

CONFRONTING ILLCIT TOBACCO TRADE:



A GLOBAL REVIEW OF COUNTRY EXPERIENCES

BOTSWANA, LESOTHO, AND SOUTH AFRICA: AN
ANALYSIS OF ALCOHOL AND CIGARETTE PRICES IN
MASERU, GABORONE, AND NEIGHBORING SOUTH
AFRICAN TOWNS

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An Analysis of Alcohol and Cigarette Prices in Maseru, Gaborone, and Neighboring South African Towns

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Chapter Summary

The government of Lesotho plans to implement a levy on tobacco and alcohol products. The proposed measure is similar to levies that have been implemented in Botswana in recent years. A concern is the possibility that Lesotho's new levy may stimulate a significant increase in bootlegging between Lesotho and South Africa. This chapter investigates the presence and possibility of bootlegging between South Africa and Botswana, and South Africa and Lesotho, by describing the differences in cigarette and alcohol prices between Gaborone, Botswana, and the nearby South African towns of Mafikeng and Zeerust, as well as between Maseru, Lesotho, and nearby Ladybrand, South Africa.

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An analysis of comparative cigarette price data indicated the following:

Gaborone and Mafikeng/Zeerust. Overall, average cigarette prices are significantly higher in Gaborone than in nearby South African towns. The cheapest pack price found in Gaborone was nearly five times the cheapest price identified in South Africa.

Maseru and Ladybrand. Cigarette prices differ between Maseru and Ladybrand, but much less than between Gaborone and Mafikeng/Zeerust. In fact, for a number of pack sizes and outlet types, the price of cigarettes in Maseru is lower than in Ladybrand. Botswana's levy on tobacco products is a plausible reason for the far more acute cigarette price differences observed between Gaborone and neighboring South African towns.

An analysis of comparative alcohol price data indicated the following:

Gaborone and Mafikeng/Zeerust. Alcohol is significantly more expensive on the Botswana side of the border. The cheapest beer price observed in Botswana was more than double that in nearby South Africa. The difference could provide motivation for bootlegging alcohol products from South Africa to Botswana. However, we did not observe very low minimum prices in Gaborone, which might be expected if bootlegging were common.

Maseru and Ladybrand. Alcohol prices were found to be significantly higher in Ladybrand than in Maseru for each product category, so from the outset there is no significant motivation for bootlegging to Lesotho.

An analysis of local perceptions of cross-border trade indicated the following:

Gaborone border area: Informants' general perception is that, although there may have been bootlegging of cigarettes and alcohol into Botswana in the past, stricter border controls have limited this activity in recent years. Where alcohol and cigarettes travel from the Mafikeng area into Botswana, this is believed to be on a small scale, for personal consumption.

Maseru border area: Locals generally perceive that the price of alcohol and cigarettes is similar on either side of the border, thus there is little incentive to transport goods across the border for resale. One retail owner did admit to smuggling products into Lesotho, specifically certain alcohol products that have recently been banned from import, and cigarettes, as these are easy to hide.

The data and analysis show that despite levies of, respectively, 30 and 40 percent on tobacco and alcohol products in Botswana, smuggling is limited and has not even come close to equalizing prices between South Africa and Botswana. This indicates effective measures by customs and border control in Botswana, which limit the illegal movement of these goods. There have also been significant proceeds from the levies, which the government has earmarked to anti-tobacco and anti-alcohol initiatives.

If Lesotho introduces similar levies, it appears likely that the country could also obtain substantial revenues. Since Lesotho scores above the African region in terms of public management, smuggling of tobacco and alcohol from South Africa to Lesotho could probably be limited.

However, is it vital that Lesotho take complementary steps to strengthen customs administration. This is more important in the case of tobacco, where prices in Maseru are already above those in Ladybrand, than in the case of alcohol, where prices in Maseru are lower.

1. Introduction

The government of Lesotho plans to implement a levy on tobacco and alcohol products. A concern is the possibility that this may stimulate a significant increase in bootlegging between Lesotho and South Africa (SA). This possibility is heightened because both Lesotho and South Africa are part of the Southern African Customs Union (SACU) region, which implies free movement of goods and services between the two countries. Geographically, the capital of Lesotho, Maseru, neighbors the South African border, and is only about 15 km away from Ladybrand in South Africa.

The proposed levy is similar to the tobacco and alcohol levies that have been implemented in Botswana in recent years. Botswana is also a SACU member, and its capital, Gaborone, is also close to the South African border and various South African towns, for example Zeerust, which is approximately 50 km from the border.

This chapter investigates the presence and possibility of bootlegging between South Africa and Botswana, and South Africa and Lesotho, by describing the differences in cigarette and alcohol prices between Gaborone and nearby South African towns, as well as between Maseru and nearby Ladybrand. We also summarize the perceptions of locals about cross-border trade of alcohol and cigarettes. To do this, data on the price of cigarettes and alcohol have been collected in Maseru, Ladybrand, Gaborone, Zeerust and other small South African towns and villages close to the Botswana border. Furthermore, retailers, street vendors, consumers, and border post officials were interviewed about purchasing patterns in these areas and across these borders, to provide insight into local perceptions about bootlegging.

This chapter provides an analysis of the price data and the interviews, to inform the debate on the prospective alcohol and tobacco levies in Lesotho. The first section of the report describes the current structure of alcohol and tobacco taxes in Botswana, Lesotho, and South Africa. The second section gives geographical context to the study. The third section provides a summary of the data that have been collected. The fourth section of the chapter compares cigarette prices between Gaborone and South African towns near the Botswana border, as well as between Maseru and Ladybrand. In the fifth section, a similar analysis is done for the price of alcohol products in these regions. The sixth section summarizes the findings of the interviews with locals in these areas. An annex provides a detailed summary of the price data by brand and packaging. Given the similarities between Botswana and Lesotho in terms of the closeness of their capital cities to the South African border, the Botswana analysis can inform the Lesotho situation on the possible cross-border trade effects of the proposed levies.

2. Alcohol and Tobacco Taxes in South Africa, Lesotho, and Botswana

South Africa, Lesotho, and Botswana are all members of the Southern African Customs Union (SACU). Under the 1969 SACU Agreement, South Africa holds sole discretion in setting excise taxes and import tariffs, and thus the agreement extends South Africa's excise tax structure and rates to Botswana and Lesotho (SACU Agreement 1969).

The government of SA follows a formula-based approach to cigarette and alcohol excise taxation. For tobacco, each year the excise tax is increased by either the expected inflation rate or the amount required to maintain a 52 percent total tax burden on the price of the most popular price category (whichever gives the higher tax increase). Similarly, the excise taxes on beer and spirits are targeted at an excise burden of 23 and 36 percent, respectively (this excludes the VAT amount). The SACU countries apply the same specific excise taxes that are determined by South Africa.

For the 2017/18 financial year the tobacco excise tax is R14.30 (USD 1.10) per 20 cigarettes, while the alcohol excise taxes are R86.39 (USD 6.60)/liter (of absolute alcohol) on malt beer and ciders, 7.82c (USD 0.01)/liter and 34.70c (USD 0.03)/kg on traditional African beer and traditional African beer powder, and R175.19 (USD 13.40)/liter (of absolute alcohol) on spirits (National Treasury 2017).²

In recent years the government of Botswana has introduced levies on tobacco and alcohol products. In 2008, the "Control of Goods (Intoxicating Liquor (Levy))(Amendment) Regulations, 2008" imposed a 30 percent levy on the price payable for alcohol beverages (or, in the case of imports, the value for customs duty purposes). This levy has subsequently increased to 40 percent. In 2014, the government passed the "Public Finance Management (Levy on Tobacco and Tobacco Products) Fund Order," in which the government imposed a levy of 30 percent of the value of tobacco products manufactured in or imported into Botswana.

The money raised by the Botswanan tobacco levy is aimed at anti-tobacco initiatives through a variety of community and population-based interventions. The funds raised by the alcohol levy are aimed at programs for youth deterrence from alcohol and social upbringing programs. In the 2015/16 fiscal year, the alcohol levy raised 325 million Pula (34.3 million USD), and the tobacco levy raised 39 million Pula (4.1 million USD) (Botswana Unified Revenue Service 2016).

3. Geography

This section provides geographical context for the study. Table 1 below presents the populations of the major cities/towns in Lesotho and Botswana, including Gaborone and Maseru,

² Exchange rate for conversion is the average exchange rate for the 22nd February 2017, the date the National Treasury Budget Review was published.

which are mentioned throughout this report. The table also gives the distance between each city/town and the nearest border crossing into South Africa.

Table 1. Population and Distance to South African Border for Major Cities, Botswana and Lesotho

CITY/TOWN	POPULATION	DISTANCE TO NEAREST BORDER CONTROL (KM)
Botswana	2 024 904	
Gaborone	231 592	26
Francistown	98 961	271
Molepolole	66 466	80
Maun	60 263	695
Mogoditshane	58 079	28
Lesotho	1 894 194	
Maseru	178 345	11
Teyateyaneng	61 578	27
Maputsoe	48 243	3
Mafeteng	30 602	17
Butha-Buthe	30 115	44

Source: Population and Housing Census of Botswana 2011, and 2011 Lesotho Demographic Survey. The distances are estimated with Google Maps, from the center of the city/town to the border crossing.

Roughly 10 percent of both countries' populations are located in the capital, and the remainder of the population is spread across significantly smaller towns; the second largest towns contain only 5 and 3 percent of the population in Botswana and Lesotho, respectively. The capitals, Gaborone and Maseru, are also very close to the South African borders. More than half of the population of both countries live in small villages or deep rural areas.

4. Data

To estimate the difference in cigarette and alcohol prices across South Africa and Botswana, and South Africa and Maseru, as well as the local perceptions about cross-border shopping in these areas, primary data collection was done.

Fieldworkers were tasked with collecting cigarette and alcohol prices in Maseru, Ladybrand, Gaborone, and the Mafikeng/Zeerust area.³ Fieldworkers also conducted informal interviews

³ Numerous small South African towns near Gaborone were visited, including Mafikeng, Zeerust, Disaneng, Lehurutshe and Ramatlabama. We refer to this general area as "Mafikeng/Zeerust," as these are the largest towns and the majority of data was collected there.

with various locals, including shop owners, managers, employees, customers and border officials. The fieldworkers who collected this data are part of an ongoing project of the Economics of Tobacco Control Project, called the African Cigarette Prices (ACP) project. The ACP project provided an appropriate platform for the collection of the required cigarette, alcohol, and interview data, as fieldworkers were already trained to collect cigarette prices in their hometowns in Africa, and were already in the field. Thus, the collection of the data described below was a dedicated process of the ACP project. In total, seven fieldworkers collected data in the three countries.

The University of Cape Town gave ethics clearance for the interviews to be conducted, while ethics clearance was not required for the price collection element. All prices in the dataset can be verified with a photograph, and both the photographs and raw dataset are available.

For the collection of price data, three types of outlets were identified. A retail outlet refers to a formal shop, usually a grocery store, petrol station, liquor store, etc. Retail outlets are located in a built structure, have electricity and offer a wide range of products. Secondly, a spaza shop refers to outlets that are less formal and smaller than retail outlets. Spaza shops are generally located in a permanent structure, and this may be made of brick, wood, clay, a container, etc. Lastly, street vendors are informal stalls. These are generally operated on the side of the road, often from a table, basket or tray, with no permanent structure.

For analysis purposes, alcohol products are grouped into five categories, namely beer, cider, spirits, spirit coolers, and other. Spirit coolers are ready-to-drink spirits-based products that are mixed by the manufacturer, for example pre-mixed brandy and cola. "Other" includes any collected prices that did not fit into the other broad categories. This includes wine products (wine, port, sherry, brut, and vermouth) and bitters. It is important to note that the spirits category includes a large variety of products, including various aperitifs, liqueurs, gin, whisky, and these can range from affordable to luxury products. For this reason, we foresee a large range of prices in this alcohol category.

The alcohol prices can also be broken down into further categories, for example by brand, can or bottle, pack size (for example, single, 6 pack, 12 pack, etc.), milliliters per item, etc. However, for simplicity in the analysis, we standardize each price to a per-liter price of the beverage. Annex 1 presents more detailed summaries of prices by product brand and packaging. For comparability, all prices were converted into United States dollars using the average of the exchange rate over the period in which the data was collected (4th of December 2017 to 8th of January 2018).

A summary of the price data is presented in Table 2.

Of the four regions, the majority of cigarette prices were collected in Maseru, due to the fact that the majority of the fieldworkers were located in this area. Overall, more cigarette prices were collected than alcohol prices, with the majority of cigarette prices collected from street vendors, followed by retail outlets.

Table 2. Data Summary: Number of Observations

	GABORONE	MAFIKENG/ ZEERUST	MASERU	LADYBRAND	TOTAL
Cigarette Prices	531	381	1932	341	3185
Outlet Type					
Retail Outlet	396	347	53	234	1030
Spaza Shop	19	24	88	48	179
Street Vendor	116	10	1791	59	1976
Alcohol Prices	1153	368	255	141	1917
Outlet Type					
Retail Outlet	1153	320	241	141	1855
Spaza Shop	0	48	14	0	62
Street Vendor	0	0	0	0	0
Product Type					
Beer	122	145	100	45	412
Cider	32	0	17	19	68
Spirit	52	2	67	51	172
Spirit Cooler	923	213	63	26	1225
Other	24	8	8	0	40
Interviews	22	20	30	8	80

Notes: "Other" includes wine products and bitters.

Alcohol prices were primarily collected from retail outlets, and no prices were collected from street vendors, as fieldworkers were instructed to focus on formal retail establishments. The majority of alcohol prices collected were of spirits, and this is driven by the large number of spirit prices collected in Gaborone. After spirits, beer and cider prices were the most common.

Data Limitations

The data has a number of limitations to keep in mind throughout the analysis.

The first is the small sample size and the non-representative nature of the data. As has been mentioned, the data collection formed part of the African Cigarette Prices project. Fieldworkers of the ACP project were not given strict instructions on what prices to collect, thus the distribution of the collected prices is not representative of the actual distribution of prices on the market; it is rather what the fieldworkers were able to collect. Thus, one should not place any importance on the number of observations collected for each outlet type,

product packaging type, or alcohol category. For example, while spirits is the largest alcohol category in the dataset, we should note that beer is the alcoholic beverage of choice for most people in these areas. Although the data are not representative, we do find consistent price differences for both cigarettes and alcohol, as well as across outlet type, packaging type, and alcohol category.

We also only collect data around the Gaborone and Maseru borders, thus we cannot extend the findings to the rest of these countries and other parts of the borders. However, as we saw in Section 2, these areas are both centered around the national capital cities and represent major economic hubs in these countries.

The data collection process involved fieldworkers asking vendors the price of cigarettes and alcohol, rather than fieldworkers actually buying these products. Vendors may be cautious of revealing the price of very cheap, illegal cigarettes. It is therefore possible that there is measurement error in our estimates of the cheapest cigarettes. We do, however, find reasonably consistent estimates of price at the bottom end of the distribution, across the regions, brands, and outlet types.

Regarding the interview data, it is worth noting that, for the manager and owner interviews, there may be an under-reporting of cigarettes sourced illegally, as this admission may be perceived as risky for the business. However, fieldworkers were trained to treat the topic with sensitivity and reinforce the objective nature of the interview. The interviews were treated as unthreatening informal discussions rather than formal surveys.

Wine was excluded from the analysis because of the significant brand variation among wine products, and because of the low level of consumption of wine relative to the other alcohol types, specifically beer, which dominate these markets.

An issue that was raised by the reviewers of the first draft of this report highlighted that we need to consider the administrative capacity of these governments to implement levies. If a country does not have the administrative capacity to collect higher taxes and/or a special levy, it would be easily circumvented, and the revenue would be lost. According to the Ibrahim Index of African Governance (IIAG) out of 100, Africa and Sub-Saharan Africa are rated at 50.8, Lesotho at 58.2, Botswana at 72.7 and South Africa at 70.1 (IIAG, 2017). Thus, all three of the countries in this study are ranked substantially above the region; however, Lesotho ranks lowest.

5. Analysis of Cigarette Price Data

The following section reports the findings of the cigarette prices that were collected. We first evaluate the difference in prices between Gaborone and nearby South African towns. A levy on tobacco products of 30 percent is already in place in Botswana; thus, we review the possible impact of this levy on the difference in prices between the two countries. We then

focus on the difference in cigarette prices between Maseru and Ladybrand, where a levy on cigarettes has been proposed.

Cigarette Prices in Gaborone, Botswana, and Mafikeng/Zeerust, South Africa

The following table presents a summary of cigarette prices in both Gaborone and Mafikeng/Zeerust and surrounding South African towns.

Table 3. Cigarette Price Summary Statistics, Gaborone and Mafikeng/Zeerust (USD per pack)

	MEAN	MEDIAN	ST. DEV.	MIN	MAX	N
Gaborone						
Retail Outlet	4,20	4,15	0,78	2,08	6,61	396
Spaza Shop	4,16	4,32	0,46	3,21	4,97	19
Street Vendor	4,69	4,97	0,63	3,15	5,96	116
Gaborone Total	4,31	4,15	0,77	2,08	6,61	531
Mafikeng/Zeerust						
Retail Outlet	2,67	2,72	0,63	0,43	4,97	347
Spaza Shop	2,19	1,55	1,41	0,62	5,44	24
Street Vendor	3,50	4,27	1,38	1,55	4,66	10
Mafikeng/Zeerust Total	2,66	2,72	0,75	0,43	5,44	381

Notes: All prices displayed are in USD, per 20 cigarettes.

In all cases the difference in means between Gaborone and Mafikeng/Zeerust are statistically significant at the 1% level, with the exception of street vendors, where the difference in means is significant at the 5% level.

Overall, average cigarette prices are significantly higher in Gaborone than in nearby South African towns. We find relatively cheap cigarettes in South Africa, where the cheapest pack in Gaborone is nearly five times that in South Africa. In both regions, cigarette prices are highest at street vendors. Vendors generally sell very few products and sell cigarettes as loose singles, while formal retail outlets sell cigarettes in packs, which may drive this difference in price by outlet type.

To investigate this further, Table 4 summarizes the difference in cigarette prices by packaging type. In both Gaborone and South Africa, the majority of observed cigarettes are sold in packs of 20. When estimating the average price by packaging type, we observe significant differences in prices between the two regions. For packs of 20, the average price in Gaborone is 1.6 times that on the South African side of the border. The average price for a single in Gaborone is almost twice that of Mafikeng/Zeerust.

Table 4. Cigarette Prices by Packaging, Gaborone and Mafikeng/Zeerust (USD, per pack equivalent)

	MEAN	MEDIAN	ST. DEV.	MIN	MAX	N
Gaborone						
1	4,97	4,97	0,33	3,98	5,96	93
10	4,44	4,03	0,69	3,97	6,38	45
20	4,18	4,15	0,78	2,08	6,61	358
Gaborone Total	4,35	4,17	0,77	2,08	6,61	497
Mafikeng/Zeerust						
1	2,94	2,33	1,52	0,78	5,44	23
10	3,09	3,11	0,71	1,94	4,97	31
20	2,58	2,61	0,63	0,62	3,88	310
Mafikeng/Zeerust Total	2,65	2,72	0,74	0,62	5,44	366

Notes: All prices displayed are in USD, per 20 cigarettes.

In all cases the difference in means between Gaborone and Mafikeng/Zeerust are statistically significant at the 1% level.

Overall, we observe that the price of cigarettes is significantly higher on the Botswana side of the border than on the South African side, and this difference exceeds the 30 percent levy on cigarettes in Botswana. This finding is consistent overall and across outlet and packaging types. Table 9 of the Annex shows the price differences for identical products that were found on both sides of the border. The table shows that every product was more expensive in Botswana than in South Africa. The largest difference in price was 68.4 percent (Camel 20 pack), the median difference was 37.7 percent (Pacific 20 pack) and the smallest difference was 7.8 percent (Benson & Hedges 20 pack).

While overall the variance in prices across the regions is similar, for single sticks there is much more variation in South Africa than in Botswana.⁴ A test of the equality of variances rejects the hypothesis of equal variances at the 1 percent level. The minimum price for a single stick in South Africa is also significantly lower than in Gaborone where, as mentioned, the cheapest loose cigarette observed is almost five times higher than in Mafikeng/Zeerust. This strongly suggests that there is more illicit trade in single cigarettes in South Africa, where prices vary more and very cheap cigarettes are found, than in Botswana, where the price of singles is higher and more uniform. Because prices are lower on the South African side of the border, it is highly likely that, to the extent that bootlegging exists, cigarettes move

⁴ The singles present in Gaborone and Mafikeng/Zeerust are the same brands, particularly Craven A, Dunhill and Peter Stuyvesant, and the brands that are only present in one area are not the cause of the extreme price variation. Thus, there exists a large variance in price, despite similar brands/quality.

illegally from South Africa to Botswana. The absence of very cheap cigarettes in Gaborone suggests that if South African cigarettes are sold illegally in Gaborone, they are either sold at the local going rate, or that the data collection has not captured these illegal cigarettes. Bootlegged cigarettes are also more likely to be sold at informal outlets such as spaza shops and street vendors; however, we observe that the lowest prices of cigarettes sold in these outlets are still significantly higher than the average prices of cigarettes sold in similar outlets in South Africa. Thus, the evidence from the price data analysis suggests that, if smuggling exists, there is not enough smuggling to equalize prices between the Mafikeng/Zeerust area and Gaborone.

Lastly, it is also possible that citizens of Botswana travel to South Africa to purchase the relatively cheap cigarettes for consumption purposes, and consume these on either side of the border. The study's Botswana price data cannot pick up this activity, as these products are not available for sale in Botswana, however, as we will see in Section 7, there is evidence of this in the interviews.

Cigarette Prices in Maseru, Lesotho, and Ladybrand, South Africa

In the previous section, we noted that cigarette prices are significantly higher in Botswana than in South African towns near the border. It stands to reason that a main driver of this difference in prices is the Botswana levy on tobacco. Considering that the government of Lesotho intends to implement a similar levy, we now evaluate the current price difference between Maseru and Ladybrand.

Table 5 below presents a summary of the cigarette prices collected in Maseru, Lesotho, and Ladybrand, South Africa. For retail outlets and spaza shops respectively, the average price in Maseru is 6 and 5 percent higher than in Ladybrand, and these differences are not statistically significant. Cigarettes sold at street vendors in are substantially cheaper (13 percent) in Maseru than in Ladybrand.

In Table 6 we summarize cigarette prices by packaging type. When we compare the price of packs of 20, we observe that packs in Ladybrand are cheaper than those in Maseru. Single sticks, which are usually sold at street vendors, are more expensive in South Africa than Lesotho.

Table 10 in the Annex shows that, of the 20 cigarette products that appeared both in Maseru and Ladybrand, 15 products were most expensive in Lesotho, while five were more expensive in South Africa. The median comparable product (Camel 20 pack) was 8.1 percent more expensive in Maseru.

Overall, we observe that there is a difference in the price of cigarettes between Maseru and Ladybrand, but it is much less pronounced than the difference between Gaborone and nearby South African towns. In fact, for a number of pack sizes and outlet types, the price of cigarettes in Maseru is lower than in Ladybrand. The difference in cigarette prices is far more

Table 5. Cigarette Price Summary Statistics, Maseru and Ladybrand (USD per pack)

	MEAN	MEDIAN	ST. DEV.	MIN	MAX	N
Maseru						
Retail Outlet	2,79	2,88	0,63	0,78	3,88	53
Spaza Shop	3,04	3,11	1,17	0,78	4,66	88
Street Vendor	3,12	3,88	1,35	1,55	6,21	1791
Maseru Total	3,11	3,88	1,32	0,78	6,21	1932
Ladybrand						
Retail Outlet	2,62	2,68	0,71	0,62	4,97	234
Spaza Shop	2,91	3,11	0,74	1,24	3,88	48
Street Vendor	3,61	4,66	1,30	1,55	4,66	59
Ladybrand Total	2,83	2,84	0,92	0,62	4,97	341

Notes: All prices displayed are in USD, per 20 cigarettes.

The difference in means for the retail outlet and spaza shop groups are not statistically significant, while the difference in means overall and for street vendors are statistically significant at the 1% level.

Table 6. Cigarette Prices by Packaging, Maseru and Ladybrand (USD, per pack equivalent)

	MEAN	MEDIAN	ST. DEV.	MIN	MAX	N
Maseru						
1	3,12	3,88	1,34	1,55	6,21	1874
10	3,26	3,11	0,22	3,11	3,57	5
20	2,62	2,76	0,61	0,78	3,11	52
Maseru Total	3,11	3,88	1,32	0,78	6,21	1931
Ladybrand						
1	3,26	3,11	1,03	1,24	4,97	161
10	2,59	2,87	0,63	1,40	3,18	16
20	2,43	2,49	0,59	0,62	4,27	159
Ladybrand Total	2,84	2,84	0,92	0,62	4,97	336

Notes: All prices displayed are in USD, per 20 cigarettes.

The overall and 10 pack difference in mean cigarette price in Maseru and Ladybrand is statistically significant at the 1% level, while the difference in means for 20 packs is significant at the 10% level. The difference in means for single sticks is not statistically significant.

acute in Botswana, and a highly plausible reason for this is the levy on tobacco products that serves to increase the price of cigarettes.

6. Analysis of Alcohol Price Data

Besides placing a levy on cigarettes, the government of Lesotho is also planning to introduce a levy on alcohol products, similar to the alcohol levy in Botswana. For this reason, this section will report on the difference in the price of alcohol products between Gaborone and nearby South African towns, as well as between Maseru and Ladybrand.

Alcohol Prices in Gaborone, Botswana, and Mafikeng/Zeerust, South Africa

The table below presents the average alcohol prices in both Gaborone and the Mafikeng/Zeerust area. We categorize the prices broadly according to the type of alcohol product. The prices of beer are italicized because beer is the beverage of choice among drinkers in these areas.

Table 7. Alcohol Price Summary Statistics, Gaborone and Mafikeng/Zeerust

	MEAN	MEDIAN	ST. DEV.	MIN	MAX	N
Gaborone						
Beer	3,07	2,94	0,71	2,10	7,12	122
Cider	3,69	3,70	0,45	2,85	4,80	52
Spirits	41,66	27,72	63,77	5,55	1423,51	923
Spirit Cooler	5,07	5,49	1,81	1,88	8,28	32
Mafikeng/Zeerust						
Beer	2,12	2,12	0,50	1,04	4,01	145
Cider	1,92	1,92	0,13	1,83	2,02	2
Spirits	19,10	16,31	18,74	5,18	230,56	213

Notes: All prices displayed are in USD, per litre of beverage.

"Other" is excluded from the analysis.

In all cases the difference in mean alcohol price in Gaborone and Mafikeng/Zeerust is statistically significant at the 1% level.

From Table 7 we see that, for each product category, alcohol is significantly more expensive on the Botswana side of the border. Beer products are approximately 45 percent more expensive in Gaborone, while the cheapest beer price observed in Botswana is more than double the price of the cheapest beer price on the South African side of the border. Ciders,

categorized similarly to beer, also have a significant price difference, where the average price in Gaborone is more than 90 percent greater than in Mafikeng/Zeerust, although there were only two prices collected there. Spirits also have a very large difference in price, however this category includes a wide range of sometimes incomparable products, including cheap and luxury products, which is a cause of this variation. Table 11 of Annex One describes direct comparisons of products on either side of the border. From the table, we note that for all—except one (Mokador 375 ml, Liqueur)—of the 119 products that were observed in both Gaborone and South Africa, the average price in Botswana was higher than in South Africa. The largest difference in directly comparable products was for a 750-ml bottle of Chivas Regal whisky, which was 229 percent more expensive in Gaborone. The median percentage difference in price between directly comparable products was 42.5 percent.

It stands to reason that the observed difference in prices is largely driven by Botswana's alcohol levy. As we observed for cigarette prices, the difference in alcohol prices across the Botswana border could provide motivation for bootlegging from South Africa to Botswana. However, we do not observe very low minimum prices in Gaborone which we might expect if bootlegging were common, and the minimum price in Gaborone is more than 80 percent higher than that in South Africa.

Alcohol Prices in Maseru, Lesotho, and Ladybrand, South Africa

Considering that the government of Lesotho intends to implement a similar alcohol levy to that in Botswana, we now investigate the current difference in alcohol prices between Maseru and Ladybrand.

The table below presents the average prices by alcohol product category for the two areas.

From Table 8 we see that, for the various categories of alcohol, mean prices are slightly higher in South Africa. The average beer price collected in Ladybrand is 20 percent higher than in Maseru, while the average cider price is 27 percent higher in Ladybrand than in Maseru. Spirits are significantly more expensive in South Africa, although it is again important to note that this category includes a large range of products. From Table 12 of the Annex (showing directly comparable products), eight of the 28 comparable products are more expensive in Lesotho. Only three out of twelve beer products are more expensive in Lesotho (Flying Fish 660 ml single bottle, Castle 340 bottle six pack, and Amstel 330 bottle 6 pack), and the largest difference in beer prices is a single 440 ml Heineken can, which was 18.7 percent more expensive in South Africa. The median percentage difference in price is 7 percent (more expensive in Ladybrand).

Table 8. Alcohol Price Summary Statistics, Maseru and Ladybrand

	MEAN	MEDIAN	ST. DEV.	MIN	MAX	N
Maseru						
Beer	2,00	2,05	0,39	1,26	2,97	100
Cider	2,74	2,82	0,49	1,60	3,95	67
Spirits	15,42	15,54	7,96	4,97	41,43	63
Spirit Cooler	3,50	3,39	0,52	3,03	5,18	17
Ladybrand						
Beer	2,40	2,47	0,58	1,04	4,71	45
Cider	3,49	3,53	0,73	1,88	5,27	51
Spirits	21,19	22,78	5,90	11,39	31,07	26
Spirit Cooler	4,59	4,45	0,67	3,53	5,88	19

Notes: All prices displayed are in USD, per litre of beverage.

Other is excluded from the analysis.

For each alcohol category, the difference in mean price in Maseru and Ladybrand is statistically significant at the 1% level.

Overall, following the alcohol levy in Botswana, alcohol prices are significantly higher in Gaborone than in nearby South African towns. We also did not observe any very cheap alcohol products in Gaborone, which we might have expected as an outcome of bootlegging. For Lesotho, alcohol prices are significantly higher in Ladybrand than in Maseru for each product category, so from the outset there is no significant motivation for bootlegging to Lesotho. Thus, an alcohol levy of approximately 20 percent will equalize the difference in prices between Maseru and nearby South Africa; this will simply "straighten out" the price differences that already exist.

7. Locals' Perceptions about Cross-Border Trade of Alcohol and Cigarettes

Besides collecting price data for the four regions, we conducted informal interviews with locals about their perceptions regarding cross-border trade between South Africa and Botswana, as well as between South Africa and Lesotho. These locals included shop managers/owners, street vendors, cigarette/alcohol consumers, and border post officials. Among other things, fieldworkers asked questions regarding the participants' opinions about the difference in price across the border; the presence of cross-border shopping; and the main products involved in cross-border shopping. This section summarizes the findings of these interviews.

Perceptions about Cross-Border Trade near the Gaborone Border

In total, the fieldworkers in Gaborone interviewed 22 participants, while fieldworkers on the South African side of the border interviewed 20 people, including street vendors, shopkeepers, consumers, and a border-post official.

From the interviews in Gaborone, respondents agree that prices of both cigarettes and alcohol in Botswana are higher than those in South Africa, and believe that the levies on these products are a cause of this difference. A general perception is that border controls are strong and that border officials will confiscate goods that are being brought into the country illegally. This, combined with the cost of transport, seems to be a deterrent for small scale cross-border shopping from South Africa. The shopkeepers and street vendors interviewed report sourcing their products from wholesalers in Botswana, such as Trans Africa, Jumbo, and Trade World. One respondent stated that it has become harder to move goods across the border in recent years. He recalls previously smuggling goods secretly, hiding alcohol “in certain compartments of their cars” in the “early years.” It was also noted that South Africa has a larger variety of alcohol products than Botswana, and a few consumers indicated that they would cross the border to buy alcohol products that are not available in Botswana, although on a small scale, and for personal use.

People interviewed on the South African side of the border agree that prices of cigarettes and alcohol are higher in Botswana than in South Africa. Most respondents commented that people travel from Botswana to South Africa to “party” in the evenings. This is apparently because Botswana has strict laws around the operating hours of bars, and relatively early closing hours. For this reason, consumers travel to South Africa to consume alcohol once the bars in Botswana are closed, or choose to visit South Africa with the purpose of drinking (one manager indicated that he hosts bachelor parties, weddings, etc. for people from Botswana). Although some vendors indicated that they were not aware of any of their products being purchased to be taken to Botswana, a number of shop owners and managers agreed that Botswana residents do purchase alcohol and cigarettes to take back home, but that this happens on a very small scale. All shopkeepers who report knowledge of their products being taken to Botswana indicate that consumers buy just a few packs or a carton or two of cigarettes, and small quantities of alcohol, and that this is for personal use. One shopkeeper reported that some customers have asked for small alcohol bottles so that they are compliant with the customs limit on alcohol (between one and two liters per traveler). Another shopkeeper recalls Botswanan customers purchasing alcohol products that are not available in Botswana, for example Hennessy VSOP Cognac.

One respondent indicated that cigarettes come into South Africa from Botswana. The bar owner recalled large trucks travelling from Botswana to South Africa carrying cigarettes from Zimbabwe and Nigeria. He believes that these trucks carry large quantities of cigarettes hidden in petrol tanks. This respondent also stated that the border is porous, and smugglers

can enter the country via small dirt roads, rather than coming through the border crossing. He also recalled police visiting his bar and telling him that there were investigations into smuggling into South Africa.

From the Gaborone and Mafikeng/Zeerust interviews, we find that the general perception is that, although there may have been bootlegging of cigarettes and alcohol into Botswana in the past, strict border controls have limited this activity in recent years. Where alcohol and cigarettes travel from the Mafikeng area into Botswana, this is believed to be on a small scale, no more than a few packs of cigarettes and small quantities of alcohol, and this is generally for personal consumption. There is an overall perception that people travel to South Africa from Botswana to continue their nights' entertainment after the bars close in Botswana and to enjoy the cheaper alcohol.

Perceptions about Cross-Border Trade near the Maseru Border

In total, fieldworkers in Maseru interviewed 30 participants, while those in Ladybrand interviewed 8 people, including street vendors, shopkeepers, consumers, and a border-post official.

Among the respondents in Ladybrand there is a general perception that the price of alcohol and cigarettes is similar in Maseru and Ladybrand, and thus they are not involved in cross-border trade because transport costs would make it relatively more expensive. There was some indication that individuals might travel to Lesotho to buy a locally produced beer called Maluti. This beer is rarely available on the South African side of the border and is a favorite among respondents. It was also noted by a number of Ladybrand respondents that locals rarely have passports (three of the eight respondents themselves did not possess a passport), and for this reason many residents of Ladybrand have never crossed the border, despite its close proximity.

Most respondents in Maseru held the belief that the price of alcohol and cigarettes is similar across the border, and that transport costs and taxes at the border make it impractical to buy goods from South Africa for resale, especially on a small scale. One shopkeeper indicated that, besides taxes and transport costs, there are many and long queues at the border, so she avoids buying products in South Africa. Most formal retail shop managers and owners indicated that they purchase bulk alcohol products from South Africa, specifically wine and beverages that are not available in Lesotho. However, others indicated that they did not have the required licenses to buy alcohol from South Africa, but would do so if they did. There is also a general opinion that there is a larger variety of alcoholic beverages in South Africa, and a few consumers reported travelling to South Africa to buy spirits that are not available locally, although only for personal consumption. In terms of beer, a number of consumers and shopkeepers indicated that there is a general preference for the local beer, Maluti, and so they would not bother buying beer from South Africa.

Most retail outlet managers reported sourcing cigarettes from local wholesalers. One vendor indicated that he would not buy cigarettes from across the border because it is difficult to distinguish legal from illegal cigarettes, and he did not want to be caught with illegal cigarettes at the border. One shop owner admitted to illegally bringing goods across the border. In particular, she smuggles in beer products that are no longer allowed to cross the border (one-liter Castle and Black Label bottles), as well as cigarettes, which she claims can easily be hidden in a loaded truck.

Overall, there is a general perception from locals that the price of alcohol and cigarettes is similar on either side of the border, thus there is little incentive to transport goods across the border for resale. Some products that were reported to move across the border were the varieties of alcohol that are not available in Lesotho; alternatively, alcohol is imported from South Africa in bulk. However, one retail owner did admit to smuggling products into Lesotho, specifically alcohol products that have recently been banned from crossing the border, and cigarettes, as these are easy to hide.

8. Conclusion

This study has investigated the possibility of bootlegging between South Africa and Botswana and Lesotho. To do this, we estimated the difference in cigarette and alcohol prices between Gaborone and nearby South African towns, as well as between Maseru and nearby Ladybrand. We also summarized the perceptions of locals about cross-border trade of alcohol and cigarettes.

The study's data and analysis show that despite levies of, respectively, 30 and 40 percent on tobacco and alcohol products in Botswana, smuggling is limited and has not come even close to equalizing prices between South Africa and Botswana. The interviews with locals in the area also produce little evidence of bootlegging. This indicates effective measures by customs and border control in Botswana, which limit the illegal movement of these goods. There have also been significant proceeds from the levies, which the government has earmarked to anti-tobacco and anti-alcohol initiatives.

The analysis indicated that, although there is a difference in prices between South Africa and Lesotho, it is much smaller than the price difference between Botswana and South Africa. Cigarettes are slightly more expensive in Maseru than in Ladybrand, while the average price of alcohol is higher in Ladybrand. Interviews with locals indicate that because prices are similar in the two countries, there is little incentive to engage in cross-border trade, specifically because of the costs of transport and taxes.

Since Lesotho scores above the African region in terms of public management, it is likely that smuggling—other than small amounts for personal consumption—from South Africa to Lesotho would be limited and that Lesotho could achieve substantial revenues from such levies. However, it is vital that Lesotho, like other countries planning significant increases in

excises for high-value, low-volume products like tobacco and alcohol, take complementary steps to strengthen customs administration. This is more important in the case of tobacco, where prices in Maseru are already above those in Ladybrand, than in the case of alcohol, where prices in Maseru are lower.

In addition, while this study has focused on the impact of smuggling on tax revenues, the main purpose of raising tobacco and alcohol taxes is to achieve the health benefits that follow from reducing consumption of these products. Increased revenues are an important positive externality. But uncertainty about their magnitude is not a reason to prevent the large increases in taxes needed to get smokers and those who abuse alcohol to stop or sharply reduce their consumption.

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Annexes

Annex 1

Table 9. Detailed Cigarette Price Summary, Gaborone and Mafikeng/Zeerust

PRODUCT (BRAND; PACK SIZE)	GABORONE MEAN USD/PACK	GABORONE N	MAFIKENG/ ZEERUST MEAN USD/PACK	MAFIKENG/ ZEERUST N	BOTSWANA PREMIUM (%)
Camel; 20	4,61	23	2,74	46	68,4
Kent; 20	4,63	29	2,96	11	56,5
Winston; 20	3,39	7	2,20	20	54,0
Peter Stuyvesant; 20	4,19	77	2,77	35	51,4
LD; 20	2,68	9	1,84	6	45,7
Marlboro; 20	4,26	33	2,96	17	44,0
Vogue; 20	4,66	11	3,25	3	43,4
Rothmans; 20	4,24	9	3,00	7	41,6
Peter Stuyvesant; 10	4,46	29	3,15	12	41,6
Craven A; 10	4,39	12	3,11	4	41,5
Kent; 200	3,92	2	2,84	1	37,9
Pacific; 20	2,67	8	1,94	2	37,7
Forum; 20	2,08	2	1,55	4	34,1
Dunhill; 20	4,52	98	3,41	34	32,5
Dunhill; 10	4,39	4	3,31	6	32,5
Craven A; 20	4,04	21	3,06	12	32,0
Chesterfield; 20	3,53	23	2,70	16	30,6
Glamour; 20	3,26	2	2,60	3	25,6
Peter Stuyvesant; 1	4,98	68	4,14	3	20,1
Dunhill; 1	5,47	3	4,66	4	17,3
Peter Stuyvesant; 30	3,58	18	3,10	11	15,6

Table 9. Detailed Cigarette Price Summary, Gaborone and Mafikeng/Zeerust, Cont.

PRODUCT (BRAND; PACK SIZE)	GABORONE MEAN USD/PACK	GABORONE N	MAFIKENG/ ZEERUST MEAN USD/PACK	MAFIKENG/ ZEERUST N	BOTSWANA PREMIUM (%)
Craven A; 1	4,90	22	4,27	2	14,7
Benson & Hedges; 20	2,36	4	2,19	16	7,8

Notes: All prices displayed are in USD, per 20 cigarettes.

The "Botswana Premium" indicates the percentage difference between the average price in Gaborone and the average price in Mafikeng/Zeerust, for good *i* (brand and pack size).

Specifically, $Premium_i = \frac{(Botswana_i - South Africa_i)}{South Africa_i}$ where $Botswana_i$ the average price for good *i* in Gaborone, and $South Africa_i$ is the average price for good *i* in the Mafikeng/Zeerust area. A premium can only be calculated for products, *i*, where there is at least one price available in both Botswana and South Africa. Products for which a price has not been collected in either area are not shown here.

Table 10. Detailed Cigarette Price Summary, Maseru and Ladybrand

PRODUCT (BRAND; PACK SIZE)	MASERU MEAN USD/PACK	MASERU N	LADYBRAND MEAN USD/PACK	LADYBRAND N	LESOTHO PREMIUM (+) / DISCOUNT (-) (%)
Savannah; 1	3,11	1	1,55	5	100,1
Pall Mall; 1	3,11	1	2,38	17	30,8
Craven A; 1	4,05	58	3,11	7	30,2
Rothmans; 1	4,01	6	3,11	3	29,2
Chesterfield; 1	3,11	2	2,44	7	27,3
Kent; 1	3,89	1	3,11	3	25,0
Camel; 1	4,18	109	3,50	2	19,7
Peter Stuyvesant; 10	3,42	1	2,95	6	15,8
Peter Stuyvesant; 1	4,10	418	3,69	45	11,0
Camel; 20	2,80	2	2,59	20	8,1
Kent; 20	2,95	2	2,84	3	4,1
Pall Mall; 20	2,14	1	2,06	6	3,8
Dunhill; 1	4,29	509	4,19	47	2,4
Dunhill; 10	3,22	4	3,16	3	2,1
Peter Stuyvesant; 20	2,79	12	2,74	15	1,5
Mills; 20	3,03	1	3,07	1	-1,2

Table 10. Detailed Cigarette Price Summary, Maseru and Ladybrand, Cont.

PRODUCT (BRAND; PACK SIZE)	MASERU MEAN USD/PACK	MASERU N	LADYBRAND MEAN USD/PACK	LADYBRAND N	LESOTHO PREMIUM (+) / DISCOUNT (-) (%)
Peter Stuyvesant; 30	2,75	1	2,86	3	-3,9
Dunhill; 20	3,02	12	3,14	11	-4,0
Rothmans; 20	2,77	7	2,91	3	-4,8
Craven A; 20	2,77	7	2,94	3	-5,6

Notes: All prices displayed are in USD, per liter of beverage.

The "Lesotho Premium / Discount" indicates the percentage difference between the average price in Maseru and the average price in Ladybrand, for good i (brand and pack size).

Specifically, $Premium_i/Discount_i = \frac{(\overline{Lesotho}_i - \overline{South Africa}_i)}{\overline{South Africa}_i}$, where $\overline{Lesotho}_i$ is the average price for good i in Maseru, and $\overline{South Africa}_i$ is the average price for good i in Ladybrand. A premium can only be calculated for products, i , where there is at least one price available in both Maseru and Ladybrand. Products for which a price has not been collected in either area are not shown here.

Table 11. Detailed Alcohol Price Summary, Gaborone and Mafikeng/Zeerust

PRODUCT (BRAND; NO. ITEMS; BOTTLE/ CAN; MLS PER ITEM)	GABORONE MEAN USD/L	GABORONE N	MAFIKENG / ZEERUST MEAN USD/L	MAFIKENG/ ZEERUST N	BOTSWANA PREMIUM (%)
Beer					
Amstel 6; Can; 440	2,85	1	1,74	3	64,4
Amstel; 1; Can; 440	3,43	2	2,12	1	62,1
Heineken; 1; Bottle; 650	3,67	2	2,31	3	58,8
Hansa; 1; Bottle; 750	2,14	2	1,45	3	47,8
Carling Black Label 6; Can; 500	2,71	1	1,85	2	46,6
Castle; 1; Bottle; 660	2,71	3	1,88	1	43,9
Carling Black Label; 1; Bottle; 750	2,31	3	1,66	2	39,5
Castle; 1; Bottle; 750	2,15	3	1,55	4	38,3
Windhoek; 1; Bottle; 330	3,54	3	2,7	1	31
Windhoek; 1; Can; 440	2,99	2	2,3	2	30,2
Amstel; 1; Bottle; 440	2,97	1	2,3	1	29,4
Heineken 6; Can; 440	3,27	2	2,53	1	29,1
Castle; 1; Can; 500	2,73	1	2,12	3	28,8
Windhoek 24; Bottle; 440	2,47	1	1,98	2	25

Table 11. Detailed Alcohol Price Summary, Gaborone and Mafikeng/Zeerust, Cont.

PRODUCT (BRAND; NO. ITEMS; BOTTLE/ CAN; MLS PER ITEM)	GABORONE MEAN USD/L	GABORONE N	MAFIKENG / ZEERUST MEAN USD/L	MAFIKENG/ ZEERUST N	BOTSWANA PREMIUM (%)
Castle 6; Bottle; 340	2,69	2	2,26	3	18,9
Carling Black Label 6; Bottle; 340	2,92	1	2,48	1	18
Carling Black Label; 1; Can; 500	2,42	2	2,06	2	17,4
Windhoek 6; Can; 440	2,58	4	2,21	2	17,1
Castle; 1; Bottle; 340	2,9	4	2,51	5	15,5
Carling Black Label; 1; Bottle; 340	2,93	4	2,63	2	11,4
Carling Black Label; 1; Can; 330	2,97	2	2,82	1	5,4
Spirits					
Chivas Regal; 1; Bottle; 750	92,17	11	27,96	1	229,6
Gilbey's; 1; Bottle; 750	14,89	9	5,18	6	187,6
Wellington; 1; Bottle; 750	26,57	2	11,29	1	135,3
Johnnie Walker; 1; Bottle; 750	155,76	32	70,62	7	120,5
Ciroc; 1; Bottle; 750	84,91	4	39,25	1	116,3
First Watch; 1; Bottle; 1000	23,15	1	10,87	1	112,9
Viceroy; 1; Bottle; 750	23,6	5	11,91	2	98,1
Bell's; 1; Bottle; 750	40,96	4	21,31	5	92,2
Olmecca; 1; Bottle; 750	42,45	11	22,27	2	90,6
KWV; 1; Bottle; 750	23,89	8	12,57	3	90,1
First Watch; 1; Bottle; 750	23,94	5	12,69	2	88,7
Wellington; 1; Bottle; 200	32,13	3	17,09	1	88,1
Mainstay; 1; Bottle; 750	24,08	2	13,26	1	81,6
Three Ships; 1; Bottle; 750	27,28	9	15,02	1	81,6
Cape To Rio; 1; Bottle; 750	21,62	3	11,91	1	81,5
Smirnoff; 1; Bottle; 750	24,3	14	13,46	4	80,5
Scottish Leader; 1; Bottle; 750	28,87	9	16,05	1	79,8
J&B; 1; Bottle; 750	32,27	6	17,98	7	79,5
Captain Morgan; 1; Bottle; 750	28,99	12	16,21	6	78,8
Black & White; 1; Bottle; 750	26,22	5	14,71	4	78,3
Gordon's; 1; Bottle; 1000	26,32	1	14,84	1	77,4

Table 11. Detailed Alcohol Price Summary, Gaborone and Mafikeng/Zeerust, Cont.

PRODUCT (BRAND; NO. ITEMS; BOTTLE/ CAN; MLS PER ITEM)	GABORONE MEAN USD/L	GABORONE N	MAFIKENG / ZEERUST MEAN USD/L	MAFIKENG/ ZEERUST N	BOTSWANA PREMIUM (%)
First Watch; 1; Bottle; 200	32,26	4	18,26	2	76,7
White Horse; 1; Bottle; 750	28,34	3	16,31	4	73,7
Count Pushkin; 1; Bottle; 750	20,56	5	12,01	1	71,1
Harrier; 1; Bottle; 750	19,98	5	11,91	1	67,7
Vat 691; Bottle; 750	22,21	6	13,26	3	67,6
First Watch; 1; Bottle; 375	31	2	18,64	1	66,3
Stroh; 1; Bottle; 500	64,49	1	38,84	1	66
Saluta; 1; Bottle; 200	15,98	1	9,71	1	64,5
Vat 691; Bottle; 375	26,96	3	16,57	2	62,7
Gilbey's; 1; Bottle; 200	14,21	10	8,79	7	61,6
Grey Goose; 1; Bottle; 750	81,75	1	51,79	2	57,9
Bain's; 1; Bottle; 750	38,33	4	24,34	1	57,5
Stretton's; 1; Bottle; 375	21,47	2	13,67	1	57,1
Richelieu; 1; Bottle; 750	29,71	7	19,2	3	54,7
Count Pushkin; 1; Bottle; 375	20,59	4	13,36	1	54,1
Patron; 1; Bottle; 750	115,83	3	75,61	1	53,2
Bell's; 1; Bottle; 200	39,06	2	25,54	4	53
Viceroy; 1; Bottle; 200	26,7	2	17,48	1	52,7
Bell's; 1; Bottle; 375	39,52	4	25,89	2	52,6
Romanoff; 1; Bottle; 750	18,89	3	12,43	1	52
Klip Drift; 1; Bottle; 750	28,56	12	18,88	4	51,3
Gordon's; 1; Bottle; 750	19,32	4	12,84	2	50,5
J&B; 1; Bottle; 375	37,3	4	24,86	1	50,1
Two Keys; 1; Bottle; 375	24,12	2	16,36	1	47,4
J&B; 1; Bottle; 200	36,63	3	24,97	3	46,7
Romanoff; 1; Bottle; 200	21,03	4	14,37	1	46,4
Mellow-Wood; 1; Bottle; 375	24,34	5	16,68	2	46
Johnnie Walker; 1; Bottle; 200	44,56	2	30,68	1	45,2
Bertrams; 1; Bottle; 750	26,3	4	18,13	1	45,1

Table 11. Detailed Alcohol Price Summary, Gaborone and Mafikeng/Zeerust, Cont.

PRODUCT (BRAND; NO. ITEMS; BOTTLE/ CAN; MLS PER ITEM)	GABORONE MEAN USD/L	GABORONE N	MAFIKENG / ZEERUST MEAN USD/L	MAFIKENG/ ZEERUST N	BOTSWANA PREMIUM (%)
Smirnoff; 1; Bottle; 200	22,99	8	16	5	43,6
White Horse; 1; Bottle; 375	26,86	1	18,85	2	42,5
Viceroy; 1; Bottle; 375	23,85	5	16,99	1	40,4
Stretton's; 1; Bottle; 750	23,18	5	16,57	1	39,9
Jameson; 1; Bottle; 375	58,72	2	42,05	1	39,6
Mainstay; 1; Bottle; 200	22,64	3	16,31	1	38,8
Klip Drift; 1; Bottle; 375	23,24	6	16,99	2	36,8
Oude Meester; 1; Bottle; 375	26,35	3	19,26	1	36,8
Copperband; 1; Bottle; 375	8,07	5	5,9	1	36,6
Clubman; 1; Bottle; 375	8,04	2	5,9	1	36,1
Zorba; 1; Bottle; 375	8,02	5	5,9	1	35,8
Vin Coco; 1; Bottle; 375	8	4	5,9	1	35,5
Russian Bear; 1; Bottle; 750	23,38	15	17,3	2	35,2
Castle Brand; 1; Bottle; 375	7,98	4	5,9	1	35,1
Knights; 1; Bottle; 750	20,74	1	15,54	1	33,5
Clubman; 1; Bottle; 200	9,5	2	7,19	1	32,3
Copperband; 1; Bottle; 200	9,5	2	7,19	1	32,3
Clubman; 1; Bottle; 750	7,5	2	5,7	1	31,7
Mellow-Wood; 1; Bottle; 200	24,55	4	18,64	2	31,7
Copperband; 1; Bottle; 750	7,5	5	5,7	1	31,6
Castle Brand; 1; Bottle; 200	9,44	1	7,19	1	31,4
Castle Brand; 1; Bottle; 750	7,48	5	5,7	1	31,4
Vin Coco; 1; Bottle; 200	9,44	1	7,19	1	31,4
Klip Drift; 1; Bottle; 200	29,01	9	22,14	2	31
Black & White; 1; Bottle; 200	26,81	1	20,49	4	30,9
Romanoff; 1; Bottle; 375	17,62	2	13,46	2	30,9
Knights; 1; Bottle; 200	24,61	2	19,03	1	29,3
Harrier; 1; Bottle; 200	22,5	4	17,48	1	28,8
Captain Morgan; 1; Bottle; 200	26,91	3	20,91	3	28,7

Table 11. Detailed Alcohol Price Summary, Gaborone and Mafikeng/Zeerust, Cont.

PRODUCT (BRAND; NO. ITEMS; BOTTLE/ CAN; MLS PER ITEM)	GABORONE MEAN USD/L	GABORONE N	MAFIKENG / ZEERUST MEAN USD/L	MAFIKENG/ ZEERUST N	BOTSWANA PREMIUM (%)
Zorba; 1; Bottle; 750	7,28	4	5,7	1	27,9
Richelieu; 1; Bottle; 200	25,74	3	20,2	1	27,4
Vin Coco; 1; Bottle; 750	7,25	4	5,7	1	27,2
Zorba; 1; Bottle; 200	9,07	1	7,19	1	26,2
Brandyale; 1; Bottle; 750	7,16	4	5,7	1	25,8
Seven Seas; 1; Bottle; 750	16,79	1	13,46	1	24,7
Gordon's; 1; Bottle; 200	22,76	4	18,35	2	24
Limosin; 1; Bottle; 375	21,29	4	17,61	1	20,9
Gordon's; 1; Bottle; 375	21,06	4	17,5	2	20,3
Amarula; 1; Bottle; 750	17,87	2	15,02	1	19
Oude Meester; 1; Bottle; 200	26,26	2	22,14	1	18,6
Chateau; 1; Bottle; 750	18,41	1	15,8	2	16,6
Johnnie Walker; 1; Bottle; 375	48,5	9	43,5	1	11,5
Chateau; 1; Bottle; 375	19,5	2	18,23	1	7
Mokador; 1; Bottle; 375	8,18	2	10,25	1	-20,3
Other					
Sedgewick's Old Brown; 1; Bottle; 750	5,58	3	3,97	3	40,5
Sedgewick's Old Brown; 1; Bottle; 375	6,21	2	5,44	2	14,2
Sedgewick's Old Brown; 1; Bottle; 200	7,29	2	6,51	2	12,1

Notes: All prices displayed are in USD, per liter of beverage.

The "Botswana Premium" indicates the percentage difference between the average price in Gaborone and the average price in Mafikeng/Zeerust, for good *i* (brand and packaging).

Specifically, $Premium_i = \frac{(Botswana_i - South Africa_i)}{South Africa_i}$ where $Botswana_i$ is the average price for good *i* in Gaborone, and $South Africa_i$ is the average price for good *i* in the Mafikeng/Zeerust area. A premium can only be calculated for products, *i*, where there is at least one price available in both Botswana and South Africa. Products for which a price has not been collected in either area are not shown here.

Table 12. Detailed Alcohol Price Summary, Maseru and Ladybrand

PRODUCT (BRAND; NO. ITEMS; BOTTLE/CAN; MIs PER ITEM)	MASERU MEAN USD/L	MASERU N	LADYBRAND MEAN USD/L	LADYBRAND N	LESOTHO PREMIUM (+) / DISCOUNT (-) (%)
Beer					
Flying Fish; 1; Bottle; 660	2,00	2	1,88	1	6,25
Castle; 6; Bottle; 340	2,63	1	2,47	2	6,21
Amstel; 6; Bottle; 330	2,61	2	2,47	1	5,59
Hansa; 1; Bottle; 750	1,54	4	1,55	1	-0,83
Castle; 1; Bottle; 660	1,94	2	2,00	1	-2,94
Castle; 1; Can; 440	2,30	1	2,43	4	-5,35
Castle; 1; Bottle; 750	1,64	7	1,76	3	-7,14
Carling Black Label; 1; Can; 330	2,59	1	2,82	1	-8,22
Carling Black Label; 1; Bottle; 750	1,69	3	1,86	1	-9,26
Amstel; 1; Can; 440	2,18	3	2,47	2	-11,81
Windhoek; 1; Can; 440	2,30	3	2,65	1	-13,24
Heineken; 1; Can; 440	2,30	1	2,82	1	-18,67
Cider					
Redd's; 1; Can; 440	2,65	1	2,12	1	25,15
Bernini; 6; Bottle; 275	3,95	1	3,20	1	23,55
Savanna; 6; Bottle; 330	3,07	7	3,02	4	1,51
Redd's; 1; Bottle; 660	1,77	4	1,88	2	-6,25
Savanna; 1; Bottle; 500	3,16	3	3,42	1	-7,53
Hunter's; 1; Bottle; 660	2,69	5	2,94	2	-8,46
Hunter's; 1; Bottle; 330	2,98	3	3,61	6	-17,27
Savanna; 1; Bottle; 330	3,14	3	3,88	4	-19,13
Hunter's; 1; Can; 330	2,83	2	3,53	2	-19,92
Hunter's; 1; Can; 440	2,68	5	3,44	2	-21,99
Spirits					
Russian Bear; 1; Bottle; 750	15,02	1	11,91	1	26,10
Skyy; 1; Bottle; 750	23,82	1	21,75	4	9,55
Smirnoff; 1; Bottle; 750	15,54	2	17,48	4	-11,11

Table 12. Detailed Alcohol Price Summary, Maseru and Ladybrand

PRODUCT (BRAND; NO. ITEMS; BOTTLE/CAN; Mls PER ITEM)	MASERU MEAN USD/L	MASERU N	LADYBRAND MEAN USD/L	LADYBRAND N	LESOTHO PREMIUM (+) / DISCOUNT (-) (%)
Spirit Cooler					
Smirnoff; 6; Can; 250	3,99	2	4,40	3	-9,34
Red Square; 6; Bottle; 275	3,39	3	3,86	3	-12,14
Klip Drift; 1; Can; 440	3,18	1	3,88	2	-18,12

Notes: All prices displayed are in USD, per liter of beverage.

The "Lesotho Premium / Discount" indicates the percentage difference between the average price in Maseru and the average price in Ladybrand, for good *i* (brand and packaging).

Specifically, $Premium_i/Discount_i = \frac{(\overline{Lesotho}_i - \overline{South Africa}_i)}{\overline{South Africa}_i}$, where $\overline{Lesotho}_i$ is the average price for good *i* in Maseru, and $\overline{South Africa}_i$ is the average price for good *i* in Ladybrand. A premium can only be calculated for products, *i*, where there is at least one price available in both Maseru and Ladybrand. Products for which a price has not been collected in either area are not shown here.

COVER QUOTE SOURCES

ⁱ WHO Framework Convention on Tobacco Control Press Release, June 28, 2018.
<https://www.who.int/fctc/mediacentre/press-release/protocol-entering-into-force/en/>

ⁱⁱ World Health Organization Press Release, July 19, 2017.
<https://www.who.int/en/news-room/detail/19-07-2017-who-report-finds-dramatic-increase-in-life-saving-tobacco-control-policies-in-last-decade>

ⁱⁱⁱ Combatting illicit trade in tobacco products: Commissioner Andriukaitis' Statement on the EU's adoption of an EU-wide track and trace system. European Commission Press Release, December 15, 2017.
http://europa.eu/rapid/press-release_STATEMENT-17-5269_en.htm

^{iv} How to design and enforce tobacco excises? International Monetary Fund, October 2016
<https://www.imf.org/en/Publications/Fiscal-Affairs-Department-How-To-Notes/Issues/2016/12/31/How-to-Design-and-Enforce-Tobacco-Excises-44352>

^v World Bank Group: "Global Tobacco Control: A Development Priority for the World Bank Group", Preface of WHO Global Tobacco Report 2015.
http://www.who.int/tobacco/global_report/2015/timevansandworldbankforeword.pdf?ua=1

“To tackle illicit trade is to tackle accessibility and affordability of tobacco products, to be more effective on the control of the packaging and to reduce funding of transnational criminal activities whilst protecting the governmental revenues from tobacco taxation.”ⁱ

– **Dr. Vera Luiza da Costa e Silva**
Head of the Secretariat of the WHO Framework Convention on Tobacco Control

“Governments around the world must waste no time in incorporating all the provisions of the WHO Framework Convention on Tobacco Control into their national tobacco control programmes and policies. They must also clamp down on the illicit tobacco trade, which is exacerbating the global tobacco epidemic and its related health and socio-economic consequences.”ⁱⁱ

– **Dr. Tedros Adhanom Ghebreyesus, Director-General**
World Health Organization

“Tobacco still remains the biggest avoidable cause of premature death in the EU, and the illicit trade in tobacco facilitates access to cigarettes and other tobacco products, including for children and young adults. In addition, millions of euros in tax revenues are lost every year as a result of the illicit trade.”ⁱⁱⁱ

– **Commissioner Vytenis Andriukaitis**
Health and Food Safety / European Commission

“Given their light weight, small size, and high value, tobacco products are susceptible to fraud through illegal trade, production, and cultivation. . . . Illegal trade is a context-specific activity that has various modus operandi and therefore requires multi-dimensional context-specific solutions.”^{vi}

– **Patrick Petit (Senior Economist) & Janos Nagy (Senior Economist)**
Fiscal Affairs Department / International Monetary Fund

“Effective tobacco tax regimens that make tobacco products unaffordable represent a 21st century intervention to tackle the growing burden of noncommunicable diseases. We are convinced that, working together with WHO and other partners in support of countries, we will be able to prevent the human tragedy of tobacco-related illness and death, and save countless lives each year.”^v

–**Dr. Tim Evans (Senior Director) & Patricio V Márquez (Lead Public Health Specialist)**
Health, Nutrition and Population Global Practice / World Bank Group

