HS Business Solutions

The Liquor Industry in the Western Cape

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1. Acronyms

ABV	Alcohol By Volume
AFBs	Alcoholic flavoured beverages
AFR	African Region
AMR	Region of the Americas
APC	Adult Per Capita Alcohol Consumption
ARA	Industry Association for Responsible Alcohol Use
BAC	Blood Alcohol Concentration
BEE	Black Economic Empowerment
BMR	Unisa Bureau of Market Research
BrAC	Breath Alcohol Content
CAMH	The Centre for Addiction and Mental Health
CAT	Methamphetamine
DALY	Disability Adjusted Life Year
DGB	Douglas Green Bellingham
DTI	The Department of Trade and Industry
EABL	East African Breweries Limited
EMR	Eastern Mediterranean Region
EU	European Union
EUR	European Region
FAS	Foetal Alcohol Syndrome
FASD	Foetal Alcohol Spectrum Disorder
GDP	Gross Domestic Product
HED	Heavy Episodic Drinking
HSRC	Human Sciences Research Council
ICD	The International Classification of Diseases
LBW	Low Birth Weight
LDS	Last Drink Survey
MEC	Member of the Executive Council

MRC	Medical Research Counsel
NGO	Non-Governmental Organization
NIMSS	National Injury Mortality Surveillance System
NLA	National Liquor Authority
NLPC	National Liquor Policy Council
OTC	Over the Counter
RTD	Ready to Drink Beverage
PDS	Patterns of Drinking Score
PERO	The Provincial Economic Review and Outlook
PET	Plastic/Polyethylene Terephthalate
RSA	Republic of South Africa
SAB	South African Breweries
SACENDU	South African Community Epidemiology Network on Drug Use
SALBA	South African Liquor Brand Owners Association
SAM	Cape Social Accounting Matrix
SAPS	South African Police Services
SARS	South African Revenue Service
SAWIS	South African Wine Industry Information and Systems
SEAR	South-East Asia Region
SES	Socio Economic Status
SMME	Small, Medium and Micro Enterprises
UCT	University of Cape Town
UK	United Kingdom
VAT	Value added tax
WC	Western Cape
WCLA	Western Cape Liquor Authority
WHO	World Health Organization
WPR	Western Pacific Region

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5. Introduction

The Western Cape Liquor Authority (WCLA) regulates the retail sale and micro-manufacturing of liquor in the province. In addition, the WCLA also facilitates transformation of the liquor industry in the Western Cape by promoting the entry of new license holders as well as aiming to ensure the responsible use of liquor.

These objectives are achieved by enforcing a regulatory environment that reflects a high level of participation by the public, maximising the benefits of the industry for the province and its people, and minimising negative effects of alcohol through increased awareness and better law enforcement.

As a liquor regulator in the Western Cape, it is important for the WCLA to have relevant and credible information available regarding the liquor industry as a whole in South Africa as well as the local market in the Western Cape. This information assists the WCLA to plan and determine appropriate interventions and share current information with relevant stakeholders.

HS Business Solutions was appointed to conduct a desktop research study and report on the liquor industry in the Western Cape. This study would serve as a baseline study to assist the WCLA with the development of programmes and the implementation of relevant social responsibility, education and enforcement intervention in order to find an optimum balance between the positive and negative impacts of liquor use.

This research paper was compiled in accordance with recognised and accepted methodologies as set out in the research proposal.

6. Purpose and Objectives

The Western Cape Liquor Authority regulates the retail sale and micro-manufacturing of liquor in the province. The entity's strategic goal is to create a regulatory environment that reflects high levels of participation by the public, maximising the benefits of the industry for the province and its people,

and minimising of its negative effects through increased awareness, reduced availability of liquor, and better law enforcement.

In order to meet its strategic goal, it is important for the WCLA to have credible and relevant information on the industry available for the purposes of planning and determining appropriate interventions.

As a public entity under the Western Cape Government, it is also the responsibility of the WCLA to avail relevant and credible information about the industry to the public and/ or key stakeholders.

Therefore, HS Business Solutions was appointed to conduct research in order to gain an overview of the liquor industry. This will assist the WCLA in developing relevant interventions, thereby equipping the entity with a baseline to measure the impact of interventions and also providing readily-available industry information to be shared with stakeholders.

This research paper will also provide information in order to direct future primary research.

7. Methodology

Research paradigm:

There are two main paradigms for research, namely positivistic and phenomenological approaches. The positivistic paradigm is based on the approach used in the natural sciences and seeks the facts of causes of social phenomena, but does not consider the subjectivity of the individuals involved. Positivism is also referred to as quantitative research as it generates mostly quantitative data. Quantitative data is usually numerical and can be statistically analysed.

Repeating research studies in order to test reliability constitutes the process known as replication. Reliability is high with quantitative data since numbers can easily be reanalysed or reprocessed.

Phenomenology is the science of phenomena, which refer to occurrences that appear or are perceived. This paradigm acknowledges that human action and behaviour are products of the subjective human mind and as such manifest in unique ways. Phenomenology focuses on depth and quality of data that is rich and captures the detail of the context. It focuses on understanding human

behaviour from the participant's perspective. Phenomenology is founded in the belief that the researcher, or even the fact that the subject is being researched, has an impact on the results.

The features of the main paradigms are contrasted below:

Table 1: Positivistic Paradigm vs Phenomenological Paradigm

Positivistic paradigm	**Phenomenological paradigm**
Tends to produce quantitative data	Tends to produce qualitative data
Uses large samples	Uses small samples
Concerned with hypothesis testing theories	Concerned with generating theories
Data is highly specific and precise	Data is rich and subjective
The location is artificial	The location is natural
Reliability is high	Reliability is low
Validity is low	Validity is high
Generalises from sample to population	Generalises from one setting to another

For this study, a positivistic paradigm was most often employed as analyses included mostly statistical data. However, the researchers remained cognisant of the fact that alcohol use and the assosciated behaviour patterns are subject to context and perspective and therefore qualitative data was included where appropriate.

Research methods:

In order to ensure optimal credibility of reseach, triangulation was employed to enhance reliability and validity.

Denzin (1970) describes triangulation as being a combination of methodologies used to study the same phenomenon. He argues that the use of different methods should lead to greater validity and reliability than a single method approach.

Easterby-Smith, Thorpe and Lowe (1991) identified four types of triangulation, which were all applied in our research methods.

Table 2: ***Types of triangulation in research, and how these were approached***

Triangulation types	**What was done in this research**
Collecting data from different sources (data triangulation)	Data was gathered from various role players at different levels of the value chain. Statistical data was sourced from reputable, independent sources to eliminate bias.
Investigator triangulation	The project was completed by a team of researchers who worked independently as not to influence one another. However, team members did review and critique one another's work to improve the final product.
Methodological triangulation, using both qualitative and quantitative data collection methods	Qualitative data was collected through literature review and semi-structured interviews. Quantitative data was also collected through literature review and desk research, as well as electronic communication
Triangulation of theories – using theory of one discipline to explain a phenomenon in another discipline	For this research, relevant theories from various disciplines were combined through the collaboration of a diverse and skilled research team.

Data collection and Search strategy

As a starting point for data collection, the researchers reviewed documents supplied to us by the WCLA. These documents were then used to identify key sources of information and gaps in the literature.

The next step was to obtain reliable and up-to-date information from reputable sources such as Statistics SA and established research organisations. Data was also gathered from communication with industry leaders and key role-players.

Analysis and integration of literature

The objective of the research was to evaluate and integrate available data to compile a report that is balanced, objective and includes relevant and current information. The researchers therefore reviewed the literature to identify trends and issues of importance, and to gain a balanced perspective on the research topic to ensure that that the research included the latest available data.

8. Literature Review

Introduction

The purpose of the research paper was to gather relevant information on the liquor industry in the Western Cape that can serve as a basis to direct future primary research. This relevant and credible information is required to gain an overview of the alcohol industry that will assist the Western Cape Liquor Authority to develop relevant interventions, measure the impact of these interventions against a baseline and have industry information to share with relevant stakeholders.

The research studies were grouped according to common factors such as focus areas of interest or influence. Some studies were relevant and applicable to more than one focus area of interest. The liquor industry represents a complex environment and areas of interest were often found to overlap and influence other related areas of interest.

Research pertaining to the liquor industry's contribution to the respective economies:

The studies conducted concerning the liquor industry in South Africa mostly pertain to the National Liquor Act 59 of 2003. No comprehensive impact assessment of the Western Cape Liquor Act 4 of 2008 (as amended) has to date been undertaken. Notwithstanding this a number of reports have contributed to a better understanding of the landscape of the liquor industry and were utilised in the current report. The main documents referred to were:

"Impact assessment on the effectiveness of the Liquor Act 59 of 2003 - final report", by the Department of Trade and Industry comprises an evaluation of the extent to which the 2003 National Liquor Act has affected market outcomes in the South African liquor sector. This study was

concluded in July 2013. Evaluating the impact of the Act is complicated by the availability of data, both as regards the baseline conditions prior to the implementation of the Act and as regards the current market outcomes, particularly in the informal sector.

Jurisdictional complexities at national and provincial level make effective monitoring and enforcement of liquor regulation difficult. This is compounded by a lack of effective collaboration between different authorities at both national and provincial levels, making it extremely challenging to evaluate the liquor industry as a whole.

This study provides a general overview, without specific statistics of the liquor industry, which can be used as a starting point for the current review. It contains estimates of the direct and indirect impact on employment and the overall economy in South Africa. The section on industry concentration levels has limited application to the current research paper as it contains data for the period 2005-2009.

The analysis of South Africa's informal retail market draws on research findings from focus groups and one-on-one interviews as well as prior research by Truen and a significant body of work on informal liquor markets undertaken by the Sustainable Livelihoods Foundation which make a valuable contribution to the current study.

"Final Report – Macro-economic Impact of the Wine Industry on the South African Economy (also with reference to the Impacts on the Western Cape) South African Wine Industry Information and Systems (SAWIS)", by Mosaka Economic Consultants contains reference to developments in the wine industry over the five years up to 2013 and the magnitude of the industry in economic terms is given for the calendar year of 2013. The report contains a general description of the wine industry together with a macro-economic impact assessment of the wine industry which includes the impact on the GDP, employment, capital utilisation and income distribution. The study aims to give a reasonably accurate presentation of the magnitude of the industry in economic terms by applying economic data sourced from VinPro, PwC and SAWIS. The updated Western Cape Social Accounting Matrix (SAM) was employed to improve the wine impact results on the Western Cape and rest of the economy. This study makes a valuable contribution to the current research paper, with the only limitation being that the primary focus is the wine industry and not the whole of the liquor industry.

For the current report it was necessary to supplement the data with more recent and comprehensive statistics. Attempts to draw the co-operation of SALBA were unsuccessful as they declined the opportunity to contribute to the study.

"Analysing the South African Liquor Industry", Aruvian's R'search The report gives an understanding of the South African liquor industry, looks at the market share scenario in the industry, the high rate of competition, opportunities for SMME's and the ethical issues faced by the industry and how it is safeguarding consumer interest. The report also includes a comprehensive analysis of the industry structure and the industry segmentation. The statistical information used is dated and the focus is primarily on the different role players in the industry. The value of the report lies in the comprehensive overview it affords of the liquor industry. Parts of the report that pertain to the ethical issues and objectives of ARA are not specifically relevant to the current research paper.

The Industry Association for Responsible Alcohol Use (ARA), in the publication "The South African Liquor Industry: Our Contribution", examines the liquor industry's role in the promotion of responsible alcohol consumption, its contribution to the South African economy and how it has assisted in the realisation of Government's policy objectives and priorities. This document provides a brief summary of ARA's main objectives and policies. The data is limited and restricted to 2009. The policies aimed at preventing alcohol abuse offer a useful perspective on the complexity of the liquor industry's responsibility.

The most significant contribution to the research for the current paper was made by "Revisiting the potential socioeconomic impact of the Western Cape Liquor Act on unregulated liquor retailers", by L Peterson & R Charman, which investigated the impact of the Western Cape Liquor Act on unregulated liquor traders. This included the impact on direct employment and livelihoods together with the economic multiplier effects, as well as intended and unintended outcomes of the legislation. The report did not consider the social and health implications of consuming liquor or the economic impact of the shebeen sector in terms of liquor harms. It additionally did not investigate the moral objections to unregulated liquor trading, examine the law enforcement of the Act or the effectiveness of the SAPS to curtail illegal activities. Concern about size of the segment of traders that were interviewed exists, but does not detract from the value of the findings.

Another valuable source of information was the paper "The Economics of Alcohol Use, Misuse and Policy in South Africa" which was commissioned by the WHO. The information included in this report is current as it was released in 2015. A team of researchers worked on the paper and it provided a balanced overview of various aspects impacting on the liquor industry.

The latest statistical information, sourced from Statistics SA, ensured that industry information included in the research was current and up-to-date. Statistics regarding the food and beverage industry, manufacturing industry, wholesale trade and retail trade were used to form a picture of the contribution of the liquor industry to other sectors.

Valuable information was obtained for SABMiller's latest Annual Report and a report commissioned by SABMiller ("Working for South Africa", Econex and Quantec, 2010) regarding the contribution of beer to the liquor industry in South Africa.

The social and economic dimensions of the liquor industry

Liquor legislation, both national and provincial, has stimulated interest in the socio- economic dimensions of the liquor industry. Research was concentrated on four areas of interest: the economy of liquor sales and distribution, the politics and social consequences of drinking, drunkenness and liquor products, the economic cost of liquor related harms and the epidemiology of drinking on trauma and other health related injuries. Reports either support or condemn stricter legislation on liquor retailing and access to liquor.

Most of the research has been focused on the considerable burden of liquor harms to society. The economic, social and health costs associated with alcohol-related harms are important measures with which to inform alcohol management policies and laws, and this was the topic of discussion in "The cost of harmful alcohol use in South Africa", by R G Matzopoulos, S Truen, B Bowman, J Corrigall. This report on the cost of harmful alcohol use in South Africa concluded that existing frameworks that guide the regulation and distribution of alcohol regularly focus on maximising the contribution of the alcohol sector to the economy, but account should also be taken of the associated economic, social and health costs. Different methods to calculate costs attributable to alcohol use were advocated to estimate costs where secondary health and economic data did not exist in literature.

The study provides a comprehensive assessment of the cost of alcohol-related harms. It argues that harm-related consumption of alcohol has economic effects that extend beyond the factors used to justify the economic benefits of retaining existing liquor legislation. The unavailability of essential costing data results in underestimating the true economic, social and health costs of alcohol in South Africa.

In a study entitled "A rapid assessment of the potential socioeconomic impact of the Western Cape Liquor Act – Synopsis of Key findings", compiled by Sustainable Livelihood Consultants, an assessment of the potential impact of the Western Cape Liquor Act on livelihoods and micro-entrepreneurship amongst affected persons and communities was undertaken over 12 working days in March 2009. In-depth interviews with 48 shebeen traders were conducted. The study had a specific focus and did not examine all the economic variables needed to be considered in studying the potential impact of liquor regulation, and specifically excluded the economic impact of liquor consumption on health and the provision of health care services.

This study offered a rare insight into the illegal liquor trade and provided information on the scope and scale of the shebeen sector in the Western Cape. Valuable information on the provision of direct employment, shebeen enterprise structures, and supply-chain dynamics together with intended and unintended consequences of the Act is contained in the report.

This study was updated by a further study undertaken in March 2012 ("Revisiting the potential social-economic impact of the Western Cape Liquor Act on unregulated liquor retailers", L Peterson & R Charman) where in-depth interviews with 211 licensed and unlicensed informal shebeen and tavern-based liquor traders together with a randomised household survey of 107 households were conducted. This study confirmed that: shebeens are important black businesses, providing jobs and supporting livelihoods, many shebeens desire to fall within the regulatory framework, shebeens will not close down e*n-masse,* the 'high street' model ignores the micro-economic foundations of informal business, and informal settlement residents generally favour licensing of shebeens. The possible unintended consequences of the Act are also discussed and valuable recommendations are made. Extensive use can be made of this important study on the unregulated sector of the liquor industry.

"The Provincial Economic Review and Outlook" (PERO, 2014) provides an overview of the current global, national and provincial economic situation; it identifies a number of key industry and labour market trends that require focused attention and gives a snapshot of selected socioeconomic challenges that impact the Western Cape's economy. It has limited application to the current study, but can be utilised to assess economic trends.

Alcohol demand and supply

To reduce the harms associated with alcohol by designing effective interventions, it is necessary to understand the patterns of those harms. The pattern of alcohol consumption varies widely by country. It was necessary to get an overview of the alcohol demand and consumption patterns in South Africa.

"Economic impact of an advertising ban on alcoholic beverages for the Industry Association for Responsible Alcohol Use", compiled by Econometrix (Pty) Ltd presents a statistical presentation and mapping of the level and patterns of global, regional and national alcohol consumption by adults 15 years and older as a sound basis for the analysis of problems related to alcohol. Data was sourced from the World Health Organization's (WHO) "Global status report on alcohol and health, 2011". Unrecorded alcohol refers to alcohol that is not taxed and is outside the usual system of government control, because it is produced, distributed and sold outside formal channels. The consumption of unrecorded alcohol is a significant issue in South Africa. This is highlighted in the report.

The main problem areas that exist around alcohol in South Africa were confirmed as: heavy episodic drinking, high levels of youth drinking and the illegal alcohol sector. These problem areas were confirmed in the "Global status report on alcohol and health 2014", by the World Health Organization, where alcohol consumption globally was dissected according to levels of consumption, patterns of drinking and trends and projections. This report served as a baseline for drinking patterns globally and greatly assisted in the interpretation of the report "Liquor consumption patterns in South Africa" by Elias Holtzkampf as well as to establish the global trends in drinking patterns and alcohol consumption.

A review of research conducted since 2000 was done and compiled into a summary report of key findings on substance abuse trends in the Western Cape in "Substance abuse trends in the Western Cape", by Nadine Harker, Rehana Kader, Bronwyn Myers, Nuraan Fakier and Charles Parry (MRC),

Alan J. Flisher (UCT), Karl Peltzer, Shandir Ramlagan, and Alicia Davids (HSRC). The report provides recommendations for interventions and outlines gaps in current knowledge.

More specific research was conducted in the article "Survey on substance use, risk behaviour and mental health among grade 8-10 learners in Western Cape Provincial Schools", by the Western Cape Government: Social Development. This research complemented a gap identified by Workstream in the report "Prevention and Treatment of Harmful Alcohol and Drug Use (Modernisation Programme) – BLUEPRINT" by the Provincial Government of the Western Cape, which highlighted a gap in the information available within the academic and research sector regarding the regional prevalence of drug and alcohol use in the Western Cape school grades 8 to 12.

The study objectives were to estimate the prevalence of alcohol, tobacco and other drug use, mental health problems and aggressive behavior, sexual risk behavior, delinquent-type behavior and exposure to crime among grade 8-10 learners in the Western Cape. This survey is the first representative survey of high school learners in the Western Province and had an excellent participation rate of 95% at the school level.

The study had a few limitations, some of which are the short time period allocated for completion, difficulties communicating with learners and limited time provided by some schools in which to conduct the research process. Notwithstanding the limitations the survey confirmed similarities to other studies' rates of reporting of alcohol, tobacco and other drug use. Consequently, findings from this study are useful in that they provide baseline data for key indicators of adolescent behaviors and service needs.

A report by the South African Community Epidemiology Network on Drug Use (SACENDU), entitled "Monitoring Alcohol and Drug Abuse Trends in South Africa (July 1996 – June 2013)", was written by Siphokazi Dada, Nadine Harker Burnhams, Charles Parry, Arvin Bhana, Furzana Timol, AureneWilford, David Fourie, Diana Kitshoff, Erika Nel, Roger Weimann & Kim Johnson. The report contained detailed data from specialist substance abuse treatment centres in six sites, and confirmed that alcohol remains the most common primary substance of abuse in the Western Cape and still causes the biggest burden of harm in terms of both communicable and non-communicable diseases. "Alcohol Use, Working Conditions, Job Benefits, and the Legacy of the "Dop" System

among Farm Workers in the Western Cape Province, South Africa: Hope Despite High Levels of Risky Drinking", authored by J. Phillip Gossage , Cudore L. Snell, Charles D. H. Parry , Anna-Susan Marais , Ronel Barnard , Marlene de Vries , Jason Blankenship , Soraya Seedat , Julie M. Hasken and Philip A. May, describes alcohol consumption in five Western Cape Province communities with the alcohol use patterns of adult males and females being contrasted as well as the drinking of farm workers compared to others. This article presented invaluable data on the consumption of alcohol among farm workers that has a long and controversial history in South Africa and elsewhere. The community survey data contrasting farm workers and others are compelling as most demographic, social and alcohol use analyses are significantly different. It also confirmed that norms of drinking formed historically have been translated to the present legacy of heavy recreational drinking on weekends.

A study was consulted entitled "Prevalence of and Associations With Papsak Wine Consumption Among Farm Workers in the Western Cape Province, South Africa", by Jo-Ann Mcloughlin, Francesca Little, Chantel Mazok, Charles Parry, and Leslie London. This study describes the prevalence of alcohol and papsak consumption, problem drinking and their associations among farm workers in the Western Cape confirms that current drinking and symptoms of problem drinking were substantially higher in these farm workers compared with the general provincial population levels. The BMR report (Unisa, 2011) includes information on household income and expenditure patterns that was useful to establish consumer patterns with regards to spend on alcoholic beverages.

An understanding of the drinking patterns in South Africa leads to an inquiry on the relation between different dimensions of alcohol consumption and the burden of disease.

The impact of alcohol on health and the burden of disease

The harmful use of alcohol is considered to one of the main risk factors for poor health in South Africa. The concept encompasses drinking that causes detrimental health and social consequences for the drinker, the people around the drinker and society at large. The harmful use of alcohol is specifically associated with increased risk of adverse health outcomes.

"The relation between different dimensions of alcohol consumption and burden of disease: an overview", by Jürgen Rehm, Dolly Baliunas, Guilherme L. G. Borges, Kathryn Graham, Hyacinth Irving,

Tara Kehoe, Charles D. Parry, Jayadeep Patra, Svetlana Popova, Vladimir Poznyak, Michael Roerecke, Robin Room, Andriy V. Samokhvalov & Benjamin Taylor, forms part of a larger study to estimate the global burden of disease and injury attributable to alcohol. This study evaluated the evidence for a causal impact of average volume of alcohol consumption and pattern of drinking on diseases and injuries. This report found evidence of a causal impact for most major diseases. Overall the findings indicate that alcohol impacts many disease outcomes causally, both chronic and acute, as well as injuries. In addition, a pattern of heavy episodic drinking increases risk for some disease and all injury outcomes.

Several studies were conducted as rapid assessments of injury morbidity presenting at district-level health services to establish a risk profile of injuries presenting in these areas through identification of high-risk population subgroups and high-risk areas for injury, as well as monitor trends over time to evaluate the effectiveness of interventions.

These rapid assessments included “Injury Morbidity Surveillance in Nyanga and Khayelitsha in the Western Cape Phase 1 Summary Report, September/October 2013”, by Linda Mureithi, Nienke van Schaik, Kendra Yama, Tracey Naledi, Richard Matzopoulos and René English, and “Injury Morbidity Surveillance in Nyanga and Khayelitsha in the Western Cape Phase 2 Summary Report February/March 2014”, by Linda Mureithi, Nienke van Schaik, Tracey Naledi, Richard Matzopoulos and René English. The studies identified the age distribution of injuries, cause of injuries as well as the location of injury by area. This contributed to the identification of a risk profile. The different rapid assessments made it possible to compare findings and establish trends.

“Report on the Rapid Assessment of the Injury Morbidity Burden at Health Services in 3 High Violence Communities in the Western Cape”, by Linda Mureithi, Nienke van Schaik, Richard Matzopoulos, Manshil Misra, Tracey Naledi and René English, was conducted in three geographical areas with high alcohol-related violence risk areas over a one week period to establish the proportion of injuries in these areas associated with obvious alcohol use. This report provided valuable data relating to alcohol and injuries.

"Alcohol use and trauma in Cape Town, Durban and Port Elizabeth, South Africa: 1999–2001", by Andreas Plüddemann, Charles Parry, Hilton Donson and Anesh Sukhai confirmed that alcohol involvement among trauma patients remained high for each of three separate study periods.

The "Global status report on alcohol and health 2014", compiled by the World Health Organization confirms that alcohol consumption has been identified as a component cause for more than 200 health conditions covered by ICD-10 disease and injury codes. New evidence also points to a causal link between alcohol and infectious diseases such as tuberculosis and pneumonia. Alcohol consumption can also contribute to more than one type of disease or injury in the drinker.

This report describes the impact of alcohol consumption on population health status, including the consequences on the health status of drinkers and some of the health consequences for individuals other than the drinker, such as foetal alcohol syndrome and some alcohol-attributable injuries.

The highest global rates of Foetal Alcohol Spectrum Disorder have been identified in various regions of South Africa since the mid-1980s. For this reason, a whole body of research has been dedicated to the risk of alcohol-exposed pregnancies in South Africa.

"Predictors of risk of alcohol-exposed pregnancies among women in an urban and a rural area of South Africa", by Neo K. Morojele ; Leslie London , Steve A; Olorunju C, Maila J. Matjila D, Adlai S. Davids, and Kirstie M. Rendall-Mkosi, revealed high levels of risk of an alcohol-exposed pregnancy, especially amongst the rural women. "Approaching the Prevalence of the Full Spectrum of Fetal Alcohol Spectrum Disorders in a South African Population-Based Study", was authored by May PA, Blankenship J, Marais AS, Gossage JP, Kalberg WO, Barnard R, De Vries M, Robinson LK, Adnams CM, Buckley D, Manning M, Jones KL, Parry C, Hoyme HE, and Seedat S. This study determined the prevalence and characteristics of Foetal Alcohol Spectrum Disorders in this fourth study of first-grade children in a South African community. The data reflected an increased ability to provide accurate and discriminating diagnoses throughout the spectrum of FASD.

"Alcohol and Other Drug Use during Pregnancy among Women Attending Midwife Obstetric Units in the Cape Metropole, South Africa", by Petal Petersen Williams, Esmé Jordaan, Catherine Mathews, Carl Lombard, and Charles D. H. Parry, confirms that there are high levels of substance use among pregnant women attending public sector antenatal clinics. "Maternal alcohol consumption

producing foetal alcohol spectrum disorders (FASD): Quantity, frequency, and timing of drinking", by Philip A. Maya, Jason Blankenship, Anna-Susan Marais, J. Phillip Gossage, and Wendy O. Kalberg concludes that there is significant variation in alcohol consumption both within and between diagnostic groupings of mothers bearing children diagnosed within the FASD continuum. Drinking measures are empirically identified and correlated with specific child outcomes. Alcohol use, especially heavy use, should be avoided throughout pregnancy. "Case management reduces drinking during pregnancy among high-risk woman" by Philip A. May et al, concluded that, although changing drinking behavior is difficult, case management provided by skilled and emphatic case managers reduced maternal drinking at critical times and therefore, reduced alcohol exposure levels to the foetus.

Confirmation of the harmful effect of alcohol and the causal link between alcohol and disease led to the need to implement effective policies to reduce harmful alcohol consumption.

Alcohol, crime and injury

In South Africa a wealth of research is emerging which indicates a strong association between alcohol, drugs, crime and injury. Research confirms that alcohol is the most frequently abused substance in the Western Cape. Compared to other provinces the Western Cape has the highest incidence of risky drinking. The province also has the highest incidence of Foetal Alcohol Spectrum Disorders in the world.

In 2009 the Provincial government of the Western Cape developed a blueprint to address the prevention and treatment of harmful alcohol and drug use. "Workstream on the Prevention and Treatment of Harmful Alcohol and Drug Use (Modernisation Programme) – BLUEPRINT", by the Provincial Government Western Cape contains information from national and international research sources and consultations with experts. Some of the expected outcomes of this strategy document included reducing crime, maximising health outcomes, increasing access to efficient and safe transport and increasing social cohesion. The broader strategic goal remains the reducing of the burden of disease and other costs to the state created directly and indirectly by alcohol and other drugs. Numerous challenges are also discussed. This strategy was to be implemented for the period of 2009 – 2014.

"The National Drug Master Plan 2013 – 2017", Department of Social Development seeks to address these challenges. This plan aims to reduce the demand for and supply of drugs and alcohol and the harms associated with their use and abuse. This plan is intended to help realise the vision of a society free of substance abuse.

"A public health approach to addressing alcohol-related crime in South Africa", by Charles D.H. Parry and Sarah Dewing, provides a brief review of the role played by alcohol in crime in general, and focuses specifically on the burden of alcohol in South Africa in terms of crime, violence and injury. Strategies likely to be effective in reducing the level of alcohol-related harm are also discussed.

These research studies together with the impact assessment document "Impact assessment on the effectiveness of the Liquor Act 59 of 2003 - final report", by the Department of Trade and Industry provides useful information for the current research paper. It also indicates government's commitment to eradicating the harms related to alcohol abuse and crime and is indicative of future regulatory strategies.

Attempts to elicit the co-operation of the SAPS by the service provider proved fruitless. The ideal situation would have been to supplement the previous research with updated statistics for crime and other related harms in the Western Cape specifically.

Regulatory impact

During recent years a substantial body of knowledge has accumulated on feasibility, effectiveness and cost-effectiveness of different policy interventions aimed at reducing the harmful use of alcohol. These findings can inform policy and program development to prevent and reduce harmful use of alcohol.

Implementation of effective policies to reduce harmful alcohol consumption requires a good understanding of the policy development process and which strategies are likely to work. To contribute to this understanding "Alcohol policy in South Africa: a review of policy", Charles D. H. Parry affords an overview of four specific policy development initiatives that have taken place in South Africa between 1994 and 2009. Restrictions on alcohol advertising, regulation of retail sales of alcohol, alcohol taxation and controls on alcohol packaging are reviewed. The article concludes that

a comprehensive national strategy encompassing different sectors may be the most appropriate strategy for developing countries.

"Strategies to reduce the harmful use of alcohol: draft global strategy", by the World Health Organization elaborates on the main findings in research that have been aimed to prevent and reduce harmful use of alcohol globally. The report sets the scene for the draft strategy to reduce harmful use of alcohol that was adopted in 2010 by WHO Member States. The report is valuable to understand the underlying reasons for the strategy as well as the research that supports the recommendations made.

"Global status report on alcohol and health 2014", again by the World Health Organization, highlights the progress made in alcohol policy development in WHO Member States after endorsement of the Global strategy to reduce the harmful use of alcohol in 2010. Member States worldwide have been urged to adopt proposed WHO policy measures to achieve the objectives of the Global alcohol strategy and the voluntary global target of at least a 10% reduction in the harmful use of alcohol by 2025. The report underlines the ten target areas for national action recommended by the Global strategy to reduce harmful use of alcohol. For each area the existence of one or more alcohol policies at country level serves to indicate the degree of implementation of the global alcohol strategy. This report serves as a baseline for alcohol policies in member states.

The Industry Association for Responsible Alcohol Use (ARA) was established in 1989 by the major manufacturers of alcohol beverages in South Africa to reduce alcohol-related harm through combating the misuse and abuse of alcohol and promoting only its responsible use. In "Liquor and advertising – Would a ban help reduce abuse? And are there unintended consequences?" the ARA states that it is important not to seek a simple solution to the complex problems of alcohol misuse and abuse. They are of the view that no single action is likely to reduce alcohol problems. What is needed is a multi-faceted, long term and sustainable strategy. Their recognition of joint responsibility of all industry stakeholders, government and civil society is in accordance with the policies of the WHO.

This report also found no statistical relationship between per capita alcohol consumption and per capita advertising expenditure on alcoholic beverages in South Africa. This weakens the

effectiveness of a ban on alcohol advertising. The report highlights other policy measures which research indicates are more effective to inhibit the harmful use of alcohol.

"The National Drug Master Plan 2013 – 2017", by the Department of Social Development offered valuable insight into the government's strategic plan to help realise their vision of a society free of substance abuse and raising the quality of life of the poor and vulnerable. This plan focuses on the delivery of evidence-based strategies that are designed to meet the defined needs of communities.

In the document "Impact assessment on the effectiveness of the Liquor Act 59 of 2003 - final report", by Department of Trade and Industry, much attention is paid to the ineffectiveness of current anti-abuse initiatives. The findings in this report suggest that a significant revision of the current programmes may be required to effectively curb liquor abuse in South Africa. Alternative anti-abuse models are analysed and interventions suggested.

An analysis of South Africa's informal retail market is done, leading to a better understanding of this complex environment, and a number of recommendations for this sector are provided.

Parry and Dewing, in "A public health approach to addressing alcohol-related crime in South Africa", discuss strategies likely to be effective in reducing the level of alcohol related harm. Specific emphasis is given to initiatives aimed at restricting the physical availability and accessibility of alcohol, restricting alcohol advertising and marketing, placing restrictions on certain alcohol products and containers, introducing counter-measures to more effectively address drinking and driving, and ensuring effective treatment for drunk-driving offenders and persons incarcerated for certain crimes. The report provides an overview of research done on interventions to reduce alcohol-related crime and injury which was valuable to this report.

Sustainable Livelihood Consultants compiled the report "A rapid assessment of the potential socioeconomic impact of the Western Cape Liquor Act – Synopsis of Key findings". In this report, the investigation included the possible impact of the Act on the informal liquor trade. An in-depth study of liquor policy and politics with specific reference to stakeholder positions was undertaken. The research contributed greatly to a better understanding of the unregulated liquor sector and the related impact and consequences of the National Liquor Act on this sector.

This study was supplemented by the report "Revisiting the potential social-economic impact of the Western Cape Liquor Act on unregulated liquor retailers", by L Peterson and R Charman, that explored the impact of the Western Cape Liquor Act on unregulated liquor traders. The study is a comprehensive overview of the unregulated liquor sector and contributed greatly to this study. Findings include that the Act will severely impact the majority of newly established Black and Coloured liquor businesses and shebeens because these businesses are located within residential areas. Difficulty to comply with the provisions of the Act will force these businesses to operate illegally. The research paper offers some recommendations that need to be considered in any future policy interventions.

In "Creating a Sober South Africa", Charles Perry, Neo Morojele, and David Jernigan report on the "Sober South Africa" workshop's findings on strategies to address alcohol problems. Interventions were considered in five broad areas for which there is good evidence for their effectiveness based on international experience and which are likely to have a good chance of having a positive impact on crime in South Africa.

The current report also made use of comparative research done in Australia and the UK. *Strategies to Prevent Community Alcohol-Related Problems: Bar areas*, by Janet Mc Allister for the CAMH is a compilation of ideas and interventions that municipalities and community groups can use to prevent or diminish alcohol-related problems in bar areas. "Dopstop Strategy", from talkingalcohol.com contains a collection of research on community-based prevention programs. These programs focus on changing the environment in which a person consumes alcohol rather than the behavior of the individual drinker. It also contains a strategic document of Distell that provides guidelines to responsible use of alcohol as well as a code of conduct for producers/ manufacturers or distributors of alcohol.

Conclusion

Although there are numerous studies regarding impacts and effects of the liquor industry available, reliable data regarding illicit trade, the cost of social ills of alcohol abuse and drinking patterns on the regional level were scant and not sufficient to draw clear conclusions. Additional research on

these issues would be beneficial and enable a better understanding of the liquor industry in the Western Cape.

Similarly, there is currently no information available regarding alcohol consumption patterns per district in the Western Cape. In order to draw any conclusions regarding drinking patterns per district, primary research needs to be conducted to gather the relevant information.

Another field with a paucity of research is the socioeconomic costs of alcohol use. Most available data relates to the period of 1998 to 2008, and thus might have become dated. There was not enough data on the South African situation to draw meaningful conclusions. It is also the case that the assessment of these costs is highly disputed and often dependent on the perspective and interpretation of the researcher.

Correlation does not indicate cause and therefore accurately establishing the contribution of alcohol to certain behaviors is extremely challenging. The researchers also found that the perspective of those involved with the social ills commonly associated with alcohol often varied from manufacturers and suppliers in the industry. The objective of this research paper is to provide an objective and current perspective on the liquor industry in South Africa and specifically the Western Cape.

9. Overview of the Liquor Industry

Introduction

The South African liquor industry has a long history that dates back to the 17th century when wine was first produced in the Cape Colony. Since then, alcohol has played an important role in South Africa's history, culture, politics and economy.

The South African liquor industry can broadly be defined as the manufacture, marketing and distribution of wine, spirits and beer.

The industry has global reach and has developed into a major force in the South African economy, providing employment to people in the primary, secondary and tertiary sectors of the economy and making a substantial contribution to export earnings and government tax revenue.

Traditionally, alcohol is categorised according to three broad categories, namely beer, wine and spirits, each with various sub-categories.

Alcohol use in South Africa has traditionally been dominated by beer, with every third male drinking it (Walbeek & Blecher, 2014). The trend in beer has remained relatively unchanged since the early 2000s. Beer has the highest "gender gap", defined as the difference between male and female drinking, of all alcohol products in South Africa (WHO, 2014).

South African Breweries (SAB) is the South African subsidiary and the historical birthplace of SAB Miller plc and was founded in 1895. SAB is one of the world's largest breweries by volume with more than 200 brands, and brewing interest and distribution agreements in 75 countries across 6 continents (SABMiller plc, 2014).

The wine industry is administered and monitored by the industry body, SA Wine Industry Information & Systems NPC (SAWIS), a not-profit organisation. SAWIS functions under control and direction of the South African Wine industry and their main functions are to collect, process and disseminate industry information as well as the administration of the "wine of origin" system (SAWIS, 2015).

South African Liquor Brand Owners Association (SALBA) is a non-profit company established in 2005 with the sole purpose of representing its members on issues of common interest. SALBA members are manufacturers and distributers of liquor products in South Africa and include large players in the spirits sector such as Distell.

South Africa has a relatively open International trade market for alcohol. South Africa's key liquor export is wine which accounts for most of the country's liquor exports.

South Africa also has significant trade links with its neighbouring countries. It exports substantial quantities of beer, spirits and wine to its neighbours, especially Namibia, but imports very little alcohol from them (Walbeek & Belcher, 2014). The only exception is Namibia, from which South Africa imports large quantities of alcohol, mainly beer.

Between 1990 and 2013 the real excise tax on beer increased by 32% and on spirits by 87% (Walbeek & Blecher, 2014). While these are sizable increases, they are modest in comparison to the 459% increase in the real excise tax on cigarettes over the same period. Because the excise tax is levied as a specific tax, the government needs to adjust the amount regularly to avoid it being eroded by inflation. Despite the increases in the excise tax in the past 24 years, the real excise tax on beer is currently less than one third of its peak level in the 1960s and that of spirits about two thirds of its peak level in the 1970s. In contrast, the real excise tax on cigarettes is currently more than two thirds higher than what it was at its peak in the early 1970s (Walbeek & Blecher, 2014).

Barriers to entry in the liquor industry are high, especially due to the fact that vast resources are required to gain market share through marketing and advertising.

Some of the key challenges facing the South African liquor industry include:

- The market is highly concentrated (oligopoly), especially in the beer and spirits sector
- Substantial resources requirements to successfully build new brands, increase barriers to entry
- Alcohol abuse and related medical and social consequences remain a significant problem in South Africa;

- Black Economic Empowerment and Transformation are key issues and initiatives to lead sustainable transformation in the industry, and are required to achieve long term success;
- Increased competition for consumers' disposable income with an increasing number of competing sectors including the communications sector
- Increasing regulatory restrictions impact on the industry in terms of advertising and retailing.

Industry dynamics and key players

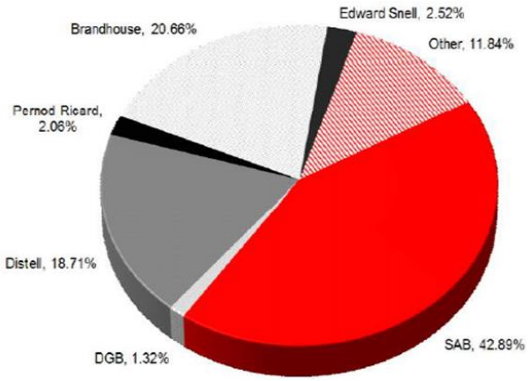
The alcoholic beverage or liquor industry in South Africa comprises the beer, wine, spirits, and ready-to-drink (RTD) segments. A large portion of the market is dominated by a small number of players.

More than 80% of the value of off-consumption liquor sold in SA is consolidated amongst Distell, SAB, and Brandhouse. On the volume side, more than 90% of the volume of liquor sold is from Distell, SAB and Brandhouse. SAB controls the vast majority of the beer market.

Therefore, at company level there is significant consolidation and the industry is characterised by high levels of concentration between a handful of companies.

The South African liquor industry is largely polarised, which means that larger players have become more powerful and smaller players are struggling to survive. High distribution costs, the view of viable brands and pressure on the South African Rand have all undermined profitability lead to greater international competition.

Figure 1: Market/ value share of total off-consumption liquor by liquor manufacturer and brand distributor



Source: Distell

Table 3: Key players in the South African liquor industry

Name of company	Liquor segment	Selected example of brands
SAB	Malt beer	Carling Black Label, Castle, Castle Lite, Dreher Premium Lager, Grolsch, Hansa, Miller Genuine Draft, Peroni Nastro Azzurro, Pilsner Urquell
	Flavoured alcoholic beverages	Blakes and Doyle, Brutal Fruit, Redd's, Sarita, Skelter's Straight
Distell	Wine	Alaska, Allesverloren, Alto, Autumn Harvest Crackling, Brandyale, Capenheimer, Cellar Cask, Chateau Libertas, Drostdy-Hof, Durbanville Hills, Flat Roof Manor, Fleur du Cap, Graça, Grünberger, Hill&Dale, Jacobsdal, J.C. Le Roux, Le Bonheur, Lomond, Monis, Nederburg, Neethlingshof, Obikwa, Paarl Perlé, Plaisir de Merle, Pongrácz, Sedgwick's Old Brown Sherry, Stellenzicht, Tassenberg, Theuniskraal, Tukulu, Two Oceans, Uitkyk, Zonnebloem, Zorba, 4th Street, 5th Avenue
	Spirits	Amarula, Angel's Share, Bacardi, Bain's, Bisquit, Black Bottle, Bunnahabhain, Collison's White Gold, Commando, Count Pushkin, Flight of the Fish Eagle, Gordon's, Harrier, Klipdrift, Knights, Mainstay, Mellow-Wood, Nachtmusik, Nederburg, Oude Meester, Richelieu, Romanoff, Scottish Leader, Seven Seas, Three Ships, Uitkyk, Van Ryn's, Viceroy
	Flavoured alcoholic beverages	Bernini, Burchell, Esprit, Hunter's, Klipdrift and Cola, Savanna, Vawter
Brandhouse	Malt beer	Amstel, Kilkenny, Guinness, Heineken, Tafel Lager, Windhoek
	Spirits	Archers, Bayleys, Bell's, Bertrams, Black & White, Bushmills, Johnnie Walker, Caol Ila, Cragganmore, Cape Velvet, Captain Morgan, Ciroc, Dimple, Don Julio, Gilbey's, Glen Elgin, J&B, Jose Cuervo, Lagavulin, Lupini, Montego, Oban, Slate, Smirnoff, Spiced Gold, Squadron, Swing, Talisker, Tanqueray, White Horse
	Flavoured alcoholic beverages	Archers, Bertrams and Ginger Ale, Captain Morgan and Cola, Foundry, J&B and Soda, Smirnoff, Strongbow
United National Breweries	Sorghum beer	Chibuku, Ijuba Blue, iJuba Special, Joburg Beer, Leopard Special, Tlokwe
DGB	Wine	Bellingham, Boschendal, Culemborg, Douglas Green, Franschhoek Cellar, Graham Beck, Legacy, Oude Kaap, St. Augustine, St. Pettie, The Beachouse, The Delivery, Tall Horse
	Spirits	Antonella, Black Douglas, Butlers Liqueurs, Douglas Green Ruby Port, Fetzer, Flex Bender, Nordic Ice, Potency, Red Heart, Tango, Teacher's, Zappa
Pernod Ricard	Wine	Long Mountain, Mumm
	Spirits	Absolut Vodka, Ballantine's, Beefeater, Chivas Regal, Havana Club, Jameson, Kahlua, Malibu, Martell, Pernod, Olmeca, Ricard, Seagram's, The Glenlivet
Edward Snell & Co.	Wine	Craighall
	Spirits	Barclays, Campari, Cape Hope, Cape to Rio, Cinzano, Clan MacGregor, First Watch, Glenfiddich, Glen Grant, Grand Marnier, Grant's, Hendrick's, Hooper's, Jack Daniel's, Jack Tarr, Oude Molen, Skyy, Stretton's, Stroh Rum, Russian Bear, The Balvenie, Two Keys, Wellington
KWV	Wine	Café Culture, Cathedral Cellar, Golden Kaan, KWV Wines, Laborie, Pearly Bay, Roodeberg
	Spirits	Imoya, KWV Brandy, Wild Africa

(Source: Econex & Quantec, 2010)

South Africa is mainly a beer drinking country. Clear and traditional sorghum together account for almost half of all absolute alcohol consumed in the domestic market (DNA Economics, 2011). The remainder of the market is divided between alcohol consumed in wine and alcohol consumed in spirits, backyard concoctions and ready to drink RTDs/ ciders.

SAB operates seven breweries and 40 depots in South Africa with an annual brewing capacity of 3.1 billion litres.

Table 4: Industry sales (volume and value) by liquor category – 2009

	Malt Beer	Sorghum beer (b)	Wine	Spirits	RTDs	Total liquor	Total liquor excl sorghum beer
Alcohol strength	*5.0%*	*4.2%*	*12-17%*	*43%*	*5%*		
Volume (thousands of hectolitres)	27,204	5,319	3,472	1,041	3,491	40,528	***35,209***
Share of category by volume	*51.2%*	*8.4%*	*16.3%*	*17.6%*	*6.6%*	*100%*	
Value (Rand billion)	31.9	2.5	8.4	12.7	7.0	62.5	***60.0***
Share of category by value	*51.0%*	*4.0%*	*13.4%*	*20.3%*	*11.2%*	*100%*	

Note: (a) The table only refers to the formal (and not the total) liquor industry (i.e. what is recorded)

(b) Volume statistics on sorghum beer is a scant and largely based on estimates.

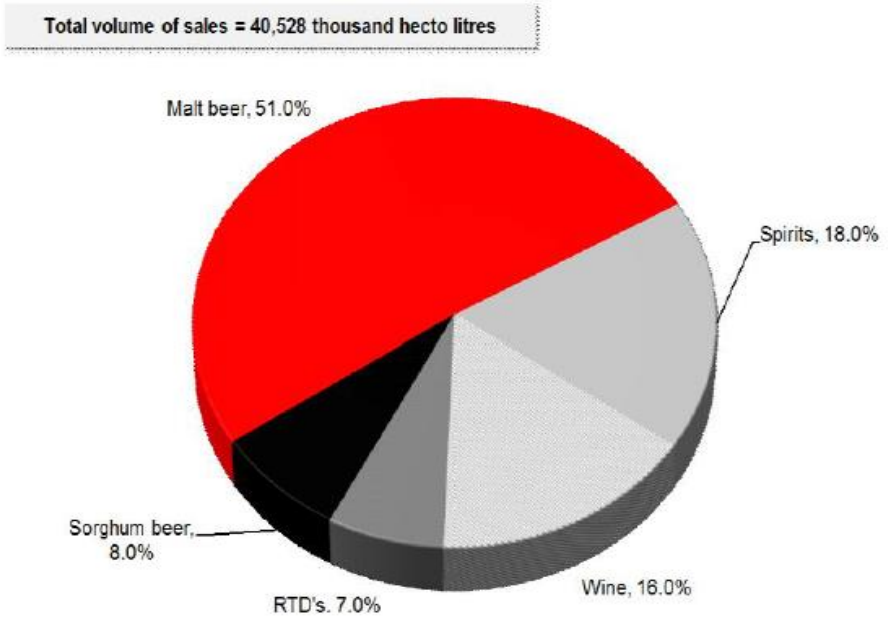
(Source: Quantec)

The total volume of liquor sold in 2009 was 40 528 thousand hectolitres and the total value of sales was R 62.5 billion (Quantec). Malt beer makes up more than 50% of liquor sales in terms of volume and value, followed by Spirits (volume 18% and value 20%), wine at 16% market share by volume and 14% of value, RTD's at 7% volume and 11% value and lastly sorghum beer at 8% of the volume and 4% of the value.

Sorghum beer is the only instance where volume share is double the value share.

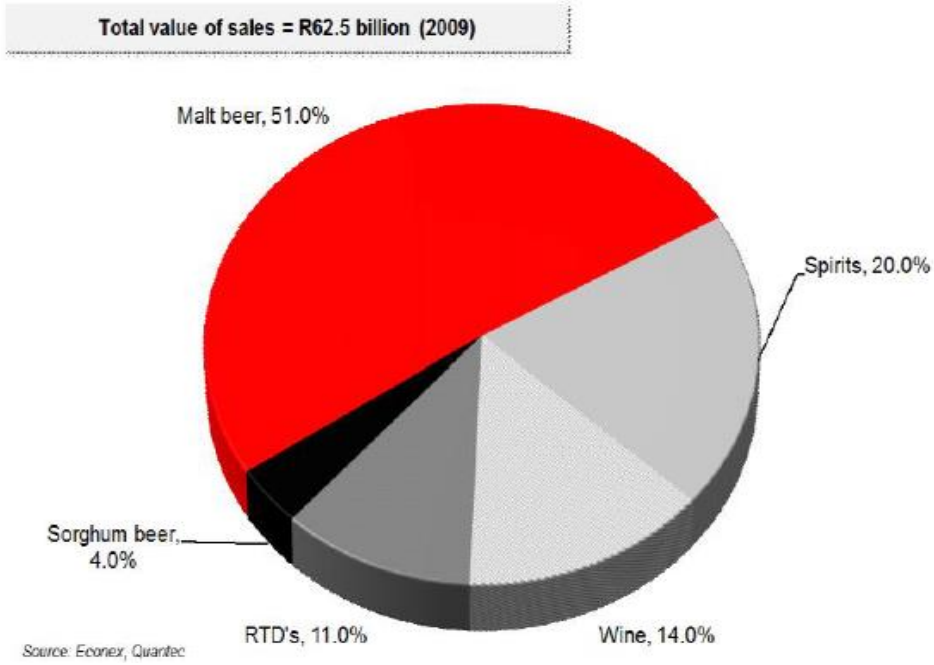
Wine and sorghum beer contribute less in value than in volume due to their comparatively lower price per litre. In the case of wine, this is attributable to bulk wine sales.

Figure 2: Sales of Liquor by Volume Shares



(Source: Quantec)

Figure 3: Sales of liquor by Value Shares



(Source: Quantec)

Value Chain

The direct economic impact of the liquor industry in terms of employment, and its direct contribution to export and government taxes, only make up a small fraction of its total contribution to the South African economy.

Through the process of manufacturing, packaging, marketing and delivering alcoholic beverages, the liquor industry stimulates economic activity throughout the entire beverage value chain, encompassing a wide range of producers and suppliers (upstream linkages) and retailers, distributors and the hospitality industry (downstream linkages).

The liquor industry has a wide reach across the primary, secondary and tertiary sectors of the economy, from agriculture (grapes, malt, hobs, and sugar cane) to manufacturing (wine making, distilling, brewing) to marketing, distribution and retail.

The liquor industry also contributes the South African economy in terms of its use of a variety of goods and services and the role it plays in the tourism industry.

Most of the wine industry is located in the Western Cape and therefore the wine industry and its entire value chain makes a significant contribution to the Western Cape economy.

The liquor industry value chain includes the following up- and downstream inputs:

1. Raw materials
    a. agricultural inputs
    b. packaging
    c. ethanol
2. The actual manufacturing process (breweries, distillers and wineries)
3. Distribution, wholesale and retail

Figure 4: Supply chain of the liquor industries: up-and downstream industries

Raw materials and process inputs at breweries, distilleries and wineries:

- Water, fruit and grains, bulk juice, wine, additives, oak products
- Fuel, packaging materials such as plastic and glass and electrical power.

Manufacturing and Processing at breweries, distilleries and wineries:

- Fermentation, distillation and brewing using raw products
- Products are then moved to facilities where they are matured in wooden or steel barrels or tanks or blended
- Equipment and machinery used such as boilers, heaters, generators and cooling equipment
- Bottling done either at manufacturing site or transported to bottling site of either bottling company or liquor company
- Imports of beer, spirits or wine

Distribution, wholesale and retail undertaken by large players themselves, specialty distributors, wholesalers and mass-retailers

- Final products transported by truck, rail, ship and air to distributors, wholesalers, large specialty retailers and mass-retailers
- Wholesalers distribute to smaller specialty retailers and some on-premise establishments such as taverns, shebeens, restaurants and bars
- Specialty retailers and mass-retailers sell to on-premise establishments such as restaurants and private consumers for off-premise consumption
- Online or mail order beverages shipped from producers, agents and wholesalers to end-consumer
- Direct producer sales of packaged wine to consumers on wine estates or direct producer exports
- Producers and wholesalers exports packaged and bulk products.

- Wooden barrel and tank manufacturers;
- Stainless steel tank manufacturers;
- Import and export industry;
- Bottling industry including manufacturers of glass and bottle caps and labels;
- Manufacture and supply of boilers and burners;
- Chemicals, gases and fermentation product manufacturers and suppliers;
- Advertising and marketing industry;
- Event management industry;
- Food and product safety and quality monitoring industry;
- Health and safety industry;
- Generator industry;
- IT (hardware and software) industry;
- Industrial cleaning industry;
- Promotional branding industry;
- Public relations industry;
- Recycling of glass industry;
- Tourism industry;
- Vineyard equipment industry;
- Viticulture industry;
- Water and effluent treatment industry;
- Wine filtration equipment; and
- Liquor licensing consultancies.

(Source: Econometrix, 2013)

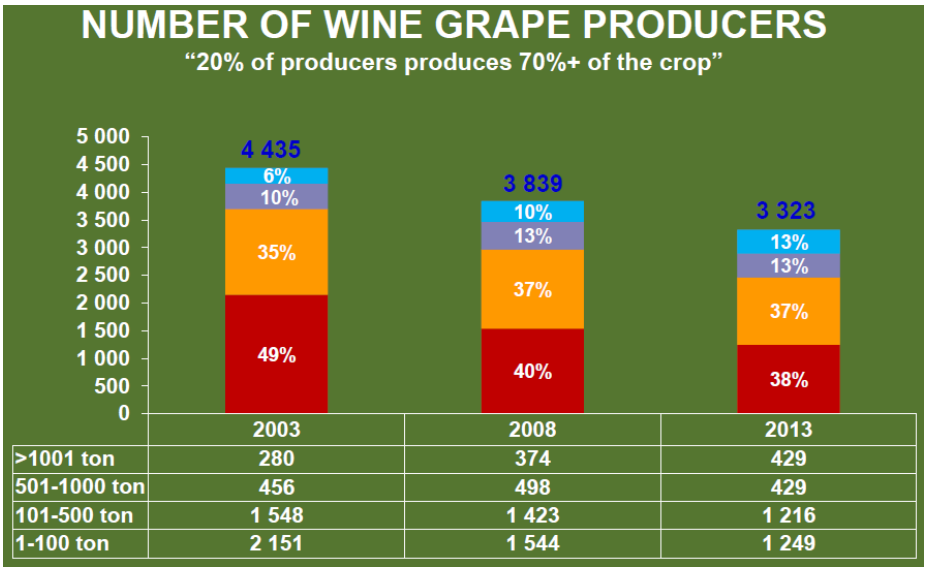
1. Raw materials

a. Agricultural Inputs:

The key agricultural inputs to the liquor industry in South Africa include grapes, barley, hops, maize and sorghum. Barley, maize and hops are key ingredients in the production of beer. Malting barley is mainly produced in the northern and southern Cape areas of South Africa by roughly 800 – 900 farmers (DNA Economics, 2011). Almost all barley produced in South Africa which is suitable for human consumption is procured by SAB (Walbeek & Blecher, 2014).

Sorghum is indigenous to Africa and is used for the production of traditional sorghum beer. Grapes are an essential input for the production of both wine and brandy in South Africa. Unlike other agricultural inputs such as maize, where a significant proportion of production is for non-alcoholic purposes, the majority of grapes produced are used in the production of wine, brandy and juice.

Figure 5: Number of Wine Grape Producers



	2003	2008	2013
>1001 ton	280	374	429
501-1000 ton	456	498	429
101-500 ton	1 548	1 423	1 216
1-100 ton	2 151	1 544	1 249

(Source: SAWIS, 2015)

b. Packaging

Packaging is a significant cost for producers, accounting for between 45% and 52% of production cost (before excise taxes) (DNA Economics, 2011). The spirits sector uses predominantly glass packaging, while beer products are packaged in both glass bottles and aluminium beverage cans. The

wine industry utilises a more diverse range of packaging for consumers, including bottles, cans, plastic/polyethylene terephthalate (PET) containers, bag-in-box and foil.

c. Ethanol

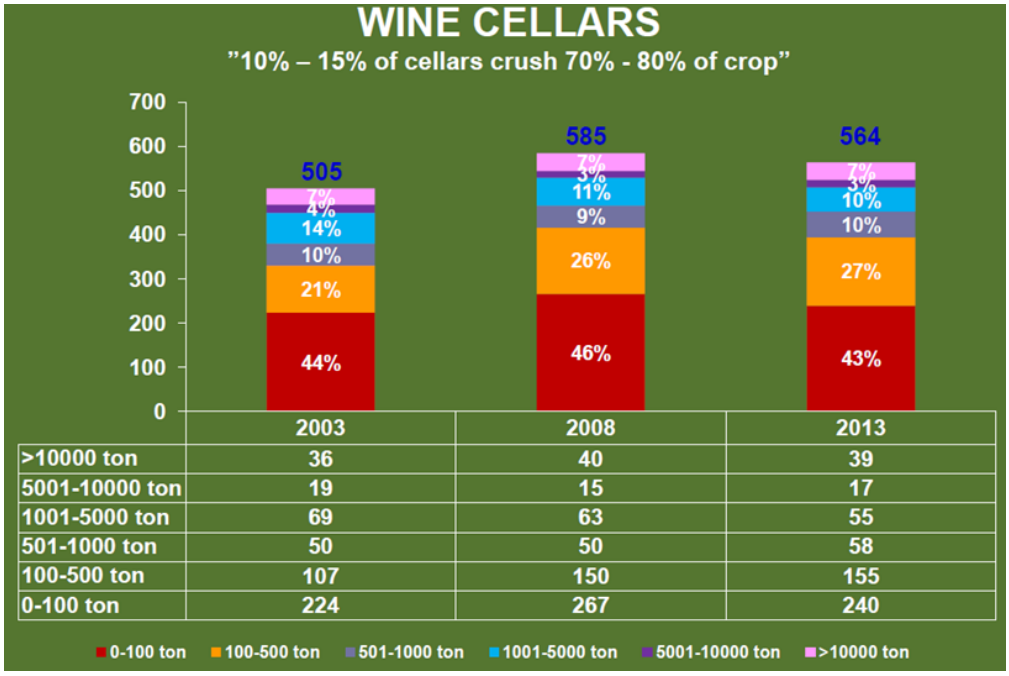
One of the simplest and often most cost-effective ways of producing an alcoholic beverage is to use beverage-grade industrial ethanol (also known as ethyl alcohol). The ethyl alcohol is used in combination with flavourings, water and other ingredients. In some product markets, producers are prohibited from using ethanol as an input, for example, brandy can only be made from wine spirits, made using grapes. Most of the demand for beverage grade ethanol comes from white spirits producers.

2. Production

Alcoholic beverages are produced by a number of breweries, wineries and distillers.

Wine is produced by a number of wine cellars and, as in the rest of the liquor industry, wine production is largely polarised as 10% – 15 % of the cellars crush 70% - 80% of the crop (SAWIS, 2015).

Figure 6: Wine Cellars



(Source: SAWIS, 2015)

SAB owns two malting plants in South Africa, situated in Caledon (Western Cape) and Alrode (Gauteng). Distell has twelve (12) production sites, all situated within the Western Cape.

3. Retail

The retail component of the value chain in the Liquor industry includes outlets concerning both the on-consumption and off-consumption market.

In 2005 there was a total of 29 908 licenced liquor outlets in South Africa (both on- and off-consumption:

Table 5: Provincial Licensing Analysis

	Western Cape (2005)	North West	KwaZulu Natal	Limpopo	Total	% of total
Micro-manufacturing	345	28	42	12	427	1.4%
Off-licenses	1 861	1 272	3 200	1 345	7 678	25.7%
Special license - taverns	129	3 049	2 543	1 751	7 472	25.0%
Other special on-consumption licenses	1 048	73	2 027	2 538	5 686	19.0%
Sorghum beer on-consumption	-	56	12	77	145	0.5%
Other on-licenses	2 238	1 144	3 299	1 819	8 500	28.4%
Total	**5 621**	**5 622**	**11 123**	**7 542**	**29 908**	
Residents per license	929.3	569.3	957.1	721.3	819.5	
Residents per on-license	1 529.7	740.6	1 350.8	879.5	1 124.1	

(Source: DNA Economics, 2011)

In 2005 the Western Cape had the lowest number of licenced outlets and therefore also the highest number of residents per licence. KwaZulu Natal had the highest number of licenced outlets, but the North West province had the lowest number of residents per licence.

During the same period, the Western Cape also had the lowest number of on-consumption licenced outlets and KwaZulu Natal had the highest.

Table 6: Distribution of On-Consumption Licence Type

	Western Cape (2005)	North West	KwaZulu Natal	Limpopo	Total	% of total
Hotel	235	51	279	55	620	2.8%
Restaurant	1 655	1 025	2 626	1 691	6 997	32.1%
Wine-house	10			1	11	0.1%
Club	326	68	361	71	826	3.8%
Sorghum beer (on consumption)		56	12	77	145	0.7%
Special license (Employers)	12	4	15	8	39	0.2%
Special license (Liquor Tavern)	129	3 049	2 543	1 751	7 472	34.3%
Special license (Accommodation)	235	35	416	503	1 189	5.5%
Special license (Eating House)	56	34	654	1 857	2 601	11.9%
Special license (Other)	745		942	170	1 857	8.5%
Sportsground	3		5		8	0.0%
Theatre	9		12		21	0.1%
Section 4 (on)			16	1	17	0.1%
Total	**3 415**	**4 322**	**7 881**	**6 185**	**21 803**	

(Source: Baseline Study for the Liquor Industry, DNA Economics, 2011)

In 2011, DNA Economics recorded twenty-seven (27) retail chains that exclusively sold alcoholic beverages for off-consumption. The liquor industry therefore has a significant impact on the retail sector in South Africa

Table 7: Major Off-Licence Chains

	Number of dedicated liquor outlets	Grocery/ general outlets	Listed?	Total firm revenue (Rm)	Liquor revenue	Big box or retail?
Big box competitors						
Massmart (Makro, CBW, Jumbo)		81	Yes	R11 102.4	R2.1bn	Mixed, mainly big box
Picardi Rebel	88		No			Mixed, mainly big box
Robinson Liquors	49		No			Big box
Metro (Liquor World/Warehouse)	49		No			Big box
Diamond Discount Liquors	39		No			Big box
Big Daddy's, including Prestons	35		No			Mixed
Midmar Liquors	34		No			Big box
Rhino Cash and Carry	10	18	No			Big box
Distri Liq	4		No			Big box
Liberty Liquors	3		No			Big box
Model	3		No			Mixed, mainly big box
Johnny's Liquor Hypermarket	2		No			Big box
Pangivans	2		No			Big box
Waltloo Big Save	1		No			Big box
North Coast Group *	Unknown		No			Big box
Retail competitors						
Spar (Tops)	549	846	Yes	R 32 256.2	R3.5bn (Tops only, 2010), R4.3bn as a whole (2009)	Retail
Pick 'n Pay	105	694	Yes	R 49 320.4		Mixed, mainly retail
Shoprite/Checkers	91	728	Yes	R 53 367.2		Retail
Woolworths	2	417	Yes	R 23 393		Retail
Spot On Liquors *	92		No			Retail
Liquor City	85		No			Retail
R&H (Aroma)	30		No			Retail
Western Province Cellars	26		No			Retail
Loco Liq	11		No			Retail
Blue Bottle Liquors	5		No			Retail
Crazy J's	5		No			Retail
Norman Goodfellows	3		No			Retail

(Source: DNA Economics, 2011)

Economic contribution

The liquor industry has significant backward linkages as explained in the value chain analysis. The industry is therefore dependent on, as well as supports, industries that supply to the liquor industry and industries supplied by the liquor industry.

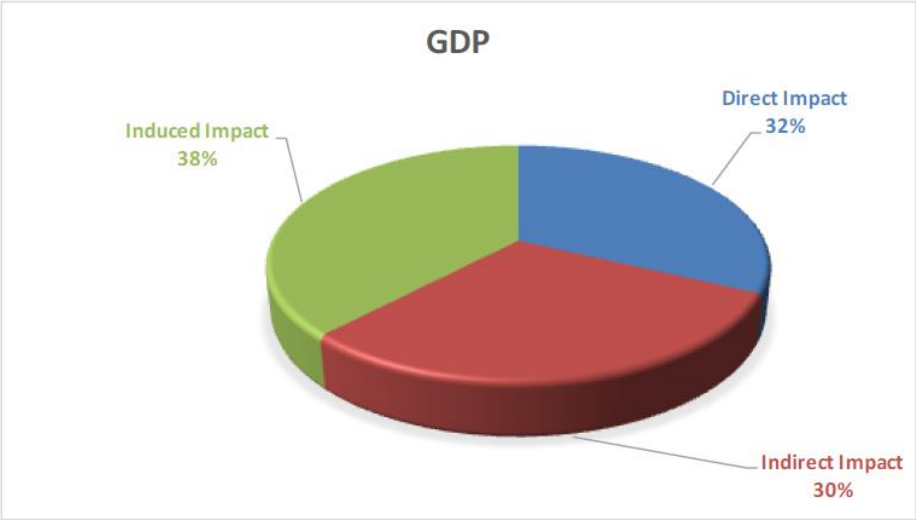
The direct impact of the Liquor Industry relates to production and includes payment of wages and salaries, profits through growing agricultural products and the manufacturing of the alcoholic beverage (including packaging).

Indirect impact in the liquor industry is the impact the industry has on its suppliers (those who provide inputs to the industry) such as the fertiliser industry.

Induced impact is when a further round of economic activity takes place as a result of the liquor industry due to salaries and wages from upstream and downstream industries.

For example, of the Wine Industry's impact on GDP can be broken down as follows:

Figure 7: Wine Industry's Impact on GDP



(Source: SAWIS, 2015)

Players in the liquor industry add value in the following ways:

- Payments for the procurement of materials,

- Remuneration of employees (salaries and benefits)
- Payments to providers of capital (investors),
- Payment to tax authorities including remittance taxes and excise taxes,
- Community investments (voluntary contributions and investments in the broader economy).

The liquor industry makes a significant contribution to tax revenues.

Table 8: Volume and Value market share of different alcoholic beverages

	Volume%					Value%				
	2006/2007	2010/2011	2011/2012	2012/2013	2013/2014	2006/2007	2010/2011	2011/2012	2012/2013	2013/2014
Spirits	3.3	3.8	3.8	3.0	2.8	23.1	21.7	20.3	21.1	20.7
Wine	8.2	7.5	7.7	7.6	7.7	10.7	10.4	10.4	10.0	10.1
Fortified Wine	0.8	0.8	0.8	0.7	0.7	1.9	1.7	1.6	1.5	1.4
RTD'd	8.6	9.5	9.9	10.6	11.0	11.0	12.3	13.1	13.3	13.6
Beer	79.1	79.2	78.6	78.1	77.8	53.3	53.9	54.6	54.1	54.2
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(Adapted from: Holtzkampf; 2012, 2014)

Beer makes the largest contribution to the economy in terms of value. The second greatest contribution comes from spirits, and RTDs make the third largest contribution in terms of value.

Although the wine industry contributes just over 10% in terms of value to the national market, the wine industry's contribution to the Western Cape economy is significant.

Table 9: Overview of the Alcoholic Beverage Market (Contribution in terms of R '000)

CATEGORY	2006/2007 VALUE	2010/2011 VALUE	2011/2012 VALUE	2012/2013 VALUE	2013/2014 VALUE
Brandy	4 102 664	4 688 970	4 930 961	4 762 840	4 692 510
Gin	483 714	574 279	641 108	667 135	757 744

Cane	124 752	139 968	150 195	144 465	134 589
Vodka	960 547	1 637 983	1 898 955	2 297 908	2 482 480
White Spirits	1 569 013	2 352 830	2 690 258	3 103 508	3 374 813
Liqueurs	892 500	861 650	966 500	1 058 721	1 141 584
Whisky	3 745 746	5 797 000	6 495 972	7 766 053	8 512 920
Rum	552 475	719 483	906 299	952 536	1 042 707
TOTAL SPIRITS	**10 862 398**	**14 419 932**	**15 023 490**	**17 643 657**	**18 764 534**
Sparkling Wine	**459 200**	**640 307**	**726 254**	**725 620**	**727 320**
Super Premium Wine	1 870 440	2 479 950	2 739 246	2 931 840	3 173 984
Premium Wine	1 000 300	1 637 958	1 764 908	2 014 415	2 354 000
Standard Price Wine	999 460	1 093 820	1 216 360	1 285 830	1 355 820
Perle	715 476	1 048 080	1 289 470	1 431 854	1 509 950
TOTAL UNFORT's	**4 585 676**	**6 259 808**	**7 009 984**	**7 663 939**	**8 393 754**
FORTIFIED WINE	**889 800**	**1 163 817**	**1 198 092**	**1 256 042**	**1 318 520**
RTD'S	**5 152 120**	**8 206 200**	**9 656 440**	**11 147 268**	**12 279 810**
Sub-Total	**21 949 194**	**30 690 064**	**33 614 260**	**38 436 524**	**41 483 938**
Beer	**25 007 400**	**35 831 400**	**40 355 520**	**45 242 353**	**49 129 456**
GRAND TOTAL	**46 956 594**	**66 521 464**	**73 969 780**	**83 678 877**	**90 613 394**

(Adapted from Holtzkampf; 2012, 2014)

Employment

The liquor industry employed an estimated 21,300 workers during 2009, and supported an additional 66 000 jobs at first round suppliers (Quantec Research). Approximately 88% of the employees in the liquor industry and its direct suppliers are from previously disadvantaged backgrounds, and the agriculture, forestry and fishing sector derives the largest direct benefit (in

terms of employment opportunities) from the liquor industry's operations (Econex & Quantec, 2010).

In 2009 it was estimated that the entire liquor value chain accounts for roughly 548,000 jobs, R41.8 billion in tax revenue and R94.2 billion (4.4%) of the country's GDP (Aruvian, 2011).

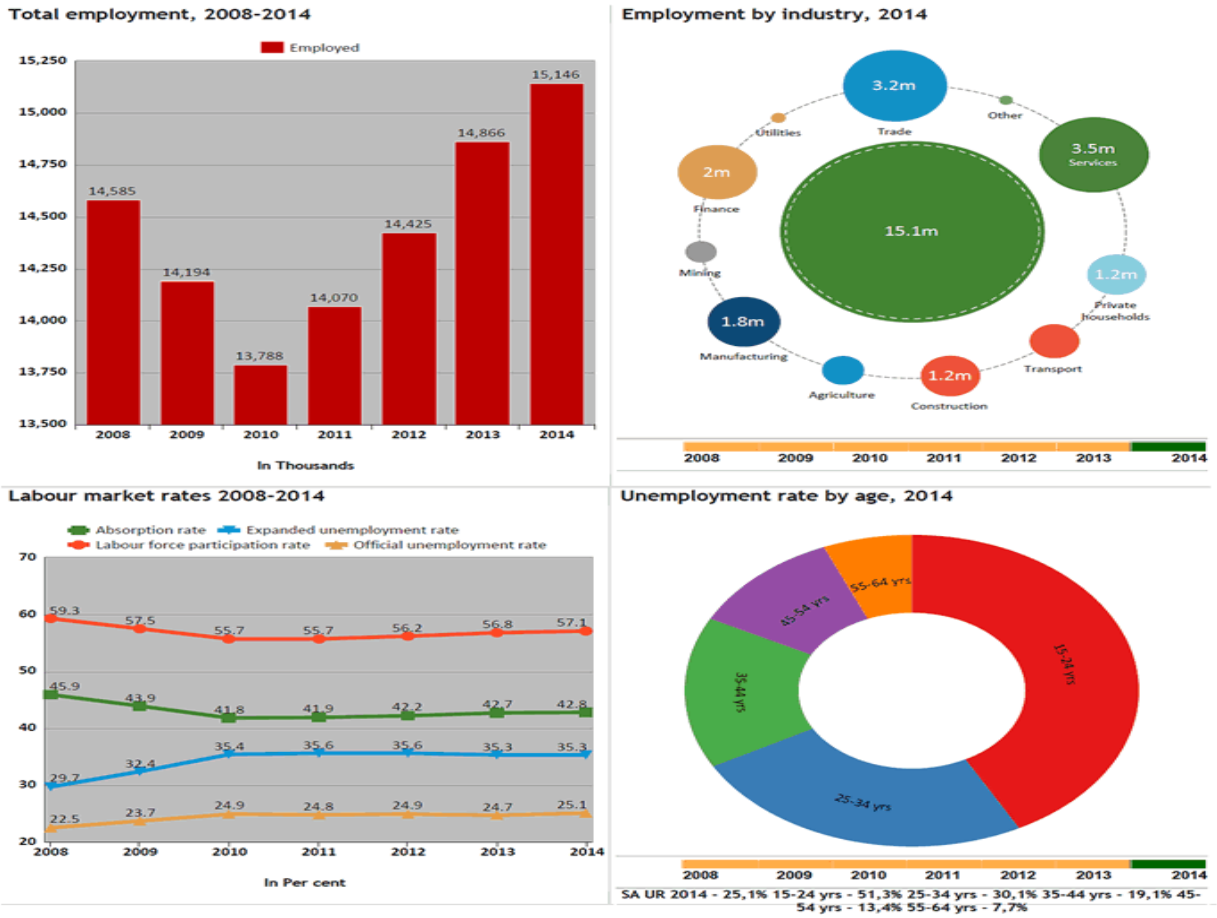
According to SAB's latest annual report, SAB employs nearly 9400 people, more than 75% of whom are from previously disadvantaged groups and 58% of its workers are black. In addition SAB's operations support an estimated 37,095 jobs at SAB's first round suppliers. For each job offered at SAB and its first round suppliers, 6.7 additional jobs are supported in the rest of the South African economy. In all 355 000 full time jobs in South Africa can be directly or indirectly traced back to the production of SAB products (SAB annual report, 2015).

The wine industry supports employment of 289,151 people in South Africa. Of this number, 55.6% are unskilled, 29.3% semi-skilled and 15% skilled. The relative labour intensiveness of the wine industry is specifically the result of the intensive labour production methods which are followed in the primary agriculture sector (SAWIS, 2015).

Therefore, between SAWIS, where members produce wine and spirits, and SAB, it is reported that the liquor industry currently supports a mammoth 644,151 jobs in South Africa. This number does not take into account employment opportunities not linked to SAB and SAWIS members

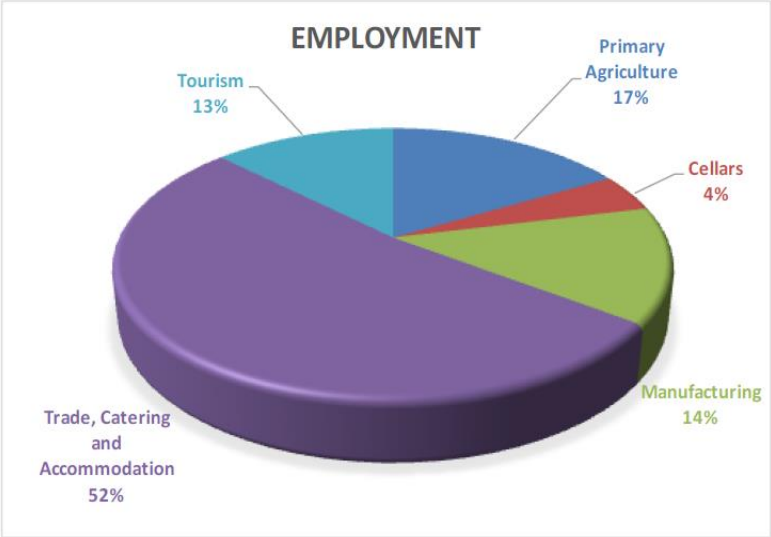
The difference between the 2009 Quantec estimate and the number of job opportunities reported by SAB and SAWIS, is most likely due to the fact that Quantec only accounted for direct and first round supplier jobs created whereas the numbers reported by SAWIS and SAB also consider wider employment opportunities supported. It appears that there was an increase of 96,151 job opportunities supported by the liquor industry from 2009 to 2015 when considering the broader estimate of 548 000 jobs (Aruvian) compared to the 644 151 reported in 2015. This growth in employment opportunities is especially significant considering the decline in total employment in South Africa between 2008 and 2014 (Stats SA, 2015).

Figure 8: Labour Market Dynamics 2014



The wine industry is reported to provide 52% of attributable employment opportunities in the Trade, Catering and Accommodation sector. The industry further provides employment in the primary agriculture, tourism and manufacturing sectors. Only 4% of employment opportunities in the wine industry can be attributed to wine cellars.

Figure 9: Value Chain of Wine Dependent Employment in South Africa



(Source: SAWIS, 2015)

GDP Contribution

An estimated R94.2 billion (or 4.4%) of the country's gross domestic product (GDP) can be traced back to the liquor industry's manufacturing operations and capital expenditure (Econex & Quantec, 2010).

In 2009 it was estimated that the entire liquor value chain accounts for roughly 548000 jobs, 41.8 billion in tax revenue and 94.2 billion (4.4%) of the country's GDP (by Quantec Research (2010).

According to Statistics SA, the largest industries, as measured by their nominal value added in the first quarter of 2015, were as follows:

- Finance, real estate and business services – 21,9 per cent;
- General government services – 17,3 per cent;
- Wholesale, retail and motor trade, catering and accommodation – 14,7 per cent; and
- Manufacturing – 13,0 per cent.

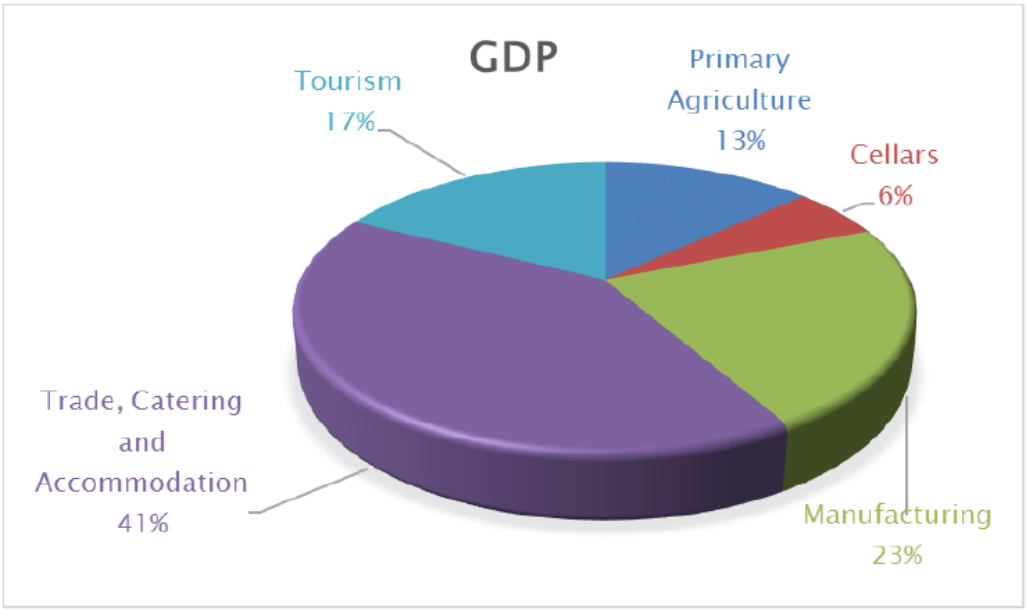
The nominal GDP at market prices during the first quarter of 2015 reported by Statistics SA was R965 billion, and the most notable performances were as follows:

- Agriculture, forestry and fishing expanded by R8 billion to R18 billion;
- Finance, real estate and business services expanded by R6 billion to R186 billion;
- Wholesale, retail and motor trade, catering and accommodation decreased by R14 billion to R125 billion;
- Manufacturing decreased by R9 billion to R111 billion;
- Transport, storage and communication decreased by R8 billion to R83 billion; and
- Mining decreased by R8 billion to R68 billion;

The R 94.2 billion (4.4%) contribution of the liquor industry towards GDP is therefore significant compared to other industries.

In 2013 the wine industry contributed R36, 145 million to the annual GDP of South Africa. It also important to note that significant value is added with every step of beneficiation.

Figure 10: Value Chain of Wine Dependent GDP in South Africa



(Source: SAWIS, 2015)

Taxes

Excise taxes on alcohol are levied as a specific tax. Excise taxes on beer and spirits have been levied in South Africa for more than 100 years. Wine has been taxed intermittently since the early 1940 and sorghum beer has been taxed since 1992. During the 2013/2014 year beer was taxed at R63.81 per

litre of absolute alcohol, spirits at R120.80 per litre of absolute alcohol, wine at R 2.70 per litre of wine (irrespective of the alcohol content) and sorghum beer at 7.82c per litre of sorghum beer, irrespective of the alcohol content (SARS).

The National Treasury reports on excise tax revenues for four categories: (1) beer, (2) traditional beer and traditional beer powder (i.e. sorghum beer), (3) wine and other fermented beverages, and (4) spirits. Of these four categories, beer is the single most important source of alcohol excise tax revenue (59% of the total), followed by spirits (27%) and wine (14%). Revenues from sorghum beer are negligible. Although alcohol excise revenues have been increasing in real terms since 2000, as a percentage of total government revenue it has been decreasing and currently comprises about 1.4% of government revenue (Walbeek & Blecher, 2014).

The direct impact of the liquor industry and its first round suppliers on tax revenue was estimated at R19.5 billion in 2009, with a hefty 57% derived from taxes on the production and sale of malt beer (Econex & Quantec, 2010).

South Africa is a net exporter of liquor, largely due to extensive wine exports. Wine exports accounted for 85% of total exports in 2009, followed by spirits (8.6%), other fermented beverages (3.7%) and beer (2.6%). Beer exports are small in comparison to wine, as beer is generally brewed by domestic breweries within a country. Liquor imports showed strong growth over the period 2005 to 2009, with a cumulative increase of 166.6% since 2005, relative to total import growth of 52.8% between 2005 and 2009 (Econex & Quantec, 2010).

Table 10: Liquor import and export performance – 2005 to 2012, R million

	Malt beer		Wine		Other fermented beverages (e.g. cider)		Spirits		*Total*	
HS Classification	*H2203*		*H2204*		*H2206*		H2208		*Aggregate*	
	Exports	**Imports**	**Exports**	**Imports**	**Exports**	**Imports**	**Export**	**Import**	**Exports**	**Imports**
2005	51.6	35.4	3806.8	81.3	20.3	1.3	255.4	1141.2	4 134.1	1259.1
2006	70.1	58.4	3563.5	110.4	28.1	2.7	287.2	1501.0	3 948.9	1672.5
2007	68.8	637.5	4731.9	130.5	32.1	0.9	398.7	1823.3	5 231.6	2592.2
2008	188.6	813.4	6229.0	163.7	106.9	1.1	550.1	2113.7	7 074.5	3092.0
2009	182.2	1185.9	6015.4	143.5	261.8	1.1	608.7	2025.8	7 068.2	3356.3
2010	124.5	156.9	5717.4	126.8	294.3	1.1	663.8	2274.5	6 799.9	2559.3
2011	138.5	187.5	5437.8	157.3	338.4	1.3	809.0	2615.3	6 723.8	2961.4
2012	225.1	251.2	5986.8	199.3	370.2	3.8	861.1	2849.9	7 443.2	3304.2
2012 share in exports	*3.0%*		*80.4%*		*5.0%*		*11.6%*		*100%*	
2012 share in imports		*7.6%*		*6.0%*		*0.1%*		*86.3%*		*100%*

(Source: Quantec)

Table 11: Specific excise duties (alcohol and tobacco), 2012/13 vs. 2013/14

Product	2012/13 Excise duty rate	2013/14 Excise duty rate	% Change in excise duties	
			Nominal	Real
Malt beer	R59.36/litre of absolute alcohol (100.98c/average 340ml can)	R63.81/litre of absolute alcohol (108.48c/average 340ml can)	*7.5%*	*1.9%*
Traditional beer (sorghum)	7.82c/litre	7.82c/litre	*0.0%*	*-5.6%*
Traditional African beer powder	34.70c/kg	34.70c/kg	*0.0%*	*-5.6%*
Unfortified wine	R2.50/litre	R2.70/litre	*8.0%*	*2.4%*
Fortified wine	R4.59/litre	R4.85/litre	*5.7%*	*0.1%*
Sparkling wine	R7.53/litre	R8.28/litre	*10.0%*	*4.4%*
Ciders & alcoholic fruit beverages	R2.97/litre (100.98c/average 340ml can)	R3.19/litre (108.48c/average 340ml can)	*7.4%*	*1.9%*
Spirits	R111.64/litre of absolute alcohol (R36.00/average 750ml bottle)	R122.80/litre of absolute alcohol (R39.60/average 750ml bottle)	*10.0%*	*4.4%*
Cigarettes	*R10.32 / 20 cigarettes*	*R10.92 / 20 cigarettes*	*5.8%*	*0.3%*
Cigarette tobacco	*R11.05 /50g*	*R12.16 /50g*	*10.0%*	*4.5%*
Pipe tobacco	*R3.22/25g*	*R3.54 /25g*	*9.9%*	*4.4%*
Cigars	*R53.05 /23g*	*R56.76 /23g*	*7.0%*	*1.4%*

(Source: National Treasury)

Table 12: Excise duties (Rand) per litre of absolute alcohol

Product	2009/10 Excise duty rate	2013/14 Excise duty rate
Spirits	R77.67	R122.80
Alcoholic fruit beverages	R46.60	R50.16
Malt beer	R46.41	R63.81
Sparkling wine	R37.33	R40.42
Fortified wine	R21.88	R122.80
Unfortified wine	R16.50	R122.80
Sorghum beer	R1.86	R1.86
Sorghum flour (R/kg)	R0.35	R0.35

(Source: National Treasury)

Tourism

Table 13: Activities of Foreign Tourists when visiting South Africa

Activities by Purpose of visits for 2013									
	Holiday	Shopping (Personal)	Shopping (Business)	Business Traveler	Business Tourist	Medical	VFR	Religion	Other
Shopping	96%	99%	90%	90%	88%	71%	96%	93%	92%
Night life	92%	63%	49%	81%	78%	0%	65%	75%	81%
Theme Parks	22%	2%	3%	6%	5%	1%	8%	0%	11%
Trading	1%	3%	60%	3%	3%	0%	1%	0%	1%
Visits to Casino	15%	3%	1%	6%	6%	0%	7%	0%	6%
Sport Competition	2%	0%	0%	6%	0%	0%	1%	0%	2%
Sport Attending	3%	0%	0%	1%	0%	0%	1%	0%	11%
Business	3%	0%	2%	76%	68%	0%	1%	0%	3%
Cultural, Historical and Heritage	43%	3%	15	12%	13%	1%	19%	0%	17%
Wildlife	53%	1%	0%	14%	9%	1%	9%	0%	15%
Visiting Natural Attractions	64%	2%	0%	19%	14%	2%	20%	0%	23%
Beach	42%	1%	2%	13%	0%	2%	13%	0%	20%
Social	34%	35%	11%	14%	14%	37%	90%	40%	0%
Medical	2%	1%	0%	0%	0%	81%	3%	0%	1%
Health	1%	0%	0%	0%	0%	13%	1%	0%	1%

(Source: SA Tourism: 2013 Annual Report)

In 2013 ± R6.6 billion was spent by local tourist visiting the Western Cape and direct spending by foreign tourist in the Western Cape amounted to ± R35 billion in 2013 (SA Tourism).

According to SA Tourism (2013), foreign tourists stay an average of 8 nights in the Western Cape. Exact data to measure impact of tourists visiting the Western Cape for wine tourism is not readily available, but if the tourists on average devote one day of their stay in the Western Cape visiting the Wine Routes and other cultural and heritage sites, an amount of R4.8 billion can indirectly be linked to them.

Although exact information in this regard is limited, it is established through several studies that the wine industry makes a significant contribution to wine tourism. About 43% of all overseas visitors to the Western Cape travel through the Cape Winelands (SAWIS, 2015).

Wine industry - Western Cape

According to SAWIS (2015), of the R36, 145 million GDP created in South Africa by the wine industry, about R19 287 million, or approximately 53%, remained in the Western Cape.

The impact of the wine industry on the Western Cape economy is significant and is much larger than the impact on the rest of South Africa.

Table 14: Total Impact of Different Phases of the Wine Producing and Selling Chain inside the Western Cape and outside the Region (GDP)

Economic Sector	Western Cape	Rest of South Africa
Primary Agriculture	66%	34%
Cellars	53%	47%
Manufacturing	72%	28%
Wholesale and Retail Trade	39%	61%
Tourism	54%	46%
Total	53%	47%

(Source: SAWIS)

The wine industry delivers 53% of its total contribution towards GDP in the Western Cape and 47% to the rest of South Africa. Similarly 58% of employment opportunities created by the wine industry fall inside the Western Cape and 42% in the rest of South Africa.

Table 15: Impact of Different Phases of the Wine Producing and Selling Chain inside the Western Cape and Outside the Region (Labour)

Economic Sector	Western Cape	Rest of South Africa
Primary Agriculture	79%	21%
Cellars	63%	37%
Manufacturing	72%	28%
Wholesale and Retail Trade	47%	53%
Tourism	59%	41%
Total	58%	42%

(Source: SAWIS)

The total turnover of the alcoholic wine industry, including sparkling wine, in 2013 amounted to R26, 359 million. Of this amount R8, 514 million was exported directly. Imports amounted to R590 million or about 3% of domestic sales. It is significant that primary agriculture output valued at R4, 820 million in 2013 and the industry added downstream value to the amount of R26, 359 million, which is about 5 times the initial value of the raw material inputs. Another R5, 972 million was generated indirectly through wine tourism.

From 2008 to 2013 the total turnover in wine sales grew by 37.5% which can be attributed mainly to excellent export performance. The growth in value of domestic sales for the same period amounted to only 38.4%. This indicative of the slower growth in primary producers' income but an escalating tax haul by government. The wine industry has been under ever increasing inflationary pressures on the production side that ultimately was passed on to consumers. However, the primary producers were in a more disadvantaged position to recoup all of these cost hikes.

Table 16: Growth Rates Wine alcohol Industry: 2008-2013 (current prices)

Economic Sector	2008	2013	Percentage Change
Primary Production	3 320	4 820	45.2%
Total Turnover (Local Wine Output)	19 164	26 359	37.5%
Exports	6 272	8 514	35.7%
Taxes/Excise	3 459	4 802	38.8%
Local Sales	12 882	17 845	38.4%

(Source: SAWIS)

Table 17: Macro-economic impact of the Wine Industry

MACRO-ECONOMIC IMPACT

Impact on	R million
GDP	36 145
Capital investment	62 277
Household income	23 579
- Low income	3 994 (17%)
- Medium income	4 945 (21%)
- High income	14 640 (62%)

(Source: SAWIS, 2015)

Table 18: Employment in the Wine Industry

EMPLOYMENT

	Numbers 2008	Numbers 2013
Total	275 606	289 151
Skilled	36 551 (13%)	43 644 (15%) **+7000**
Semi-skilled	78 310 (28%)	84 769 (29%) **+6400**
Unskilled	160 745 (58%)	160 738 (56%)

(Source: SAWIS, 2015)

Table 19: Growth in the Wine Industry

GROWTH 2008-2013 (current prices)

	2008 (Rm)	2013 (Rm)	% change 2003-2008	% change 2008-2013
Primary production	3 320	4 820	37	45
Total turnover (excluding tourism)	19 164	26 359	79	38
Exports	6 272	8 514	99	36
Taxes	3 459	4 802	71	39
Domestic sales	12 892	17 845	76	38

(Source: SAWIS, 2015)

There was an increase in the volume of wine exports in 2013 of 18%, which means that volume exports accounted for 57.4% of production in volume terms. Brandy sales have been declining, ending 20% lower in 2013 compared to 2008.

In the Western Cape, the wine industry in total is responsible for total employment of 167,494. Sawis reported that the wine industry's actual impact on the South African economy is as follows:

- Total capital asset base is estimated at R62, 277 million. The corresponding number of employment opportunities amounts to a significant 289,151. The most significant sectors are the trade, catering, accommodation and transport sectors.

- The total annual impact of the wine industry on the national economy amounts to R36, 145 million which amounts to 1.2% of the total GDP of South Africa in 2013.

- The wine industry generates an amount of R23, 578 million of private disposable income. Of this amount, 17% is destined for low-income households, which is slightly higher than for the economy as a whole (16%).

- Of the total impact that the wine industry has on GDP and employment creation, approximately R19, 287 million and 167,494 employment opportunities have been created in the Western Cape.

Table 20: Total Macro-economic Impact of the Wine Industry on the South African Economy [Rand millions; 2013 prices]

Macroeconomic Indicators	Rand millions
Impact on GDP	36 145 (26 223)
Impact on Capital Investment	62 277 (49 768)
Impact on Household Income	23 579 (17 124)
· Low Income	3 994 (2 908)
· Medium Income	4 945 (3 598)
· High Income	14 640 (10 618)
Fiscal Impact	11 598 (8 517)
· National Government	10 809 (7 945)
· Provincial Government	106 (76)
· Local Government	684 (496)
Impact on Balance of Payments	17 783 (12 704)
	Numbers
Impact on Employment	289 151 (275 606)
· Impact on Skilled Employment	43 644 (36 551)
· Impact on Semi-Skilled Employment	84 769 (78 310)
· Impact on Unskilled Employment	160 738 (160 745)

(Source: SAWIS, 2015)

Table 21: Total Macro-economic Impact of the Wine Industry on the Western Cape [Rand millions; 2013 prices]

Macroeconomic Indicators	Rand millions
Impact on GDP	19 287 (14 214)
Impact on Capital Investment	33 458 (29 055)
Impact on Household Income	11 511 (8 478)
· Low Income	2 050 (1 528)
· Medium Income	2 509 (1 852)
· High Income	6 952 (5 098
Fiscal Impact	4 809 (3 566)
· National Government	4 407 (3 273)
· Provincial Government	70 (51)
· Local Government	331 (242)
	Numbers
Impact on Employment	167 494 (168 102)
· Impact on Skilled Employment	22 559 (19 427)
· Impact on Semi-Skilled Employment	49 857 (48 392)
· Impact on Unskilled Employment	95 077 (100 283)

Note: Figures in brackets relates to 2008 figures

(Source: SAWIS, 2015)

The impact of the wine industry on the Western Cape and RSA differs for three reasons, namely:

- The Orange River region does not form part of the Western Cape Province.
- A major portion of the trade, catering and accommodation activities involving wine falls outside the Western Cape area.
- A significant portion of the indirect and induced impacts occur in the rest of South Africa due to import leakages from the Western Cape as well as the fact that the major portion of the market for wine is still outside the Western Cape.

Unregulated trade/ Illicit trade in alcohol

In 2011 it was estimated that 14% of alcohol consumed in South Africa is illicit in some or another form, typically either by evading excise duties or by being produced for sale by unlicensed brewers (DNA Economics, 2011).

The definition of illicit alcohol includes two broad areas of concern, namely alcohol products that evade excise taxes, and secondly the sale and consumption of alcohol outside the regulated system. Tax evasion if of concern because of the potential for government to use tax as a tool to reduce the harmful use of alcohol and generate revenue.

Truen et al (2011) estimated that up to 40,000 people are employed in the formal retail sector (both on- and off-consumption) through the sale of liquor. However, the informal sector may provide the largest proportion of jobs within the overall liquor industry given the subsistence nature of many informal liquor traders and the widespread prevalence of informal liquor outlets.

Tax evasion occurs when, for example, alcoholic beverages are smuggled from other countries without paying the domestic excise tax, or counterfeit products, on which no tax is paid, are sold. Other methods of tax evasion include the dilution of the excise tax.

Estimating the size of the illicit alcohol market is understandably highly contentious, as there has been little research conducted in South Africa that adequately and representatively samples the local population. The illegal and informal nature of the activity means that it is inherently difficult to observe and thus measure. Additionally, different actors have different incentives when estimating the size of the market. The estimates for South Africa vary in terms of the size of the illicit market as well as the definition used for the market.

Estimates generated for the South African authorities (the Treasury and the Department of Trade and Industry) indicate a much smaller illicit market than a much-quoted study by the World Health Organisation. The WHO study indicates that illicit per capita alcohol consumption is 2.5 litres per year, or 26% of the total market. The other studies suggest that illicit consumption is only 1 litre per year, or 14% of the total market. All studies are in agreement that the major source of illicit alcohol use, in terms of absolute alcohol, is illicit home-brew, followed by spirits and then wine.

Unregulated Liquor Traders

Table 22: Average economic impact of shebeens by business type

	Average employees (family)	Average employees (other)	Average employees (total)
Level 1	2.6	1.2	3.75
Level 2	2.3	0.5	3.5
Level 3	1.2	0.1	1.7

(Source: L Peterson & R Charman, 2012)

* Level 1 equals average 480 cases of liquor quarts per week

Level 2 equals average 85 cases of beer quarts per week

Level 3 equals less than 25 cases of beer quarts per week.

Table 23: Direct Employment, Related Entrepreneurs, and livelihoods linked to 211 surveyed shebeens in the Western Cape

	High Volume	Medium Volume	Low Volume	Total
Direct employment	45	357	138	**540**
Related entrepreneurs	10	122	56	**188**
Livelihoods (food and accommodation)	89	602	372	**1063**
Total	144	1081	566	**1791**
Average	**12**	**10.6**	**7.1**	**8.5**

(Source: L Peterson & R Charman, 2012)

Although illicit trade erodes tax revenue for government, the informal and unlicensed trade do make a contribution in terms of employment and livelihood.

10. Social and Economic Impacts of Alcohol Consumption

Introduction

The liquor industry in South Africa employs a large number of people in the primary, secondary and tertiary sectors of the economy. In addition the industry makes a significant contribution towards GDP, taxes and exports.

On the other hand, harmful alcohol use imposes major costs on society, primarily through injuries, alcohol related disease and a variety of social ills.

The socio-economic impact of alcohol use can be divided into three categories (Moller & Matic, 2010):

1. Health and crime: The impact of alcohol use on health and crime will be discussed later in this report and therefore this section deals mainly with the non-financial welfare costs and social ills associated with alcohol abuse.

2. The second category for alcohol-related negative externalities include labour and productivity costs include, but are not limited to, absenteeism, job turnover, inappropriate behaviour and alcohol-related morbidity.

3. The third category is non-financial, intangible welfare costs. These costs are often incurred by those who do not abuse, but rather the actions of those who do. They include noise pollution, pain and emotional suffering due to the death or injury of a loved one from an alcohol-attributed accident or crime, being the victim of alcohol-induced crime etc. Other social welfare costs include the cost of alcohol tax evasion, alcohol-attributable litter, vandalism and fires.

Non-financial welfare cost refers to pain, suffering and premature loss of life. Most non-financial welfare costs relate to non-health impact on drinkers, the quality of life of the relatives of drinkers, informal care for drinkers and the relatives of drinkers and care for the children of drinkers.

The emotional costs placed on premature mortality and morbidity associated with alcohol can be estimated by considering the amounts that individuals would pay for their prevention. Additional

non-financial welfare costs are incurred by individuals who are affected by the actions of others who misuse alcohol.

Accurately estimating the value of all non-financial welfare costs associated with harmful alcohol use would be impossible. These costs are highly subjective and various methods of calculating these impacts are employed, creating highly divergent estimates. However, in the South African context, studies by Miller (1998) and Rosen *et al* (2008) relating to traffic crashes and crime, suggest that the cost of emotional pain associated with traffic crashes and violent crime, respectively, is equal to the economic costs attributed to the event.

Socio-economic cost of alcohol abuse

Alcohol abuse generates costs that may be internal (borne by the abuser) and some are external (inflicted on others). A negative externality is defined as a spill-over of an economic transaction that negatively affects a third party. In the case of alcohol abuse, the consumer bears no costs for the impact on society, while those negatively affected through health or social harm receive no compensation. The private cost is defined as the total cost incurred by the individual purchasing the product while the social cost is the private cost plus the externality.

The externalities linked to alcohol use include health and crime expenditure by government, labour and productivity costs and non-financial welfare costs.

Table 24: Summary of cost type by cost bearer:

Cost type by cost bearer	
Costing categories	Cost bearer
Health and welfare costs	
Impact on health	External
Healthcare costs	External
Treatment, research and prevention	External
Social security	External
Drink-driving damage	External
Labour costs	
Productivity at work	Contested
Absenteeism	Contested
Premature mortality	Contested

Unemployment/retirement	External
Other labour costs (traffic congestion, imprisonment)	External
Costs of crime	Internal
Responses to crime	External
Consequences of crime	External
Anticipation of crime	External
Non-financial welfare costs	External

(Source: Matzopoulos, 2014)

Allocating some of the costs, such as absenteeism and premature mortality, to a specific cost bearer is still contested. Difficulty attributing cost to cost bearers further complicates estimation of accurate socio-economic cost due to harmful use of alcohol.

Table 25: Summary of alcohol-attributable costs in South Africa, 2009 (Truen et al, 2013)

Cost category	**Amount (R million)**
Tangible costs	
Healthcare	9 330
Other healthcare costs	2 333
Treatment research and prevention	18
Social and welfare costs	397
Crime response	9 680
Crime consequence – transfers	4 500
Crime anticipation	3 750
Road traffic accidents – damage to motor vehicles	7 912
Total tangible costs	37 920
Intangible costs	
Premature mortality and morbidity – reduction in earnings	8 245 - 9 769
Premature mortality and morbidity – VSL	183 527 - 216 450
Absenteeism	141 - 448
Non-financial welfare costs	16 100

Total intangible costs	208 013 - 242 767
Insufficient data to estimate cost	
Hangovers and drunkenness at work	Uncertain
Unemployment and early retirement	Uncertain
Other labour costs	Uncertain
Miscellaneous other social and welfare costs	Uncertain
Total costs	**245 933 - 280 687**

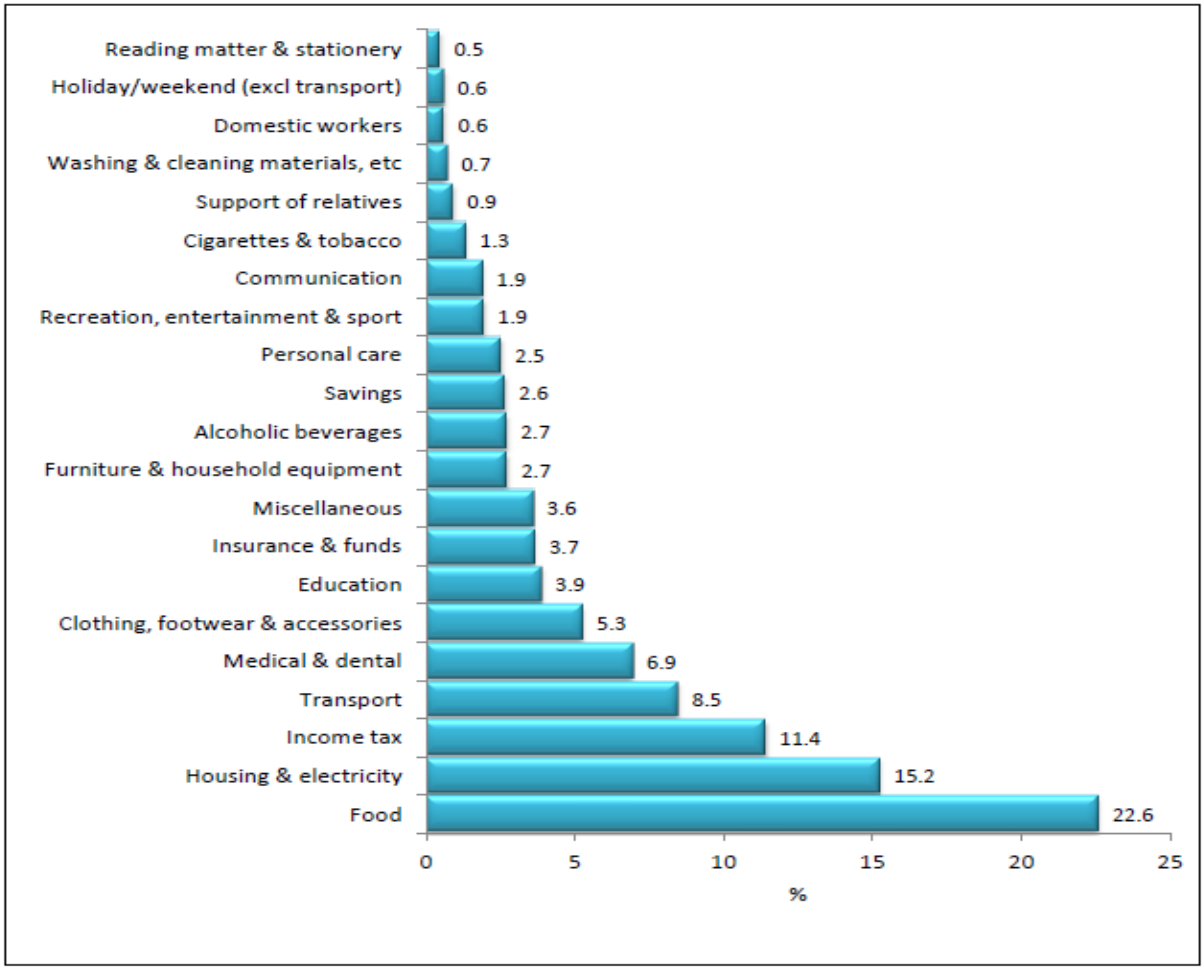
Alcohol use contributes to a variety of crimes, accidents and misdemeanours. It is, however, clear that estimating the socio-economic cost of harmful alcohol use is problematic for various reasons:

- Allocation of cost is problematic as it is not clear-cut who the cost-bearer is
- Quantifying intangible cost is subjective and context-specific
- For most costs, insufficient data is available to make accurate estimates

Household expenditure:

According to UNISA BMR (2011) South African households spent on average 2.7% of their household expenditure on alcoholic beverages. On average this percentage was on par with spending on furniture and household equipment and more than the percentage of income used for savings.

Figure 11: PERCENTAGE DISTRIBUTION OF HOUSEHOLD EXPENDITURE BY ITEM, 2011



(Source: BMR, 2011)

When household spending is further analysed according to income group, it is clear that lower income groups spend proportionally more on alcoholic beverages (BMR, 2011). The lowest proportional spend on alcoholic beverages occurred in the highest income group (R 1 329 845 + per annum) and the proportional spend on alcohol increased as household income decreased. The highest proportional spend on alcohol occurred in the second lowest income bracket (R 54 345 – R 151 727) at 4.5% of household expenditure.

Table 26: PERCENTAGE DISTRIBUTION OF TOTAL HOUSEHOLD EXPENDITURE BY EXPENDITURE AND INCOME GROUP

Expenditure group	<R54 344	R54 345 – R151 727	R151 728 – R363 930	R36 931 – R631 120	R631 120 – R863 906	R863 907 – R1 329 844	R1 329 845+
	%	%	%	%	%	%	%
Alcoholic beverages	3.0	4.5	2.8	2.0	1.8	1.9	1.6
Cigarettes & tobacco	1.8	2.3	1.5	1.1	0.6	0.6	0.2
Clothing, footwear & accessories	7.6	8.4	6.1	3.9	2.8	2.6	1.6
Communication	1.0	1.6	2.2	2.3	2.3	2.1	1.4
Domestic workers	0.2	0.2	0.7	0.9	0.7	0.8	0.9
Education	2.4	3.4	4.8	4.7	4.1	3.5	3.1
Food	47.7	35.2	21.7	14.7	11.3	9.8	6.8
Furniture & household equipment	1.9	3.0	3.0	2.7	2.5	3.1	2.4
Holiday/weekend (excl transport)	0.1	0.1	0.4	0.7	1.0	1.2	1.5
Housing & electricity	15.1	14.3	16.0	16.2	15.6	14.3	14.3
Income tax	0.8	3.3	8.7	15.2	17.7	19.8	25.4
Insurance & funds	0.9	2.0	3.8	5.1	4.7	5.3	4.7
Medical & dental	2.8	3.1	7.8	9.3	10.8	10.0	6.0
Miscellaneous	2.7	4.4	4.2	3.1	3.1	3.0	3.8
Personal care	4.0	3.6	2.8	2.0	1.6	1.3	1.0
Reading matter & stationery	0.2	0.5	0.6	0.6	0.4	0.6	0.3
Recreation, entertainment & sport	0.9	0.9	1.5	2.5	2.8	3.3	2.9
Savings	0.3	1.2	1.9	2.7	3.1	3.0	9.5
Support of relatives	1.0	1.9	0.8	0.3	0.4	0.4	1.2
Transport	4.1	5.1	8.0	9.6	12.2	13.1	11.0
Washing & cleaning materials, etc	1.6	1.1	0.7	0.4	0.4	0.3	0.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(Source: BMR, 2011)

The two lowest income brackets spent more on alcoholic beverages than on education, health or savings in 2011 (BMR, 2011).

Considering that disposable income is a scarce resource, especially in South Africa and even more so in the lower income groups, it is concerning that spending on alcohol is proportionally higher in low income household and also exceeds spending on health care and education.

Cost to government

In 2009 the total tangible and intangible cost to the South African government due to harmful use of alcohol was estimated at 10% - 12% of the GDP (Matzopoulos, 2014).

Budlender (2010) analysed some of the direct costs to government as a result of alcohol use in 2009–2010. Her estimates suggest that provincial governments allocated around R 7 billion because of alcohol use per year, whereas national government allocated more than R 10 billion. After deducting

the income generated by government through VAT, excise tax and licencing she calculates a net expenditure of R 1 billion, but many costs were not qualified.

The following table represents a summary of direct costs incurred by government according to Budlender's study:

Table 27: Costs to government of alcohol use

Cost Category	**R millions**
National and Provincial Department of Health	6805
National Safety and Security	5808
Provincial Community Safety	44
Correctional Services	3355
National Justice and Constitutional Development	335
Substance abuse, prevention and rehabilitation	157
Disability grant	172
Services to persons with disabilities	6
HIV and AIDS	26
Care and Support Services to Families	34
Youth Development	2
Other costs attributed to be considered	
Prison Programmes	Not quantified in study
Traffic Management	Not quantified in study
Community policing forums	Not quantified in study

In addition to some attributed costs not being quantified, the study also does not take account of the broader economic impact of the liquor industry**.** It is therefore difficult to accurately deduce if government incurs a net income or net expenditure due to the alcoholic beverage industry in South Africa.

Cost associated with harmful alcohol use:

Healthcare

In total, 36,840 deaths (6.1% of total mortality), 787,749 years of life lost (7.4% of premature mortality) and 344,331 years lived with a disability (6.2% of total disability) were attributable to alcohol in 2000, which together accounted for more than 1.1 million disability-adjusted life years (DALYs), or 7% of the total disease burden (Matzopoulos, 2014).

Over the past decade, the contribution of alcohol to infectious diseases was included in analyses. Factoring in this contribution increased the estimated total alcohol-attributable DALYs for SA to more than 1.3 million in 2004 (Matzopoulos, 2014).

Injury-related causes account for nearly half (41%) of the total contribution, with the largest single contribution from intentional injuries, i.e. interpersonal violence and suicide, at 25% (Matzopoulos, 2014).

Unintentional injuries, including road traffic injuries, accounted for 16% of DALYs. Infectious diseases accounted for a third of DALYs in 2004, with tuberculosis (18%) and HIV/ AIDS (13%) being the largest contributors. Non-communicable diseases accounted for the remaining alcohol-attributable DALYs (Matzopoulos, 2014).

Drinking and driving

Information regarding the indirect cost of drinking and driving is scant, not specific to the South African context and/ or conducted more than five years ago. However, from data gathered between 1998 and 2009, it appears that the emotional or non-financial cost of drinking approximately equal to the attributable direct financial cost.

The CSIR estimated the cost of traffic crashes to the national economy in 2002 at R42.5 billion, which equated to R67.6 billion in 2009 (Matzopoulos, 2014). This included human casualty costs (56%),

which was already reflected in healthcare costs, and an addition 44% in vehicle damage and incident costs which equated to R29.7 billion (Matzopoulos, 2014).

A Californian study conducted in 1998 indicated that monetary costs account for less than half of the costs of alcohol-attributable crashes (47%), with the rest accruing from 'quality of life', including medical expenses, property damage, employer costs, costs to public services and travel delays (Matzopoulos, 2014)

An estimated 24% of SA driver deaths and non-fatal injuries would be prevented if drivers were not driving under the influence of alcohol (Matzopoulos, 2014). Drunk drivers are likely to be over-represented among those involved in collisions with pedestrians and cyclists

Premature death.

The cost of mortality and morbidity is estimated by calculating the net present value of the earnings stream that an individual would have earned if it had not been for the event that resulted in premature death or disability.

A key problem with this approach is that it produces different values for deaths between, and even within, countries. In South Africa, where unemployment levels are high, low-skill workers can be replaced relatively easily, and the cost to the economy of premature death may be limited to the fraction compared with finding a new employee (Matzopoulos, 2014)

Another method to measure the economic value of premature mortality would be to estimate the average amount an individual would be willing to pay to prevent death. This amount then generates a value of statistical life (VSL). VSLs must be treated with some caution, as it does not take into account the value society places on averting premature mortality, which includes the emotional costs of such mortality.

Using average per capita employee compensation as a proxy, based on 2009 GDP and mid-year population estimates, the economic benefits lost as a result of premature mortality in South Africa equated to R21 632 per death for 2009. This amount did not include the total impact on society and may be substantially higher if emotional costs were included.

At 2009 per capita GDP levels, Lindhjem *et al*.'s (2011) VSLs suggest that the average South African would be prepared to pay R3.5 million to prevent their death.

Loss of productivity

Alcohol misuse is a risk factor for work-related injuries, increased absenteeism and high employee turnover (WHO, 2014).

Moller and Matic (2010) suggest that the impact of harmful use of alcohol on labour supply and overall productivity is discernible through the following four channels:

- lower productivity due to hangovers or drunkenness at work
- absenteeism due to hangovers
- unemployment and retirement effects
- Other labour costs.

Although it is expected that a drunken or hung over individual is likely to be less productive than a sober individual, recent studies have not yielded reliable results. In the absence of conclusive research, an estimate of the impact on productivity in South Africa is not warranted.

Absenteeism

Moller and Matic (2010) assumes that 4 - 6% of absenteeism is due to harmful alcohol use. A single study conducted by a commercial firm and covering 7 000 employees in 60 firms found that absentee rates average 2.3% in workers earning R1 000 or less per month, and 1.3% in workers earning R10 000 - 15 000 per month (Matzopoulos, 2014).

Matzopoulos (2014) calculates the cost of absenteeism by multiplying employee compensation by absenteeism rates, by the fraction of absenteeism attributable to alcohol, and finally by the productivity loss factor. Given total employee compensation costs of R1 081.4 billion in 2009, the alcohol-attributable fraction approach suggests that the cost of alcohol-attributable absenteeism ranges from R140.6 million to R447.7 million annually.

Law enforcement and community protection

Matzopoulos (2014) estimates that government agencies (justice, correctional service and public security), in responding to crime, spend the equivalent to 2.55% of the GDP. Applying Budlender's

AAFs of 22.5% for police and public security, 38.5% for correctional services and 2% for justice costs, it is estimated that costs of R9.68 billion were attributable to alcohol in 2009.

Alda and Cuesta (2011) calculated health costs relating to crime to have been R52 billion in 2007, equivalent to 2.6% of the GDP. Two-thirds accrued from the contribution to disease burden and productivity losses and the rest primarily from emotional costs, with medical costs accounting for less than 1%.

Alcohol consumption, crime and injury

The table below indicates the percentage of offenders of various crimes and injuries who tested positive for alcohol consumption.

Table 28: SUMMARY OF ALCOHOL RELATED CRIME AND INJURY IN SOUTH AFRICA

Crime or Injury	Percentage of offenders tested positive for alcohol consumption	Original Sources
Sexual offence	3.8%-9.1%	Crime Information Analysis Centre, 2001
Serious assault	40% believed positive for alcohol or drugs	Omar, 2004
Weapon related offences	25%	(Parry et al., 2004) Cape Town, Durban and Johannesburg only
Trauma patients	39%	(Pludderman et al., 2004) Cape Town, Durban and Port Elizabeth only
Assault cases	14%	(Parry et al., 2004) Cape Town, Durban and Johannesburg only
Homicide	51%	Non-Natural Mortality Surveillance System (NNMSS)
Murder	17%	(Parry et al., 2004) Cape Town, Durban and Johannesburg only
Suicide	35%	NNMSS (Matzopoulos, 2005)
Burns	60%	NNMSS (Matzopoulos, 2005)
Robbery	10%	(Parry et al., 2004) Cape Town, Durban and Johannesburg only
Housebreaking	22%	(Parry et al., 2004) Cape Town, Durban and Johannesburg only
Motor vehicle theft	12%	(Parry et al., 2004) Cape Town, Durban and Johannesburg only
Road Traffic Injuries	41%	(Schneider et al. 2007)
Transport fatalities	53% Pedestrians 61% Drivers 58% Cyclists 40%	NNMSS (Matzopoulos, 2005)
Interpersonal violence	61%	(Schneider et al., 2007)
Domestic violence	70%	(Peden et al., 1995) Cape Metropole only
Domestic violence	49%	(Parry et al., 2004) Cape Town, Durban and Johannesburg only
Rape	22%	(Parry et al., 2004) Cape Town, Durban and Johannesburg only
Drowning	40%	NNMSS (Matzopoulos, 2005)

(Source: Parry and Dewing, 2006, DNA, 2011)

Although the link between alcohol use and certain crimes are clearer than with others, it is important to be cognisant of the fact that correlation does not indicate cause. In other words, the fact that someone was under the influence of alcohol when they committed a crime or caused an injury does not mean that the action was taken as a direct result of alcohol consumption. Alcohol

does play a role in inhibiting judgement, but it does not mean that it acts as a motivator. Caution should therefore be applied when attributing the cause of crime or injury to the use of alcohol.

The liquor industry's contribution to socio-economic development

Just like the costs associated with alcohol include non-financial welfare costs, the contribution of the liquor industry also includes initiatives by role-players in the industry that develop and assist the community.

Some of the initiatives include the following:

SABMiller
SAB Sustainable Agricultural Programme To Support Emerging Farmers
CSI water projects to contribute towards community water security through support and participation in the Strategic Water Partners Network (SWPN).
Supporting more than 30 000 small enterprises through SAB KickStart, Customer Business Development Programme (CBD), distribution development programmes like the Owner Driver Scheme and in the agricultural sector through support of emerging famers.
Helping small-scale farmers increase profitability, production and social development. SAB aims to strengthen the Go Farming initiative, through which they aim to increase local sourcing of agricultural inputs, particularly from emerging farmers.
The SAB Foundation owns 1.54% of SAB. Dividends, which will be paid out bi-annually for ten years, will benefit the wider South African community through the Foundation. It is envisaged The SAB Foundation will retain into perpetuity the SABMiller shares issued to it at the end of the 10-year period of the transaction, continuing its existence indefinitely, becoming an evergreen contributor to community development.
The Road Offences Panel Programme, piloted in and around Cape Town, is designed to have a positive influence on reducing drunk driving and keeping South Africans safe on the road. This joint venture is also expected to dramatically reduce the workload and lessen the burden on the formal criminal justice system.
You Decide is an outreach programme developed in partnership with the Department of Trade and Industry (DTI), the National Youth Development Agency (NYDA) and provincial Departments of Education.

Reality Check FAS awareness campaign that aims to communicate the harsh truth about drinking whilst pregnant, in a clear and unambiguous way.
Distell
The Distell Foundation is an umbrella body for Distell's corporate citizenship activities, and Distell employees volunteer their skills and both Company and personal time to a variety of causes.
Distell aligns with the United Nations' Millennium Development Goals and the 12 key outcomes of the South African Government's 'Programme of Action' through investments and in-kind support for more than 60 projects.
Life skills programmes: • Chrysalis Academy • Goedgedacht Trust's POP programme • Vision AfriKa • The South African Life College Group • Pebble Project Trust • Anna Foundation • Jonkershoek Prochorus project.
Cultural development of South African communities: • The Oude Libertas Centre in Stellenbosch • Sponsorship for awards recognising excellence in arts • Music initiatives • Student bursaries
The Stellenbosch River Collaborative was established; a partnership between Distell, Spier, Stellenbosch municipality, WWF, governmental departments and various nature conservation organisations and water user associations. Aimed at addressing the deteriorating water quality in the Eerste River catchment area, the collaborative was set up after the Adopt a River programme became inoperative.
Brandhouse
Training in the cooking and hospitality industry: • Infinity Culinary 12-week training course on cooking skills, life skills as well as the professional tools necessary for graduates to obtain employment in this industry.

• Study assistance at the International Hotel School to previously disadvantaged people who are interested in working and studying in the hospitality and tourism sector. • Ikusasa School of Cooking to allow school leavers who are disadvantaged (financially and/ or academically) access to the otherwise cost prohibitive culinary industry by giving them a one year skills based introductory course to allow them to enter the industry with reasonable skills.
Brandhouse Number 1 Taxi Driver Campaign (2004-2012) was an educational programme intended to change driver behaviour and ensure safer and 'dry' roads.
TSiBA is a unique, private, not-for-profit business school that helps people who cannot access tertiary education. Brandhouse funds were used for previously disadvantaged students who had registered for a Higher Certificate in Business Administration (HCBA) focused on entrepreneurship and leadership.
SCAT is an independent fundraising and grant-making development agency based in Cape Town, with the aim of channelling funds to rural communities who have limited access to resources.
Financial and non-finance assistance to glass recycling SMMEs in partnership with the Glass Recycling Company.
Mdumbi Eco Centre is a sustainable eco centre in Eastern Cape that is used to implement permaculture and renewable technologies as homestead solutions.
Drive Dry was launched seven years ago with objective of changing consumer behaviour and attitudes towards drinking and driving. The concept is to drive dry or not drive at all.
KWV
KWV's is committed to the empowerment, development and upliftment of disadvantaged communities. The company's Sustainability Strategy is aligned to the Millennium Development Goals, the King III Report and the company's overall mission and vision.
Sponsorships: • Ligstraal School for LSEN is a special needs school for Learners with Special Educational Needs. • Drakenstein Association for Persons with Disabilities (APD) is a non-profit organisation, affiliated to the National Council for Persons with Physical Disabilities in South Africa. • The Boland School for Autism (Paarl, South Africa) provides children on the autism spectrum the opportunity to learn and grow within a social environment along with their

peers, an environment that respects every child's uniqueness whilst promoting learning and development by using an IEDP approach. • The Institute for the Blind offers adults that became blind at a later stage of their lives continued learning through education and training classes. • Valcare Trust facilitates networks between organisations, churches, individuals, businesses etc. to alleviate poverty and increase the involvement in the Paarl Valley. • Discover and Share tennis program • Klapmuts Primary School
ARA: Industry association for responsible alcohol use
Established in 1989, and registered as a non-profit organisation (NPO), the ARA is a public benefit organisation (PBO). It comprises members that include the leading manufacturers of alcohol beverages in South Africa, such as SAB Ltd, companies represented by the South African Liquor Brandowner's Association like Distell, Brandhouse, KWV, and DGB, the members of VinPro and Cellars SA, E Snell & Co, and many others.
Ongoing awareness campaigns are the driving force of the responsible alcohol use message to the mainstream public. A number of campaigns have been developed to reach a variety of audiences: • Do you have a buddy on campus? Campaign at Universities • Think Before You Drink! Alcohol Intake During Pregnancy and FAS awareness campaign • Enjoyment is knowing when to stop (print campaign) • November 2009 saw the launch of a series of hard-hitting ARA television adverts aimed at educating parents on the impact of their drinking behaviour on their children. • ARA produces and design quirky awareness campaign stickers that promote responsible wine drinking and enjoyment.
Perdeberg Wine Project Christmas party for children from the Feetjieland and Vryguns crèches in the Perdeberg district of the Western Cape.

The list above includes only some of the industry players and does not include all the initiatives even by the companies listed. It is therefore clear that players in the industry contribute towards addressing socio-economic problems attributable to the use of alcohol and also participate in initiatives to uplift communities and improve socio-economic conditions.

There needs to be balance between the economic contribution of the industry, the benefits of moderate drinking and the costs of alcohol abuse. For both individuals and society there is an optimal level of consumption. This is a difficult balance and must take into account political, economic and social realities.

Society and the alcohol industry support the principle that government must impose restrictions on harmful use of alcohol as is evidenced by the general understanding of the necessity of not allowing children to buy alcohol, requiring licences to sell alcohol and outlawing drunk driving.

11. The Impact of Alcohol on Health in the Western Cape

Alcohol has a multitude of effects on health and wellness. These effects range from those conditions directly caused by alcohol abuse or misuse, such as foetal alcohol spectrum disorders (FASD) or alcohol dependence, to those chronic or acute conditions which alcohol might be a risk factor for, such as many types of cancers or injuries. Additionally, alcohol has been shown to have particular benefits for health when consumed in moderation. These health factors will be considered in the context of the Western Cape in order to clarify where particular attention is needed by policymakers, stakeholders and health professionals.

Alcohol ranks as the leading risk factor for death and disability in southern sub-Saharan Africa (Lim et al., 2012). The WHO also highlights that South Africa is one of the countries with the highest level of heavy episodic drinking (McLoughlin et al., 2013: 879). Many of the negative effects are caused by harmful or problem drinking. This type of drinking is defined by the WHO as “drinking that causes detrimental health and social consequences for the drinker, the people around the drinker and society at large, as well as the patterns of drinking that are associated with increased risk of adverse health outcomes” (WHO, 2012: 5). More than 200 disease and injury conditions are linked to alcohol (“Global status report”, 2014: xiii). In addition to environmental factors, alcohol-related harm is determined by the volume of alcohol consumed, the pattern of drinking and in some cases the quality of alcohol consumed (4).

Globally, children, adolescents and elderly people are more vulnerable to alcohol-related harm (“Global status report”, 2014: 7). This is linked to their own problem drinking as well as the drinking of parents or other family members who put them in danger of harm.

In South Africa, tangible and intangible costs of the harmful use of alcohol reached nearly R300 billion, between 10 and 12% of the 2009 GDP (Matzopoulos et al., 2014). It is important to note however that these studies remain incomplete and further investigation, especially into the intangible costs, are needed (“Global status report”, 2014: 18)

Alcohol accounts for 7% (3rd highest) of total disability adjusted life years (DALYs) nationally in a comparative risk assessment conducted in 2000. In the Western Cape, alcohol is a major contributor to the burden of disease (Mureithi et al., Feb. 2013: 12).

McLoughlin et al. highlight the fact that many negative consequences of alcohol abuse and harms associated with alcohol in the Western Cape can be linked to the legacy of the "dop" system, where farm workers were part-paid with alcohol. This system relied on cheap, low-quality white wine sold in bulk, and increased the production of this product. This led many in the agricultural and rural communities in the Western Cape to become dependent on alcohol. While the system has been criminalised in 2007, cheap liquor is still freely available in many marginalised communities. The most popular form of packaging for cheap wine, which also facilitated very low pricing, was a 5-liter foil bag known as *papsak*. Often papsak would include a tap which could not be resealed once opened, implying that the wine was meant for immediate consumption once opened (880). This system led to binge drinking and many of the consequences of problem drinking are associated with it. Alcohol abuse in the Western Cape is widespread in poor, rural environments, largely due to this legacy.

McLoughlin et al., in interviews with farm workers in Vredendal and Stellenbosch, found that 76.3% of current drinkers in Vredendal and 27.1% of Stellenbosch current drinkers listed papsak as their drink of choice, showing that the product is still widely consumed and available, especially in rural areas (883). In their study, problem drinking was reported by 56.8% of men and 41.2% of women. If only current drinkers are considered, 73% showed problematic CAGE scores, based on the CAGE questionnaire which assesses the four key-phrases "Cut down", "Annoyed", "Guilty" and "Eye-Opener" using four questions:

1 Have you ever felt you needed to cut down on your drinking?

2 Have people annoyed you by criticising your drinking?

3 Have you felt guilty about drinking?

4 Have you ever felt you needed a drink first thing in the morning (eye opener) to steady your nerves or get rid of a hangover?

The majority of current drinkers with problematic CAGE scores (57%) preferred papsak. The researchers highlight the strong links between poverty, papsak preference and problem drinking

(885). Research also indicates the inverse relationship between price and alcohol-related harms (Chaloupka et al., 2002), showing that cheap wine is a particular problem area.

In a study of papsak consumption for farm workers in the Western Cape, McLoughlin et al. found that papsak drinking was strongly associated with problem drinking, and that there was also a significant association between living near to where papsak is produced and preference for papsak consumption, highlighting the fact that easy access to illegal beverages could lead to higher consumption (2013: 879).

These factors all highlight how the particular conditions in the Western Cape could lead to heightened negative health impacts.

It is important to note that alcohol also has been linked to many health benefits, such as moderate drinking leading to cardiovascular health benefits such as lower risk for ischaemic heart disease and ischaemic stroke ("Global status report", 2014: 12) as well as being beneficial for the risk of diabetes mellitus (12). These benefits should be measured against the health risks of excess drinking highlighted for different categories below.

This section will look at four areas of health impacts, namely chronic conditions, acute conditions, alcohol dependence and FASD, and infectious diseases in order to assess the burden of disease which alcohol has in the Western Cape.

a. Chronic Conditions

Mental health impacts including depression

Alcohol is linked to both mental and physical health problems (Morojele et al., 2012: 196). Poverty increases the probability of substance use. This is due to the fact that those affected by poverty will be more likely to live under chronic stress, which in turn negatively impacts their mental health and social wellbeing, and leads to or exacerbates substance use. The poor and marginalised will usually also lack access to mental health services, social support, education and recreation. Children from these communities are also likely to be less supervised by parents and caregivers, which could lead to adolescent substance use. Conditions of poverty also lead to community violence and unemployment, which are conducive to substance use. These various factors can lead to psychological problems such as anxiety and depression (200), and alcohol abuse can exacerbate

these conditions. In addition, parents who abuse alcohol affect family functioning and the parent-child relationship, which negatively affects child development ("Global status report", 2014: 9).

Depression and anxiety have variously been linked to alcohol use, although the degree of contribution of alcohol to these conditions has not been fully established (10). Alcohol is not proven to have a causal link, although its neuropsychiatric properties might influence these conditions. However, the relationship of alcohol abuse and mental health problems might be indicative of environmental, genetic or personality factors which are important to consider.

Cardiovascular diseases

Despite moderate alcohol consumption being shown to be beneficial for certain cardiovascular diseases, there are considerable risks for this category of disease associated with problem drinking. The cardiovascular benefits of moderate drinking also disappear with heavy drinking ("Global status report", 2014: 12).

Alcohol use negatively affects hypertension, atrial fibrillation and haemorrhagic stroke, regardless of the drinking pattern ("Global status report", 2014: 12).

The risk for hypertension increases for men but has been shown to decrease for women with moderate drinking. Chronic alcohol use, however, increases blood pressure, putting strain on the heart and increasing the risk for cardiovascular diseases ("Global status report", 2014: 12).

Ischaemic heart disease is a major cause of death and disease burden around the world. Heavy drinking has been related to an increase in IHD risk. Chronic heavy drinking has also been linked to dilated cardiomyopathy or cardiac dysrhythmias (Rehm et al., 2010: 829).

It has been shown that a pattern of drinking while eating leads to less harm form chronic diseases including cardiovascular diseases ("Global status report", 2014: 4).

Epilepsy and diabetes

Epilepsy is also impacted by alcohol, the effects of which are visible in addition to withdrawal-induced seizures ("Global status report", 2014: 10). Heavy alcohol consumption may worsen the clinical course of existing epilepsy due to increased clearance of anti-epileptic drugs and poor compliance with treatment regimens (Rehm et al., 2010: 829). These conditions highlight the fact

that alcohol affects judgement which is necessary for the effective management of chronic conditions.

While moderate drinking has been shown to be beneficial for the risk of diabetes mellitus, heavy drinking again removes the health benefits and becomes detrimental instead ("Global status report", 2014: 12).

Gastrointestinal diseases

Gastrointestinal diseases such as liver cirrhosis and acute and chronic pancreatitis are causally linked to alcohol consumption. There is a strong correlation between higher alcohol use and higher risk for these diseases, with exponential increases in the latter even with moderate increases in the former.

Alcohol consumption is linked more strongly to liver cirrhosis mortality than to morbidity. This is due to the fact that alcohol consumption has been shown to worsen existing liver disease and to lower the immune system. This affects the course of existing liver disease and increases the chance of death (Rehm et al., 2010: 831).

Heavy alcohol consumption is also strongly related to the risk for pancreatitis. Metabolites of alcohol, such as acetaldehyde and fatty acid ethyl esters, could lead to the initiation or enhancement of pancreatic injury. The link could also be due to inflammatory cell activation, which could lead to fibrosis in the pancreas. No risk was found with light or moderate drinking, yet it increased with the amount of consumption (832).

Cancer

In February 2007, the Monograph Working Group of the International Agency for Research on Cancer (IARC) concluded that there was 'sufficient evidence' for the carcinogenicity of ethanol in animals. They thus classified alcoholic beverages as carcinogenic to humans for many types of cancer. However, it was confirmed that alcohol was not carcinogenic for renal-cell cancer and non-Hodgkin's lymphoma. Inconclusive results were also found for stomach and lung cancer. (Rehm et al., 2010: 827)

Alcohol use has been shown to be a risk factor for female breast cancer ("Global status report", 2014: 9). Alcohol consumption is additionally carcinogenic for the following categories:

- Cancer of the mouth
- Nasopharynx
- Other pharynx and oropharynx
- Laryngeal cancer
- Oesophageal cancer
- Colon and rectum cancer
- Liver cancer (12)

From 4% to 25% of the disease burden due to specific cancers can be attributable to alcohol worldwide ("Global status report", 2014: 47).

There is little understanding of how alcohol consumption leads to the development of cancers, but current theories hold that the mechanisms for cancer development differ by the target organ and include polymorphisms in genes that encode enzymes responsible for ethanol metabolism, such as alcohol dehydrogenase, aldehyde dehydrogenase and cytochrome P450 2E1. It could also include increased oestrogen concentration and changes in folate metabolism and in DNA repair. Acetaldehyde, produced from alcohol metabolism and ingested as a component of alcoholic beverages, has also been highlighted as a likely causal pathway. (Rehm et al., 2010: 827).

The National Institute for Occupational Health, in its most recent report on cancer statistics in South Africa released in 2009, reports the following cancers being the top ten most common in South Africa for men and women:

Table 29: Top Ten Most Common Cancers of Men

The following cancers represent the top ten most common cancers of men according to the National Cancer Registry (2009):

Type of Cancer for All Men	No of Cases 2009	Lifetime Risk 2009
Prostate Cancer	4 601	1:26
Cancer of Unknown Primary (CUP)*	1 562	1:89
Kaposi Sarcoma	1 468	1:185
Lung Cancer	1 440	1:91
Colorectal Cancer	1 265	1:111
Cancer of the Oesophagus	1 017	1:133
Non-Hodgkin's Lymphoma	793	1:255
Bladder Cancer	762	1:179
Stomach Cancer	731	1:185
Malignant Melanoma	501	1:314
All Cancers	27 154	1:8

Table 30: Top Ten Most Common Cancers of Women

The following cancers represent the top ten most common cancers of women according to the National Cancer Registry (2009):

Type of Cancer for All Women	No of Cases 2009	Lifetime Risk 2009
Breast Cancer	6 224	1:33
Cervical Cancer	5 270	1:42
Cancer of Unknown Primary (CUP)*	1 536	1:125
Kaposi Sarcoma	1 136	1:304
Colorectal Cancer	1 075	1:182
Cancer of the Uterus	1 073	1:160
Non-Hodgkin's Lymphoma	799	1:314
Cancer of the Oesophagus	764	1:239
Cancer of the Lung	685	1:254
Malignant Melanoma	635	1:391
All Cancers	29 891	1:9

From the data above, it is observed that two of the top ten cancers for men have been linked to alcohol use, and three of the top ten cancers for women. The specific impact of alcohol on these cancer statistics has not been confirmed.

Research on these various chronic conditions highlights that heavy alcohol use is strongly linked to increased risks. While few chronic conditions are causally linked to alcohol consumption, other than gastrointestinal diseases, there are many increased risk factors which should be considered. In addition, light to moderate drinking is shown to be particularly beneficial for the prevention of particular chronic conditions such as cardiovascular disease and diabetes mellitus.

b. Acute Conditions

Acute conditions include those injuries which are caused by intentional harm to another person or to oneself, or unintentional injuries caused by such factors as falling, drowning, or road accidents. Both of these types of acute conditions have been shown to be affected by alcohol abuse. Alcohol affects motor skills and judgement, leading to increased risks for poor decision making and heightening the chances for accidents. This is particularly the case with heavy drinking.

Globally, 2004 figures suggest that an estimated 3.8% of all deaths were attributable to alcohol. The rates differed for men and women, with 6.3% of deaths for men and 1.1% for women attributable to alcohol. For alcohol-related deaths for men, 27.3% were linked to unintentional injuries and 11.4% to intentional injuries. For women, these figures were 24.8% and 9.0% respectively (Morojele et al., 2012: 195).

The 2012 updated statistics show a shift in these numbers where the alcohol-related deaths have moved towards chronic conditions globally, with statistics especially for women dropping dramatically for acute conditions and rising for cardiovascular diseases and diabetes. The statistics are shown in the table below:

Table 31: Global alcohol-attributable deaths, distribution of deaths and alcohol-attributable fractions by sex and broad disease category, 2012 (Source: "Global status report", 2014)

	Alcohol-attributable deaths (AAFs; % of all global deaths)			Distribution of all alcohol-attributable deaths across disease categories (%)		
Disease category	**Both sexes[a]**	**Males**	**Females**	**Both sexes[a]**	**Males**	**Females**
Cancers	410 000 (5.0)	306 000 (6.6)	103 000 (2.9)	12.5	13.6	10.0
Cardiovascular diseases and diabetes	1 098 000 (5.8)	497 000 (5.3)	600 000 (6.2)	33.4	22.1	58.2
Neuropsychiatric disorders	131 000 (7.8)	104 000 (13.4)	26 000 (2.9)	4.0	4.6	2.6
Gastrointestinal diseases	533 000 (23.6)	375 000 (28.1)	158 000 (17.2)	16.2	16.6	15.3
Infectious diseases	262 000 (2.8)	191 000 (3.8)	71 000 (1.6)	8.0	8.5	6.9
Unintentional injuries	563 000 (15.2)	514 000 (21.5)	49 000 (3.7)	17.1	22.8	4.8
Intentional injuries	285 000 (20.0)	265 000 (25.8)	21 000 (5.2)	8.7	11.7	2.0
Neonatal conditions	3 500 (0.1)	1 900 (0.1)	1 500 (0.1)	0.1	0.1	0.1
Net alcohol-attributable deaths[a]	3 285 000 (5.9)	2 255 000 (7.6)	1 031 000 (4.0)	100	100	100

[a] May not be an exact sum of all the relevant deaths included in the table due to rounding.

The global burden of disease, measured by disability-adjusted life-years lost from death and disability, is estimated as 4.6% (Rehm et al. 2009). The updated figures from 2012 show that 3.3 million deaths, or 5.9% of all global deaths were attributable to alcohol consumption, and about 139 million DALYs were lost to alcohol ("Global status report", 2014: xiv).

Table 32: Global alcohol-attributable burden of disease (in thousands of DALYs) by sex and broad disease category, 2012 (Source: "Global status report", 2014)

	Alcohol-attributable DALYs (thousands) (AAFs; % of all global DALYs)[a]			Distribution of all alcohol-attributable DALYs across disease categories (%)		
Disease category	**Both sexes[a]**	**Males**	**Females**	**Both sexes[a]**	**Males**	**Females**
Cancers	12 000 (5.4)	9 000 (7.2)	3 000 (3.0)	8.6	8.2	10.2
Cardiovascular diseases and diabetes	22 000 (5.0)	12 000 (4.8)	10 000 (5.3)	15.5	10.6	33.6
Neuropsychiatric disorders	34 000 (12.2)	29 000(20.6)	6 000 (3.9)	24.6	26.1	18.8
Gastrointestinal diseases	19 000 (24.2)	14 000 (28.2)	5 000 (17.6)	13.6	12.5	17.6
Infectious diseases	9 000 (1.6)	7 000 (2.4)	2 000 (0.8)	6.8	6.7	7.2
Unintentional injuries	28 000 (12.5)	26 000 (17.2)	3 000 (3.4)	20.4	23.5	8.8
Intentional injuries	14 000 (18.3)	13 000 (23.6)	1000 (4.3)	10.3	12.2	3.2
Neonatal conditions	330 (0.1)	180 (0.1)	150 (0.1)	0.2	0.2	0.5
Net alcohol-attributable DALYs[a]	139 000 (5.1)	110 000 (7.4)	29 230 (2.3)	100	100	100

[a] May not be an exact sum of all the relevant DALYs included in the table due to rounding.

Intentional Injuries – South Africa

In South Africa, a study of patients in trauma units conducted between 1999 and 2001 found that over half of all the patients experienced violent injuries. Nationally, between 35.8% and 78.9% of patients tested positive for blood alcohol. In Cape Town the figures were between 44.6% and 54.9%. The highest figures were recorded in 2001, demonstrating an upward trend in the research period since 1999. Patients with injuries associated with violence were more likely to test positive for alcohol.

Alcohol-related domestic violence has been highlighted as a serious problem in the Western Cape (McLoughlin et al., 2013: 879). There is evidence that women may be more vulnerable to alcohol-related harm. Women are affected by interpersonal violence and risky sexual behaviour due to their own drinking problems as well as the drinking problems of their male partners ("Global status report, 2012: 9).

Young people who are involved in criminal activities also seem to be disproportionately involved in substance use, and research shows that both the perpetration and experience of violence are associated with alcohol and other drug use among children and adolescents (Morojele et al., 2012:

197). Substance use is linked to school violence, sexual assault and sexual abuse. It also greatly increases the risk for injury or fatality (198).

Domestic violence and violence against children are of particular concern. Studies show that in 2008 half of non-natural deaths of those aged 0-19 years were due to violence. 43% of the 15 – 19-year-olds who were tested had positive blood alcohol concentrations. Positive BAC tests were highest for those who died from violence (54.2%) and transport-related deaths (40%). Informal settlements were most likely to be associated with these injuries (61.2%). Alcohol-related deaths were most common in the night or early morning hours, between 20h00 and 03h00, and were also prevalent on weekends. Those who died from stabbings or sharp object wounds were most likely to have positive BACs, with a prevalence of 65.3%, followed by blunt force deaths at 54.5%.

Overall, those young people who died of non-natural causes and who tested positive for alcohol consumption were more likely to have moderate to high levels of alcohol in BAC tests. This suggests heavy drinking and/ or intoxication preceding death (198).

The research suggests that for many young people from lower socioeconomic environments, alcohol played an important role in violence, injury and death. Higher alcohol consumption, especially for vulnerable and marginalised groups, exacerbates existing social problems and threatens the health and safety of young people.

Alcohol consumption, especially heavy drinking, has also been causally linked to suicide (“Global status report”, 2014: 12). Deaths by suicide in one study were shown to have positive blood alcohol in 35% of cases, with a mean BAC of 0.15g/100ml, indicating heavy drinking (Parry & Dewing, 2006: 44).

Unintentional Injuries

Unintentional injuries are strongly linked to higher BACs. One of these categories is drinking and driving. Drink-driving is a major risk factor for injury and death in South Africa. The WHO stresses that alcohol-impaired driving affects judgment, coordination and other motor functions. Intoxicated pedestrians are also a risk factor (2010: 13).

Illicit alcohol also has serious health concerns and could lead to health impacts like poisoning and alcohol-related blindness. The WHO stresses that illicit alcohol often has higher ethanol content and

is potentially contaminated with toxic substances such as methanol (2010: 17) or even disinfectants ("Global status report", 2014: 5). Rehm et al. point out reports of methanol poisoning outbreaks, as well as harmful levels of ingredients such as acetaldehyde, ethyl carbamate and coumarin (2010: 834). However, they stress that not enough research has been conducted to establish the impacts of unregulated alcohol.

The global figures of 20.4% of DALYs attributable to alcohol show that it has a serious impact on accidents such as falls, burns and drowning. These figures are discussed in more detail in the Crime section of this research report.

c. Alcohol Dependence and FASD

Alcohol dependence and FASD are both directly caused by alcohol abuse or misuse in conjunction with environmental, genetic and personality factors which exacerbate the risk factors for these conditions. Due to these conditions gaining their definition due to the association with alcohol, policies and health interventions for these conditions need to specifically target altering alcohol risk factors and drinking behaviour in order to decrease the prevalence of dependence and FASD.

Alcohol dependence

The WHO highlights that harmful drinking is a risk factor for neuropsychiatric disorders (2010: 5). Of these neuropsychiatric disorders, alcohol use disorder is the most important and most directly linked to alcohol abuse.

Alcohol is a psychoactive substance with dependence-producing properties ("Global status report", 2014: xiii). Parents with alcohol dependence might increase the likelihood that their children will develop drinking problems when they are introduced to alcohol (9). This could be due to creating a climate conducive to heavy drinking or due to increased exposure to alcohol.

Alcoholism or alcohol dependence is a chronic disease which is characterised by physical and psychological dependence on alcohol. It might result from a genetic predisposition, mental illness, sustained heavy and abusive drinking or a combination of these factors.

It is relatively easy for young people to access alcohol, directly or indirectly, in South Africa due to poor and inconsistent enforcement of laws (Morojele et al., 2012: 200), leading to underage

drinking. Underage drinking might increase the likelihood of dependence due to increased duration of drinking and longer associations of alcohol with socialising.

The 2014 report by the WHO shows that the prevalence of alcohol use disorders for men is 10% of the total population, and alcohol dependence affects 4.2% of men above the age of 15. For females, these figures are 1.5 and 0.7%. These figures highlight the importance of targeted interventions especially for men who are at risk of alcohol use disorders or dependence.

Foetal Alcohol Spectrum Disorders

Foetal alcohol syndrome (FAS) was only formally diagnosed in 1973. The syndrome and related conditions are caused by drinking by women during pregnancy.

FAS is characterised by

- Minor facial anomalies
- Evidence of prenatal and/ or postnatal growth retardation
- Evidence of deficient brain growth
- If possible, confirmation of maternal alcohol consumption from the mother or a knowledgeable collateral source

Other related conditions include Partial Foetal Alcohol Syndrome (PFAS), Alcohol-Related Neurodevelopmental Disorders (ARND) and Alcohol-Related Birth Defects (ARBD). Collectively, these are referred to as Foetal Alcohol Spectrum Disorders (FASD).

For a diagnosis of PFAS, the following must be evident in the child

- Facial anomalies
- One or more other characteristics such as prenatal or postnatal growth retardation
- Small OFC and/or evidence of characteristic behavioural or cognitive abnormalities not explained by other factors
- If possible, confirmation of maternal alcohol consumption

ARND requires evidence of significant prenatal alcohol exposure, and the child displays neurological or structural brain abnormalities or characteristic behavioural and cognitive abnormalities inconsistent with other factors.

ARBD is diagnosed based on prenatal alcohol exposure, two or more characteristic facial anomalies, congenital structural defects, but generally normal behavioural performance. (May et al., 2012: 3)

South Africa, and the Western Cape in particular, has among the highest rates of foetal alcohol spectrum disorders in the world. In surveyed groups in South Africa, 34 – 51% of women reported prenatal drinking (May et al., 2013b: 503).

In one study, a group of first-grade children in a Western Cape community were examined. The prevalence of FASD per 1,000 individuals in this study ranged from:

- Foetal alcohol syndrome (FAS): 59.3 to 91.0
- Partial foetal alcohol syndrome (PFAS): 45.3 to 69.9
- Alcohol-related neurodevelopmental disorder (ARND): 30.5 to 46.8

The overall rate of FASD in this population is thus 135.1 to 207.5 per 1,000, or between 13.6 to 20.9% (May et al., 2012: 1). The vast majority of the mothers of these children reported drinking during pregnancy (between 89.1 and 96.8% depending on the condition diagnosed). These women reported drinking an average of 13 drinks per week, with evidence that many of the mothers drank well above this average. Mothers also reported drinking throughout all trimesters, with less than half quitting during the second or third trimesters. Fathers were also reported to have drinking problems. 61.9% of FAS case fathers were reported to have had drinking problems; however, 38.7% of unexposed control fathers (no diagnosis of FAS) also had drinking problems.

Behavioural problems, lower verbal ability, lower IQ scores and dysmorphology were strongly correlated with the number of drinks which the mother consumed on average. The more the mother drank during pregnancy, the more significant these problems became (May et al., 2012: 8). First trimester drinking, when compared to no drinking, raises the FASD likelihood 12 times; first and second trimester drinking raises FASD outcomes 61 times, and drinking in all three trimesters raises the likelihood of an FASD diagnosis by 65 times (May et al., 2013b: 502).

Mothers of FASD children were more likely to live in rural areas while pregnant. Only 28% of all mothers of the students in the study group came from rural areas; however, mothers whose children were diagnosed with FASD came from rural areas in 46 to 49% of cases (2013a: 9).

The study shows that the rates of FAS and PFAS combined in this community have remained stable over the years, despite changing legislation and regulations on the liquor industry. This indicates that this problem is largely found in the unregulated rural market. The unique community demonstrates worrying trends for similar low-socioeconomic groups nationally, and environmental factors are important to consider in remedying this problem. There are indications that poor nutrition in this population plays a role in exacerbating the problem of FASD (11). Studies indicate that there is a strong need to explore and address the drinking behaviour of mothers in these at-risk communities. May et al. indicate that socioeconomic development and addressing the drinking subculture patterns in the community, as well as implementing a comprehensive prevention program, would be methods to address this problem (11). The fact that this study was undertaken in a wine-growing region in the Western Cape among a lower socioeconomic status community indicates that cheap and illicit wine might still be readily available to these populations.

A study by Williams et al. looked at 5231 pregnant women who visited 11 Midwife Obstetric Units in the Cape Metropole. Urinalyses in a subsampled group of those studied showed a prevalence of 8.8% for at least one illicit drug, and 19.6% tested positive for alcohol. This differed from the self-reported prevalence of 3.6% for illicit drugs and a higher self-reported 36.9% for alcohol (2014: 1). The researchers note that the lower detection for alcohol in the urinalysis compared to self-reported alcohol use could be accounted for by the fact that alcohol use is not viewed as negatively as drug use, and that participants might have been more willing to report alcohol use even when it had already dissipated from their bodies (8). They also note that urine samples were not collected over weekends when more drinking might have taken place, and thus their findings might be underrepresenting the actual prevalence of alcohol use during pregnancy for this group (8).

A 2007 study of two areas in the Cape Metropole indicates that between 49 and 55% of pregnant mothers drank alcohol while pregnant; however, these studies were very small in scale (2).

The researchers point out that despite the higher prevalence of alcohol and other drug (AOD) use in the Western Cape among previously disadvantaged communities, there exists very limited access to

treatment in Cape Town (1). The highest risk factors identified were for demographic factors like being coloured, single and unemployed, which collectively were high risk factors for drug use, and being coloured and singe were risk factors for alcohol use (9).

May et al. found that an effective way of mitigating some of these risks and reducing harm to foetuses was through case management (CM) interventions. CM was found to be effective in reducing total drinks consumed on weekends after six months, peak blood alcohol concentration at six and 18 months, and overall problematic drinking when compared to baseline. Case managers were able to reduce maternal drinking at critical times, and lower alcohol exposure levels to the foetus (2013a: 61). They emphasise that case management can provide education, coaching and support in order to encourage a healthy pregnancy free from drinking (62).

Case management involved Motivational Interviewing (MI), which focused on expressing empathy through reflective listening, developing discrepancy in clients by highlighting negative impacts of clients' behaviour on their goals and values, managing client resistance and avoiding arguments, and supporting self-efficacy through optimism and emphasising the client's responsibility to choose changes and carry them out (62).

A second strategy for effective case management is known as the Community Reinforcement Approach (CRA). In this strategy, the goal is to make a sober lifestyle more rewarding than the use of substances. Family members and friends are involved in helping clients to respond effectively to high-risk behaviour and to support and reinforce healthy choices (62).

While the intervention was affective for the majority of clients, it must be noted that many clients were already concerned about their drinking and had tried to reduce their drinking prior to the first CM visit (64). This might not be the case for all mothers who consume alcohol, and these interventions might only be effective for those who fit a specific profile.

Their study also noted that significant risk factors were stress levels, with half of respondents noting that they experienced their lives as very or extremely stressful, as well as the fact that many of the current friends of respondents drank alcohol, with 67.5% reporting that half, most or all of their current friends drank alcohol (64).

The mean age of first drinking was 16.1 years, ranging from 10 years to 22 years of age. Respondents indicated that they consumed a mean of 5.4 drinks per weekend, with a range of 0 drinks to 40.7 drinks. Additionally, those respondents who are employed consumed more standard drinks per occasion than those who are unemployed, indicating that those with money could afford to buy more alcohol (65).

CM was found to reduce risk to the foetus by reducing exposure to alcohol in pregnant women. The process increased levels of happiness in participants, which correlates with reduced drinking. The process was not effective in women who were not pregnant. However, for pregnant women this intervention did not often have long-term effects on their drinking behaviour, as once they completed their pregnancies, they often returned to the drinking patterns before beginning CM, albeit at slightly reduced levels (69).

One of the greatest risk factors for FAS diagnosis was binge drinking (May et al., 2013b: 507). In May et al.'s findings, average drinking for mothers of FASD children was shown to form a spectrum; the heaviest sustained binging was practised by mothers of FAS children, and the least drinking and fewest binges was found among mothers of children without FASD (507). The data shows that there is no safe level of alcohol consumption that can be recommended for any woman at any time of pregnancy, even in the first trimester when many women do not know they are pregnant, as drinking exclusively in this time already increases the risk of FAS by 12 times (507-8).

Studies do show that with good postnatal conditions a child with FASD can improve in brain development in areas like verbal acuity and ability to focus attention. Additionally, when a mother ceases drinking after the first trimester it could decrease the odds of FASD by 5 times (510). The high prevalence of FASD in the Western Cape makes it a priority in the field of alcohol-related health impacts.

d. Infectious Diseases

Infectious diseases have been linked to the use of alcohol in various studies. Alcohol abuse not only leads to increased risks for infection but also leads to poorer compliance with medication to manage or treat these diseases.

Alcohol has been linked to sexual risk behaviours and earlier initiation of sex (Morojele et al., 2012: 196), which could be strong risk factors for the contraction of HIV and other STIs. A strong association has been found between alcohol consumption and HIV infection and sexually transmitted infections. Research has not shown this to be a causal relationship, but might be due to a common third cause such as generally risky behaviour ("Global status report", 2014: 13).

UNAIDS reports the following figures for South Africans living with HIV:

Table 33: HIV and AIDS estimates 2013

Number of people living with HIV	6,300,000 [6,000,000 - 6,500,000]
Adults aged 15 to 49 prevalence rate	19.1% [18.1% - 19.9%]
Adults aged 15 and up living with HIV	5,900,000 [5,700,000 - 6,200,000]
Women aged 15 and up living with HIV	3,500,000 [3,300,000 - 3,700,000]
Children aged 0 to 14 living with HIV	360,000 [320,000 - 390,000]
Deaths due to AIDS	200,000 [170,000 - 220,000]
Orphans due to AIDS aged 0 to 17	2,400,000 [810,000 - 2,600,000]

Source: http://www.unaids.org/en/regionscountries/countries/southafrica

It is important to note that there is no causal link between alcohol and these infectious diseases, but it has been shown to increase risk factors due to its psychoactive effects. Particular risks have been identified for adolescents, men who have sex with men, and heavy drinkers (Morojele et al., 2013: 1). No conclusive findings have been made on how much alcohol affects HIV infection or those living with the disease.

However, alcohol is also consistently associated with the prevalence and incidence of HIV. Heavy drinking patterns and/ or AUD are also shown to be causally linked to the worsening of the disease course for HIV/ AIDS. This is due again to the weakening of the immune system. Generalised alcohol use has also been shown to be linked to overall reports of unprotected sex, although evidence on this link is inconclusive. This might indicate that there is not a direct causal link between alcohol and

the risk factors for HIV, but that other factors which are directly linked to HIV risks might be more likely to be present in those with problem drinking. These factors include personality traits such as sexual compulsivity and sensation seeking, or psychiatric conditions such as antisocial personality disorder. It is important to assess the link between alcohol and HIV infection in relation to these factors.

However, there is a strong causal relationship between heavy consumption of alcohol and the course of the disease. Heavy drinking again disrupts HIV treatment, leading to dropouts and treatment failures.

The WHO also finds that problem drinking is linked to increased risks for diseases such as tuberculosis and pneumonia (2010: 5). Heavy drinking weakens the immune system and enables these diseases to spread more easily ("Global status report", 2014: 12).

Research by Rehm et al. shows that there is strong evidence that higher consumption of alcohol leads to increased risk for a variety of diseases, including

- tuberculosis,
- mouth, nasopharynx, other pharynx and oropharynx cancer,
- oesophageal cancer,
- colon and rectum cancer,
- liver cancer,
- female breast cancer,
- diabetes mellitus,
- alcohol use disorders,
- unipolar depressive disorders,
- epilepsy,
- hypertensive heart disease,
- ischaemic heart disease (IHD),
- ischaemic and haemorrhagic stroke,
- conduction disorders and other dysrhythmias,
- lower respiratory infections (pneumonia),
- cirrhosis of the liver,

- preterm birth complications and
- foetal alcohol syndrome (2010: 817)

The inclusion of infectious diseases demonstrates that lowering alcohol consumption can lead to lower risk. Increasing cost is one of the strategies favoured by researchers to lower alcohol consumption. However, it is vital to remember that the health climate in the Western Cape might not be heavily affected by an increase in the cost of alcohol, as illicit alcohol still has a large influence particularly for those form lower socioeconomic backgrounds who are most affected by infectious diseases.

Researchers investigating the impact of alcohol on HIV and TB found that there was sufficient evidence of a causal relationship of alcohol on TB incidence and on worsening the disease (821). In addition, heavy drinking of more than 40g of pure alcohol per day has a strong and consistent risk relationship with TB incidence. The researchers postulate two reasons for this strong relationship. Firstly, heavy drinking affects the immune system, making the body more susceptible to infection as well as already-present infections being converted into active TB. Secondly, heavy alcohol consumption often takes place in social settings which might facilitate the spread of TB infection, such as shebeens.

Heavy alcohol consumption also undermines treatment as it disrupts medication intake regimens and negatively affects the treatment process or help-seeking of affected individuals. Compared to abstinence, heavy alcohol consumption worsens outcomes for sufferers of TB.

These factors indicate that those who are at high risk of contracting infectious diseases, as well as those already infected, should be targeted for risk-reduction in terms of alcohol consumption. In order to mitigate the harms caused by alcohol for these groups, it is necessary to find strategies that promote health and wellness while also reducing risk factors related to gender, age and socioeconomic conditions.

12. The Impact of Alcohol on Overall Crime per Area in the Western Cape

Alcohol has been shown to have an influence on crime in various ways in the South African context. Not only is crime of particular concern in the illicit trade and manufacture of alcohol, certain crimes are also influenced by higher alcohol consumption. While there is no direct causal link between alcohol consumption and any particular crimes, there are strong correlations of certain forms of crime and higher alcohol consumption. It must however be noted that attributing alcohol use to particular crimes is extremely challenging. For deaths by unnatural causes, a law or police docket is opened and fault must be established. Only through studying these judgements can the role of alcohol be assessed more accurately, and other methods of linking alcohol with crime might prove inconclusive.

Graham et al. (1998) show that alcohol might create a pretext for particular categories of crimes such as violent crimes. They explain that this might have five mechanisms:

(i) societal and cultural attitudes, explanations and norms,
(ii) "person factors", for example, personalities predisposed to aggression,
(iii) the pharmacological effects of alcohol itself,
(iv) the effect of specific drinking contexts, and
(v) the interaction of these factors.

The first component refers to the way drinking, drunkenness and the effect of alcohol on behaviour are understood. In particular societies, heavy drinking might be more socially acceptable and even socially sanctioned and favoured. This seems to be the case in some Western Cape communities, especially with the legacy of the *dop* system and the high prevalence of problem and recreational drinking.

The pharmacological effects of alcohol relate to how various neurotransmitters are suppressed. These neurotransmitters would normally limit aggression by causing anxiety and fear.

The drinking context describes the setting in which drinking takes place. Some settings are conducive to heavy or problem drinking, while other might inhibit abuse of alcohol. The drinking context might

also create a barrier or a setting more conducive to exacerbating criminal acts or injuries. (Parry & Dewing, 2006: 43)

However, even when alcohol is a factor in crimes, it is important to note that there are often a multitude of factors linked to the prevalence of particular crimes. Research points out that social, psychological and other processes also need to be taken into account (Pernanen, 1993, p. 897).

Despite the tenuous causal link between alcohol and crime, there is a high correlation of alcohol consumption linked to intentional and unintentional injury. The Non-Natural Mortality Surveillance System (NNMSS) showed that 46% of non-natural deaths in South Africa in 2002 involved persons with blood alcohol concentrations (BACs) greater than or equal to 0.05g/100 ml (Matzopoulos et al., 2003). This indicates that alcohol is an important component which should not be discounted in addressing crime in South Africa.

South Africa has ten times the amount of male homicidal injury when compared to the global average. This form of violence is also the second leading contributor to the burden of disease (BoD) in the Western Cape, and claims approximately 600 lives each month. (Mureithi et al. Feb 2013: 10).

DoH/HST rapid assessments, 2013-2015

The Western Cape Department of Health commissioned Health Systems Trust to embark on a study of select high violence communities. The study involved a series of rapid assessments of health facilities in problem communities in the Western Cape, namely Khayelitsha, Nyanga and, for one assessment, Elsies River. While the study is not comprehensive, it serves to give an indication of injuries in areas with a high risk of violence. This gives a clearer picture of the crime per area in the Western Cape, as well as showing the links between crime and alcohol in vulnerable areas.

The results for the February 2013 report show that a total of 2725 cases were seen at the surveyed health facilities. 1048 (38.4%) of the cases studied were injury cases, 1660 (61.0%) were non-injury cases and 17 (0.6%) could not be classified into either category.

The highest proportion of injuries were reported on Sunday, with 60.8% of cases on this day being injuries. In fact, cases increased towards the end of the week and decreased sharply after Sunday. Males made up 673 of the injury cases, constituting 64.2% of the 1048 injuries. Female injuries numbered 375, or 35.8% of cases seen. A large proportion of the injuries were seen over the

weekend, 18.8% on Saturday and 24.1% on Sunday. Injuries were most common between 7pm and 1am, with this time frame constituting 30.0% of all injuries reported. 31.8% of injuries seen during the rapid assessment were linked to probable alcohol consumption.

Saturday and Sunday had the most injuries linked to violence, with 21.3% and 30.3% respectively. Transport-related injuries primarily took place over the weekend period, Friday to Sunday. These figures all demonstrate that a large amount of injuries take place during leisure time, especially Sunday when most people in the relevant communities do not work. The high proportion of night-time injuries and probable alcohol consumption demonstrate that social occasions and injuries were often linked.

60.4% of all injuries reported were due to violence. Unintentional injuries were responsible for 22.9% of injury cases, and transport-related injuries constituted 11.2% of injury cases. Males were much more likely to be affected by violence, with 65.5% of male injuries attributable to this cause, while injuries in women were attributed to violence in 51.2% of cases. Of all of the violent injuries and transport-related injuries reported, 69.7% and 61.5% occurred in men. Self-harm was equally prevalent in men and women.

In the May 2014 rapid assessment (RA), it was shown that in contrast to previous RAs where blunt force was most common violent injury for females, injury due to sharp objects saw an increase to 40.9% of cases followed by blunt force in the form of push/kick/punch (39.6%) and blunt object (10.1%).

Figures from the first rapid assessment are given below for the prevalence of particular causes of injury within the health facilities in the studied communities.

Table 34: Subclassification of main classified injuries

Subclassification of main types of injuries by gender			
	Male, n (%)	Female, n (%)	Total, n (%)
	n=673	n=375	N=1048
Violence (n=633)			
Firearm	25 (5.7)	1 (0.5)	26 (4.1)
Sharp force	249 (56.5)	40 (20.8)	289 (45.7)
Blunt force	153 (34.7)	143 (74.5)	296 (46.8)
Other	7 (1.6)	4 (2.1)	11 (1.7)
Unknown	7 (1.6)	4 (2.1)	11 (1.7)
Transport (n=117)			
Motor vehicle - pedestrian	22 (30.6)	18 (40.0)	40 (34.2)
- driver	3 (4.2)	2 (4.4)	5 (4.3)
- passenger	5 (6.9)	4 (8.9)	9 (7.7)
- unspecified	32 (44.4)	18 (40.0)	50 (42.7)
Railway passenger	1 (1.4)	0 (0)	1 (0.9)
Bicycle	3 (4.2)	0 (0)	3 (2.6)
Motorcycle	1 (1.4)	0 (0)	1 (0.9)
Unspecified	5 (6.9)	3 (6.7)	8 (6.8)
Self-harm (n=24)			
Poisoning - medication	5 (41.7)	4 (33.3)	9 (37.5)
- other poisonous substance	2 (16.7)	4 (33.3)	6 (25.0)
- unknown substance	3 (25.0)	4 (33.3)	7 (29.2)
Unknown	2 (16.7)	0 (0)	2 (8.3)
Hanging/ firearm	0 (0)	0 (0)	0 (0)
Unintentional (n=240)			
Falls	44 (34.9)	39 (34.2)	83 (34.6)
Accidental burns	14 (11.1)	27 (23.7)	41 (17.1)
Dog bites	17 (13.5)	9 (7.9)	26 (10.8)
Foreign body	4 (3.2)	3 (2.6)	7 (2.9)
Laceration	12 (9.5)	9 (7.9)	21 (8.8)
Unintentional ingestion	5 (4.0)	5 (4.4)	10 (4.2)
Unknown	26 (20.6)	21 (18.4)	47 (19.6)
Crush injury	3 (2.4)	0 (0)	3 (1.3)
Bite other	1 (0.8)	0 (0)	1 (0.4)
Near drowning	0 (0)	1 (0.9)	1 (0.4)

While 31.8% of all injuries were linked to alcohol consumption, these numbers varied greatly depending on the type of injury. Violent injuries had the highest proportion of cases with probable alcohol consumption, with 45.5% of cases and a further 6% of cases being classified as “unknown”. Transport related injuries showed probable alcohol consumption in 23.1% of cases, and unintentional injuries showed 6.3% consumption. More males had probable alcohol consumption than females, with 38.0% and 20.5% respectively.

Table 35: Alcohol Consumption by Injury Type

Alcohol consumption by injury type				
Classification	Yes	No	Unknown	Total
Violence	288 (45.5%)	307 (48.5%)	38 (6%)	633 (100%)
Transport	27 (23.1%)	78 (66.7%)	12 (10.3%)	117 (100%)
Unintentional	15 (6.3%)	183 (76.3%)	42 (17.5%)	240 (100%)
Self-harm	3 (12.5%)	11 (45.8%)	10 (41.7%)	24 (100%)
Unknown	0 (0%)	6 (17.7%)	28 (82.4%)	34 (100%)
Total	333 (31.8%)	585 (55.8%)	130 (12.4%)	1,048 (100%)

Men showed more violent injuries associated with alcohol use than women, with 51.0% and 43.8% respectively. A quarter of transport-related injuries were linked with probable alcohol use in men, compared to a fifth of transport-related injuries in women. Women showed probable alcohol use in 32.8% of violent injuries.

Overall, more than half of injuries in men and almost a third of those for women were linked with probable alcohol use. While this is only a single study, it offers important insight into how crime and alcohol interact in lower socioeconomic environments. Subsequent rapid assessments showed deviations in these figures, indicating that large-scale studies would be beneficial to assess the full impact of alcohol on particular population groups. However, studies consistently show high correlations of probable alcohol use and violence, particularly perpetrated by and suffered by men (Mureithi et al., Feb 2013, November 2013, May 2014).

Demographics of drinkers and harmful drinking

The SADHS classifies drinking according to gender. For men, responsible drinking is less than four drinks on one occasion, hazardous drinking is 4-6 drinks and harmful drinking is more than 6 drinks. For women, these numbers are 2 drinks, 2-4 drinks and more than 4 drinks respectively (Herrick, 2013: 1050).

Data shows that whites in South Africa are most likely to have had a drink in the past year, with 70% of white men and 51% of white women reporting this. This racial group was also most likely to have had a drink in the past week (53% of men and 31% of women). Coloured and Indian respondents are the next most likely to drink. The highest rates of hazardous drinking, at 31.4%, can be found in men aged 35 – 44 years and women over age 65, with 42.3%. Irresponsible drinking is most likely among urban black and coloured men, with 28.6% and 28.4% respectively, and for women irresponsible drinking is most likely for the coloured racial grouping at 38.7%. (Herrick, 2013: 1050).

Harmful drinking by area

An HSRC household survey concluded that there were higher levels of hazardous and harmful alcohol use in rural areas of the province, at 21%, than there were in urban informal areas (17%) or in urban formal areas (12%). For binge drinking, defined in their study as five or more drinks on one occasion, rural formal areas showed 20% of the population partook in binge drinking, whereas 16% of those in urban informal areas and 15% of those in urban formal areas did similarly. Studies have also focused on risky drinking in particular districts of the Western Cape, finding that the West Coast district had an 8% prevalence of risky drinking, the Eden district showed 6% and the Boland district showed 5% prevalence. The West Coast also showed the highest prevalence of binge-drinking, at 19%. These findings can be indicative of where the most risky alcohol use takes place (Harker et al.).

Meta-analysis of the various crimes indicate that alcohol use does not seem to be the major determining factor for the majority of crimes besides disorderly and offensive behaviour. Most violent crimes and robberies seem to be influenced by the socioeconomic climate of a particular area, with poor, urban areas showing the highest incidence of crimes, even when these crimes are not statistically linked to alcohol use. Alcohol can thus be seen as playing an ancillary role in exacerbating already-existing social and economic problems which create the climate for these crimes to be prevalent. Solely reducing alcohol consumption thus might not be an effective strategy to combat crime in already crime-riddled areas like Mitchell's Plain, Khayelitsha and other poor, urban communities, since the correlation of crime and alcohol is not always apparent. It might, however, be effective in reducing the incidence of crimes or injuries which show a strong correlation with alcohol consumption, namely road accidents, unintentional injuries such as falls and drowning, assaults, suicide and domestic violence. It must be stressed that it is vital to attack the root causes of these crimes in addition to any alcohol policies set in place.

a. road accidents and deaths

Road accidents and deaths are often linked to driving under the influence of alcohol. Drink-driving is a major risk factor for injury and death in South Africa. The WHO stresses that alcohol-impaired driving affects judgment, coordination and other motor functions. Intoxicated pedestrians are also a risk factor (2010: 13). Research published in 2004 indicates that for those injured in transport-related incidents, pedestrians were most likely to test positive for alcohol (Plüddemann: 267). Drunk driving is particularly a problem during the festive season from December to January. 2015 statistics

show that only in the period from 1 December 2014 to 5 January 2015, there were 1118 fatal crashes with 1368 fatalities on South African roads. These numbers show a reduction of 2.5% since the previous year. Studies show that almost half of drivers killed in road accidents were above the legal BAC limit, at 46.5% (Sukhai et al., 2002). However, it is difficult to assess the yearly incidence of drunk driving over the festive season due to the fact that blood tests might be delayed for several months in South Africa.

Alcohol has a direct role in the commission of drinking and driving (Parry & Dewing, 2006: 44), and it can thus be considered an alcohol-related offence.

It is estimated that road accidents in South Africa cost the South African government R9 billion annually ("Impact Assessment", 2013: 45). The figures from the 2011 Road Traffic Report, commissioned by the Department of Transport, found that road fatalities reached 31.9 people per 100 000 inhabitants, the 7th highest rate in the world for those countries surveyed. Additionally, 25% of the non-natural deaths of those aged 0-19 years nationally were due to transport-related injuries. 40% of those tested in these cases had positive BACs. (Morojele et al., 2012: 198).

In the Western Cape, there are encouraging signs for road safety. Safely Home, an initiative of the Western Cape government, shows that road crash fatalities continue to decrease year to year. In 2013, the total fatalities were 599, down from 611 for the previous year. However, this represented only a drop of 1%, whereas previous years saw much higher drops. The Western Cape also shows lower rates of road crash fatalities per 100,000 people in the population, with 23.80 deaths, a reduction of nearly 10% from the 2008 figures of 33.05. In the province, the largest percentage of deaths are also reported over weekends, with officials again linking these deaths to drink-driving ("Road Deaths in the Western Cape" [online]").

In the findings from the rapid assessments from health facilities in three communities in the Western Cape, transport-related injuries accounted for 11.2% of all injuries. Unspecified motor vehicle accidents (MVAs) made up the most transport-related injuries at 42.7%, followed by MVAs involving pedestrians at 34.2%. The November 2013 report expanded on these findings by looking at transport related injuries by gender. In this report, 63.1% of injuries involved pedestrians. The most common vehicles involved in these injuries were found to be cars or bakkies, with 50.8% of reported cases, and minibus taxis at 30.8%. The two age groups most affected by transport injuries were those aged

25 to 34 years and 5 to 9 years. 23.1% of injuries showed probable alcohol consumption (Mureithi et al. Feb 2013, Nov 2013). The 2008 NIMSS reports that 29.4% of non-natural deaths for 2008 were due to transport injuries, amounting to 9153 people ("A Profile of Fatal Injuries": 5). Of these cases, blood alcohol was tested in 3062, and positive BAC was found in 55.72% of those tested (1706 people). The mean BAC was 0.18. The figures indicate that alcohol potentially plays a role in the majority of road accident and transport-related deaths.

Pedestrian deaths numbered at 3044 or 33.3% of all transport-related deaths. Passengers accounted for 23.1% and drivers 18.2% of deaths. Motor cyclists or other cyclists accounted for 3.7% and railway-related deaths made up 3.3% of this category. Men were four times as likely to die from transport-related deaths as females.

b. falls and drowning

The latest report for the National Injury Mortality Surveillance System, for the period of 1 January to 31 December 2008, showed that 36795 cases of non-natural deaths were reported ("A Profile of Fatal Injuries": 5). 611 of these occurred in areas defined as "sea/lake/dam", and the total number of drownings were 784, or 14.4% of non-transport injury deaths. Drownings were much more likely for the age group of 1-4 years old, accounting for 115 of the cases where age was known, or 16.6%.

Males were twice as likely to die from non-transport unintentional injuries as were females. The average age of victims whose ages were known was 30.

Figures for falls were only reported in the 2007 report, amounting to 10% of unintentional injuries not related to transport. Most of the deaths due to falls occurred in private homes.

For unintentional injuries, positivity for blood alcohol was reported in 44.2% of cases of which tests were completed, a total of 537 cases out of 1215. The mean BAC was the highest for all types of injuries at 0.19.

The rapid assessments in Khayelitsha, Nyanga and Elsies River show that unintentional injuries were the second-leading type of injury, making up 22.9% of all injuries. In these areas, falls were much more prominent than the national average, making up 34.6% of cases of unintentional injury. Other unintentional injuries reported were of unknown sub classification (19.6%), accidental burns (17.1%)

and dog bites (10.8%). The November 2013 report indicated that falls had become even more prominent, making up 46.6% of cases of unintentional injuries (Mureithi et al., Feb 2013, Nov 2013)

In 2007, Cape Town had 77 deaths by drowning, or about 2.4 deaths per 100,000 people. The link with alcohol is unclear.

c. assaults and other contact crime

Various researchers have found links between alcohol and violence. Parr highlights that studies by English et al. (1995) concluded that 47% of homicide or purposeful injury could be attributed directly to alcohol use. Research by Schultz & Rice (1991) who found that 46% of homicide or purposeful injury could be attributed to alcohol use, mirrors these findings. Single et al. (1998) find lower attribution at 27%. (Parry & Dewing, 2006: 43). These findings indicate that alcohol is often a factor in the prevalence of violent crimes.

Parry & Dewing further highlight findings by the SAPS for murder cases, noting in 1997 that in 64% of cases in which the motive was known and 24% of cases in which the circumstances surrounding the murder were known, the crime can be linked to alcohol use. Furthermore, in 2001 39% of trauma patients in Cape Town, Durban and Port Elizabeth had breath alcohol concentrations (BrACs) which were greater than or equal to 0.05g/100 ml. These levels were found to be particularly high for injuries as a result of violence, with figures 73% for Port Elizabeth, 61% for Cape Town and 43% for Durban (Parry & Dewing, 2006: 44).

In the rapid assessments in Khayelitsha, Nyanga and Elsies Rivier, probable alcohol consumption was found in 31.8% of all injury cases, and 36.3% of cases where the alcohol consumption status was known. This was higher for violent cases; 45.5% of violence cases and 48.4% of cases where alcohol consumption status was known showed probable alcohol consumption. Mirroring most other findings, males had a higher proportion of violent injuries associated with alcohol use, at 51.0%, than did females at 32.8%

For both men and women, most violence occurred amongst those who were 15 to 34 year olds. Women also reported high numbers of violent injuries for the 35-44 year old age group. Most injuries due to violence occurred between 7pm and 1am (36.5%). For these cases of violence, males

were more likely to suffer from sharp force violence at 56.5% of cases. Women reported more blunt force injuries at 74.5%.

Most of the blunt force injuries reported no probable alcohol consumption, with 57.4%. However, most sharp force injuries (54.3%) reported alcohol consumption. (Mureithi, Feb 2013).

Crime Stats SA reports that there were a total of 486,939 reported crimes in the Western Cape in 2014. Of these 2896 were murder, 3326 were attempted murder, 24,718 were assault with the intent to inflict grievous bodily harm, and 36880 were common assault. Nyanga showed the highest number of murders of any precinct, with 304, followed by Harare with 164 and Mitchell's Plain with 158. The precincts with no murder reports in 2014 were generally more affluent, including Stanford, Simon's Town, Rondebosch and Claremont.

Importantly, those precincts which rank highly for contact crimes also often rank highly for the alcohol-related crime of drink-driving, such as Nyanga and Harare ranking within the top 10 of drunk-driving arrests in the Western Cape. This might indicate a correlation of irresponsible drinking and contact crime by precinct ("Provincial Statistics: Western Cape", [online]).

A further study, published in 2004, shows the self-reporting of alcohol use to be high for violent crimes. The study was conducted in Durban, Johannesburg and Cape Town, and those arrested for a crime were asked if they were under the influence of alcohol. For 15% of the alleged crimes, arrestees said that they were under the influence of alcohol at the time the alleged offence took place. Violent crimes showed a higher rate, with 25% of weapons-related offences, 22% of rapes, 17% of murders and 14% of assault cases reporting alcohol use. Many of the arrestees said that they consumed alcohol or drugs in order to give them courage to commit the crimes (Parry & Dewing 2006, 45).

The figures for the top ten precincts with the highest prevalence of murder and common assault, two of the common contact crimes, in the Western Cape are given below:

Table 36: Murder: Worst ten precincts in WC, 2014

Precinct	Province	Num Crimes
Nyanga	Western Cape	305
Harare	Western Cape	164
Mitchells Plain	Western Cape	158
Gugulethu	Western Cape	150
Khayelitsha	Western Cape	146
Delft	Western Cape	144
Mfuleni	Western Cape	118
Kraaifontein	Western Cape	112
Philippi East	Western Cape	73
Bishop Lavis	Western Cape	73
Total		1443

Table 37: Common Assault: Worst ten precincts in WC, 2014

Precinct	Province	Num Crimes
Mitchells Plain	Western Cape	2188
Worcester	Western Cape	1593
Kraaifontein	Western Cape	913
Kleinvlei	Western Cape	868
Harare	Western Cape	805
Khayelitsha	Western Cape	774
Oudtshoorn	Western Cape	704
Mfuleni	Western Cape	672
Beaufort West	Western Cape	644
Cape Town Central	Western Cape	643
Total		9804

d. robberies

In a study of arrestees in three cities in South Africa, 10% of all the robberies that were part of the study involved alcohol. For 22% of cases of housebreaking and 12% of cases involving the theft of a motor vehicle, respondents also indicated alcohol use prior to the offence (Parry & Dewing, 2006: 44-5). These findings seem to indicate that alcohol is not a major component of robberies or theft, and that other factors might be more prominent.

Cape Town Central precinct showed the highest number of common robberies in 2014, with 956 reported offences, followed by Mitchell's Plain with 935 and Parow with 552. Urban formal areas are generally the most affected. Areas with extremely high numbers of cases are usually lower to middle socioeconomic areas. The lowest prevalence was found in small towns and rural areas such as 0 cases reported in Graafwater and Struisbaai.

For robbery with aggravating circumstances, Mitchell's Plain, Khayelitsha and Nyanga are the most heavily burdened precincts, with 1301, 1185 and 983 cases respectively.

Burglary at residential premises was highest in Mitchell's Plain (1421), Kraaifontein (1247) and Table View (1235).

Theft out of a motor vehicle deviated from the common trend, with many more affluent areas being among the most commonly struck by this crime. Cape Town Central (3617 cases) and Stellenbosch (1852) had the highest prevalence, with Sea Point (1099), Table View (975) and Claremont (867) also in the top ten. Theft of motor vehicle or motorcycle were most common in Bellville (560), Parow (440) and Cape Town Central (339).

e. suicide

The NIMSS report of 2008 found that a staggering 10.0% of non-natural deaths were due to suicide, numbering 3125 for that year. In 40.77% of cases (1274), blood alcohol tests were completed, and the number of BAC positive out of those tested was 519, or 40.74%, with a mean BAC of 0.14. This shows a high correlation between drinking and suicide.

Hangings made up 46.2% (n=1444) of the 3125 suicides. Poisonings amounted to 17.0% or 530 cases, and firearms were the third most common cause with 13.5% of cases, or 422 deaths. 69.2% of all

suicide victims were between 15-44 years old. Men were four times as likely to commit suicide as women.

In Cape Town there were 370 suicides in 2007, accounting for 11.5 per 100 000 population. This was 7.8% of the total non-natural deaths in the city, slightly lower than the national average.

f. rape and sexual assault

Reported sexual crimes in the Western Cape in 2014 numbered 8009, continuing the downward trend since 2010. This figure accounted for about 1.6% of the reported crimes in the province. However, it is important to note that sexual crimes are notoriously underreported.

The figures for the ten worst-affected precincts are given below:

Table 38: Total Sexual Crimes: Worst ten precincts in WC, 2014

Precinct	Province	Num Crimes
Nyanga	Western Cape	330
Mitchells Plain	Western Cape	288
Gugulethu	Western Cape	242
Harare	Western Cape	236
Khayelitsha	Western Cape	233
Delft	Western Cape	215
Mfuleni	Western Cape	192
Worcester	Western Cape	176
Kraaifontein	Western Cape	166
Conville	Western Cape	139
Total		2217

Both of the precincts evaluated in the HST rapid assessments, Khayelitsha and Nyanga, are among the top five for sexual assault. Thus, the figures from the study might give a good indication at how communities with high levels of sexual assault can be understood in terms of alcohol abuse. It is important to note that the rapid assessments in the HST study were conducted over the period of

only one week at healthcare facilities, and already 58 cases of sexual assault were reported for only these two communities, demonstrating how few of these cases will go on to be reported to police.

In the communities assessed, sexual assault was the second leading cause of injury in women overall and the leading cause for females between 5 and 19 years of age. Of the 58 sexual assault cases seen during the period assessed in the February 2013 report, the majority, 75.9% were female. Sexual assaults were found to account for 22.9% of violent injuries amongst women.

Children aged 5 to 9 years were most affected by sexual assault, with 29.3% of cases, and those 15 to 19 made up 24.1% of cases. Of the 14 cases of sexual assault in males, the majority, 78.6%, occurred in 5 to 9 year old boys. For females, 31.8% were in the age group 15 to 19.

58.6% of the cases of sexual assault reported knowing who the perpetrator was.

38.2% of these cases said that the perpetrator was a neighbour, and 41.2% said it was another known person including an ex-intimate partner, neighbour, community member and acquaintance.

The effect of alcohol was also apparent. 25.9% of all sexual assault cases were reported to have probable alcohol use during the first rapid assessment (Mureithi, Feb 2013). School studies in South Africa have furthermore indicated that alcohol was associated with being a victim of sexual assault and sexual abuse (Morojele et al., 2012: 198). In the Western Cape, a docket analysis was finalised by the SAPS in 2001, showing that 9.1% of child sexual offence cases reported to police involved an offender under the influence of alcohol, compared to 3.8% nationally (Perry et al. “Creating a sober South Africa”: 70). These figures show that the Western Cape, particularly those communities greatly affected by sexual assault, have alcohol as a common factor in up to a quarter of cases.

g. disorderly and offensive behaviour

Crimes that might be categorised as disorderly and offensive behaviour include arson, malicious injury to property, public violence and crimen injuria, which refers to unlawfully and intentionally impairing the dignity or privacy of another person. In 2014, the rates were 662 for arson, 26,388 for malicious injury to property, 278 for public violence and 8522 for crimen injuria.

Arson was again most common in the high crime areas of Mitchell’s Plain (29 cases), Harare and Nyanga (22 cases each). Malicious injury to property similarly was highest in Mitchell’s Plain (1415

cases), followed by Worcester (854) and Kleinvlei (609). Public violence was reported common in Nyanga (21 cases), Philippi East (21) and Worcester (18). Crimen injuria was most common in Mitchell's Plain (1072), Paarl East (347) and Worcester (296).

In studies in England and Wales, it was found during interviews with 18-24 year old participants in the study that in the 12 months prior to interview 39% of binge drinkers admitted to committing an offence and 60% admitted criminal and/or disorderly behaviour during or after drinking alcohol (Richardson & Budd, 2003:5). In a study of those who were engaged in disorderly conduct in Australia, 85% of offenders had consumed alcohol within 48 hours prior to the time of their offence, and the median number of standard drinks consumed was 15 (Sweeney & Payne, 2011). While no comparable studies are available for South Africa, the international figures show that alcohol is a major factor in cases of disorderly conduct.

h. domestic violence

Perry and Dewing point out that some studies of South African crime find that family violence is linked to alcohol in as many as 49% of cases (2006, 44). This crime again seems to be strongly correlated with alcohol use.

For the HST report on injuries in Khayelitsha and Nyanga, blunt unspecified injuries were found to be the leading mechanism of violent injury amongst women, accounting for 48.4% of cases. These include push, kick, hit and shove. For women who were victims of violence, 64.1% knew who had injured them. 34.2% reported that it was an intimate partner, 20.3% that it was a family member and 19.5% said that it was another known person. This means that at least 54.5% of cases of violence against women could be considered as domestic violence in these high crime communities (Mureithi et al., Feb 2013).

In the November 2013 report, it was found that the most common type of violence was interpersonal (44.4%). For women suffering from violent injuries, 29.1% were assaulted by a spouse or partner. Alcohol use was reported or suspected in over half (53.2%) of all of these violent injuries (Mureithi et al., Nov 2013).

The May 2014 RA highlights that much higher percentages of women and children suffer violent injuries which are non-fatal than reflected in local mortality statistics, where transport-related injuries are the leading cause of fatal injury amongst females (Mureithi et al., May 2014). This highlights that long-term intimate partner violence or child abuse might be a pronounced problem, and that these may elude crime or other official statistics such as mortality rates, amounting to an insidious, underreported crime.

In a study done in the Western Cape, it was found that nearly two-thirds of the women who were tested at their death were severely intoxicated at the time of their murder by their husbands or partners. The murderers were intoxicated at similar rates ("Impact Assessment", 2013: 43). Thus, for fatal domestic violence, alcohol is a major component.

Perry and Dewing also point to research conducted in the early 1990s by the Medical Research Council, studying persons who received services for traumatic injuries at many facilities in the Cape Metropole. Of those studied, 70% of domestic violence cases were deemed to be alcohol related (2006, 44).

Research also shows that men who reported problem drinking were twice as likely to commit violence against their intimate partners in the past ten years (Abrahams et al., 2006) Women in a township outside Cape Town who were sexually abused were also shown to be twice as likely to have consumed alcohol (Kalichman & Simbayi, 2004).

These figures highlight that alcohol use, particularly problem drinking, might be a major factor in the crime of domestic/ intimate partner violence.

i. child abuse and neglect

The Department: Social Development stresses that the emotional, social and financial costs of alcohol abuse affect not only the drinkers themselves but also their families. ("National Drug Master Plan", 37). Families of addicts suffer from financial pressures due to the high costs associated with theft from family members, legal fees for those who commit crimes as well as the high costs of making use of treatment for alcohol and drug addiction (2). While very few cases, relative to other crimes, of child abuse and neglect are reported, these factors highlighted by the DSD show that the problem might be much more widespread than official statistics would show.

Table 39: Neglect and ill-treatment of children: Worst ten precincts in WC, 2014

Precinct	Province	Num Crimes
Elsies River	Western Cape	22
Delft	Western Cape	20
Khayelitsha	Western Cape	17
Paarl East	Western Cape	17
Mfuleni	Western Cape	16
Harare	Western Cape	15
Kraaifontein	Western Cape	15
Bishop Lavis	Western Cape	14
Conville	Western Cape	13
Kleinvlei	Western Cape	12
Total		161

The highest prevalence of child abuse and neglect, discounting sexual offences, can be found in Elsies River, which had 22 reported cases in 2014. This is followed by Delft with 20 cases and Khayelitsha with 17. The trend for those precincts most affected seems to be that they are found in lower income urban areas.

A docket analysis by the South African Police Service in 2001 showed that 9.1% of child sexual offence cases in the Western Cape involved an offender who was under the influence of alcohol. This was dramatically higher than the 3.8% national average (Parry & Dewing, 2006: 44). This does not, however, indicate a strong connection between alcohol and child sexual offences, but does indicate that the problem might be more pronounced in the Western Cape. Most affluent areas did not report any cases of child neglect or abuse in 2014.

13. Demand of Alcohol in the Western Cape and Drinking Patterns

Alcohol Demand and Supply

Introduction:

Alcohol consumption is measured in terms of volume of pure alcohol consumed and also in terms of drinking patterns. Heavy Episodic Drinking (HED) is defined as consumption of 60 or more grams of pure alcohol (more than 6 standard drinks in most countries) on at least one single occasion, at least monthly.

HED is one of the most important indicators for acute consequences of alcohol use, such as injuries.

Differences in the levels of total consumption between regions of the world and between countries are the result of complex interactions between a wide range of factors. These include socio demographic factors, prevalence rates and abstention, level of economic development, culture, and the preferred beverage types.

The volume of alcohol consumption is most commonly measured in terms of Alcohol per capita consumption (APC) either in litres of pure alcohol per year or grams of pure alcohol per person per day. The latter indicator can be converted from the former.

Total per capita (15+ years) consumption is defined as total (recorded plus estimated unrecorded) alcohol per capita (aged 15 years and older) consumption within a calendar year in litres of pure alcohol. In this report total APC in 2010 consists of the sum of average APC (15+) of recorded alcohol in 2008–2010 and an estimate of unrecorded per capita (15+) alcohol consumption (see Box 13) in 2010. Notably, the recorded APC data were adjusted for 29 countries where the number of tourists was at least equal to the number of inhabitants (see Appendix IV for methodology). There are different data sources and approaches for calculating APC and assessing distribution by alcoholic beverage, as discussed in Appendix IV. This report mostly uses official data sources such as tax or sales data, rather than data calculated from surveys, which is often imprecise and underreported. Aggregate data are weighted by population size in each country.

Alcohol per capita consumption (APC)

Alcohol per capita consumption (APC) is defined as the per capita amount of alcohol consumed in litres of pure alcohol in a given population.

Adult per capita consumption (15+ years) usually refers to per capita alcohol consumption in the population of those aged 15 years and older, but in this report the term "adult per capita consumption" is avoided as the population 15–19 years old is presented in this report as population of adolescents, also for consistency with the context of alcohol-related indicators included in the Global monitoring framework for the prevention and control of NCDs (see Box 10 in Chapter 1). In the international context limiting per capita alcohol consumption to the population 15+ years balances the fact that population distributions in developing countries are quite different from those in developed countries (i.e. developing countries have a much larger proportion of children and young people). Using per capita consumption for the whole population would mean that consumption among adults would be underestimated in those countries with many young people.

Grams of pure alcohol per day is another often used measure of alcohol consumption. In particular, this measure is used by a number of countries that have set guidelines for daily limits on alcohol consumption to minimize risks to health. Given the specific weight of alcohol of 0.793 g/cm^3 (at 20 °C), per capita consumption in litres of pure ethanol per year can be converted into grams per day as follows:

$$g/day = APC \times 1000 \times 0.793/365 \text{ days}$$

(Source: WHO, 2014)

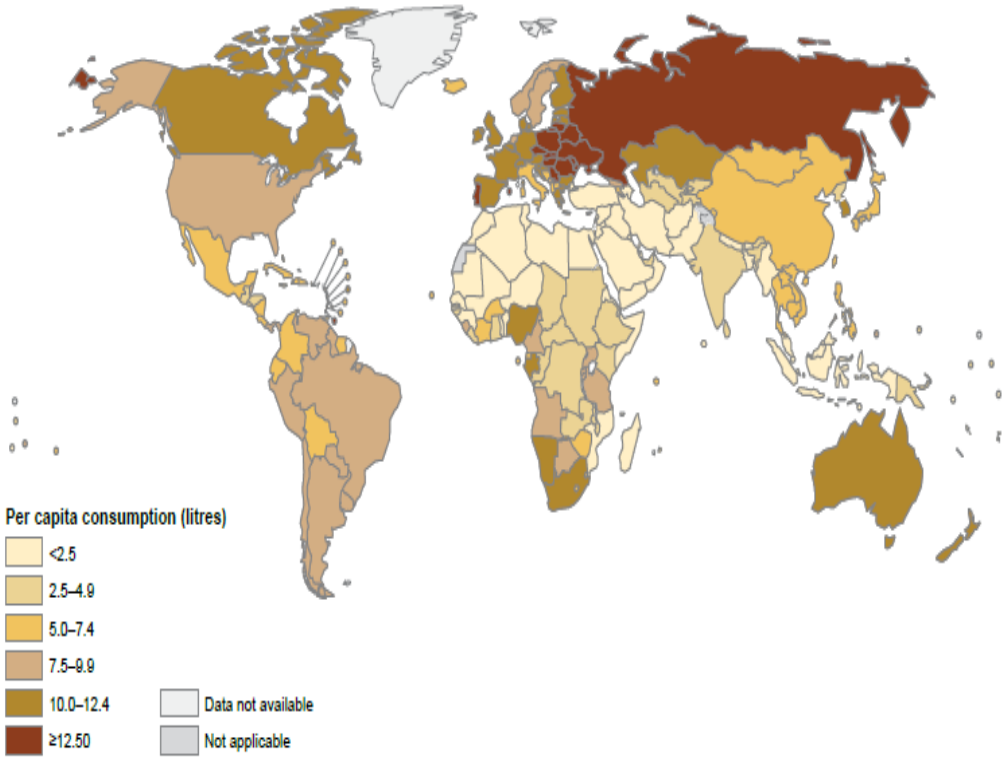
APC is used as measure for alcohol consumption to balance the difference in population distributions in developing countries from developed countries, as they have much larger proportion of children and young people. Using per capita consumption would mean that consumption among adults would be underestimated in those countries with many young people if it were assumed that most young people under 15 years do not consume significant quantities of alcohol (Econometrix, 2013).

South Africa is considered to be a medium consumption country in terms of per capita adult alcohol consumption. However, findings from national surveys show that those who do drink appear to do so at binging levels (BMR report 429, 2011).

Levels of Consumption

The most recent WHO data indicates that globally in 2010 individuals above 15 years of age drink on average 6.2 litres of pure alcohol per year. This translates into 13.5 grams of pure alcohol per day (WHO, 2014).

Map 1: Total alcohol per capita consumption (15+ years; in litres of pure alcohol), 2010



(Source: WHO, 2014)

In South Africa, the APC in litres of pure alcohol was recorded as between 10.0 and 12.4 litres of pure alcohol per year for individuals fifteen years and older in 2010. This is higher than the global average and falls into the second-highest category for APC per litre per year (WHO, 2014).

South African adult per capita alcohol consumption in 2005 equalled 9.5 litres of pure alcohol per year. Therefore, there has been an increase in APC in South Africa from 2005 (9.5) to 2010 (10.0 – 12.4).

Considering the litres of pure alcohol consumed by the adult drinking population, South Africa has the 5th highest consumption ratio in the world. Despite South Africa's high abstention rate, the

amount that drinkers drink is very high. South Africa's situation is typical of countries where per drinker consumption is particularly high, but with a moderate or low APC (BMR report 429, 2011).

Of total recorded alcohol consumed worldwide, 50.1% was consumed in the form of spirits and 24.8% was unrecorded (homemade alcohol, illegally produced or sold outside government controls). In contrast to the rest of the world, the most alcohol in South Africa is consumed in the form of beer. In terms of volume, beer accounted for 77.8% of all liquor sales in South Africa in 2013/2014.

Table 40: Market share of all liquor categories

	Volume%					Value%				
	2006/2007	2010/2011	2011/2012	2012/2013	2013/2014	2006/2007	2010/2011	2011/2012	2012/2013	2013/2014
Spirits	3.3	3.8	3.8	3.0	2.8	23.1	21.7	20.3	21.1	20.7
Wine	8.2	7.5	7.7	7.6	7.7	10.7	10.4	10.4	10.0	10.1
Fortified Wine	0.8	0.8	0.8	0.7	0.7	1.9	1.7	1.6	1.5	1.4
RTD'd	8.6	9.5	9.9	10.6	11.0	11.0	12.3	13.1	13.3	13.6
Beer	79.1	79.2	78.6	78.1	11.8	53.3	53.9	54.6	54.1	54.2
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(Adapted from, Elias Holtzkampf; 2012, 2014)

Patterns of drinking

Abstention rates

The majority of the world's adult population had abstained from drinking alcohol in the past 12 months. These individuals may be lifetime abstainers or former drinkers.

Types of abstainers

Lifetime abstainers: people who have never consumed alcohol.

Former drinkers: people who have previously consumed alcohol but who have not done so in the previous 12-month period.

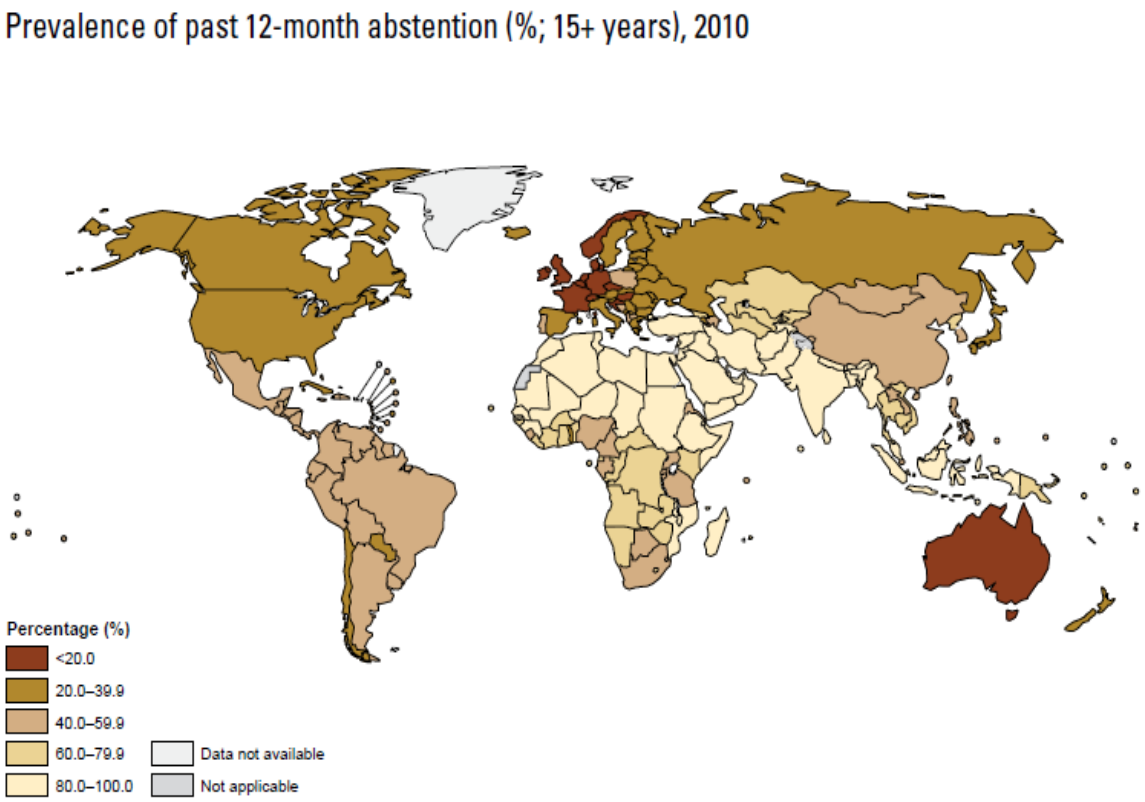
Past 12-month abstainers: people who did not drink any alcohol in the previous 12-month period. This includes former drinkers and lifetime abstainers.

In this report, rates of abstention refer to the percentage of people in a given population aged 15 years or older who are either lifetime abstainers, former drinkers or past 12-month abstainers (as specified separately in each case). Best estimates for abstention rates in 2010 are presented for 190 WHO Member States (and Associate Member States) based on the methodology discussed in Appendix IV.

(Source: WHO 2014)

In 2010, it was reported that globally 61.7% of the population (15+) had not drunk alcohol in the previous 12 months, and 13.7% had ceased alcohol consumption, meaning they did not consume alcohol in the past 12 months, although they did earlier in their lives. Almost half of the global adult population (48.0%) has never consumed alcohol.

Map 2: Prevalence of past 12-month abstention (%; 15+ years), 2010



(Source: WHO, 2014)

In the Southern African region 40.0% to 59.9% of the population reported that they did not consume alcohol during the previous twelve months in 2010. This is in line with the global average.

There is considerable variation in prevalence of abstention across different regions. Abstention rates are high in countries with low APC, because fewer drinkers add to the APC of that country or region.

Prevalence of abstention is an indicator that is equally relevant to the description of levels and patterns of alcohol consumption.

In South Africa, 65% of the population reported to have never consumed alcohol in 2005 (Econometrix, 2013). In addition, 7.7% have not consumed alcohol during the previous year (Econometrix, 2013). In conclusion, almost three quarters of the population have abstained from drinking alcohol in the past 12 months. This abstention rate is among the highest rates in the world.

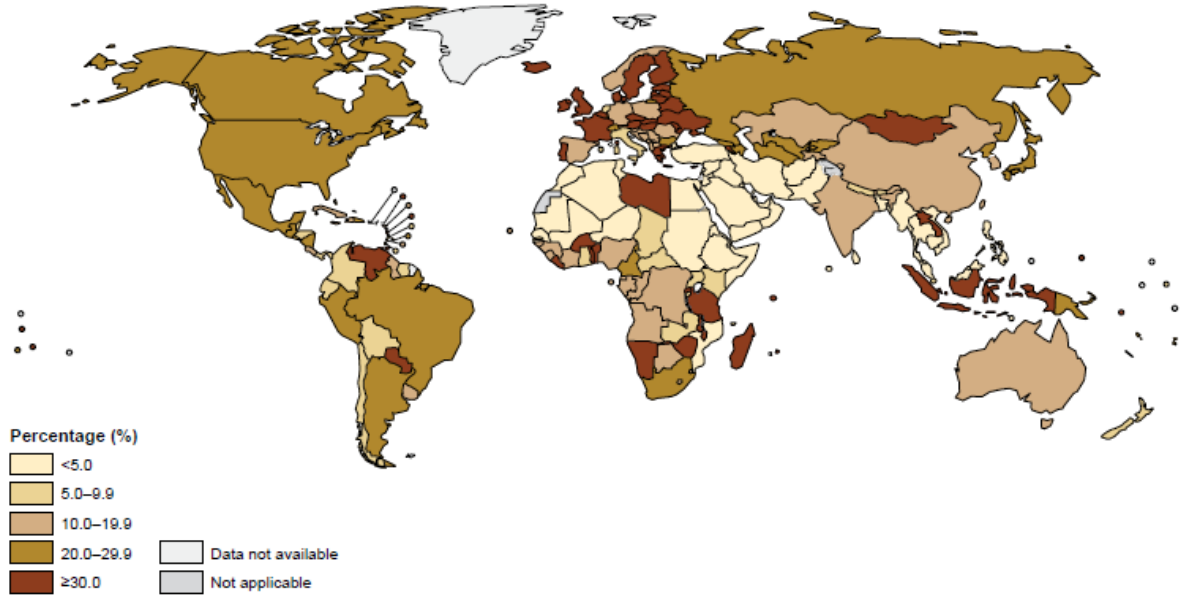
Heavy Episodic Drinking

Globally about 16% of drinkers aged 15 years or older engage in heavy episodic drinking.

While there is an association between total APC and the prevalence HED among the global population, there is no consistent association between total APC among drinkers and the prevalence of HED among drinkers.

The biggest harm caused by drinking is from binge drinking (heavy episode drinking). In South Africa, a very high percentage of drinkers, 45.4%, have weekly heavy episodic drinking occasions, compared to a global average of only 11.5% (BMR report 429, 2011).

Map 3: Prevalence of heavy episodic drinking among current drinkers (%; 15+ years), 2010



(Source: WHO 2014)

In South Africa, the percentage adults who engage in HED is between 20.0% and 29.9% which is above the global average of 16%. South Africa therefore falls into the second highest category for HED.

Heavy episodic drinking is quite high in many countries with middle to high per capita consumption, such as in Brazil and South Africa. It is important to note that alcohol dependence in itself accounts for a relatively small amount of harm at the population level, as it affects relatively few people. By far the biggest impact comes from binge drinking, which affects a much bigger demographic.

Binge drinking is categorised as drinking five or more units on one or more occasions. Heavy drinking is drinking 15 or more units of alcohol during the previous week. It is also notable that in South Africa rates of heavy drinking are up to five times higher on weekends than on weekdays.

Table 41: Prevalence of weekly episodic drinking among drinkers in the past 12 months, 2005

	Women (%)	Men (%)	Total (%)
South Africa	41.2	48.1	45.4
Africa	16.2	30.5	25.1
Americas	4.5	17.9	12.0
Eastern Mediterranean	17.9	24.9	24.7
European region	4.6	16.8	11.0
South East Asia	12.9	23.0	21.7
Western Pacific	1.3	11.6	8.0
World	**4.2**	**16.1**	**11.5**

(Source: Econometrix, 2013)

Patterns of Drinking Score

Strongly associated with the alcohol-attributable burden of disease of a country, PDS is measured on a scale from 1 (least risky pattern of drinking) to 5 (most risky pattern of drinking). The higher the score, the greater the alcohol-attributable burden of disease. Notably, different drinking patterns give rise to very different health outcomes in population groups with the same level of consumption.

PDS is based on an array of drinking attributes, which are weighted differentially in order to provide the PDS on a scale from 1 to 5: the usual quantity of alcohol consumed per occasion; festive drinking; proportion of drinking events, when drinkers get drunk; proportion of drinkers who drink daily or nearly daily; drinking with meals; drinking in public places.

Patterns of drinking score (PDS)

PDS reflect how people drink instead of how much they drink within a population. Strongly associated with the alcohol-attributable burden of disease in a country, PDS is measured on a scale from 1 (least risky pattern of drinking) to 5 (most risky pattern of drinking). The higher the score, the greater the alcohol-attributable burden of disease in population groups with the same level of consumption. Notably, different drinking patterns give rise to very different health outcomes in population groups with the same level of consumption.

PDS estimates are based on the following drinking attributes which are weighted differentially in order to provide the PDS on a scale from 1 to 5:

- the usual quantity of alcohol consumed per occasion;
- festive drinking;
- proportion of drinking events when drinkers get drunk;
- proportion of drinkers who drink daily or nearly daily;
- drinking with meals;
- drinking in public places.

Two of these attributes make the pattern of drinking less risky, namely, the proportions of drinkers who drink with meals or drink daily or nearly daily .

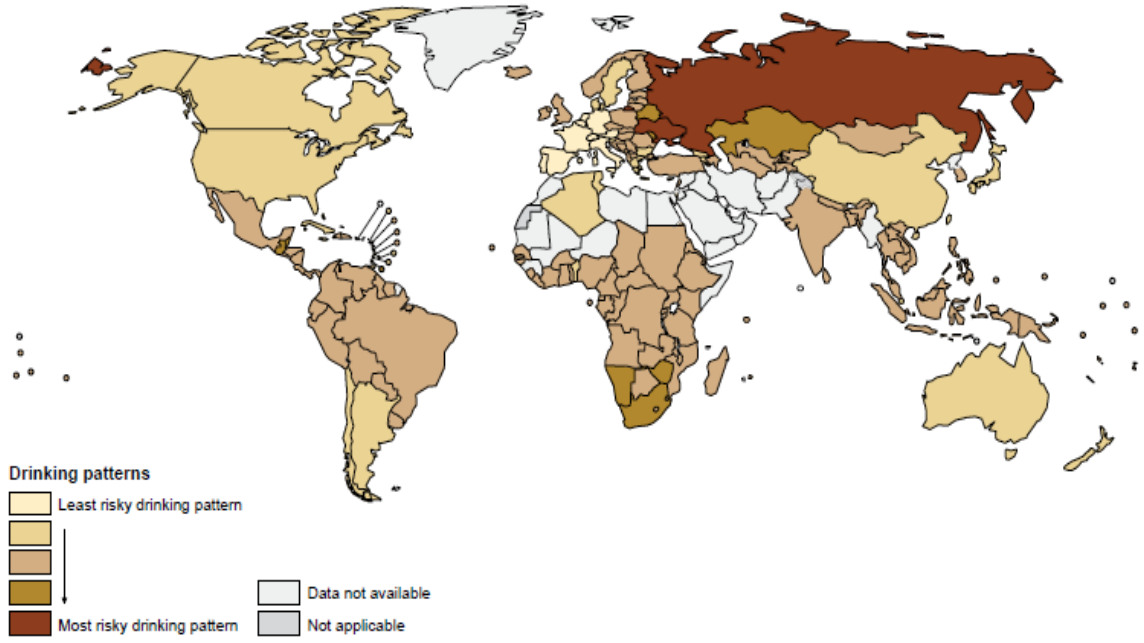
Data for 2010 on the above measures stem from surveys (see Appendix IV for details).

(Source: WHO, 2014)

High patterns of drinking scores, or the most risky patterns of drinking, prevail in Kazakhstan, Mexico, the Russian Federation, South Africa and Ukraine. South Africa has a pattern of drinking score of 4, among the highest in the world, which indicates a high alcohol-attributable burden of disease (BMR report 429, 2011).

There are only a few countries in the world with the lower PDS, or the least risky patterns of drinking. These countries are in southern and Western Europe. The highest PDS, i.e. the most risky patterns of drinking have been found in Russia and Ukraine. The ones with the highest diversity of patterns can be found in the WHO European Region, and half of all countries worldwide have a score of 3. Less drinking patterns (with a score lower than 3) are mainly found in the upper middle and high-income countries, whereas more than 95% of low-income and lower middle income countries have a score of 3.

Map 4: Patterns of drinking score (15+ years), 2010:



(Source: WHO, 2014)

Risk factors

Factors Impacting on Alcohol Consumption

There are several major determinants that have an impact on levels and patterns of alcohol consumption. Some are individual risk factors and others are environmental factors. Environmental factors such as economic development, culture, availability of alcohol and the level and effectiveness of alcohol policies are relevant factors in explaining differences in vulnerabilities between societies, historical trends in alcohol consumption and alcohol related harm (WHO, 2007; Babor et al., 2010; Nelson et al., 2013).

Age

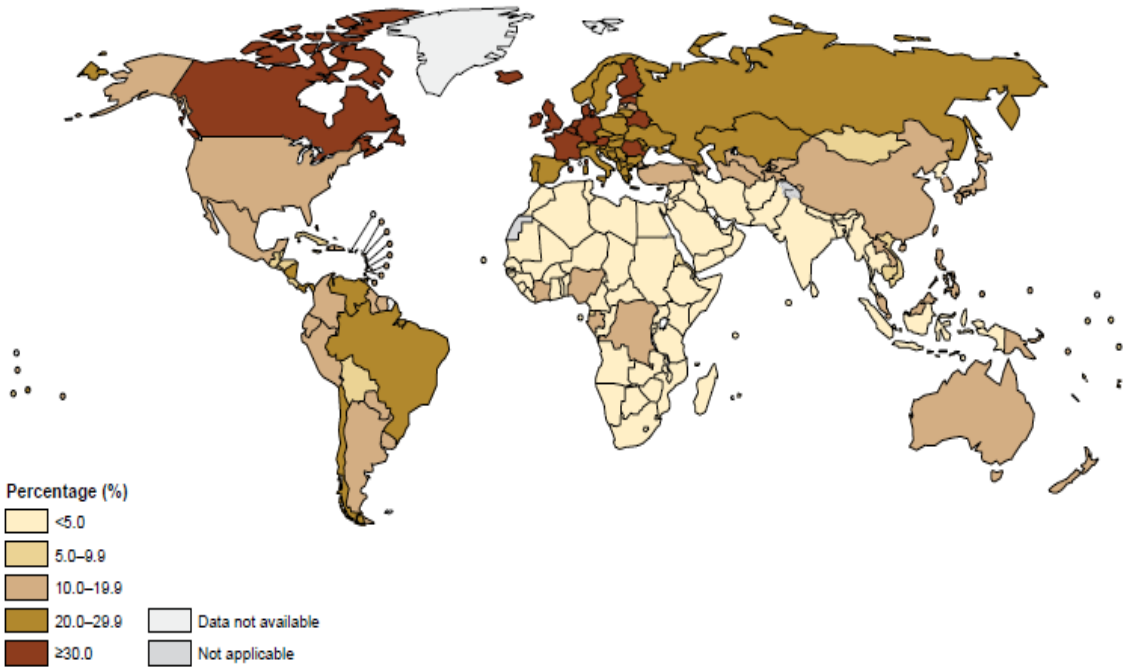
Typically, a greater proposition of the total alcohol consumption by young people is consumed during heavy drinking episodes (US Surgeon General, 2007).

In general, regional differences in the proportions of abstainers and drinkers among 15 to 19-year-olds reflect those among the total population aged 15 years and older. The WHO European Region

and WHO Region of the Americas have the highest proportions of current drinkers among adolescents, and the WHO South-East Asia Region and WHO Eastern Mediterranean Region the lowest.

With regard to patterns of alcohol consumption, worldwide, monthly HED is slightly more prevalent among young people aged 15–19 years (11.7%) than among the total population aged 15 years or older (7.5%). However, there are differences between WHO Member States and between WHO Regions. The highest rates of heavy drinking amongst adolescents are found in the WHO European Region, WHO Region of the Americas and WHO Western Pacific Region, and HED is more prevalent among adolescents than among the total population aged 15 years or older in all of these WHO Regions. In the WHO South-East Asia Region, HED is more prevalent in older age groups and in the WHO African Region, a similar proportion of HED is found among adolescents and among the total population aged 15 years or older.

Map 5: Prevalence of heavy episodic drinking among 15-19-year-olds (%), 2010



(Source: WHO, 2014)

In South Africa the prevalence of HED falls in the lowest category at less than 5%.

Gender

Alcohol use among woman has been increasing steadily in line with economic development and changing gender roles (Grucza, et al., 2008; Wilsnack, 2013).

In all WHO Regions, females are more often lifetime abstainers than males. Females also drink less alcohol on average and engage less often in HED.

There are also substantial gender differences in the proportion of current drinkers among all people aged 15 years or older and total APC among drinkers aged 15 years or older, particularly in the WHO South-East Asia Region. Across WHO Regions, gender differences are smaller in the WHO African Region, WHO Region of the Americas and WHO European Region than they are in the WHO Eastern Mediterranean Region, WHO South-East Asia Region and WHO Western Pacific Region.

The total alcohol per capita consumption in 2010 among male and female drinkers worldwide was on average 21.2 litres and 8.9 litres of pure alcohol, respectively. Depending on the WHO Region, this translates into 30–57 grams of pure alcohol per day for males and 10–29 grams of pure alcohol per day for females.

Age and Gender

In line with gender differences among adults, there are more current drinkers and fewer lifetime abstainers among adolescent males than among adolescent females in all WHO Regions. Moreover, there are about three times more young males (16.8%) than females (6.2%) who engage in HED. In general, the prevalence of HED amongst adolescents aged 15–19 years mirrors the prevalence among all (15+ years), with the highest heavy drinking rates among young people of both genders found in the WHO European Region, WHO Region of the Americas, and WHO Western Pacific Region.

Economic Wealth

In general, the greater the economic wealth of a country, the more alcohol is consumed and the smaller the number of abstainers. Economic wealth is also associated with lower proportions of unrecorded APC of total APC and a higher prevalence of HED among drinkers. For example, in high-income countries only 8.5% of all alcohol consumed consists of unrecorded alcohol, whereas in low-

income and lower middle income countries more than 40% of all alcohol consumed is unrecorded alcohol. One explanation for this association is that unrecorded alcohol is commonly cheaper than recorded alcohol.

Table 42: Total alcohol per capita consumption, 2010

Total alcohol per capita consumption (APC) and unrecorded APC (in litres of pure alcohol) and the corresponding proportion (%) of unrecorded APC of total APC, as well as the prevalence (%) of current drinkers and of HED among current drinkers, all among the total population aged 15 years and older by income group and the world, 2010

Income group	Total APC	Unrecorded APC	Proportion of unrecorded APC of total APC (%)	Prevalence of current drinkers (%)	Prevalence of HED among drinkers (%)
Low income	3.1	1.4	44.3	18.3	11.6
Lower middle income	4.1	1.7	42.3	19.6	12.5
Upper middle income	7.3	1.8	24.2	45.0	17.2
High income	9.6	0.8	8.5	69.5	22.3
World	6.2	1.5	24.8	38.3	16.0

(Source: WHO, 2014)

While the relationship between levels and patterns of alcohol consumption and economic wealth appears fairly straightforward at the global level, the associations described may not be equally true in all WHO Regions.

In general, high income-countries have the highest alcohol per capita consumption (APC) and the highest prevalence of HED amongst drinkers.

Greater economic wealth is broadly associated with high levels of consumption and lower abstention rates. However, for a given level or pattern of drinking, the alcohol attributable mortality and burden of disease and injury will generally be greater in societies with lower economic development in more affluent societies.

Therefore, although wealthier societies consume more alcohol and engage more frequently in HED, the harmful effects of hazardous drinking patterns are more pronounced in lower developed societies.

Surveys and mortality studies, particularly from the developed world, suggest that there are more drinkers, more drinking occasions and more drinkers with low risk drinking-patterns in higher socio economic groups, while abstainers are more common in the poorer social groups (WHO, 2004).

The link between socio economic status (SES) and alcohol-related harm is an area of growing public health concern, because market liberalisation and increasing affluence have increased the availability of alcohol to lower SES groups in growing economies.

Changes in affordability of alcohol have often increased drinking, particularly among lower SES groups (McKee et al., 2000). Research on links between alcohol consumption, alcohol-related harm and economic development of a society, country or region largely mirrors data on associations between alcohol consumptions and the SES of an individual.

Economic Wealth and Gender

Another factor that can be considered in combination with economic wealth is gender. Gender differences in alcohol consumption are generally smaller in low- and high-income countries compared to middle income countries.

Table 43: Total alcohol per capita consumption

Total alcohol per capita consumption (APC; in litres of pure alcohol), as well as prevalence (%) of current drinkers and of heavy episodic drinking (HED) among the total population aged 15 years and older by sex, income group and the world, 2010

	Proportion of current drinkers			Total APC among drinkers			Prevalence of HED among drinkers		
Income group	Males (%)	Females (%)	Males/ females	Males	Females	Males/ females	Males (%)	Females (%)	Males/ females
Low income	24.9	11.9	2.1	18.4	8.9	2.1	14.5	5.4	2.7
Lower middle income	28.0	11.0	2.5	24.0	8.0	3.0	15.8	2.6	6.2
Upper middle income	57.3	32.5	1.8	20.5	8.5	2.4	24.0	4.9	4.9
High income	75.6	63.6	1.2	18.9	8.4	2.3	30.2	13.4	2.3
World	47.7	28.9	1.6	21.2	8.4	2.5	21.5	5.7	3.8

(Source: WHO, 2014)

Familial risk factors.

A family History of alcohol use disorders is considered a major vulnerability factor for both genetic and environmental reasons (WHO, 2004). Parents with alcohol use disorders display particular patterns of alcohol consumption and thereby increase the likelihood that their children will develop drinking patterns associated with high risk of alcohol use disorders when they are introduced to alcohol (Latendresse et al., 2008).

Unrecorded Alcohol Consumption

Unrecorded alcohol refers to alcohol that is not taxed and is outside the usual system of government control, because it is produced, distributed and sold outside formal channels. Unrecorded alcohol in a country includes consumption of homemade or informally produced alcohol (legal or illegal), smuggled alcohol, alcohol intended for industrial or medical uses, alcohol obtained through cross-border shopping, as well as consumption of alcohol by tourists. Homemade or informally produced alcoholic beverages are mostly fermented beverages made from sorghum, millet, maize, rice, wheat or fruits.

The total APC comprises two components, namely consumption of recorded and of unrecorded alcohol. Recorded alcohol is alcohol consumed as a beverage that is recorded in official statistics, such as data on alcohol taxation or sales. Unrecorded alcohol is alcohol consumption as a beverage but that is not recorded or not accounted for in official statistics and alcohol taxation or sales.

Unrecorded alcohol

Unrecorded alcohol refers to alcohol that is not taxed in the country where it is consumed because it is usually produced, distributed and sold outside the formal channels under government control. Unrecorded alcohol consumption in a country includes consumption of home-made or informally produced alcohol (legal or illegal), smuggled alcohol, alcohol intended for industrial or medical uses, and alcohol obtained through cross-border shopping (which is recorded in a different jurisdiction). Sometimes these alcoholic beverages are traditional drinks that are produced and consumed in the community or in homes. Home-made or informally produced alcoholic beverages are mostly fermented products made from sorghum, millet, maize, rice, wheat or fruits.

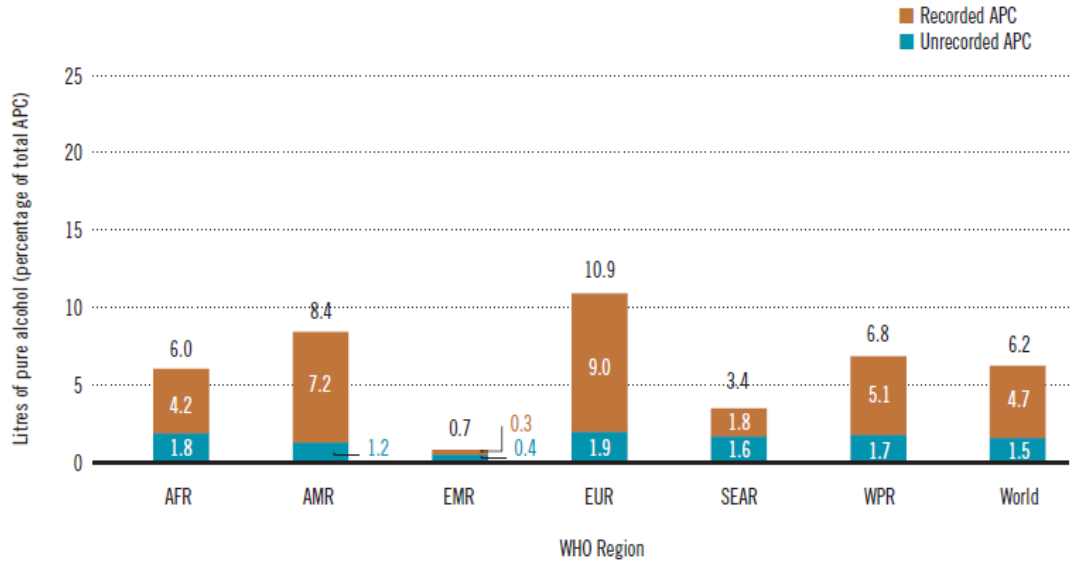
Unrecorded consumption also includes so-called surrogate alcohol, commonly ethanol that was not produced as beverage alcohol but is used as such, e.g. mouthwash, denatured alcohol, medicinal tinctures, aftershaves and perfumes.

There are different sources of relevant data and various approaches to estimating unrecorded alcohol consumption, as discussed in Appendix IV.

(Source: WHO, 2014)

Worldwide almost a quarter (24.8%) of all alcohol consumed is consumed in the form of unrecorded alcohol. In some countries, particularly within the WHO South East Asia Region and the WHO Eastern Mediterranean Region, unrecorded alcohol consumption makes up more than 50% of total alcohol consumption. In some countries where alcohol is banned, unrecorded alcohol amounts to 100% or almost 100% of total APC. The distribution of unrecorded alcohol consumption across WHO Regions is approximately proportional to the distribution of the world wide population across the regions.

Figure 12: Total, unrecorded and recorded alcohol per capita (15+ years) consumption in litres of pure alcohol by WHO region and the world, 2010



(Source: WHO, 2014)

Africa has an unrecorded APC of 1.8% which is above the global average of 1.5%. It is also the second highest in the world, with only the European region recording a higher unrecorded APC of 1.9%.

The consumption of unrecorded alcohol is a significant issue in South Africa (as it is all over the world), and poses a difficult dimension for measuring the true nature of global alcohol consumption. Unrecorded liquor is usually cheaper than mass or factory produced products; it is often brewed in rural areas and is consumed mostly by poorer segments of society.

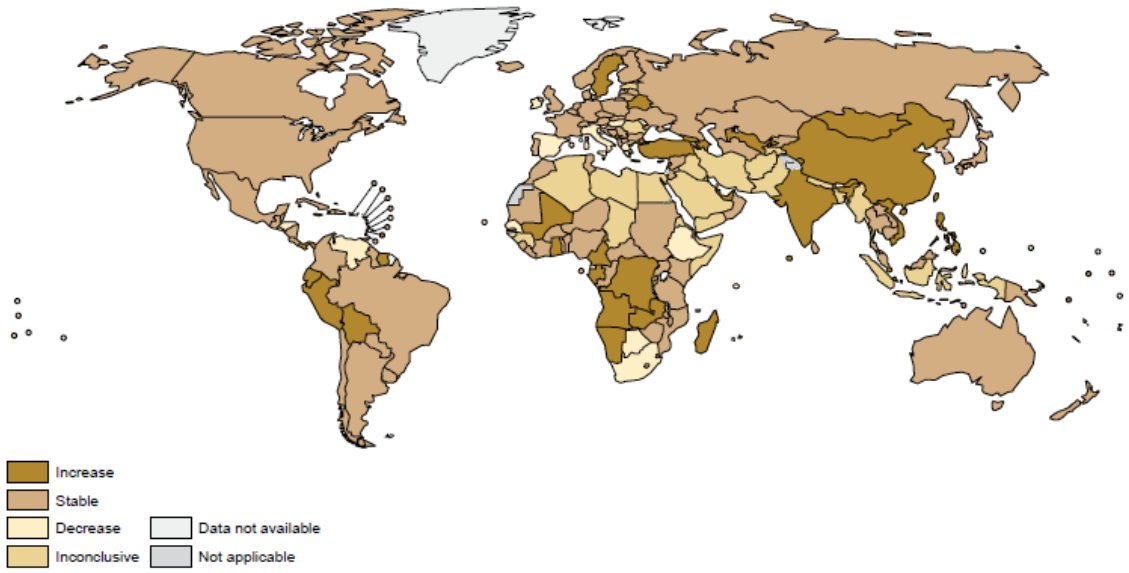
It must also be noted that, of the 35% of the population that do consume alcohol, only a small percentage consume branded products; the largest percentage consume home-brews or illegal alcohol (Econometrix, 2013).

In South Africa, there are around 50,000-60,000 licenced/ legal outlets for alcohol sales and distribution; in contrast, there are an estimated 120,000 unlicensed outlets. It is generally accepted that the alcohol abuse problem lies within this unlicensed sector, which is not regulated at all by government. The amount of taxes lost through this illegal sector is enormous, and estimated to be in the region of R16 billion (BMR report 429, 2011).

Five Year Trend in Alcohol Consumption

The most prevalent tendency worldwide is an increase in recorded alcohol per capita consumption. This trend is mainly driven by an increase in alcohol consumption in China and India, which could potentially be linked to active marketing by the alcohol industry and increased income in these countries. The five-year trend in the WHO African Region, WHO European Region and, particularly, the WHO Region of the Americas is mainly stable, although some countries in the WHO European Region and the WHO African Region report significant decreases in consumption.

Map 6: Five-year change in recorded alcohol per capita (15+ years) consumption, 2006-2010



(Source: WHO, 2014)

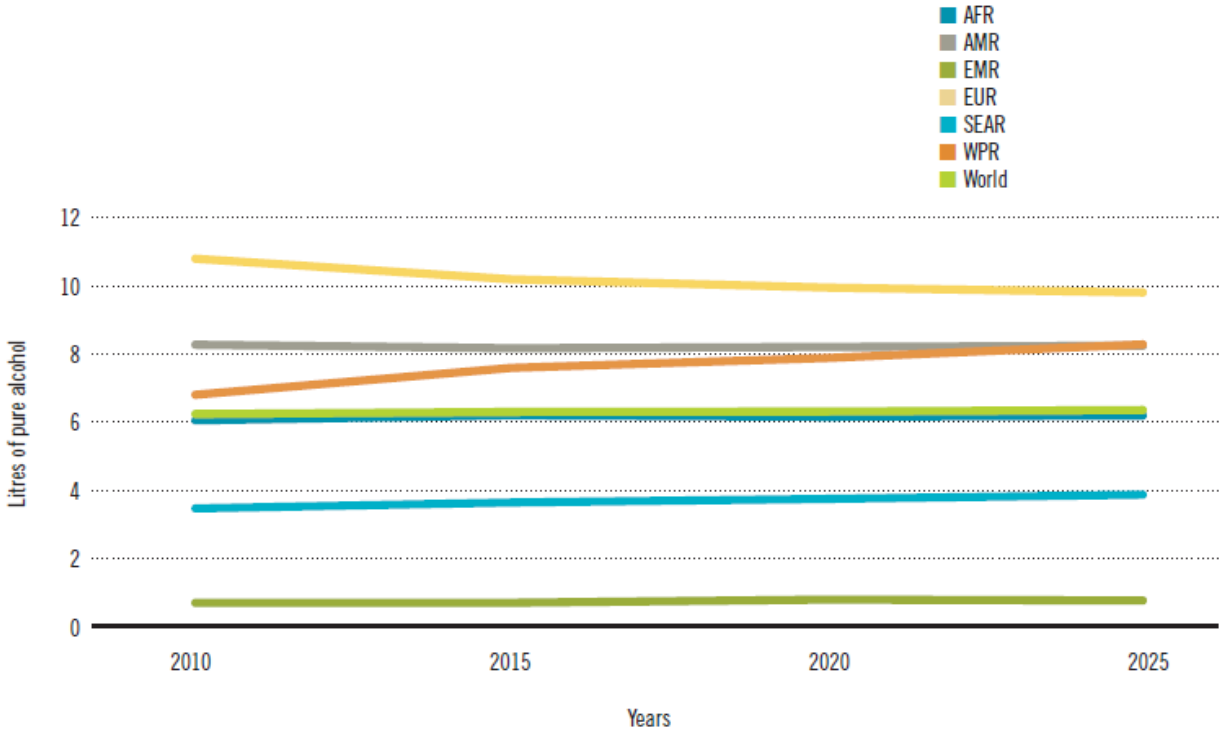
South Africa has shown a decrease in APC from 2006 – 2010.

Projections of Alcohol Consumption Up to 2025

Up until 2025, alcohol per capita consumption (15+ years) is expected to continue to increase in half of the WHO Regions. If this expected increase is not counterbalanced by substantial decreases in the other half of the WHO Regions, alcohol per capita consumption globally is expected to increase. The highest increase is expected in the populations of the WHO Western Pacific Region, dominated by the population of China, with an increase in per capita consumption of 1.5 litres of pure alcohol by 2025. Recorded alcohol per capita consumption is also expected to increase in the WHO Region of the Americas and the WHO South-East Asia Region. Alcohol consumption in the WHO Eastern

Mediterranean Region and the WHO African Region is expected to remain stable. Despite the expected decrease of alcohol consumption in the WHO European Region, it will remain the region with the highest per capita consumption in the world.

Figure 13: Total alcohol per capita (15+ years) consumption by WHO region, 2010 - 2025



(Source: WHO 2014)

It should be noted that the above predictions refer to APC (i.e. the volume of alcohol consumed by each individual aged 15 years or older on average). Thus, although APC is not expected to increase in the WHO African Region in the next 10 years, the high growth rate of the adolescent and adult population will increase the number of potential consumers. Consequently, the total amount of alcohol consumed in the WHO African Region might also substantially increase. The same applies to the WHO South-East Asia Region, which will be influenced by the high population growth rate in its populous countries.

In conclusion, the main problem areas that exist around alcohol consumption in South Africa are:

- the small population that drinks, does so excessively, i.e. heavy episode drinking
- high levels of youth drinking

- illegal alcohol sector

(BMR report 429, 2011)

Alcohol Demand and Supply in South Africa

Expenditure on alcoholic beverages by households amounted to 2.7% of total expenditure in 2011. Liquor makes up a much larger proportion (almost double) of the shopping bag for poor and middle class households (around 3% to 4.5%) than for wealthy households (around 1½% to 2%) (BMR report 429, 2011).

Table 44: Overview of the Alcoholic Beverage Market Volume = '000litre; Value = R'000

CATEGORY	2006/2007 VOLUME	2006/2007 VALUE	2010/2011 VOLUME	2010/2011 VALUE	2011/2012 VOLUME	2011/2012 VALUE	2012/2013 VOLUME	2012/2013 VALUE	2013/2014 VOLUME	2013/2014 VALUE
Brandy	46 600	4 102 664	39 00	4 688 970	37 100	4 930 961	33 400	4 762 840	30 600	4 692 510
Gin	6 300	483 714	5 320	574 279	5 200	641 108	5 100	667 135	5 200	757 744
Cane	2 300	124 752	1 800	139 968	1 700	150 195	1500	144 465	1 300	134 589
Vodka	13 925	960 547	16 750	1 637 983	17 100	1 898 955	18 800	2 297 908	18 200	2 482 480
White Spirits	22 525	1 569 013	23 870	2 352 830	24 000	2 690 258	25 400	3 103 508	24 700	3 374 813
Liqueurs	10 200	892 500	9 500	861 650	9 600	966 500	9 870	1 058 721	9 900	1 141 584
Whisky	30 600	3 745 746	34 000	5 797 000	35 700	6 495 972	40 000	7 766 053	40 800	8 512 920
Rum	4 900	552 475	4 950	719 483	5 900	906 299	5 850	952 536	5 900	1 042 707
TOTAL SPIRITS	114 825	10 862 398	111 320	14 419 932	112 300	15 023 490	114 520	17 643 657	111 900	18 764 534
Sparkling Wine	8 000	459 200	8 320	640 307	8 650	726 254	8 075	725 620	7 600	727 320
Super Premium Wine	44 000	1 870 440	45 000	2 479 950	47 400	2 739 246	48 000	2 931 840	50 800	3 173 984
Premium Wine	70 000	1 000 300	82 600	1 637 958	86 600	1 764 908	91 150	2 014 415	100 000	2 354 000
Standard Price Wine	121 000	999 460	91 000	1 093 820	94 000	1 216 360	91 000	1 285 830	88 500	1 355 820
Perle	43 600	715 476	52 800	1 048 080	54 500	1 289 470	56 350	1 431 854	57 500	1 509 950
TOTAL UNFORT's	278 600	4 585 676	271 400	6 259 808	282 500	7 009 984	286 500	7 663 939	296 800	8 393 754
FORTIFIED WINE	29 660	889 800	28 595	1 163 817	28 745	1 198 092	28 175	1 256 042	27 770	1 318 520
RTD'S	302 000	5 152 120	354 000	8 206 200	374 000	9 656 440	410 000	11 147 268	432 000	12 279 810
Sub-Total	733 085	21 949 194	773 635	30 690 064	806 195	33 614 260	847 270	38 436 524	876 070	41 483 938
Beer	2 778 600	25 007 400	2 937 000	35 831 400	2 980 000	40 355 520	3 025 000	45 242 353	3 070 000	49 129 456
GRAND TOTAL	3 511 685	46 956 594	3 710 635	66 521 464	3 786 195	73 969 780	3 872 270	83 678 877	3 946 070	90 613 394

(Source: Liquor Consumption Patterns in South Africa, Elias Holtzkampf; 2012, 2014)

Beer represents 78% of liquor volumes in the RSA. Beer declined from 79% over the previous seven years due to a growth in the RTD sector. RTD volumes increased by 43% over the past seven years, with Beer up only 10.5% over the period. However, RTD volumes increased by 132 million litres and Beer volumes increased by a whopping 292 million litres. Spirit volumes declined year on year and also lost share in value terms. Wine in value terms remained fairly stable over the 2013/2014 year.

'Ales' are excluded from these tables and discussion as there is a lack of availability of data on these products. However, the Western Cape police estimated the volumes at 120 million litres in 2014.

Spirits Market

Table 45: South African Spirits Market

	Volume%					Value%				
	2006/2007	2010/2011	2011/2012	2012/2013	2013/2014	2006/2007	2010/2011	2011/2012	2012/2013	2013/2014
Brandy	40.6	35.0	33.0	29.2	27.3	37.8	32.5	32.8	27.0	25.0
Gin	5.5	4.8	4.6	4.5	4.6	4.5	4.0	4.3	3.8	4.0
Cane	2.0	1.6	1.5	1.3	1.2	1.1	1.0	1.0	0.8	0.7
Vodka	12.1	15.0	15.2	16.4	16.3	8.8	11.4	12.6	13.0	13.2
Liqueurs	8.9	8.5	8.5	8.6	8.8	8.2	6.0	6.4	6.0	6.1
Whisky	26.6	30.5	31.8	34.9	36.5	34.5	40.2	43.2	44.0	45.4
Rum	4.3	4.4	5.3	5.1	5.3	5.1	5.0	6.0	5.4	5.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(Source: Liquor Consumption Patterns in South Africa, Elias Holtzkampf; 2012, 2014)

Brandy volumes were at their highest in 1998 and 1999, when 53.3 million litres were sold. Brandy has subsequently lost 23 million litres. These volume losses were due to growth of Vodka (mostly Smirnoff) and Whisky.

Another development over the past few years is structural changes in the Whisky market. Brandhouse has very successfully grown Johnnie Walker Red and it is now the number two whisky after Bells.

The Wine South African Wine Market

Table 46: South African Wine Market

	Volume%					Value%				
	2006/2007	2010/2011	2011/2012	2012/2013	2013/2014	2006/2007	2010/2011	2011/2012	2012/2013	2013/2014
Sparkling Wine	2.8	3.0	3.0	2.7	2.5	9.1	9.3	9.4	8.6	8.0
Super Premium Wine	15.4	16.1	16.3	16.3	16.7	37.1	35.9	35.4	34.9	34.8
Premium Wine	24.4	29.5	29.7	30.9	32.9	19.8	23.7	22.8	24.0	25.8
Standard Price Wine	42.2	32.5	32.3	30.9	29.1	19.8	15.9	15.7	15.3	14.9
Perle	15.2	18.9	18.7	19.1	18.9	14.2	15.2	16.7	17.1	16.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(Source: Liquor Consumption Patterns in South Africa, Elias Holtzkampf; 2012, 2014)

From 2007 till 2014 the standard priced market has declined due to 'Ales'.

The RTD Market

The RTD market is driven by innovative and new products. A new trend that developed over the past years is the growth of the can market.

All the new launches and developments are fuelling the growth of the RTD sector.

The Beer Market

An interesting move in the Beer market is the move to flavoured beers. Flying Fish in a lemon and orange flavour was launched during the last part of 2013 and in the three months to September 2014 held a market share of 0.7%. This percentage of the Beer market is significant in volume terms.

2013/2014 Overview and 2015 Forecast

The total South African liquor market grew by only 1.5% in 2013/2014 and is expected to growth at approximately 1.3% over the next twelve months. As annual population growth is in excess of 2.0%, not including illegal immigrants, and the national per capita consumption of legal products continues to decline. South Africa's per capita alcohol consumption was estimated to have been 22.5 litres per annum in 2005/2006. This declined to only 16.5 litres per annum in 2013/2014.

The Beer market increased by 1.5% during 2013/2014 and is expected to have an even lower increase during 2015 at only 1.0%.

The RTD sector grew by 5.4% during 2013/2014, with most of the growth generated by the Cider market and Double Black Guarana. The expected growth for 2015 is 3.5%.

The Fortified wine market declined by 1.4% in 2013/ 2014 and a further decline of nearly 1% is expected over 2015. In this market the biggest sector is the Standard Priced Fortified wine market led by Sedgwick's Old Brown. This sector should remain stable, but the Wine Aperitif market is forecast to decline due to the growth of illicit Spirit products. Also, HP Ports & Sherries and HP Aperitifs & Vermouths is a dying sector, with very little consumer or trade support. It is forecast that these two categories will continue to lose volumes.

The Sparkling wine market is expected to be flat over the 2014/2015 period, but the price war in December among the three major grocer groups could increase the sales.

The Wine market grew by 3.6% over 2013/2014 and is expected grow with 2.8% over the 2014/2015 period. Similar to previous years, the growth will mostly be in the Super Premium and Premium sector, with some growth coming from the Perlé sector.

The spirits market declined by 2.3% over 2013/2014, mainly due to strike action and the generally poor performance of the economy. The biggest decline was due to the Brandy market and to a lesser extent Cane and Vodka. Over 2014/2015 it is expected that the Brandy market to lose another 5.2% (equal to 1 600 000 litres), the Cane market to lose 7.7% volume and the other markets to be flat, with low growth in the Whisky sector. The total spirits market is therefore forecast to decline with 0.8% in 2015.

Wine by Type

Table 47: Super Premium Wine

	Volume%						Value%			
	2009	2010	2011	2012	2013	2014	2011	2012	2013	2014
Red	39.0	41.4	43.1	43.2	44.2	45.6	50.6	51.2	52.3	53.2
White	39.2	38.1	37.6	36.1	35.9	35.8	34.1	34.5	34.2	34.1
Rose	21.8	20.5	19.3	20.7	19.9	18.6	15.3	14.3	13.5	12.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(Source: Liquor Consumption Patterns in South Africa, Elias Holtzkampf; 2012, 2014)

Table 48: Premium Wine

	Volume%					
	2009	2010	2011	2012	2013	2014
Red	17.6	17.5	17.2	16.1	18.1	18.1
White	72.4	67.5	65.2	63.5	61.3	57.3
Rose	10.0	15.0	17.7	20.4	20.6	24.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

(Source: Liquor Consumption Patterns in South Africa, Elias Holtzkampf; 2012, 2014)

Table 49: Premium Wine by Container Type

CATEGORY	M/s Volume				Market Share Value %	Retail Selling Price (R/ℓ)	Retail Selling Price (R/ℓ)
	2011	2012	2013	2014	2012	2012	2014
Bottle	10.6	11.2	9.2	9.2	15.8	30.8	34.59
Jug	1.5	2.1	1.8	1.7	2.3	24.39	26.40
5L Box	50.9	50.0	50.6	48.6	42.9	18.67	19.45
3L Box	20.8	21.7	25.0	28.7	21.3	21.33	23.96
2L Box	9.2	8.1	7.5	6.2	10.5	28.08	30.76
Tetra	6.8	6.7	6.0	5.6	6.9	22.31	23.81
TOTAL	100.00	100.00	100.00	100.00	100.00		

(Source: Liquor Consumption Patterns in South Africa, Elias Holtzkampf; 2012, 2014)

In the Super Premium market, red wine in 2014 made up 45.6% of the volumes and more than half (53.2%) of the value. The rosé sector declined in both volume and value terms. Distell is still the market leader by far, with the wine distributor Vinimark in second place, followed by DGB.

Distell and Namaqua dominate the Premium wine market with Vinimark (Robertson's) the third most popular. The brands are Namaqua as the market leader, followed by Robertson's, Overmeer and 4th Street. Namaqua is the biggest distributor in this market, with Distell in a close second place and Vinimark in third spot.

In the Super Premium sector the share of Rosé declined, but in the Premium sector Rosé increased substantially. The reason for this is that the volumes of Four Cousins (Super Premium sector) were cannibalised by 4th Street (Premium sector). The total Rosé sector (Super Premium and Premium), gained share and volumes increased by 15%.

Boxes make up 83.5% of the Premium Sector in volume terms. 5L Boxes and 2L boxes lost share to the 3L boxes in 2013/2014.

Table 50: South African Liquor Market

Year End June	2008/2009	2009/2010		2010/2011		2011/2012		2012/2013		2013/2014		2014/2015	
VOLUME = '000L	Actual	Actual	Hist Trend	Actual	Hist Trend	Actual	Hist Trend	Actual	Hist Trend	Actual	Hist Trend	Forecast	Hist Trend
BRANDY	43 750	41 150	94.1	39 000	94.8	37 100	95.1	33 400	90.0	30 600	91.6	29 000	94.8
Gin	5 600	5 410	96.6	5 320	98.3	5 200	97.7	5 100	98.1	5 200	102.0	5 300	101.9
Cane	2 050	1 890	92.2	1 800	95.2	1 700	94.4	1 500	88.2	1 300	86.7	1 200	92.3
Vodka	15 600	16 450	105.4	16 750	101.8	17 100	102.1	18 800	109.9	18 200	96.8	18 200	100.0
WHITE SPIRITS	23 250	23 750	102.2	23 870	100.5	24 000	100.5	25 400	105.8	24 700	97.2	24 700	100.0
Liqueurs	9 000	9 400	104.4	9 500	101.1	9 600	101.1	9 870	102.8	9 900	100.3	9 900	100.0
Whisky	31 250	31 200	99.8	34 000	109.0	35 700	105.0	40 000	112.0	40 800	102.0	41 500	101.7
Rum	4 800	4 800	100.0	4 950	103.1	5 900	119.2	5 850	99.2	5 900	100.9	5 900	100.0
TOTAL SPIRITS	112 050	110 300	98.4	111 320	100.9	112 300	100.9	114 520	102.0	111 900	97.7	111 000	99.2
SPARKLING WINE	8 650	8 000	92.5	8 320	104.0	8 320	100.0	8 075	97.1	7 600	94.1	7 600	100.0
HP Natural	44 750	42 520	95.0	45 000	105.8	47 000	104.4	48 000	102.1	50 800	105.8	53 000	104.3
MP Natural	73 500	80 000	108.8	82 600	103.3	87 500	105.9	91 150	104.2	100 000	109.7	105 000	105.0
SP Still	103 000	89 180	86.6	91 000	102.0	92 400	101.5	91 000	98.5	88 500	97.3	88 500	100.0
Perle	48 500	51 300	105.8	52 800	102.9	55 600	105.3	56 350	101.3	57 500	102.0	58 500	101.7
TOTAL NATURAL	269 750	263 000	97.5	271 400	103.2	282 500	104.1	286 500	101.4	296 800	103.6	305 000	102.8
HP Ports & Sherries	460	450	97.8	440	97.8	410	93.2	390	95.1	370	94.9	350	94.6
HP Aperitifs & Verm	475	465	97.9	455	97.8	435	95.6	415	95.4	400	96.4	380	95.0
SP Fortified	19 000	18 900	99.5	18 600	98.4	19 500	104.8	20 200	103.6	20 200	100.0	20 200	100.0
Wine Aperitifs	9 150	9 360	102.3	9 100	97.2	8 350	91.8	7 170	85.9	6 800	94.8	6 600	97.1
TOTAL FORTS	29 085	29 175	100.3	28 595	98.0	28 695	100.3	28 175	98.2	27 770	98.6	27 530	99.1
AFB's	271 250	279 000	102.9	282 600	101.3	300 600	106.4	328 000	109.1	339 000	103.4	349 000	102.9
Spirit Coolers	75 750	84 000	110.9	81 800	97.4	84 400	103.2	82 000	97.2	93 000	113.4	98 000	105.4
RTD's	347 000	363 000	104.6	364 400	100.4	385 000	105.7	410 000	106.5	432 000	105.4	447 000	103.5
SUB TOTAL	766 535	773 475	100.9	784 035	101.4	816 815	104.2	847 270	103.7	876 070	103.4	898 130	102.5
Beer	2 831 000	2 865 000	101.2	2 937 000	102.5	2 980 000	101.5	3 025 000	101.5	3 070 000	101.5	3 100 000	101.0
GRAND TOTAL	3 597 535	3 638 475	101.1	3 721 035	102.0	3 796 815	102.0	3 872 270	102.0	3 946 070	101.9	3 998 130	101.3

(Source: Holtzkampf; 2012, 2014)

- This table represents an estimate of liquor consumption in the RSA and does not include Namibia, Botswana, Lesotho and Swaziland.
- All volumes are in thousands of litres.
- The twelve months are from July to June.
- The historic trends are year on year indices; if lower than 100, they reflect a volume decline and if over 100 they reflect a volume growth. For instance in the twelve month period from 1 July 2010 to 30 June 2011 it was estimated that 39,000,000 litres of Brandy was consumed. This was a decline of 5.2% on the previous year (94.8 – 100). Likewise, Vodka over the same period sold 16,750,000 litres and this was at a growth of 1.8% compared the previous year (101.8 – 100).
- Super Premium wine is classified as all wine selling at prices above R30 per 750ml. Graca and the Saints range would be at the lower end of this market.
- Premium wine is classified as wines selling in the R17 to R29 (per 750ml) price range and most of the boxes. 5L boxes selling at less than R77 are classified as Standard price. The top end of Premium wine would be Drostdyhof and Obikwa.
- AFBs are products such as Savanna and Hunters. Spirit Coolers are products such as Smirnoff Spin and Klippies and Cola.

Alcohol consumption among young people (BMR; report 429, 2011)

The majority of learners agreed that alcohol consumption among the youth in South Africa is becoming more socially acceptable and tolerated. Many learners, who consume alcohol, have been drunk or engaged in 'binge drinking' with disturbing consequences which impact on education either directly or indirectly. Reported consequences include; drunkenness, violence, motor car accidents, irresponsible sexual behaviour and criminal activities. Learners generally consume alcohol at social events over weekends and mainly do so to be socially acceptable (BMR report 429, 2011).

Consistent with global findings, alcohol use is taking on a youthful face, as indicated by an increasing trend in lifetime prevalence of alcohol use among youth aged 13-19 years in South Africa. Hazardous and harmful drinking patterns, such as drinking to intoxication and binge drinking, seem to be on the rise among young adults. 50% of learners reported alcohol consumption for ever having drunk alcohol (almost on par with 49.1% in 2002), 35% for having drunk alcohol in the past month (up from

32% in 2002), and 29% for having engaged in binge drinking in the past month (up from 23% in 2002) (BMR report 429, 2011).

The following section is based on information from a survey on substance use, risk behaviour and mental health among grade 8 – 10 learners in Western Cape provincial– Western Cape Government: Social Development (DSD), February 2012

Early initiation equals first time use of alcohol at younger than 13 years of age; 5 or more alcoholic drinks at once equals binge drinking.

Lifetime Use

Sixty-six percent of all learners had used alcohol in their lifetimes (DSD, 2012). This proportion was consistent for both male and female learners, and across districts with no significant differences found by gender or district. There were statistically significant differences between learners reporting lifetime alcohol use in each of the grades, with grade 8 learners reporting the lowest proportion (53.6%), grade 9s the second lowest (69.0%) and grade 10s the highest (74.7%) proportion of lifetime alcohol use. There were no differences in the proportions of males and females reporting lifetime alcohol use in each of the grades, and in each of the five districts (DSD, 2012).

Past Year Use

Among those learners who reported lifetime alcohol use, 59.1% reported using alcohol in the past 12 months (DSD, 2012). This proportion is fairly consistent for both male and female learners, and across districts with no significant differences found by gender or district. There were statistically significant differences between learners reporting past year alcohol use in each of the grades, with grade 8 learners reporting the lowest proportion (48.4%), grade 9s the next lowest (58.8%) and grade 10s the highest (66.8%) proportion of past year alcohol use. There were no differences in the proportions of past year alcohol use between male and female learners in each of the grades, and in each of the five districts.

Current Use (in the past 30 days)

Among those learners who reported lifetime alcohol use, 35.1% reported current alcohol use. This proportion was consistent for both male and female learners, and across districts with no significant differences found by gender or district. The lowest proportion of current alcohol use was reported by grade 8 learners (24.5%), the second lowest by grade 9s (35.1%) and the highest proportion by grade 10's (42.1%).

Past 7 day use:

Almost a quarter (22.4%) of lifetime alcohol users reported alcohol use in the past 7 days. This proportion was fairly consistent for both male and female learners and across districts, with no significant differences found by gender or district. Fewer grade 8 learners compared to grade 9 and 10 learners reported past 7-day alcohol use, with no significant differences in the proportions reported by grade 9 and 10 learners. The figures for this measure were Grade 8 (17.5%), Grade 9 (22.4%) and Grade 10 (25.7%). While there were no differences in the proportions of past 7-day alcohol use between male and female learners in grades 8 and 9, significantly more grade 10 male compared to female learners reported current alcohol use (Male 29.1% vs Female 23.5%). There were no differences in the proportions of male and female learners reporting past 7-day alcohol use in any of the five districts (DSD, 2012).

Binge Drinking:

Almost a quarter (22.3%) of lifetime alcohol users reported binge drinking. This proportion was fairly consistent across districts with no significant differences found by district. However significantly more male compared to female learners reported binge drinking (25.4% vs 19.8%). Significantly fewer grade 8 learners compared to grade 9 and 10 learners (17.1% vs 22.5% and 25.5%) reported binge drinking, with no significant differences in the proportions reported by grade 9 and 10 learners. While there were no differences in the proportions of binge drinking between male and female learners in grades 8 and 9, significantly more grade 10 male compared to female learners reported binge drinking (31.6% vs 20.9%). While there were no differences found by gender in four of the districts, significantly more male compared to female learners in metro-East district (26.2% vs 16.6%) reported binge drinking. For those learners who had repeated a grade, significantly more males than females reported this behaviour (34.6% vs 25.3%).

Age of onset

Twenty-eight percent of lifetime alcohol users reported having first tried alcohol at younger than 13 years of age. This proportion was fairly consistent for both male and female learners with no significant differences found by gender. Only one significant difference in proportions across districts was found where more metro-South learners compared to non-metro South learners reported early alcohol initiation (33.3% vs 24.1%). There were statistically significant differences between learners reporting early alcohol use initiation in each of the grades, with grade 8 learners reporting the highest proportion (45.7%), grade 9's the second highest (26.9%) and grade 10's the lowest (17.3%) proportion of early alcohol use initiation. There were no differences in the proportions of male and female learners reporting early initiation of alcohol use in any of the five districts.

Frequency of Alcohol Use in the Past Year:

10% of learners who reported lifetime alcohol use, reported using alcohol every week and 13% reported never using alcohol in the past year. Similar proportions of male and female learners reported using alcohol once or twice per month (28% and 27%), a few times a year (±26%), and never (12 and 15%). Significantly more male compared to female learners reported alcohol use every week (12.2% vs 8.3%), and fewer male learners reported using alcohol hardly ever (20.3% vs 25.4%).

Frequency of Drunkenness

A small proportion of all lifetime alcohol users (2.1%) reported getting drunk every day, and 29.5% reported never getting drunk in the past year. Similar proportions of male and female lifetime alcohol users reported getting drunk once per month every few weeks and never. However, significantly more males compared to females reported getting drunk every day (2.9% vs 1.4%) and once per week (11.6% vs 7.9%), and fewer male compared to female learners reported getting drunk once or twice in the previous year (30.8% vs 36.8%).

Alcohol Use Summary:

1. The overall rate of lifetime use of alcohol was high (66.0%);
2. Among learners who reported lifetime use of alcohol, more than ⅓ reported current use, almost ¼ reported alcohol use in the week preceding the study, and almost ¼ reported binge-drinking in the two weeks prior to the study.

3. Among those who used alcohol, almost ⅓ reported initiation of alcohol use before the age of 13; at least 10% reported using alcohol on a weekly basis; and a small proportion reported being drunk on a daily (2%) or weekly (10%) basis.
4. Males were more likely to report binge-drinking, frequent alcohol use and drunkenness, and early initiation of alcohol use. They did not differ from females on lifetime and past year drinking. These findings were consistent across the districts.

(DSD, 2012)

Table 51: Alcohol use: Lifetime and past year

		LIFETIME USE (Q28)									PAST YEAR USE (Q30)*								
		MALE			FEMALE			TOTAL			MALE			FEMALE			TOTAL		
		n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI
Grade	8	1562	53.3	50.2–56.3	2125	53.9	50.9–56.9	3708	53.6	51.1–56.1	712	45.5	42.0–48.9	1022	50.5	47.5–53.5	1744	48.4	45.9–50.9
	9	2067	68.4	65.9–70.9	2466	69.6	66.8–72.4	4569	69.0	66.8–71.2	1217	59.2	56.0–62.4	1395	58.4	55.1–61.6	2636	58.8	56.5–61.1
	10	2002	77.9	75.6–80.2	2796	75.5	69.8–75.3	4822	74.7	72.5–77.0	1373	68.9	65.5–72.3	1817	65.1	62.6–67.7	3209	66.8	64.5–69.1
	Total	5631	66.6	64.6-68.6	7387	65.6	63.5-67.7	13099	66.0	64.2-67.8	3302	59.3	56.9-61.7	4234	59.00	56.9–61.0	7589	59.1	57.5-60.9
District	Metro-North	905	68.6	64.4–72.8	1225	67.9	61.4–74.4	2141	68.2	63.0–73.4	545	62.2	57.7–66.8	742	62.3	58.8–65.8	1294	62.2	59.1–65.4
	Metro-Central	977	65.3	60.7–69.9	1331	63.3	60.4–66.2	2323	64.2	61.12–67.2	578	61.2	51.6–70.8	755	58.1	51.90–64.2	1341	59.3	53.1–65.6
	Metro-South	822	63.6	56.45–70.6	1220	65.3	60.7–70.0	2054	64.6	59.5–69.70	474	58.4	53.3–63.4	705	60.9	54.5–67.2	1187	60.1	55.5–64.6
	Metro-East	906	66.1	62.2–70.1	1130	61.2	55.5–66.9	2051	63.1	58.9–67.3	539	63.3	59.2–67.5	635	57.9	54.0–61.9	1185	60.4	57.3–63.5
	Non-metro	2021	67.8	64.6–71.1	2481	67.8	64.7–71.0	4530	67.9	65.1–70.7	1166	56.0	52.3–59.6	1397	57.2	54.2–59.9	2582	56.6	53.9–59.9
Repeated grade	Yes	1906	73.9	71.2–76.8	1687	70.6	67.3–73.9	3612	72.3	69.9-74.9	1124	60.4	57.1–63.8	954	58.1	55.3–60.9	2092	59.4	57.1–61.7
	No	3675	63.4	60.9–65.9	5654	64.4	62.4–66.4	9390	64.0	62.1–65.9	2156	59.1	55.8–62.3	3262	59.3	57.0–61.7	5456	59.3	57.2–61.4

*Table 52: Alcohol use: Current (past 30 days) and past 7 days**

		CURRENT USE (Q31)									PAST 7 DAY USE (Q32)								
		MALE			FEMALE			TOTAL			MALE			FEMALE			TOTAL		
		n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI
Grade	8	353	22.7	20.2–25.2	509	25.8	23.2–28.4	868	24.5	22.6–26.4	280	17.4	15.2–19.6	376	17.7	15.7–19.7	657	17.5	16.0–19.1
	9	717	34.6	31.7–37.5	812	35.6	32.6–38.6	1539	35.1	33.0–37.2	476	22.8	20.1–25.5	519	22.1	19.8–24.3	1004	22.4	20.7–24.1
	10	908	46.2	43.0–49.4	1071	39..0	36.2–41.7	1992	42.1	40.0–44.2	563	29.1	26.3–32.0	643	23.5	21.0–25.1	1216	25.7	23.9–27.5
	Total	1978	35.9	34.1-37.7	2392	34.3	32.6-36.1	4399	35.1	33.7-36.4	1319	23.8	22.2-25.3	1538	21.3	20.0-22.6	2877	22.4	21.4-23.5
District	Metro-North	324	35.9	33.1–38.8	428	35.9	31.5–40.3	759	36.1	33.2–38.9	209	22.1	18.7–25.4	289	23.0	20.1–25.9	503	22.7	20.1–25.3
	Metro-Central	351	36.5	30.1–42.9	408	34.0	27.8–40.2	761	34.9	30.2–39.6	267	28.3	22.8–33.7	274	21.3	18.0–24.6	542	24.2	20.6-28.0
	Metro-South	290	37.4	33.4–41.5	388	35.5	31.0–40.0	682	36.3	32.8–39.8	205	25.9	23.0–28.8	259	23.3	20.0–26.5	467	24.3	21.9–26.8
	Metro-East	313	36.0	31.7–40.4	348	32.3	28.0–36.7	667	34.0	30.8–37.2	215	23.8	19.9–27.8	211	19.0	15.2–22.9	430	21.2	18.6–23.8
	Non-metro	700	34.9	31.9–38.0	820	33.9	31.4–36.5	1530	34.4	32.2–36.7	423	21.6	19.6–23.6	505	20.3	18.2–22.4	935	21.0	19.5–22.4
Repeated grade	Yes	772	42.2	39.5–44.9	589	36.1	33.0–39.1	1370	39.4	37.4–41.5	574	30.5	27.8–33.3	444	26.8	23.6–30.0	1027	28.9	26.9–31.0
	No	1192	32.8	30.2–35.5	1793	33.9	31.9–35.9	3004	33.5	31.9–35.1	734	20.4	18.2–22.6	1086	19.7	18.3–21.0	1830	20.0	18.8–21.1

*Among lifetime alcohol users

*Table 53: Alcohol use: binge drinking and age of onset**

		BINGE DRINKING (Q33)									AGE OF ONSET <13 YEARS (Q29)								
		MALE			FEMALE			TOTAL			MALE			FEMALE			TOTAL		
		n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI
Grade	8	266	16.9	14.5–19.3	353	17.3	14.8–19.7	621	17.1	15.3–18.9	644	44.5	41.1-48.0	909	46.3	42.9–49.9	1564	45.7	43.0–48.3
	9	501	24.9	22.4–27.5	458	20.5	18.0–22.9	968	22.5	20.6–24.5	559	27.5	24.6–30.5	620	26.3	23.6–29.0	1189	26.9	24.8–29.0
	10	613	31.6	29.1–34.1	587	20.9	18.8–23.0	1208	25.5	23.8–27.2	411	19.7	17.5–22.0	420	15.3	13.2–17.5	838	17.3	15.6–19.0
	Total	1380	25.4	23.8–27.0	1398	19.8	18.4-21.2	2797	22.3	21.1-23.5	1614	28.9	26.7-31.0	1949	27.2	25.4–29.1	3591	28.0	26.4-29.6
District	Metro-North	232	25.3	21.8–28.8	269	22.3	18.0–26.5	504	23.6	20.3–27.0	261	29.9	23.9–36.0	360	29.4	24.6–34.1	624	29.7	25.3–34.0
	Metro-Central	254	27.3	24.3–30.3	237	19.4	16.0–22.7	491	22.7	19.9-25.6	289	31.1	24.7-37.5	371	29.3	24.5–34.2	666	30.2	26.1–34.3
	Metro-South	215	27.6	22.7–32.4	239	20.4	17.1–23.6	457	23.2	19.7–26.7	262	33.6	26.6–40.5	376	32.7	28.0–37.5	644	33.3	28.3–38.3
	Metro-East	233	26.2	22.0–30.5	186	16.6	13.7–19.4	425	20.9	18.6–23.3	260	27.6	23.3–31.9	287	25.8	21.1–30.5	552	26.6	22.8–30.5
	Non-metro	446	23.3	20.8-25.9	467	19.8	17.6–22.1	920	21.5	19.8–23.2	542	26.0	23.4–28.5	555	22.6	19.7–25.5	1105	24.1	22.0–26.3
Repeated grade	Yes	636	34.6	31.9–37.3	417	25.3	22.3–28.3	1062	30.5	28.3–32.6	375	18.3	16.1–20.6	233	13.2	11.2–15.1	613	16.0	14.5–17.6
	No	736	20.8	19.0–22.6	968	18.2	16.8–19.6	1714	19.2	18.0–20.4	1224	34.0	31.5–36.4	1703	31.2	29.1–33.2	2950	32.4	30.6–34.1

*Among lifetime alcohol users

Alcohol Abuse

Alcohol remains the dominant substance of abuse across all sites except the Western Cape and the Northern Region. Between 20% (Western Cape) and 51% (Central Region and KwaZulu-Natal) of patients in treatment have alcohol as a primary drug of abuse (SACENDU, 2014).

In the Western Cape the most common primary substances of abuse reported by the 32 specialist treatment centres/ programmes participating in the SACENDU project between January – June 2013 were methamphetamine ('tik'), alcohol, cannabis and heroin.

Table 54: Mean age of patients in treatment centres by selected primary drug of abuse (January – June 2013)

Substance	WC	KZN	EC	CR	GT	NR
Alcohol	41	28	40	38	39	31
Cocaine/crack	34	26	35	30	32	28
Cannabis/Mandrax	28	32	28	23	26	20
Heroin	27	25	25	26	25	25
Ecstasy	33	28	-	-	21	-
Cannabis	20	28	25	21	22	26
Methamphetamine	27	19%	2%	8%	10%	13%
CAT	-	25	-	30	27	29
OTC/PRE1	38	30	40	47	39	31
Inhalants	19	25	-	17	18	16
All substances	29	27	34	31	28	27

(Source: SACENDU, 2014)

Alcohol is still the most common primary substance of abuse among patients seen at specialist treatment centres across all sites (except Western Cape and Northern Region), accounting for 51% of admissions in the Central Region and KwaZulu-Natal, 37% in the Eastern Cape and 27% in Gauteng (SACENDU, 2014).

Alcohol accounted for 20% of admissions in the Western Cape and 20% in the Northern Region. The proportion of alcohol-related admissions decreased slightly in Northern Region. The Central Region

and KwaZulu-Natal are the only sites where over 50% of patients are treated for alcohol-related problems (SACENDU, 2014).

The mean age of patients seen at treatment centres who had alcohol as the primary substance of abuse ranged from 28 years to 41 years across sites. This is substantially older than the mean age for other drugs. Such patients are also more likely to be male. The proportion of patients with alcohol as their primary substance of abuse and female ranged from 11% in KwaZulu-Natal to 30% in the Eastern Cape (SACENDU, 2014).

14. Regulatory Impact

Context

The WCLA is responsible for creating a regulatory framework for the retail sale and micro-manufacturing of liquor in the province. Regulations are necessary in order to ensure that the negative impacts of alcohol abuse can be curtailed and that the liquor industry can operate in a safe, fair and economically fruitful way. With this mandate, it is important to recognise the impact that regulatory legislation and practices have on the province. Regulations ensure that the health and safety of the public can be protected, and enable better control of negative impacts such as crime. Illegal manufacture of liquor and illegal liquor outlets, which fall outside of these regulations, threaten the regulatory safeguards and could exacerbate negative impacts. However, these illegal and unlicensed outlets also constitute an important function within communities which must be considered in policy decisions, and as far as possible policies should be aimed at integrating these outlets into legal frameworks and improving their adherence to regulations of the liquor industry.

The liquor industry has many social and economic benefits in the context of the Western Cape, but also presents considerable challenges such as exacerbating crime, negative health impacts and a sizable illegal liquor manufacturing and trade industry. For this reason, the regulatory environment has many conflicting interest groups and needs to be carefully navigated; policy needs to balance the potential for job creation and income generation with the costs of alcohol abuse and over-consumption. The relevant interest groups and stakeholders include established enterprises in the liquor industry like SAB, various sectors of national government such as the dti and the Department: Agriculture, Forestry and Fisheries, provincial and regional government, the NLA and the WCLA, healthcare and crime prevention organisations, the Industry Association for Responsible Alcohol Use (ARA), various NGOs, licensed and unlicensed liquor manufacturers and traders, and community members, especially those who are negatively affected by alcohol abuse or over-consumption.

Research by the Department of Social Development, in the National Drug Master Plan 2013 – 2017, estimates that the economic cost to South Africa of alcohol abuse is between 1 and 4 percent of GDP per annum. However, the economic benefits of the liquor industry are immense, with an estimated contribution of between 3.9% (R93.2 billion in 2009/10) and 4.4% (R94.1 billion in 2009) of GDP

based on research by Truen et al (2011) and Econex and Quantec Research (2010). In addition, the liquor industry in the Western Cape provides 275 000 jobs (Herrick 2012).

The licencing regulations implemented by the National Liquor Authority and the Western Cape Liquor Authority have created increased licencing and regulation within the liquor industry. Nationally, in the retail sector it is estimated that over 65,000 licences have been issued. Every distribution site and subsidiary owned by an enterprise is required to be individually registered, which adds to this large number of licences issued (Parry, 2010). This indicates a highly diverse and competitive industry, but also shows that for single enterprises having to register multiple sites and subsidiaries, major administrative costs and bureaucracy are involved which could be reduced by streamlining and simplifying processes and requirements.

The industry seems to be largely racially divided and there are considerable hurdles to black empowerment, one of the chief national policy goals. The informal and unlicensed segment is largely made up of black and poor individuals, and the formal and regulated liquor industry has struggled with implementing transformation. The wine industry is one example of this lack of transformation. 2013 estimates show that 5,000 hectares of over 100,000 hectares of wine farm land was black owned. Only 31% of these black-owned farms were “fully black-owned” (Purchase 2013). These racial dynamics and the need for transformation in the country show that policymakers need to take South Africa’s historical context into consideration and find ways to integrate largely black-run unlicensed outlets into the formal and regulated liquor industry. Inclusive policies could integrate unlicensed shebeens and taverns into the formal sector, and black individuals already empowered through these businesses could operate legally, safely and under the stewardship of the WCLA, improving conditions for business owners and patrons.

Another consideration when assessing regulatory impacts is the effect of alcohol abuse and over-consumption on the health of the population. It is vital to investigate these socioeconomic concerns to gauge the full impact of regulations in the liquor industry. The ARA highlights the hazardous effects of foetal alcohol syndrome (FAS) particularly in the Western Cape where farmworkers were traditionally paid with the “*dop* system”, where alcohol was used as a substitute for monetary remuneration. While this practice has been banned, there are concerns that it might still be practiced, particularly in the informal sector such as in shebeens. The World Health Assembly and the World Health Organization (WHO) have adopted resolutions for the implementation of

programmes and policies to reduce harmful alcohol consumption (Parry, 2010). In 2008, the WHO Regional Director for Africa proposed a 10-point action plan to reduce harmful alcohol consumption on the continent. The strategies included:

- regulating availability
- restricting sale
- regulating marketing
- increasing taxes and prices
- enacting, strengthening or enforcing drinking and driving laws
- establishing and strengthening alcohol information and surveillance systems
- increasing community action
- strengthening the health sector response
- raising political commitment
- building partnerships

South Africa's per capita alcohol consumption is estimated to be between 10.3 and 12.4 litres, the higher number including consumption of homebrewed alcoholic concoctions (Rehm et al., 2004). This positions South Africa as one of the countries with the highest alcohol consumption per drinker in the world, similar to countries such as the UK and the Ukraine (Rehm et al., 2004). South Africa also demonstrates hazardous patterns of drinking such as drinking first thing in the morning, drinking to intoxication, and drinking apart from meals (Rehm et al., 2003; Parry, 2005). Alcohol is estimated as the third largest contributor to death and disability in South Africa, trailing only unsafe sex and interpersonal violence (Parry, Morojele & Jernigan, 2009). Stringent regulations are therefore vital to ensure that the negative socioeconomic impacts are curtailed and that alcohol abuse and over-consumption are directly combated in policy and in its implementation.

Alcohol consumption places a heavy burden on South Africa's health system, with research indicating that 46% of non-natural deaths in South Africa involved persons with blood alcohol concentrations (BACs) greater than or equal to 0.05g/100ml (Matzopoulos et al., 2003). In fact, 2003 data for non-natural deaths indicates that 49% of those deceased for all causes of death had positive BACs and the mean BAC was 0.18g/100ml, with high rates for both homicides and suicides (Harris et al., 2004).

In addition to the health and mortality impacts and how regulation impacts on these, there is also the aspect of crime. In their research, English et al. (1995) found that 47% of homicide or purposeful injury could be related to alcohol use. Other estimates place the rates of violent crime related to alcohol use between 27% and 46% (Single et al. 1998; Schultz & Rice 1991). Alcohol acts as a suppressant of various neurotransmitters that would normally inhibit aggression by causing anxiety or fear. Studies link alcohol to violence, particularly child abuse and rape, and show that unregistered drinking establishments like shebeens might create drinking contexts conducive to violence or other illegal activities (Shaw & Louw, 1997). The South African Police Service in the Western Cape conducted a study in 1996 of violent crime that showed that alcohol was involved in 64% of cases in which the motive was known and in 24% of cases in which the circumstances surrounding the murder were known (South African Police Service, 1997). Security Studies surveyed persons who were victims of serious assault and found that in 40% of cases victims believed that, at the time of the assault, the assailant was under the influence of alcohol or other drugs. Additionally, a third of victims expressed that when the assault occurred they were under the influence of alcohol themselves (Omar, 2004). The crime of driving under the influence of alcohol has also been related to many deaths in South Africa.

The World Health Organization indicates that a multi-faceted policy approach is needed. Targeted individual as well as population-based approaches aimed at reducing per capita consumption of alcohol are needed (Parry & Bennetts, 1998).

Regulations and policies need to take cognizance of the valuable economic contribution and opportunities afforded by the liquor industry, as well as bearing in mind the immense socioeconomic costs in terms of illegal liquor manufacturing and trade, health impacts and alcohol's influence on crime. In formulating strategic interventions, it is necessary to engage all stakeholders such as major liquor enterprises and licensed businesses, communities and interest groups, at-risk groups who abuse or over-consume alcohol, as well as informal and unlicensed individuals or businesses who rely on the liquor industry for subsistence or who are economically empowered through it, particularly shebeens who might be interested in being integrated into the formal sector.

Interventions

Addressing and overcoming the negative effects of alcohol abuse and over-consumption requires not only well-crafted policies and regulations, but also the effective implementation of these.

Regulations on the liquor industry need to be mindful of which factors limit the practices of an economically healthy liquor industry, and which factors protect the health and safety of society. Interventions need to balance these various factors.

Interventions to combat the negative impacts of alcohol abuse and over-consumption fall under three categories: agent interventions, host interventions and environmental strategies.

- Agent interventions aim to tackle the agent itself, namely liquor in this case, for example limiting its availability or increasing its cost
- Host interventions tackle those who over-consume or abuse liquor, such as not serving those who are already drunk
- Environmental strategies focus on the context within which liquor is marketed, distributed and consumed, and tries to create an unsuitable environment for alcohol abuse or over-consumption. These strategies are seen as having the best potential for reducing alcohol-related violence or crime (Mosher & Jernigan, 2001)

Various strategies are employed nationally and internationally. Parry and Dewing (2006) summarise these strategies in the table below. These strategies cover agent, host and environmental interventions.

Table 55: Strategies for Reducing alcohol-related crime, violence and injury

Place: Restricting Physical Availability and Facilitating More Responsible Retail Practices	• Restrict hours and days of sale and bring unregulated outlets into regulated market • Restrict outlet density and outlet location • Require responsible beverage service programmes and codes of conduct • Establish accords between licensees, police, local authorities and community organisations in trouble spots • Encourage server liability in cases where alcohol has been served to intoxicated persons who go on to harm themselves or others

	• Conduct routine enforcement programmes to ensure compliance with laws prohibiting sales to minors/intoxicated persons, and to control public nuisance activities • Conduct Last Drink Surveys in order to identify "problem premises" for intervention • Increase community access to information regarding violations and complaints • Prohibit/restrict alcohol availability in public settings (e.g. beaches, parks, sporting events) • Discourage free or heavily discounted drinks • To reduce underage drinking establish a mechanism of referral for dealing with young persons who use false or altered identification to enter licensed premises, improve training of and require certification for crowd controllers at bars/clubs, and establish alternative alcohol-free entertainment to young people • Encourage community organisations to implement alcohol-safe environmental policies
Price: Restricting Accessibility	• Increase alcohol excise taxes and adjust annually to reflect inflation
Promotion: Restricting Advertising and Marketing	• Advertising not permitted when 15% of viewing audience is between 10 and 18 (legal drinking age) • Eliminate advertising with a substantial appeal to underage consumers • Match level of alcohol advertising with equivalent exposure to health and safety messages • Institute rotating health warning labels that are conspicuous and easy to read • Prohibit outdoor advertising and billboards where children are likely to be present or in high crime areas

Product Restrictions	• Restrict size of alcohol containers to that of one standard drink (e.g. 340ml of beer) or multiples thereof • Impose special labelling and bottling requirements so that alcoholic products are easily distinguishable from non-alcoholic products • Move towards packaging alcohol in safer materials and dispensing alcohol in safer materials (e.g. plastic) – especially in high-risk locations
Drink-Drive Counter-Measures	• Increase the use of random breath testing • Introduce a graduated licensing system for novice drivers
Treatment	• Introduce mandatory treatment for repeat drink-drive offenders • Introduce alcohol/drug treatment for persons incarcerated for certain crimes

Herrick also offers strategies to mitigate what she argues is “alcohol-as-disaster”, linking the negative impact to the Western Cape as disastrous in scale and linking it to various factors, particularly poverty. She suggests firstly improved access to education and improved school retention rates, and secondly instituting more equitable and sustainable paths to social and economic development as policy focuses which could benefit the province. Policy needs to take stock of both behavioural and contextual factors in order to alleviate these negative impacts (Herrick, 1053-4).

The Department of Social Development, in their National Drug Master Plan 2013 – 2017, stress that: “In the field of substance abuse it is generally accepted that no single approach such as criminalising or decriminalising substances or abusers would solve the problem of substance abuse. Instead a balanced approach that uses an integrated combination of strategies is advocated.”

It is important not just to employ blanket regulations which might not have the desired impacts, but rather to understand the effectiveness of each regulation so that it does not limit the activities of the liquor industry while providing little or no benefits in terms of health or safety. For example, blanket regulations might be less effective in combatting FASD than directed approaches which stop the sale of alcohol to pregnant women or bar their consumption of alcohol in heavily affected areas. An assessment of these factors will be given in the cost/ benefit analysis of liquor enforcement at the end of this section.

The Liquor Act of 2003

The Department: Trade and Industry is responsible for the administration and enforcement of the Liquor Act (59 of 2003) through the National Liquor Authority (NLA). The regulation of the liquor industry is a concurrent national and provincial legislative competence.

The Act provides for the establishment of norms and standards, minimum standards, and measures for co-operative governance in the regulation of liquor. The Act also provides for the establishment of the National Liquor Policy Council (NLPC) composed of all MECs responsible for the administration of liquor matters in each province. The NLPC is chaired by the Minister of Trade and Industry. The Act aims to reduce the socioeconomic and other costs associated with alcohol abuse and to promote the development of a responsible and sustainable liquor industry. It also provides for public participation in liquor licensing.

The Department: Trade and Industry drafted a liquor policy document in 1997 which served as the impetus for the current Liquor Act. The liquor policy also aimed to promote transformation in the liquor industry and to encourage wider participation, as well as to reduce consumption levels of alcohol in South Africa and encourage responsible drinking. Due to opposition from various stakeholders, all aspects of this policy document did not form part of the Liquor Act of 2003. Key policy points were omitted or changed in the final Act, and a ruling by the constitutional court prevented national government from taking jurisdiction over retail regulation. The following aspects are among those altered in the final Act according to the dti's 2013 impact assessment of the effectiveness of the Liquor Act:

- A planned prohibition of cross-holdings allowing vertical integration was not included in the final Act. This factor is shown to have contributed to current barriers to entry in production and distribution markets, limiting transformation of the liquor industry.
- A specific levy was proposed on the manufacturing and importation of liquor which would be channelled towards anti-abuse initiatives. This was replaced in the final Act by a requirement for licensed entities to contribute an unspecified amount to anti-abuse initiatives
- The policy proposed the formation of a National Liquor Advisory Committee comprising of members from government, the liquor industry, civil society organisations and other

relevant stakeholders. However, the final Act only required the establishment of a National Liquor Policy Council consisting of representatives from National and provincial government. Research conducted in 2009 studied the drinking patterns of South African consumers and concluded that the prevalence of alcohol abuse has remained unchanged for the 12 years prior, indicating that the Liquor Act might not have been effective in reducing all socioeconomic harms (Peltzer, Davids & Njuho, 2011). This lack of progress could be the result of inadequate policy or poor implementation of the regulations already in place.

Parry argues greater regulation for alcohol policy developments is needed, as they have been influenced by competing forces and taken place in a piecemeal fashion. Research favours a comprehensive national alcohol strategy cutting across different sectors (2010). In order to ascertain the regulatory impact of the WCLA in conjunction with the NLA under the provisions of the Liquor Act 2003, a factor analysis will be conducted. The particular effects of policies to tackle the vast illegal trade and manufacture of liquor will be assessed, as well as measures to better regulate and integrate the illegal outlets in the province. Policies such as limited trading hours and regulations on Sunday trading will be viewed in relation to their impact on the objectives outlined above. Finally, a cost/ benefit analysis of liquor enforcement will be conducted in order to clarify the potential effects of stricter or more lenient enforcement measures.

a. Factors that hinder illegal outlets from operating in the regulated space

Characteristics of illegal outlets

Illegal outlets for the sale of liquor are numerous and diverse in their characteristics. It is estimated that the majority of liquor consumption in South Africa occurs through informal and unlicensed liquor outlets, both in on-consumption and off-consumption contexts. Estimates suggest that more than 90% of beer and 50% of wine volumes sold annually are consumed in this sector. This positions the informal liquor retail market as extremely important in any policy considerations.

The informal retail markets also provide valuable entrepreneurial and economic opportunities for marginalised people. The informal sector could be incredibly valuable in achieving greater transformation and black empowerment if it is integrated effectively into the regulated liquor industry.

The informal market consists of unlicensed retailers, producers and distributors of liquor. Often these unlicensed entities are in direct competition with licensed businesses who may have previously been unlicensed. The Sustainable Livelihood Foundation (2012) suggest that there at least 180,000 and as many as 250,000 informal liquor traders of varying sizes operating in South Africa.

When assessing these informal traders, Sustainable Livelihoods Consultants divided the types of retailers into three categories ("Rapid Assessment", 2009: 22). Level 1 enterprises were defined as selling 480 crates of 750ml beer per week. Level 2, which have inferior physical structures and volume of sales, sold approximately 85 crates of 750ml beer per week. These businesses would mostly be unable to meet all the licensing requirements, especially in terms of infrastructure. Both of these categories were seen as established businesses which operated from formal structures; however, only level 1 businesses had endeavoured to obtain licenses. The researchers estimated that approximately 8500 shebeens would fall into these two categories (2009). Level 3 was characterised by very small enterprises, which typically sell small quantities of 750ml beer and / or "Virginia" or papsak, and even illegal concoctions. Often these level 3 enterprises were run for subsistence only rather than to make large profits. They were often run by women who were the breadwinners of their families.

The findings indicated that level 1 and 2 enterprises would likely have the capacity and desire to obtain licenses, amounting to around 8,500 enterprises. In their survey, Sustainable Livelihood Consultants found that approximately half of these businesses had already applied for licenses, and 20% of them were awaiting responses on their applications. The findings are encouraging as they indicate that many businesses operating in the informal sector would be open to integration into the formal liquor industry. This would ensure that these businesses could be better monitored and regulated in order to meet the standards of the WCLA and the NLA.

In a survey commissioned by the dti, it was found that unlicensed shebeens had a favourable view of obtaining licenses. They stated the advantage of being able to buy liquor and have it delivered by the brewery at a cheaper cost, as well as being able to operate without fear of being raided. The only disadvantage mentioned in the survey with regards to being licensed is that when licensed they cannot set their own prices or operate out of regulated hours. ("Impact Assessment", 2013)

The Sustainable Livelihoods Foundation also found that less than 7% of the almost 500 informal liquor retailers which they identified in their research were licensed, while over 80% of informal retailers have never attempted to undergo the licensing process ("Impact Assessment", 2013). The vast majority of the informal liquor traders are thus unlicensed and not actively pursuing licensing.

Suspicion or lack of knowledge of licensing process

Research by FOSHIZI indicated that for many unlicensed retailers, the licensing process is often met with suspicion and considered too daunting to undertake. They identify particular concerns around the cost of application, the stringent requirements for liquor outlets (including the location, size and availability of amenities) and the belief that there is too much "red tape" ("Impact Assessment", 2013).

The fact that the bulk of national liquor consumption occurs in these unlicensed outlets is of great concern. Due to poorly resourced, unsafe environments within these outlets, policies need to be geared towards improving access to licencing by educating or supporting shebeen owners, or perhaps simplifying licensing requirements and processes. The research suggests that unlicensed outlets often are daunted by the process of obtaining licenses, which shows that more consultation and inclusion of these stakeholders needs to take place ("Impact Assessment, 2013: 75).

Unsafe and disruptive spaces

Further factors inhibiting these illegal outlets from operating in the regulated space are the fact that a large number of outlets operate in residential areas. There might be problems with commercial zoning in township areas, and the ease of operating in the owner's backyard, avoiding costs for additional property or facilities, makes this the preferred mode of operation for many traders. While shebeens offer an important source of income for individuals who might have limited opportunities for formal employment, there are many negative aspects when these sites are unregulated and operate in residential areas, such as noise, the lack of ablution facilities and resultant public urination, underage drinking, drugs and prostitution (Herrick, 1051) as well as the risk of sexual assault. Herrick also notes that shebeens operate as both public and private spaces, many being undetectable from the outside, being visited mostly by regular customers and often being hosted in tiny spaces like a $5m^2$ room (Herrick, 1051). This private aspect allows for the impression that these spaces can somehow avoid regulation.

The unsafe conditions are a major deterrent to many of these unlicensed outlets being included in the regulated market. Because of the real and perceived risks of these establishments, community groups have strongly campaigned against them and have supported legislation to remove them from communities in the Western Cape. Parry notes that community organisations, including religious groups, were vocal opponents of legalising shebeens, and pressure from these groups was key in preventing the Western Cape Province from passing legislation that would have allowed shebeens to integrate into the regulated market (2010: 1344). Parry also explains that there was not enough collaboration between shebeeners when legislation was being debated. These factors placed considerable barriers to shebeens becoming licensed and regulated.

Research thus stresses the need establish commercial zoning in township areas which could allow shebeens to be segregated from residential areas, as well as simplifying the process of obtaining a license while respecting safety and health considerations ("Impact Assessment", 2013: 85).

Desire to remain unregulated

In addition, shebeens might be resistant to being licensed since this would place additional requirements on them in order to meet the minimum requirements of the Liquor Act. By not being licensed, shebeen owners can operate with no regard for infrastructure or other requirements, such as having separate toilets for men and women. They can also avoid licence fees and various taxes. The situation also continues to be profitable for retailers who sell liquor to the shebeens for resale, as well as for established brands in the liquor industry who, while campaigning for the legalisation of shebeens, will see their products enter the market regardless (Parry, 2010: 1344).

Poor monitoring of licensed outlets also creates an unfavourable climate for increasing the desire of unlicensed outlets to obtain licenses. Because these licensed outlets are able to contravene certain regulations without the consequences they should face, unlicensed outlets feel that there might be little incentive to gain licenses. The unlicensed outlets can still remain competitive since the licensed outlets do not offer better environments or services in many cases. Rigorous monitoring is thus important so that licensed outlets consistently provide a safer and better resourced drinking environment than unlicensed outlets, increasing their competitive advantage so that unlicensed outlets will aspire towards obtaining licenses.

These objectives can be obtained by stricter monitoring and enforcement of license conditions, including prohibitions on serving minors such as ablution facilities and restrictions on underage drinking and work. This also requires training for licensees and police officers, and greater awareness among shebeen clientele about the advantages of licensed outlets ("Impact Assessment", 2013: 85)

Other factors relate to a lack of resources and the desire to maximise profits in ways that are not possible if following liquor regulations. For example, shebeens who produce their own concoctions often cannot abide by legislation to have warning labels. Shebeens often do not regulate time of sale, and operate for much longer hours per day and on Sundays to increase income.

Summary of main factors

The research above describes various aspects of the illegal outlets in the Western Cape that need to be overcome by policies which seek to curb the unlicensed trade of alcohol. All of these various factors present challenges which will be discussed in relation to policy considerations. A summary of the relevant factors hindering the integration of these illegal outlets into regulation includes:

- The large number of unlicensed outlets
- The fact that individuals are economically empowered through it
- The fact that many families subsist on the illegal liquor trade
- The difficulty of entering the highly competitive regulated market
- Suspicion of local law enforcement
- Suspicion of legislation
- Lack of education, particularly about the process of licensing
- Lack of consultation with shebeeners during policy decisions
- Many outlets observing no advantages to being licensed
- Shebeeners finding the licensing process daunting
- Poor monitoring of licensed outlets
- Police corruption: accepting bribes or confiscating alcohol for their own purposes
- Operate in residential areas
- Poor commercial zoning in townships
- No resources to relocate establishments if illegally located
- Unsafe environments

- Lack of infrastructure required for licensing, such as toilets
- Selling to minors
- Selling of illegal homebrewed concoctions
- Prevalence of alcohol abuse
- Prevalence of crimes and drug use
- Opposition from communities and religious groups
- Contested legislation and many different interest groups with opposing views, leading to long delays

b. Policy interventions that have been utilised to formalise illegal outlets in South Africa and internationally

Understanding policy positions

Three positions are advanced to describe policy intervention frameworks in the South African context. These are described by data from Sustainable Livelihoods Consultants below:

- Moral/ prohibitionist

The proponents of this viewpoint argue that trading in residential areas and other non-white areas should be widely prohibited. Retailing should be limited to those enterprises with licences that operate from commercial or other suitably zoned locations. Unlicensed locations, according to those who hold this view, should be closed down regardless of the economic impact on shebeeners. The proponents justify this view by arguing that liquor consumption has destructive consequences in poor communities, leading to crime, violence, health problems and other negative impacts. They argue that the provincial government should restrict sale in these communities. Social groups such as Concerned Citizens Against Alcohol and certain political leaders.

- Normalisation

Leading industry stakeholders, including the South African Breweries (SAB) and the South African Liquor Brandowners Association (SALBA), hold this view. The proponents of this view see the current structure of liquor retailing in non-white areas as a remnant of apartheid policies that distorted the market and led to non-white retailers trading illegally. Shebeens should be legalised in order to

normalise the supply chain and increase regulation. SAB is a strong proponent, demonstrating that the number of licenced venues per consumer is significantly below comparative international figures, especially in non-white areas, and only approximately 4% of all licences have been issued to taverns, despite the fact that the majority of on-consumption occurs in the shebeen sector.

- Livelihood rights

Organised bodies representing shebeeners have taken this standpoint. They defend shebeening and argue that illegal liquor traders have no alternative economic opportunities and they engage in liquor sale purely for subsistence and to support their families. This is therefore a livelihood right and should be protected by the constitution. The Western Cape Shebeeners' Association (WCSA) argues: 'As to [the MEC's] suggestion of re-employment of shebeen owners into unknown and unspecified industries of employment it is a…breach of my constitutional right of freedom of choice of employment' ("Rapid Assessment", 2009: 12).

Policy developments in South Africa

The national liquor bill was withdrawn in 2001 and the regulation of liquor licensing was recognised as a provincial competence. The Western Cape provincial government met these changes by establishing a Policy Development Panel to draft a provincial liquor policy. This panel tabled a comprehensive liquor policy in 2003 that provided for the integration of unlicensed outlets into the regulated market. This policy was formalised as a Bill in 2005 and approved by the legislature in 2007. However, it was only enacted fully in late 2008. These long delays were due to inputs from various stakeholders and restructuring of the Bill.

In the approved Bill, policy no longer focused on integrating unlicensed outlets but rather on closing them down by various means, including prosecuting distributors who sell alcohol to unlicensed outlets and increasing penalties for contravening liquor regulations. It also provided for reducing permissible hours for sale of liquor and mandated training for license holders on issues like not selling to minors and having proper facilities (Parry, 2010: 1341). These policies were intended to protect public safety and health as well as weed out illegal outlets.

Two important advances have taken place on the national level in 2003. In February of that year, the Minister of Finance reported in his budget speech that new benchmarks for liquor taxation would be 43% of retail sales price for spirits, 33% for clear beer and 23% for wine. The lower taxation on wine

was to encourage the growth of the lucrative local wine industry, and the scaled taxes were aimed at taxing those beverages with higher alcohol content to discourage their consumption and to tackle problem drinking. Over time excise tax levels have been increased towards these targets to bring them in line with international trends, and new targets of 48% for spirits and 35% for beer were set.

Also in 2003 the Department: Trade and Industry introduced a revised National Liquor Bill. This Bill provided legislation on the retail sale of alcohol for those provinces that did not pass their own legislation. The legislation was broad and included such aspects as barring employment of those under the age of 18, barring the sale of liquor to those under the age of 18, as well as providing that the Minister of Trade and Industry, in consultation with the Minister of Health, may prescribe public health notices to be displayed at points of sale (Parry, 2010: 1341). The Western Cape Government is one of the three provincial governments which fulfils liquor licensing and regulation as a provincial competence, with most other provinces relying on the broad national liquor legislation. A number of provinces have enacted their own legislation, but only liquor Acts in the Western Cape and Northern Cape effectively repeal the authority of the Liquor Act of 1989. Parry notes that the disjointed nature of liquor regulation means that government is not comprehensively addressing the fact that the majority of liquor outlets are unlicensed and continue to operate outside the law. He demonstrates that focused national policies will more effectively address this problem (Parry, 2010: 1341).

The South African constitution states that liquor licensing is a provincial competence and trading regulations and the control of liquor outlets is a local government competence. Municipalities are responsible for implementing by-laws that determine trading days and hours for on- and off-consumption, as well as determining penalties if these by-laws are contravened.

By instituting the requirements for licenses and enforcing this legislation, the number of licensed outlets has skyrocketed. By the end of 2012, the NLA had issued approximately 2,400 licences. Most of these licenses are for distribution sites (“Impact Assessment”, 2013: 56).

Liquor policies also led to a crackdown on illegal outlets. Police raids are a common occurrence at unlicensed shebeens. Research indicates that while this is in line with legislation and justified, there is often corruption involved in SAPS raids, with bribes being demanded, due process not being followed, and confiscated liquor being consumed or retained Police raids also do not always have the intended effects, as shebeeners will find new ways to trade illegally after raids. This is due to the

fact that police do not communicate adequately with shebeeners about the requirements of the Liquor Act, these shebeeners have no alternative livelihoods and they are often still ineligible for liquor licenses. In addition, there are reports of theft and even violence by police during raids. (Herrick & Charman, 2013: 28). These irregularities and the difficult position of shebeeners ensured that the illegal activities continued unabated, more covertly than before, and undermined the legitimacy of the police.

These policies seem to have an oppositional approach to illegal outlets, and most do not seem intent on integrating these outlets into the regulated market but rather on eradicating them. The policies on increasing training for unlicensed shebeeners might be effective in allowing them to enter the formal market, and commercial zoning in townships would allow for the greater possibility of traders fulfilling the requirements for licensing. However, these policies would not apply to subsistence sellers of alcohol or to the illegal manufacturing of alcohol, which would be very challenging to bring into the regulated market.

Due to the informal nature of the unlicensed market and the strict requirements for licensing, national and provincial policies have not been effective in steering unlicensed outlets towards obtaining licenses on a large scale, even though research indicates that there are a large number of these outlets who aim to have licenses and are actively pursuing them ("Rapid Assessment", 2009: 24). This indicates that policies and intervention strategies are currently inadequate to address the unregulated market in South Africa.

Policies aimed at illegal outlets and manufacturing internationally

Internationally, policies on regulating the liquor industry are extremely diverse. In most developed nations, the unregulated sale of liquor constitutes only a tiny percentage of the market share, and policies are mostly focused on curbing alcohol abuse.

The table below, taken from DNA Economics's research for the dti, compares international liquor regulations in selected countries.

Table 56: International Liquor Regulations

	Special licence required for production	Special licence required for retail sales (off- and on-consumption)	Legal BAC limits in place	Age restriction for sale of liquor to under-age drinkers	Legal restrictions on advertising
Australia	Yes, regulated at sub-national level	Yes	BAC level of 0.05%, zero tolerance for young and professional drivers	18	Yes, but largely voluntary/self-restricted
Brazil	No, though some requirements may pertain to the labelling of liquor products.	Varies by state / local government.	Zero tolerance translated into a 0.02% BAC level (0.2g / l) to account for measurement errors.	18	Minimal, focussed on television times
Germany	No	No special licence required.	BAC level of 0.05%.	16 for beer and wine, 18 for spirits.	Some restrictions on radio and television airing times.
Kenya	Yes, Excise License issued by the Commissioner of Domestic Taxes required	Yes	No	18	Yes, partial restrictions
Mexico	Not clear, though specific licence required for the production of Tequila.	Yes	Legislated and applied at State / Municipal level, BAC limits vary by state for those states where a BAC limit is in place.	18	Some restrictions on times of television adverts as well as proximity of marketing near schools etc.
South Africa	Yes	Yes, provincially regulated	BAC level of 0.05% (0.5g / l) and BAC level of 0.02% (0.2g / l) for professional drivers	18	No legal restrictions. Voluntary (self-regulating) restrictions in place.
Sweden	Yes	Monopoly of most liquor sales	BAC level of 0.02%	20 for off-premise (some permissible sales to age 18 and over). 18 for on-premise	Ban on most forms of advertising, and on spirits in print media.
Thailand	Yes, licence issued by National Excise Department	Yes	BAC limit of 0.05% (0.5g / l) with zero tolerance for certain driver categories including learner drivers, taxi, train and heavy truck drivers.	20	Restrictions on time of advertising for televised media, as well as restrictions on the type of advertising material.
Turkey	Yes	Yes, administered at both a national and local level.	BAC limit of 0.05% (0.5g / l).	18	Yes, partial ban on advertising through some media and strict regulations focused on both print and media advertising.
Ukraine	Yes	Yes	Zero tolerance approach, with a practical BAC limit of 0.02% (0.2g / l).	18	Yes, restrictions (and ban on outdoor advertising) mainly applicable to spirits and wine.
Zambia	Yes	Yes	BAC limit of 0.08% (0.8g / l)	18	No restrictions on advertising

Source: DNA Economics based on various sources.

High excise duties is one of the main policy interventions to tackle alcohol abuse, raising the price of alcohol in an attempt to lower consumption. This strategy has been shown to have an adverse effect in countries such as Sweden, where many consumers choose to purchase their alcohol from neighbouring countries with lower excise taxes. The country also sees high levels of informal alcohol production. This strategy might encourage an increase in the illegal or unregulated trade of alcohol in certain situations ("Impact Assessment", 2013: 134).

It is concerning for Sweden's local liquor industry since consumers are incentivised to smuggle liquor due to high excise taxes. The study compares the price of a bottle of Bells Extra Special Scotch in four countries:

- NKr270 ($38) in Norway
- NKr225 in Sweden
- NKr117 in Denmark
- NKr90 in Germany.

The Swedish Brewers Association estimates that in 2010, a total of 89.1 million litres of beer entered into Sweden via cross border trade, of which 52.3 million litres was for legitimate personal use, and 36.8 million litres was contraband intended for onsale ("Impact Assessment", 2013: 135). Thus, extremely high excise taxes might not be a viable solution to diminish the illegal trade of liquor.

In Australia and New Zealand, the Last Drink Survey (LDS) has been used by liquor licensing coordinating committees since 2001 to ensure compliance with regulations and the safety of the regulated market. Police forward data to local committees which meet to discuss licensing issues. Any "problem premises" identified are targeted with training initiatives. LDS has reportedly seen a decline in police call-outs to problem premises, as well as a reduction in data identifying problem premises, indicating the effectiveness of this strategy on a local basis (Parry & Dewing, 2006: 49).

Kenya took an alternative approach to reduce the consumption of illegal liquor. The Senator Keg experiment involved removing excise tax on the local beer brand Senator Keg, introduced by EABL. Senator Keg was introduced in 2004 at a fifth of the price of EABL's mainstream beer Tusker. Consequently, the brand increased its market share to 40% of the Kenyan beer market. Kenyan Revenue Authority approved tax exempt status for the brand in order to make it appealing to those who were purchasing illicit beverages. The success of the brand has, however, led to calls to reintroduce excise tax on the beer ("Impact Assessment" 2013: 26).

Thailand, under their Liquor Act, has a very straightforward and low-cost licensing process which has resulted in a large amount of establishments obtaining licenses. However, the country suffers from poor enforcement, leading to many unlicensed traders as well as to licensed retailers contravening many regulations. This highlights the fact that easing the licensing burden on liquor retailers would not be solely sufficient to ensure that regulations are followed. More straight-forward licensing processes as well as strict enforcement and monitoring are suggested based on this international example ("Impact Assessment", 2013: 147)

In Zambia, the Traditional Beer Act of 1930 was repealed and replaced by the Liquor Licensing Act of 2011. The new Act prohibited the manufacturing for sale of any liquor product containing more than 3% alcohol without a license. It also prohibited the manufacturing of traditional beer without a license. This intervention was aimed at criminalising and enforcing regulations on illegal liquor manufacture and sale.

Researchers also note that in addition to government policy, social movements have also been effective in targeting alcohol consumption (Room et al., 2002). In the early 1990's the campaign of an Indian women's movement led to a statewide ban on Arrack, a clear liquor distilled from molasses. (Room et al., 2002). The Indian government's support of these social movements have led to widespread gains. South African policy could similarly link with relevant social movements in order to increase effectiveness.

Reviewing South African and international policies demonstrates that liquor regulations need to be specific to context. The lax licensing regulations in Germany would likely not work in a country like South Africa. Thus, all of the factors and strategies need to be considered in formulating policies, and regulations should be cognizant of local constraints.

c. The economic impact of illegal trading on the business of legal traders

i. Illegal trading effects with regard to legally manufactured liquor

The ARA highlights the important impact that the liquor industry has on the national economy. The liquor industry is estimated to have:

• Sustained production to the value of R333 billion throughout the economy

• Supported more than 548 000 jobs throughout the economy

• Generated R41.8 billion in government tax revenue (6.7% of total tax revenue) – direct impact totalled R19.5 billion.

• Added R94.2 billion (or 4.4%) to the country's GDP in 2009

• For every R1.00 in sales generated by the liquor industry, R2.08 is added to the country's GDP. The liquor industry has particularly high spin-off effects on employment:

• For each job offered by the liquor industry and its direct suppliers, 6.3 additional jobs are supported in the rest of the economy (formal and informal)

• The majority of positions are for unskilled workers

• Around 88% of employees in the industry and its direct suppliers are from previously disadvantaged backgrounds ("Liquor and Advertising", 3).

It is estimated that there are between 50,000-60,000 licenced/ legal outlets for alcohol sales and distribution nationally, whereas the number of unlicensed outlets is much larger, estimated at 120,000. Most research identifies the greatest problems of alcohol abuse and negative impacts within this unregulated, unlicensed sector. There is also a significant loss of taxes in this sector. The ARA argues that instead of blanket policies to decrease drinking of legal products, the focus should be on diminishing drinking at these unregulated outlets and eliminating the manufacture of illegal liquor, which constitute the greatest problems ("Liquor and Advertising": 6).

Shebeening has very high economic potential. In 2009 it was estimated that 80% of township businesses have a turnover of R500 per week or less, but shebeens earn significantly more, with level 3 shebeens seeing turnover of +/- R900 per week and level 2 and 1 seeing turnover of approximately R7000 per week. This places shebeening in the top 3-5% of all informal businesses in terms of return on investment ("Rapid Assessment", 2009: 24). A large amount of these shebeens earning higher amounts make profits through the sale of legally manufactured alcohol such as 750ml labelled beer, with only level 3 shebeens selling mostly papsak or homebrewed concoctions.

While the revenue of these illegal outlets might seem small in relation to the size of the legal liquor industry, integrating these retailers into the legal market could ensure better conditions for workers and customers and more safety for consumers, which could have a positive impact on the image of the formal liquor industry.

There are particular differences between licensed and unlicensed shebeens which create negative impacts for the business of legal traders.

Licensed shebeens are limited to selling legally manufactured liquor. Licensed shebeens buy their stock directly from the manufacturers SAB, Distell and Brandhouse who also deliver the products to them. Licensed shebeens have regulated prices as part of their licensing agreements, and these prices are regulated by the manufacturers. They thus do not have the flexibility which unlicensed shebeens have in inflating prices ("Impact Assessment", 2013: 170).

Unlicensed shebeens, not able to buy stock directly from manufacturers, instead buy their stock only from the local taverns, bottle stores and wholesalers. The owner of the shebeen is responsible for the transport of the liquor from the point of sale to his or her shebeen premises. Unlicensed shebeen owners mark up their prices by between R2.00 and R4.00 per unit from the retail price at which they acquired their stock ("Impact Assessment", 2013: 170). This could discourage some illegal outlets from selling legally manufactured liquor due to the higher prices they need to charge in order to make profits.

Unlicensed shebeens are primarily in operation for subsistence of the shebeeners and their families. Licensed shebeen owners, on the other hand, use profits to not only provide for their families, but also to pay tax and to grow their businesses.

The unlicensed shebeen has no strict operating hours, often open for up to 18 hours in one day. Licensed shebeens have operational requirements. This creates the advantage for unlicensed shebeens during hours and days when licensed outlets are required to be closed. However, it has been found that due to these unregulated hours, there are more conflicts and cases of violence in unlicensed shebeens. They suffer from overcrowding and they are also often sites for illicit trading ("Impact Assessment", 2013: 187).

Illegal traders have been found to contravene many of the restrictions in the Liquor Act, particularly with regards to the conditions of the establishments. While the unlicensed outlets do provide additional jobs for many people in the communities where they operate, informal liquor employees often do not have formal contracts or protection, they have little job security, and they do not have fixed job descriptions. Payment for these workers has been estimated in the range from R1,000 to R2,000 a month, but workers in unlicensed shebeens report that they are sometimes given alcohol as a form of payment, prohibited by the Liquor Act. Shebeens could have an average of between three and twelve employees dependent on the size of the establishment. Unlicensed shebeens also have been reported to commonly employ minors. Reports also indicate that licensed and unlicensed shebeens frequently serve minors, although this is discouraged by security at many licensed shebeens ("Impact Assessment", 2013: 77).

In summary, the illegal trading of legally manufactured liquor has the following impacts on the business of legal traders:

- Economic potential for individuals with few viable income opportunities
- Greater number of unlicensed outlets than licensed, placing pressure on the licensed outlets in particular areas
- Legal products still enter the market and are taxed when sold to wholesalers or licensed taverns, where the shebeens often buy them
- Shebeeners, however, avoid income and other taxes
- Higher/ unregulated pricing in unlicensed outlets
- Create or sustain situations of problem drinking
- Poor working conditions, no contracts and poor compensation (sometimes in the form of alcohol) means these outlets do not empower workers
- Longer/ unregulated hours and days of sale means business taken from legal outlets and more problem drinking
- Improperly zoned and create disturbances in residential areas
- Many of the positive economic effects, such as increased employment in transport, security and branding associated with the licensed liquor industry, are lost with unlicensed outlets
- Negatively affect the image of the liquor industry and brands
- Licensed businesses seek to grow and expand, creating more economic opportunities in a regulated way, whereas many shebeens exist purely for subsistence
- Higher incidence of illicit alcohol

ii. Illegal trading effects with regard to illegally manufactured liquor

The WHO estimates that 26% of all alcohol consumed in South Africa is unrecorded, namely being produced, distributed or sold outside regulated channels ("Liquor and Advertising": 4).

Illicit alcohol can include the following:

- Excise evasion
    - This includes either licensed or unlicensed producers of alcohol who do not pay excise duties for liquor produced on a relatively large scale
- Unlicensed producers of liquor
    - Manufacturers not licensed to the NLA but who might pay some or even full excise taxes

- Micro-manufacturers without the appropriate provincial license who produce alcohol on a small scale. They might produce and sell “home-brews”, traditional beer or alcoholic concoctions.

Producers of illicit alcohol might employ various strategies, including using cheaper spirits to produce variants of other categories of spirits, industrial alcohol in the form of methanol or ethanol being used to produce cheap spirits, or using wine as a base to produce mixtures that can be marketed as spirits or ales, due to the lower excise duties on wines. The latter beverages, in many cases, might still be legal (“Impact Assessment”, 2013: 61)

The revised National Liquor Bill of 2003 included provisions for manufacturers of legal liquor products. Parry notes that manufacturers are required to indicate what measures they will take to contribute to combating alcohol abuse and which industry code of conduct they subscribe to (2010: 1342).

Excise taxes were also increased in the 2015 budget speech. The new tax rates for alcoholic beverages are tabled below:

Table 57: Changes in specific excise duties, 2015/16

Product	Current excise duty rate	Proposed excise duty rate	Percentage change	
			Nominal	Real
Malt beer	R68.92 / litre of absolute alcohol (117c / average 340ml can)	R73.05 / litre of absolute alcohol (124c / average 340ml can)	6.0	1.2
Traditional African beer	7.82c / litre	7.82c / litre	–	-4.8
Traditional African beer powder	34.70c / kg	34.70c / kg	–	-4.8
Unfortified wine	R2.87 / litre	R3.07 / litre	7.0	2.2
Fortified wine	R5.21 / litre	R5.46 / litre	4.8	0.0
Sparkling wine	R9.11 / litre	R9.75 / litre	7.0	2.2
Ciders and alcoholic fruit beverages	R3.45 / litre (117c / average 340ml can)	R3.65 / litre (124c / average 340ml can)	6.0	1.2
Spirits	R137.54 / litre of absolute alcohol (R44.36 / 750ml bottle)	R149.23 / litre of absolute alcohol (R48.13 / 750ml bottle)	8.5	3.7
Cigarettes	R11.60 / 20 cigarettes	R12.42 / 20 cigarettes	7.0	2.2
Cigarette tobacco	R13.03 / 50g	R13.94 / 50g	7.0	2.2
Pipe tobacco	R3.63 / 25g	R3.89 / 25g	7.0	2.2
Cigars	R61.87 / 23g	R64.96 / 23g	5.0	0.2

Source: National Treasury

The tax on legally manufactured alcohol, as highlighted by the ARA, accounts for approximately 6.7% of the total tax revenue. This amount is significantly impacted by the illegal manufacturing of alcoholic beverages, which contribute nothing to excise taxes.

2009 estimates indicate that 160,000 hectolitres of spirits and about 400,000 hectolitres of wine were illegally produced and consumed. In the vodka and cane markets, illicit production is estimated to make up around 13% and 6% of these markets respectively. Excise evasion could be as high as R400 million per annum (Holzkampf, 2012). SALBA estimated that up to 9 million litres of illicit spirits were produced in 2013. Despite clampdowns on illicit producers and ethanol importers, the industry is expected to be growing, mostly due to the rise in excise taxes, making many types of legally produced liquor unaffordable for poorer consumers ("Impact Assessment", 2013: 61).

It is difficult to measure the health impacts of illicit liquor since the composition of these beverages is so varied. However, studies have found that many producers of illicit liquor have been found to be using expired colourants and flavourants, to mislabel bottles and misidentify ingredients, and to produce and sell in unhygienic or contaminated environments ("Impact Assessment", 2013: 61). All of these factors make the illicit production of alcohol a major impediment to the work of the WCLA and a major threat to the focus on healthy and safe drinking in the regulated market.

Papsakke, while banned, still forms part of the illicit market. This could have a negative impact on the image of the local wine industry and lead to social ills such as FAS and problem drinking. Improperly packaged liquor might have contaminants which could cause harm to consumers.

The illegal trade and manufacture of alcohol would be greatly detrimental to the economic benefits of the liquor industry. The industry spans across the primary, secondary and tertiary sectors of the South African economy, in the form of, among other activities:

- agriculture (grapes, malt, hops and sugar cane)
- manufacturing (wine making, distilling and brewing)
- marketing, distribution and retail. ("Liquor and Advertising": 3)

Illegally manufactured liquor can thus be seen to have the following impacts on the business of legal traders:

- Loss of considerable excise taxes

- Much lower prices than legally manufactured alcohol might make them preferable for low income earners
- Health impacts such as poisoning and even alcohol-induced blindness
- Papsakke and concoctions tarnish the reputation of the local liquor industries
- Loss of job-creation and income in sectors such as manufacturing of containers, delivery, marketing, etc.
- Strongly linked to problem drinking, defeating the aims of the NLA and the WCLA

d. The impact on alcohol sales, alcohol abuse and illegal trading of Sunday trading for licensed premises in the industry

The Liquor Act of 1989 defined closed days, where no liquor could legally be sold, as Sundays, Good Friday and Christmas Day, offering no clear justification for these prohibitions (Liquor Act No. 27 of 1989). Sunday sale currently varies based on provincial by-laws, including the tabling of provisions for Sunday sale of alcohol in Kwa-Zulu Natal in 2012. In the Western Cape, Sunday sale is currently permitted with certain restrictions, such as the need for special licenses and limited hours from 11.00 am until 18.00 am for adequately licensed supermarkets and liquor stores.

The reasoning for these restrictions on Sunday trading are not detailed. Reasoning often ranges from religious justifications as Sunday is the Sabbath day for many Christian denominations, and limiting consumption which therefore limits the negative impacts of alcohol abuse, since Sunday is the day on which most South Africans do not work and might be more inclined to recreational drinking. There are also concerns that it will add to the rate of drunk driving and lead to a lack of productivity for the start of the work week (Lancaster, 2013).

Many industry stakeholders, including the ARA, oppose restrictions on Sunday trading. They claim that these restrictions will negatively impact on the economy and will do little to curtail the adverse effects of alcohol abuse (“Sunday alcohol ban” 2015).

The impacts of Sunday trading on various relevant factors will be explored below.

Alcohol Sales

Increased hours will ensure greater sales and income across the range of liquor traders. Commentators have noted that since Sunday liquor laws treat sales for on- and off-consumption

differently, they grant greater market power to businesses like restaurants, hotels and bars and distort the liquor retail market on these days (Lenta, “Sunday Liquor Sales”). Relaxing these restrictions will ensure more equitable and increased income.

Purchasing at these establishments also often comes at a higher price than supermarkets or liquor stores, leading to higher costs for consumers and lower sales-volumes.

Sunday trading will also ensure that sales on other days are not increased in order to compensate for the lack of Sunday trading. Many people will simply purchase more alcohol on Saturdays in order to consume it on Sundays.

Wider Sunday trading could increase the tax revenue for the liquor industry, but it should be weighed against the factors discussed below.

Alcohol abuse

International studies show that alcohol abuse and alcohol-related crime might increase with increased trading hours and trading days, with certain crimes seeing hikes of between 5% and 10% in US studies when comparing legalised Sunday trade to periods where it was banned (Heaton, 2012).

Studies are inconclusive with regards to whether Sunday trading has any effect on the rate of drunk driving in countries like the US (Heaton, 2012), and no comparable studies currently exist in South Africa.

Babor et al. argue that restricting hours and days of sale is effective where the limited hours reduce availability of alcohol and where late-night violence prevails. Thus it might not have strong effects in all areas, but particularly for areas prone to problem drinking and where no alternatives for acquiring alcohol exist. The strongest policies are found to be those that relate to restrictions on affordability, availability, accessibility, and measures that deter drinking and driving (Babor et al., 2010: 242).

The evidence linking Sunday trading to alcohol abuse is extremely limited at this time, and further research in this area would provide a more conclusive basis for policy decisions. Particular attention should be paid to the unique South African context where alcohol abuse is a much greater factor in the unregulated market.

Illegal trading

Closing legal outlets on Sundays could potentially increase the business of illegal outlets. For many, Sunday is the only day of recreation, and they will often choose to drink on this day regardless of whether they acquire liquor legally or illegally.

Research has indicated that in some areas such as Mitchell's Plain, lack of availability simply meant that clientele were forced to walk long distances to places where they could purchase alcohol, exposing themselves to dangers such as mugging and violence ("Rapid Assessment", 2009: 34). Limiting Sunday trading might only exacerbate illegal trading and the social ills associated with it.

e. Most likely effect of reduced liquor trading hours as specified by amended legislation on liquor sales, consumption and harmful effects

The National Drug Master Plan indicates that limits on hours and days of purchase has been connected to lower alcohol consumption. This relates to availability theory, which states that the more available a product is, the more it will be consumed (55). This indicates that there might be value in policies reducing trading hours. The WHO also advocates for the effectiveness of reduced availability through limiting hours of sale in leading to fewer alcohol-related problems such as homicides and assaults ("Strategies to reduce the harmful effects of alcohol", 2010: 4). This indicates that some level of restriction on hours of sale might be part of effective policies. However, the WHO also warns that context needs to be considered, and the South African context has particular challenges to merely reducing hours or days of sale (7).

Reducing hours of sale will have no impact on the unregulated market, where these restricted hours are not upheld. Since the majority of alcohol consumption and of problem drinking occurs in these unregulated outlets, restricted hours will have limited effects on the harmful effects of alcohol. It most likely could affect the rate of drunk driving most directly.

Industry and government do not always agree on policies. For example, Distell opposes restricting trading hours and days. They argue that international trends demonstrate that restricting trading times only serve to encourage abuse and illicit trading as consumers try to circumvent restrictions ("Dopstop Strategy").

The most likely effects of reduced trading hours would be lower sales and consumption in areas which already frequent legal establishments, and potentially limiting the rate of drunk driving. However, in areas with high numbers of illicit traders and illegal liquor, there would likely be very little effect in curtailing trading times to lower consumption and harmful effects. The business of illegal traders might benefit from the lack of licensed traders available, and this would lead to the growth of the illicit trade of alcohol. Unlicensed traders would have even less of an incentive to want to acquire licenses if adhering to regulations would only further restrict their income, especially for those who work on a subsistence basis.

f. A cost benefit analysis of liquor enforcement measured by:

i. Absence of liquor enforcement

Cost	**Benefit**
Administrative • More negative effects of alcohol abuse, overuse and illicit trading will lead to more long-term problems	**Administrative** • Reduce the implementation burden on the NLA by simplifying the regulations, for example, requiring large corporations to have a separate license for each depot and distribution centre • Reduce burden on businesses in maintaining liquor licenses
Economic • Loss of revenue in taxes • Loss of productivity • Cheap wine threatens income for winemakers • Poor working conditions for those in the liquor industry • Expansion of the unregulated market • Payment of workers with alcohol	**Economic** • Liquor industry claims that higher excise taxes reduce job opportunities. Reducing enforcement on taxes could increase economic opportunities • Greater revenue with longer trading hours as well as Sunday trading • Economic opportunities for black and poor shebeeners

	• Less resources on policing liquor industry • Greater revenue in advertising and sponsorships • Facilitate entry of smaller businesses into highly competitive market
Social • Increased violence, child abuse, FAS, and crime • being under the influence of alcohol also increases the likelihood of a woman being the victim of domestic abuse • Increase in alcoholism • Underage drinking	**Social** • Greater competition might improve conditions of shebeens. • Allow for economic and social empowerment of shebeeners and related businesses
Health • Road mortality. In 2009, South Africa's road traffic mortality rate was 39.7 per 100 000, which is 26% higher than the African average and almost twice the global average ("Impact Assessment", 2013: 35) • FAS. There are increasing figures of alcohol use amongst women in South Africa. FAS is a result of alcohol abuse by women of child-bearing age and drinking during pregnancy. • Dangers of papsakke for health. • No health warnings on liquor	**Health** • Due to more easily available and cheaper alcohol, less reliance on homemade concoctions which could have serious adverse effects

• Increased hospital admissions and health effects for alcohol-related conditions	
Crime • Increase in unlicensed sale • Increase in crime • Increase in drunk driving	**Crime** • More shebeens could be brought into regulated market if licensing regulations are diminished

ii. Strict adherence to the provisions of the Western Cape Liquor Act

Cost	**Benefit**
Administrative • Extremely intensive on labour, bureaucracy and businesses' time and resources • Cost of liquor licenses ensure that many businesses remain unlicensed • On-selling and licence scams could increase. There are already reports of license 'renting', whereby a licenced operator will rent, at cost, their liquor licence and South African identity document to enable shebeeners to obtain supplies from regulated channels ("Rapid Assessment", 2009: 34)	**Administrative** • Fewer social ills lessens burden on health, crime and social sectors
Economic • Large numbers of shebeens have closed, disempowering shebeeners with few other economic opportunities	**Economic** • Closing of shebeens might increase demand on regulated outlets,

• The Western Cape shebeen sector provides employment and self-employment for an estimated 130,660 persons. Each shebeen also provides business for an estimated 2.28 to 3 other micro-enterprises ("Rapid Assessment", 2009: 25) • Less revenue from alcohol advertising which amounts to R4.386 billion based on 2011 figures ("Liquor and Advertising": 4) • Ban on papsak lead to negative economic impact on sectors of the wine industry and job security for some wine farm workers (Henn et al., 2005; Morris, 2006)	increasing tax revenue and industry growth
Social • Customers have to travel further to acquire liquor, impacting on their safety • Ban on papsak could lead to poor communities plunged into further poverty to satisfy their alcohol dependence	**Social** • Less alcohol advertising; however, research has indicated that this might not decrease rates of alcohol consumption or abuse ("Liquor and Advertising": 3) • Lower incidences of alcohol-related abuse, domestic violence, public disturbances and other social ills.
Health • Might drive production of illicit concoctions.	**Health** • Lower rates of FAS and other negative health impacts of alcohol abuse
Crime	**Crime** • Lower rates of drinking and driving.

• Might encourage illicit production and trade of illicit alcohol for shebeeners to remain undetected	

15. Conclusion

The South African Liquor Industry has wide reach. Not only is the use of alcohol an intricate part of our culture, but the industry also has an impact on various sectors ranging from agriculture to tourism.

In addition to its direct contribution to the economy, the liquor industry also provides employment for a significant number of individuals, both in the formal and informal sector. The liquor industry also has various forward and backward economic linkages, and therefore its influence reaches far beyond primary production and sale of alcoholic beverages.

The Western Cape is a sought after holiday destination known for its wine and beautiful wine farms. Much of the identity of the province is defined by its wine industry which not only plays a significant role in the agricultural sector, but also in tourism.

The contribution of the liquor industry to the South African and Western Cape economy is well documented and quantified. However, data regarding the impact of unregulated trade and the negative impact of alcohol use is not readily available. Information on illicit trade is challenging to obtain for obvious reasons. There are no recent studies on the socio-economic cost of harmful alcohol and those that were conducted years ago, were either reliant on deductions and estimates or conducted outside South Africa. There is a need for primary research to be conducted regarding the socioeconomic cost of harmful alcohol use in the South African context.

There appears to be general consensus that the problems associated with alcohol consumption are related not to the use of alcohol per se, but rather to harmful drinking patterns. It therefore follows that addressing the ills related to alcohol should focus on cultivating responsible drinking patterns.

A clear area that deserves focus, is FASD as it is a high-impact area where the harmful effects of alcohol is clearly established. FASD is clearly linked to alcohol and has devastating social and economic effects. In addition, individuals affected by FASD are predisposed to substance dependence which continues the vicious circle.

Alcohol consumption is part of the culture of many people in the Western Cape, and very strict regulation create the risk of criminalising normally law-abiding citizens instead of limiting the use of

alcohol. Increased regulation without increased policing is pointless and funding could be better utilised in educational programmes than in law-enforcement. Focus should be placed on eradicating harmful drinking with clearly established links to social and economic ills and cultivating responsible alcohol use.

Alcohol confers undeniable benefits to moderate drinkers. Countries all over the world restrict the use of alcohol in a number of ways. The key is to address the areas that cause harm and maintain a balance with the economic and social benefits the industry offers.

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