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Industry data on alcohol sales in South Africa between 1995 and 2022 and its value in detecting the impact of policy interventions

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Abstract

Aims: To assess changes in total alcohol consumed over time and changes in consumption of different alcoholic beverages in South Africa. In addition, to assess the utility of industry sales data for evaluating the impact of policy changes related to a packaging ban on wine products in September 2007, and bans on alcohol sales during the COVID-19 pandemic in 2020 and 2021.

Design. Alcohol industry sales data as a proxy for consumption were assessed using statistics presented in South African Wine Industry Information & Systems (SAWIS) booklets released annually between 1995 and 2022, and used to describe changes over time in consumption overall, and by product, and the impact of policy changes on consumption.

Results. Per capita consumption of alcoholic beverages overall in South Africa has held steady or declined over time, but declines in the market share of wine and beer (especially) and a massive increase for Ready-To-Drinks (RTDs) were noted. The consumption data also indicated short term effects of Covid-19 interventions (especially in 2020) in terms of reducing overall alcohol consumption, with a return to prior levels in 2022. Industry data on packaging for wine was able to show the immediate and longer-term impact of the 2007 ban on wine sold in foil bags.

Conclusion. Industry data are a useful adjunct to consumer measures of alcohol use, as well as for detecting the impact of policy changes related to alcohol availability and packaging, notwithstanding gaps in information on illicit/unrecorded sales and other limitations.

Introduction

Data on alcohol consumption is crucial for governments to make informed decisions that protect public health and manage the economic and social impacts of alcohol use. Monitoring alcohol consumption over time at a national level can, if such information is disaggregated, also provide a useful gauge of sub-populations at particular risk, and it can furthermore be of value in advocacy for targeted policy interventions and in assessing their impact (Fogarty, 2009).

Various methods are used to assess alcohol consumption, each with advantages and disadvantages (World Health Organization [WHO], 2000). These can generally be divided into consumer and production/sales data. Under consumer data there are self-report measures via surveys or the use of biological markers, such as blood alcohol concentration, urine, hair, or saliva tests. In the former, individuals are asked to report their alcohol consumption over a specific period. This can be done through interviews, questionnaires or diaries, and can provide detailed information about drinking patterns and behaviours. However, self-reporting on alcohol use can be unreliable due to social desirability and recall biases (McKenna et al., 2018). It can also be influenced by cultural or social norms (WHO, 2000). Biomarkers, on the other hand, can be more accurate than self-report measures as they offer more objective data and can also detect recent or heavy drinking (Nanau & Neuman, 2015). However, biomarkers can be invasive (e.g. blood tests), expensive (e.g. hair analysis) and have specific detection windows in terms of the time at which consumption occurred and during which alcohol can be detected (Corrales-Gutierrez et al., 2023; Shetty et al., 2023).

Sales data come from government or producers/retailers and can be used to track alcohol sales to estimate consumption. The advantage of using sales data is that it is relatively objective and provides an indirect estimate of overall

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consumption trends. However, it does not capture consumption of alcohol that is not sold commercially. Furthermore, it may also not capture changes in drinking habits (e.g. people buying more alcohol per purchase). It also can be problematic in not taking into account tourist consumption or properly reflecting alcohol purchased for later consumption (Robinson et al., 2013). Despite these challenges, in comparison with sales data, national surveys typically substantially under-estimate per capita consumption of alcohol (Probst et al., 2017) and, furthermore, they often do not provide estimates of per capita consumption of alcohol by beverage type. Collecting alcohol sales data can also be challenging for researchers due to proprietary claims by manufacturers and retailers. However, this data is sometimes accessible through industry monitoring bodies, often for a fee, or from government regulatory agencies like Customs and Excise.

Consumption of alcohol in general and of particular beverage types is affected by multiple, often inter-related factors, including production or supply chain disruptions (Schechter, 1986), weather conditions, armed conflict (Jawad et al., 2019), and other restrictions on sales (Babor et al., 2022). This was seen most recently in South Africa where full and partial bans on alcohol sales over a 20-month period (Table 1) substantially affected the availability of alcohol and its consumption and associated negative consequences, including trauma admissions and unnatural deaths (Barron et al., 2024; Chu et al., 2022; Moultrie et al., 2021; Navsaria et al., 2021). COVID-19 and associated government responses affected alcohol in other countries, with most countries reporting an increase in alcohol consumption which was often attributed to mental health correlates or triggers (Roberts et al., 2021). Restrictions on availability were cited as one of the reasons for decreased consumption in cases where that occurred (Roberts et al., 2021). Policy shifts can also affect alcohol sales and consumption patterns. One such shift was the gazetting of amendments to the Liquor Products Act of 1989 (Department of Agriculture, 2007) by which the sale of wine in foil bags without locking mechanisms or their being in carboard packaging was outlawed in South Africa (Parry, 2010).

Table 1

Levels of Covid-19 Lockdown in South Africa, Restrictions for On/Off-Site Sales of Alcohol and Curfews

Level	Date	Alcohol on-site sales	Alcohol offsite sales	Curfews
0	01/01/2020-18/03/2020	Normal	Normal	None
0	19/03/2020-26/03/2020	Mo-Fr 09:00-18:00 Sa-Su 09:00-13:00	Mo-Fr 09:00-18:00 Sa-Su 09:00-13:00	None
4&5	27/03/2020-31/05/2020 (66 days)	BAN	BAN	Hard lockdown*
3	01/06/2020-12/07/2020	BAN	Mo-Th 09:00-17:00	20:00/21:00*-04:00
3b	13/07/2020-17/08/2020 (36 days)	BAN	BAN	21:00/22:00-04:00
2/1	18/08/2020-28/12/2020	Normal	Mo-Th 09:00/10:00-17:00/18:00	22:00/00:00-04:00
3	29/12/2020-01/02/2021 (34 days)	BAN	BAN	21:00-05:00/06:00
3	02/02/2021 - 28/02/2021	Normal	Mo-Th 10:00-19:00	23:00-04:00
1	01/03/2021-01/04/2021	Normal	Normal	24:00-04:00
1	2/4/2021-5/4/2021	Normal	BAN	24:00-04:00
1	01/03/2021-30/05/2021	Normal	Normal	24:00-04:00
2	31/05/2021-15/06/2021	Restaurants/Bars 22:00	Normal	23:00-04:00
3	16/06/2021	Restaurants/Bars 21:00	Mo-Th 10:00-18:00	22:00-04:00
4a	28/06/2021-25/07/2021 (28)	BAN	BAN	21:00-04:00
3a	26/07/2021-12/09/2021	Mo-Su till 20:00	Mo-Th 10:00-18:00	22:00-04:00
2a	13/09/2021-30/09/2021	Mo-Su till 22:00	Mo-Fr 10:00-18:00	23:00-04:00
1a	01/10/2021-30/12/2021	Normal	Normal	24:00-04:00
1	31/12/2021	Normal	Normal	None

***** People were confined to their homes, movement was restricted to essential services, and a curfew was imposed. Establishments like cinemas and restaurants were closed, and alcohol sales were banned to reduce incidents and hospital admissions. Soldiers were deployed to enforce these measures, public gatherings were prohibited, and schools were closed. Inter-provincial travel was limited, and public transport operated under strict protocols.

This South African study was undertaken using alcohol sales data to assess the value of aggregate alcohol sales data for detecting population level trends in total alcohol consumed over time and changes in consumption of different alcoholic beverages. Industry data were used to assess how policy changes during the COVID-19 pandemic and alcohol packaging restrictions affected consumption.

Methods

Design

The study used secondary data on alcohol sales from various industry sources between 1995 and 2022 as a proxy for alcohol consumption during that period.

Procedures

This information was sourced from the annual (online) statistical booklets released by the South African Wine Industry Information & Systems (SAWIS). The South African Wine Industry Information & Systems is an organisation established in 1999 whose primary functions include the collection, processing, and dissemination of wine industry information, as well as the administration of the industry's Wine of Origin system. Among other things it publishes annual statistics on the South African wine industry and other alcohol sectors. It aims to be an indispensable data technology resource for the wine industry, providing real-time, relevant information to enable quality decision-making. It collects information directly from the wine sector as well as from International Wine & Spirits Research (IWSR) and the South African Liquor Brand Owners Association (SALBA; https://www.sawis.co.za/info/annualpublication.php). Data on beer were provided by SALBA. Data from Sections 7 (producers' sales, income and prices) and 10 (liquor consumption in South Africa) of the SAWIS annual statistics booklet between 1995 and 2022 were accessed (see Appendix 1 and South African Wine Industry Information & Systems, 2023). Per capita estimates were calculated using the 2022 mid-year population estimates provided by Statistics South Africa (StatsSA, 2022) for the denominator. Data from 1995 till 2022 were selected as this is the period for which there was the most compete data. Data from all companies, and not only from companies that are members of SAWIS,are reported on.

It should be noted that data for wine categories (still wine, fortified wine, sparking wine), are for South Africa (~94%) and other Southern African Customs Union (SACU) countries (~6%) which besides South Africa, include Botswana, Lesotho, Namibia and Eswatini. In addition, in comparison to all other products, wine categories only include imported products from 2019. In 2022 only 0.7% of the wine consumed in the country was imported. Ready-To-Drink (RTD) products refer to both Alcohol Flavoured Beverages (AFBs) and spirit coolers (including cider). Spirits is used to refer to brandy, gin, cane, whiskey, vodka, liqueurs, rum and agave.

As only public data were accessed and presented, no ethical approval was sought for the study.

Data Analysis

Data from SAWIS are presented by graphs. The data were not subjected to any additional manipulation besides addition of individual beverage types within a category of alcohol (e.g. spirits and wine) and no additional statistical analyses were undertaken.

Results

Changes in Total Alcohol Consumed Per Capita Over Time in South Africa (in Litres or Litres of Absolute Alcohol [LAA]) using Industry Sales Data

Figure 1 shows the trends for per capita total alcohol sales and spirits in LAA. Apart from a drop in 2020 and 2021, the trend for total alcohol sales has been stable at around seven LAA per capita per year. Figure 1 shows a similar pattern for spirits as for total alcohol sales but at under two LAA per capita, and rising after 2020. Figure 2 shows over time a steady increase in per capita consumption for RTDs and a decrease for wine, with a drop in 2020 and 2021, and then rising after that. Figure 3 indicates an increase in consumption of beer and RTDs (in total volume at population level) over time, and only a very modest increase for wine products and spirits. It also shows that beer is the most consumed alcohol product by volume in the country followed by RTDs (which eclipsed wine around 2008), with spirits in fourth place after wine.

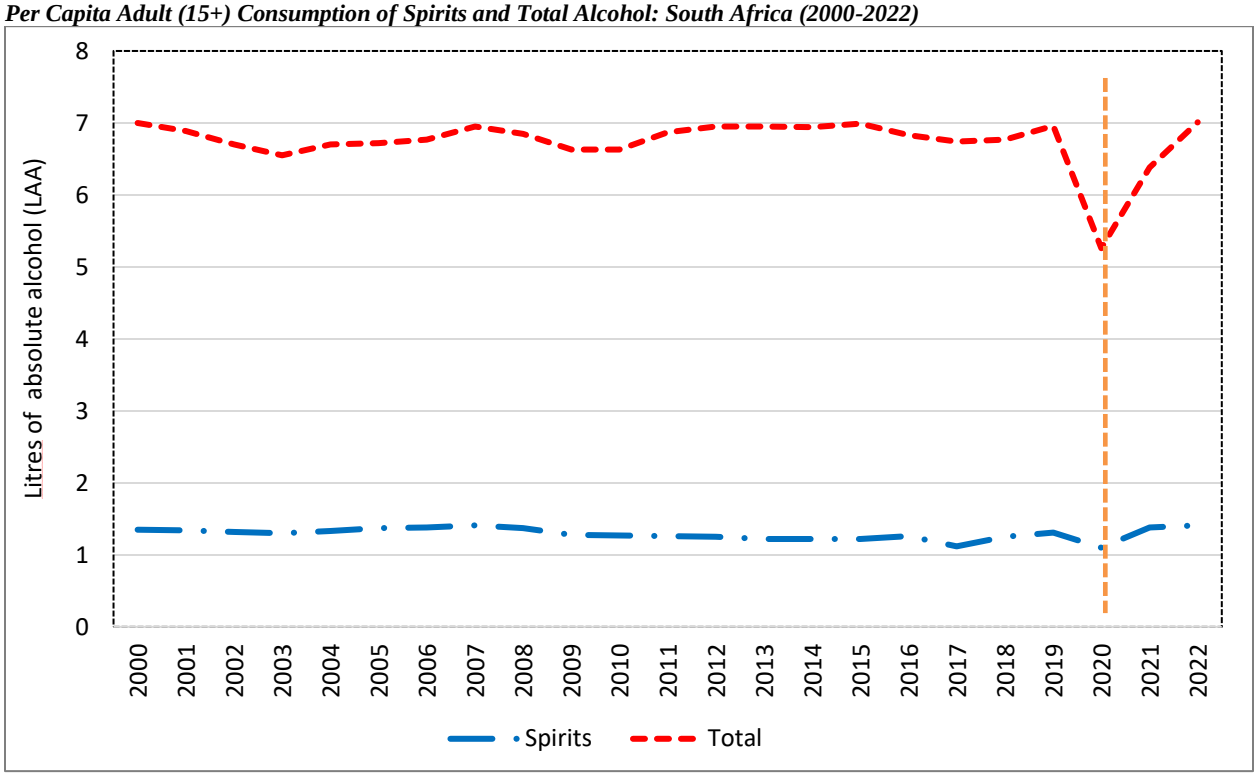
The market share for the four main categories of alcoholic beverages as a percentage is shown in Figure 4. The most discernible trend is an increase in the proportion of alcohol consumed in the form of RTDs and a decline in the consumption of beer.

The Effect of Measures Taken to Manage the COVID-19 Pandemic in South Africa on Alcohol Consumption, Including Shifts in Beverages Consumed (in Short- and Medium-Term)

Coinciding with the COVID-19 pandemic and the strict restrictions on alcohol sales and movement of people in 2020 and fewer restrictions in 2021, the data (Figure 1) point to a dramatic drop in total per capita alcohol consumption in LAA in 2020 and lower consumption in 2021, but a return to pre-COVID total consumption in 2022. As compared to total per capita alcohol consumption, a similar drop in 2020 is evident for per capita consumption of RTDs and wine (in litres) in 2020 and to a lesser extent in 2021 (Figure 2). The data (Figures 1 and 3) indicate a much smaller decline in spirits consumption in millions of litres in 2020 and then a slow return to pre-COVID levels. All products have shown a substantial increase in consumption (in millions of litres) from 2020 to 2022 to well above pre-COVID levels, except for beer (Figure 3). Visually inspecting the raw data suggests an increase in the proportion of alcohol consumed (market share based on alcohol content) during 2020 and 2021 in the form of spirits and a slight decline in the proportion of beer consumed (Figure 4).

Figure 1

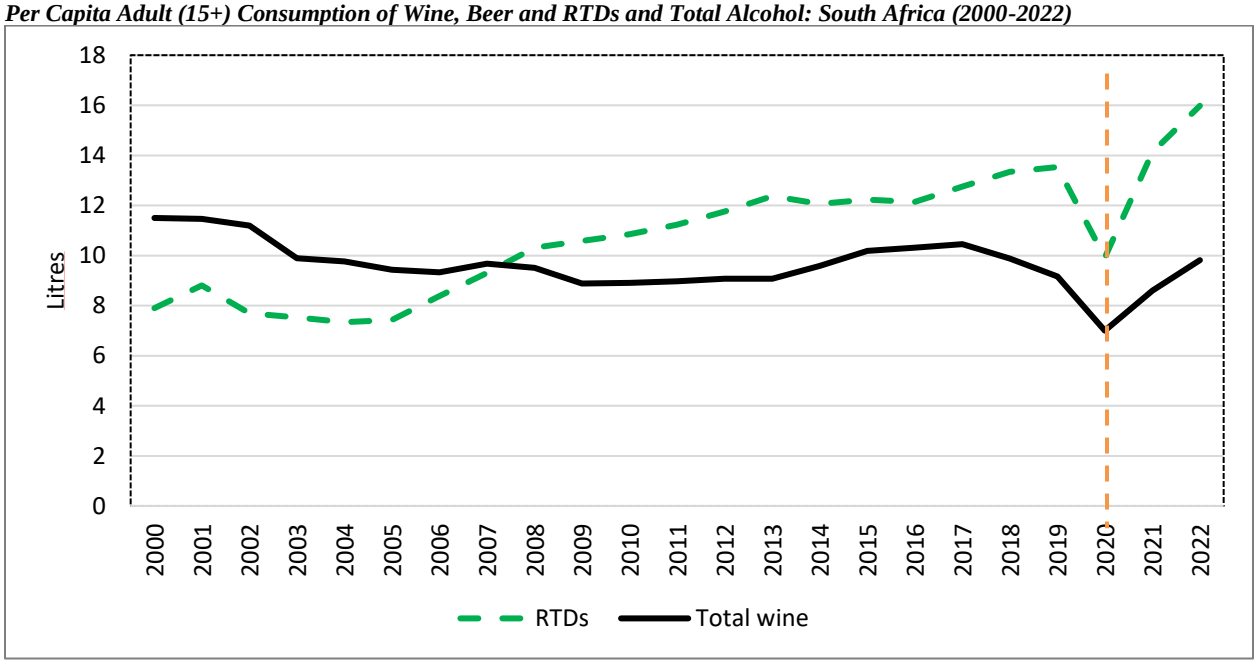
Per Capita Adult (15+) Consumption of Spirits and Total Alcohol: South Africa (2000-2022)



***Note*:** Figures based on various industry sources (SAWIS, IWSR, SALBA)

Figure 2

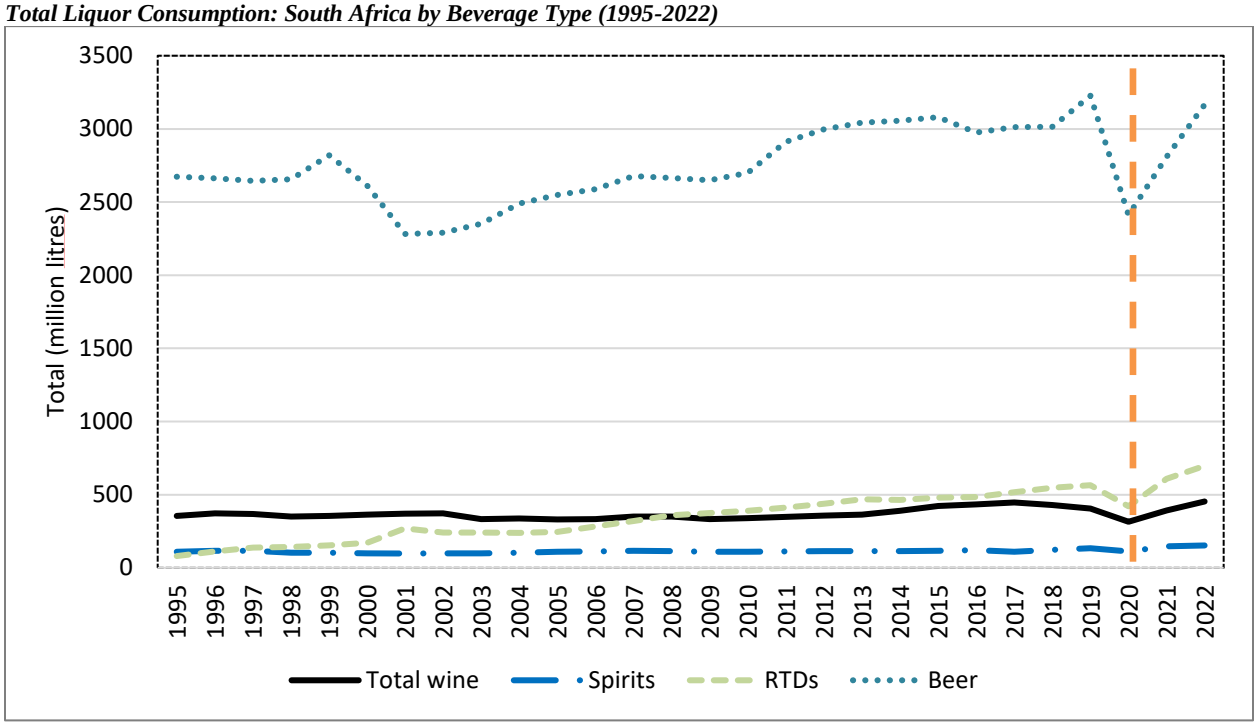
Per Capita Adult (15+) Consumption of Wine, Beer and RTDs and Total Alcohol: South Africa (2000-2022)



Note: Figures based on various industry sources (SAWIS, IWSR, SALBA); Total wine (includes still wine, fortified wine, and sparkling wine)

Figure 3

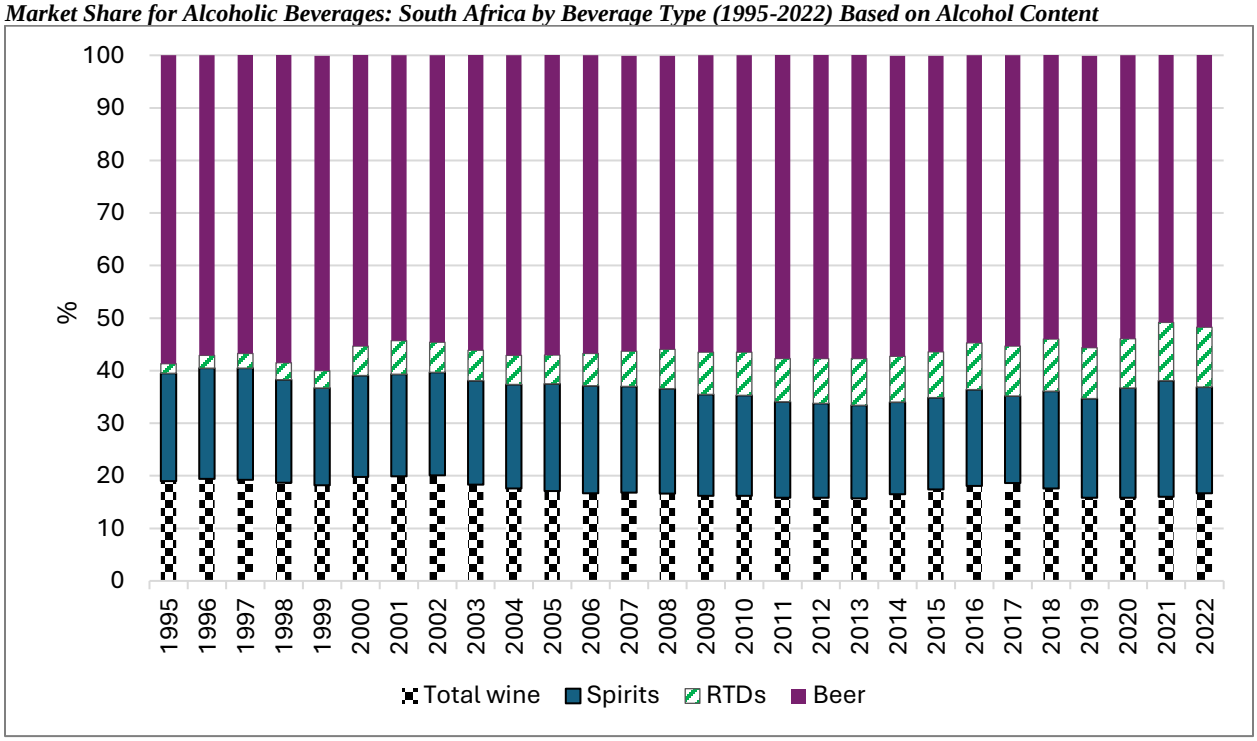
Total Liquor Consumption: South Africa by Beverage Type (1995-2022)



Note: Figures based on various industry sources (SAWIS, IWSR, SALBA). Wine categories are for South Africa (~94%) & SACU countries; wine categories only include imported products from 2019; all other product categories include imported products; RTDs refers to AFBs & spirit coolers (including cider). Total wine (includes still wine, fortified wine, and sparkling wine)

Figure 4

Market Share for Alcoholic Beverages: South Africa by Beverage Type (1995-2022) Based on Alcohol Content



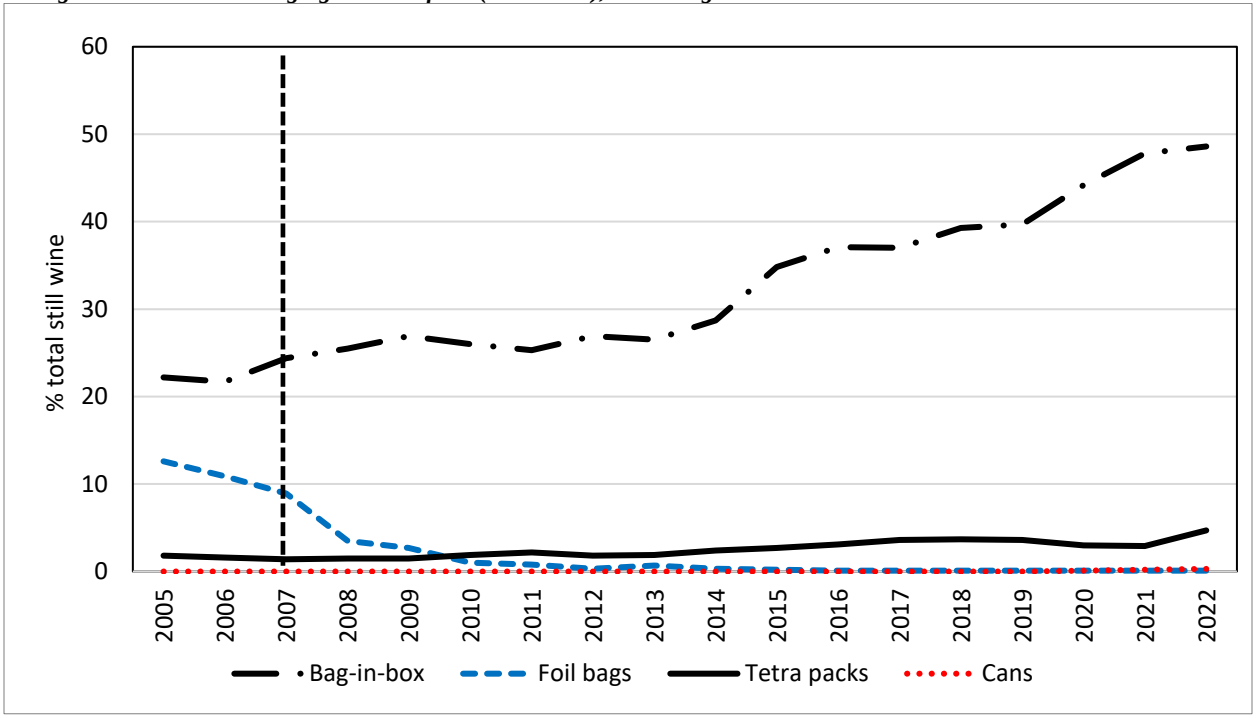
***Note*:** Figures based on various industry sources; Total wine (includes still wine, fortified wine, and sparkling wine)

Utility of Industry Data for Assessing the Impact of Other Policy Changes (e.g. Packaging)

An analysis of changes in wine packaging in South Africa between 2000 and 2022 (Figure 5) shows a substantial drop in the sale/consumption of wine in foil bags as a percentage of total still wine following the gazetting of changes to the Liquor Products Act of 1989 (Department of Agriculture, 2007). In contrast, the sale of wine in boxes ("bag-in-box wines") has increased exponentially since around 2013 and there has also been an increase in wine sold in tetra packs (single-serving or multi-serving containers made from aseptic packaging, typically lined with layers of paper, aluminium foil, and polyethylene).

Figure 5

Changes in Still Wine Packaging: South Africa (2000-2022), Excluding Plastic and Glass Bottles



***Note*:** Figures based on various industry sources (SAWIS, IWSR, SALBA). September 2007 amendments to the Liquor Products Act of 1989 were gazetted.

Discussion

Based on alcohol industry data, per capita consumption of alcoholic beverages in volume consumed overall has held steady over time between 2000 and 2022 in South Africa. With regard to particular alcoholic beverages, this is also the case for spirits (in terms of the volume of beverage consumed and per capita consumption). In contrast, there appears to have been a substantial increase in the consumption of RTDs in terms of litres consumed, as well as with regard to per capita consumption. This increase in RTDs in recent years is also evident in other countries such as China, Japan and the USA (ISWR Drinks Market Analysis, 2024). Wine showed a decline in per capita consumption and a flatlining in volume consumed over the time period. This contrasts with the global overall figures, which indicate that the global wine market is projected to reach 26.7 billion litres by 2027, up from 24 billion litres in 2022 (Mason, 2024). Beer consumption also showed an increase in the volume consumed over time in South Africa (but not in market share), by 18.8% (from 2,672 million litres in 1995 to 3,165 million litres in 2022). This increase is in contrast with global beer sales consumption which has been showing a decline since around 2014 (Conway, 2024). However, Africa is one of the regions of the world which has seen an increase in beer consumption, by 13.7% from 2015 to 2019, from 12.95 to 14.73 million kilolitres (Conway, 2024), and it is well known that Africa is one of the important growth areas for beer producers (Jernigan & Babor, 2015).

With regard to market share, RTDs showed a massive increase between 1995 and 2022 in South Africa, and both beer and wine showed substantial decreases. Nevertheless, beer remains the most consumed product in South Africa, having a market share around 52%, followed by spirits at 20%, 17% for wine products and 11% for RTDs. The market share for spirits in South Africa has remained stable over time. Global consumption trends for spirits has varied depending on the specific type of spirit and regional factors, but according to industry sources the consumption of spirits globally has generally seen an increase over the past decade, driven by factors such as economic growth, changing consumer preferences, and increased marketing efforts by spirit producers (ISWR Drinks Market Analysis, 2023).

This data from industry sources complements what is available from the most recent national household surveys conducted in South Africa between 2016 and 2017 (National Department of Health [NdoH] et al. 2019; Pengpid et al., 2021) in several ways. First, it provides more up-to-date information, typically within the past 12 to 18 months. In this instance, it shows the rapid rise in the drinking of RTDs which has not been indicated from survey data. It has also shown the impact of the temporary alcohol sales bans and other restrictions on alcohol consumption at a national level during the COVID-19 pandemic that has also not been shown by national surveys, as such surveys have not been carried out since 2017. The only national data that has been published that points to the impact of the COVID-19 pandemic and associated restrictions on drinking and movement comes from a study looking at unnatural deaths (Barron et al., 2024). Second, it provides annual data which allows for more accurate determination of trends, and third, it provides data on specific beverage types which is often absent from national household surveys conducted in South Africa (NDoH et al. 2019; Pengpid et al., 2021), and has only been provided in more localised surveys (Harker et al., 2020; Trangenstein et al., 2018). On the other hand, industry data on aggregate alcohol sales and estimated consumption are not capable of providing information on drinking by age, gender and other demographics or describing individual patterns of drinking.

Substantial short-term declines in the consumption of all alcoholic beverages and in the consumption of individual alcoholic beverages compared to the pre-COVID-19 period were noted in 2020 in South Africa. The decline in the volume of alcohol consumed in 2020 and 2021 was especially noticeable for RTDs and beer, and in terms of per capita consumption, for RTDs and wine. The market share for beer decreased during 2020, but increased for spirits. Consumption levels for all alcoholic beverages appear to have returned to pre-COVID levels in 2022, or even surpassed those levels, as in the case of RTDs. No national surveys have been conducted since 2020–2021 so this is the only data available pointing to an increase in alcohol consumption since that time in South Africa. Research has shown that the drop in alcohol consumption levels in 2020 and 2021 were accompanied by substantial declines in alcohol-related harms in South Africa, particularly trauma admissions and unnatural deaths (Barron et al., 2024; Chu et al., 2022; Moultrie et al., 2021; Navsaria et al., 2021). Two studies in particular showed that it was the effect of the temporary bans on liquor sales that was the reason for the decline in unnatural deaths rather than the restrictions on movement (Barron et al., 2024; Moultrie et al., 2021).

A systematic review of alcohol and substance use during the COVID-19 pandemic identified 45 studies from 16 countries and noted that there was a mixed picture with regard to alcohol use globally, with a trend towards increased consumption (Roberts et al., 2021). Our research found a dramatic drop in alcohol consumption in South Africa in 2020 (especially) and 2021; years in which there were prolonged periods of full liquor sales bans as well as periods of partial bans on alcohol. This mirrors the findings of a 14-country study that found that total bans on alcohol sales in the context of the Covid pandemic were associated with substantial reductions in typical drinking quantities relative to partial bans (Huckle et al., 2022). As annual data were only provided by SAWIS, it was not possible to disaggregate the effect of the full and partial bans on liquor sales.

On the issue of utility of industry sales data to evaluate the impact of policy changes, namely the amendment to the 1989 Liquor Products Act on consumption, the study showed that industry data on packaging for wine was very sensitive in being able to show the impact of the 2007 ban on wine sold in foil-bags in reducing sales/consumption. This would no doubt have also showed up in survey data, had national surveys been conducted around that time and included questions on the type of containers/packaging in off-consumption alcohol purchases. Such questions have not been included in any national household surveys undertaken in South Africa and certainly not any repeated surveys asking about such practices over time. Other ways to measure the impact of policy changes include focusing on the impact of policy changes on harms, as was evidenced in a study assessing the impact of alcohol policy changes in the Northern Territory of Australia via emergency department (ED) utilisation (Brownlea et al., 2023). This was not the focus of the study presented, but was reflected in the studies investigating the impact of COVID-19 restrictions on alcohol on trauma and unnatural deaths (Barron et al., 2024; Chu et al., 2022; Moultrie et al., 2021; Navsaria et al., 2021).

Study Strengths and Limitations

While the study had several strengths, such as its focus on longitudinal data from the liquor sector, it lacks opportunities for independent verification. This could be facilitated by setting up some kind of track-and-trace system as has been instituted for some beverage types in Russia and Kenya (Neufeld et al., 2020; Ross, 2017), and also making it mandatory to have such information shared with researchers. Setting up a track-and-trace system has been suggested for South Africa as a way to counter unrecorded alcohol production and sales (Parry, 2022) and should ideally be a condition for getting a licence to produce and sell alcohol.

Independent of this challenge associated with the use of industry data, the data presented in this paper are subject to various other limitations. First, sales information does not necessarily equate 100% to consumption, especially with regard to a product like red wine which is often purchased in one year and consumed in another year. Furthermore, the data do not take into account tourist consumption. However, with regard to these limitations it is likely that only a very small proportion of the alcoholic beverages were sold and not consumed in the year they were purchased in a country like South Africa, and tourist consumption is unlikely to change much from year to year, apart from 2020 and 2021 when tourist numbers to South Africa were down as a consequence of the COVID-19 pandemic. The data also exclude unrecorded alcohol which industry says grew 10% annually between 2017 and 2020 in South Africa (Euromonitor, 2021), and it ignored the increase in home production of alcoholic beverages during the COVID-19 pandemic, often involving the use of pineapples (Pasiya,

2021). In addition, industry data on sales are not granular in that they typically do not provide information on sub-group analyses (e.g. women and youth) and data are not typically provided on specific days of the week or months. Furthermore, the data presented only took account of imports for wine from 2019, and wine information includes other data from other SACU countries (~6% of the data). Finally, only graphical data were presented, and no statistical analyses were provided to assess possible trends over time or interruptions in trend data.

Conclusion

As shown in this paper, despite some limitations, industry data provide a useful indication of alcohol consumption over time and also are useful for monitoring the impact of policy interventions; in this case limits on certain forms of packaging and on alcohol availability. However, getting better information on sales data (including data by day of week, month of year and location, e.g. state or province) would be facilitated by setting up some kind of track-and-trace system as indicated above. Overall, such a system would have the potential to improve the quality and scope of industry data on production/sales and thereby improve the data available to assess the impact of policy changes on alcohol consumption.

Abbreviations

AFBs: Alcohol Flavoured Beverages
IWSR: International Wine & Spirits Research
LAA: Litres of absolute alcohol
RTD: Ready to drink
SACU: Southern African Customs Union
SALBA: South African Liquor Brand Owners Association
SAWIS: South African Wine Industry Information & Systems

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References

Babor, T. F., Casswell, S., Graham, K., Huckle, T., Livingston, M., Österberg, E., Rehm, J., Room, R., Rossow, I. & Sornpaisarn, B. (2022). *Alcohol: no ordinary commodity: Research and public policy*. Oxford University Press.

Barron, K., Parry, C.D.H., Bradshaw, D., Dorrington, R., Groenewald, P., Laubscher, R., & Matzopoulos, R. (2024). Alcohol, violence and injury-induced mortality: Evidence from a modern-day prohibition. *The Review of Economics and Statistics*, 106, 938-955. https://doi.org.10.1162/rest_a_01228

Brownlea, S., Miller, J., Taylor, N., Miller, P., Coomber, K., Baldwin, R., & Palmer, D. (2023). Impact of alcohol policy changes on substance-affected patients attending an emergency department in the Northern Territory with police. *Emergency Medicine Australasia*, *35*(3), 390–397. https://doi.org/10.1111/1742-6723.14126

Chu, K. M., Marco, J. L., Owolabi, E. O., Duvenage, R., Londani, M., Lombard, C., & Parry, C. D. (2022). Trauma trends during COVID-19 alcohol prohibition at a South African regional hospital. *Drug and Alcohol Review*, *41*(1), 13–19. https://doi.org/10.1111/dar.13310

Conway, J. (2024). *Global beer industry – statistics and facts*. Statista. Retrieved 3 December 2024 from https://www.statista.com/topics/7974/global-beer-industry/#topicOverview.

Corrales-Gutierrez, I., Gomez-Baya, D., Leon-Larios, F., Medero-Canela, R., Marchei, E., Mendoza-Berjano, R., & García-Algar, Ó. (2023). Alcohol consumption assessed by a biomarker and self-reported drinking in a sample of pregnant women in the south of Europe: A comparative study. *Toxics*, *11*(11), 930. https://doi.org/10.3390/toxics11110930

Department of Agriculture. (2007). *Amendments to Liquor Products Act 60 of 1989*. Government Notice 2007, 3276, 3–5.

Euromonitor. (2021). *Illicit trade: Alcoholic drinks in South Africa in 2020*. Euromonitor.

Fogarty, J. J. (2009). A review of alcohol consumption and alcohol control policies. *Worldwide Hospitality and Tourism Themes*, *1*(2), 110–132. https://doi.org/10.1108/17554210910962503

Harker, N., Londani, M., Morojele, N., Williams, P.P., & Parry, C.D.H. (2020). Characteristics and predictors of heavy episodic drinking among young people aged 16-25: The International Alcohol Control study (IAC), Tshwane, South Africa. *International Journal of Epidemiological Research & Public Health*, *17*(10), 3537. https://doi.org/10.3390/ijerph17103537

Huckle, T., Parker, K., Casswell, S., Medina-Mora, M.E., Quintanar, T.R., Parry, C., Harker, N., Williams, P.P., Chaiyasong, S., Jankhotkaew, J., Torun, P., Ali, I., Obot, I., Austin, G., Sengee, G., Yujuico, E., Pham, C.V., Muluan, W.A., Amul, G.G.H., Elorrieta, F., Trangenstein, P., & Stockwell, T. (2022). *Reductions in alcohol consumption during total alcohol bans vs partial bans as part of Covid-19 restrictions – a multi-country study* [unpublished manuscript]. SHORE & Wariki Research Centre, Massey University.

ISWR Drinks Market Analysis. (2024). *Ready-to-Drink strategic study: The evolution of the Ready-to-Drink alcohol market*. Retrieved 3 December 2024 from https://www.theiwsr.com/global-ready-to-drink-alcohol-strategic-study/.

ISWR Drinks Market Analysis. (2023). *Global Beverage Alcohol Market Volume Growth Slows to +1% Per Annum 2022-2027, Whilst Value Forecast to Grow By +2% YOY*. Retrieved 3 December 2024 from https://www.theiwsr.com/global-beverage-alcohol-shows-subdued-growth-2022-2027-whilst-value-outlook-is-more-positive/.

Jawad, M., Vamos, E. P., & Najim, M. (2019). The impact of armed conflict on cardiovascular disease risk among civilian populations in low-and middle-income countries: A systematic review. *Heart*. *105*(18), 1388–1394. https://doi.org/10.1136/heartjnl-2018-314459

Jernigan, D. H., & Babor, T. F. (2015). The concentration of the global alcohol industry and its penetration in the African region. *Addiction*, *110*(4), 551–560. https://doi.org/10.1111/add.12468

Mason, J. (2024). Global wine consumption could see a 'shift' by 2027. *The Drinks Business*. Retrieved 3 December 2024 from https://www.thedrinksbusiness.com/2024/03/global-wine-consumption-could-see-a-shift-by-2027/#:~:text=Additionally%2C%20in%20volume%2C%20the%20findings,by%20the%20US%20with%202 1.6%25

McKenna, H., Treanor, C., O'Reilly, D., & Donnelly, M. (2018). Evaluation of the psychometric properties of self-reported measures of alcohol consumption: A COSMIN systematic review. *Substance Abuse Treatment, Prevention, and Policy*, *13*, 1–19. https://doi.org/10.1186/s13011-018-0143-8

Moultrie, T. A., Dorrington, R. E., Laubscher, R., Groenewald, P., Parry, C. D. H., Matzopoulos, R., & Bradshaw, D. (2021). Unnatural deaths, alcohol bans and curfews: Evidence from a quasi-natural experiment during COVID-19. *South African Medical Journal*, 111(9), 834–837. https://doi.org/10.7196/SAMJ.2021.v111i9.15813

Nanau, R. M., & Neuman, M. G. (2015). Biomolecules and biomarkers used in diagnosis of alcohol drinking and in monitoring therapeutic interventions. *Biomolecules*, *5*(3), 1339–1385. https://doi.org/10.3390/biom5031339

National Department of Health (NDoH), Statistics South Africa (Stats SA), South African Medical Research Council (SAMRC), and ICF. 2019. *South Africa Demographic and Health Survey 2016*. Pretoria, South Africa, and Rockville, Maryland, USA: NDoH, Stats SA, SAMRC, and ICF.

Navsaria, P. H., Nicol, A. J., Parry, C. D. H., Matzopoulos, R., Maqungo, S., & Gaudin, R. (2021). The effect of lockdown on intentional and non-intentional injury during the COVID-19 pandemic in Cape Town, South Africa: A preliminary report. *South African Medical Journal*, 111(2), 110–113. https://doi.org/10.7196/SAMJ.2021.v111i2.15318

Neufeld, M, Bunova, A., Gornyi, B., Ferreira-Borges, C., Gerber, A.,Khaltourina, D., Yurasova, E., & Rehm, J. (2020). Russia's national concept to reduce alcohol abuse and alcohol-dependence in the population 2010–2020: Which policy targets have been achieved? *International Journal of Environmental Research & Public Health*, *17*(21), 8270. https://doi.org/10.3390/ijerph17218270

Parry, C.D.H. (2010). Alcohol policy in South Africa: a review of policy development processes between 1994 and 2009. *Addiction*, 105, 1340–1345. https://doi.org/10.1111/j.1360-0443.2010.03003.x

Parry, C. (2022). *Effect of Minimum Unit Pricing on consumption of unrecorded alcohol in South Africa and the Western Cape in particular* [unpublished manuscript]. Cape Town: SAMRC.

Pasiya, L. (2021). *Pineapple prices increase by 74% as South Africans continue to brew their own alcohol.* Retrieved 3 December 2024 from https://www.iol.co.za/lifestyle/food-and-restaurants/pineapple-prices-increase-by-74-as-south-africans-continue-to-brew-their-own-alcohol-4de24ec3-f0ad-4dc6-a982-8d9cb1ddbcad.

Pengpid, S., Peltzer, K., & Ramlagan, S. (2021). Prevalence and correlates of hazardous, harmful or dependent alcohol use and drug use amongst persons 15 years and older in South Africa: Results of a national survey in 2017. *African Journal of Primary Health Care & Family Medicine*, *13*(1), 2847. https://doi.org/10.4102/phcfm.v13i1.2847

Probst, C., Shuper, P. A., & Rehm, J. (2017). Coverage of alcohol consumption by national surveys in South Africa. *Addiction*, *112*(4), 705–710. https://doi.org/10.1111/add.13692

Roberts, A., Rogers, J., Mason, R., Siriwardena, A. N., Hogue, T., Whitley, G. A., & Law, G. R. (2021). Alcohol and other substance use during the COVID-19 pandemic: A systematic review. *Drug and Alcohol Dependence*, *229*, 109150. https://doi.org/10.1016/j.drugalcdep.2021.109150

Robinson, M., Thorpe, R., Beeston, C., & McCartney, G. (2013). A review of the validity and reliability of alcohol retail sales data for monitoring population levels of alcohol consumption: A Scottish perspective. *Alcohol and Alcoholism*, *48*(2), 231–240. https://doi.org/10.1093/alcalc/ags098

Ross, H. (2017). Tracking and tracing tobacco products in Kenya. *Preventive Medicine*, *105*, S15–S18. https://doi.org/10.1016/j.ypmed.2017.04.025

Schechter, E. J. (1986). Alcohol rationing and control systems in Greenland. *Contemporary Drug Problems.*, *13*, 587.

Shetty, A., De La Torre, S., Ibrahim, B., Hong, A., Meza, J., Saab, S. (2023). Role of Biomarkers to Assess the Use of Alcohol. *Journal of Clinical Gastroenterology* 57(6), 537–545. https://doi.org/10.1097/MCG.0000000000001852

South African Wine Industry Information & Systems (2023). SA Wine Industry 2023 Statistics NR 48. Pretoria: SAWIS. Retrieved 12 November 2024 from https://www.sawis.co.za/info/download/Book_2023_Final_19_Jul_24.pdf

StatsSA (2022). Mid-year population estimates 2022. Pretoria: StatsSA. Retrieved 11 November 2024 from https://www.statssa.gov.za/publications/P0302/P03022022.pdf

Trangenstein, P. J., Morojele, N. K., Lombard, C., Jernigan, D. H., & Parry, C. D. H. (2018). Heavy drinking and contextual risk factors among adults in South Africa: Findings from the International Alcohol Control study. *Substance Abuse Treatment, Prevention, and Policy*, *13*(1), 43. https://doi.org/10.1186/s13011-018-0182-1

World Health Organization (WHO). (2000*). International guide for monitoring alcohol consumption and related harm*. Geneva. https://iris.who.int/bitstream/handle/10665/66529/WHO_MSD_MSB_00.4.pdf?sequence=1