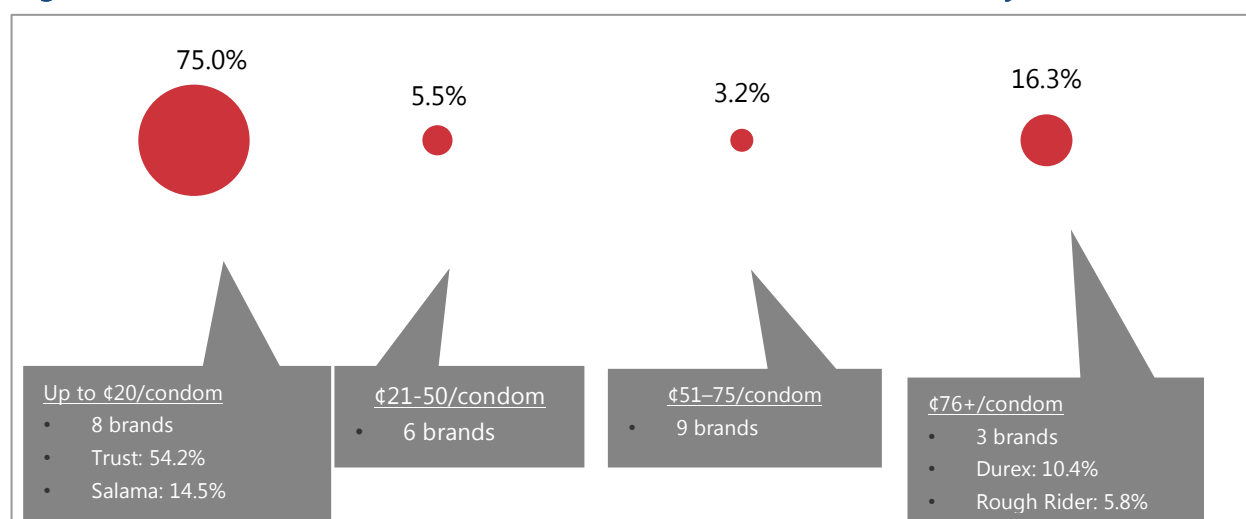
Brands Available and Their Price

AIDSFree carried out a rapid assessment to identify all condom brands and their associated prices in Kenya by interviewing approximately 25 condom retailers. The assessment identified 26 brands across Kenya, and a median price to consumers per condom from \$0.10 to \$0.83 (see Annex C for a full list of brands and median price to consumer). Figure 4 shows the user share of these brands, sorted by price from least to most expensive. Of 26 brands, Trust had the highest user share at 54.2 percent, followed by Salama (14.5%), Durex (10.4%), and Rough Rider (5.8%). The remaining brands all had less than 2 percent each. Three-quarters of respondents used the least expensive brands

(i.e., \$0.10 to \$0.20 per unit), which included Trust, Salama, and eight other brands. Salama is an SM brand in Tanzania, and appears to have a significant share in Kenya even though it is not registered for marketing in Kenya. For the purposes of this assessment, the team considered Trust and Salama to be SM condoms.

Interestingly, 16.3 percent of users reported using high-priced brands most often (priced at \$0.76 or more per unit), double that of those who use low- and mid-priced options (priced at \$0.21 to \$0.75 per unit). This demonstrates potential for low- to mid-priced commercial brands to occupy a larger share of the market through influencing user-related factors such as brand familiarity, appeal, and availability. Another interesting feature of the Kenya market is the availability of commercial brands at prices lower than the leading SM brand in country, suggesting that the market is evolving and competitive.

Figure 4. User Share and Retail Prices of Condom Brands in Kenya



Demographic Characteristics of Survey Respondents

The AIDSFree research team interviewed 1,466 men in Kenya for the willingness-to-pay survey. As shown in Table 2, the profile of men who use free, SM and commercial condoms is markedly different in terms of wealth quintiles, and to a certain extent by residence. The majority of free condom users belonged to lower three wealth quintiles (71%), a proportion that dropped to under half for SM users (41%) and to just 11 percent for commercial users. Free users were predominantly from rural areas (74%), while more SM and commercial users were from urban areas (54%).

Table 2. Sociodemographic Characteristics of Willingness-to-Pay Survey Respondents in Kenya, Disaggregated by Condom Segment Used Most Often

	Use free condoms most often (%)	Use SM brand of condoms most often (%)	Use a commercial brand of condoms most often (%)
Age			
18–34 years	74	85	81
More than 34 years	26	15	19
Residence			
Urban	26	54	54
Rural	74	46	46
Wealth index			
Lower three wealth quintiles	71	41	11
Upper two wealth quintiles	29	59	89
Marital status			
Single	61	59	63
Married/living together	39	41	37
Total percentage (unweighted N)	100% (589)	100% (602)	100% (275)

Other Contextual Parameters

Table 3 highlights three key contextual parameters relevant for the assessment:

- *The absolute unit consumer price of the SM brand in country in US dollars.* This provides an indication of whether the brand is likely to be subsidized. As noted earlier, the willingness-to-pay survey did not examine the cost structure of SM condom brands, and thus uses the absolute unit price as a surrogate measure.
- *The unit consumer price of the SM brand in country relative to the per capita GNI.* This is a surrogate measure of the consumer price of the SM brand relative to the population's ability to pay.
- *Trends in the number of SM condoms distributed in country.* Significant declining trends would indicate disruption in supplies of SM brands.

Table 3. Parameters of Ability to Pay and SM Supplies

Parameter	Range [^]	Kenya
<i>Reference SM condom brand</i>		<i>Trust</i>
Consumer price of reference SM condom brand per unit (\$)	0.05–0.22	0.20
Exchange rate	1–365	100
Per capita GNI, PPP adjusted, current international \$, 2016	1,810–12,830	3,120
% change in per capita GNI (2016 vs. 2012)*	6%–19%	19%
Consumer price per CYP** as a ratio of per capita GNI (%)*	0.10%–0.77%	0.77%
Total sales units of SM condoms (Mn) ***	0.8–174.0	31.6
% change in total sales of SM condoms (2012 versus 2016)	90%–3%	89%

* Per capita GNI, PPP adjusted, current international \$, 2016; ** 1 CYP = 120 condoms; *** From *Contraceptive Social Marketing Statistics*, published by DKT (available [here](#)); [^] in countries included in this assessment

The table above shows that Trust, the SM brand in Kenya, is among the highest-priced SM condoms among the countries included in this assessment, both in absolute value and in relation to the average ability to pay in the country.

The absolute value of the price suggests that Trust is being marketed at close to or above full-cost recovery (i.e., the revenues from sales of Trust meet or exceed the total cost of sales of the brand—including costs toward commodity purchase, packaging, distribution, advertising and promotion, management overheads, and all applicable duties, levies, and taxes).

Findings on the price relative to ability to pay suggest that in Kenya, the potential for increasing the price of the SM brand without affecting overall condom use would be lower than in some other countries included in the assessment.

Of note is that sales of SM Trust condoms in Kenya declined to 89 percent of Trust's value in 2012, possibly as a result of price increases the brand may have instituted to move toward full-cost recovery.

Men Who Use Free Condoms Most Often

This section explores the question: if the supply of free condoms were reduced/restricted, would people who currently use these condoms purchase priced condoms or discontinue using condoms? Therefore all data and analyses presented in this section pertain only to men who reported using free condoms most often.

Prior Use of Priced Condoms

Users of free condoms do not use free condoms exclusively (Figure 5); over half (53%) have used a priced condom before and 13 percent did so in the three months preceding the survey. Even when disaggregated by residence, age, and wealth quintile, over half of all users reported using a priced condom at least once. Urban users and those in the upper two wealth quintiles were slightly more likely to have used a priced condom ever and recently. Thus in Kenya, over half of all men who used free condoms most often showed a willingness and ability to pay for condoms, and 13 percent paid for condoms in the three months preceding the survey.

Figure 5. Use of Priced Condoms by Men Who Use Free Condoms, Disaggregated by Residence, Age, and Wealth Quintile

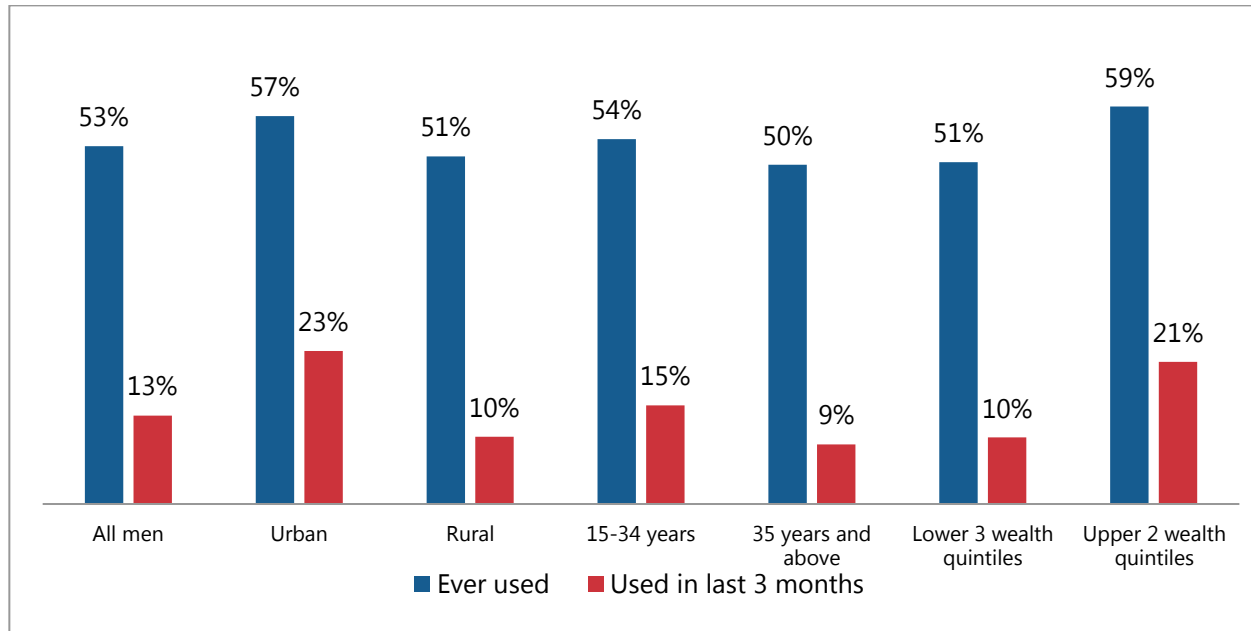


Figure 6. Priced Brands Ever Used and Used in Last 3 Months

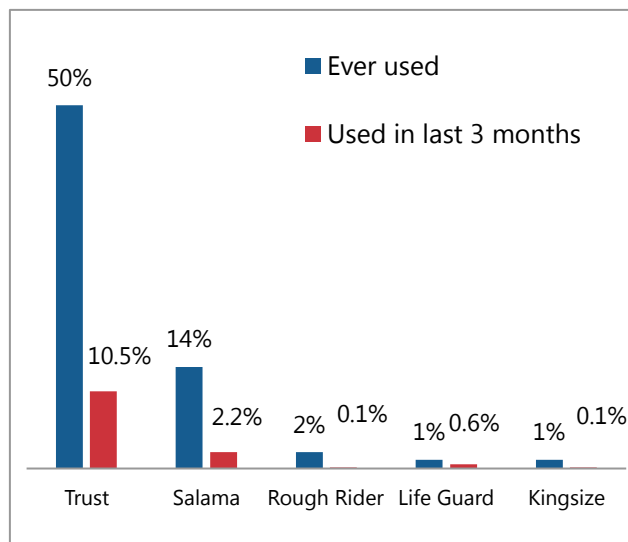


Figure 7. Priced Brands that Users of Free Condoms Had Heard of or Seen

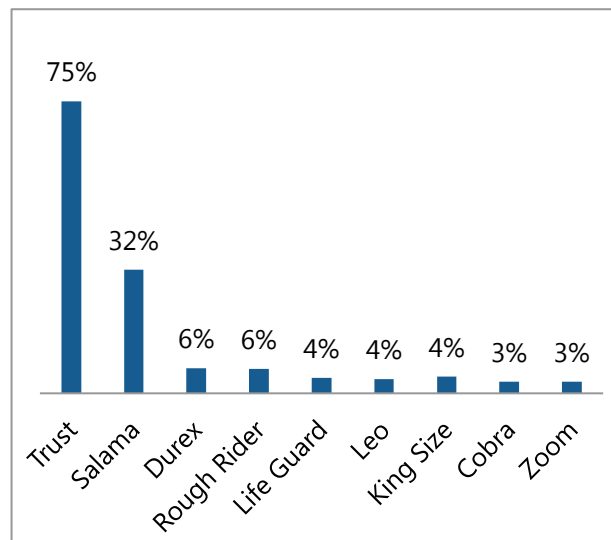
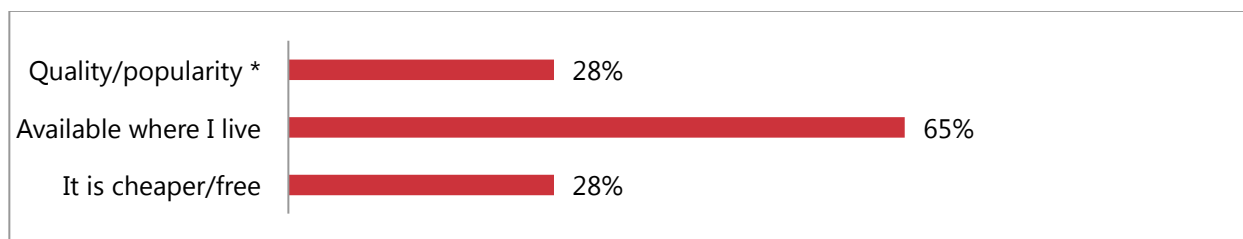


Figure 6 shows the most common ever-used and recently used priced brand by users of free condoms was Trust (50% and 10.5% respectively), followed by Salama (14% and 2.2%). In terms of overall brand awareness among users of free condoms (Figure 7), 75 percent were familiar with Trust, again followed by Salama (32%). No commercial brand was known by more than 6 percent of men who used free condoms.

Reasons for Using Free Condoms Most Often

Men who used free condoms cited several reasons for using free condoms; just over one-fourth cited price as a rationale, but 65 percent cited availability near to where they live (Figure 8). These results suggest that cost may not be the primary driver in this group.

Figure 8. Reason(s) for Choosing Condom Type



*Quality/popularity comprises: 'my friends use it,' 'I like the packaging,' 'it is meant for me,' 'I trust it more,' and 'it is advertised.'

Willingness to Pay

Figure 9 presents actions that free condom users would take if free condoms were unavailable at their typical source. The majority (86%) would continue using condoms, purchasing them nearby or at another location, while 7 percent said that they would stop having sex, and another 7 percent said that they would cease using condoms. Among men who would continue using condoms, 64 percent would be willing to pay at least the current market price of a Trust 3-pack (60 KSH) (Figure 10). The same figure also shows that 93 percent of those who would continue using condoms would be willing to pay at least 30 KSH, the price of a Salama 3-pack. These findings show strong potential for users of free condoms to switch to priced brands in Kenya, as long as three condoms are available to customers for 30 KSH.

The AIDSFree team used the Van Westendorp PSM to estimate consumer willingness to pay for condoms based on the perceived values of condom brands. Figure 11 presents two curves—a price below which Trust would be considered too cheap and perhaps of suspect quality (red) and a price above which it would be considered too expensive to buy regardless of its perceived quality (gray). The intersection of the two lines is the optimal price—the point at which the fewest number of

Figure 9. Users' Strategies when Free Condoms are Unavailable

If free condoms were not available from your source, what would you do?

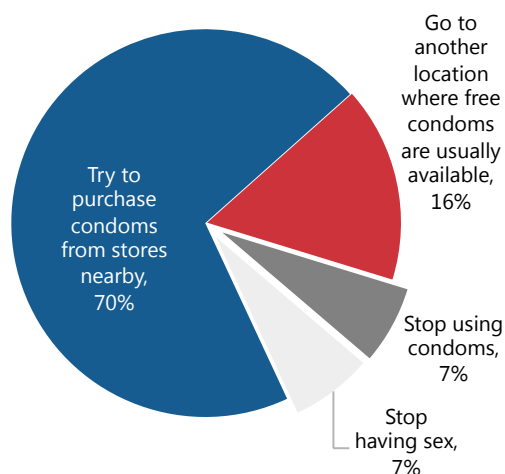
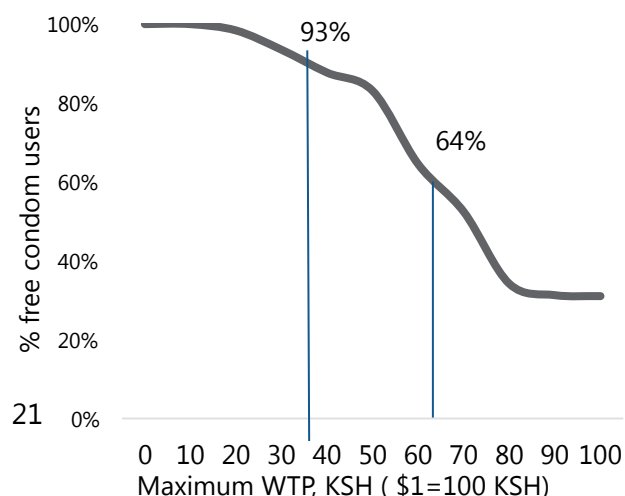


Figure 10. Willingness to Pay for Trust 3-Pack among Users of Free Condoms

What is the maximum amount you would be willing to pay for a pack of 3 Trust condoms?



respondents rejected the brand for either reason. The survey found that among men who mostly used free condoms, the optimal price for Trust was 45 KSH, a price rejected by merely 7 percent of free condom users.

The curves in Figure 12 represent the price below which most users would accept the brand as “not expensive” (gray) and the price above which users would accept the brand as “not a bargain” or above the minimum expected price (light blue). The intersection, referred to as the indifference price, was 50 KSH, a price that 82 percent of users would accept. Men who used free condoms most often were willing to pay between 45 and 50 KSH for Trust. While this is lower than the current market price of Trust, the Van Westendorp PSM shows that most men who use free condoms would be willing to pay at least 45 KSH for a 3-pack of branded condoms. Because the direct questioning approach is likely to understate willingness to pay, the researchers placed greater credence in the Van Westendorp PSM approach.

Figure 11. Optimal Price for Trust among Users of Free Condoms

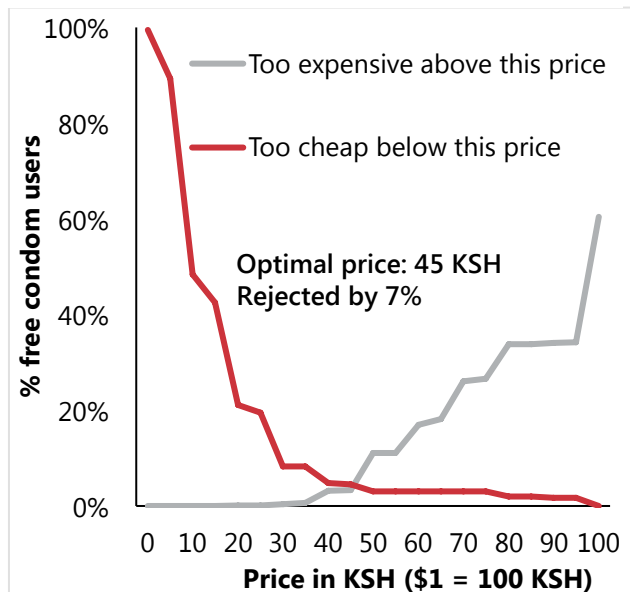
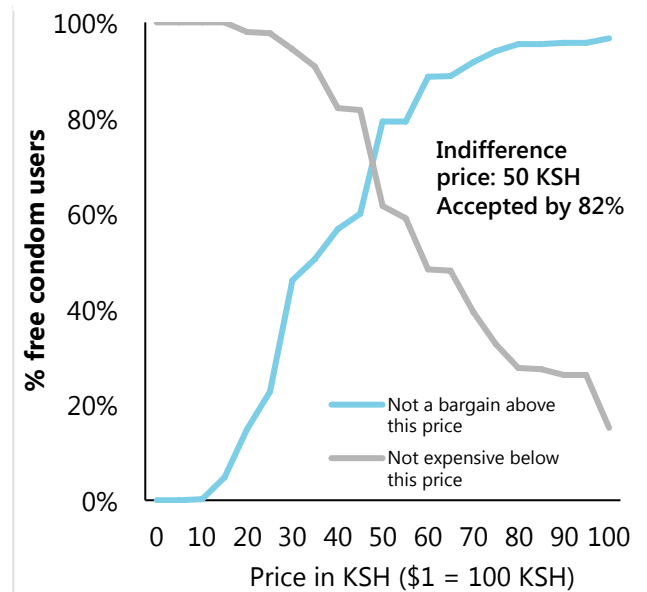


Figure 12. Indifference Price for Trust among Users of Free Condoms



Summary: Men Who Use Free Condoms Most Often

In summary, the AIDSFree research team concluded that there would be a low risk of decline in condom use among users of free condoms if supplies of these condoms were restricted, as long as branded condoms that these men were aware of, and that were priced up to 45 KSH for a 3-pack (such as Salama condoms), continued to be easily available. This conclusion was based on the following:

- Supplies of free condoms exceed demand by a factor of two or more.
- The estimated willingness to pay among men who use free condoms is at least 45 KSH for a 3-pack of condoms, higher than low-priced condoms available in country.

Men Who Use SM Brands of Condoms Most Often

This section examines the question: if the price of SM brand(s) of condoms were increased, would those who use these condoms discontinue using condoms or would they switch to other condom brands? Therefore, all data presented in this section focuses only on men who reported using an SM brand of condoms (i.e., Trust or Salama) most often.

Prior Use of Commercial Brands of Condoms

Only 14 percent of SM brand users in the Kenyan sample reported ever using a commercial brand; 3 percent had done so in the three months preceding the survey (Figure 13). Those who have used priced condoms, including SM and commercial options, demonstrated a strong preference for Trust—some 90 percent had used it before. Salama was the second most popular, having been used by 35 percent. No commercial brand was used by more than 3 percent of SM users (Figure 14).

These figures should not be interpreted as demonstrating an unwillingness to pay for commercial condoms among SM users, but rather a strong brand preference for Trust and, to a lesser extent, Salama.

Figure 13. Past Use of Commercial Brands by SM Brand Users

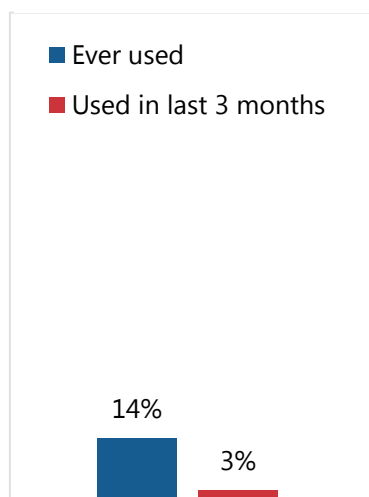
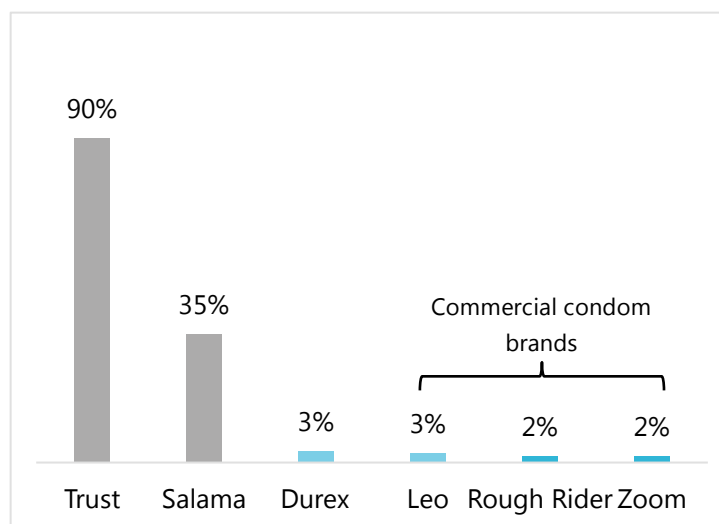


Figure 14. Main Brands Ever Used by SM Brand Users



Willingness to Pay

Applying the Van Westendorp PSM approach to assess willingness to pay, the researchers found that SM condom users would pay between 50 and 55 KSH for a 3-pack of Trust—slightly less than the current market price. This suggests that Trust condoms are currently priced at the higher end of the optimal price range. Further, all other conditions remaining the same, increasing the price of Trust without measures to increase the brand's perceived value (for example through advertising, packaging innovations, or product changes) is likely to result in decreased use of the Trust brand (Figures 15 and 16).

Figure 15. SM Users' Optimal Price for Trust

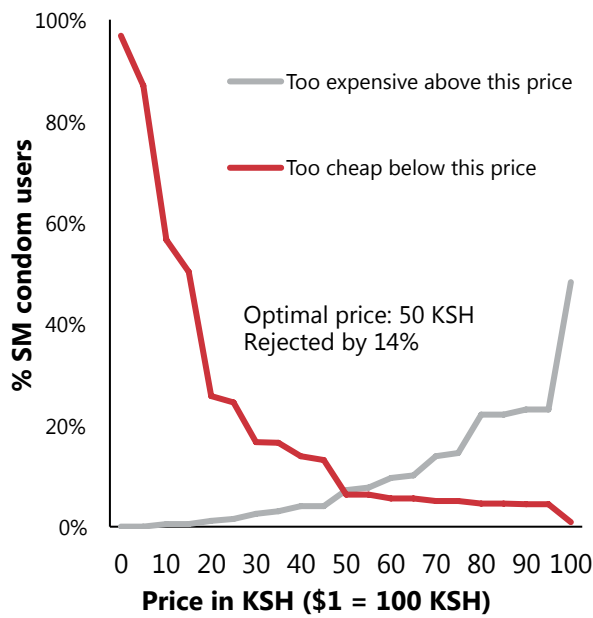
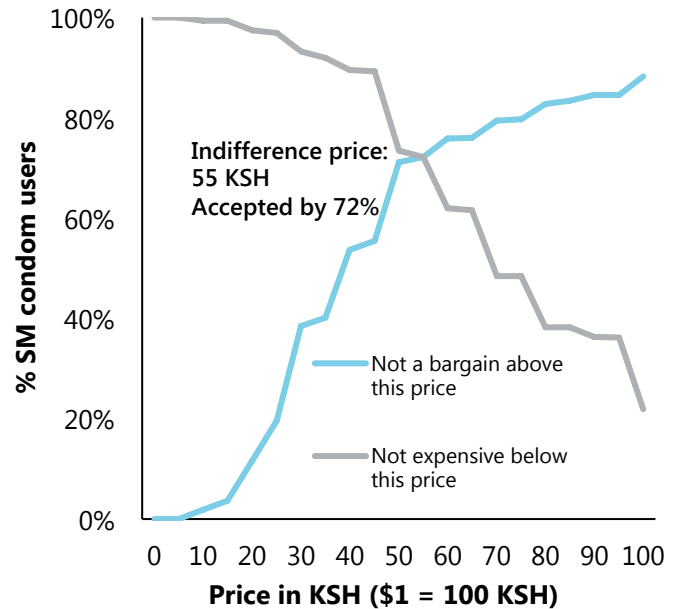


Figure 16. SM Users' Indifference Price for Trust



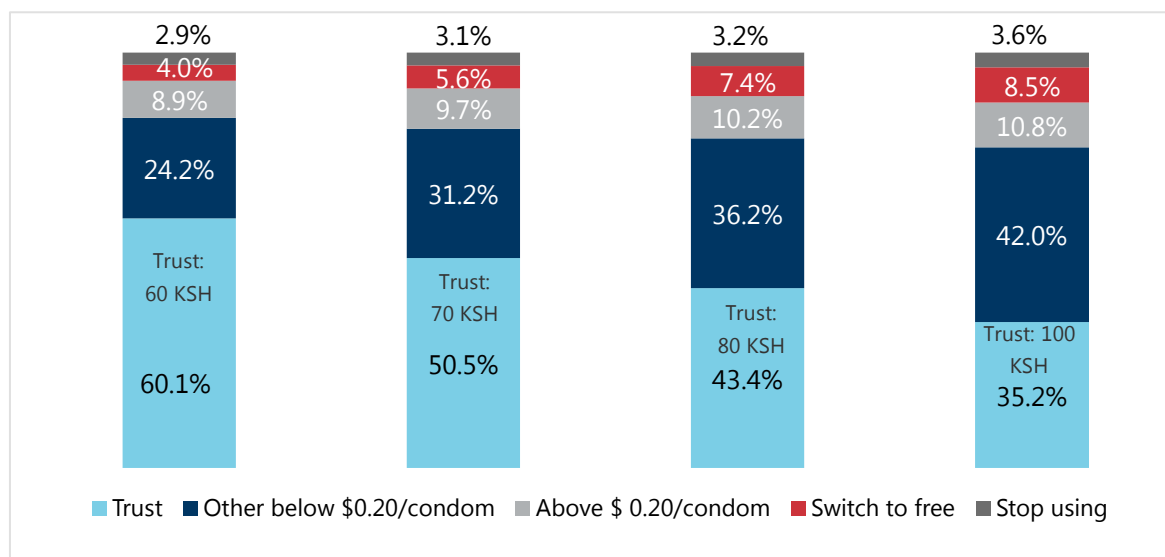
Price Sensitivity

The AIDSFree research team used the discrete choice model to examine what men who mainly use SM condom brands would do if the price of their brand increased. This method makes two important assumptions: all respondents are aware of all brands in the market (the method “forces” awareness of all brands); and all brands are available in all outlets.

The AIDSFree research team examined price sensitivity of men who use SM brands of condoms in two scenarios:

1. When the price at which Trust is available is changed from the current (60 KSH) to three new price levels: 70, 80, and 100 KSH, with the price of all other condom brands remaining the same. The focus in this scenario is on whether these price increases would lead this group of men to switch over to other priced brands, opting to switch to free condoms, or opting to discontinue using condoms.

Figure 17a. Simulated Effect on SM User Purchase Preferences with Trust Price Increases

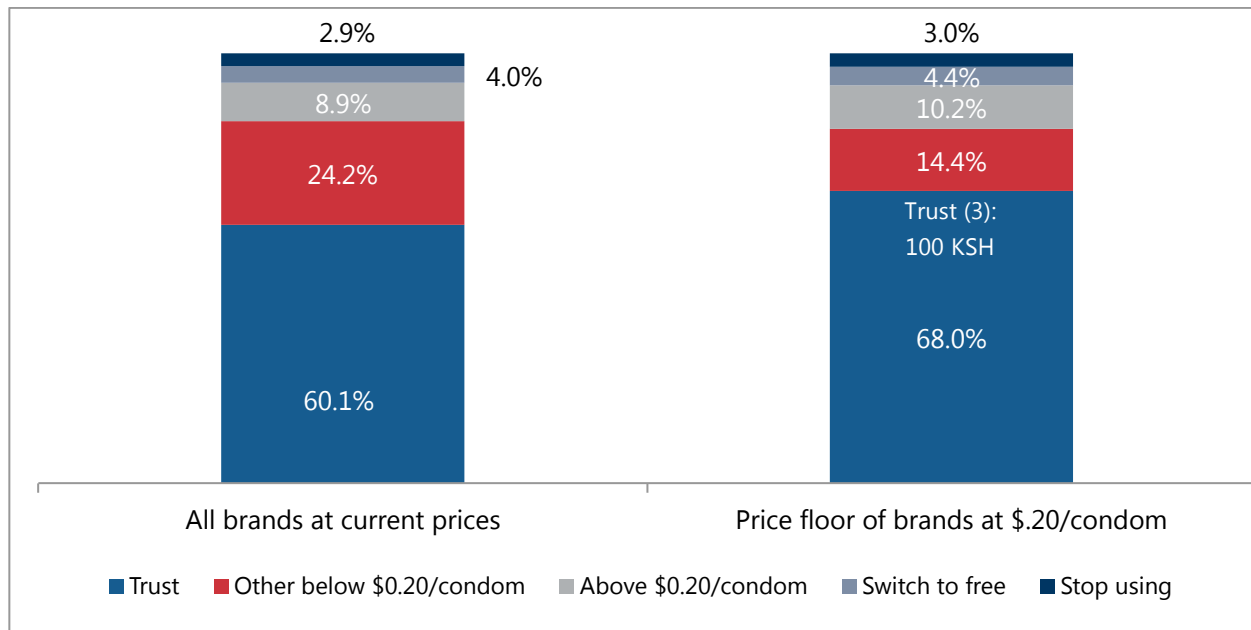


2. When the prices of all brands currently being sold at \$0.20 or less per condom are increased to \$0.20 per condom (i.e., the least expensive condom brand available is 60 KSH for a 3-pack). This scenario examines potential risks in disrupting supplies of low-priced condoms currently coming into Kenya, including SM brands such as Salama and Protector.

Figure 17a demonstrates an output of the discrete choice model for scenario a, assessing consumers' purchase preferences at four different price levels of Trust condoms. The results showed that incremental increases in the price of Trust would trigger incremental losses of market share for the brand, predominantly to other low-priced condoms. This held true across the three price tiers, with Trust's market share decreasing from 60 percent to 35 percent with a price increase from 60 KSH to 100 KSH. The same increase projects to benefit low-priced brands, whose share would increase from 24 percent to 42 percent. The simulation also showed that although very few users would stop using condoms altogether, the share of men using free condoms would increase across all price points and double at the highest price point.

Figure 17b illustrates findings from scenario 2, in which prices for eight low-priced brands (including six commercial brands) increase to \$0.20, the current market price of Trust, while maintaining the prices of all other brands. In this scenario, Trust would gain market share, from 60 percent to 68 percent of user share, largely at the expense of lower-priced commercial brands (24% to 14%). The proportion of men who would cease using condoms or opt for free condoms showed negligible increases in this scenario.

Figure 17b. Simulated Effect on SM User Purchase Preferences with Low-Price Brand Price Increases



Summary: Men Who Use SM Condom Brands Most Often

The AIDSFree research team concluded that there would be a low risk of decline in condom use among users of SM brands if the price of Trust condoms increased, or if supplies of other cheaper condom brands were disrupted. However, the team did not observe a strong rationale for Trust to increase its price. This is based on the following:

- The proportion of users who would cease using condoms increased only marginally if the price of Trust increased, or if supplies of cheaper condom brands were disrupted. However, these events would likely cause an increase in the proportion of men opting for free condoms.
- The price of Trust is among the highest in the countries included in the assessment, so the brand is likely to have no or low need for donor subsidies to continue maintaining its market presence. Hence, financial self-reliance does not offer a rationale for Trust to increase its price.

Strategies to Increase Volume and Value Share of Commercial Sector Condoms

This section examines which actions or scenarios would be likely to increase volume and value share of the commercial sector for condoms. The researchers modeled the outcomes of three scenarios:

- Increasing the price of SM brands
- Reducing the price of commercial brands
- Introducing smaller packaging units of commercial brands

The AIDSFree team defined the commercial sector for condoms as the sum total of all condoms brands being marketed by for-profit organizations in country, i.e., all priced brands, excluding those marketed by SMOs. Since a growth in the commercial sector is most likely to come from motivating those who use SM condoms to use commercially marketed condoms, all analyses in this section focused on those who reported using either an SM condom brand or a commercial brand most often (and thus excluded those who used free condoms most often).

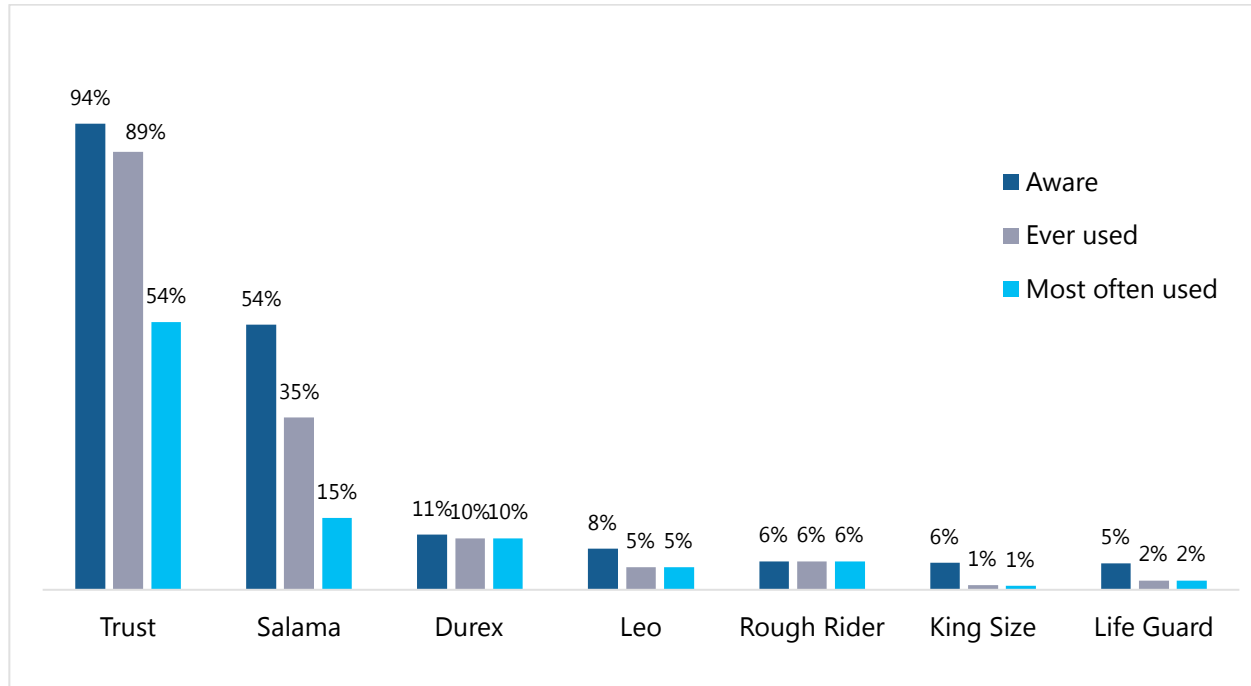
For each of the strategies tested, the team researched the outcomes in terms of three criteria:

1. *Improved market sustainability*: a substantial increase in the volume of the total commercial sector
2. *Low risk to public health outcomes*: no more than a marginal increase in the proportion who would opt for free condoms
3. *Market-driven rationale for the brand(s) concerned to undertake the strategy*: a substantial increase either its market volume or market value without a more than a marginal decline on the other (either market value or market volume)

Overview of the Priced Condom Market

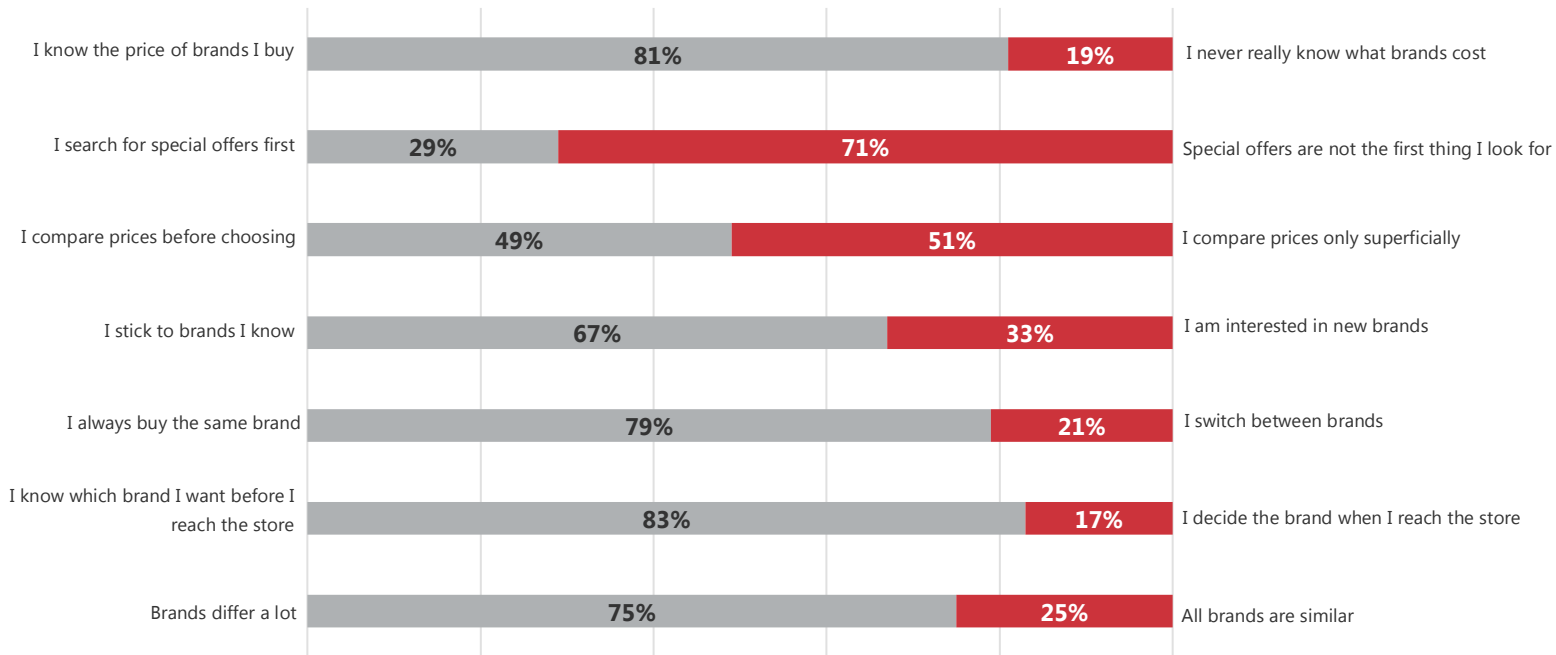
Among men who use priced condoms (SM or commercial brands) most often, Trust and Salama are leading brands (Figure 18). Trust had near universal awareness (94%) and ever-use (89%), and was the brand most often used by more than half of respondents. While significantly behind Trust, Salama was known to 54 percent of respondents, had been used by 35 percent, and was the most often used among 15 percent. All other brands had much lower awareness and ever-use.

Figure 18. Awareness and Use of Leading Brands



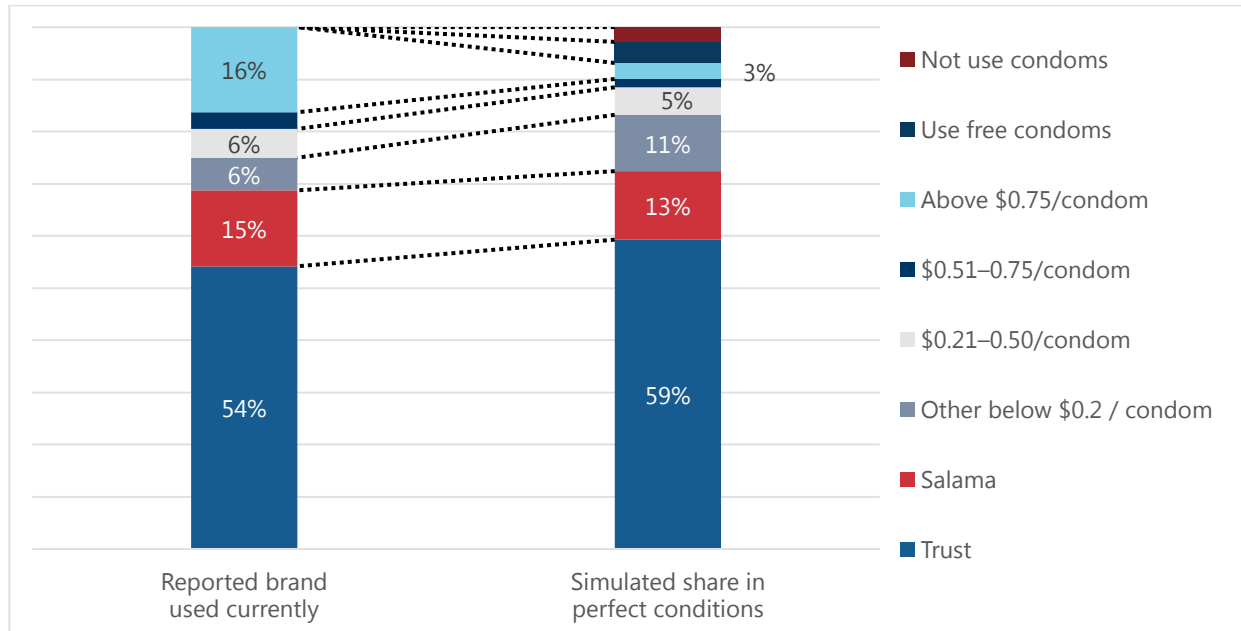
Researchers determined attitudes about purchasing condom brands by asking respondents to choose between several pairs of statements. Figure 19 demonstrates that Kenyan condom buyers consider themselves value-oriented in their condom purchase habits (i.e., price-aware and brand-loyal rather than price-oriented). The first statement in the figure relates to price awareness, and shows that most respondents (81%) considered themselves aware of brand prices. The next two statements, address aspects of price sensitivity (price consciousness and a propensity to search for deals), and indicated that Kenyan condom buyers did not consider themselves price-oriented. The last four statements relate to brand loyalty. Three-quarters of respondents noted differences among the brand options and slightly more said that they always bought the same brand.

Figure 19. Purchase Attitudes of Priced Condom Users



As mentioned earlier, the discrete choice model makes two important underlying assumptions in estimating price sensitivity—that all respondents are aware of all brands in the market, and that all brands are available in all outlets. The stacked bars in Figure 20 compare reported brand used (in direct questioning) against a simulated output from the discrete choice model at current market prices. This comparison provides insights into how improved availability and awareness could affect brand shares. Under the “perfect” conditions assumed in the discrete choice model, the market share of Trust would increase from 54 percent to 59 percent, while the other SM brand, Salama, would decline from 15 percent to 13 percent. Low-priced commercial brands (\$0.20 and less) would nearly double in market share from 6 percent to 11 percent, suggesting that low awareness and limited availability may be hindering brands in this segment. These gains, however, would come largely at the expense of higher-priced commercial brands, whose share could shrink dramatically, from 16 percent to 3 percent. Seven percent of users would opt for free condoms or cease using condoms altogether under this scenario.

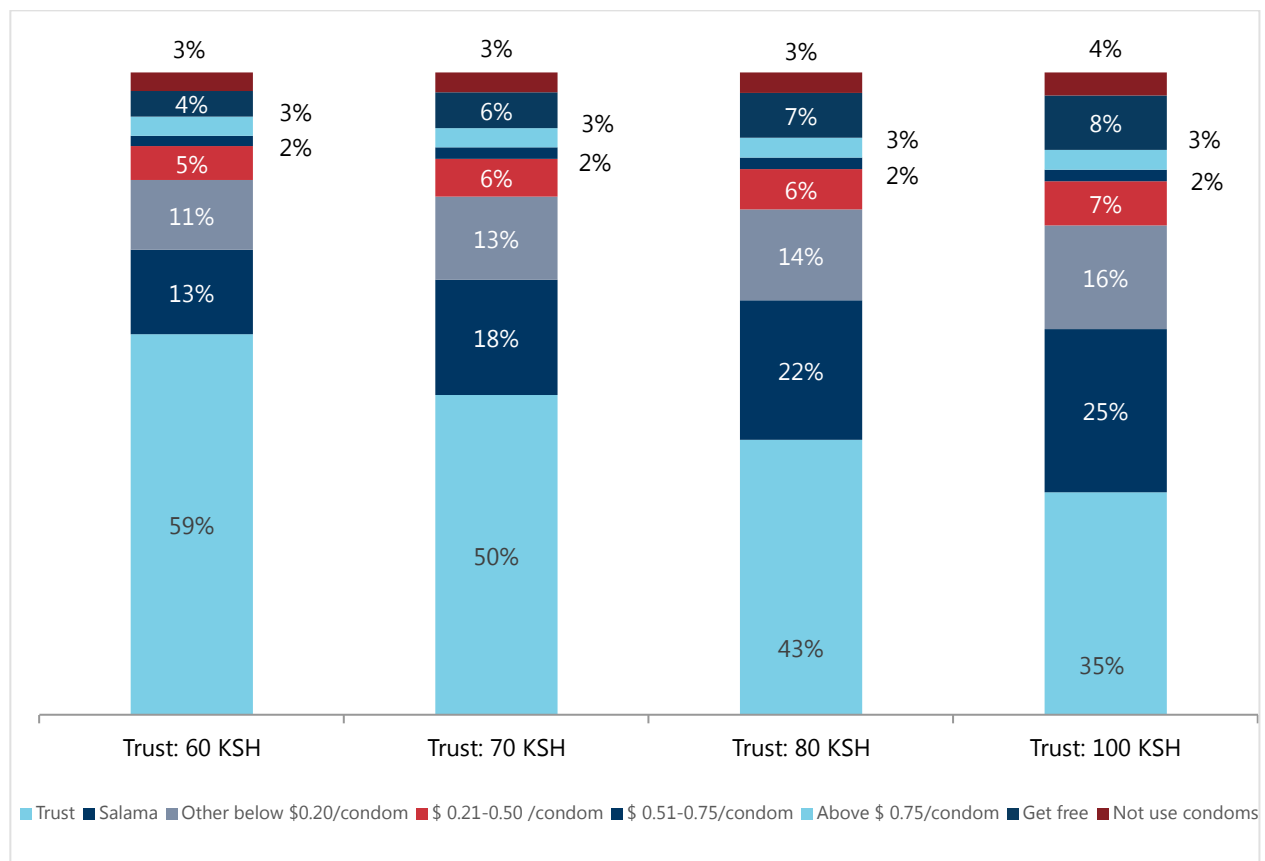
Figure 20. Comparison of Condom Market Share under Current Conditions versus Simulation Where Respondents Are Aware of All Brands and Prices



Effect of Increase in Price of Trust on the Priced Condom Market

Figure 21 shows that if the price of Trust increased, the share of commercial brands (brands other than Salama and Trust) in the priced market would increase from 21 percent (when Trust is priced at 60 KSH for a 3-pack) to 28 percent (when Trust is priced at 100 KSH for a 3-pack). Use of free brands would be expected to increase nominally, from 4 percent to 8 percent, under these conditions. The share of individuals not using condoms would remain fairly constant. However, as the price of Trust condoms increased, not only would its share of market volumes decrease, but the brand's market value (volume sold multiplied by the unit price to customer) would also decrease. Thus, this strategy meets only two of the three outcome criteria described above.

Figure 21. Impact on Total Priced Market if Price of SM Brands Were Increased



Effect of Decrease in Price of High-Priced Commercial Brands on the Priced Condom Market

The figures that follow show outcomes of the scenario in which the price of mid- and high-priced commercial brands (brands being sold at more than \$0.50 per condom) is reduced. Analysis showed that in this case, the overall share of the total commercial sector remained largely unchanged. Even with a 44 percent price reduction, the total commercial sector share maintained 23 percent of the total priced market (Figure 22). Similarly, the proportion who would opt for free condoms or cease using condoms would remain unchanged. Condom brands in the mid- and high-priced commercial segments would gain only marginally in volume and market value (Figure 23). Thus, this strategy met only one of the three criteria outlined earlier in this section.

Figure 22. Share of Condom Segments with Price Reduction in Mid- and High-Priced Condoms

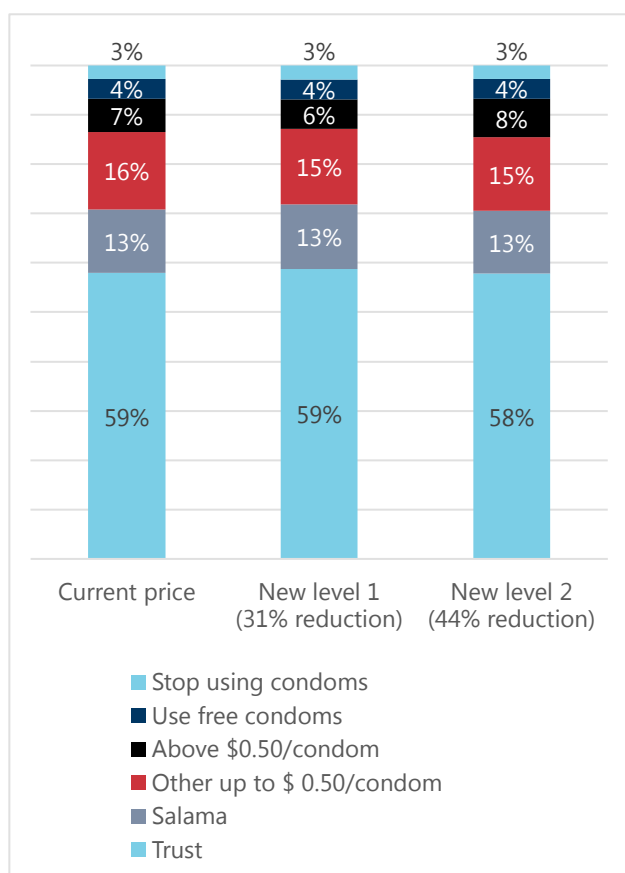
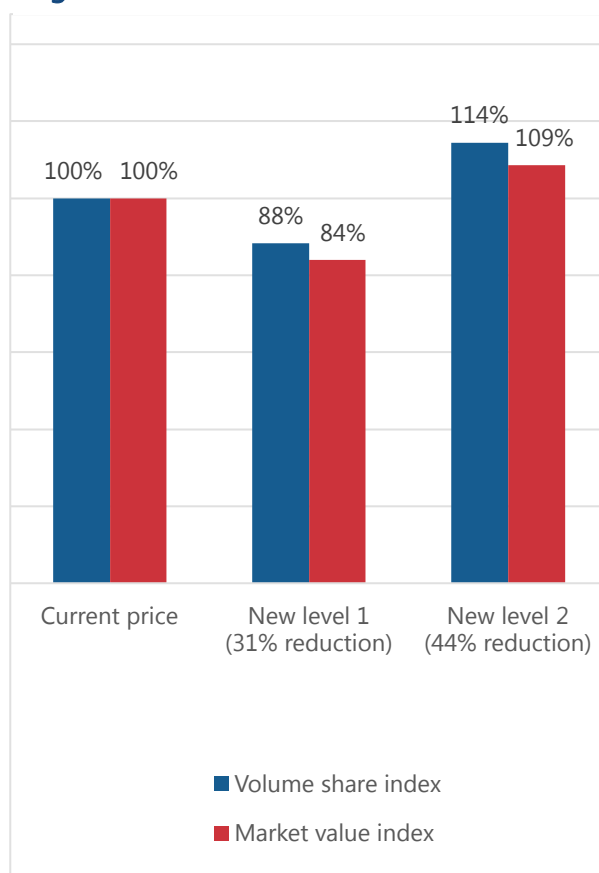


Figure 23. Volume and Market Value of Mid- and High-Priced Condom Segment Indexed to Current Scenario



Effect of Introducing a Single Pack on the Priced Condom Market

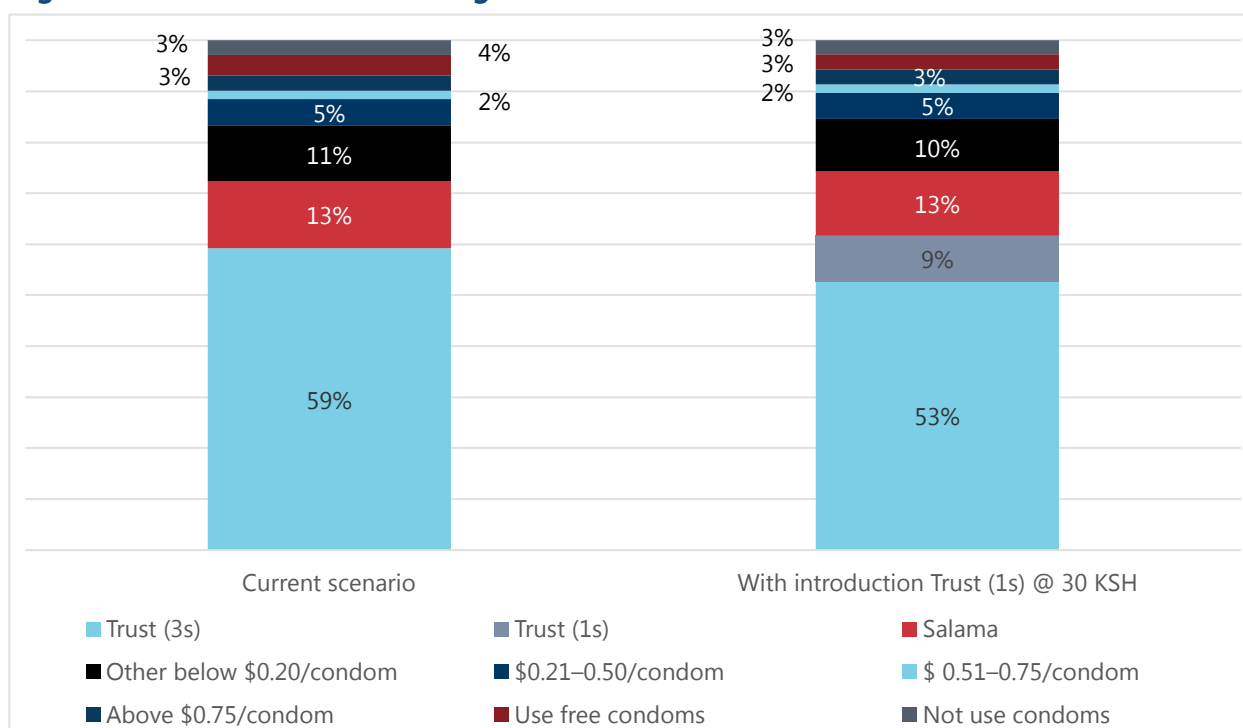
Introducing a single pack of Trust, as modeled in Figure 24, would marginally increase the Trust brand's volume share of the market: from 59 percent to 62 percent. Under this scenario, the proportion of men who would opt for free condoms or not use condoms decreased marginally (by 1%). Two commercial brands (Durex and Unidus) were also tested for single-pack options; the expected effect on market share was found to be similarly marginal. With only marginal changes in volumes, the changes in market values are similarly marginal and are not shown in the graphs below. Thus, this strategy meets only one of the three criteria outlined earlier in the section.

Summary: Strategies to Increase Volume and Value of the Commercial Market

The AIDSFree research team concluded that none of the scenarios for increasing the commercial sector's share was appropriate for the following reasons:

- Decreasing the price of mid- and high-priced commercial brands or introducing a single pack of condoms had only marginal effects on the volume share of the commercial sector. The brands undertaking these strategies would see only marginal effects on their volume and value.

Figure 24. Introduction of Single-Pack Size for Trust



- Though the analyses showed that increasing the price of Trust condoms would likely increase the share of the commercial sector, there does not seem to be a strong rationale for Trust to increase prices further:
 - Trust is being sold at \$0.20 per condom, and at this price it is not likely to require subsidies to maintain its market presence. Thus a need for financial self-reliance is unlikely to motivate a price increase
 - Increasing the price of Trust was projected to decrease both sales volume and market value, providing a disincentive for further price increases.

Discussion and Recommendations

Key findings from the Kenya willingness-to-pay survey are:

- Current supplies of free condoms exceed their current levels of utilization by a factor of two. Aligning levels of supply to current levels of demand poses negligible risks to condom use, and is likely to improve efficiencies and reduce wastage.
- Men who use free condoms most often are willing to pay up to 45 KSH for a 3-pack of condoms. SM brands from neighboring countries and commercial brands of condoms in this price range are available in Kenya, though their purchase and use appears to be hindered to some extent by lack of awareness and limited availability. Thus, reducing the supplies of free condoms to below current use of free condoms, in coordination with marketers of low-priced condoms, is unlikely to reduce condom use.
- There is no clear need or benefit for Trust condoms (the leading SM brand) to increase its prices. Assuming the brand has achieved full-cost recovery, Trust would be motivated to increase prices further if increasing the price could substantially increase either its market

volume or market value, without resulting in more than a marginal decline in the other. The survey found that if Trust were to increase prices further, both its market volume and market value would decline.

- The analysis found no market-driven rationale for mid- and high-priced commercial brands to decrease their prices, or to introduce a single pack of condoms in the current market scenario.

Based on these findings, the AIDSFree research team recommends actions to graduate men from using free condoms to using priced condoms through the following:

1. Align the supply of free condoms to levels of utilization of free condoms.

The assessment suggests that supplies of free condoms greatly exceed their levels of use. Aligning levels of supply and utilization of free condoms could increase efficiency, with minimal risks.

2. Gradually restrict the supply of free condoms further below current levels of utilization while closely monitoring condom use.

The assessment suggests that users of free condoms are willing to pay up to 45 KSH for a 3-pack of condoms. A few commercial and SM brands are being offered to customers within this price range. Therefore, there appears to be low risk in reducing supplies of free condoms below their current levels of use. Restricting supplies in urban and higher-income areas could test this theory to see if users switch to priced condoms. Restricting free supplies would help change market expectations and grow sales of priced condom brands.

3. Explore approaches to providing “market-priming” support to marketers of low-priced condoms (brands being sold to customers below \$0.20 per unit) to expand awareness and availability of their brands.

As expected, the assessment shows that along with price, brand awareness, appeal, and availability are important factors influencing brand choice. Men who use free condoms currently are likely to opt for low-priced condoms (those sold for under \$0.20 per unit), but men’s awareness and the perceived availability of these brands are limited. Providing limited-time support to marketers of low-priced condoms would mitigate risks that men who use free condoms would stop using condoms when supplies are restricted. Possible approaches could include SM organizations undertaking distribution and retail promotion of low-priced condoms as part of their market-shaping activities; or supporting marketers of low-priced brands through innovative financing mechanisms such as soft loans linked to milestones, impact bonds, or matching grants.

Nigeria

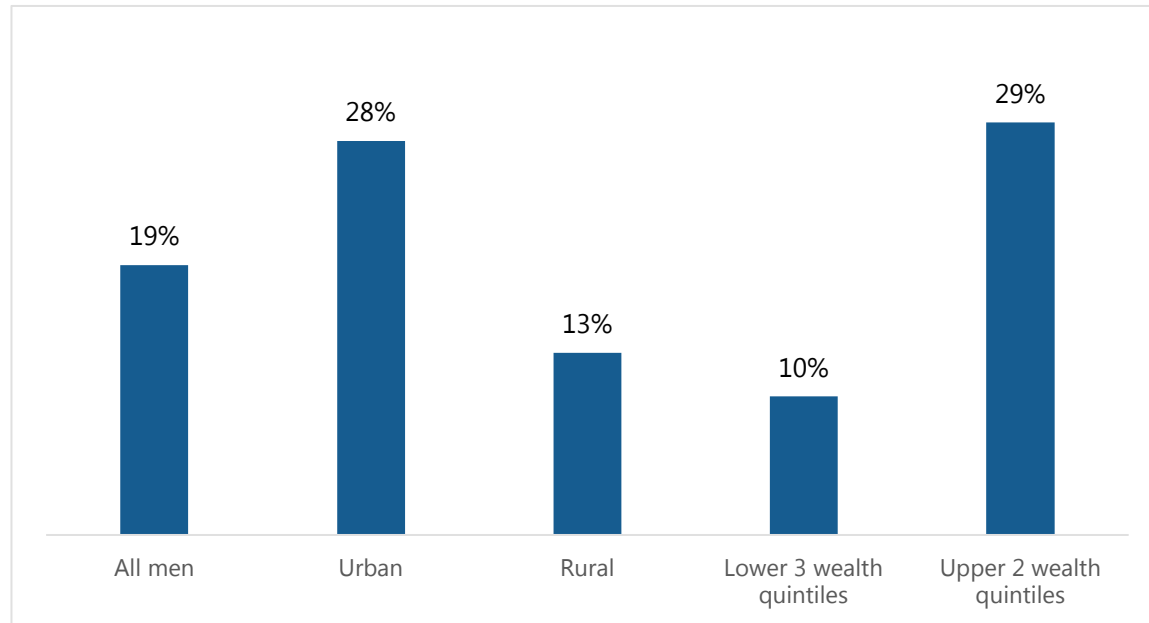
Market Overview

To provide a contextual overview to the Nigeria condom market, the AIDSFree research team used secondary data sources and findings from the willingness-to-pay assessment.

Condom Use Differentials

To complement the willingness-to-pay survey findings, the AIDSFree research team analyzed condom use reported by men in the Nigeria DHS 2013. The analysis examined men's self-reported condom use with their last sexual partner (irrespective of partner type), and was disaggregated by wealth quintile and residence (urban or rural). The results, summarized in Figure 25, show notable differentials in condom use. More than a quarter of men in urban areas (28% compared to 13% of rural men) reported using a condom with their last sexual partner. Condom use by men in the upper two wealth quintiles (29%) was three times that of men in the lower three quintiles (10%). These differentials could be due to multiple factors, including price, which calls for a more careful examination of price.

Figure 25. Percentage of Men Reporting Condom Use with Most Recent Partner, Disaggregated by Select Demographic Characteristics



Nigeria DHS 2013.

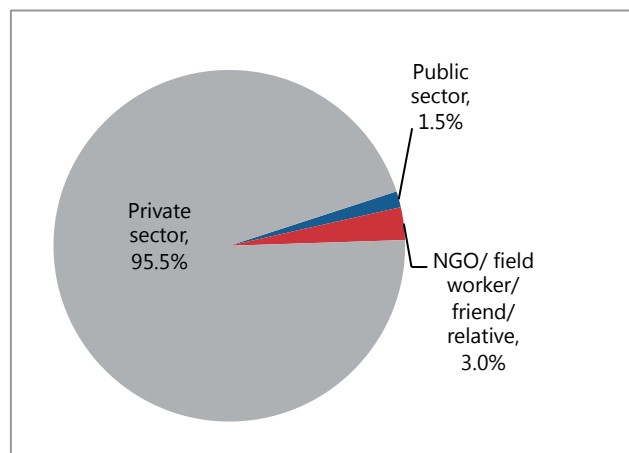
Utilization and Supply of Condoms

Figures 26 and 27 compare the demand and supply of condoms, respectively, by source of supply. To estimate the utilization of condoms from public and private sector sources, the team examined

where men who reported using a condom with their most recent partner had obtained the condom, according to Nigeria DHS 2013. Figure 26 shows that almost all men (more than 95%) reported obtaining the condom from a private sector source such as pharmacy, shop, or kiosk (see Annex B for details), 2 percent obtained the condom from a public sector source, and 3 percent from FBO, NGO, or a field worker. Assuming that condoms from FBOs, NGOs, and field workers were free, about 5 percent of users obtained free condoms, and the rest paid for their condoms.

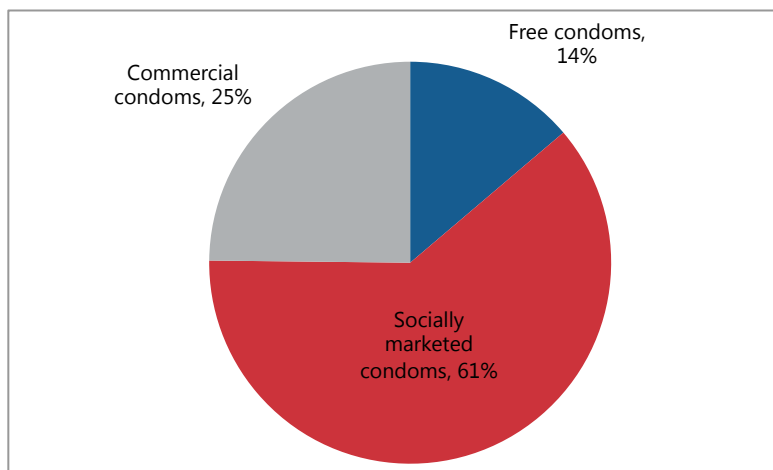
To estimate the supply of condoms, AIDSFree conducted an assessment of condoms distributed free by public sector and NGOs, and condoms distributed by SMOs and commercial marketers in 2015 (Figure 27). Fourteen percent of condoms distributed in Nigeria were free, while priced condoms made up the remaining 86 percent. Note that estimates of the volume of condoms supplied varied due to lack of reliable data. For example, the distribution of condom supplies cited in a recent report Jones and Kadirov (2017) estimate the share of the public sector to be much higher in 2017 than found in AIDSFree’s 2016 assessment. Despite the differences in estimates in volumes of condoms supplied, supply appears to exceed demand; at least three times more free condoms are made available in country than are chosen by users (Ganesan 2017a).

Figure 26. Percentage Distribution of Source of Condom Used with Most Recent Partner



Source: Nigeria DHS 2013 and AIDSFree.

Figure 27. Percentage Distribution of Condoms Supplied, by Sector

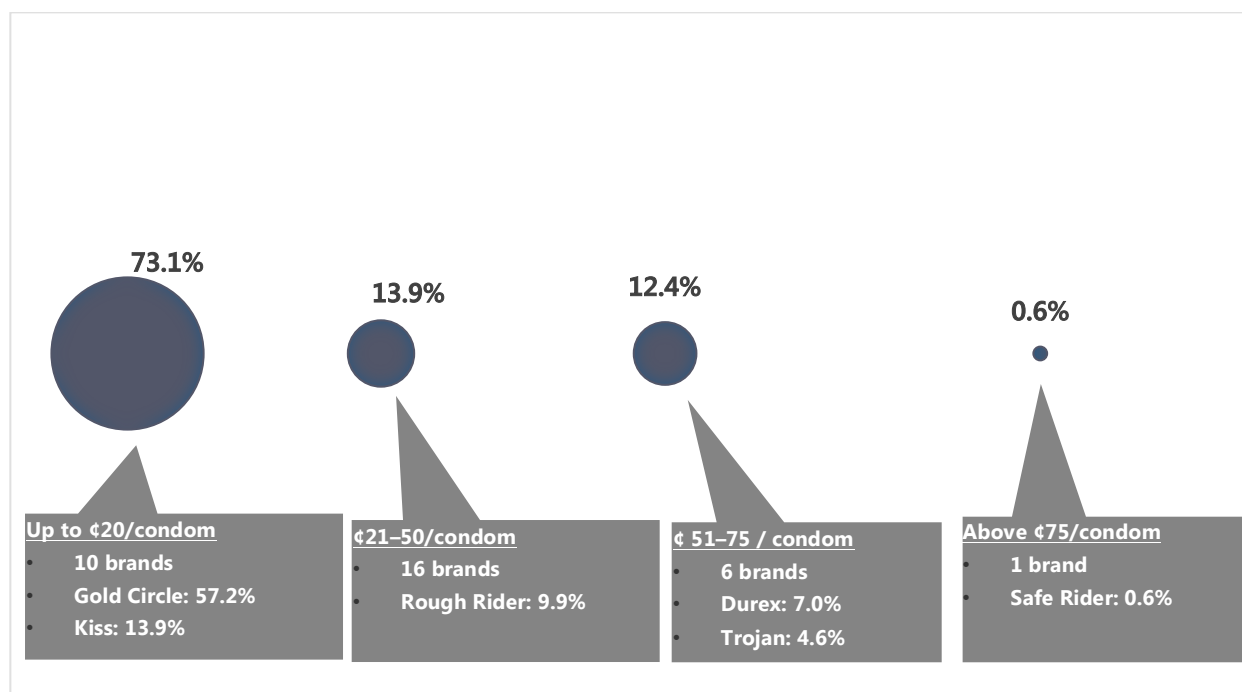


Source: 2016 Nigeria Market Assessment, AIDSFree.

Willingness to Pay

A total of 33 brands were identified in preliminary interviews with approximately 25 condom retailers. The median price to consumers per condom ranged from \$0.05 to \$1.90 (see Annex C for a full list of brands and median price to consumer). Figure 28 shows the user share of these brands from the willingness-to-pay survey, sorted by price from least to most expensive. Of the 33 brands, Gold Circle held the highest user share at 57 percent, followed by Kiss (14%), Rough Rider (10%), Durex (7%), and Trojan (5%). For the purposes of this report, researchers considered Gold Circle, Gold Circle Flex, Kiss, and Fiesta to be SM brands.

Figure 28. User Share and Retail Prices of Condom Brands in Nigeria



Demographic Characteristics of Survey Respondents

The AIDSFree research team interviewed 1,360 respondents in Nigeria for the willingness-to-pay survey. As shown in Table 4, the proportion of users from upper wealth quintiles increased from free (57%) to SM (74%) to commercial (87%). More users of SM and commercial brands in the sample lived in urban areas. The differences between segments, particularly between those who use SM brands most often and those who use a commercial brand most often, were low. The authors expected that, in a well-segmented market where brands are targeted and priced optimally to serve different population segments, there would be greater differences between the segments in terms of residence and wealth (for example, as in Kenya). However, Table 4 suggests that SM and commercial brands in Nigeria are serving similar user segments.

Table 4. Sociodemographic Characteristics of Willingness-to-Pay Survey Respondents in Nigeria, Disaggregated by Condom Segment Used Most Often

Age	Use free condoms most often (%)	Use SM brand of condoms most often (%)	Use a commercial brand most often (%)
Age			
18–34 years	76	81	68
More than 34 years	24	19	32

Cont.

Table 4, cont.

Age	Use free condoms most often (%)	Use SM brand of condoms most often (%)	Use a commercial brand most often (%)
Residence			
Urban	55	61	61
Rural	45	39	39
Wealth index			
Lower three wealth quintiles	43	26	13
Upper two wealth quintiles	57	74	87
Marital status			
Single	70	77	83
Married/living together	30	23	17
Total percentage (unweighted N)	100% (488)	100% (580)	100% (292)

Other Contextual Parameters

Table 5 below highlights three key contextual parameters relevant for the assessment:

- *The absolute unit consumer price of the SM brand in country in US dollars.* This provides an indication of whether the brand is likely to be subsidized. As noted earlier, the willingness-to-pay surveys did not examine the cost structure of SM condom brands in the assessment countries, and hence use the absolute unit price as a surrogate measure.
- *The unit consumer price of the SM brand in country relative to the per capita GNI.* This is a surrogate measure of the consumer price for an SM brand relative to the population's ability to pay.
- *Trends in the number of SM condoms distributed in country.* Significant declining trends would indicate disruption in supplies of SM brands.

Table 5. Parameters of Ability to Pay and SM Supplies

Parameter	Range [^]	Nigeria
<i>Reference SM condom brand</i>		Gold Circle
Consumer price of reference SM condom brand per unit (\$)	0.05–0.22	0.05
Exchange rate	1–365	365
per capita GNI, PPP adjusted, current international \$, 2016	1810–12,830	5,740
% change in per capita GNI (2016 vs. 2012)*	6% –19%	11%
Consumer price per CYP** as a ratio of per capita GNI (%)*	0.10%–0.77%	0.10%
Total sales units of SM condoms (Mn) ***	0.8–174.0	174.0
% change in total sales of SM condoms (2012 vs. 2016)	90% - 3%	81%

* per capita GNI, PPP adjusted, current international \$, 2016; ** 1 CYP = 120 condoms; *** From *Contraceptive Social Marketing Statistics*, published by DKT (available at <https://www.dktinternational.org/contraceptive-social-marketing-statistics/>); [^] in countries included in this assessment

The table shows that Gold Circle—the leading SM brand in Nigeria—is the lowest-priced SM condom among countries included in this assessment, both in absolute value and in relation to the average ability to pay in the country.

Based on the absolute value of the price, Gold Circle is likely being marketed below full-cost recovery (i.e., the revenues from sales of Gold Circle do not meet the total cost of sales of the brand—including costs toward commodity purchase, packaging, distribution, advertising and promotion, management overheads, and all applicable duties, levies, and taxes). The low absolute price (in \$US) of the brand could, at least partially, be due to substantial decline in the exchange rate of the Nigerian Naira (NGN) vis-à-vis the US dollar.

Based on the price relative to ability to pay, there is probably a potential for increasing the price of the SM brand without affecting overall condom use.

Finally: sales of SM condoms in Nigeria declined to 81 percent of its value in 2012. However, this decline is not substantial, and the AIDSFree research team does not anticipate this decline affecting the study results.

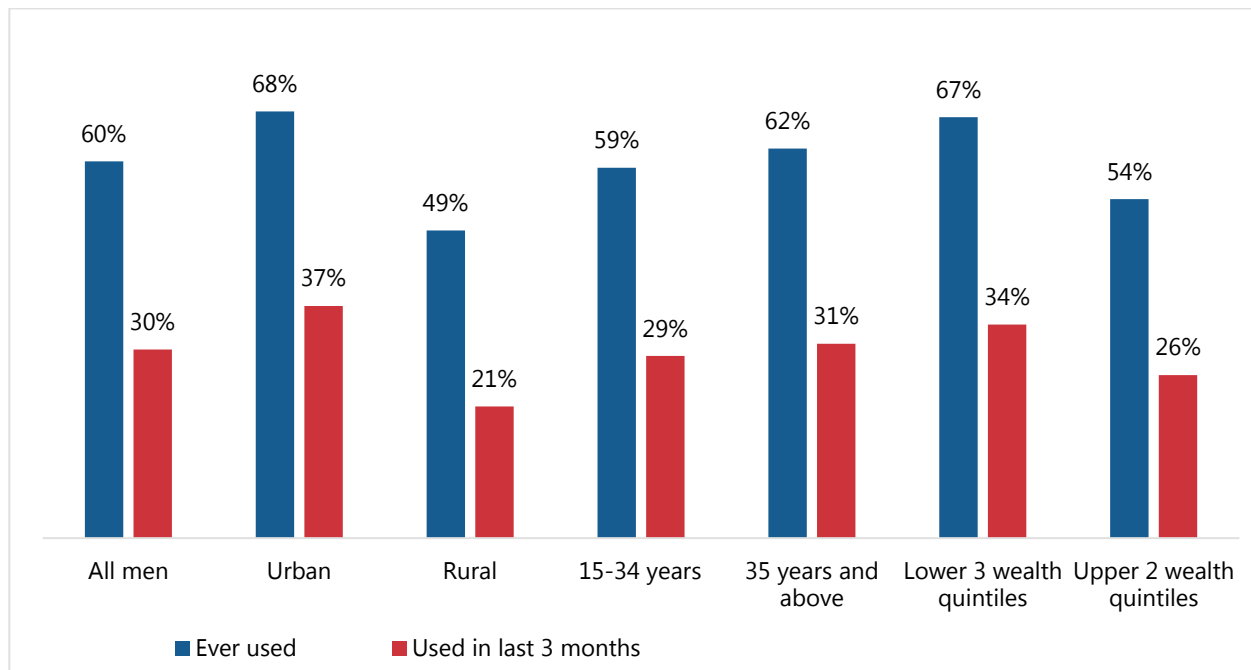
Men Who Use Free Condoms Most Often

This section examines the question: if supply of free condoms were reduced/restricted, would people who currently use these condoms purchase priced condoms or discontinue using condoms. All data and analyses presented in this section focus only on those who reported using free condoms most often.

Prior Use of Priced Condoms

Most free condom users do not use free condoms exclusively; in fact, 60 percent of survey respondents reported having used a priced condom in the past, and 30 percent reported having used one in the last three months (Figure 29). Thus, 60 percent of men who use free condoms most showed a willingness and ability to pay for condoms, and 30 percent demonstrated this in the three months preceding the survey.

Figure 29. Percentage of Free Condom Users Who Have Ever Used, and Used in the Last Three Months, A Priced Condom, Disaggregated by Residence, Age, and Wealth Quintile



As displayed in Figure 30, Gold Circle was the most purchased brand among men who mainly used free condoms (53% ever; 24% in the last three months), followed by Kiss (12% and 5%) and Rough Rider (3% and 1%). In terms of overall brand awareness among free users (Figure 31), 70 percent were aware of Gold Circle, followed by Kiss (25%) and other brands.

Figure 30. Priced Brands Ever Used and Used in Last 3 Months

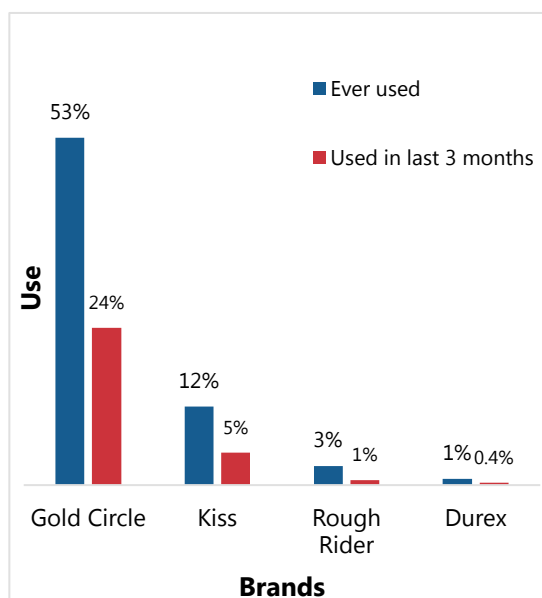
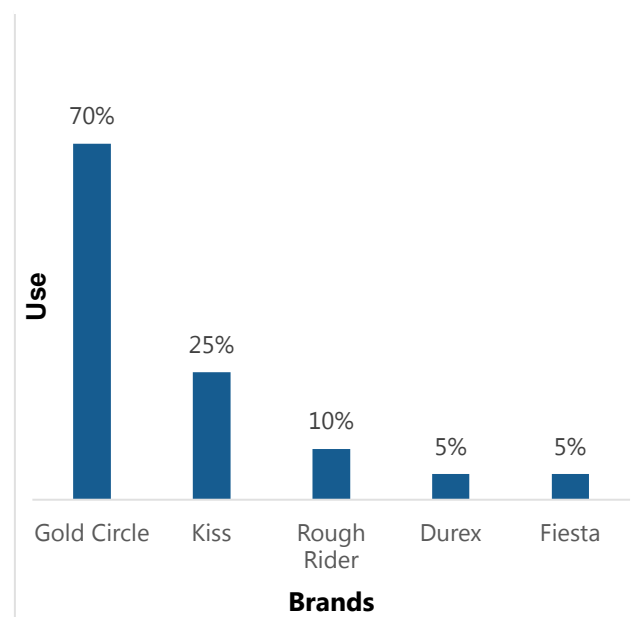


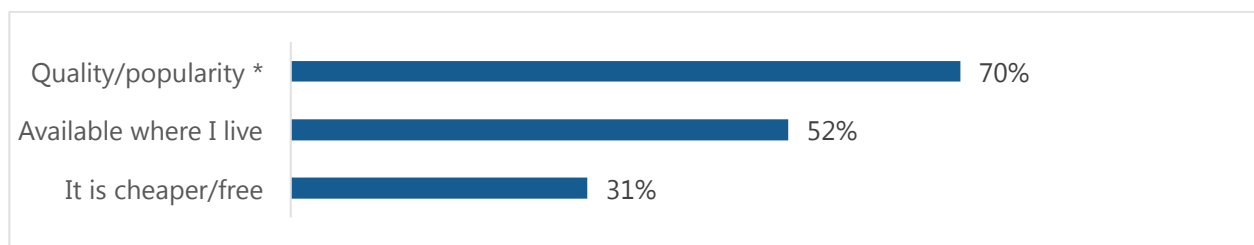
Figure 31. Priced Brands that Users of Free Condoms Had Heard of or Seen



Reasons for Using Free Condoms Most Often

When men mainly using free condoms were asked why they preferred these condoms, only 31 percent attributed their choice to low or no cost. In contrast, 70 percent cited condom quality or popularity, and half cited convenience of availability near where they live (Figure 32). These results suggest that cost may not be the primary driver for choices made by this group.

Figure 32. Reason(s) for Choosing Condom Type



*Quality/popularity comprises: 'my friends use it', 'I like the packaging,' 'it is meant for me,' 'I trust it more,' and 'it is advertised.'

Willingness to Pay

Figure 33 presents actions that free condom users would take if free condoms were unavailable at their typical source. Only 3 percent said they would stop using condoms in this case, and another 3 percent reported that they would stop having sex. Instead, 70 percent of free condom users would attempt to purchase condoms from stores nearby, or go to another location where free condoms are usually available (23%). Thus, 93 percent of these men said that they would continue using condoms; of these, 80 percent would be willing to pay the current market price of a 4-pack of the lowest-priced SM brand, Gold Circle (70 Naira) (Figure 34).

Figure 33. Actions Cited by Users of Free Condom When Free Condoms are Unavailable

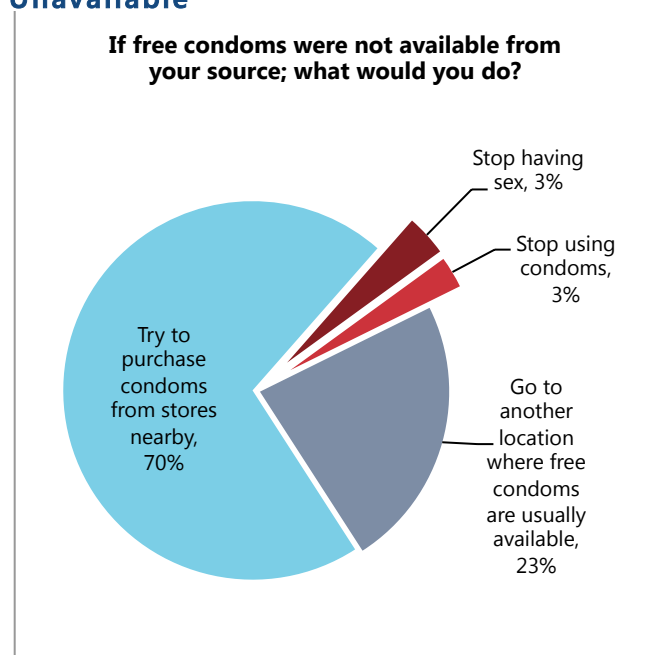
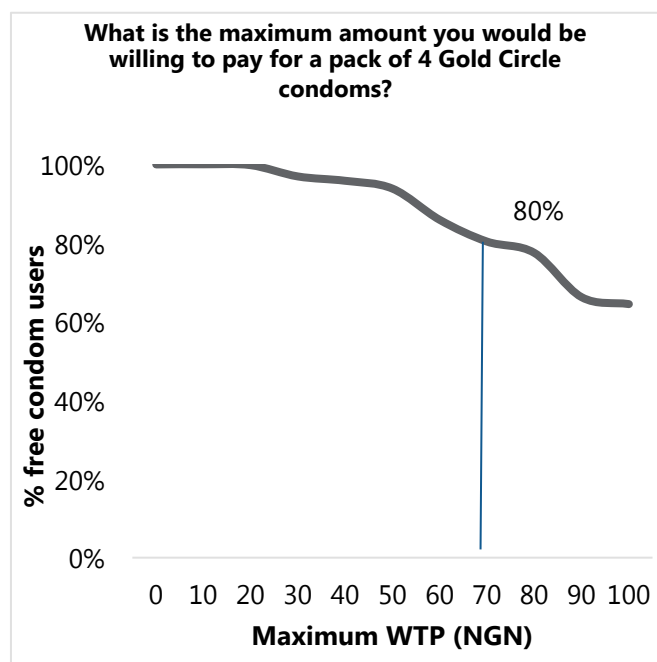


Figure 34. Willingness to Pay for Gold Circle 4-Pack among Users of Free Condoms



The AIDSFree research team used the Van Westendorp PSM to estimate consumer willingness to pay for condoms based on the perceived value of the brands. Figure 35 presents two curves: a price below which Gold Circle would be considered too cheap and perhaps of suspect quality (blue) and a price above which it would be considered too expensive, regardless of its perceived quality (red). The intersection of the two lines is the price point at which the fewest number of respondents would reject the brand for either reason. This is deemed the optimal price, which for a 4-pack of Gold Circle was 70 Naira. Only 10 percent of respondents rejected a Gold Circle 4-pack at that price, which is also the brand's median cost to consumers.

Figure 36 also presents two curves: a price below which most users would accept the brand as “not expensive” (navy blue) and a price above which users would accept the brand as “not a bargain” or above the minimum expected price (gray). The intersection of the two lines is the price point at which the most number of respondents would accept the brand as within their “bargain price” and “expensive but worth it.” This is called the indifference price, which for Nigeria was 100 Naira, a price that 78 percent of free users would accept. The two graphs together show that users of free condoms are willing to pay between 70 and 100 Naira for a 4-pack of Gold Circle—at least the current market price and up to 43 percent more. It should be noted that the Van Westendorp PSM approach is more reliable because direct questioning is likely to understate willingness to pay.

Figure 35. Optimal Price for Gold Circle among Users of Free Condoms

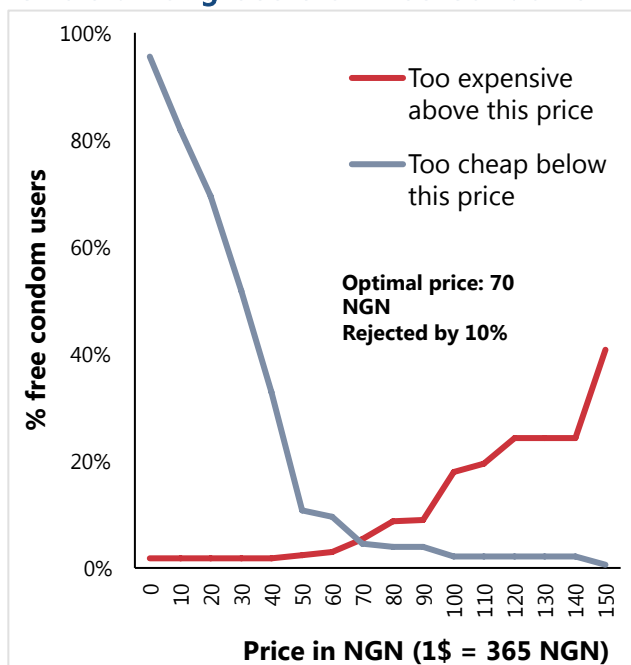
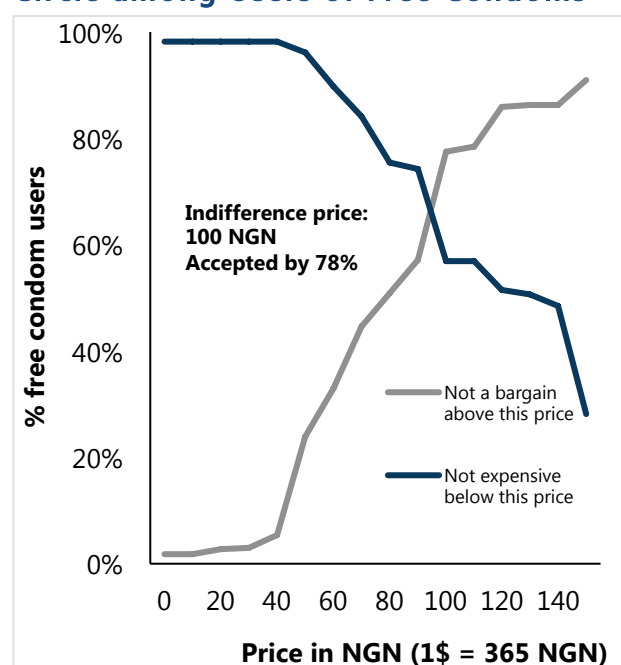


Figure 36. Indifference Price for Gold Circle among Users of Free Condoms



Summary: Men Who Use Free Condoms Most Often

The team concluded that there would be a low risk of decline in condom use if supplies of free condoms were restricted, as long as Gold Circle condoms continued to be easily available and sold to customers at 70–100 Naira for a 4-pack. These conclusions were based on the following:

- The proportion of men who use free condoms is very low (at most 5%). In 2015, only 40 million free condoms were distributed, a low figure in relation to the overall condom market in Nigeria. However, the volume of free condoms distributed in 2015 still exceeded use of free condoms (in 2013) by a factor of 3. Other studies report that supplies of free condoms have substantially increased since 2015, further increasing the extent of oversupply.
- Both approaches for determining willingness to pay showed that men who use free condoms most often are willing to pay at least the current market price for Gold Circle, the lowest-priced condom in the market. The Van Westendorp PSM approach showed that these would be willing to pay between 70 and 100 Naira for a 4-pack of Gold Circle—at least the current market price and up to 43 percent more.
- The willingness-to-pay survey showed that users of free condoms did not appear to be inhibited by having to pay for condoms. However, according to the 2013 Nigeria DHS, condom use levels varied significantly by wealth and residence. Given the low number of free condoms distributed in Nigeria in 2015, the possibility that men who do not use condoms (who were not included in the willingness-to-pay survey) are inhibited by low availability of free condoms cannot be discounted. These findings call for further research to understand the reasons for the high inequity in condom use before altering current strategies involving free supplies of condoms.

Men Who Use SM Brands of Condoms Most Often

This section examines the following question: if the price of SM brands of condoms (Gold Circle, Gold Circle Flex, Kiss, and Fiesta) increased, would those who use these condoms discontinue using condoms, or would they switch to other condom brands? All data and analyses presented in this section focus only on those who reported using an SM brand of condoms most often.

Prior Use of Commercial Brands of Condoms

Only 11 percent of men who mainly used an SM brand of condoms reported ever using a commercial brand, and 4 percent reported having done so in the three months preceding the survey (Figure 37). Of priced condom brands, including SM and commercial options, SM users displayed a preference for their segment, as shown in Figure 38. The main brands that SM users ever used were two SM brands, Gold Circle (94%) and Kiss (35%); of commercial options, Rough Rider and Durex were the most often ever used (4%).

Figure 37. Past Use of Commercial Brands by SM Brand Users

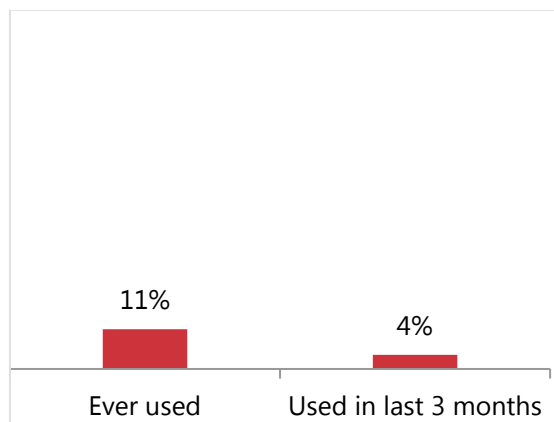
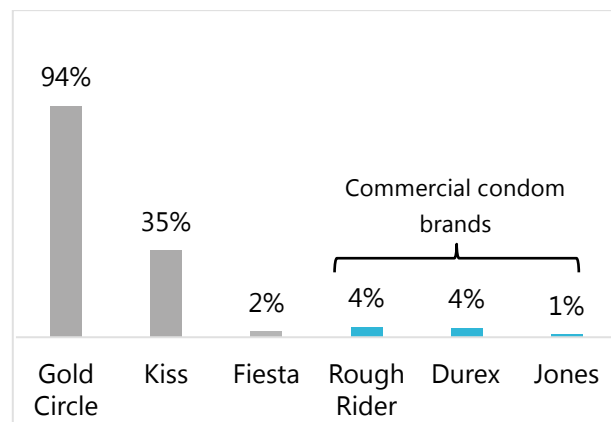


Figure 38. Main Brands Ever Used by SM Brand Users



Figures 37 and 38 should not be construed as demonstrating an unwillingness by SM users to pay for commercial condoms, but rather a loyalty to Gold Circle and Kiss.

Willingness to Pay

Figures 39 and 40 show that when the Van Westendorp PSM approach was applied to determine willingness to pay for a 4-pack of Gold Circle condoms, users of SM condoms would be willing to pay 100–130 Naira, which is 40–90 percent more than the current market price. This shows that there is considerable potential to increase the price of Gold Circle condoms while maintaining other elements of Gold Circle’s marketing mix.

Figure 39. SM Users’ Optimal Price for Gold Circle

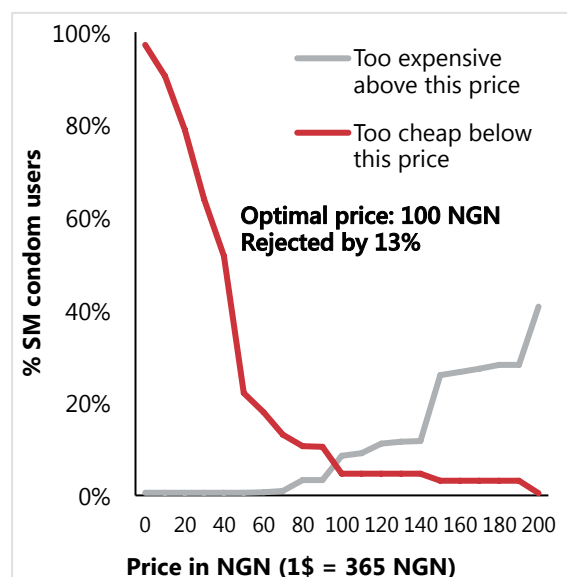
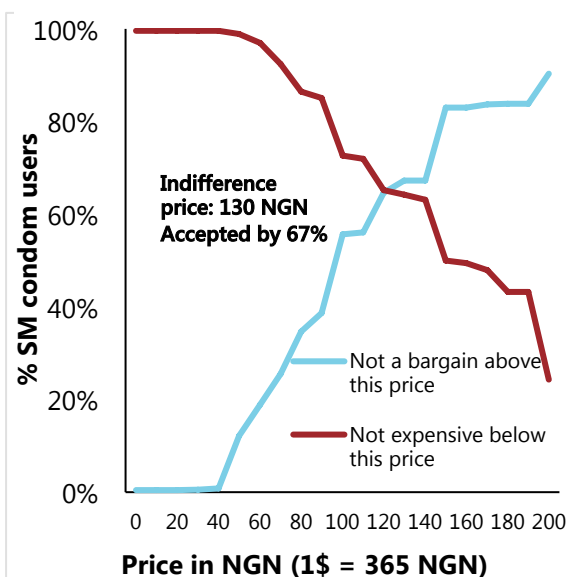


Figure 40. SM Users’ Indifference Price for Gold Circle

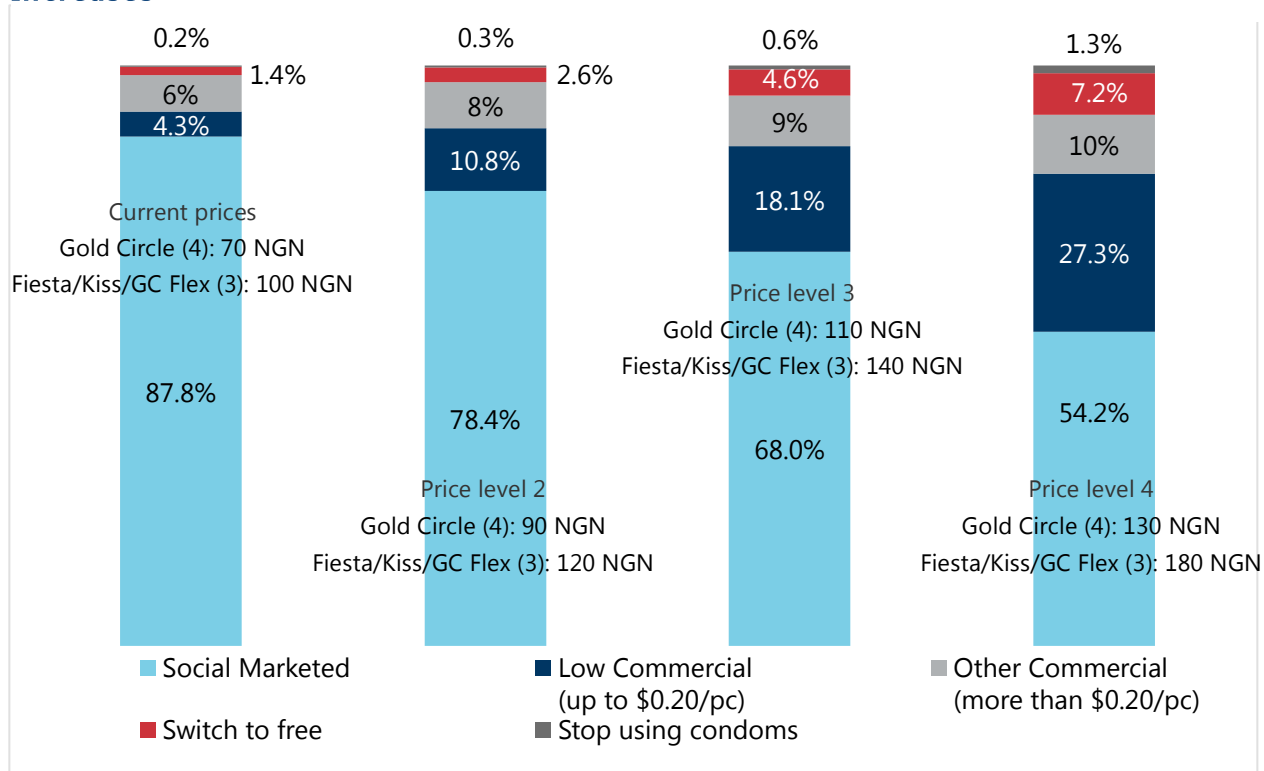


Price Sensitivity

The AIDSFree research team used the discrete choice model to assess price sensitivity—what users of SM condoms would do if the price of their brand increased. Again, this method assumes that all respondents are aware of all brands in the market, and all brands are available in all outlets.

Figure 41 demonstrates a simulation of consumer purchase preferences after increasing the price of all four SM brands, while maintaining the prices of all other brands. The results showed that some men who prefer SM brands would switch to other commercial brands, particularly low-priced commercial brands (those less than \$0.20 per condom). Also, price increases would probably result in slightly higher demand for free condoms (particularly at the highest price point), but would be unlikely to result in decreased condom use.

Figure 41. Simulated Effect on SM User Purchase Preferences with SM Brand Price Increases



Summary: Men Who Use SM Brands of Condoms Most Often

The AIDSFree research team concluded that there would be a low risk of decline in condom use if the price of SM condoms were increased. Rather, there appears to be sufficient rationale to increase their prices. These conclusions were based on the following evidence:

- SM condom users most often ascribed a value to Gold Circle condoms that is 40–90 percent higher than its current market price. Simulations also suggested that even if the price of all four SM condom brands increased by as much as 80 percent, condom use would not decline.

- There are at least six low-priced brands, available to customers at less than \$0.20 per condom that could mitigate risks from a price increase in SM brands.

Strategies to Increase Volume and Value Share of Commercial Sector

This section investigates which actions or scenarios would be likely to increase volume and value share of the commercial sector for condoms. The research modeled the outcomes of three scenarios:

- Increasing the price of SM brands
- Reducing the price of commercial brands
- Introducing smaller packaging units of commercial brands.

The AIDSFree team defined the commercial sector for condoms as the sum total of all condoms brands being marketed by in-country for-profit organizations, i.e., all priced brands, excluding those marketed by SMOs. Since a growth in the commercial sector is most likely to come from motivating those who use SM condoms to use commercially marketed condoms, all analyses in this section focused on those who reported using either an SM condom brand or a commercial brand most often (and thus excluded those who used free condoms most often).

For each of the strategies tested, the team researched the outcomes in terms of three criteria:

1. *Improved market sustainability*: a substantial increase in the volume of the total commercial sector
2. *Low risk to public health outcomes*: no more than a marginal increase in the proportion who would opt for free condoms
3. *Market-driven rationale for the brand(s) concerned to undertake the strategy*: a substantial increase either its market volume or market value without a more than a marginal decline on the other (either market value or market volume).

Overview of the Priced Condom Market

Among men who use priced condoms most often in Nigeria (SM or commercial brands), Gold Circle and Kiss were leading brands in terms of awareness and use (Figure 42). Rough Rider and Durex were the most widely known and used commercial brands.

Figure 42. Awareness and Use of Leading Priced Brands

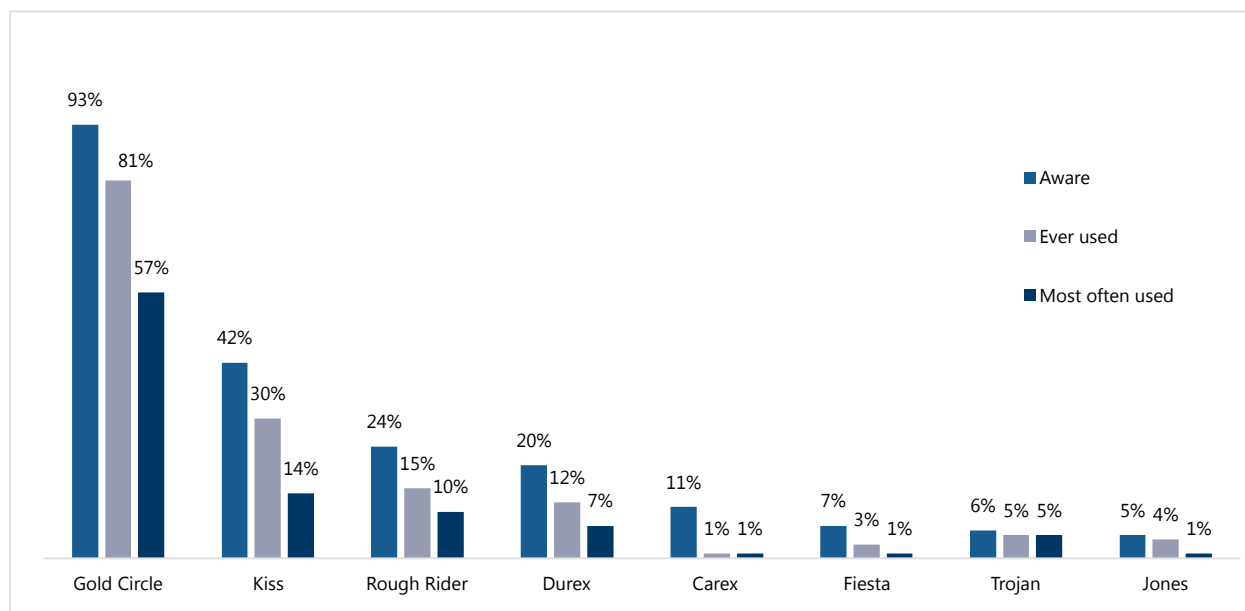
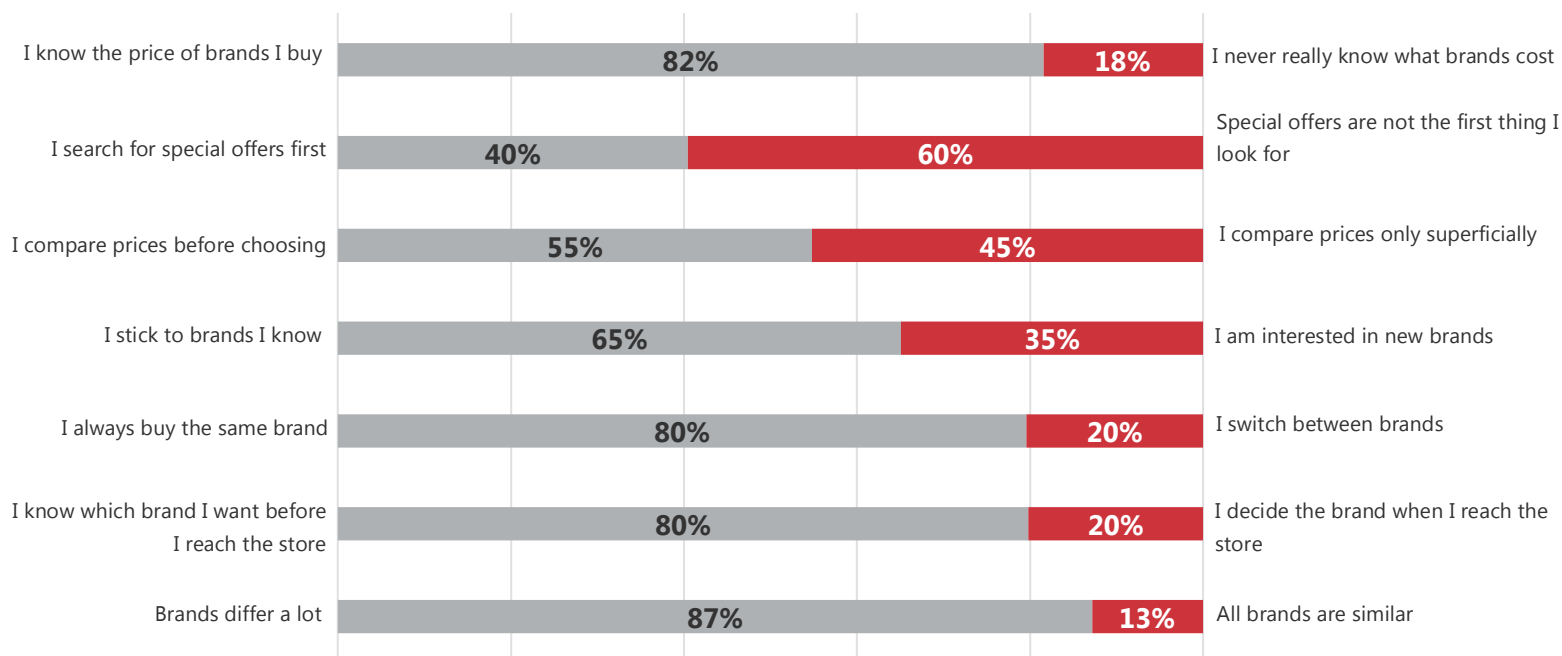


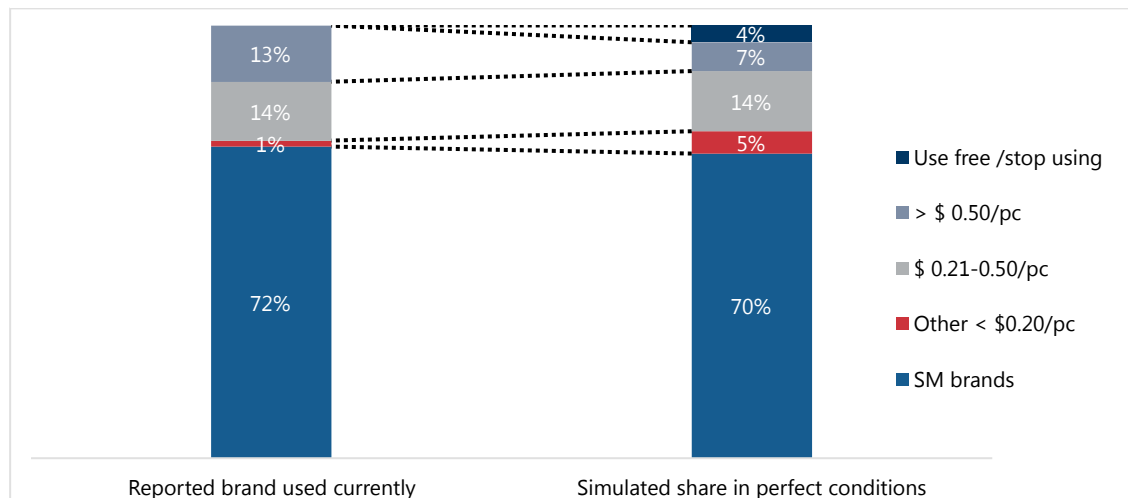
Figure 43. Attitudes of Priced Condom Users on Condom Choice



Attitudes toward purchasing condom brands was determined by asking respondents to choose between various pairs of statements. Figure 43 demonstrates that most Nigerian condom buyers considered themselves value-oriented in their condom purchase habits (i.e., price-aware and brand-loyal rather than price-oriented). The first statement in the figure shows that most respondents (82%) considered themselves aware of brand prices. The second group of statements relate to aspects of price sensitivity (i.e., price consciousness and a propensity to hunt for deals). About half the respondents reported being price-oriented in their brand choice. The third group of statements relates to brand loyalty. Most respondents described themselves as brand-loyal and not variety-seeking; 80 percent said they “always buy the same brand” and 87 percent stated that “brands differ a lot.”

As mentioned earlier, estimates of price sensitivity using the discrete choice model assume that all respondents are aware of all brands in the market, and that all brands are available in all retail outlets. The stacked bars in Figure 44 compare the reported brand used (in direct questioning) against a simulated output from the discrete choice model. The comparison provides insights into how improved availability and awareness could affect brand shares. Under the “perfect” conditions assumed in the discrete choice model, low-priced commercial brands (under \$0.20 per condom) would gain market share, at the expense of high-priced condom brands (more than \$0.50 per condom). In other words, low-priced commercial brands appear to be hindered by low awareness and limited distribution of these brands.

Figure 44. Comparison of Condom Market Share under Current Conditions vs. Simulation Where Respondents Are Aware of all Brands and Prices

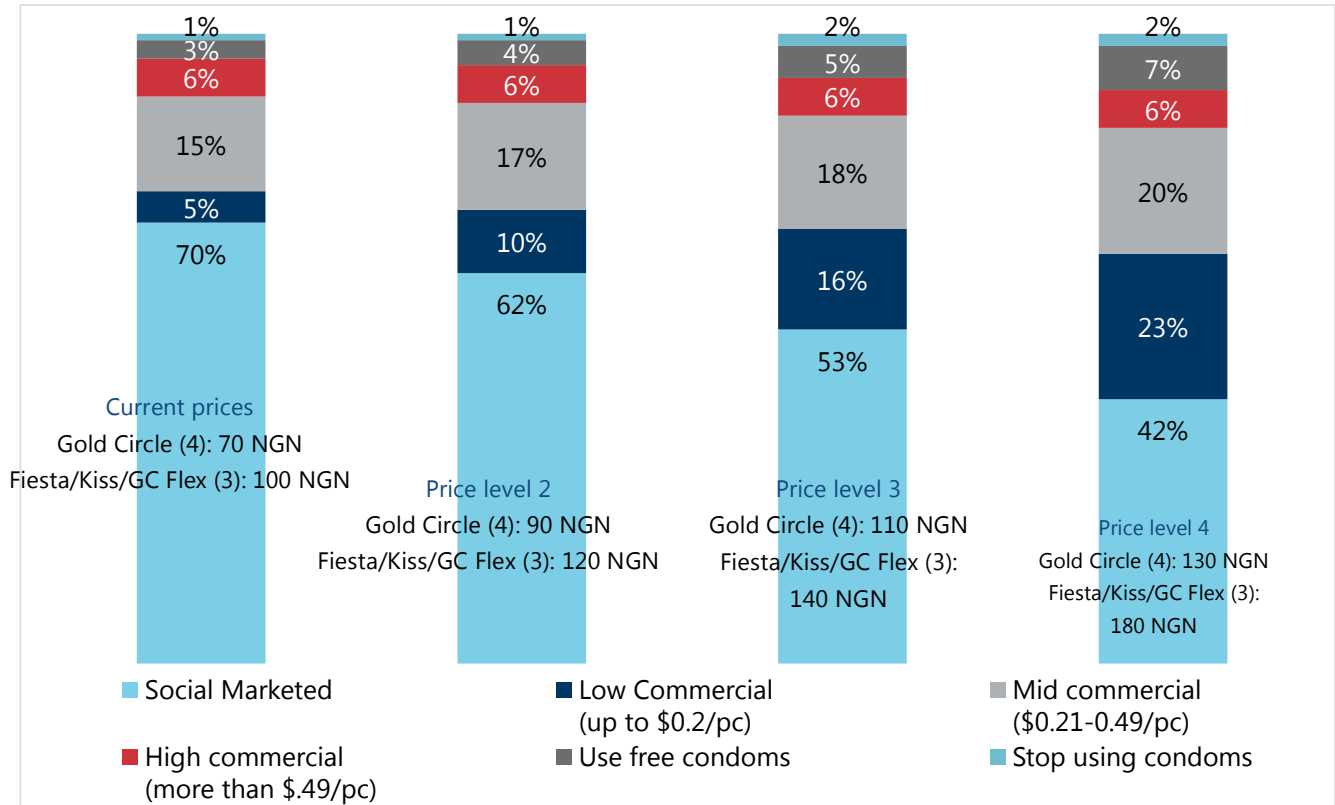


Effect of Increase in Price of SM Brands on the Priced Condom Market

Considering the priced market as a whole, if the price of SM brands increased, few users of priced condoms would stop using condoms or switch to free condoms (Figure 45). The largest impact would be a near doubling of the commercial sector’s share from 26 percent to 49 percent, mainly due to the expected share growth of low-priced and mid-priced commercial brands. Findings from

the analysis indicate that the market value of the SM brands would be highest, despite a decrease in number of condoms sold, when the brands were sold to customers at price level 3. Thus, this strategy meets the criteria outlined earlier in this section.

Figure 45. Impact on Total Priced Market if Price of SM Brands Were Increased



Effect of Decrease in Price of High-Priced Commercial Brands on the Priced Condom Market

As presented in Figure 46, when the price of high-priced commercial brands (i.e., brands sold to customers at more than \$0.49 per condom) diminished, the overall share of the total commercial sector remained largely unchanged. Even with a 34 percent price reduction, the total commercial sector share only increased from 26 percent to 28 percent of the total priced market. The price decrease was unlikely to change the proportion of men who would opt to use free condoms or cease using condoms. In addition, the brands in the high-priced commercial segment were expected grow in volume and gross revenue, as illustrated in Figure 47. Thus, this strategy meets two of the three criteria outlined earlier in this section.

Figure 46. Share of Condom Segments with Price Reduction in High-Priced Condoms

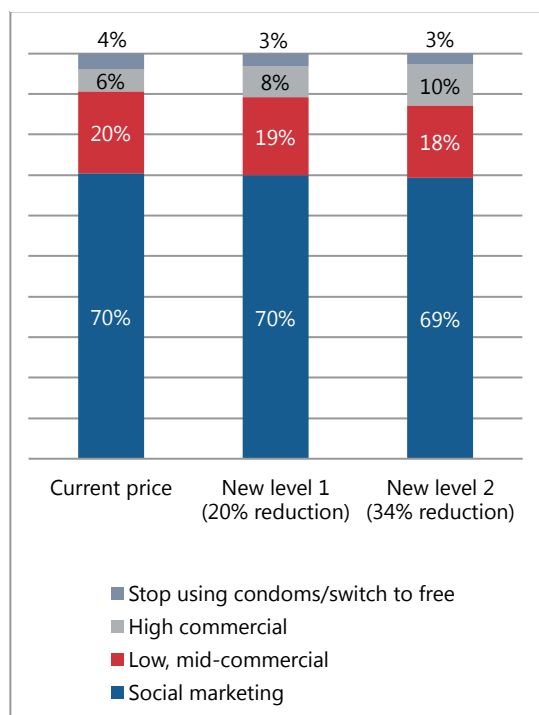
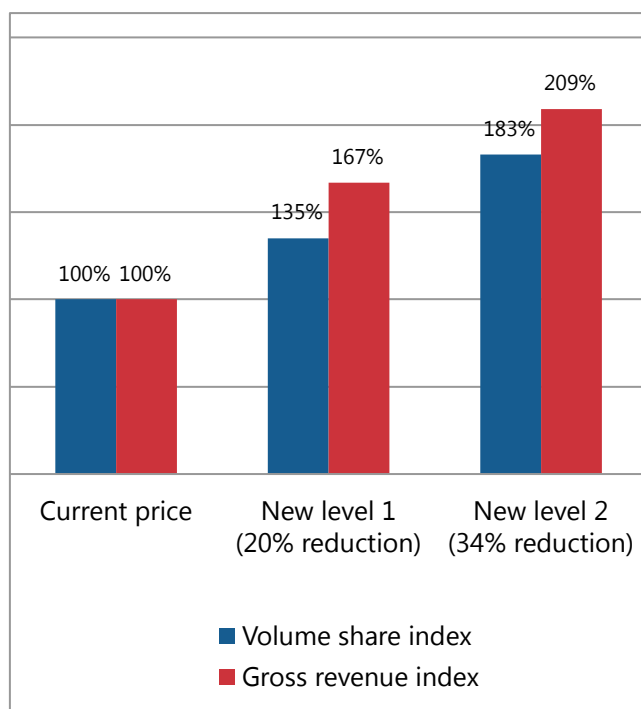


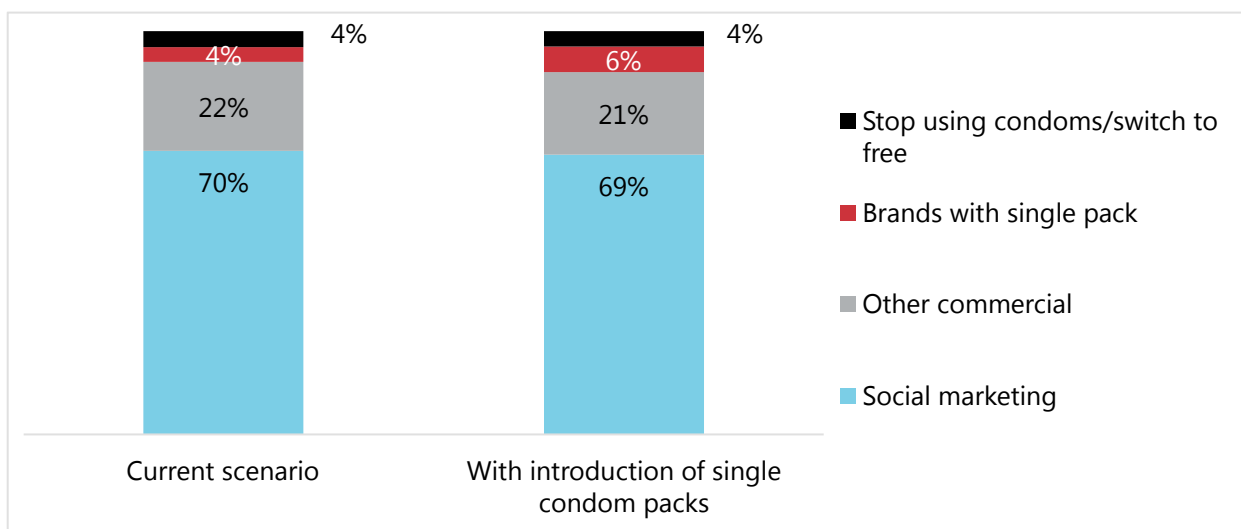
Figure 47. Volume and Gross Revenue of High-Priced Condom Segment Indexed to Current Scenario



Effect of Introducing a Single-Pack on the Priced Condom Market

Introducing a smaller pack size of commercial brand, as displayed in Figure 48, did not increase the share of the total commercial sector or the proportion who would opt for free condoms. In this case, three brands were tested for single-pack options at current prices per unit: Durex, Carex, and Contempo Midnight Black. AIDSFree's calculations showed that the specific selected brands would grow in volume share marginally (from 4% to 6%), but would be unlikely to witness significant increase in market value. Thus, this strategy meets only one of the three criteria outlined earlier in this section.

Figure 48. Introduction of Single Pack Sizes for Three Commercial Brands



Summary: Strategies to Increase Volume and Value of the Commercial Market

The AIDSFree research team concluded that, among the options tested, two merited consideration:

- Simulations showed that if all four SM brands were to increase their prices, the actions would have two substantial beneficial effects:
 - An increase in the volume share of the commercial sector, and consequently its value share
 - An increase in the value share of all four SM brands (achieving their highest levels at price level 3), despite a decrease in their sales volumes.
- Simulation also showed some benefits in high-priced brands reducing their price. Such an action would likely result in growth of these brands' sales volumes and market value. However, this action would not result in growth of the total commercial sector, since the growth in sales of high-priced commercial brands would come at the expense of mid- and low-priced commercial brands.

Discussion and Recommendations

In Nigeria, current supplies of free condoms exceed levels of utilization of free condoms. Men who use free condoms most often are willing to pay more for Gold Circle than the brand's current market price. However, the Nigeria DHS 2013 showed significant differentials in condom use by wealth and residence. Consequently, the possibility that these inequities exist due to low availability of free condoms cannot be ruled out without further investigation.

The Nigeria willingness-to-pay survey identified two strategies worthy of further consideration—increasing the price of all four SM brands, and reducing the price of high-priced brands.

- Men who use SM brands of condoms most often are willing to pay 40–90 percent more for Gold Circle than the brand's current market price. Simulations showed that if all the four SM brands increased their prices, the actions would have two substantial beneficial effects: increase in volume and value of the commercial market, and an increase in value of the SM brands despite a reduction in sales volumes.
- Simulation also showed some benefits in high-priced brands reducing their price. Such an action would likely result in growth of these brands' sales volumes and market value, though this would not result in growth of the total commercial sector.

Based on these findings, the AIDSFree research team recommends actions to graduate men from using SM brands to commercial brands through the following, and conducting further research:

1. **Examine reasons for high differentials in condom use by wealth and residence, and develop strategies to address this inequity in use.**

In Nigeria, there are high inequities in condom use by wealth and residence. Although the reasons for these inequities may not be due to low availability of free condoms, it is critical to conduct further research to clarify the reasons for the differences and enable development of appropriate, evidence-informed strategies.

2. Motivate SMOs to increase the price of their brands through evidence-informed advocacy.

In AIDSFree's modeling exercises, increasing prices of all SM brands was the only scenario in which the commercial sector's volume and value share increased. This scenario would not be expected to adversely affect condom use, and would shift consumers' price expectations to align with real market prices. Also, it would likely result in increased market value of the SM brands despite a decline in market volumes. Advocating for such a price increase could focus on the main benefits of this strategy: it would foster development of the commercial market and increase the funds available with SMOs to focus on (other) market failures.

3. Encourage commercial brands, particularly high-priced brands, to reduce prices.

The survey suggested that if high-priced commercial brands reduced their price, their volume sales and market value could substantially increase. Though such a strategy did not appear to affect the overall share of the commercial sector, it has strong potential to benefit the brands concerned.

South Africa

Market Overview

To provide a contextual overview to the South Africa condom market, the AIDSFree research team used secondary data sources and findings from the willingness-to-pay assessment.

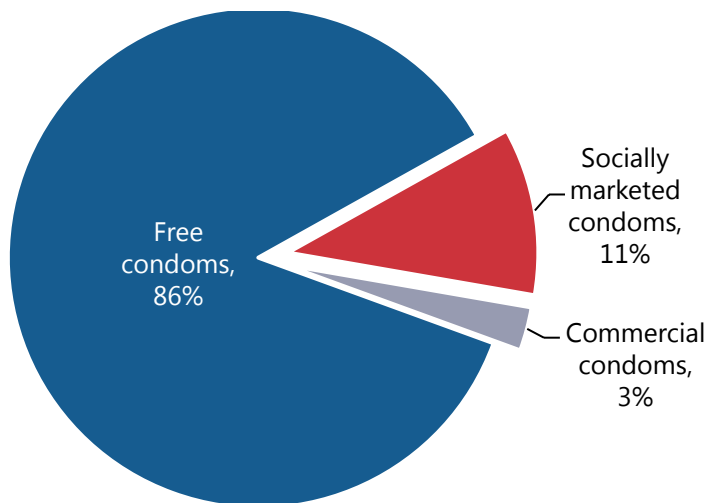
Supply of Condoms

In the other survey countries, the study team analyzed recent DHS data to supplement the willingness-to-pay assessment and provide insights into the share of condom use by source, wealth, and residence. This was not possible for South Africa because its last DHS was conducted in 2003 and was therefore not current enough to provide relevant comparators.² The supply of condoms, based on the 2016 AIDSFree assessment (Figure 49), is dominated by free condoms (86%). The researchers noted that this figure probably overestimate shares of free supplies due to stocks in pipeline and wastage, and recommend comparing it with data from the 2016 South Africa DHS 2016, when it is made publicly available. Such a comparison will yield a more reliable assessment of whether the levels of free supplies are appropriate.

² South Africa DHS 2016 datasets required for these analyses were not available as of February 2018 (<https://dhsprogram.com/What-We-Do/Survey-Search.cfm>; accessed 2/28/2018)

For the purposes of this assessment, the AIDSFree research team classified brands as SM or commercial on the basis of the organization that markets the brand, and the organization's mandate. Trust and Lovers Plus (marketed by Population Services International in South Africa) were classified as SM brands in this assessment, though both are reported to be marketed at full-cost recovery (i.e., the revenues from sales of these brands meet or exceed the total cost of sales, including commodity purchase, packaging, distribution, advertising and promotion, management overheads, and all applicable duties, levies, and taxes). SM brands and commercial brands account for 11 percent and 3 percent, respectively, of the condoms supplied in-country (Figure 49).

Figure 49. Percentage Share of Condom Volume Supplied by Sector

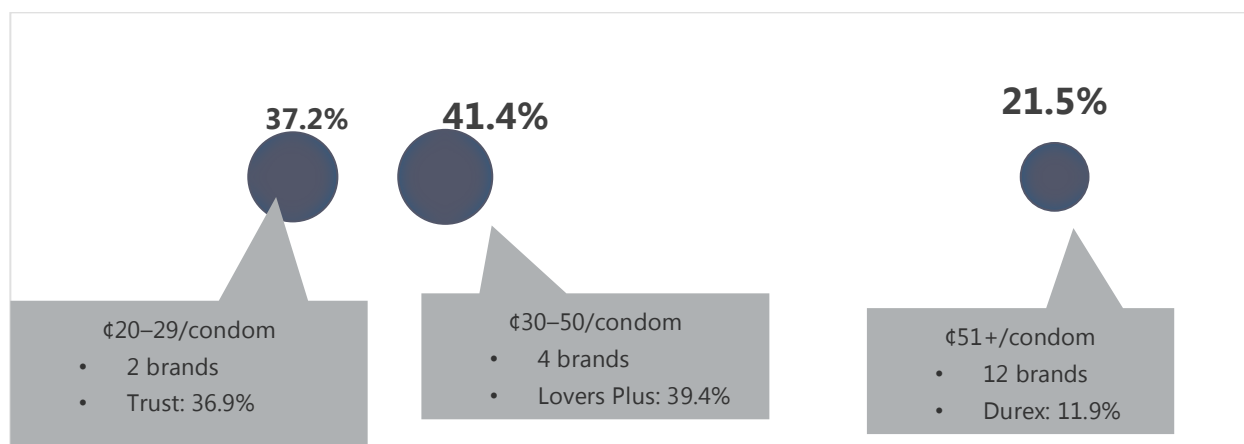


Source: 2016 South Africa Market assessment, AIDSFree Project.

Brands Available and Their Price

The South Africa condom market is diverse, with over 300 brand variants sold through retail outlets. To dig into brand volume and distribution further, AIDSFree interviewed several condom retailers and identified 18 popular brands across the country with a median price from \$0.21 to \$1.25 per condom (see Annex B for a full list of brands and median prices). Figure 50 shows the user share of these brands, sorted by price from least to most expensive. The priced condom market in South Africa is relatively split between price groups, indicating that the condom market is more developed than in other countries in the region. The absence of brands sold at under \$0.20 per condom reflects the absence of subsidized condom brands in South Africa.

Figure 50. User Share among Condoms that are Sold from WTP Survey



Demographic Characteristics of Survey Respondents

In South Africa, the AIDSFree research team interviewed 1,248 men as part of a willingness-to-pay survey. Since South Africa's DHS data were outdated, the study team assessed respondents' wealth using the South African Audience Research Foundation's Living Standards Measure (LSM). The sample (Table 6) shows that commercial brand users had a distinctly different profile from users of SM and free condoms in terms of living standard and residence. Surprisingly, profile differences between men who used free condoms versus SM condom users were not as distinct.

Table 6. Sociodemographic Characteristics of Willingness-to-Pay Survey Respondents in South Africa, Disaggregated by Condom Segment Used Most Often

	Use free condoms most often (%)	Use SM brand of condoms most often (%)	Use a commercial brand most often (%)
Age			
18 – 34 years	51	50	36
More than 34 years	49	50	64
Residence			
Metro	52	53	98
Other urban and rural	48	47	2
Wealth index			
LSM 1-4 (lowest)	13	11	-
LSM 5-6 (middle)	54	49	19
LSM 7-10 (highest)	33	40	81
Marital status			
Single	68	65	56
Married/living together	32	35	44
Total percent (unweighted N)	100% (503)	100% (492)	100% (253)

Other Contextual Parameters

Table 7 highlights three key contextual parameters relevant for the assessment:

- The absolute unit consumer price of the SM brand in country in US dollars, which provides an indication of whether the brand was likely to be subsidized. As noted earlier, the willingness-to-pay surveys did not examine the cost structure of SM condom brands in the assessment countries, and hence used the absolute unit price as a surrogate measure.
- The unit consumer price of the SM brand in country relative to the per capita GNI. This was a surrogate measure of the consumer price of the SM brand relative to the population's ability to pay.
- Trends in the number of SM condoms distributed in country. Significant declining trends would indicate disruption in supplies of SM brands.

Table 7. Parameters of Ability to Pay and SM Supplies

Parameter	Range ^	South Africa
<i>Reference SM condom brand</i>		<i>Trust</i>
Consumer price of reference SM condom brand per unit (\$)	0.05 - 0.22	0.22
Exchange rate	1 – 365	12
per capita GNI, PPP adjusted, current international \$, 2016	1,810 – 12,830	12,830
% change in per capita GNI (2016 vs. 2012)*	6% - 19%	6%
Consumer price per CYP** as a ratio of per capita GNI (%)*	0.10% - 0.77%	0.21%
Total sales units of SM condoms (Mn) ***	0.8 - 174.0	48.9
% change in total sales of SM condoms (2012 vs. 2016)	90% - 3%	70%

* per capita GNI, PPP adjusted, current international \$, 2016

** 1 CYP = 120 condoms

*** From *Contraceptive Social Marketing Statistics*, published by DKT (available at <https://www.dktinternational.org/contraceptive-social-marketing-statistics/>)

^ in countries included in this assessment

The table shows that Trust—a lower-priced SM brand in South Africa—is the highest-priced SM condom among countries included in this assessment in terms of absolute value. However, Trust's price relative to the average ability to pay is low relative to the other countries.

Based on the absolute value of the price, the researchers expected that Trust was being marketed at close to or above full-cost recovery. Based on the price relative to ability to pay, they expected that increasing the price of the SM brand might not cause a decline in condom use.

The researchers noted that sales of SM condoms in South Africa declined to 70 percent of their value in 2012, possibly as a result of price increases the brand may have instituted to move toward full-cost recovery.

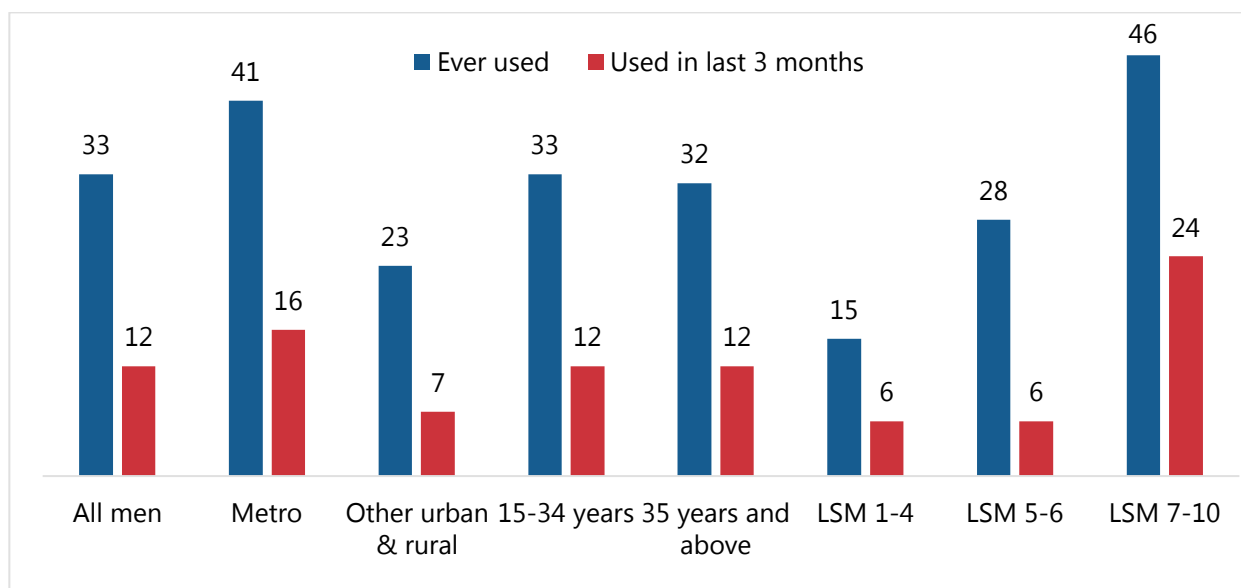
Men Who Use Free Condoms Most Often

This section focuses on the following question: if the supply of free condoms were reduced/restricted, would people who currently use free condoms purchase priced condoms or discontinue using condoms? Thus, all data and analyses presented in this section focus only on those who reported using free condoms most often.

Prior Use of Priced Condoms

Users of free condoms in South Africa did not use them exclusively; one-third reported using a priced condom before, and 12 percent had done so in the three months preceding the survey (Figure 51). For South African men who used free condoms most often, whether they had used a priced condom in the past differed greatly, depending on residence and LSM tier. Overall, only about one-third had used a priced condom in the past, and only 12 percent within the last three months. When disaggregated by LSM, almost half of those in the upper tiers had used a price condom before, compared to only 15 percent from lower LSM tiers. Similar, albeit less dramatic, differences existed in users of urban/rural residence: 41 percent from the metro area had used a priced condom before, compared to just 23 percent for users from other urban and rural areas. Thus, one-third of men who used free condoms most often demonstrated a willingness and ability to pay for condoms, and willingness varied greatly by LSM and residence.

Figure 51. Users of Free Condoms Who Have Ever Used, and Used in the Last Three Months, a Priced Condom, Disaggregated by Residence, Age, and Wealth Quintile (%)



Over 20 percent of men who used free condoms reported using Trust or Lovers Plus before, but only 5 percent had used Durex (Figure 52). Similarly, 65 percent of users of free condoms were aware of Trust and Lovers Plus, while 39 percent were aware of Durex. Fewer than 20 percent were aware of any other brand (Figure 53). The strong differential by residence and brand suggests that other drivers besides price, such as availability and appeal, in addition to price, affect the type of condom used.

Figure 52. Priced Brands Ever Used and Used in Last 3 Months

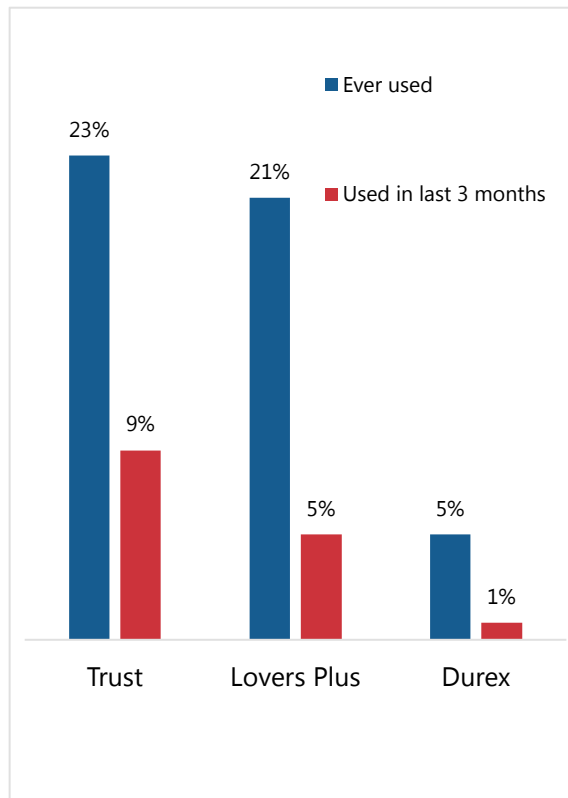
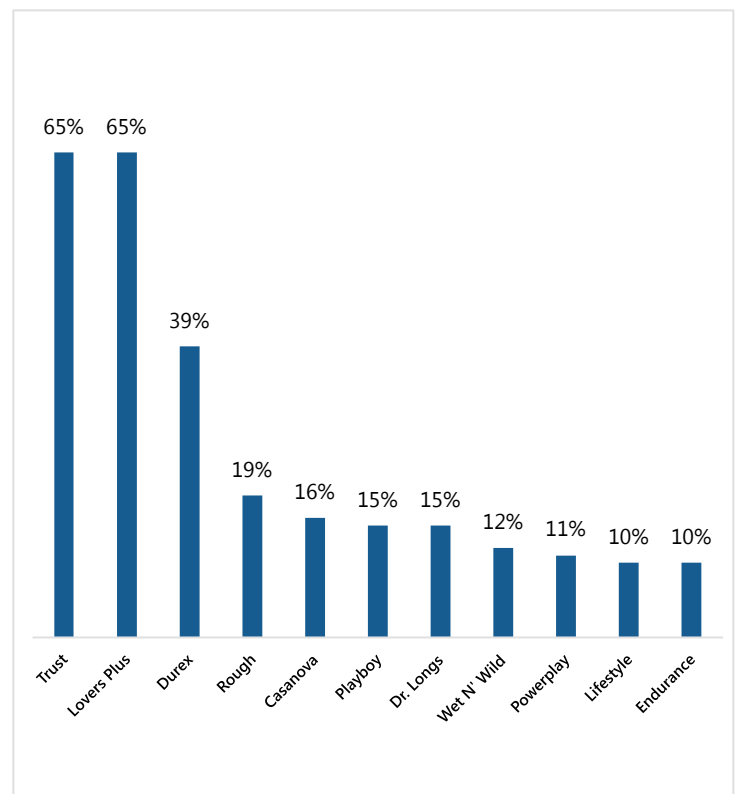


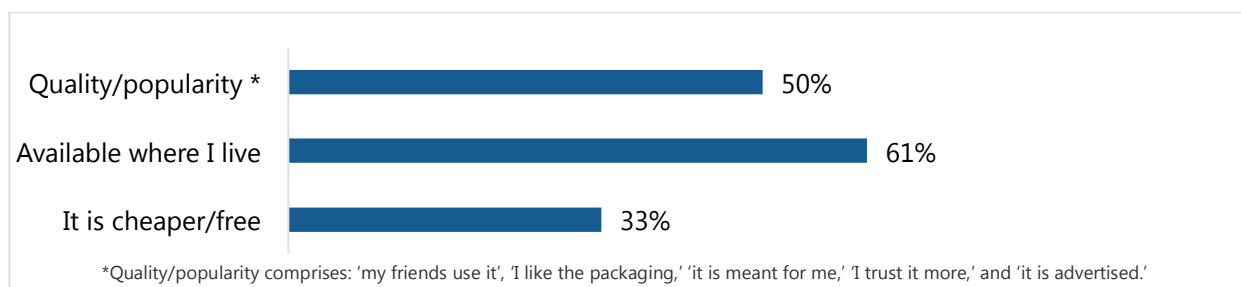
Figure 53. Priced Brands that Users of Free Condoms Had Heard of or Seen



Reasons for Using Free Condoms Most Often

When men were asked why they used free condoms most often, only one-third mentioned low or no cost. Over three-fifths cited availability near where they live (Figure 54), and 50 percent cited quality or the popularity of free condoms as their reason. These results again suggest that cost may not be the main driver of use of free condoms.

Figure 54. Reason(s) for Choosing Condom Type



Willingness to Pay

Figure 55 presents actions that users of free condom would take if free condoms were unavailable at their typical source. Compared to other countries included in the assessment, fewer men who used free condoms reported a willingness to purchase condoms in South Africa during direct questioning. Overall, only about one-third of men reported a willingness to purchase condoms from a nearby store, and 64 percent said that they would go to another location where free condoms are usually available (i.e., 94% would continue using condoms). Four percent said they would stop using condoms, and another 2 percent said that they would stop having sex. This was a surprising finding, since South Africa has a higher per capita GNI than other countries included in the assessment, so South African men would be expected to have a greater ability to pay. Examining disaggregates by wealth and residence did not reveal additional insights; during direct questioning, only one-third of men (similar to overall levels) belonging to the highest LSM or living in metro areas reported willingness to purchase condoms.

To understand their reported willingness to pay, the research team examined those who said that they would continue to use condoms if free supplies were restricted. Among this group, 74 percent

Figure 55. Alternative Choices for Free Condoms

If free condoms were not available from your source; what would you do?

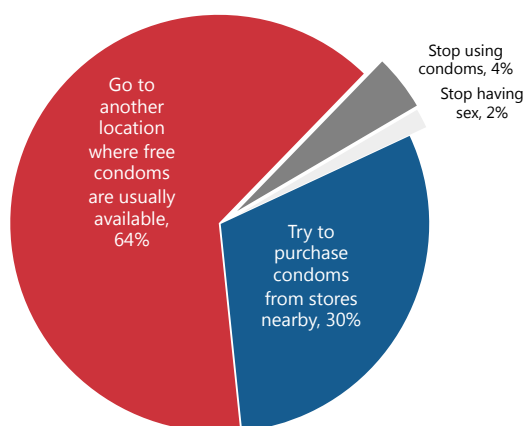
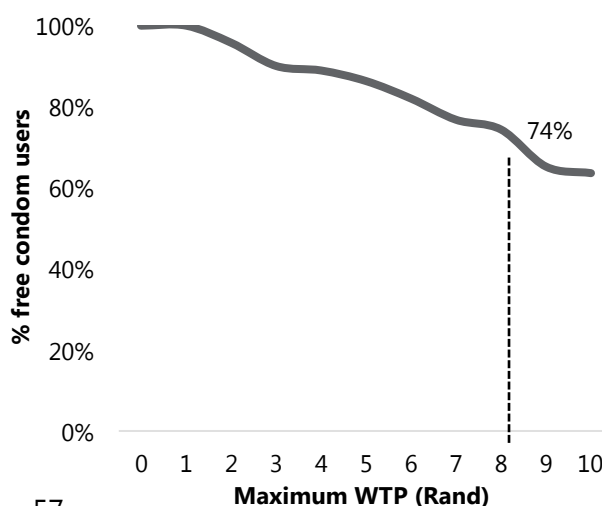


Figure 56. User Willingness to Pay for Trust

What is the maximum amount you would be willing to pay for a pack of 3 Trust condoms?



would be willing to pay the current market price of Trust (Figure 56). These numbers suggest that the responses of men who use free condoms may be driven more by expectations that free condoms will be consistently and widely available, rather than unwillingness to pay for condoms if they were not so easily available.

The AIDSFree team used the Van Westendorp PSM to estimate consumer willingness to pay for condoms based on perceived values of condom brands. Figure 57 presents two curves: a price below which Trust would be considered too cheap and perhaps of suspect quality (red) and a price above which it would be considered too expensive to buy regardless of its perceived quality (gray). The intersection of the two lines is the optimal price, being the point at which the fewest number of respondents reject the brand for either reason. The survey found that the optimal price for Trust among users of free condoms was 14 rand. This price was rejected by 22 percent of free condom users.

The curves in Figure 58 represent the price below which most users would accept the brand as “not expensive” (gray) and the price above which users would accept the brand as “not a bargain” or above the minimum expected price (light blue). The intersection, referred to as the indifference price, was 14 South African rand, a price that 67 percent of users would accept. Applying both curves together, one can see that users of free condoms were willing to pay up to 14 rand for a 3-pack of Trust, 75 percent more than the current market price.

Figure 57. Optimal Price for Trust among Users of Free Condoms

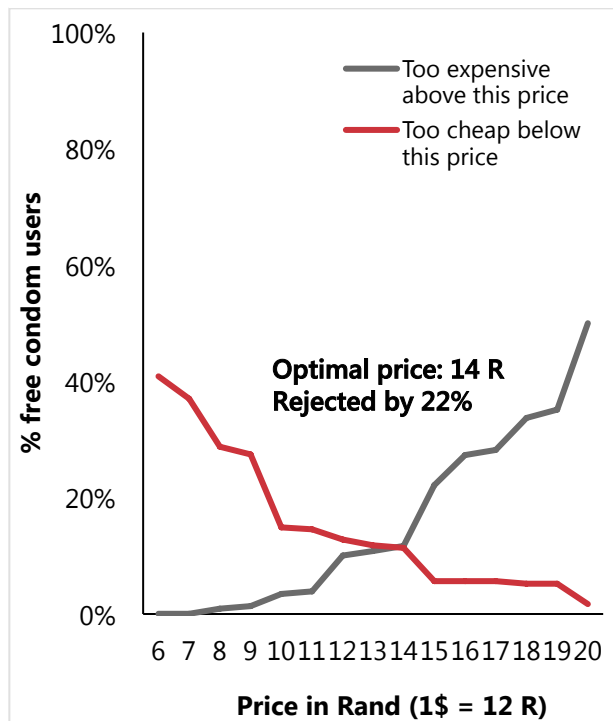
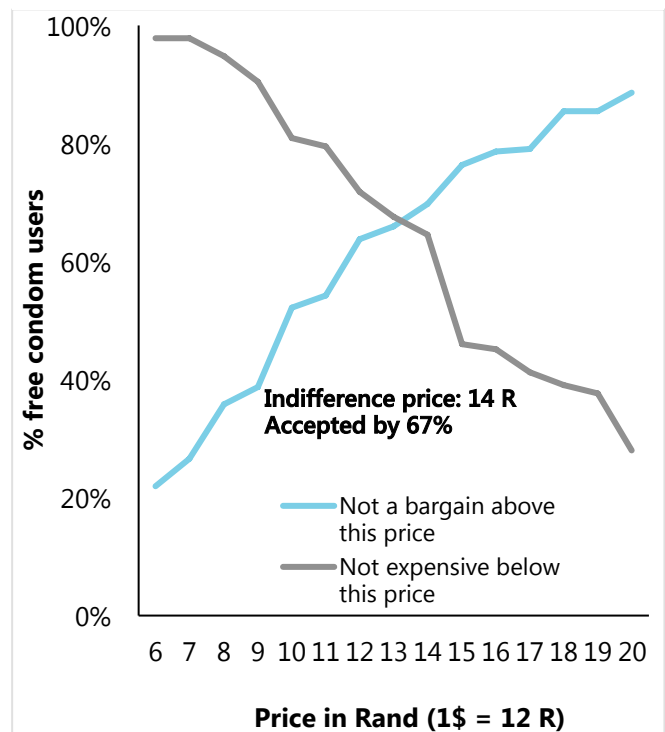


Figure 58. Indifference Price for Trust among Users of Free Condoms



Summary: Men Who Use Free Condoms Most Often

The AIDSFree research team concluded that there would be a low risk of decline in condom use if supplies of free condoms were restricted, as long as Trust continues to be easily available and sold to customers at its current market price or up to 14 rand. This conclusion is based on the following:

- The Van Westendorp PSM approach showed that men who use free condoms were willing to pay up to 14 rand for a 3-pack of Trust condoms. The higher estimates obtained through the Van Westendorp PSM approach (in comparison to the direct questioning approach) are consistent with per capita GNI levels of South Africa, and with respondents' reported reasons for using free condoms. This finding suggests that users rely on free condoms because of their positive perceptions of the product quality and an expectation of easy and consistent access to free condoms, rather than an unwillingness to pay for condoms.
- AIDSFree was not able to assess the use of free condoms relative to the quantities of free condoms distributed, and recommends making this comparative assessment when South Africa's DHS data become available, to further inform decisions on altering supplies of free condoms.

Men Who Use SM Brand(s) of Condoms Most Often

This section examines the following question: if the price of SM brand(s) of condoms were increased, would those who use these condoms discontinue using condoms, or would they switch to other condom brands? Thus, all data and analyses in this section focus only on those who reported using a SM brand of condoms (i.e., Trust or Lovers Plus) most often.

Prior Use of Commercial Brands of Condoms

Only 17 percent of SM condom users in South Africa reported ever using a commercial brand, 5 percent in the three months preceding the survey (Figure 59). Of priced condom brands, including SM and commercial options, SM users displayed a loyalty to their segment (Figure 60). Trust and Lovers Plus dominated brands used by those who use SM brands most often: 68 percent had ever used Trust, and 63 percent had ever used Lovers Plus. Only 11 percent of these men or fewer purchased commercial brands such as Rough Rider, Durex, and Casanova.

Figure 59. Past Use of Commercial Brands by SM Brand Users

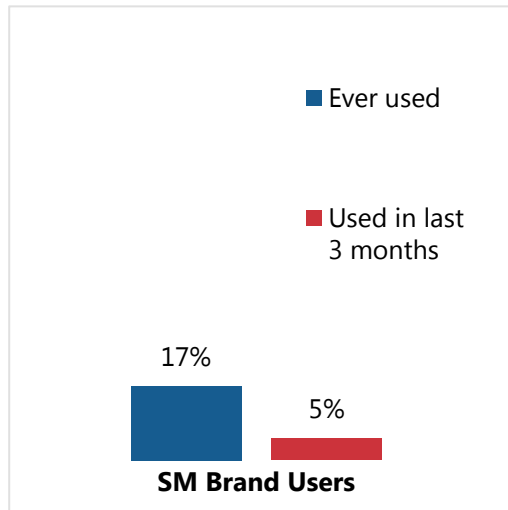
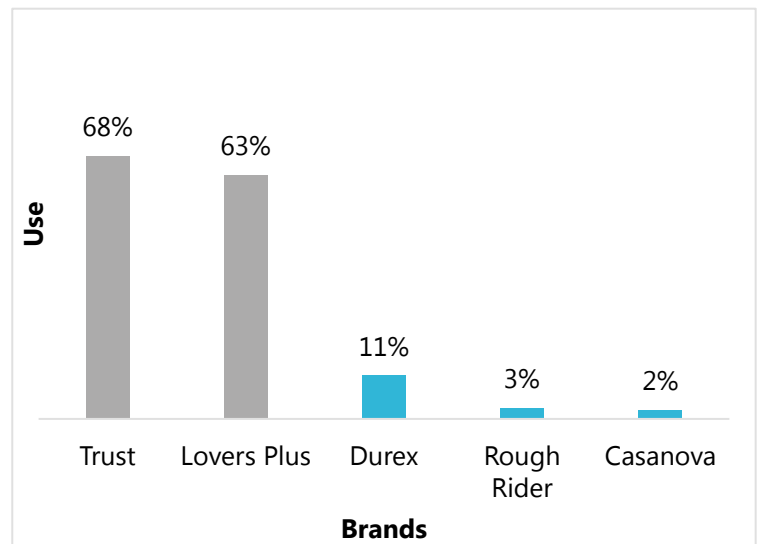


Figure 60. Brands Ever Used by SM Brand Users



Willingness to Pay

Figures 61 and 62 show that when the same Van Westendorp PSM approach was applied to assess willingness to pay for a 3-pack of Trust in this group, it showed that users of SM condoms were willing to pay 60–75 percent more than the current market price. This suggests considerable room for price increases. Note that these findings do not speak directly to whether users of Trust condoms would continue using the same brand or switch to other priced condoms when these options are available.

Figure 61. SM Users' Optimal Price for Trust

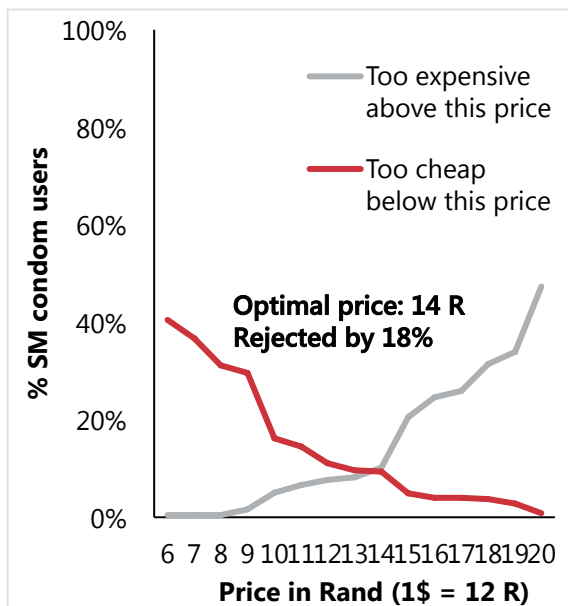
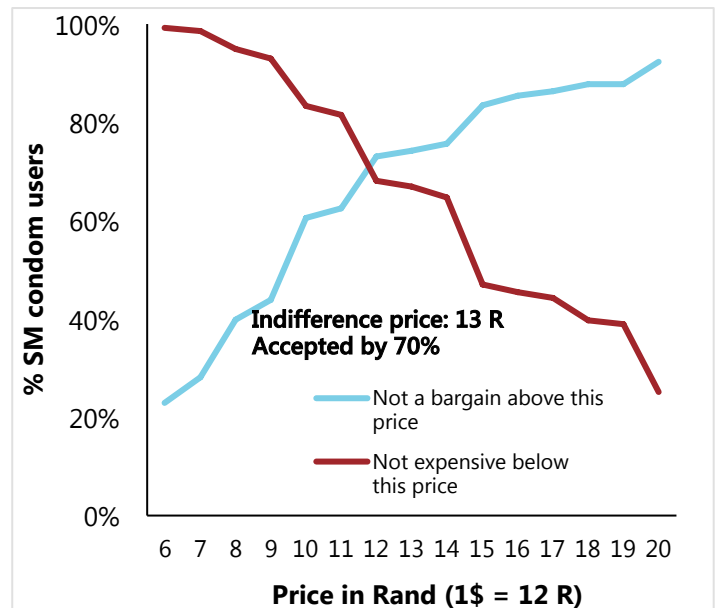


Figure 62. SM Users' Indifference Price for Trust

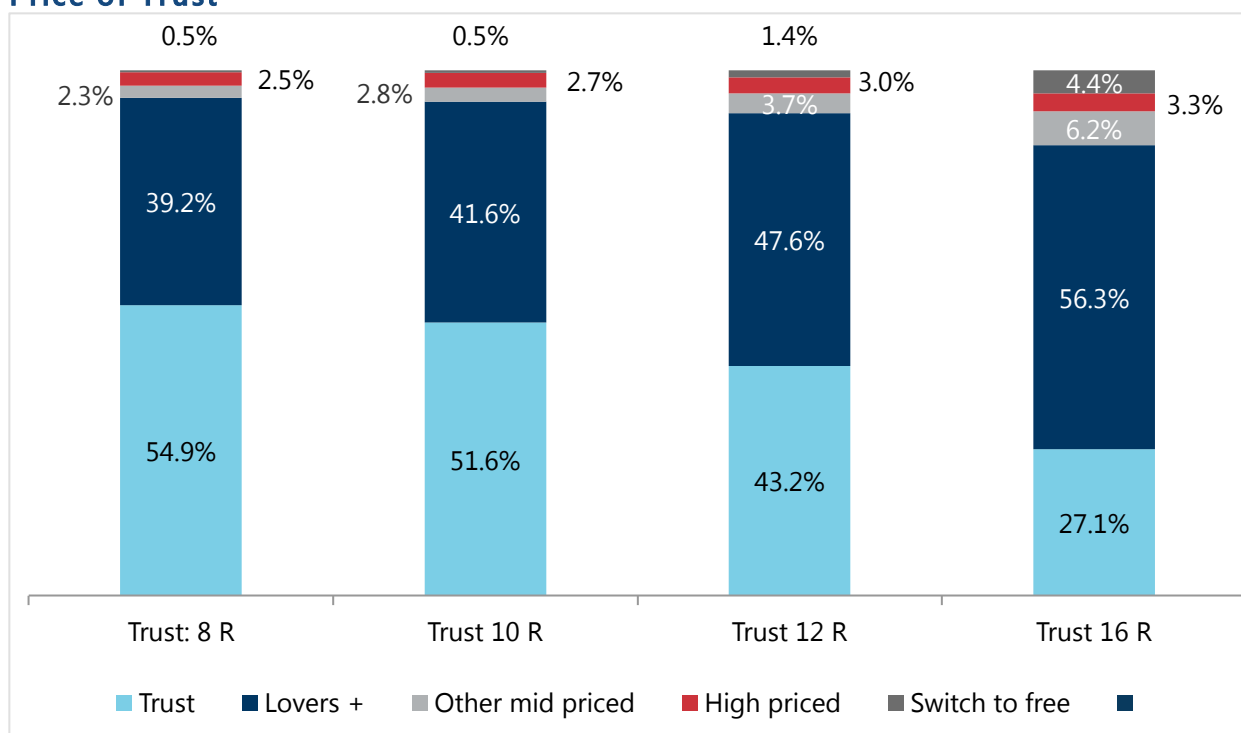


Price Sensitivity

Examining the broader question of what men who use SM brands of condoms most often would do if the price of their brand was increased when they have multiple options requires assessing price sensitivity. The AIDSFree research team used the discrete choice model, as described earlier. As noted, this method assumes that all respondents are aware of all brands in the market; and that all brands are available in all outlets.

Figure 63 shows simulated consumer purchase preferences at different prices by increasing the price of Trust in three steps. In each of these simulations it is assumed that the prices of all other brands remain the same. The findings showed that if the consumer price of Trust increased up to 14 rand, users of Trust condoms would likely switch over to Lovers Plus condoms, with minimal risk of people discontinuing condom use or opting to use free condoms.

Figure 63. Simulated Effect on SM User Purchase Preferences with Increases in Price of Trust



Summary: Men Who Use SM Brands of Condoms Most Often

The AIDSFree team concluded there would be a low risk of decline in condom use if Trust were to increase its price. However, the rationale for increasing the price was mixed. These conclusions were based on the following:

- The price of Trust is the highest-priced SM brand among those included in the assessment, and was reported to be marketed at full-cost recovery. The same rationale applied to Lovers Plus, which is marketed at a higher price than Trust. Thus, financial self-reliance could not be a motive for the price increase.

- At the same time, those who use SM condoms most often ascribed a value to Trust condoms (the lowest-priced condom in the market) that was 75 percent more than its current market price. Simulations suggested that if the price of Trust condoms increased by as much as 100 percent, condom use would not decline.

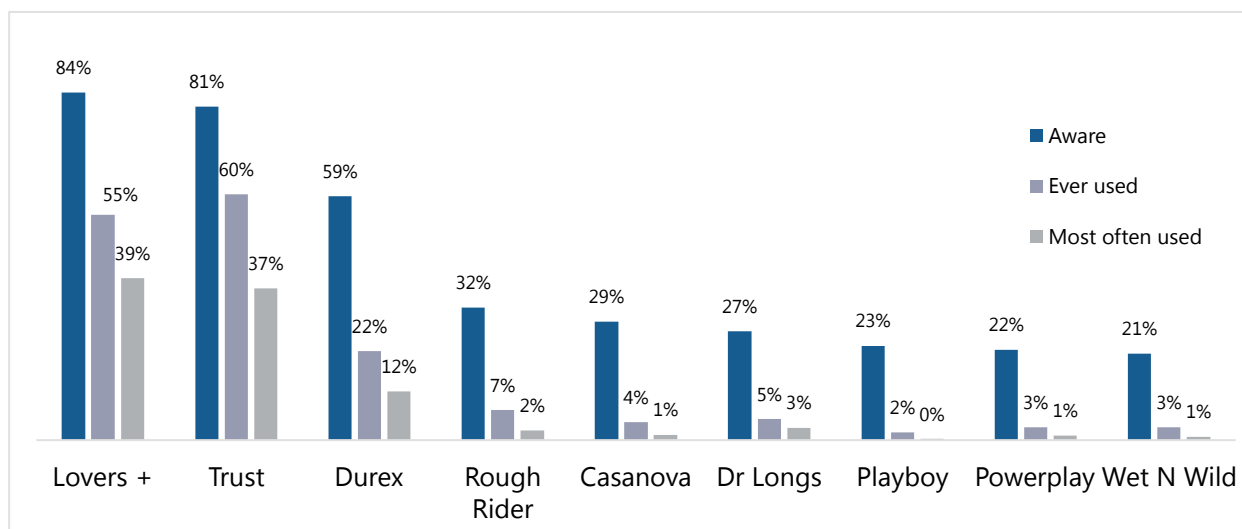
Strategies to Increase Volume and Value Share of Commercial Sector

This section examines which actions or scenarios would be likely to increase volume and value share of the commercial sector for condoms. The research modeled the outcomes of three scenarios:

- Increasing the price of SM brands
- Reducing the price of commercial brands
- Introducing smaller packaging units of commercial brands

The AIDSFree team defined the commercial sector for condoms as the sum total of all condom brands being marketed by for-profit organizations in country, i.e., all priced brands, excluding those

Figure 64. Awareness and Use of Leading Priced Brands



marketed by SMOs. Since a growth in the commercial sector is most likely to come from motivating those who use SM condoms to use commercially marketed condoms, all analyses in this section focused on those who reported using either an SM condom brand or a commercial brand most often (and thus excluded those who used free condoms most often).

For each of the strategies tested, the team researched the outcomes in terms of three criteria:

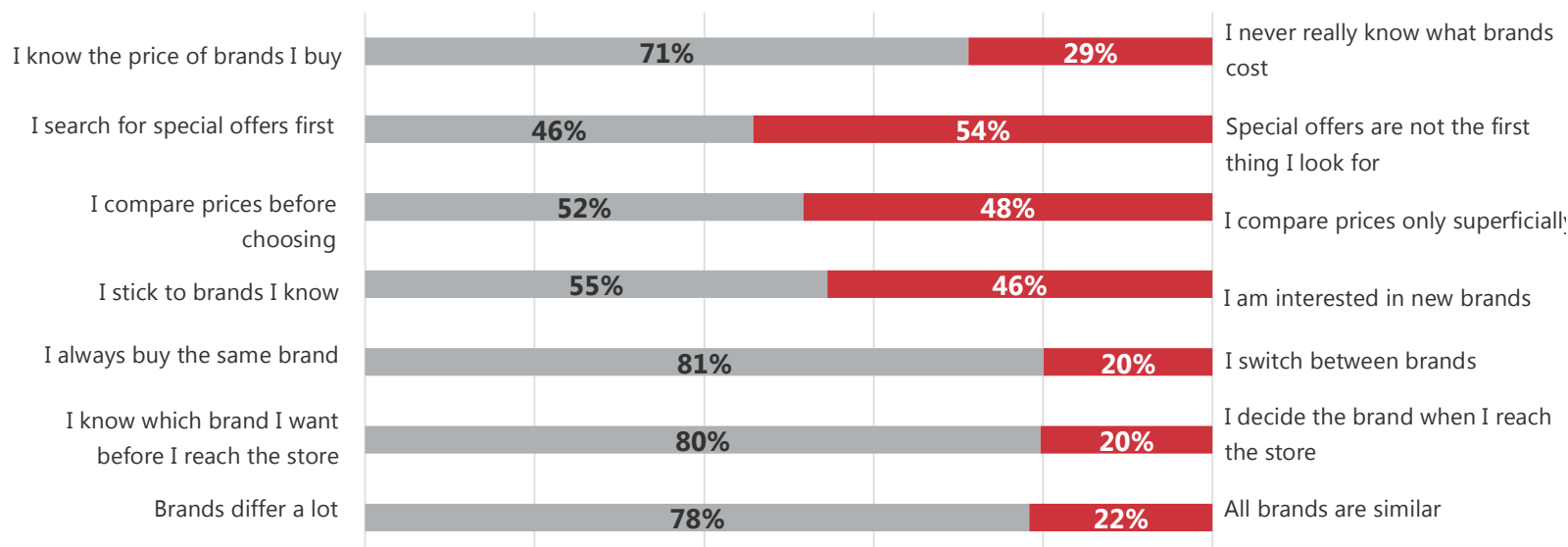
1. *Improved market sustainability*: a substantial increase in the volume of the total commercial sector
2. *Low risk to public health outcomes*: no more than a marginal increase in the proportion who would opt for free condoms

3. *Market-driven rationale for the brand(s) concerned to undertake the strategy:* a substantial increase in either its market volume or market value without a more than a marginal decline on the other (either market value or market volume)

Overview of the Priced Condom Market

Among South African men who use priced condoms most often, including SM and commercial brands, Lovers Plus and Trust, with Durex close behind (Figure 64) were leading brands in terms of awareness and use. Lovers Plus had the highest level of awareness (84%) and most often use (39%), and third-highest ever-use (55%). Trust had the second largest number of users in all three categories (81%, 37%, and 60%, respectively). More men were aware of and used commercial condom brands in comparison to other countries included in the assessment. In South Africa, 22 percent ever used Durex, and only 12 percent used Durex most often.

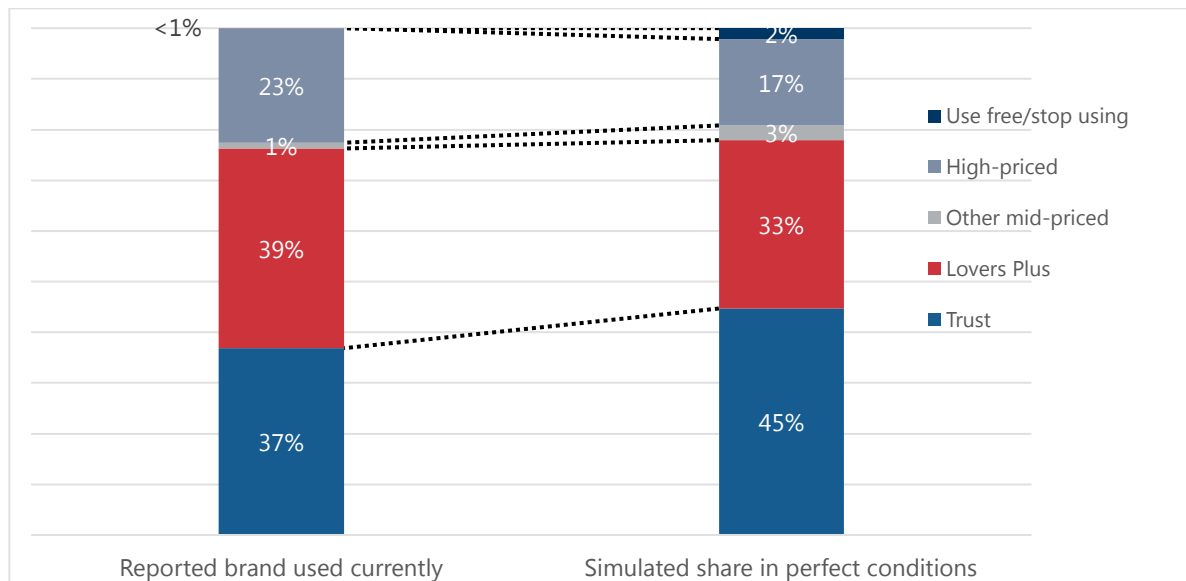
Figure 65. Purchase Attitudes of Priced Condom Users on Condom Choice



The researchers determined attitudes toward purchasing condom brands by asking respondents to choose between various pairs of statements. Figure 65 shows that most condom buyers considered themselves value-oriented in their condom purchase habits (i.e., price-aware and brand-loyal rather than price-oriented). The first statement relates to price awareness, and shows that well over half of respondents (71%) felt that they were aware of brand prices. The second group of statements describe price sensitivity (price consciousness and a propensity to hunt for deals). Only about half the respondents reported being price-oriented in their brand choice. The third group of statements relates to brand loyalty. Eighty percent of respondents were brand-loyal, stating that they always bought the same brand, knew the brand they want before reaching an establishment, and felt that brands differ a lot.

The stacked bars in Figure 66 compare reported brand used (in direct questioning) against a simulated output from the discrete choice model. The comparison provides insights into how improved availability and awareness could affect brand shares. Under the “perfect” conditions assumed in the discrete choice model, Trust would gain market share at the expense of Lovers Plus and other high-priced brands, growing from 37 percent to 45 percent of the market. Other mid-priced brands did not gain substantially (growing from 1% to 3% of the market), and high-priced brands dropped from 23 percent to 17 percent. In other words, Trust appeared to be hindered by distribution gaps (as noted previously, awareness of Trust was high).

Figure 66. Comparison of Condom Market Share under Current Conditions versus Simulation Where Respondents Are Aware of All Brands and Prices



Effect of Increase in Price of Trust on the Priced Condom Market

Figure 67 continues to explore pricing scenarios by increasing the price of Trust by three levels. The share of Lovers Plus increases from 33 percent of the market at current prices to 47 percent of the market when Trust is doubled. This occurs at the expense of Trust, whose share of the market drops from 45 percent to 22 percent in the same scenarios. Expectedly, as Trust prices increase, the volume of men not using condoms shows only a marginal increase. The overall effect on the volume share of the commercial market is an increase of 4 percent (from 20% when Trust is sold to customers at 8 rand to 24% when Trust is sold at 16 rand).

As noted in the section on users of SM brands of condoms, the rationale for recommending an increase in price of Trust condoms is constrained because it is not subsidized through donor funds. Therefore, AIDSFree examined whether the marketer would benefit from a price increase in terms of increased market value. Figure 68 shows that increasing the price of Trust would result in increased market value of the Trust and Lovers Plus brands, with only a marginal decline in market volumes of these brands. Thus, increasing the price of Trust condoms meets the criteria outlined earlier in this section.

Figure 67. Impact on Total Priced Market if Prices of SM Brands Were Increased

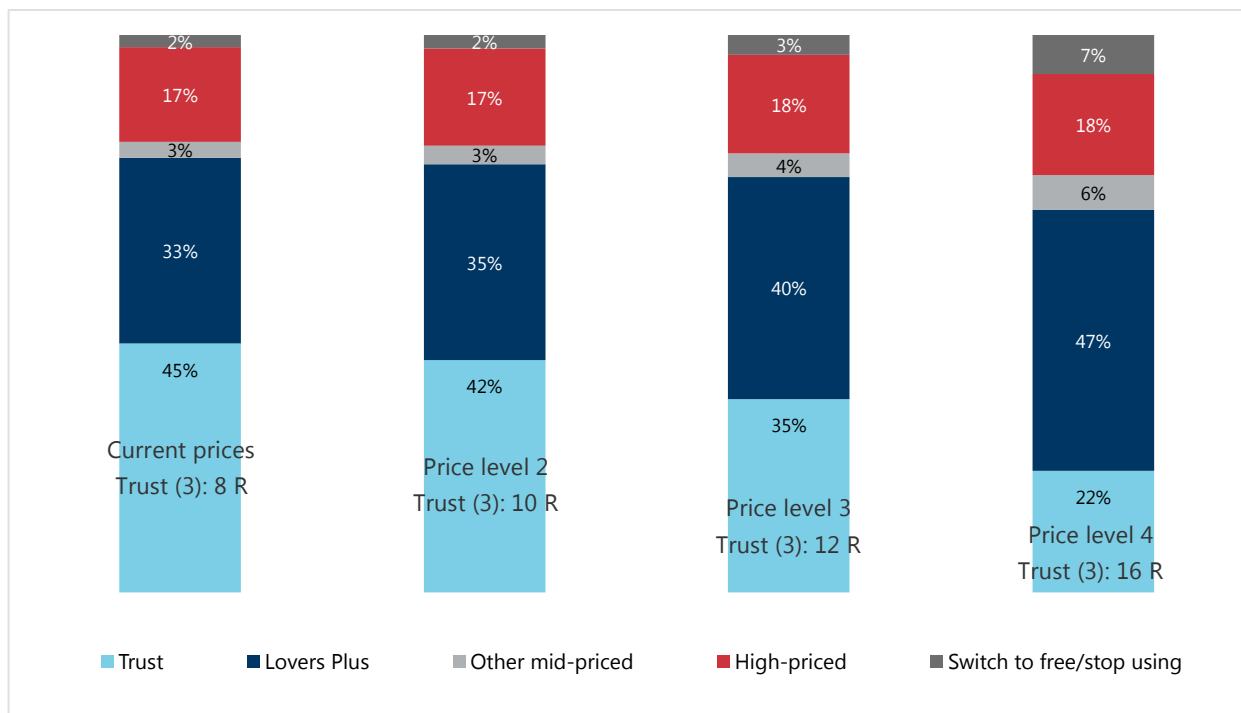
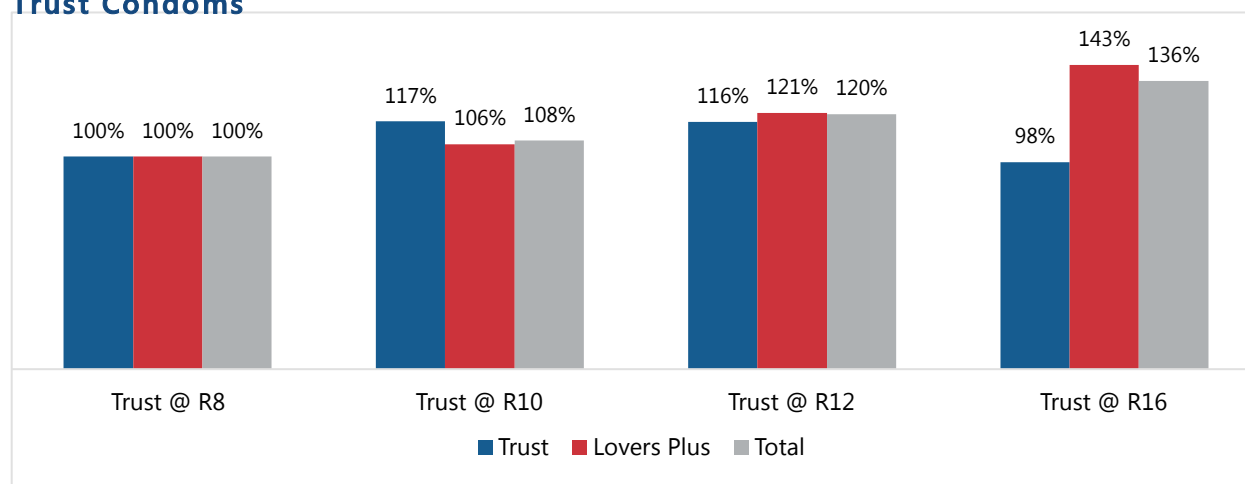


Figure 68. Indexed Market Value of Trust and Lovers Plus at Different Prices of Trust Condoms



Effect of Decrease in Price of High-Priced Commercial Brands on the Priced Condom Market

Figure 69 demonstrates how the share of condom segments would change when high-priced commercial brands went down in price. A reduction would likely result in growth in the overall share of the total commercial sector (from 20% to 31%). With a 47 percent price reduction, the share of high-priced condoms increased from 17 percent to 29 percent of the total priced market, attracting users from Lovers Plus and Trust. However, Figure 70 demonstrates that although the high-priced commercial segment would close to double their market volume (172%), they would be expected to lose gross revenue (94%). Consequently, the overall market value of the commercial sector would be expected to decline. Thus, this strategy does not meet the criteria laid out earlier in the section.

Figure 69. Share of Condom Segments with Price Reduction in High-Priced Condoms

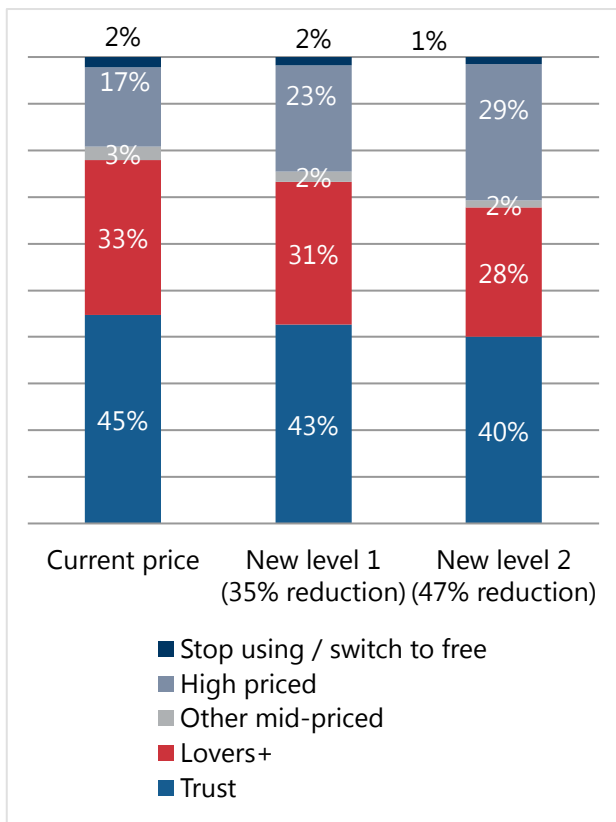
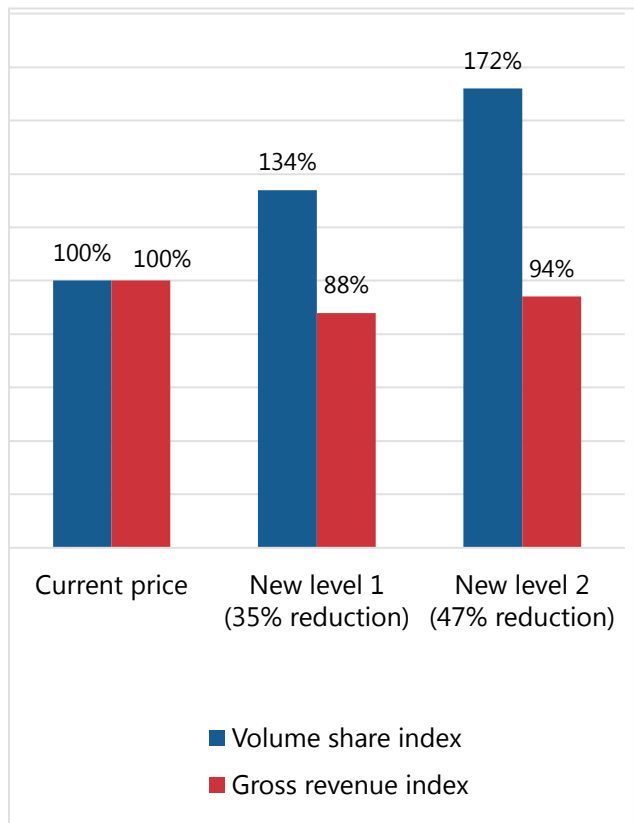


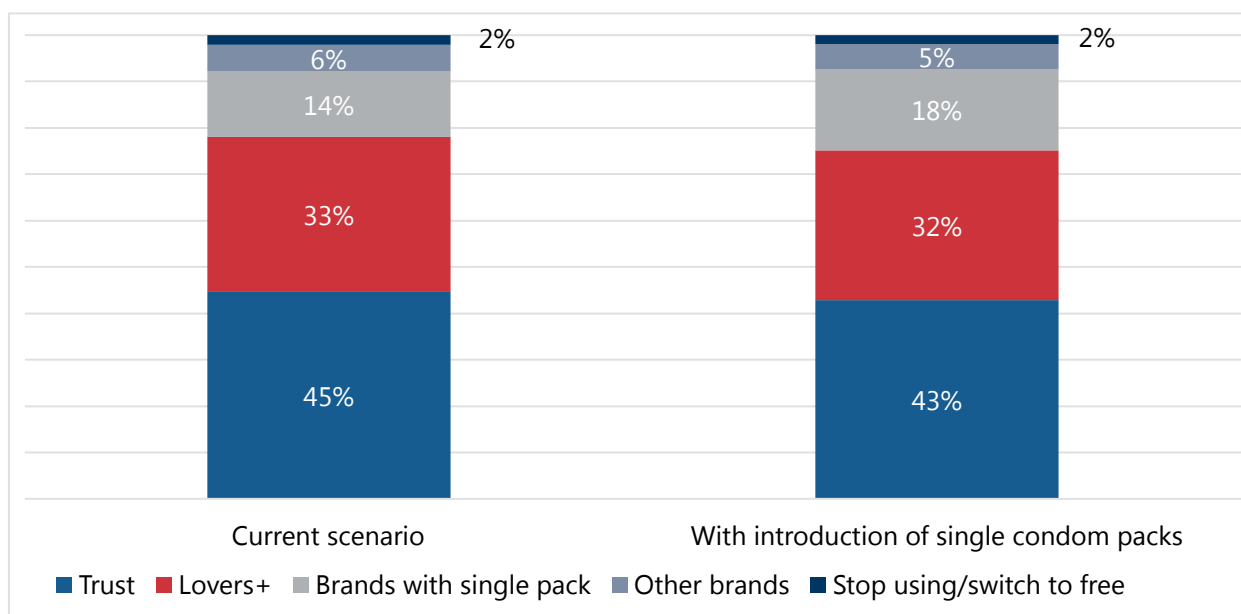
Figure 70. Volume and Gross Revenue of High-Priced Condom Segment Indexed to Current Scenario



Effect of Introducing a Single Pack on the Priced Condom Market

If a smaller pack size of commercial brand were introduced, as modeled in Figure 71, the share of the overall commercial sector brands (brands other than Trust and Lovers Plus) would see a slight growth (by 3%). The three brands that were tested for single pack options (Durex, Carex, and Contempo Midnight Black) would grow in share from 14 percent to 18 percent. In this case, all other brands seemed to be equally affected by the smaller pack option. Like the marginal growth in volume share, the value share would grow only marginally. Thus, this strategy does not meet the criteria laid out earlier in the section.

Figure 71. Introduction of Single Pack Sizes for Three Commercial Brands



Summary: Strategies to Increase Volume and Value of the Commercial Market

The AIDSFree research team concluded that none of the actions examined increased both the volume and value share of the commercial sector (all brands excluding Trust and Lovers Plus condoms) substantially. However increasing the price of Trust seemed to have most positive effects for the following reasons:

- All of the strategies examined in this assessment showed potential for only marginal gains in volume of the total commercial sector, or an increase in volume at the expense of decreased market value.
- If the price of a 3-pack of Trust condoms increased up to 12 rand, it would not increase the volume and value of the commercial condom market; but it would increase the market value of the SM brands and the total condom market, with only a marginal decline in volume sales of SM brands. Further, as noted above, a price of 12 rand for 3-pack of Trust was within the acceptable price range of men who most often used free and SM condoms.

Discussion and Recommendations

The South Africa willingness-to-pay survey showed that users of free or SM condoms would pay up to 14 rand for a 3-pack of Trust condoms, without risking decreased condom use. Strategies to increase volume and value for commercial brands yielded only volume gains, but decreased market value. Increasing the price of a 3-pack of Trust condoms up to 12 rand (an acceptable price for SM condom users) did not increase the volume and value of the commercial condom market, but did increase the market value of SM brands and the total condom market, with only a marginal decline in SM brand volume sales.

The team could not determine if the current supplies of free condoms aligned with their use, since 2016 DHS findings were not available for South Africa. Examining those data when they become available will provide important insights into required supplies of free condoms.

Based on these findings, the AIDSFree research team recommends actions to graduate men from using free condoms to using priced condoms, while simultaneously increasing the market value of the priced condom market through the following:

1. **Analyze DHS 2016 data on source of condoms used to align levels of supply and use of free condoms.**

In all other countries included in the assessment, AIDSFree found that the supply of free condoms exceeded demand for and use of these condoms, but 2016 DHS findings were not available for South Africa during the study. Examining those data will help reveal the share of users who accessed free condoms and whether there is an excess of free supplies. Aligning levels of free supplies to the levels of use is the lowest-risk strategy, and therefore should be a priority.

2. **Restrict free supplies further, in phases, with close monitoring.**

AIDSFree's analyses suggest that free condom users would be willing to pay up to 14 rand for a 3-pack of condoms. However, the market expectations in South Africa—that free supplies will be consistently and widely available—seems to drive use of these condoms, as willingness to pay exists. Restricting supplies in urban and higher-income areas can test this expectation to see if users switch to priced condoms. Restricting free supplies would help change market expectations, and grow sales of SM and commercial brands. To implement a phased reduction in free supplies, donors should collaborate with all actors to ensure a cohesive approach.

3. **Provide evidence from this assessment to motivate marketers of Trust and Lovers Plus to increase the price of Trust in increments.**

AIDSFree's assessment suggests that the combined sales volume of Trust and Lovers Plus would be maintained even if the price of Trust increased to 12 rand. Such an increase would likely result in significant increase in revenues, which would the marketers of these brands to invest more resources in (other) market failures.

Zambia

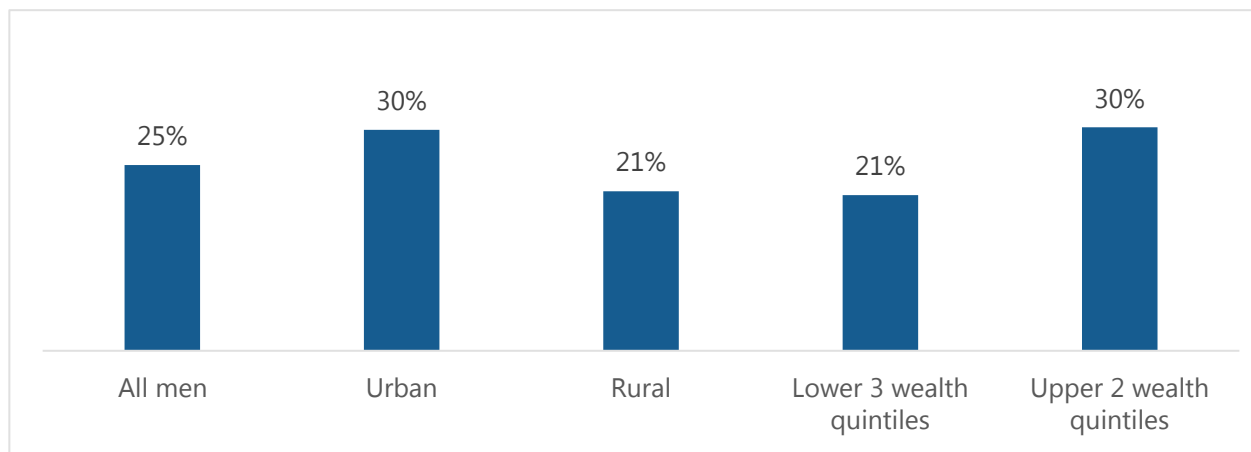
Market Overview

To provide a contextual overview to the Zambia condom market, the AIDSFree research team used secondary data sources and findings from the willingness to pay assessment.

Condom Use Differentials

To complement the willingness-to-pay survey findings, the AIDSFree research team analyzed condom use reported by men in the Zambia DHS 2013–2014. The analysis examined men’s self-reported condom use with their last sexual partner (irrespective of partner type), and was disaggregated by wealth quintile and residence (urban or rural). Figure 72 shows some degree of inequities in condom use. Twenty-one percent of both rural users and users in the lower quintiles used condoms with their last sexual partner, compared to 30 percent in both the urban and upper quintile user groups. This could be influenced by many factors, such as condom availability and price, user awareness, or differences in coverage of behavior change initiatives among population subgroups. The next section will examine price as a factor in the Zambian condom market.

Figure 72. Percentage of Men Reporting Condom Use with Most Recent Partner, Disaggregated by Select Demographic Characteristics, Zambia DHS 2013–2014

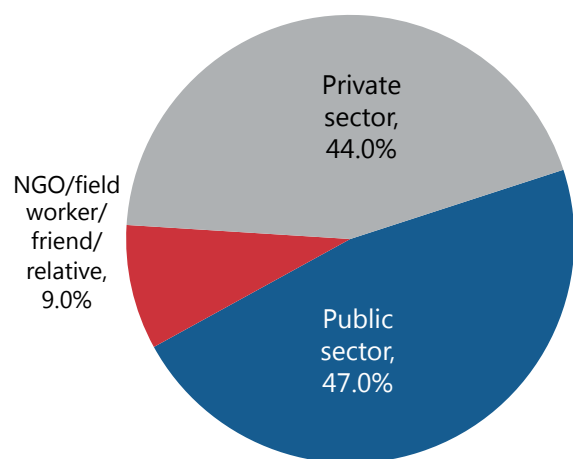


Utilization and Supply of Condoms

To estimate use of condoms from public- and private-sector sources, AIDSFree examined where men who reported using a condom with their most recent partner obtained the condom from, according to the Zambia DHS 2013–14. Figure 73 shows that 44 percent of men reported obtaining the condom from a private-sector source such as pharmacy, shop, or kiosk (see Annex B for details), 47 percent from a public-sector source, and 9 percent from an FBO, NGO, or field worker. Assuming that condoms obtained from FBOs, NGOs, and field workers were free, 56 percent of users obtained free condoms.

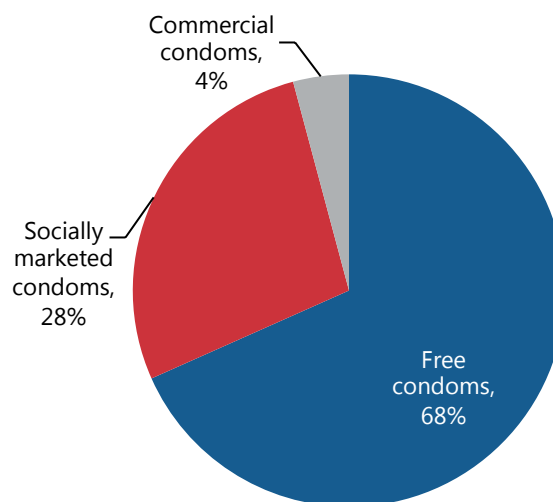
To estimate the supply of condoms, AIDSFree conducted an assessment of condoms distributed free by the public sector and NGOs, and condoms distributed by SM organizations and commercial marketers in 2015 (Figure 74). The assessment showed that 68 percent of condoms distributed in Zambia were free; priced condoms made up just under one-third of the condom market. It is worth noting that volumes distributed probably overestimate shares of free supplies due to stocks in pipeline and wastage. The difference between the share of free condoms used (Figure 73) and distributed (Figure 74) suggests that the supply exceeds demand, though not to the degree observed in other countries included in this assessment. Figure 74 also shows that the majority of private sector condom distribution is of SM brands rather than commercial brands, which make up merely 4 percent of the Zambian market.

Figure 73. Percentage Share of Number of Condoms Supplied by Sector



Source: 2016 Zambia Market Assessment, AIDSFree Project.

Figure 74. Percentage Distribution of Source of Condom Used with Most Recent Partner



Source: Zambia DHS 2013-2014.

Brands Available and Their Price

To understand condom brands and their pricing, AIDSFree conducted a rapid assessment by interviewing approximately 25 condom retailers. The assessment revealed 18 brands across the country, with a median price to consumers per condom from \$0.15 to \$1.00 (see Annex C for a full list of brands and median price to consumer). Figure 75 shows the user share of these brands, sorted by price from least to most expensive, obtained from the willingness-to-pay survey. The Zambian market is dominated by Maximum: 72 percent of respondents reported using the brand most often. Chishango, the second most popular, lags well behind with 10 percent, followed by Rough Rider (7%) and the remaining brands with less than 2 percent each. A large majority (86.8%) use the least expensive condoms (i.e., \$0.15–\$0.20 per unit). Although only 2 percent of users bought the most expensive brands most often, 10 percent used mid-range brands costing between \$0.50 and \$0.75. This is much larger than the 1.1 percent who used condoms priced between \$0.20

and \$0.50, showing that users can be influenced by factors such as brand familiarity, appeal, and availability in addition to price.

Demographic Characteristics of Survey Respondents

AIDSFree interviewed 1,247 men in Zambia for the willingness-to-pay survey. As shown in Table 8, the profiles of men who use free, SM, and commercial brands appear to be markedly different in terms of wealth and residence. Users of free condoms were predominantly from rural areas (65%), while those who used SM and commercial brands were most likely to be from urban areas (both at 65%). Commercial condom users were almost exclusively from the upper two wealth quintiles (92%) as were two-thirds of SM users; users of free condom leaned heavily toward the lower quintiles (61%). The distinct profiles of the three segments, particularly in terms of wealth and residence, suggest that the market is currently well-segmented.

Figure 75. User Share and Retail Prices of Condoms Brands in Zambia

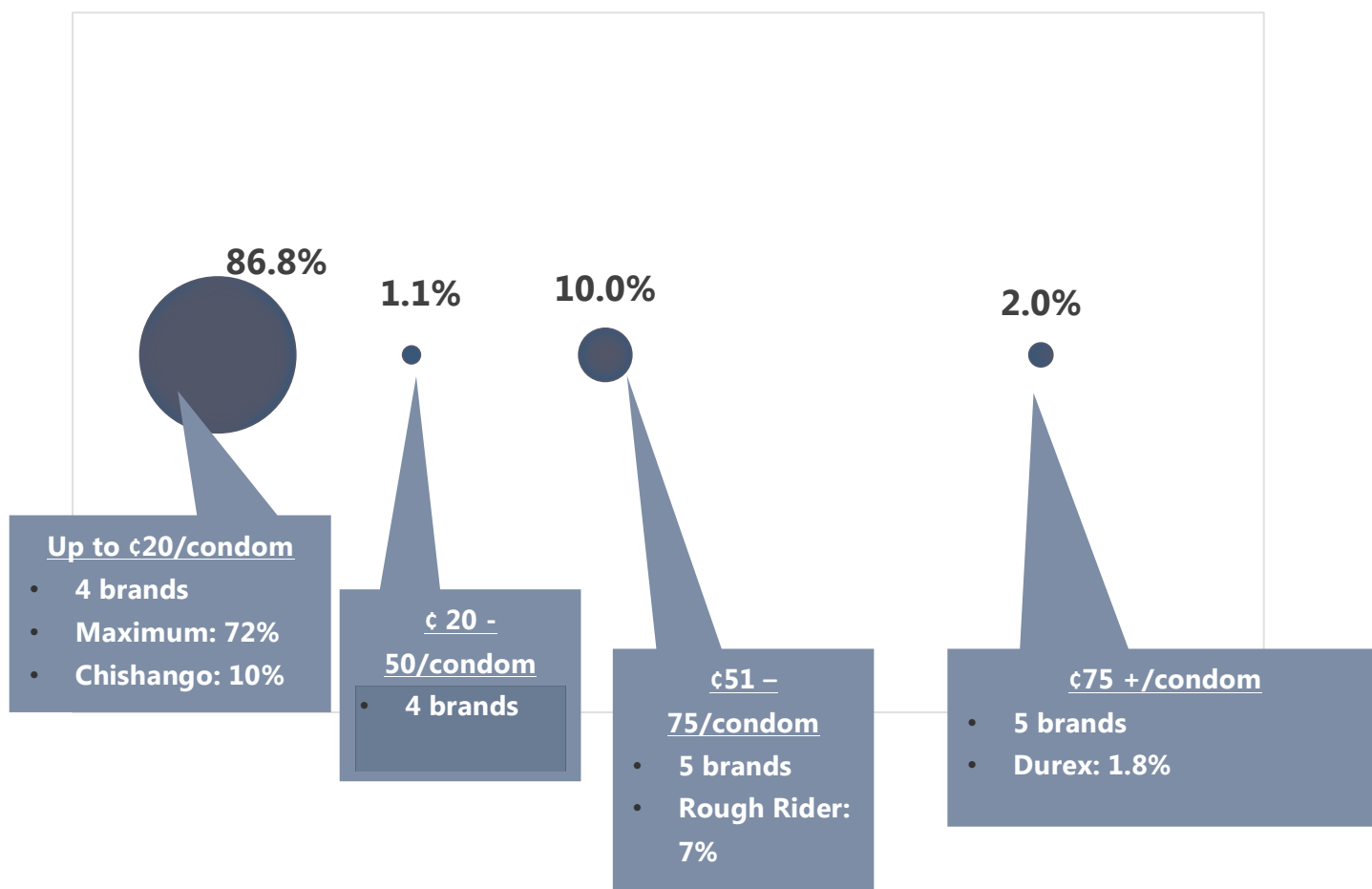


Table 8. Sociodemographic Characteristics of Willingness-to-Pay Survey Respondents in Zambia, Disaggregated by Condom Segment Used Most Often

Demographic characteristic	Use free condoms most often (%)	Use SM brand of condoms most often (%)	Use a commercial brand most often (%)
Age			
18 – 34 years	67	78	85
More than 34 years	33	22	15
Residence			
Urban	35	65	65
Rural	65	35	35
Wealth index			
Lower three wealth quintiles	61	34	8
Upper two wealth quintiles	39	66	92
Marital status			
Single	60	68	77
Married/living together	40	32	23
Total %, (unweighted N)	100% (496)	100% (500)	100% (251)

Other Contextual Parameters

Table 9 highlights three key contextual parameters relevant for the assessment:

- *The absolute unit consumer price of the SM brand in country in US dollars.* This provides an indication of whether the brand is likely to be subsidized. As noted earlier, the willingness-to-pay surveys did not examine the cost structure of SM condom brands in the assessment countries, and hence use the absolute unit price as a surrogate measure.
- *The unit consumer price of the SM brand in country relative to the per capita GNI.* This is a surrogate measure of the consumer price of the SM brand relative to the population's ability to pay.
- *Trends in the number of SM condoms distributed in country.* Significant declining trends would indicate disruption in supplies of SM brands.

Table 9. Parameters of Ability to Pay and SM Supplies

Parameter	Range [^]	Zambia
<i>Reference SM condom brand</i>		<i>Maximum</i>
Consumer price of reference SM condom brand per unit (\$)	0.05 - 0.22	0.17
Exchange rate	1–365	9.9
per capita GNI, PPP adjusted, current international \$, 2016	1810–12,830	3,850
% change in per capita GNI (2016 vs. 2012)*	6%–19%	9%
Consumer price per CYP** as a ratio of per capita GNI (%)*	0.10%–0.77%	0.53%
Total sales units of SM condoms (Mn) ***	0.8 - 174.0	0.8
% change in total sales of SM condoms (2012 vs. 2016)	90% - 3%	3%

* per capita GNI, PPP adjusted, current international \$, 2016

** 1 CYP = 120 condoms

*** From *Contraceptive Social Marketing Statistics*, published by DKT (available at <https://www.dktinternational.org/contraceptive-social-marketing-statistics/>)

[^] in countries included in this assessment

The table above shows that Maximum, the leading SM brand in Zambia, is among the highest-priced SM condoms among countries included in this assessment in terms of absolute value. In relation to the average ability to pay in Zambia, Maximum's price is in the middle of the range of values observed in the five countries.

Based on the absolute value of the price, it is likely that Maximum is being marketed close to, or at, full-cost recovery. Based on the price relative to ability to pay, increasing the price of the Maximum may have an effect on condom use.

Sales of SM condoms in Zambia declined to just 3 percent in 2012 as a result of changes in support to social marketing there. The AIDSFree team acknowledges that this sharp decline during the study period could have affected the findings from the survey.

Men Who Use Free Condoms Most Often

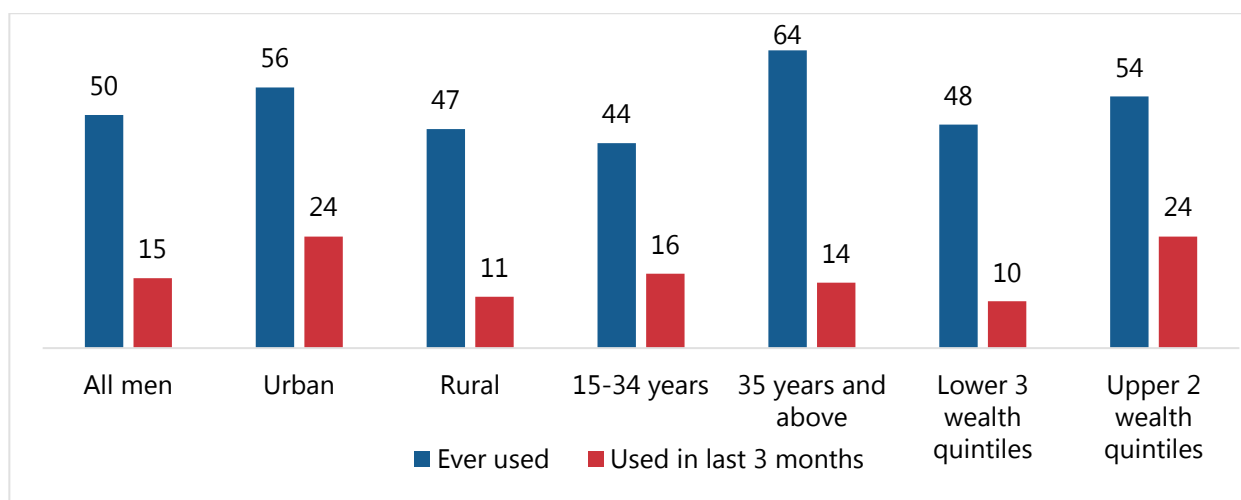
This section examines the question: if the supply of free condoms were reduced or restricted, would people who currently use these condoms purchase priced condoms, or discontinue using condoms? Thus, all data and analyses presented in this section focus only on those who reported using free condoms most often.

Prior Use of Priced Condoms

In Zambia, those who use free condoms do not use them exclusively; 50 percent reported paying for condoms in the past, including 15 percent in the three months preceding the survey (Figure 76). The difference between "ever used" and "used in last three months" is notable across all levels of disaggregation in residence, age, and wealth quintile. This large difference indicates that while more users of free condoms may have obtained priced brands in the past, they were less likely to

have done so in the recent past—perhaps due to large declines in supplies of SM condoms in the preceding two to three years.

Figure 76. Percentage of Users of Free Condoms Who Have Ever, and in the Last Three Months, Used a Priced Condom, Disaggregated by Residence, Age, and Wealth Quintile



As shown in Figure 77, users of free condoms most often used Maximum (47%), followed by Chishango and Combat (4% each). Maximum was also the only brand used by more than 1 percent of users of free condoms in the last three months (13.4%), and, at 78 percent, was the priced brand that these men were most aware of (Figure 78). Figure 78 also illustrates that Combat was known to 15 percent of men who preferred free condoms, followed by Chishango (11%), and then Trust, Rough Rider, and Moods.

Figure 77. Priced Brands Ever Used and Used in Last 3 Months

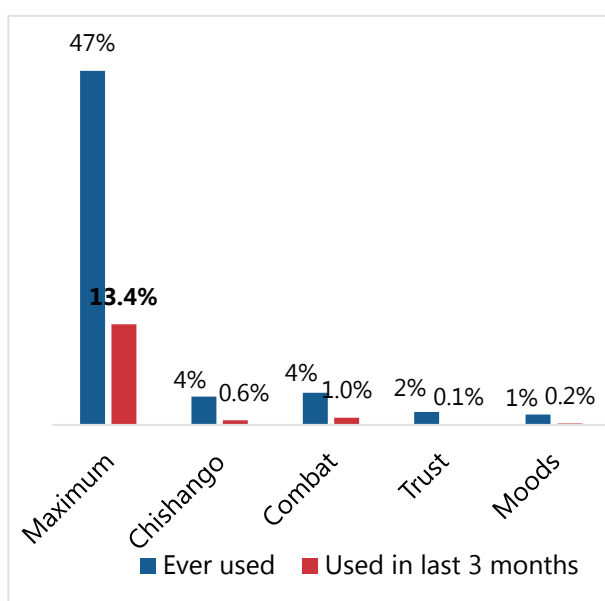
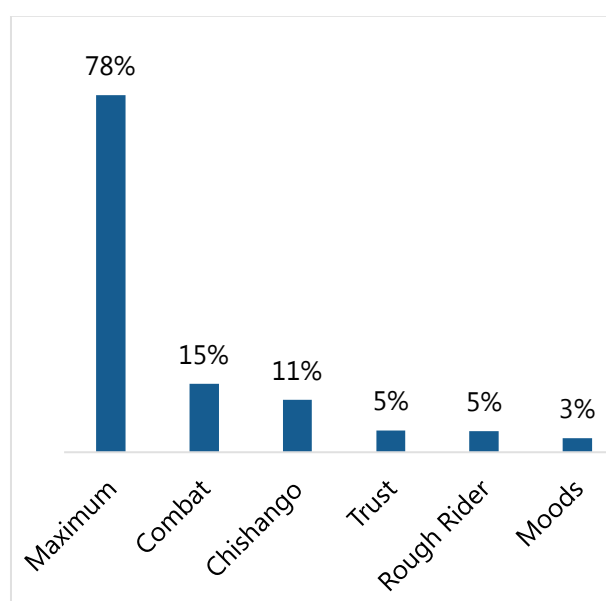


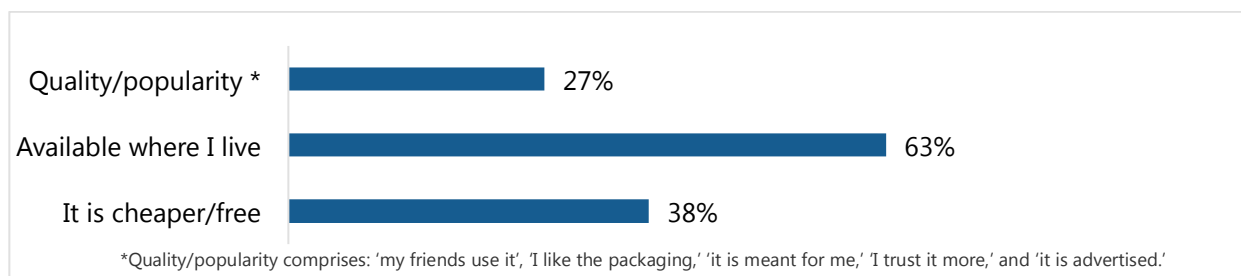
Figure 78. Priced Brands that Users of Free Condoms Had Heard of or Seen



Reasons for Using Free Condoms Most Often

When men were asked why they used free condoms most often (without prompting possible responses), only 38 percent attributed their choice to low or no cost, whereas 63 percent cited availability near to where they lived (Figure 79). This suggests that cost may not be the main driver for decisions to use free condoms.

Figure 79. Reason(s) for Choosing Condom Type



Willingness to Pay

Figure 80 presents actions that free condom users would take if free condoms were unavailable at their typical source. While 64 percent would try to purchase condoms from stores nearby and 26 percent would hunt for free options (i.e., 90% would continue to try and use condoms), 10 percent would stop using condoms altogether or stop having sex. Of those that would continue using condoms, Figure 81 shows that only 51 percent would be willing to pay at least the current market price of a 3-pack of Maximum (5 Zambian kwacha or ZMW). The same figure also shows that 89 percent would be willing to pay up to 2 ZMW for a 3-pack of Maximum. The results of these analyses raise concerns that Zambian men who mainly use free condoms would not be willing to purchase the lowest-priced SM brand condom.

Figure 80. Actions Cited by Free Condom Users when Free Condoms are Unavailable

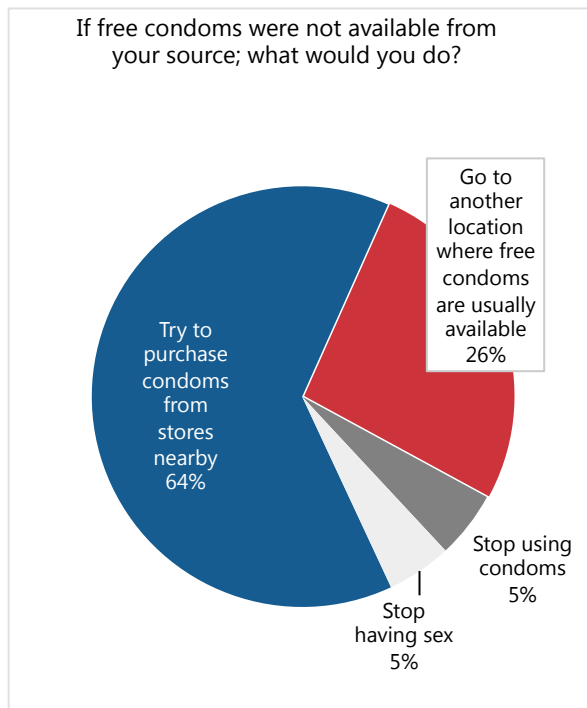
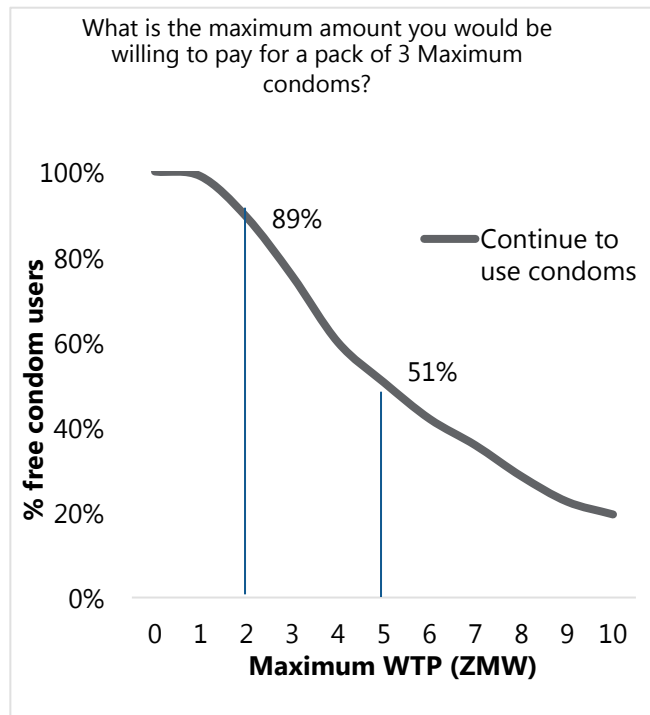


Figure 81. Free Condom Users' Willingness to Pay for Maximum 3-Pack



The AIDSFree team used the Van Westendorp PSM approach to estimate consumer willingness to pay for condoms based on perceived values of condom brands. Figure 82 presents two curves: a price below which Maximum would be considered too cheap and perhaps of suspect quality (red), and a price above which it would be considered too expensive to buy regardless of its perceived quality (gray). The intersection of the two lines is the optimal price, being the point at which the fewest respondents would reject the brand for either reason. The survey found 2 ZMW to be the optimal price, which was rejected by 17 percent of free condom users in Zambia.

The curves in Figure 83 represent the price below which most users would accept the brand as "not expensive" (gray) and the price above which users would accept the brand as "not a bargain" or above the minimum expected price (light blue). The intersection for Zambia (referred to as the indifference price) was 4 ZMW, a price that 70 percent of free users would accept. The two graphs taken together show that users are willing to pay between 2 and 4 ZMW, lower than the current market price of Maximum, the lowest-priced SM brand.

Figure 82. Free Users' Optimal Price for Maximum

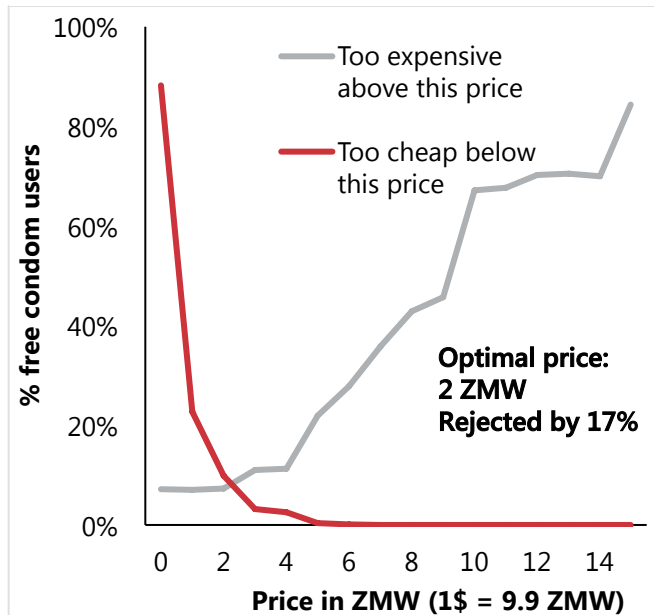
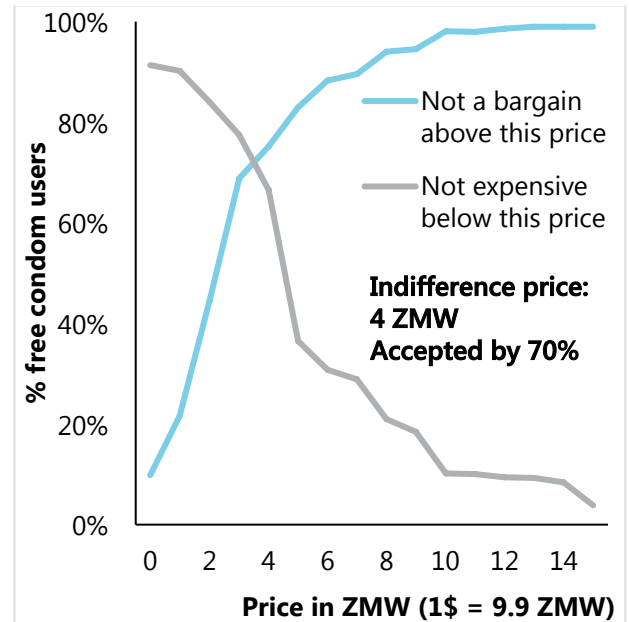


Figure 83. Free Users' Indifference Price for Maximum



Summary: Men Who Use Free Condoms Most Often

The AIDSFree research team concluded that there would be a high risk of decline in condom use if supplies of free condoms were restricted and the lowest-priced condom available in retail cost 5 ZMW for a 3-pack, the price of the lowest-priced SM brand of condoms in Zambia. To successfully transition users of free condoms to purchase condoms, they must be made widely available at 2 ZMW for a 3-pack. Though these findings could have been affected by the shortage of SM condoms during 2014-2016 in Zambia, they suggest that:

- Users of free condoms attribute a value to Maximum that is lower than its current market price. In direct questioning—though this method is likely to understate willingness to pay—only 51 percent reported willingness to pay 5 ZMW if free condoms were not available. Both direct questioning and the Van Westendorp PSM approach showed that 89 percent were willing to pay up to 2 ZMW.
- Supplies of free condoms do *not* substantially exceed their utilization in Zambia.

Men who Use SM Condom Brands Most Often

This section examines the question: if the price of SM brand(s) of condoms were increased, would those who use these condoms discontinue using condoms, or would they switch to other condom brands? Thus, all data and analyses presented in this section are focused only on those who reported mainly using a SM brand of condoms. In addition to Maximum, Chishango, Combat, and Trust were treated as SM brands in this assessment.

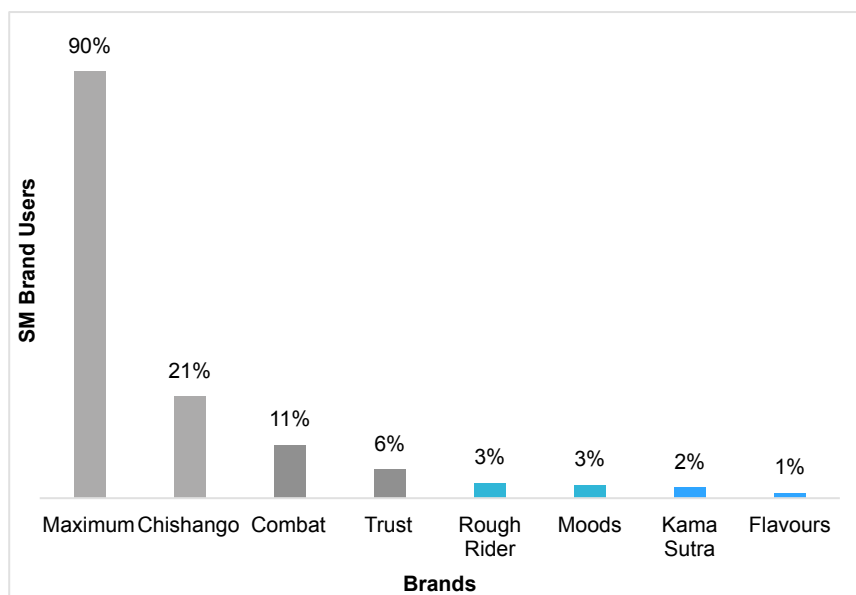
Prior Use of Priced Condoms

Only 7 percent of SM brand users in the Zambia sample reported having ever used a commercial brand, with 3 percent having done so in the three months preceding the survey (Figure 84). Of priced condom brands, including SM and commercial options, SM condom users demonstrated a strong loyalty to their segment; in the sample, only 3 percent reported ever using a commercial brand. Maximum dominated the ever-used group; 90 percent of SM users reported having used the brand at least once (Figure 85).

Figure 84. Past Use of Commercial Brands by SM Brand Users



Figure 85. Main Brands Ever Used by SM Brand Users



Willingness to Pay

Findings from the Van Westendorp analysis showed that willingness to pay for Maximum (3.5–4.5 ZMW) was slightly lower than its current market price of 5 ZMW. Figure 86 shows that the optimal price for Maximum is 3.5 ZMW, which only 9 percent of SM condom users rejected, while the indifference price of 4.5 ZMW would be accepted by 70 percent (Figure 87). This suggests that Maximum condoms are currently priced at the higher end of the ideal price range. Further, this suggests that, all other things being equal, increasing the price of Maximum without measures to increase the brand's perceived value (for example, through advertising, packaging innovations, or product changes) would probably decrease the use of Maximum condoms. Note that these findings are specific to the effect on use of the Maximum brand and not on all condoms.

Figure 86. Users' Optimal Price for Maximum

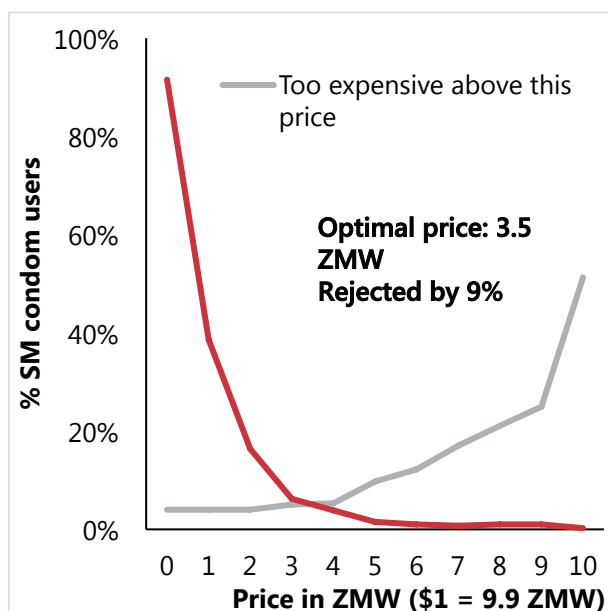
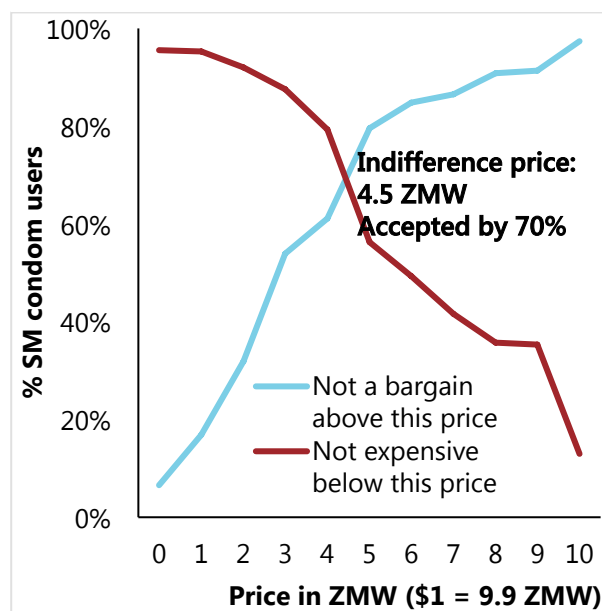


Figure 87. Users' Indifference Price for Maximum



Price Sensitivity

Examining the broader question of what men who use SM brands of condoms would do if the price of their brand were increased and they have multiple choices requires assessing price sensitivity. The AIDSFree research team used the discrete choice model, which makes two important assumptions: that all respondents are aware of all brands in the market, and that all brands are available in all outlets.

Figure 88. Simulated Effect on SM User Purchase Preferences with SM Brand Price Increases

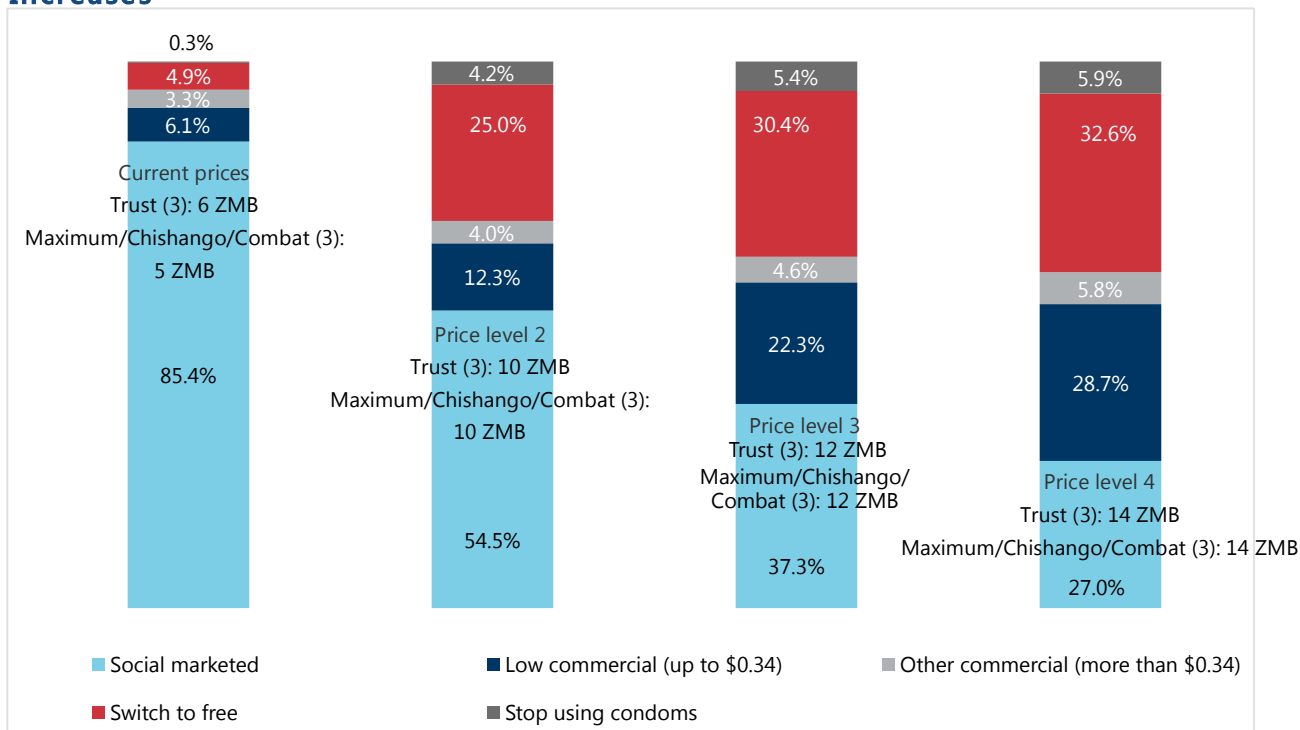


Figure 88 presents a simulation of consumer purchase preferences after increasing the price of all four SM brands, while maintaining the prices of all other brands. Results showed that a significant portion of SM users would switch to free condoms or stop using condoms altogether. Even at the second price point, five times more SM users would switch to a free brand. At the highest price point, the number of SM users who would stop using condoms increased from less than 1 percent up to 6 percent. Though the commercial sector would be expected to grow from just over 9 percent to a little more than one-third of SM users, an additional one-third would opt for free brands, thus offsetting the promising market gains.

Summary: Men Who Use SM Brands of Condoms Most Often

The AIDSFree research team concluded that there would be a high risk of decline in condom use, or an increased burden on free supplies from the public sector, if the price of SM condoms were increased. Those who used SM condoms most often ascribed a slightly lower value to Maximum relative to its current market price. The simulations also suggested that if the price of all SM condom brands increased, a substantial proportion of men would either stop using condoms or switch over to free condoms.

Strategies to Increase Volume and Value Share of Commercial Sector

This section examines which actions or scenarios would be likely to increase volume and value share of the commercial sector for condoms. The research modeled the outcomes of three scenarios:

- Increasing the price of SM brands
- Reducing the price of commercial brands
- Introducing smaller packaging units of commercial brands.

The AIDSFree team defined the commercial sector for condoms as the sum total of all condoms brands being marketed by for-profit organizations in country, i.e., all priced brands, excluding those marketed by SMOs. Since a growth in the commercial sector is most likely to come from motivating those who use SM condoms to use commercially marketed condoms, all analyses in this section focused on those who reported using either an SM condom brand or a commercial brand most often (and thus excluded those who used free condoms most often).

For each of the strategies tested, the team researched the outcomes in terms of three criteria:

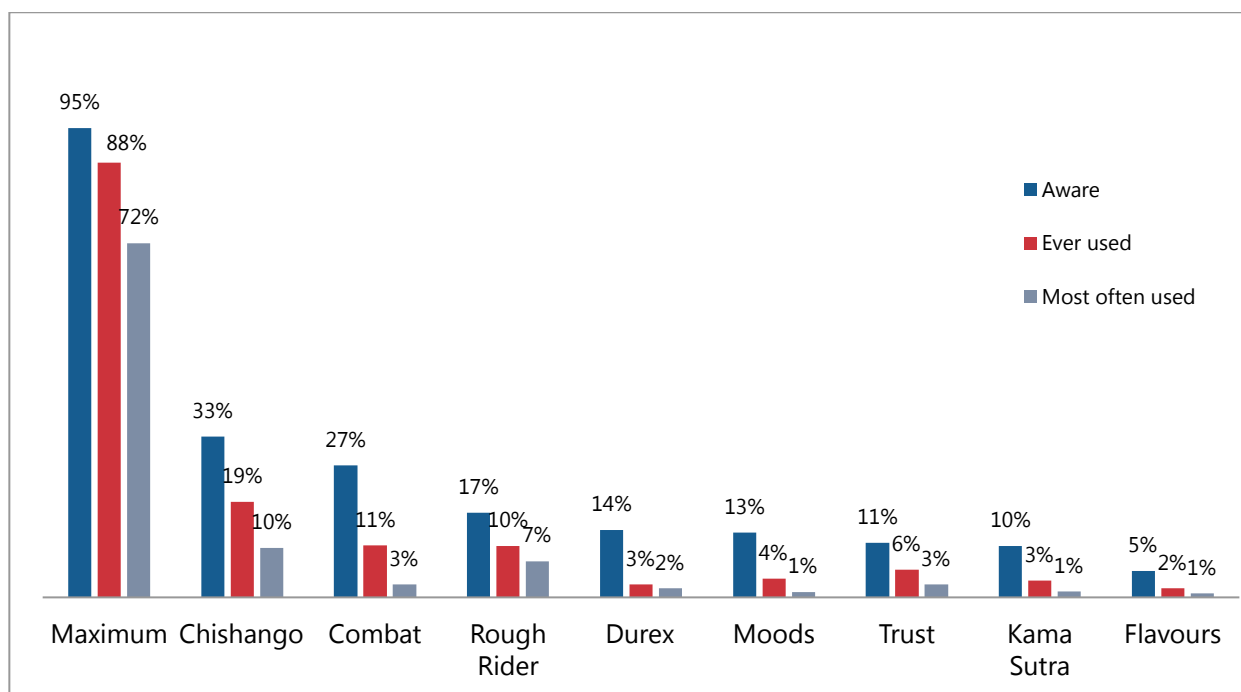
1. *Improved market sustainability*: A substantial increase in the volume of the total commercial sector.
2. *Low risk to public health outcomes*: No more than a marginal increase in the proportion who would opt for free condoms.

3. *Market-driven rationale for the brand(s) concerned to undertake the strategy:* A substantial increase either its market volume or market value without a more than a marginal decline on the other (either market value or market volume).

Overview of the Priced Condom Market

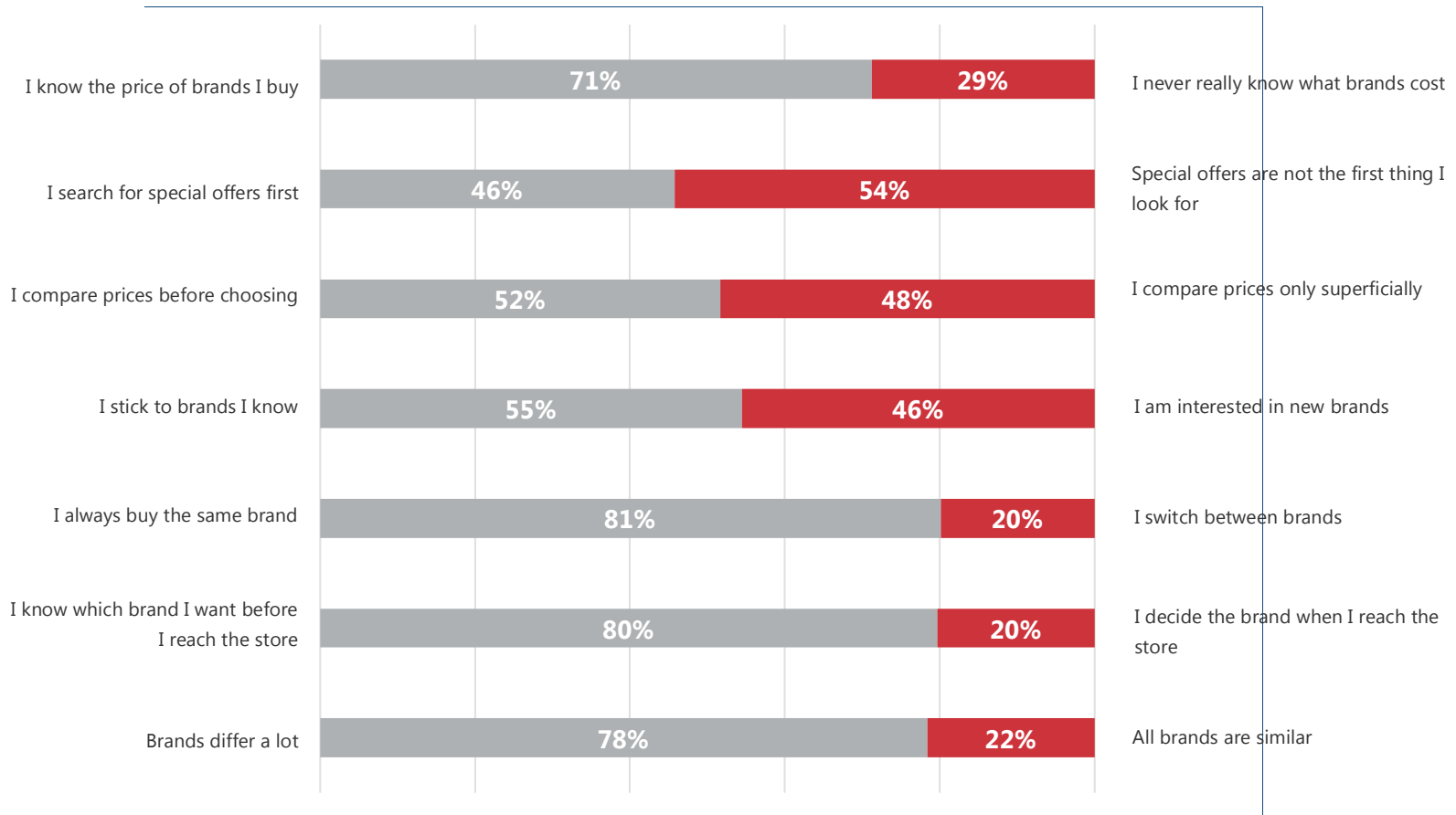
Among men who mainly used priced condoms (SM or commercial brands), Maximum dominated the market (Figure 89). This SM brand had almost universal awareness (95%) and ever-use (88%), and was the preferred brand of three-quarters of priced condom users. Brands other than Maximum, Chishango, Combat, and Trust were considered as commercial brands for the purposes of this study.

Figure 89. Awareness and Use of Leading Priced Brands



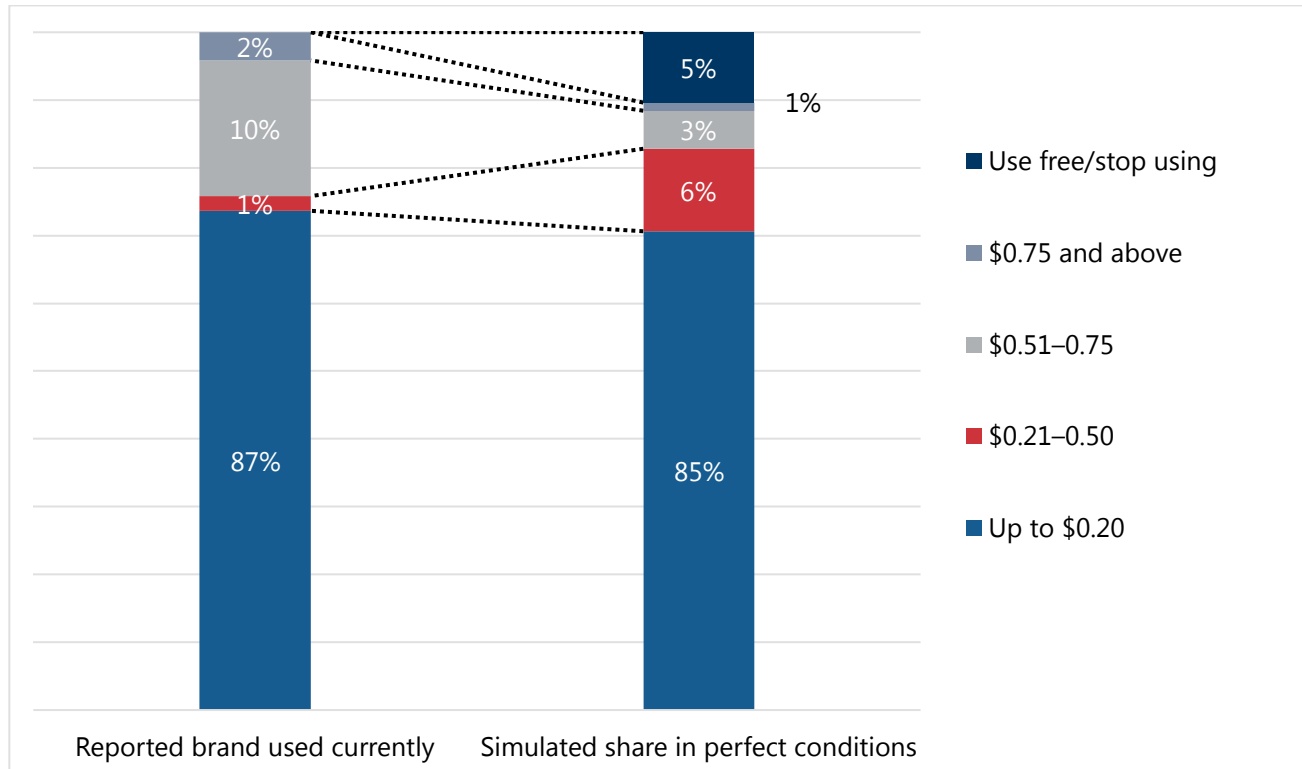
To assess attitudes about purchasing condom brands, the researchers asked respondents to choose between various pairs of statements. The results, shown in Figure 90, demonstrate that Zambian condom buyers considered themselves value-oriented in their condom purchase habits (i.e., price-aware, and are brand-loyal rather than price-oriented). The first statement relates to price awareness, and shows that most respondents (71%) considered themselves aware of brand prices. The second two statements, which relate to aspects of price sensitivity (price consciousness, and a propensity to search for deals), indicate that Zambian condom buyers did not consider themselves price-oriented. The last four statements relate to brand loyalty. More than three-quarters of respondents noted differences among brand options, and said that they always bought the same brand.

Figure 90. Purchase Attitudes of Priced Condom Users on Condom Choice



As noted earlier, the discrete choice model assumes that all respondents know of all brands in the market, and that all brands are available in all outlets. The stacked bars in Figure 91 compare reported brand used (in direct questioning) against a simulated output at current market prices. This comparison shows how improved availability and awareness could affect brand shares. Under the perfect conditions assumed in the discrete choice model, Maximum would retain its dominant position with 85 percent of market share. Low-priced commercial brands (\$0.21–\$0.50 per unit) would gain slight market share from 1 percent to 6 percent, suggesting that low awareness and limited distribution and availability are hindering these brands. However, gains in share would come largely at the expense of higher-priced commercial brands (e.g., Rough Rider), whose share would shrink from 10 percent to less than one-third of its original share.

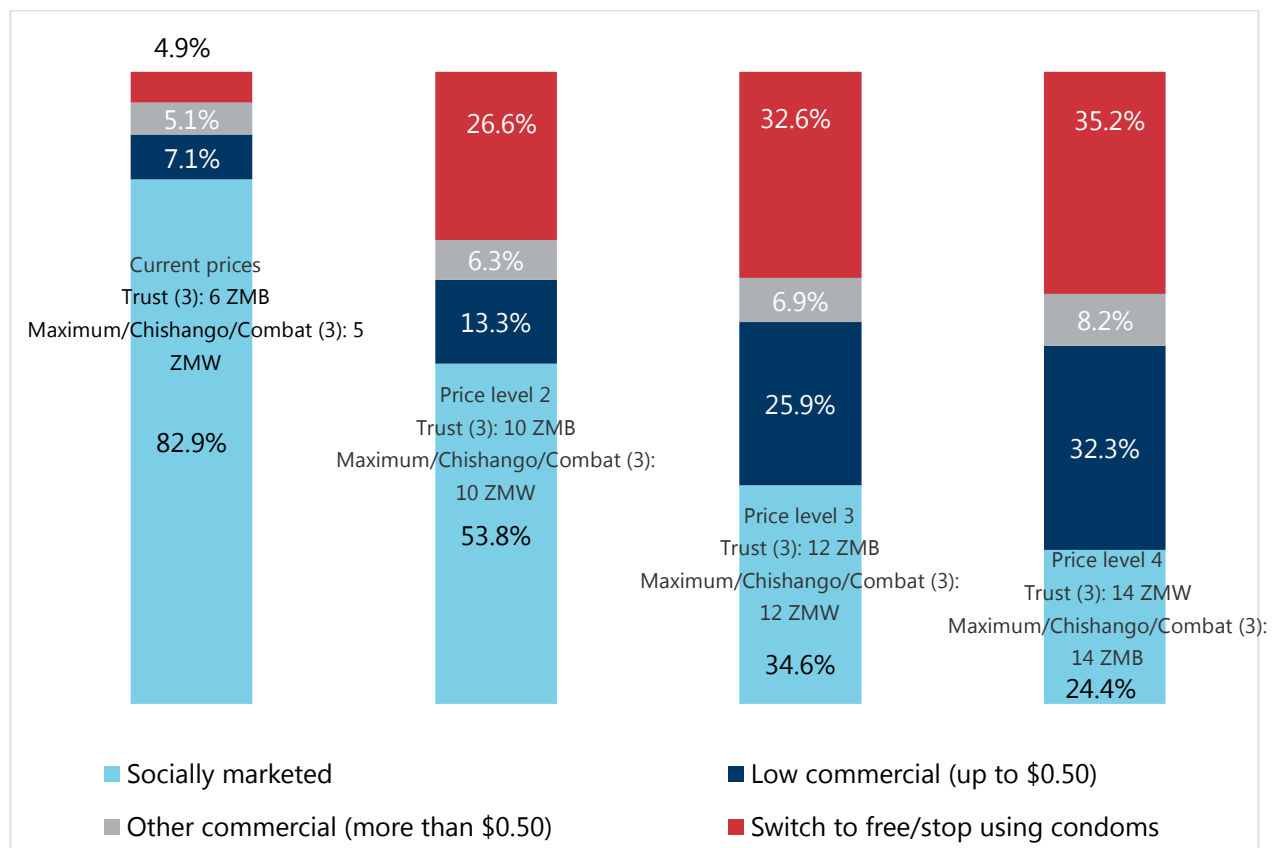
Figure 91. Comparison of Condom Market Share under Current Conditions vs. Simulation Where Respondents Are Aware of All Brands and Prices



Effect of Increase in Price of SM Brands on the Priced Condom Market

If the price of SM brands increased, as in Figure 92, the share of low-priced commercial brands would undergo a sizeable advance, from 7 percent of market share at current prices to 32 percent when the brands are sold at 14 ZMW. Such a price shift would also be expected to dramatically affect the number of individuals that do not use priced brands, with 35 percent switching to free condoms or ceasing to use condoms altogether. The shifts would primarily come from a large decrease in users of SM brands, from 83 percent to less than one-quarter of the market at the highest price tier. These analyses show the importance of having at least one condom brand available to customers at 5 ZMW for a 3-pack; and that increasing the price of SM brands does not meet the criteria outlined earlier in the section.

Figure 92. Impact on Total Priced Market if Price of SM Brands Were Increased



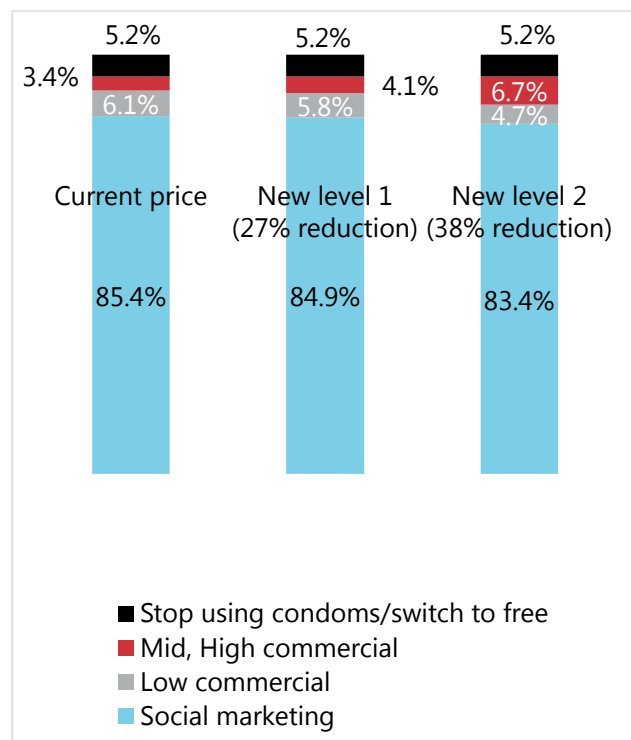
Effect of Decrease in Price of Mid- and High-Priced Commercial Brands on the Priced Condom Market

As shown in Figure 93, decreasing the price of mid- and high-priced commercial brands would marginally increase the overall share of the total commercial sector. Even with a 38 percent price reduction, the total commercial sector share would only increase from 10 percent to 12 percent of the total priced market (Figure 94). As mid-to-high commercial brands doubled their share, the growth would come partially at the expense of lower-priced brands. While the mid- and high-priced commercial segment would likely double their market volume, they would be expected to lose in market value (Figure 93). Thus, this strategy does not meet the criteria outlined earlier in the section.

Figure 93. Share of Condom Segments with Price Reduction in Mid- and High-Priced Condoms



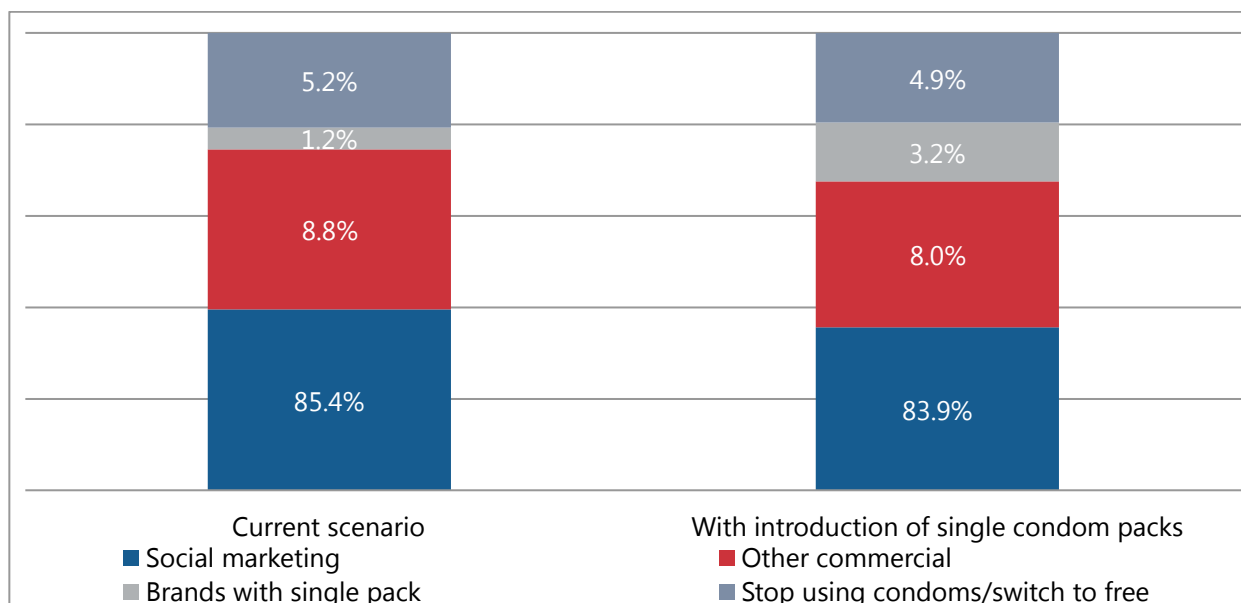
Figure 94. Volume and Gross Revenue of High-Priced Condom Segment Indexed to Current Scenario



Effect of Introducing a Single Pack on the Priced Condom Market

Introducing a smaller pack size of a commercial brand, as modeled in Figure 95, would marginally increase the share of the commercial sector (from 10% to 11.2%). In this case, two brands were tested for single-pack options: Durex and Carex. According to the model, these specific brands would grow in share from 1 percent to 3 percent, with most gains coming from SM brands. Thus, this strategy does not meet the criteria outlined earlier in the section.

Figure 95. Introduction of Single-Pack Sizes for Two Commercial Brands



Summary: Strategies to Increase Volume and Value of the Commercial Market

The AIDSFree research team concludes that none of the actions examined to increase the share of the commercial sector are appropriate for the following reasons:

- A decrease in the price of mid- and high-priced commercial brands and introduction of single-pack brands does increase the volume share of the commercial sector brands. However, this increase is very low, and does not seem to justify the investments and risks associated with such an action. Further, a decrease in price of mid- and high-priced brands would likely result in decreased market value of the brands.
- Though our analyses show that increases in price of all SM brands condoms is likely to increase the share of the commercial sector, such price increases would likely result in many condom users opting for free condoms or ceasing to use condoms.

Discussion and Recommendations

Key findings from the Zambia willingness-to-pay survey are:

- Men who mostly use free condoms are not willing to pay the current market price of Maximum (5 ZMW). Thus, restricting free supplies would likely result in decreased condom use.
- There is no clear need for or benefit from increasing the price of SM brands, which are reportedly marketed with low or no donor support. Increasing prices in these brands would likely lead users to switch over to free condoms or stop using condoms all together.
- Reducing prices in mid- and high-priced commercial brands, and introducing a single pack of condoms, would likely result in only a marginal growth in the commercial sector's overall share, and probably a decreased market value for these brands. Moreover, the anticipated gains may not be justified due to the potential risks and investments required to execute this strategy successfully.
- As noted earlier, the survey findings could have been affected by the shortage of SM condoms in Zambia from 2014–2016. A fresh examination of these research questions, after the market has stabilized with re-initiation of social marketing, would provide updated insights in a normal market scenario.

Based on these findings, the AIDSFree research team recommends actions to stabilize and enhance social marketing of condoms, and to strengthen the low-priced condom market segment through the following actions:

1. **Invest in strategies to increase the perceived value of condoms, and stabilize availability of SM brands of condoms.**

The Zambian condom market appears to be well-segmented and operating at its upper price thresholds. Restricting supplies of free condoms or increasing prices of SM condoms may push

people to discontinuation or otherwise adversely affect condom use. Instead, it is recommended to increase investments in category promotion, either through NGO programs or manufacturers, with a goal of increasing condom use and willingness to pay.

Also, past disruption in supplies of SM condoms in Zambia could have adversely affected condom use in Zambia. Given the assessment's findings that men who use SM condoms are unwilling to pay for mid- and high-priced condoms, establishing wide availability of SM brands should be an important consideration in Zambia.

2. Partner with marketers of low-priced commercial condoms.

Some evidence suggests that Maximum's current price is slightly more than men who prefer SM brands are willing to pay. Partnerships with marketers of commercial, low-price, quality-assured condoms could be a way of addressing willingness to pay. For example, Deluxe and Dume are being sold to customers in Kenya at below \$0.20 per condom; facilitating introduction of these brands in Zambia could mitigate risks from disruption of SM brand availability in country.

Zimbabwe

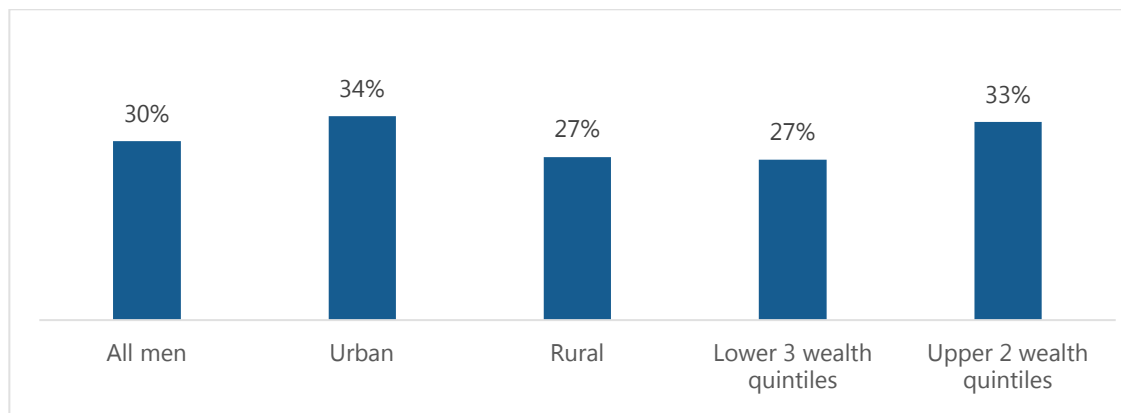
Market Overview

To provide a contextual overview to the Zimbabwe condom market, the AIDSFree research team used secondary data sources and findings from the willingness-to-pay assessment.

Condom Use Differentials

To complement the willingness-to-pay survey findings, the AIDSFree research team analyzed condom use reported by men in the 2015 Zimbabwe DHS. The analysis examined men's self-reported condom use with their last sexual partner (irrespective of partner type), and was disaggregated by wealth quintile and residence (urban or rural). The results, summarized in Figure 96, show minor differentials between wealth quintiles and residence. Urban respondents were slightly more likely to report condom use (34%) than their rural counterparts (27%). The difference between the upper two quintiles and the lower three was similar in size (33% versus 27%). Thus, condom use appears to be somewhat equitable in Zimbabwe.

Figure 96. Percentage of Men Reporting Condom Use with Most Recent Partner, Disaggregated by Select Demographic Characteristics, Zimbabwe DHS 2015



Use and Supply of Condoms

To estimate use of condoms from public and private sector sources, AIDSFree examined DHS data on where men who reported using a condom with their most recent partner obtained the condom. Figure 97 shows that 54 percent of men reported obtaining the condom they used with the most recent partner from a private sector source such as pharmacy, shop, or kiosk (see Annex B for details), 36 percent obtained the condom from a public sector source, and 10 percent from FBOs, NGOs, or field workers. Assuming that condoms obtained from FBOs, NGOs, and field workers were free, 46 percent of users obtained free condoms.

To estimate the supply of condoms, AIDSFree conducted an assessment of condoms distributed free by public sector and NGOs, condoms distributed by SMOs, and commercial sources in 2015. As shown in Figure 98, three-quarters (76%) of condoms distributed in Zimbabwe were free condoms, while condoms that are sold make up just under a quarter of the condom market (24%). It is worth noting that volumes distributed are likely to overestimate shares of free supplies due to stocks in pipeline and wastage. The difference between the share of free condoms used (Figure 97) and distributed (Figure 98) suggests that the supply exceeds demand—nearly twice as many free condoms are made available in Zimbabwe than are chosen by users.

Figure 97. Percentage Distribution of Source of Condom Used with Most Recent Partner

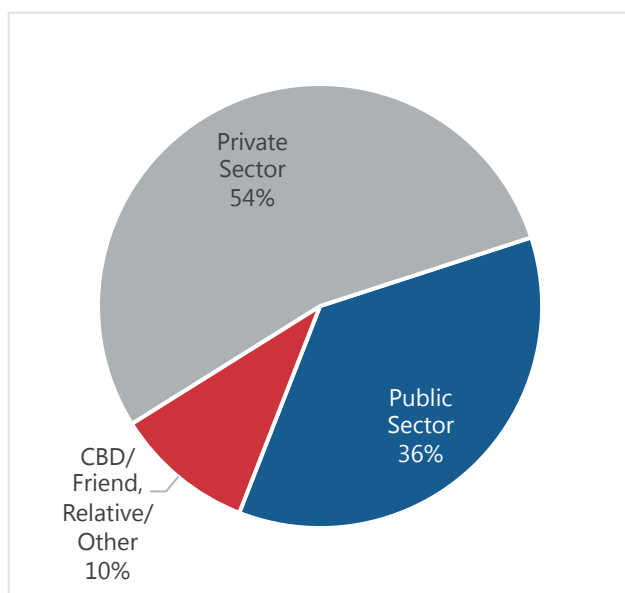
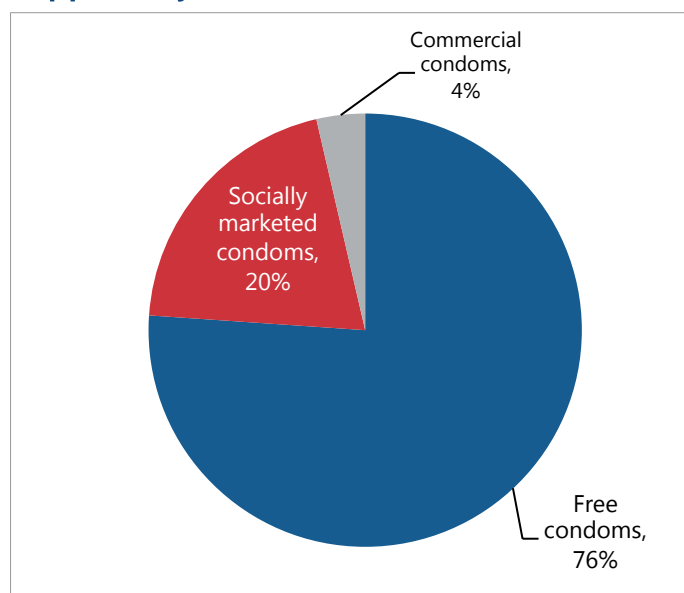


Figure 98. Percentage Share of Number of Commercially Marketed Condoms Supplied by Sector

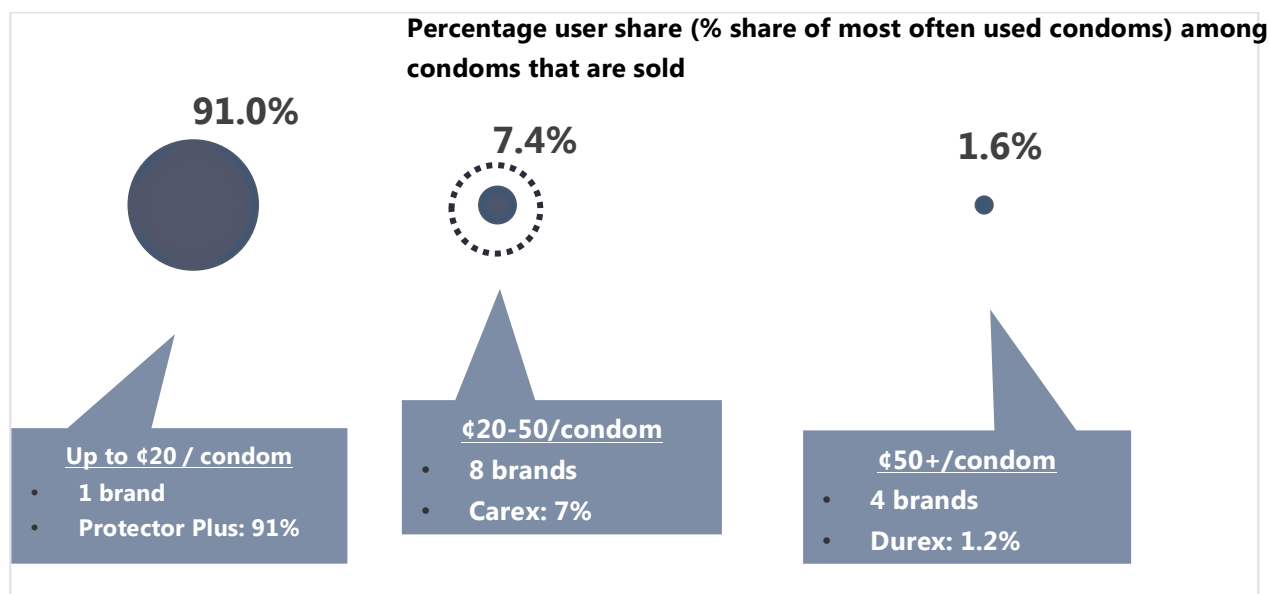


Sources: Zimbabwe DHS 2015; 2016 Zimbabwe market assessment, AIDSFree Project.

Brands Available and Their Price

To understand the brands available in Zimbabwe and the prices at which they are sold, AIDSFree carried out a rapid assessment by interviewing approximately 25 condom retailers. The assessment identified 13 brands across the country, with a median price to consumers per condom from \$0.08 to \$1.33 (see Annex C for a full list of brands and median price to consumer). This included the only SM brand in the country, Protector Plus, priced at \$0.08 per condom. Figure 99 shows the user share of these brands obtained through the willingness-to-pay survey, sorted by price from least to most expensive. The Zimbabwean market is dominated by a single brand, Protector Plus, which commands 91 percent of the priced condom user share. The mid-priced segment covers 7.4 percent, with Carex as the main brand. The higher-priced segment accounts for only 1.6 percent of the user share, mainly Durex.

Figure 99. User Share and Retail Prices of Condom Brands in Zimbabwe



Demographic Characteristics of Survey Respondents

The AIDSFree research team interviewed 1,245 men in Zimbabwe for the willingness-to-pay survey. As shown in Table 10, the profile of men who use free, SM, and commercial condoms appears to be markedly different in terms of wealth and residence. Users of free condoms were predominantly from rural areas (77%), while those preferring SM brands were mostly urban (56%) and users of commercial brands were exclusively so. Commercial condom users were universally from the upper two wealth quintiles, as were two-thirds of SM users; men who used free condoms were mainly from the lower quintiles (64%).

Table 10. Sociodemographic Characteristics of Willingness-to-Pay Survey Respondents in Zimbabwe, Disaggregated by Condom Segment Used Most Often

Demographic characteristic	Use free condoms most often (%)	Use SM brand of condoms most often (%)	Use a commercial brand most often (%)
Age			
18–34 years	61	81	78
More than 34 years	39	19	22
Residence			
Urban	23	56	100
Rural	77	44	-
Wealth index			
Lower three wealth quintiles	64	34	-
Upper two wealth quintiles	36	66	100

(cont.)

Demographic characteristic	Use free condoms most often (%)	Use SM brand of condoms most often (%)	Use a commercial brand most often (%)
Marital status			
Single	48	60	66
Married/living together	52	40	34
Total %, (unweighted N)	100% (500)	100% (500)	100% (245)

Other Contextual Parameters

Table 11 below highlights three key contextual parameters relevant for the assessment:

- *The absolute unit consumer price of the SM brand in country in US dollars.* This provides an indication of whether the brand is likely to be subsidized. As noted earlier, the willingness-to-pay surveys did not examine the cost structure of SM condom brands in the assessment countries, and thus use the absolute unit price as a surrogate measure.
- *The unit consumer price of the SM brand in country relative to the per capita GNI.* This is a surrogate measure of the consumer price of the SM brand relative to the population's ability to pay.
- *Trends in the number of SM condoms distributed in country.* Significant declining trends would indicate disruption in supplies of SM brands.

Table 11. Parameters of Ability to Pay and SM Supplies

Parameter	Range [^]	Zimbabwe
<i>Reference SM condom brand</i>		<i>Protector</i>
Consumer price of reference SM condom brand per unit (\$)	0.05–0.22	0.08
Exchange rate	1–365	1
per capita GNI, PPP adjusted, current international \$, 2016	1810–12,830	1,810
% change in per capita GNI (2016 vs. 2012)*	6–19%	12%
Consumer price per CYP** as a ratio of per capita GNI (%)*	0.10–0.77%	0.53%
Total sales units of SM condoms (Mn) ***	0.8–174.0	25.0
% change in total sales of SM condoms (2012 vs. 2016)	90–3%	90%

* per capita GNI, PPP adjusted, current international \$, 2016

** 1 CYP = 120 condoms

*** From *Contraceptive Social Marketing Statistics*, published by DKT (available at

<https://www.dktinternational.org/contraceptive-social-marketing-statistics/>)[^] in countries included in this assessment

The table shows that Protector Plus, Zimbabwe's SM brand, is among the lowest-priced SM condoms among the countries included in this assessment in terms of absolute value. In relation to the average ability to pay in the country, Protector Plus's price is in the middle of the range of values observed in the five countries.

Based on the absolute value of the price, the AIDSFree researchers expected that Protector Plus is being marketed below full-cost recovery. Based on the price relative to ability to pay, they expected that increasing the price of the Protector Plus may have an effect on condom use.

Of note is that sales of SM condoms in Zimbabwe declined to 90 percent of their value in 2012—a slight decline that was unlikely to affect the findings from this survey.

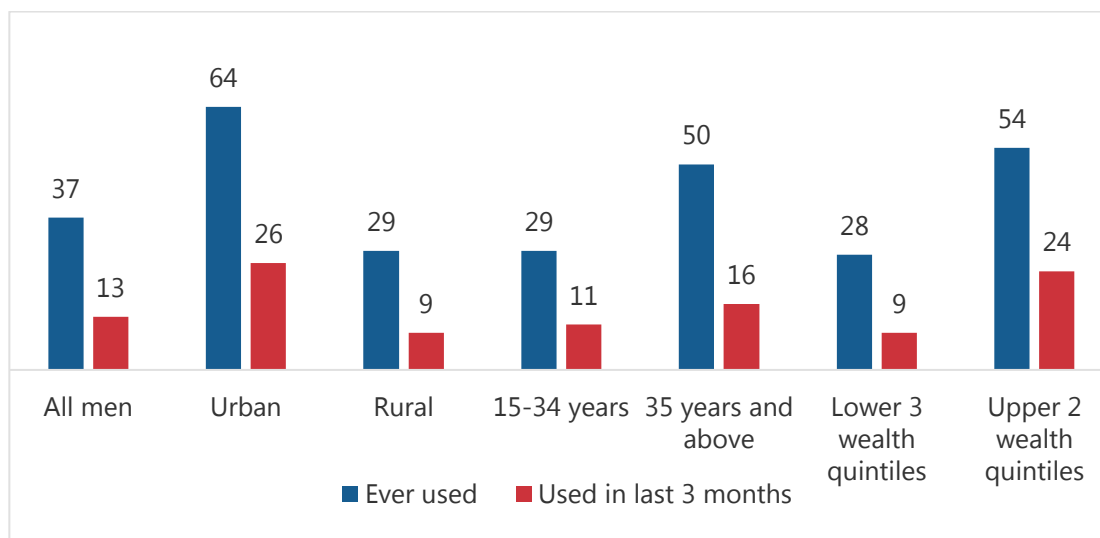
Men Who Use Free Condoms Most Often

This section examines the following question: If the supply of free condoms were reduced/restricted, would people who currently use these condoms purchase priced condoms, or discontinue using condoms? Thus, all data and analyses presented in this section focus only on those who reported using free condoms most often.

Prior Use of Priced Condoms

In Zimbabwe, results from the willingness-to-pay survey indicated that more than one-third of men who preferred free condoms did not use them exclusively; 37 percent reported paying for condoms in the past, including 13 percent in the three months preceding the survey (Figure 100). Thus, only one-third of these men demonstrated a willingness and ability to pay for condoms, and only 13 percent did so during the three months preceding the survey.

Figure 100. Percentage of Users of Free Condoms who Have Ever Used, and Used in the Last Three Months, a Priced Condom, Disaggregated by Residence, Age, and Wealth Quintile



As shown in Figure 101, users of free condoms were most likely to have used Protector Plus (ever 37%; in the past 3 months 12%). Protector Plus was also the best-known brand among these users (76%), followed by Carex and Durex (11% and 5%, respectively) (Figure 102).

Figure 101. Priced Brands Ever Used and Used in Last Three Months

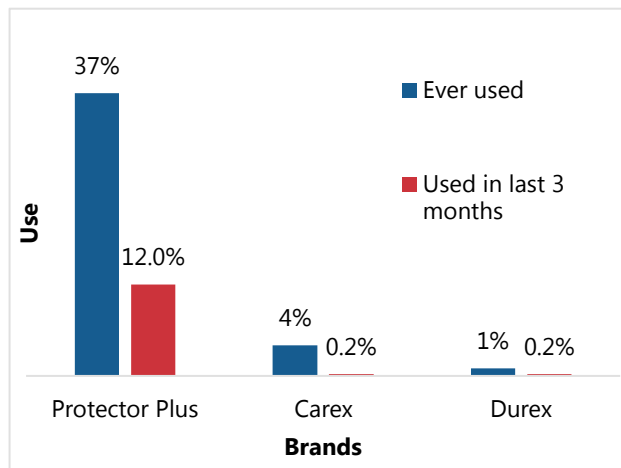
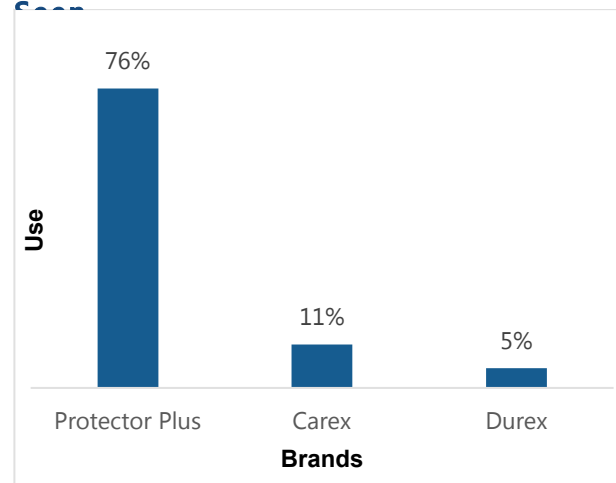


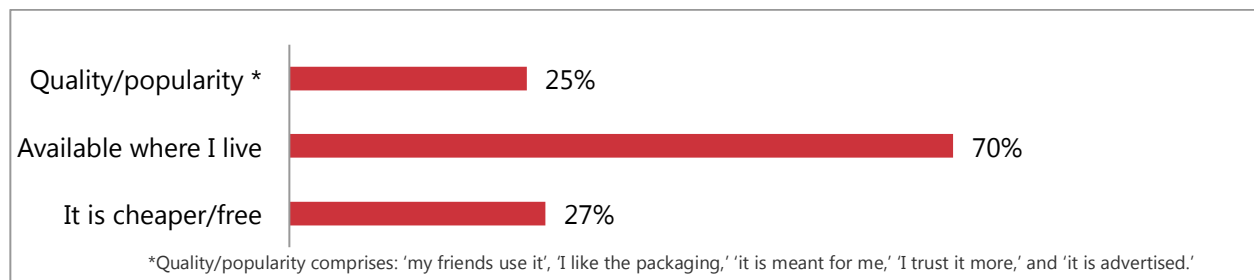
Figure 102. Priced Brands that Users of Free Condoms Had Heard of or



Reasons for Using Free Condoms Most Often

When men were asked why they mainly used free condoms, only 27 percent attributed their choice to low or no cost; most (70%) cited availability near to where they lived (Figure 103). This suggests that cost may not be the main driver of the choice to use free condoms.

Figure 103. Reason(s) for Choosing Condom Type



Willingness to Pay

Figure 104 presents actions that users of free condoms would take if free condoms were unavailable at their typical source. While 42 percent would look for free condoms elsewhere and 39 percent would purchase condoms nearby (i.e., 81% would try to continue using condoms), 15 percent reported they would stop having sex and 4 percent would cease using condoms. Of those who would try to continue using condoms, Figure 105 shows that 61 percent would be willing to pay the current price of a Protector Plus 4-pack (\$0.30). Of note is that this approach to assessing willingness to pay is likely to understate the maximum amount that individuals would be willing to pay. Also, as in South Africa, it is possible that the large proportion of men who report that they would look for free condoms elsewhere is more a reflection of consistent and wide availability of free condoms than an inability to purchase condoms.

Figure 104. Actions Cited by Users of Free Condoms when Free Condoms are Unavailable

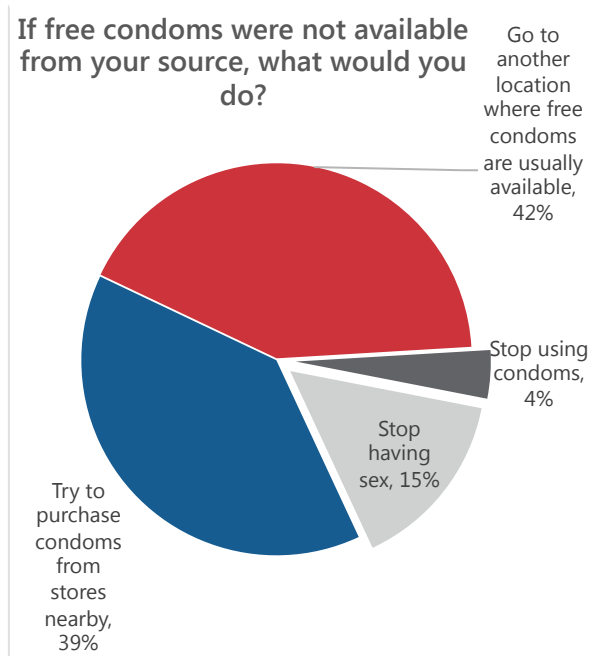
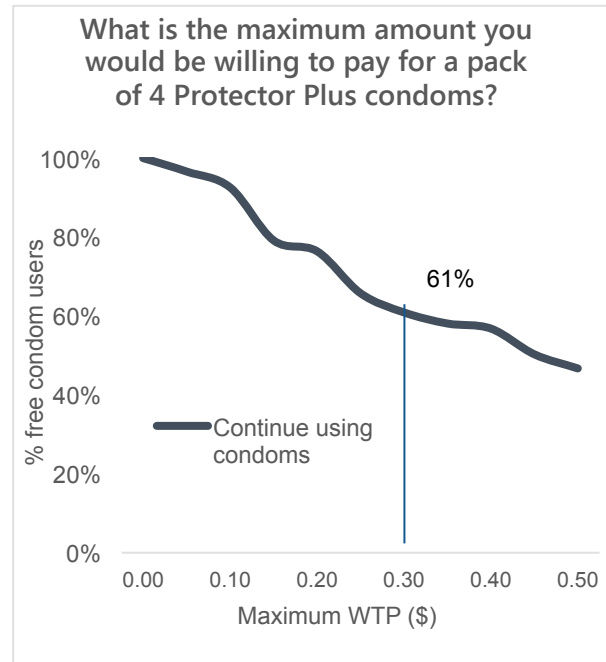


Figure 105. Willingness to Pay for Protector Plus 4-Pack among Users of Free Condoms



The AIDSFree team used the Van Westendorp PSM approach to estimate consumer willingness to pay for condoms based on the perceived values of different condom brands. Figure 106 presents two curves: a price below which Protector Plus would be considered too cheap and perhaps of suspect quality (red), and a price above which it would be considered too expensive to buy regardless of its perceived quality (blue). The intersection of the two lines is the optimal price, being the point at which the fewest number of respondents reject the brand for either reason. The survey found \$0.25 to be the optimal price, which was rejected by 11 percent of men who preferred free condoms.

The curves in Figure 107 represent the price below which most users would accept the brand as “not expensive” (gray) and the price above which users would accept the brand as “not a bargain” or above minimum expected price (light blue). The intersection, referred to as the indifference price, was \$0.30, a price that 77 percent of free users would accept. The two graphs together show that users are willing to pay between \$0.25 and \$0.30—similar to the current market price of Protector Plus.

Figure 106. Free Users' Optimal Price for Protector Plus

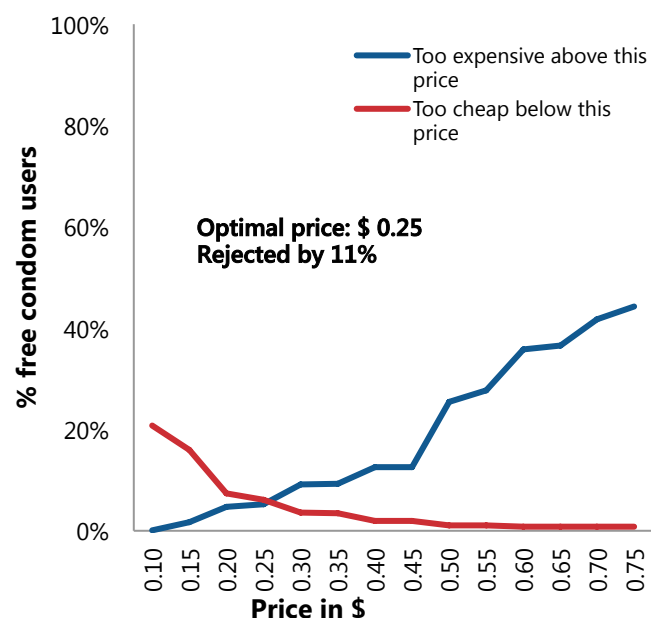
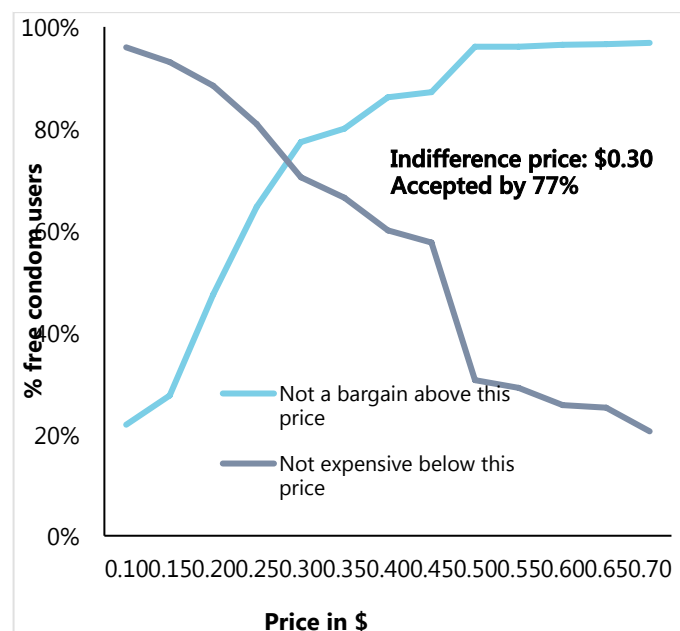


Figure 107. Free Users' Indifference Price for Protector Plus



Summary: Men Who Use Free Condoms Most Often

The AIDSFree research team concluded that there would be a low risk of decline in condom use if supplies of free condoms were restricted, as long as Protector Plus continued to be widely available to customers at a price of \$0.25–\$0.30 for a 4-pack. This conclusion is based on the following:

- Supplies of free condoms exceeded their use by a factor of nearly two.
- Users of free condoms attributed a value to Protector Plus similar to its current market price.

Men Who Use SM Brand(s) of Condoms Most Often

This section examines the following question: If the price of SM brand(s) of condoms were increased, would those who use these condoms discontinue using condoms, or would they switch to other condom brands? Thus, all data and analyses presented in this section focus only on men who reported using an SM brand of condoms (i.e., Protector Plus) most often.

Prior Use of Commercial Brands of Condoms

Only 15 percent of SM brand users in the Zimbabwe sample reported having ever used a commercial brand, only 2 percent in the three months preceding the survey (Figure 108). Of priced condom brands, including SM and commercial options, SM condom users demonstrated a strong preference for Protector Plus versus the commercial brands Carex and Durex (14% and 3%, respectively) (Figure 109).

Figure 108. Past Use of Commercial Brands by SM Brand Users

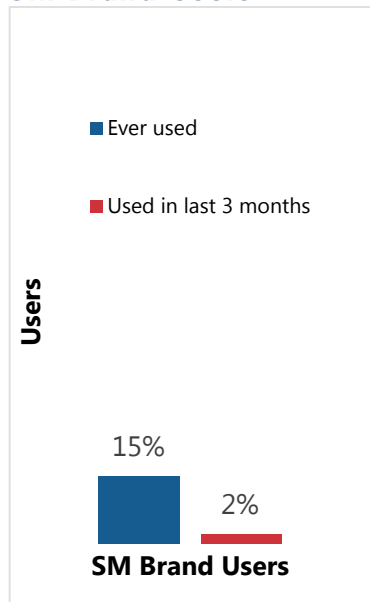
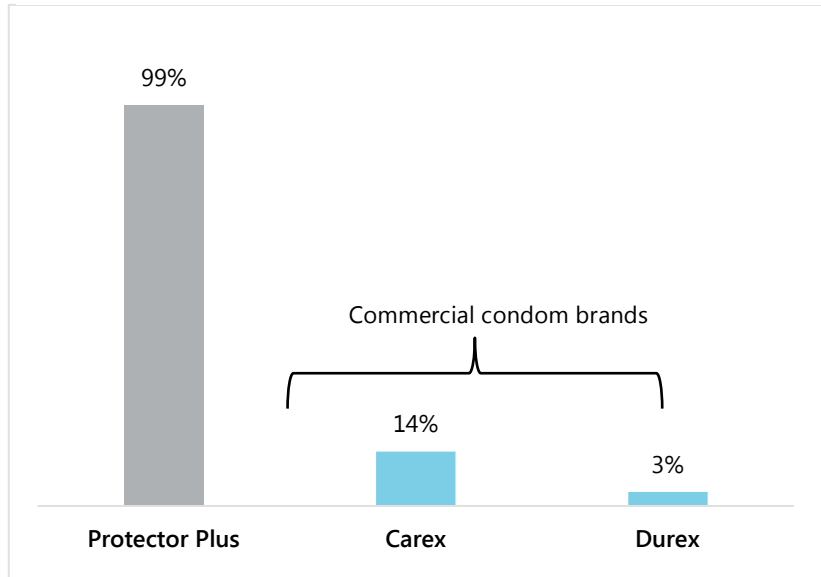


Figure 109. Main Brands Ever Used by SM Brand Users



Willingness to Pay

When the Van Westendorp approach was applied to assess SM users' willingness to pay for a 4-pack of Protector Plus, the findings showed willingness to obtain the brand at slightly above its current market price of 0.30. Figure 110 shows that the optimal price for Protector Plus was \$0.40, rejected by only 8 percent of SM users, while the indifference price of \$0.35 would be accepted by 75 percent. (Figure 111). These analyses suggest that there is currently room for a marginal price increase.

Figure 110. SM Users' Optimal Price for Maximum

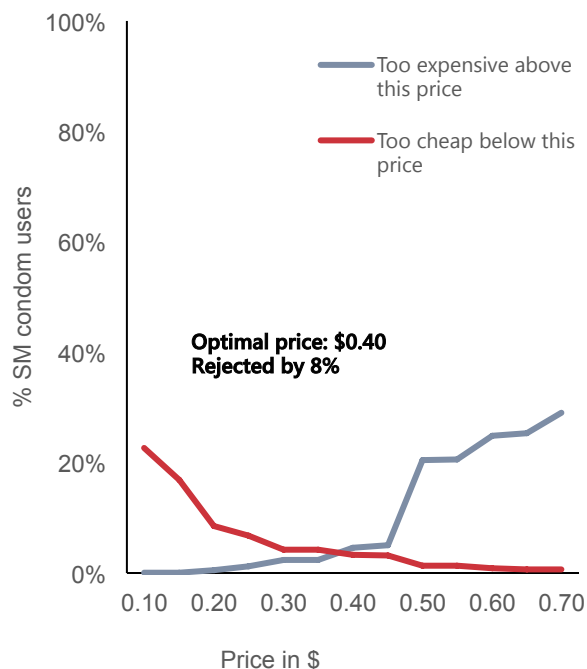
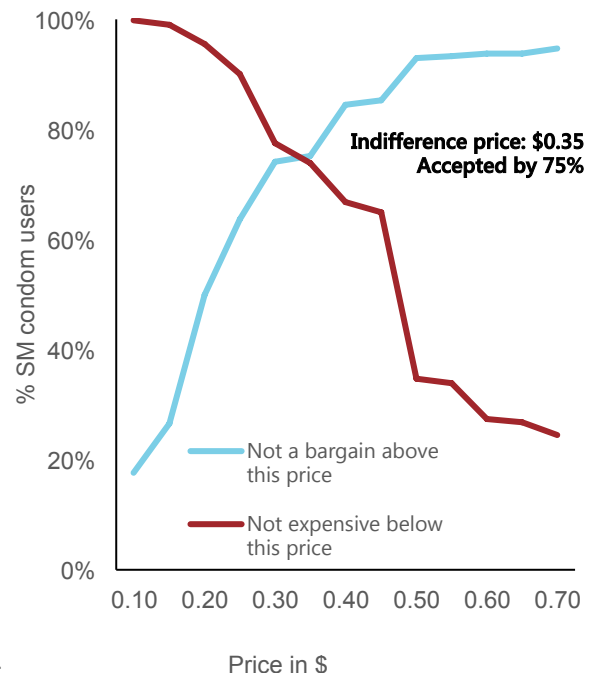


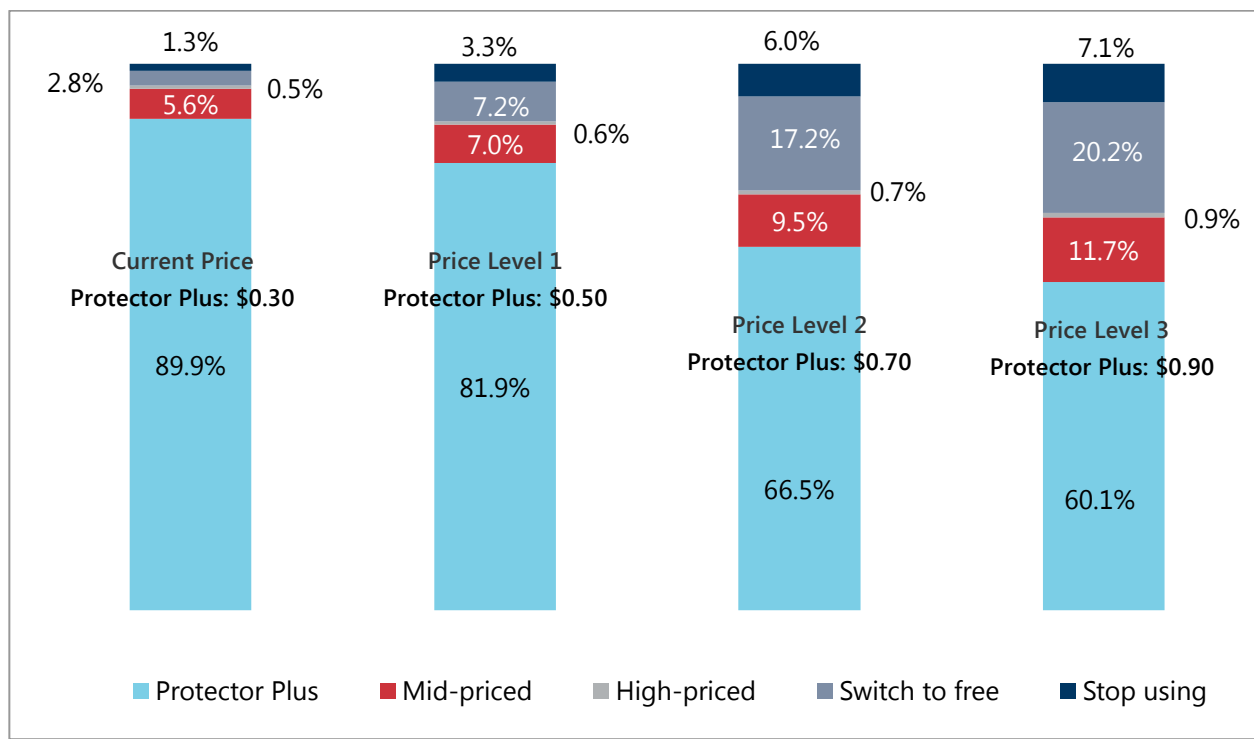
Figure 111. SM Users' Indifference Price for Maximum



To assess what users of SM brands of condoms would do if the price of their brand increased, AIDSFree used the discrete choice model. This model makes two assumptions: that all respondents are aware of all brands in the market, and that all brands are available in all outlets.

Figure 112 presents a simulation of consumer purchase preferences after increasing the price of Protector Plus, with no change in the prices of other brands. Results showed that a significant portion of SM users would switch to free condoms or stop using condoms altogether. At its current price of \$0.30, Protector Plus would be the preferred choice of 90 percent of respondents. Yet if the SM brand price increased, significant proportions of those using SM brands would switch to free condoms or cease using them altogether. The commercial sector would be expected to grow from just over 6 percent to about 12 percent of SM users at the highest price point, while 20 percent would opt for free brands, thus well offsetting any market gains. These findings raise an alarm about the potential negative effects of increasing SM prices (other than marginal price increases) on the purchasing behavior of condom users in Zimbabwe.

Figure 112. Simulated Effect on SM User Purchase Preferences with SM Brand Price Increases



Summary: Men Who Use SM Brands of Condoms Most Often

The AIDSFree research team concluded that there would be a medium-high risk of decline in condom use, or an increased burden on free supplies from the public sector, if the price of SM condoms were increased beyond its current price of \$0.30 to \$0.50 for a 4-pack. The findings also

suggest that the market may be able to bear a marginal price increase (from \$0.30 to \$0.35 for a 4-pack). This conclusion is based on the following:

- Those who use SM condoms most often ascribed a value to Protector Plus slightly above its current market price. However, simulations suggested that if the price of Protector Plus were increased (other than a marginal price increase between its current price and \$0.50 per pack), a substantial proportion would either stop using condoms or switch over to free condoms.
- The AIDSFree team noted that given the relatively lower price of Protector Plus, it is likely to be subsidized. However, evidence from the assessment does not support strategies to increase the brand's price with the aim of graduating it from donor support in the near future.

Strategies to Increase Volume and Value Share of Commercial Sector

This section examines which actions or scenarios would be likely to increase volume and value share of the commercial sector for condoms. The research modeled the outcomes of three scenarios:

- Increasing the price of SM brands
- Reducing the price of commercial brands
- Introducing smaller packaging units of commercial brands.

The AIDSFree team defined the commercial sector for condoms as the sum total of all condoms brands being marketed by for-profit organizations in country, i.e., all priced brands, excluding those marketed by SMOs. Since a growth in the commercial sector is most likely to come from motivating those who use SM condoms to use commercially marketed condoms, all analyses in this section focused on those who reported using either an SM condom brand or a commercial brand most often (and thus excluded those who used free condoms most often).

For each of the strategies tested, the team researched the outcomes in terms of three criteria:

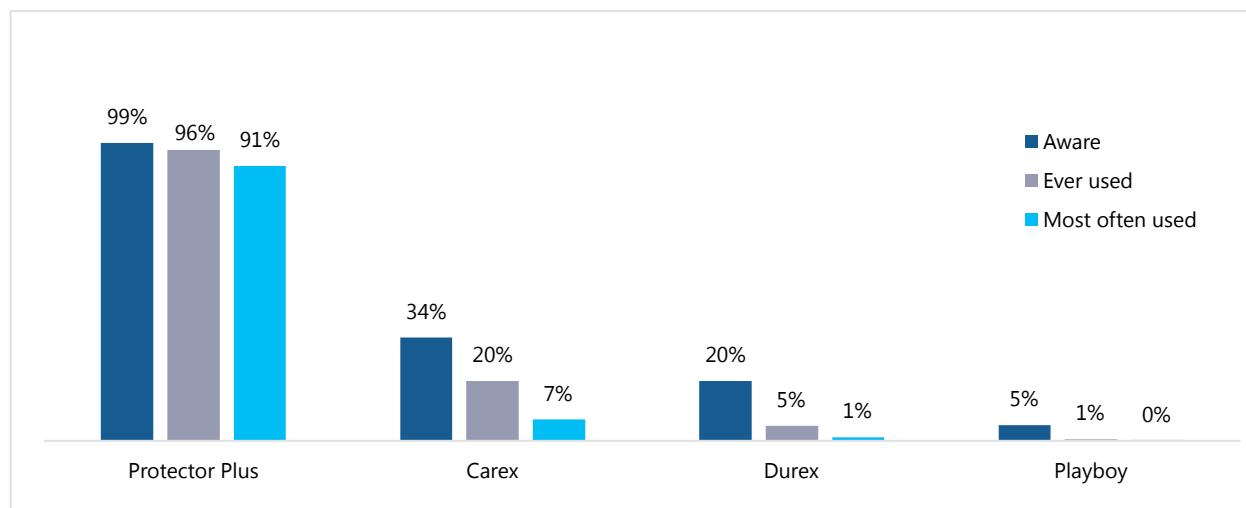
1. *Improved market sustainability*: a substantial increase in the volume of the total commercial sector
2. *Low risk to public health outcomes*: no more than a marginal increase in the proportion who would opt for free condoms
3. *Market-driven rationale for the brand(s) concerned to undertake the strategy*: a substantial increase either its market volume or market value without a more than a marginal decline on the other (either market value or market volume)

Overview of the Priced Condom Market

Protector Plus, Zimbabwe's only SM brand, dominated condom choices among men who use priced condoms (including SM and commercial brands). The brand had almost universal awareness (99%) and ever-use (96%), and was the preferred brand of nine of ten users of priced condoms. Of

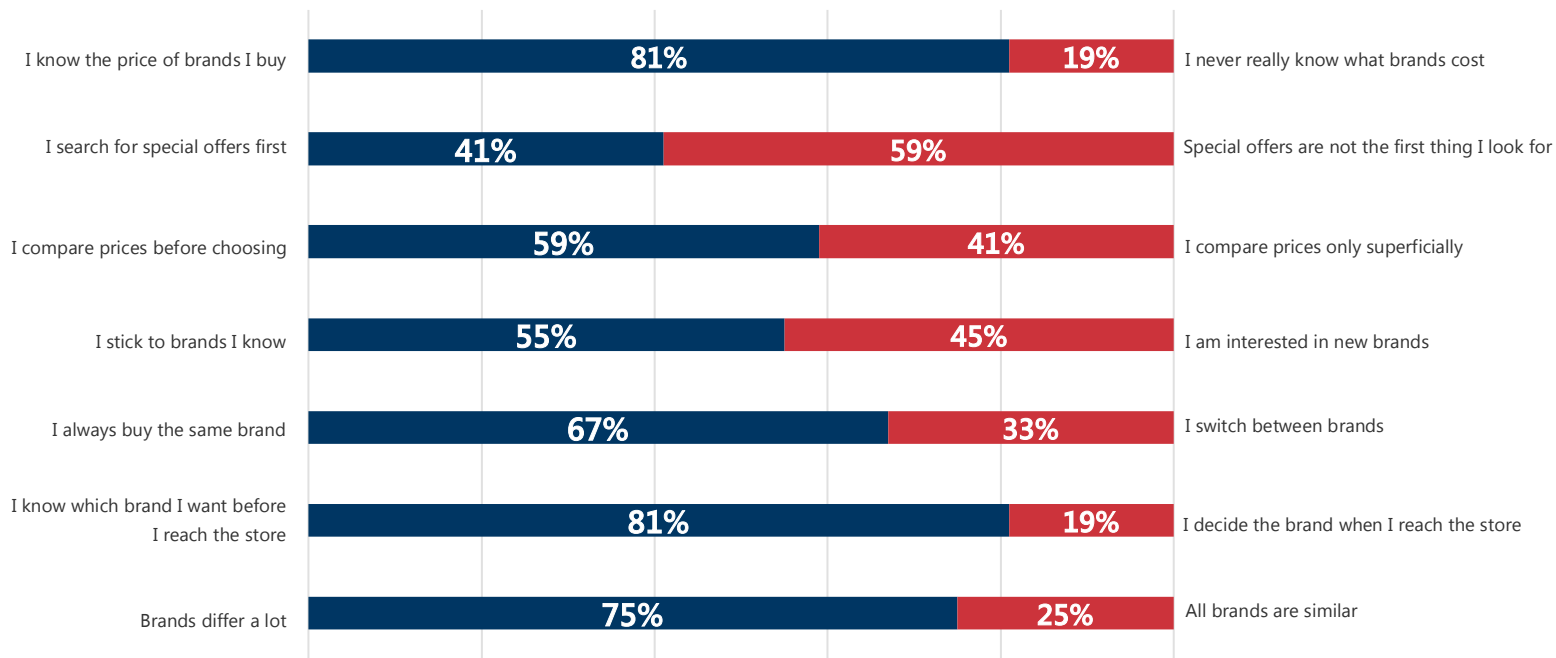
the commercial brands, Carex was known to one-third of respondents, followed by Durex (20%) and Playboy (5%). Ever-use of commercial brands tracked a similar trend (Figure 113).

Figure 113. Awareness and Use of Leading Priced Brands



Researchers assessed attitudes toward purchase of condom brands by asking respondents to choose between various pairs of statements. The results, in Figure 114, showed that most Zimbabwean condom buyers considered themselves value-oriented in their condom purchase habits (i.e., price-aware and brand-loyal rather than price-oriented). The first statement relates to price awareness, and shows that most respondents (81%) consider themselves aware of brand prices. The second group of statements, focused on price sensitivity (i.e., price consciousness, and a propensity to search for deals), indicated that Zimbabwean condom buyers did not consider themselves price-oriented. The third group of statements focuses on brand loyalty. More than three-quarters of respondents noted differences between the brand options and 67 percent said they always bought the same brand.

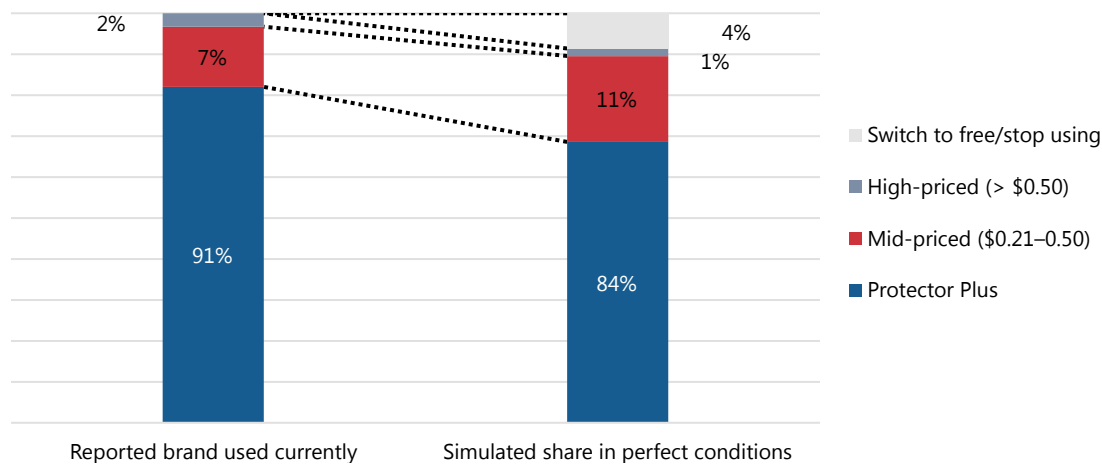
Figure 114. Purchase Attitudes of Users of Priced Condom on Condom Choice



Respondents: users of an SM or commercial brand of condoms most often (unweighted n=751)

As mentioned earlier, the discrete choice model assumes that all respondents know of all brands in the market, and that these brands are all available in all outlets. The stacked bars in Figure 115 compare reported brand used (in direct questioning) against a simulated output from the discrete choice model at current market prices. This comparison provides insights into how improved availability and awareness could impact brand shares. Under the perfect conditions assumed in the discrete choice model, Protector Plus maintained a significant market share, though dropping from 91 percent to 84 percent. Mid-priced commercial brands (\$0.21–\$0.50) gained some market share, from 7 percent to 11 percent, suggesting that these brands may be hindered by low awareness and limited distribution and availability.

Figure 115. Comparison of Condom Market Share Under Current Conditions Versus Simulation Where Respondents Are Aware of All Brands and Prices



Effect of Increasing the Price of Protector Plus on the Priced Condom Market

If the price of Protector Plus increased by 15 percent (Figure 116), the market share of this SM brand would fall dramatically from 84 percent to 56 percent. The share of commercial brands would increase 1.5 times, from 12 percent of market share at current prices to 18 percent. However, there would also be a spike in those using free condoms or no condoms from 4 percent to 26 percent. Thus, this strategy does not meet the criteria outlined earlier in the section.

Figure 116. Impact on Total Priced Market if Price of SM Brands Were Increased



Effect of Decrease in Price of High-Priced Commercial Brands on the Priced Condom Market

As shown in Figure 117, when the price of high-priced commercial brands is reduced, the overall share of the total commercial sector remained virtually unchanged. Even with a 50 percent price

reduction, the total commercial sector share remained at 12 percent of the total priced market. However, the high-priced commercial segment would triple its volume share and increase its market value by more than 250 percent (Figure 118). Thus, this strategy meets the criteria outlined earlier in the section.

Figure 117. Share of Condom Segments with Price Reduction in High-Priced

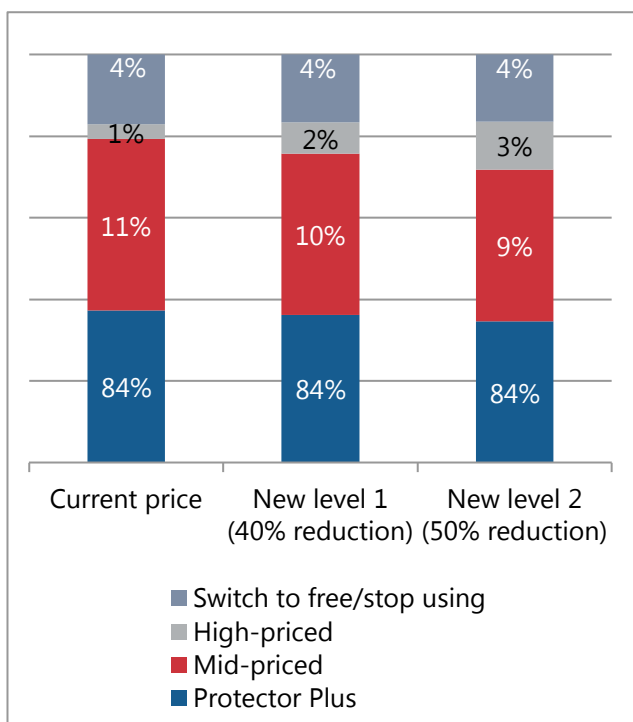
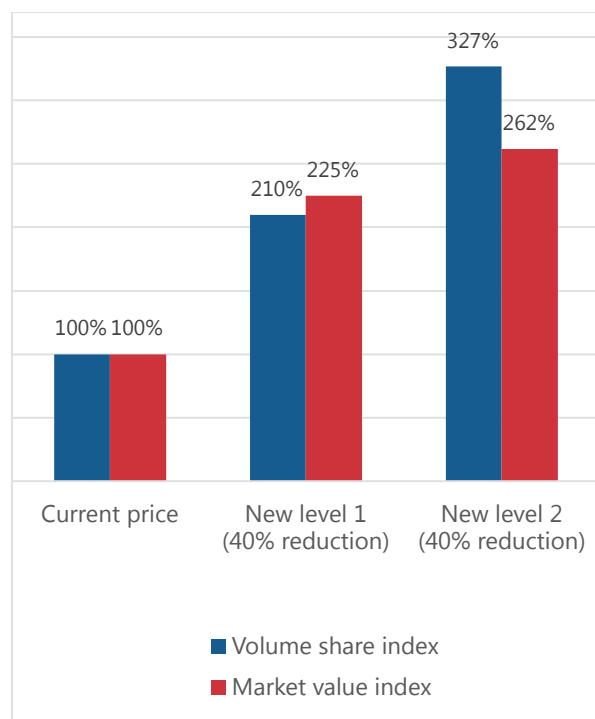


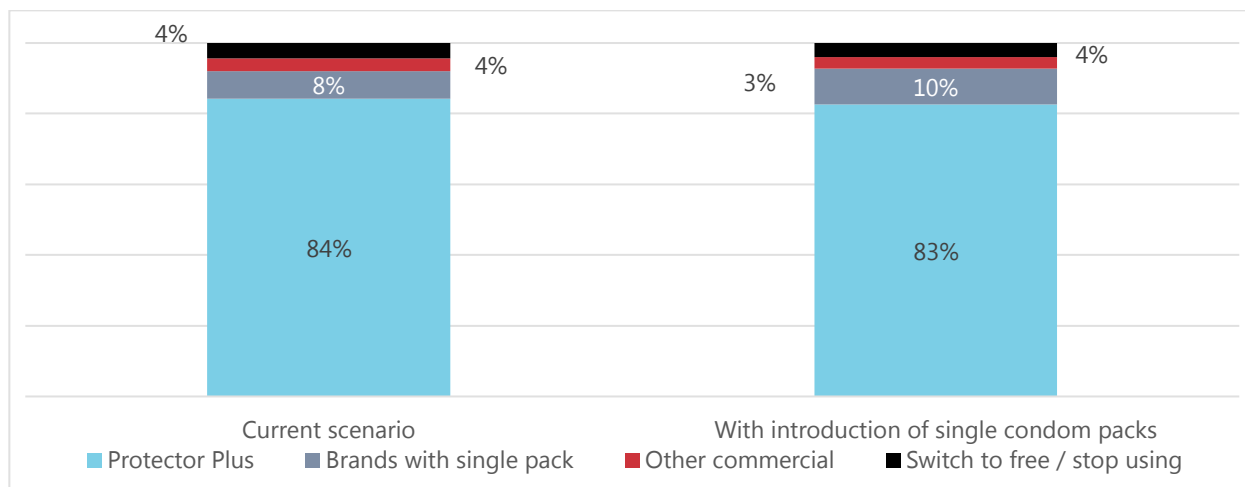
Figure 118. Volume and Gross Revenue of High-Priced Condom Segment Indexed to Current Scenario



Effect of Introducing a Single Pack on the Priced Condom Market

Introducing a smaller-size pack of a commercial brand (Figure 119), would leave the commercial sector's share largely the same. In this case, Carex and Durex were tested for single-pack options. According to the model, the single-pack brands would grow marginally in share, from 8 percent to 10 percent. Thus, this strategy does not meet the criteria outlined earlier in the section.

Figure 119. Introduction of Single-Pack Sizes for Two Commercial Brands



Summary: Strategies to Increase Volume and Value of the Commercial Market

The AIDSFree research team concluded that motivating high-priced brands to reduce their price using evidence from this survey is the most promising strategy based on the following:

- Increasing the price of SM brands results would likely increase the share of the commercial sector, but at the unwelcome cost of decreased condom use and/or increased burden on the public sector for free condoms.
- A decrease in the price of high-priced condoms would likely result in increased volume shares and market value of these specific brands (and overall market value of the commercial sector).
- If smaller pack sizes were introduced, the specific brands introducing these variants would benefit marginally in value and volume. However, the overall share of the commercial sector would remain the same.

Discussion and Recommendations

Key findings from the Zimbabwe willingness-to-pay survey are:

- Current supplies of free condoms exceed use of free condoms by a factor of nearly 2. Aligning levels of supply to current levels of demands poses negligible risks, and would likely improve efficiencies and reduce wastage.
- Men who use free condoms most often are willing to pay \$0.25–\$0.30 for a 4-pack of Protector Plus, similar to its current market price. Thus, if the current price of Protector Plus is maintained, reducing supplies of free condoms below the current level of use of such condoms would lead these men to graduate to Protector Plus.
- Though Protector Plus is likely to be subsidized, increasing the brand's price to reduce the subsidy burden and attempt to graduate the brand would probably lead to undesirable outcomes:

- At an increased price, men who use free condoms would no longer be willing to pay the increased price.
- With more than a marginal price increase, a substantial proportion of men who use the brand most often would switch over to free condoms or stop using condoms altogether.
- A decrease in the price of high-priced condoms would likely result in increased volume shares and market value of these specific brands (and overall market value of the commercial sector).

Based on the findings, the AIDSFree research team recommends actions focusing on graduating men from free condoms to priced condoms, and motivating high-priced commercial brands to reduce their prices to increase their market value.

1. Continue to support Protector Plus, maintaining its current price levels.

There is room for a marginal increase in the price of Protector Plus, but such an increase may not enable the brand to graduate from donor support. The current price of Protector Plus is commensurate with the price the market is able to bear; increasing the price substantially to achieve higher cost recovery rates would likely adversely affect the condom market. More importantly, maintaining the brand's current price allow for successful execution of strategies to enable free condom users to graduate to Protector Plus.

2. Align the supply of free condoms with levels of use.

AIDSFree's assessment suggests that supplies of free condoms greatly exceed their levels of use. Aligning levels of supply and use would enable improved efficiencies.

3. Gradually restrict the supply of free condoms further (below current levels of use of free condoms) while closely monitoring condom use.

AIDSFree's assessment suggests that there is sufficient willingness to pay for condoms among users of free condoms for them to graduate to Protector Plus—as long as this brand continues to be widely available at \$0.25–0.30 for a 4-pack. Restricting supplies in urban and higher-income areas could be a way of testing this conclusion, to see if users switch to priced condoms. Restricting free supplies would also help change market expectations, and grow sales of priced condom brands.

4. Use evidence from this survey to motivate high-priced condom marketers to reduce their prices.

Findings from the assessment suggest that if high-priced condom brands were to reduce their prices, they would gain in volume and market value.

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ANNEX A. WILLINGNESS-TO-PAY

SURVEY INSTRUMENT

Section 1: Respondent Background Characteristics

ASK FOR RESPONDENT SELECTED FROM HOUSEHOLD LISTING.

READ OUT: First, I would like to ask you some questions about yourself.				
R01	Respondent's line number on Household Roster	_____		
R02	DELETE ROW			
R03	How old were you at your last birthday?	Age in Years _____		
R04	What is your marital status?	Single Married Cohabiting Divorced/Separated Widowed	1 2 3 4 5	
R05	What is the highest level of education you have completed?	None Nursery/kindergarten/preschool Primary (complete) Primary (incomplete) Secondary (complete).. Secondary (incomplete) Tertiary/vocational... College/university Adult education Other specify.	0 1 2 3 4 5 6 7 8 9	Skip to S01 Skip to S01 Skip to S01 Go to R06 Skip to S01 Go to R06 Skip to S01 Skip to S01 Skip to S01 Skip to S01
R06	Are you currently attending primary or secondary school?	Yes No	1 0	

Section 2. Respondent Sexual History

ALL RESPONDENTS				
READ OUT:				
"I am now going to ask some questions about your sexual history and relationships in the last 12 months. I know it may be difficult to remember exactly, but I would like to ask you to answer the questions to the best of your knowledge, as this information is very important for the survey. Again, this information is completely private and anonymous and cannot be linked to you or any partner in any way"				
S01	Have you ever had sexual intercourse?	No Yes No response	1 2 99	If No/no resp, Terminate.
S02	How old were you when you first had sexual intercourse?	Record age in years Don't know No response	— 98 99	
S03	When was the last time you had sex?	< 12 months ago. 12+ months ago. Can't remember....	1 2 99	Terminate Terminate
S04	Have you ever used a male condom?	No Yes Don't know No response	1 2 98 99	Terminate Terminate Terminate
S05	When was the last time you used a male condom?	Within last 4 weeks >1 to 3 months ago >3 to 6 months ago >6 months ago No response	1 2 3 4 99	Terminate Terminate Terminate
S06	Thinking about the last time you used condoms, to what extent did a desire to protect yourself from sexually transmitted infections or HIV motivate you to obtain condoms? Would you say... (READ OUT OPTIONS) SINGLE CODE	Not at all To some extent To a large extent Don't know / Can't say (v)	1 2 3 9	
S07	Thinking about the last time you used condoms, to what extent did a desire to protect yourself from an unintended pregnancy motivate you to obtain condoms? Would you say... (READ OUT OPTIONS) SINGLE CODE	Not at all To some extent To a large extent Don't know / Can't say (v)	1 2 3 9	

BRAND LIST Applicable for All Subsequent Questions.

Kenya	Nigeria	South Africa	Zambia	Zimbabwe	CODE
Free Condoms	Free Condoms	Free Condoms	Free Condoms	Free Condoms	100
Brand 1	Brand 1	Brand 1	Brand 1	Brand 1	101
Social Marketed	Social Marketed	Social Marketed	Social Marketed	Social Marketed	200
Brand 1	Brand 1	Brand 1	Brand 1	Brand 1	201

Brand 2	Brand 2	Brand 2	Brand 2	Brand 2	202
Brand 3	Brand 3	Brand 3	Brand 3	Brand 3	203
Brand 4	Brand 4	Brand 4	Brand 4	Brand 4	204
Brand 5	Brand 5	Brand 5	Brand 5	Brand 5	205
Brand 6	Brand 6	Brand 6	Brand 6	Brand 6	206
Brand 7	Brand 7	Brand 7	Brand 7	Brand 7	207
Commercial Brands	Commercial Brands	Commercial Brands	Commercial Brands	Commercial Brands	300
Brand 1	Brand 1	Brand 1	Brand 1	Brand 1	301
Brand 2	Brand 2	Brand 2	Brand 2	Brand 2	302
Brand 3	Brand 3	Brand 3	Brand 3	Brand 3	303
Brand 4	Brand 4	Brand 4	Brand 4	Brand 4	304
Brand 5	Brand 5	Brand 5	Brand 5	Brand 5	305
Brand 6	Brand 6	Brand 6	Brand 6	Brand 6	306
Brand 7	Brand 7	Brand 7	Brand 7	Brand 7	307

Section 3. Condom Preference, Use, and Availability

This section is applicable to ALL RESPONDENTS 18+ years of age WHO HAVE USED A CONDOM IN THE PAST 3 MONTHS				
C01	Which of these brands of condoms do you know at least by name? SHOW CARD: MARK ALL MENTIONED	USE BRAND LIST Other, specify:		If none, terminate
C02	Which of these brands of condoms have you ever used? Script Notes: Only those that respondent is aware of in C01	USE BRAND LIST Other, specify:		
C03	Which of these brands of condoms have you used in the past 3 months? Script Notes: Only those that respondent is aware of in C01	USE BRAND LIST Other, specify:		
C04	Which of these brands of condoms have you used in the past 4 weeks? Only those that respondent is aware of in C01	USE BRAND LIST Other, specify:		
C06	I would like to confirm the brand of condom that you use most of the time? Script Notes (SHOW COMPLETE LIST) Interviewer (Show Card)	USE BRAND LIST Other, specify:		
C07	Who chooses this brand that you use most of the time?	Myself Partner Both	1 2 3	C08a C08b C08a
C08a	What are the main reasons you choose the [BRAND MENTIONED IN C06] most of the time? DO NOT READ OUT Multiple Response Allowed	It is cheaper It is available where I stay My friends use it I like the packaging It is meant for me		

		I trust it more I saw an advert Other Specify		
CO8b	What are the main reasons your partner chooses the [BRAND MENTIONED IN C06] most of the time? DO NOT READ OUT Multiple Response Allowed	It is cheaper It is available where I stay My friends use it I like the packaging It is meant for me I trust it more I saw an advert Other Specify		
C09	From what source do you usually buy or obtain condoms most often? Single response	Bar/Night club Kiosk/Spaza Lodging Duka/Small Shop/Cafe Street vendors Pharmacy/Chemists Supermarket Convenience stores Hospital/Clinic At work Other (specify) DK	1 2 3 4 5 6 7 8 9 10 977 988	
C10	Approximately how many minutes does it take FROM YOUR HOUSE for you to get condoms from your usual source? <i>Note: source referred to in C09.</i>			
C11	What means of transport do you usually use to get to your usual source of condoms? <i>Note: source referred to in C09.</i>	Walking Public transport Bicycle Motorbike Private Car/Taxi Other (Specify____)	1 2 3 4 5 977	
C12	Which brands of condoms are available at the place that you usually buy or obtain condoms from?	USE C01 BRAND LIST		
C13	Which of these condom brands would you consider using in the future? Select multiple response.	USE C01 BRAND LIST		

Section 4. ValueManager Assessment

APPLICABLE TO USERS OF SM AND COMMERCIAL BRANDS.

Select based on responses in C06

VM1. On average, how frequently do you buy Condoms?	
Every day	360
Every second day	180
2 times a week	100
Once a week	50
Once every 2 weeks	25
Once a month/every 4 weeks	12
Once every 2 to 3 months	5
Less often	0

VM2. Which of the following brands of condoms have you ever bought yourself?	
//PM: Ask for brands, not for each product per brand..//	
SHOW ALL KNOWN BRANDS (ACC. TO C01). SHOW PICTURES.	
CODE ALL MENTIONED.	
USE BRAND LIST	
Other, specify:	
None of these	TERMINATE

The next questions are still about buying condoms.

LAST FIVE PURCHASES	
FILTER: ASK ONLY IF MORE THAN ONE BRAND MENTIONED IN VM2 (BRANDS EVER BOUGHT)	
VM3. Of the last 5 times you purchased condoms, roughly how many times did you buy each of these brands? Please note that the total for all brands must equal 5.	
//PM: Ask for brands, not for each product per brand..//	
SHOW ALL BRANDS EVER BOUGHT (ACC. TO VM2). SHOW PICTURES.	
SCRIPTING: NUMERIC ENTRY (0-5) FOR EACH BRAND, TOTAL MUST ADD UP TO 5	
REFER TO BRAND LIST	--

FILTER: ASK IF 2 OR MORE BRANDS RECEIVED THE SAME HIGHEST SCORE IN VM3 (LAST 5 PURCHASES)	
VM4. And which of these brands do you buy most often?	
SHOW BRANDS WITH HIGHEST SCORE IN VM3 (LAST 5 PURCHASES). SHOW PICTURES.	
SINGLE CODE.	
REFER TO BRAND LIST	

VM5. All things considered, how do you rate the performance of this brand?	
SHOW MAINLY BOUGHT BRAND ACCORDING TO VM3/VM4. SHOW PICTURE.	
SINGLE CODE.	
REFER TO BRAND LIST	

Excellent	5
Very good	4
Good	3
Fair	2
Poor	1

TRIM INDEX QUESTION 2: PREFERENCE

FILTER: ALL

VM6. How strongly do you prefer this brand to any others?

SHOW MAINLY BOUGHT BRAND ACCORDING TO VM3/VM4. SHOW PICTURE.

SINGLE CODE.

REFER TO BRAND LIST

Extremely strongly	5
Very strongly	4
Strongly	3
Only slightly	2
No preference	1

BRAND PRICE PERCEPTION

FILTER: ALL

VM7. How do you feel about the PRICE of this brand in comparison to others that are currently available?

ASK FOR ALL KNOWN BRANDS (ACC. TO CO1). IF MORE THAN 8 BRANDS ARE KNOWN, ASK FOR A RANDOM SELECTION OF 8. SHOW PICTURES.

SHOW BRANDS IN RANDOMISED ORDER IN A GRID OR ON SEPARATE SCREENS.

SINGLE CODE PER BRAND.

Compared to other brands available the price of this brand is ...

much lower	1
slightly lower	2
slightly higher	3
much higher	4

BRAND VALUE PERCEPTION

FILTER: ALL

VM8. How do you feel about the VALUE of this brand in comparison to others that are currently available?

ASK FOR ALL KNOWN BRANDS (ACC. TO CO1).

SHOW BRANDS IN RANDOMISED ORDER IN A GRID OR ON SEPARATE SCREENS.

SINGLE CODE PER BRAND.

Compared to other brands available this brand is...

worth much less	1
worth slightly less	2
worth slightly more	3
worth much more	4

PRODUCT PRICE ESTIMATION	
FILTER: ALL	
VM9. What was the price of the condom brand you bought most recently? If you do not know, please make a guess. If a guess is not made, code 0,00.	
// PM: We do not need to know which the most recently bought product is, and we will not use the stated price in the analysis. The purpose of the question is to focus the respondent on his own price awareness, and to enable us to ask the following two questions, which will help us understand his general level of price awareness.//	
SCRIPTING: OPEN NUMERIC, XX DIGITS //PM SPECIFY NUMBER OF DIGITS//	
Condom price	__ _ _ [currency]

RELATIVE PRICE KNOWLEDGE 1 (COMPETITOR PRICES)	
FILTER: ALL	
VM10. Compared to the next best condom brand you considered buying, was the price of the brand you most recently purchased higher or lower?	
SINGLE CODE	
I cannot say	1
This price was lower	2
This price was higher	3
The prices were equal	4

RELATIVE PRICE KNOWLEDGE 2 (PRICES OVER TIME)	
FILTER: ALL	
VM11. Compared to what this condom brand (bought most recently) usually costs, was the price you paid higher or lower?	
SINGLE CODE	
I cannot say	1
This price was lower	2
This price was higher	3
The prices were equal	4

The next questions are still about buying condoms.

BUYING HABITS AND ATTITUDES		
FILTER: ALL		
VM12. Which of these two opinions best describes how you feel when buying Condoms? Please choose the one on the left or the one on the right.		
SCRIPTING: SHOW PAIRS OF STATEMENTS IN UNROTATED ORDER:		
SINGLE CODE PER STATEMENT PAIR		
I think that brands differ a lot	or	I think that all brands are more or less the same
I always know exactly what brand I'm going to buy before I approach a vendor	or	I decide what brand I'm going to buy when I'm standing in front of the vendor
I almost always buy the same brand	or	I switch between different brands

I compare prices very carefully before I make a choice	or	To be honest, I compare prices only superficially
I always search for special offers first	or	Special offers are not the first thing I look out for
I always know the price of the brands I buy	or	I never really know what brands cost
I'm always interested in new brands	or	I prefer to stick to brands I know
I think that condoms need to be improved	or	I'm completely satisfied with the condoms as they are
I find it easy to make the right choice for me	or	I find it difficult to make the right choice for me

Section 5: Discrete Choice Model (DCM)

FOR USERS OF SM AND COMMERCIAL BRANDS (Ref. C06)

DISCRETE CHOICE MODEL (DCM) SECTION
FILTER: ALL
<p>VM13. Please imagine you want to buy CONDOMS. Which of the following products would you choose? If no product is acceptable to you, please select „None of these“.</p> <p>SCRIPT: Show all applicable brands</p> <p>CONDOMS SHOWCARD</p> <p>VM 14. Please think of the last time you bought Condoms - think of where you bought it and why. Now imagine that you are in the same situation again. Which of the following products would you choose in that kind of situation? If no product is acceptable to you, please select „None of these“.</p> <p>CONDOMS SHOWCARD</p>

FOR USERS OF FREE BRANDS (Ref. C06)

DC01	<p>If free condoms were not available from [source from where respondent usually obtains free condoms SHOW Response from c09], what would you do?</p> <p>Prompt</p>	<ol style="list-style-type: none"> 1. Stop using condoms 2. Go to another location where free condoms are usually available 3. Try to purchase condoms from stores nearby 4. Stop having sex 5. Other (Specify___) 		
DC01b	Why do you say so?	Verbatim		
DC02	<p>If [source from where respondent usually obtains free condoms SHOW Response from c09] does not have free condoms and Trust is available in a store nearby, would you be willing to pay Price (See Below) to purchase a pack of 3 condoms?</p> <p>Price</p> <p>South Africa: 8 Rands</p> <p>Kenya : 50 Shillings</p> <p>Nigeria : 50 Nira</p>	<ol style="list-style-type: none"> 1. Yes 0. No 		<p>DC03</p> <p>DC05</p>

	Zambia: Zimbabwe:			
DC03	If Yes: Would you be willing to pay [Round Price DC02+ 20% of Price DC02]? South Africa: 10 Rands Kenya : 75 Shillings Nigeria : 50 Nira Zambia: Zimbabwe:	1. Yes 0. No		DC04 DC07
DC04	If Yes: Would you be willing to pay [Round Price DC02+ 50% of Price DC02]? South Africa: 12 Rands Kenya : 50 Shillings Nigeria : 50 Nira Zambia: Zimbabwe:	1. Yes 0. No		DC07 DC07
DC05	If NO would you be willing to pay [Round Price DC02- 20% of Price DC02]? South Africa: 6 Rands Kenya : 40 Shillings Nigeria : 50 Nira Zambia : Zimbabwe :	1. Yes 0. No		DC07 DC06
DC06	If NO would you be willing to pay [Round Price DC02- 50% of Price DC02]? South Africa: 4 Rands Kenya : 25 Shillings Nigeria : 25 Nira Zambia: Zimbabwe:	1. Yes 0. No		DC07 DC07
DC07	What's the maximum amount you will be willing to pay?	[NUMBER STRING]		

Section 6. Brand Attributes

APPLICABLE TO ALL RESPONDENTS

Now I would like to ask you a few questions about the following four brands of condoms.

SCRIPTOR Ask for max of 4 brands:

1. if user of free condoms: ask for free condoms, and one randomly selected brand the respondent is aware of from each of SM, mid-priced and premium commercial

2. if user of SM or commercial brands: ask for most often bought brand (vm3/vm4), and one randomly selected brand from other three categories that they are aware of

I am going to read out a statement and I would like you to tell me to which, if any, of these brands the statement applies. You can mention as many or as few brands as you like, and there is no right or wrong answer, we are simply interested in your opinion (ONLY BRANDS THAT THE RESPONDENT WAS AWARE OF)

Note: rotate the order in which the statements are asked

		[BRAND LIST]	
BA01	Is good value for money		
BA02	Is truly different from other brands		
BA03	Is worthy paying a bit more for		
BA04	Has good prize promotions		
BA05	Comes in affordable pack sizes		
BA06	Reflects your social status		
BA07	A brand that's been a leader through the years		
BA08	A brand one can trust		
BA09	A brand that knows what you need		
BA10	A brand you feel comfortable using		
BA11	A brand with some happy memories for you		
BA12	A prestigious brand		
BA13	A good choice as far as other people are concerned		
BA14	More expensive than other category in the market		
BA15	Is a consistently high quality product		
BA16	A brand for everyone		

Section 7. Brand Price Perception

APPLICABLE TO ALL RESPONDENTS

	H01	H02	H03	H04	H05
*Brands should be same as previous section on brands attributes excluding free	Now can you imagine, about how much would you expect a packet of BRAND	Can you tell me at what price you consider a packet of	Now can you tell me at what price you would consider a	At what price would you consider a packet of BRAND OF	And at what price would you consider a packet of BRAND OF

[H05<H04] [H04>H03] [H02<H03] [Use Price List]	OF CONDOM to cost where you normally buy condoms?	BRAND OF CONDOM to be a bargain, a great buy for the money?	packet of BRAND OF CONDOM to be expensive, but still worth buying?	CONDOM to be so expensive that you would not consider buying it?	CONDOM to be so cheap that you would question the quality?
SM Brand					
Mid-Priced Commercial					
Premium Commercial					
*Brands should be same as previous section on brands attributes excluding free					

Section 8: Social Economic Status

APPLICABLE TO ALL RESPONDENTS

LSM / SEC SCORING GRID

S/No	DESCRIPTION	LSM_Valu e
1	Do you have a colour TV?	15
2	Did you access the internet during the past 4 weeks?	49
3	Do you have a satellite dish/ DSTV/cable TV subscription?	34
4	Do you have a built-in kitchen sink in your kitchen?	31
5	Do you have a microwave oven?	32
6	Did you read a newspaper in the last 7 days?	12
7	Do you have a video recorder?	13
8	Do you have a cell phone/mobile phone with a working line?	16
9	Do you have an electric iron?	14
10	Do you have a personal computer for your own personal use at home?	34
11	Do you have a fixed telephone line at home or an outstanding application for one?	11
12	Did you watch TV in the last 7 days?	10
13	Do you have access to email?	41
14	Do you have an automatic washing machine?	32
15	Do you have refrigerator?	15
16	Do you have a hi-fi or music center?	17
17	Do you have a free-standing deep freezer?	19
18	Do you have a video camera/camcorder?	35
19	Do you have an account with a commercial bank?	12
20	Do you live in a house, cluster house or condominium	11
21	Did you buy adult clothing in the past six months?	10
22	How many cars do you have in your household? One	12
23	How many cars do you have in your household? Two or more	24
24	Constant	22

Total score:

INTERVIEWER DOES NOT NEED TO ADD THESE IN FIELD

If total score is	LSM Group			
Up to	37	01	E	
38	to	54		02
55	to	70	03	D
71	to	87	04	
88	to	103	05	C2
104	to	120	06	
121	to	153	07	
154	To	186	08	
187	To	219	09	C1
220	To	252	10	
253	To	285	11	
286	To	318	12	
319	To	352	13	
353	To	385	14	

386	To	418	15	AB
419	To	451	16	
452	To	999	17	

ONLY ONE CODE

SEC AB	1
SEC C1	2
SEC C2	3
SEC D	4
SEC E	5

Socioeconomic Status Using the DHS Approach

	Question	Kenya	Nigeria	Zambia	Zimbabwe
DHS01	Does your household have electricity?	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No
DHS02	an electric iron?	n/a	1. Yes 2. No	n/a	n/a
DHS03	a fan	n/a	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No
DHS04	a refrigerator	n/a	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No
DHS05	a generating set?	n/a	1. Yes 2. No	n/a	n/a
DHS06	a cable TV?	n/a	1. Yes 2. No	n/a	n/a
DHS07	a television?	1. Yes 2. No	n/a	1. Yes 2. No	1. Yes 2. No
DHS08	a sofa set?	1. Yes 2. No	n/a	1. Yes 2. No	n/a
DHS09	a cupboard?	1. Yes 2. No	n/a	n/a	n/a
DHS10	a DVD player?	1. Yes 2. No	n/a	1. Yes 2. No	1. Yes 2. No
DHS11	a radio?	1. Yes 2. No	n/a	n/a	1. Yes 2. No
DHS12	a table?	1. Yes 2. No	n/a	n/a	n/a

DHS13	a clock?	1. Yes 2. No	n/a	1. Yes 2. No	1. Yes 2. No
DHS14	What is the main material of the floor of your dwelling?	1. Cement 2. Earth/Sand 3. Other	1. Earth, Sand, Dung 2. Other	1. Earth, Sand, Dung 2. Concrete Cement 3. Other	1. Earth, Sand, Dung 2. Concrete Cement 3. Other
DHS15	What is the main material of the external walls of your dwelling?	1. Dung/Mud/Soil 2. Other	1. Cane/Palm/Trunks/dirt (mud) 2. Other	n/a	n/a
DHS16	What is the main material of the roof of your dwelling?	1. Thatch/grass/makuti 2. Other	n/a	1. Thatch/palm leaf 2. Other	1. Tiles 2. Asbestos 3. Thatch 4. Other
DHS17	What type of fuel/energy does your household mainly use for cooking?	1. Wood 2. LPG/Natural gas 3. Other	1. Wood 2. Kerosene 3. Other	1. Electricity 2. Other	1. Electricity 2. Wood/Straws/Shrubs/Grass 3. Other
DHS18	What is the main source of drinking water for members of your household?	n/a	n/a	n/a	1. Piped into dwelling 2. Other
DHS19	What kind of toilet facility do members of your household usually have?	1. No facility/bush/field 2. Other	n/a	n/a	1. Flush or pour flush toilet to piped sewer system. 2. Other
DHS20	Do you share this toilet facility with other households	n/a	n/a	n/a	1. Yes 2. No
DHS21	Does any member of this household have a bank account?	n/a	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No
DHS22	Does any member of this household own a watch?	n/a	n/a	n/a	1. Yes 2. No
DHS23	a car or truck	n/a	n/a	n/a	1. Yes 2. No
DHS24	a wheelbarrow	n/a	n/a	n/a	1. Yes 2. No

DHS25	a non-mobile telephone	n/a	n/a	n/a	1. Yes 2. No
DHS26	a computer in working condition?	n/a	n/a	n/a	1. Yes 2. No
DHS27	Does this household own any livestock, herds, other farm animals or poultry?	n/a	n/a	n/a	1. Yes 2. No

ANNEX B. SOURCE OF CONDOM USED WITH MOST RECENT PARTNER

Kenya

Data source: Kenya DHS 2014

Source	Percent
Government hospital	7.2
Government health center	6.0
Government dispensary	7.7
Other public	.6
Private hospital, clinic	1.6
Pharmacy/Chemist	17.3
Faith-based, church, mission hospital	.2
Family Options/FHOK clinic	.5
Other private medical	.2
Shop	48.4
Mobile clinic	.5
Community-based distributor	.8
Community health worker	1.0
Friend/Relative	3.6
Other	4.5
Total	100.0

Nigeria

Data source: Nigeria DHS, 2013.

Source	Percent
Public Sector	1.50%
Government hospital / health center	1.00%
Family planning clinic / mobile clinic	0.30%
Field worker	0.10%
Other public sector	0.10%
Private Sector	98.00%
Private hospital / clinic / doctor	0.40%
Pharmacy	11.50%
Chemist / PMS	76.50%
Shop	6.60%
Field worker / NGO	0.40%
Friend / relative	2.60%
Other	0.50%
Total	100%

South Africa

Note: most recent available DHS for South Africa was 2003. It was therefore not considered usable as a source to weight the South Africa survey sample for representativeness.

Zambia

Data source: Zambia DHS, 2013-2014.

Source	Percent
Government hospital	7.1
Government health center/post	34.4
Mobile hospital/clinic	.7

Family planning clinic	.1
Community-based agent/field worker	4.2
Other public	.4
Private hospital/clinic	.7
Mission hospital/clinic	1.0
Pharmacy	6.6
Community-based agent/field worker	.9
Mobile hospital/clinic	.0
Other private medical	.2
Shop	36.5
Church	.2
Friends, relatives	5.7
Other	1.2
Total	100.0

Zimbabwe

Data source: Zimbabwe DHS, 2015.

Source	Percent
Government hospital/clinic	7.5
Rural health center	16.4
Municipal clinic	7.3
Zimbabwe National Family Planning Council clinic	.1
Zimbabwe National Family Planning Council Community-based distributor/depot holder	.1
Village health worker	3.0
MOH and Child Care mobile clinic	.2
Mission hospital/clinic	1.3
Other public sector	.1
Private hospital/clinic	.4
Pharmacy	6.6
Private doctor	.2

Community-based distributor	.4
Private outreach clinic	.2
Other private medical sector	.1
General dealer	8.0
Supermarket/truck stop	24.1
Service station	.7
Bottle store/bar	11.0
Friend/relative	8.7
Public toilet	.2
Street vendor	.0
Workplace	2.1
OTHER	1.2
DK	.1
Total	100.0

ANNEX C. LIST OF CONDOM BRANDS AND MEDIAN PRICE

Kenya

Brand	Price/Unit (KSH)	Price/Unit (\$)	Pack Size	Price/Pack (KSH)
Trust Moja Moja	10	0.10	1	10
Salama Bomba, Kinga Imara Hali and Madhubuti	10	0.10	3	30
Protector	10	0.10	3	30
Romantic Love Rubber Rocket Type	10	0.10	3	30
Dume Zenye Hali Ya Juu	13	0.13	3	40
Salama Studs	17	0.17	3	50
Deluxe Flavored Luxury	17	0.17	3	50
Dume Condoms	17	0.17	3	50
Femiplan Strawberry Male Condom	17	0.17	3	50
Leo Dotted	17	0.17	3	50
Umbrella Studded	17	0.17	3	50
Zoom Scented Chocolate Flavored Studded Condom	17	0.17	3	50
Trust Maximum Protection and Studded	20	0.20	3	60
Deluxe Studded For Extra Pleasure	23	0.23	3	70
Bull Dotted Banana, Chocolate and Strawberry	28	0.28	3	84
Trust Triple Tested Classic, Ribbed and Scented	30	0.30	1	30
Deluxe Studded Flavored Banana, Strawberry	33	0.33	3	100
Life Guard Studded	33	0.33	3	100
Share Condoms Dotted	33	0.33	3	100
Durex Select Flavors	45	0.45	3	135
Share Condoms Thin	45	0.45	3	135
Gold Moods	50	0.50	3	150
M-Zone Anatomic Condom	50	0.50	3	150
Share Condoms Delay	50	0.50	3	150

Brand	Price/Unit (KSH)	Price/Unit (\$)	Pack Size	Price/Pack (KSH)
Unidus Butterfly, Penguun and Pussycat	50	0.50	3	150
Unidus Bull	57	0.57	3	170
Durex Extra Safe, Extra Ribbed	67	0.67	3	200
Euphoria Condom	67	0.67	3	200
Kama Sutra Condoms	67	0.67	3	200
Kingstyle Premium Condoms	67	0.67	3	200
Midnight Black	67	0.67	3	200
Spiked	67	0.67	3	200
Wet 'n' Wild Lubricated	67	0.67	3	200
Endurance	75	0.75	3	225
Erotica Ribbed	75	0.75	3	225
King Size Extra Large	75	0.75	3	225
Power Play	75	0.75	3	225
Durex Extra Pleasure, Feartherlite, Performa, Pleasuremax	77	0.77	3	230
Bareback	80	0.80	3	240
Durex Classic and Sensation	83	0.83	3	250
Rough Rider Studded Extra Sensation	83	0.83	3	250

Nigeria

Brand	Price/Unit (NGN)	Price/Unit (\$)	Pack Size	Price/Pack (NGN)
Natural Feeling	17	0.05	3	50
Gold Circle	18	0.05	4	70
Kiss	33	0.09	3	100
Etelson	33	0.09	3	100
Fiesta	33	0.09	3	100
Gold Circle Flex	33	0.09	3	100
Hero son	42	0.11	12	500
Jones	50	0.14	3	150
Shin Guard	50	0.14	3	150
Shoot	63	0.17	12	750

Brand	Price/Unit (NGN)	Price/Unit (\$)	Pack Size	Price/Pack (NGN)
Life Style	73	0.20	3	220
Shakara	77	0.21	3	230
Body Language	83	0.23	3	250
Fantasy	83	0.23	3	250
Romantic Love Rubber	83	0.23	3	250
Spicy Love	83	0.23	3	250
Umbrella	83	0.23	3	250
Contempo Midnight	93	0.26	3	280
Masculan	100	0.27	3	300
Flavors	110	0.30	3	330
Black king kong	130	0.36	10	1,300
Powdera	133	0.36	4	530
Bareback	150	0.41	3	450
Carex Classic	150	0.41	3	450
Rough Rider	150	0.41	3	450
Spicked	150	0.41	3	450
Impress	167	0.46	3	500
Durex	183	0.50	3	550
Erosex	198	0.54	10	1,980
Trojan	200	0.55	3	600
Okamoto	250	0.68	10	2,500
Pasante	250	0.68	12	3,000
Carex	270	0.74	10	2,700
Safe Rider	383	1.05	3	1,150
Durex Elite	550	1.51	12	6,600
Durex Latex Free	695	1.90	14	9,730

South Africa

Brand/s	Price/Unit ®	Price/Unit (\$)	Pack Size	Price/Pack ®
Contempo - Rough Rider	9.0	0.75	12	108
Contempo - Rough Rider	12.0	1.00	3	36
Contempo - Wet N Wild	12.0	1.00	3	36
Contempo - Bare Back	12.0	1.00	3	36
Contempo - Endurance	12.0	1.00	3	36
Contempo - Power Play	12.7	1.06	3	38
Dr.Lee - Rocky Passion Strawberry Studded	4.7	0.39	3	14
Dr.Longs	9.0	0.75	3	27
Durex - Fetherlite, Fetherlite Ultra, Extra Safe	10.4	0.87	12	125
Durex - Pleasure, Performa	11.7	0.97	12	140
Durex - Real Feel	13.8	1.15	12	165
Durex - Fetherlite, Fetherlite Ultra, Extra Safe	12.7	1.06	3	38
Durex - Pleasure, Performa	15.0	1.25	3	45
Durex - Select New	10.7	0.89	3	32
Durex - Real Feel	16.7	1.39	3	50
Lifestyle - Ultra Thin	6.0	0.50	3	18
Lovers Plus, Lovers Plus Colour Flavored	3.8	0.31	12	45
Lovers Plus, Lovers Plus Colour Flavored, Lovers Plus Ribb Studded, Lovers Plus Extra	5.3	0.44	3	16
Trust, Trust Studded	2.7	0.22	3	8

Zambia

Brand	Price/Unit (ZMW)	Price/Unit (\$)	Pack Size	Price/Pack (ZMW)
Chishango	1.7	0.17	3	5
Combat	1.7	0.17	3	5
Maximum	1.7	0.17	3	5
Trust	1.9	0.19	3	6
Fantasy	3.3	0.34	3	10
Man Force	3.3	0.34	3	10

Brand	Price/Unit (ZMW)	Price/Unit (\$)	Pack Size	Price/Pack (ZMW)
Moods	3.3	0.34	3	10
Sensation	3.3	0.34	3	10
Kama Sutra	5.0	0.51	3	15
Lifestyles	5.0	0.51	3	15
Rough Rider	5.0	0.51	3	15
Flavors	5.0	0.51	3	15
Carex	6.7	0.67	3	20
Endurance	8.3	0.84	3	25
Power play	8.3	0.84	3	25
Bare Back	8.3	0.84	3	25
Wet 'n' Wild	8.3	0.84	3	25
Durex	10.0	1.01	3	30

Zimbabwe

Brand	Price/Unit (\$)	Pack Size	Price/Pack (\$)
4 Play	0.50	3	1.5
Bare Back	0.50	3	1.5
Carex	0.40	12	4.8
Carex	0.45	3	1.36
Casanova	0.83	3	2.5
Durex	1.54	12	18.5
Durex	1.20	3	3.59
ESP	0.33	3	1
Moods	0.33	3	1
Play Boy	1.33	3	3.99
Protector Plus	0.08	4	0.3
Vibe	0.50	3	1.5
Wet 'n' Wild	0.50	3	1.5



JSI Research & Training Institute, Inc.
1616 Fort Myer Drive, 16th Floor
Arlington, VA 22209 USA
Phone: 703-528-7474
Fax: 703-528-7480
Web: aidsfree.usaid.gov