Gender Dimensions of Alcohol Consumption and Alcohol-Related Problems in Latin America and the Caribbean

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Foreword

Over the last decade, alcohol consumption has become an increasing concern among public health policy makers and international development agencies. Alcohol is one of the major causes of global disease, with men bearing most of the burden of alcohol related diseases. In developing nations, alcohol ranks as the fourth cause of disability among men. In addition to contributing to illness and injury, excessive drinking affects health by leading to risky behaviors, including unsafe sex practices and violence. Alcohol consumption is particularly problematic in the Latin America and the Caribbean (LAC) Region. Worldwide, LAC has the highest percentage of total deaths attributed to alcohol – 4.5 percent compared to 1.3 percent for developed regions and 1.6 percent for developing regions.

With a view to better understanding some of the gender issues that negatively affect men in the LAC Region, the purpose of this study was to identify the role of gender in alcohol consumption and alcohol-related problems in the LAC Region. Based primarily on published literature on alcohol research in the LAC Region, the study examines the public health rationale for addressing alcohol use issues; investigates gender differences in alcohol consumption levels and patterns and the socio-cultural forces shaping those differences; and briefly discusses the legislative and policy responses in LAC to tackle alcohol-related problems.

The paper concludes that alcohol use and abuse are linked to men’s and women’s roles and expectations in society. Men are more likely to drink heavily and excessively than are women, and less likely to abstain from alcohol consumption. Furthermore, drinking norms are applied differentially and this is most evident in the case of gender. Men and women are subjected to different expectations and meanings in their use of alcohol, as well as in the way they respond to it.

The study identifies a number of alcohol policy options for LAC, including levying taxes, setting product safety standards, licensing production, promoting health and public education, controlling advertisements, enacting drunk driving laws and minimum-age limits, supporting public education, providing consumer information, and restricting the times and conditions of beverage sales. But given the study’s findings, it also emphasizes the importance of considering the gender dimensions of alcohol consumption and alcohol-related problems. Prevention and injury reduction mechanisms, in particular, should focus on changing socio-cultural norms about gender and drinking, including those that promote high-risk drinking behaviors among males. Mechanisms that socialize males and females about drinking and drunkenness – including the media – should be targeted.
This report was written with the objective of stimulating discussion on an important public health issue that has hitherto received relatively limited attention. It was also written to create awareness of the importance that gender roles play in the lives of men. We hope that these two goals will be achieved in the production of this report.

Guillermo Perry
Chief Economist
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Abstract

This report examines the gender dimensions of alcohol consumption and alcohol-related problems in Latin America and the Caribbean (LAC). It finds that alcohol use is one of the major causes of the global disease burden, ranking as the fourth cause of disability among men in less developed countries. It also finds that men bear most of the burden of alcohol-related diseases and that alcohol plays an important role in instigating unsafe sex practices and violent behaviors, for example, domestic violence. Moreover, the report shows that men are more likely than women to drink alcohol heavily and excessively and that drinking norms influence these gender differences in alcohol consumption. As for alcohol policies in the LAC Region, the report finds that these focus overwhelmingly on control of availability and access to alcohol; implementation and enforcement of these policies, however, remain superficial. Finally the report lays out policy options for LAC countries ranging from imposing taxes, to putting in place public education campaigns. But it stresses the importance of establishing policies and programs that consider gender differences in alcohol consumption patterns and alcohol related problems.
I. Introduction

The issue of alcohol evokes impassioned debate among scholars and practitioners in many disciplines. Each discipline, whether economics, public health, medicine, anthropology or public health, offers its own perspective on the way alcohol affects the well being of individuals, families, and communities, and asks how—and even if—problems related to drinking should be tackled.

Evidence is mounting that public health and social concerns about the problems associated with alcohol consumption and the problems associated with it are entirely justified. This paper also holds that efforts to prevent and mitigate these problems need to consider the socio-cultural context in which drinking occurs—in particular gender roles and gender relations. Every society where alcohol is consumed has norms that establish the rules for when, how, and who drinks. Gender plays a critical part in shaping those rules.

Alcohol research began about forty years ago, but the issue of alcohol consumption and production emerged onto the agenda of the World Bank only within the past ten years. Work supported by the Bank, such as social capital research, the Global Burden of Disease and Voices of the Poor studies, and numerous consultations with civil society organizations and indigenous communities reveals that the poor in developing countries perceive alcohol use—particularly among men—as detrimental to their well being and their efforts to build human and social capital (Murray and Lopez, 1996; Narayan, 1999; Delaney and Shrader, 2000). These findings have fueled momentum within the Bank to examine its role in mitigating alcohol's negative effects. They have also heightened the need to pay close attention to the significant gender dimensions of the issue.

The reports and studies financed by the Bank have highlighted the role of alcohol production and consumption in economic and human development by detailing the social and economic costs and benefits of alcohol. They have also provided an economic rationale for government's role in the prevention of alcohol-related problems (Cercone, 1993, Velasco, 1998; World Bank Group, 2000). Though thorough and far-reaching in their analyses, the existing papers have paid little attention to the gender dimensions of the issue. The current undertaking strives to fill that gap.

The objective of this paper is to enhance the knowledge base of the World Bank on the gender dimensions of alcohol consumption and alcohol-related problems in Latin America and the Caribbean (LAC), and to identify key areas for future research and intervention by the Bank. The information garnered for this paper comes primarily from the published literature on alcohol research in the LAC region.

The paper is divided into four sections. The first part examines the public health rationale for addressing the issue of alcohol use. The second part investigates gender differences in drinking levels and patterns and drinking-related problems, particularly in LAC, and addresses the socio-cultural forces shaping those differences. The third part briefly discusses the legislative and policy responses in LAC to tackle alcohol-related problems, and the final part makes broad policy and programming recommendations and identifies areas in need of further research and operations.
II. Alcohol Consumption, A Public Health Issue

This section provides support for the public health concern about alcohol consumption and abuse. The discussion on the effects of alcohol on health and social well-being is organized into two parts. The first part focuses on the diseases and injuries associated with alcohol use, and the ways its impact primarily falls on the individual. The second part focuses on the effects that extend beyond the individual to the family and community, through violence and the risk behaviors associated with alcohol.

Effects of Alcohol on Disease and Injury

The World Health Organization (WHO, 1999) has identified alcohol use as one of the major causes of the global disease burden. The Global Burden of Disease study estimated that, in 1990, alcohol was responsible for 3.5 percent of the world's total disability-adjusted life-years lost. This exceeds the tolls taken by tobacco (2.6 percent) and illicit drugs (0.6 percent) combined (Murray and Lopez, 1996). The adverse effects of alcohol consumption on disease and injury characterized by steady heavy drinking and intoxication are well documented in the scientific literature. Among men, alcohol is the leading cause of disability in industrialized countries and ranks fourth in causing disabilities in developing countries (WHO, 1999). Alcohol also plays a significant role in causing disability through neuro-psychiatric conditions that impair the well-being of individuals, families, and communities. Moreover, alcohol is closely associated with acute as well as long-term chronic conditions ranging from addiction, brain damage, high blood pressure, and stroke to cancers and muscle and bone diseases (Edwards and others, 1995). Furthermore, alcohol is a trigger for violence, injury, and accidents. All these facts bear particularly acute importance in LAC, the region hit the hardest by the mortal effects of alcohol: compared to other geographical regions, Latin America had the highest percentage (4.5 percent) of total deaths attributed to alcohol (see Table 1).

Viewing alcohol consumption as a continuum from abstinence to addiction, WHO recognizes two main patterns of drinking that have the greatest adverse effects on health: sustained moderate or heavy drinking over an extended period of time, and single or repeated episodic intoxication. An episode of intoxication resulting from a single drinking occasion can impair an individual's health, as well as the social well-being, through accidents, assaults, and injuries. Steady heavy drinking is associated with numerous chronic physical and mental health problems.

---

1 In analyzing the attributable burden due to alcohol, Murray and Lopez examined three dimensions: detrimental effect on injuries; detrimental effect on disease; and protective effect on ischaemic heart disease. (For discussion of methodology for deriving the estimates, see Murray and Lopez, 1996).
Furthermore, alcohol is a psychoactive substance that can lead to addiction and dependency. The public health and medical communities regard alcohol dependency, also referred to as alcoholism, as a disease. The DSM IV classification system classifies alcohol use disorders as substance-related disorders. These are divided into two groups: substance use disorders, which include dependence and abuse; and substance-induced disorders, including intoxication, withdrawal, delirium, dementia, amnestic disorder, psychotic disorder, mood disorder, anxiety disorder, sexual dysfunction, and sleep disorder (see Annex 2 for more detailed definitions of substance-use disorders).

Alcohol dependence and abuse—both characterized by maladaptive patterns of use leading to clinically significant impairment or distress and manifested by tolerance, withdrawal, inability to fulfill role obligations, recurrent substance related legal problems, and social and interpersonal problems—are issues of public health concern.

WHO estimates a prevalence of 9.7 to 35.6 percent heavy drinkers in the LAC region. Research in the 1960s and 1970s estimated that in Latin America about 10 percent of the population were excessive drinkers and another 5 percent alcoholics (Caetano, 1984). Table 2 indicates the prevalence of alcohol dependency in Brazil and Mexico. Sex disaggregation highlights the dramatically higher prevalence rates of alcoholism among men compared to women. In Mexico, for example, 12.5 percent of men were found to be alcoholics, compared to only .06 percent of women (Medina-Mora, 1999).

Alcoholism, though significant, is but one of the many health problems associated with alcohol use. Cirrhosis is a commonly known disease that is related to alcohol abuse.

---

Table 1: Burden of Disease and Injury Attributable to Alcohol Use, 1990

<table>
<thead>
<tr>
<th></th>
<th>Deaths (000's)</th>
<th>As % of total deaths</th>
<th>Years of life lost (YLLs) (000's)</th>
<th>As % of total YLL</th>
<th>Years lived w/ (disability YLDs) (000's)</th>
<th>As % of total YLD</th>
<th>Disability adjusted life years (DALYs) (000's)</th>
<th>As % of total DALYs</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAC</td>
<td>136.1</td>
<td>4.5</td>
<td>3,319</td>
<td>5.9</td>
<td>6,201</td>
<td>14.7</td>
<td>9,520</td>
<td>9.7</td>
</tr>
<tr>
<td>Industrialized regions</td>
<td>136.8</td>
<td>1.3</td>
<td>4,601</td>
<td>5.4</td>
<td>10,797</td>
<td>14.3</td>
<td>15,398</td>
<td>9.6</td>
</tr>
<tr>
<td>Developing regions</td>
<td>636.8</td>
<td>1.6</td>
<td>14,868</td>
<td>1.8</td>
<td>17,603</td>
<td>4.4</td>
<td>32,289</td>
<td>2.7</td>
</tr>
<tr>
<td>Total</td>
<td>773.6</td>
<td>1.5</td>
<td>19,287</td>
<td>2.1</td>
<td>28,400</td>
<td>6.0</td>
<td>47,687</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Source: Murray, C. and Lopez, A. 1996

---

2 The health and medical literature employs terms such as alcohol abuse and alcohol dependency that are based on a disease model, placing the issue primarily in the realm of medicine and psychiatry rather than in the realm of social science. Alcohol abuse is defined as patterns of heavy alcohol intake in nondependent persons in which health consequences and/or impairment in social functioning are associated (U.S. DHHS, 1990, p. xxi). Alcohol dependence syndrome is defined as a severe disability in which dependence brings about a reduction in the individual's ability to control the drinking behavior. International Classification of Diseases of WHO and Diagnostic and Statistical Manual of Mental Disorders differentiate alcohol abuse (a nondependent, problem drinking condition) from alcohol dependence. The definitions and the differentiation made between the two conditions are constructed primarily for clinical reasons; treatment of each condition requires different intervention goals and approaches.

3 DSM IV is the fourth edition of the American Psychiatric Association Diagnostic and Statistical Manual.

Because of a lack of data on alcohol abuse and alcohol-related problems, cirrhosis often serves as a proxy for heavy drinking levels.

### Table 2: Prevalence of Alcohol Dependency, by Gender

<table>
<thead>
<tr>
<th>Country/City</th>
<th>Male</th>
<th>Female</th>
<th>Age</th>
<th>Diagnostic test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rio de Janeiro</td>
<td>4.9%</td>
<td>1.7%</td>
<td>18 and older</td>
<td>CAGE</td>
</tr>
<tr>
<td>Sao Paulo</td>
<td>13.0%</td>
<td>3.0%</td>
<td>15-49</td>
<td>CAGE</td>
</tr>
<tr>
<td>Porto Alegre</td>
<td>16.0%</td>
<td>4.0%</td>
<td>18 and older</td>
<td>CAGE</td>
</tr>
<tr>
<td>Bahai</td>
<td>6.3%</td>
<td>0.9%</td>
<td>?</td>
<td>DSM III</td>
</tr>
<tr>
<td>Mexico</td>
<td>12.5%</td>
<td>0.6%</td>
<td>?</td>
<td>ICD-10</td>
</tr>
</tbody>
</table>


Measuring cirrhosis mortality has its limitations; but it possesses one great advantage: the data are widely reported and therefore allow for comparisons between countries. Figure 1 indicates cirrhosis mortality rates for some countries in LAC. Notably, the rates show stark gender differences. Interpretation of these cirrhosis statistics, however, calls for a note of caution: age standardization based on European populations was used, raising the mortality rates. It should be considered that 36 percent of Latin America is below the age of 15, as compared to 19 percent of Europe (Madrigal, 1998). It is also important to note that the proportion of total cirrhosis deaths caused by alcohol varies among countries as a result of other environmental factors that contribute to cirrhosis mortality. Poor living conditions and hygiene as well as malnutrition can cause infectious and degenerative liver conditions, both acute and chronic, meaning that alcohol is only one of the many factors that contribute to cirrhosis deaths.

Essentially, however, it is important to note that cirrhosis remains a significant health problem in many of the countries in LAC, particularly among men. Cirrhosis is one of the ten leading causes of death in Mexico. Among men between the ages of 35 and 45, it is the number one killer (Madrigal, 1998, Medina-Mora, 1999). In Mexico, Venezuela R.B., Argentina, and Trinidad and Tobago, cirrhosis deaths among men are as much as three times higher than the deaths among women. This concurs with epidemiological findings that reveal that higher proportions of men in LAC are heavy drinkers compared to their female counterparts (see Section II).

Alcohol dependency and cirrhosis are far from the only problems associated with alcohol use. The scientific literature has pointed out that alcohol is associated with many other diseases, injuries, and accidents, such as traffic-related fatalities, homicides, and suicides. While it is important to recognize that socio-economic conditions, enforcement measures, and safety regulations (such as seat-belt laws) mediate the relationship between alcohol consumption and traffic accidents, some studies conducted in LAC justify the concern about this relationship, as demonstrated in Table 3.
Figure 1: Cirrhosis Mortality

Deaths from Cirrhosis Per 100,000 in the Americas and the Caribbean among men and women (age standardized)

Source: Edwards and others, 1995

Gender differences in alcohol-related problems were further highlighted by Edwards and others (1995), who determined the degree to which alcohol contributes to illness and injury by conducting a meta-analysis of scientific studies published since 1980. The researchers then produced estimates that were combined with the existing data on prevalence of alcohol use among the Australian population. In 1998, a similar exercise was carried out for the Canadian population. This methodology was employed to determine the fraction of each disease and injury attributable to alcohol. The attributable fraction was further disaggregated by sex. Some health conditions are, by definition, caused by alcohol, such as alcoholic poisoning and alcohol dependence, and would, therefore, be designated with an attributable fraction of 1.00. Other conditions that had relatively high attributable fractions were unspecific liver cirrhosis, chronic pancreatitis, road injuries, fire injuries, drowning, suicide, and assault.

The two studies highlighted a wide range of health problems caused by alcohol, including:

- cancers (for instance, liver or laryngeal)
- heart diseases
- maternal and child health problem (for instance, low birth weight, or spontaneous abortion)
- injuries (for instance, falls, burns, or work related)
- accidents (for instance, water or auto transport)
- violence (for instance, suicide, assault, or child abuse).
Table 3: Relationship between Alcohol and Traffic-Related Accidents and Fatalities in Some Latin American Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Percent of drivers with positive blood alcohol content (BAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>1980</td>
<td>20% of drivers in Buenos Aires*</td>
</tr>
<tr>
<td>Brazil</td>
<td>1995</td>
<td>30% of drivers in Salvador**</td>
</tr>
<tr>
<td>Chile</td>
<td>1974</td>
<td>70% of male drivers*</td>
</tr>
</tbody>
</table>

Percent of accidents attributed to alcohol

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Percent of accidents attributed to alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>1990s</td>
<td>19%**</td>
</tr>
<tr>
<td>Brazil</td>
<td>1990s</td>
<td>25%**</td>
</tr>
<tr>
<td>Ecuador</td>
<td>1990s</td>
<td>33%**</td>
</tr>
<tr>
<td>Mexico</td>
<td>1972</td>
<td>7% nationwide*</td>
</tr>
<tr>
<td>Mexico</td>
<td>1974</td>
<td>17% in Mexico City*</td>
</tr>
</tbody>
</table>

Percent of traffic fatalities attributed to alcohol

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Percent of traffic fatalities attributed to alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>1970</td>
<td>46% (male traffic deaths)*</td>
</tr>
<tr>
<td>Colombia</td>
<td>1990s</td>
<td>60%**</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>1990s</td>
<td>46%**</td>
</tr>
<tr>
<td>Peru</td>
<td>1990s</td>
<td>50%**</td>
</tr>
</tbody>
</table>

Sources: (*) Caetano, 1984; (**) Madrigal, 1998

Alcohol contributed to certain problems, such as fire injuries, chronic pancreatitis, and assault, to the same extent among women as among men in Australia and Canada. Where there were gender differences in attributable fractions, however, alcohol played a greater role (that is, was designated with a higher fraction) in causing illnesses and injuries among men than among women (Table 4). For example, alcohol was estimated to cause 41 percent of suicide cases among men in Australia, compared to only 16 percent among their female counterparts. Country differences were also evident. While alcohol contributed to nearly half of road injuries in both Canadian men and women, it was more instrumental in causing road injuries among men (0.37) in Australia than among women (0.18).

These two studies, which estimated the role of alcohol in causing illnesses and injuries among the Australian and Canadian populations, offer a useful methodology. However, their findings cannot be generalized to other populations, especially in the developing world. Three key reasons for exercising caution in interpreting the data for other populations are:

- levels and patterns of drinking vary greatly across different populations, particularly between men and women;
- the meta-analysis only included scientific studies published in the English language; and
- social and environmental conditions that interact with drinking vary greatly across different populations.
Table 4: Selected Health Issues by Alcohol Attributable Fractions

<table>
<thead>
<tr>
<th>Health issue</th>
<th>Australian Male</th>
<th>Australian Female</th>
<th>Canadian Male</th>
<th>Canadian Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver cancer</td>
<td>0.18</td>
<td>0.12</td>
<td>0.29</td>
<td>0.16</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>-</td>
<td>0.03</td>
<td>-</td>
<td>0.04</td>
</tr>
<tr>
<td>Unspecific liver cirrhosis</td>
<td>0.54</td>
<td>0.43</td>
<td>0.54</td>
<td>0.54</td>
</tr>
<tr>
<td>Chronic pancreatitis</td>
<td>0.84</td>
<td>0.84</td>
<td>0.84</td>
<td>0.84</td>
</tr>
<tr>
<td>Spontaneous abortion</td>
<td>-</td>
<td>0.04</td>
<td>-</td>
<td>0.20</td>
</tr>
<tr>
<td>Road injuries</td>
<td>0.37</td>
<td>0.18</td>
<td>0.43</td>
<td>0.43</td>
</tr>
<tr>
<td>Fall injuries</td>
<td>0.34</td>
<td>0.34</td>
<td>0.24</td>
<td>0.15</td>
</tr>
<tr>
<td>Fire injuries</td>
<td>0.44</td>
<td>0.44</td>
<td>0.38</td>
<td>0.38</td>
</tr>
<tr>
<td>Drowning</td>
<td>0.34</td>
<td>0.34</td>
<td>0.30</td>
<td>0.23</td>
</tr>
<tr>
<td>Suicide</td>
<td>0.41</td>
<td>0.16</td>
<td>0.27</td>
<td>0.17</td>
</tr>
<tr>
<td>Assault</td>
<td>0.47</td>
<td>0.47</td>
<td>0.27</td>
<td>0.27</td>
</tr>
</tbody>
</table>


Gender-Differentiated Effects of Alcohol

Women are affected differently by alcohol than are men because of physiological differences (NIAAA, 1999 and 2000; Graham and others, 1998; Schenker, 1997). Schenker (1997) reviewed the medical literature and highlighted the following key issues affecting women:

- Women obtain a higher concentration of alcohol in the blood for a similar intake of alcohol because of the lower total water content in their bodies.
- Alcohol enters the bloodstream in a more concentrated form in women, because the stomach enzyme that breaks down alcohol before it enters the bloodstream is less active in women.
- Alcohol’s effects vary according to the menstrual cycle, because, research suggests, the intensity of alcohol intake is affected by monthly hormonal fluctuations.

These physiological differences have important implications (for detailed description of mechanisms, see NIAAA, 2000):

- Women are more susceptible to alcoholic liver disease. Women develop alcohol-induced liver disease more rapidly—over a shorter period of time and after consuming less alcohol than men. Furthermore, women are more likely than men to develop alcohol hepatitis and to die from cirrhosis.
- Women’s hearts exhibit greater sensitivity to the adverse effects of alcohol.
Women tend to become more intoxicated than men when they ingest the same amount of alcohol and to experience more sedation (measured by four visual analog scales and by choice reaction time), suggesting that women's brains have a greater sensitivity to alcohol.

Women who are heavy drinkers have an increased risk of breast cancer.

Women who drink during pregnancy can adversely affect the fetus, depending on the amount consumed, manner of consumption, and the phase of pregnancy.

Maternal consumption of alcohol during pregnancy increases the risk of having children with birth defects. Heavy and binge drinking is the most hazardous drinking pattern during pregnancy, linked strongly to the birth of children with Fetal Alcohol Syndrome. In the United States, FAS is considered the most common nonhereditary cause of mental retardation (NIAAA, 2000). Children with FAS share a characteristic set of minor facial traits at birth, suffer from growth deficiencies, and the damage to their developing brains affects them throughout their lives. FAS is an example of the intergenerational effects of alcohol consumption—the consequences of drinking passed on by a mother to her infant.

Beneficial Effects of Alcohol on Health

Alcohol's negative effects on human health are a well-documented, longstanding part of the scientific literature. However, over the past decade seemingly paradoxical evidence has emerged that alcohol consumption may have a protective effect on one aspect of human health: coronary heart disease. Studies have shown that individuals who consume small to moderate amounts of alcohol are less likely to have a myocardial infarction than those who do not drink. (For a review of the studies in the United States on the health benefits of alcohol, see NIAAA, 2000).

These studies, however, have been challenged on two fronts: applicability of the findings to women; and methodology (see detailed discussion in World Bank Group, 2000). The majority of participants in the studies were men. In those where women did participate, the protective relationship was not so clear. Studies found that light consumption of alcohol (1.5 to 29.9 grams per day) protected older women (50 years of age and over) from CHD; light consumption also conferred protective benefits on women with one or more risk factors for CHD. These benefits did not hold true, however, for women with no CHD risk factors. Such women enjoyed no significant protective effects. Notably, women who drank more than 30 grams per day had significantly higher mortality, largely due to their higher risk of death from breast cancer. The research on beneficial effects of alcohol remains inconclusive for women. Furthermore, when discussing the beneficial effects of alcohol on the risk of CHD, it is important not to ignore the prevalence of CHD in a given developing country in relation to other health and social problems that are caused or exacerbated by alcohol.

5 NIAAA (2000) has conducted an extensive review and analysis of FAS prevention research. Although research is largely US-based, the review offers a valuable framework for developing prevention programs.
Effect of Impurities in Alcohol on Health

A large proportion of the alcohol consumed in the developing world comes from illicit production. Another public health concern about drinking involves the effect of impurities in alcohol, and illicitly produced alcohol is the greatest culprit. For instance, some poisoning deaths from drinking illicitly made alcohol have been attributed to iron particles leaching from the distilling barrels. In a small rural community in Mexico, 49 people died after drinking illegally made 96-proof aguardiente (Medina-Mora, 1999). It is important to note that the alcohol industry has cited the potential dangers of illicitly produced alcohol as an argument for controlling home brewing and for promoting industrial production; most often, these alcohol industry campaigns are waged on behalf of foreign-made imports. The scope and significance of the effects of alcohol impurities remain highly anecdotal, however, and demand further investigation.

Effect of Alcohol on Risk Behaviors

A third dimension of the public health concern over alcohol consumption involves the effect of alcohol on risk behaviors. As discussed above, substantial evidence from the medical and health literature supports the conclusion that disease and injury are among the direct effects of alcohol consumption. Drinking can also indirectly affect health by encouraging risk behaviors, such as unsafe sex. The AIDS epidemic makes such concerns even more urgent and highlights the need to examine the relationship between alcohol and HIV risk behaviors.

A survey of sexual behaviors among low-income youths in Barrios Altos and Canto Grande in Lima, Peru found that, after controlling for age, sex, and socio-economic status, having a sexually transmitted disease (past and present) and an unintended pregnancy were significantly related to combining sex with alcohol and drug use. The likelihood that a girl's first sexual intercourse happened at an early age increased if she had consumed alcohol (Caceres and others, 1997).

Another study, which examined risk factors for HIV infection among Guatemalan soldiers of indigenous backgrounds, revealed that alcohol consumption was strongly associated with HIV infection. Drinking, along with poor condom use and sex with prostitutes, was found to increase by a factor of 15.6 the soldiers' risk of acquiring sexually transmitted diseases (Flores and Arathoon, 1994).

Studies of AIDS in other countries, such as Thailand, indicate that alcohol consumption influences many dimensions of sexual behavior. One such study, which included students, soldiers, and clerks in the sample of 1,472 men, revealed that heavy drinking increased the odds of having had sexual intercourse; increased the odds of having visited prostitutes; and decreased the odds of consistent condom use in sexual encounters with sex workers (VanLandingham and others, 1993). In addition to the survey, focus group discussions with men identified drinking as the most important precursor to visiting sex workers.

The relationship between drinking and HIV risk behaviors, such as visiting commercial sex workers or having sex without condoms, is not one of simple causality. It has been argued that drinking behavior co-occurs with other dangerous factors, such as risk-taking.

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6 Includes beverages made from sugar cane alcohol and agaves, such as mescal and sotol. *Aguardiente* means “burning water” (Medina-Mora, 1999).
personality traits, suggesting that those who drink are also those who are likely to engage in risky behaviors. As demonstrated by the Thai study, alcohol use is most likely to be an excuse for, rather than a cause of, unsafe sexual behaviors; additionally, alcohol use serves as a predictor of high-risk behaviors. Consequently, HIV prevention efforts need to consider the role of drinking in the spread of the AIDS virus.

**Effect of Alcohol Use on Families and Communities**

Undoubtedly, alcohol use has played a significant and integral role in many cultural and religious events and has also facilitated social interactions throughout human history (Lomitz, 1973; Heath, 1974; Bunzel, 1973). Though difficult to quantify, many qualitative studies, particularly ethnographies, have demonstrated the role of alcohol as a social lubricant. However, these studies of traditional or indigenous societies also indicate that the secondary effects of alcohol vary greatly depending upon the socio-cultural context in which drinking occurs (see Section II). The studies clearly find that the beneficial effects on social interactions are marred by the negative social impacts.

Alcohol-induced problems (such as disease and injury) are borne not only by the individual who consumes the alcohol, but also by his/her family and community. Alcohol reportedly plays an important role in instigating violent behaviors, particularly within the family. Such behaviors include child abuse and partner violence, the majority of which is against women.

However, the relationship between alcohol and family violence is not one of simple causality. Levinson's exhaustive 1989 review of the anthropological literature on 90 preliterate and peasant societies explored the issues of family violence in a cross-cultural perspective. He found that only seven societies indicated that alcohol use was a key component in the sequence of events leading up to wife-beating. In those societies, intoxication provided an excuse for the violent behaviors of men; when a violent man was not intoxicated, wives, families, and communities would not tolerate his violence. Men of the Tzeltal people of Mexico, Levinson found, drank heavily during fiestas. During these social events, they often became physically aggressive toward one another, and commonly the male aggression went on to be directed toward female partners. Child abuse was not included in the study.

Studies conducted in the 1990s have also found that alcohol plays a significant role in domestic violence. For example, more than a quarter (26 percent) of the women seeking counseling services in the urban areas of Mexico reported that their partners' abusive behaviors were fueled by intoxication (Ramirez and others, 1992). In the Solomon Islands, 32 percent of family violence offenses were related to problem drinking (McDonald, 1995). Even higher rates were found in South Africa: 67.4 percent of domestic violence cases in Cape Town and 76.4 percent in rural areas involved alcohol use (Parry, 1995).

Another form of family violence is child abuse. In both Canada and Australia, 16 percent of child abuse cases could be attributed to alcohol. In Japan, 20 percent of abused children had alcoholic parents, and in Hungary 8.6 percent of child abuse cases in 1994 involved alcohol (Fekete, 1996). Alcohol has also been associated with a high proportion of child abuse cases in the UK (30 percent) and Norway (50 percent) (Moser, 1992).

Physical abuse during childhood has also been found to be the risk factor for becoming alcohol dependent as an adult. This highlights the intergenerational effect and the complex relationship between violence and alcohol abuse. In a case control study of the relationship between physical and sexual abuse during childhood among Navajo Native Americans,
alcohol dependence was found to be an independent risk factor for being involved in domestic violence, either as a victim or as a perpetrator (Kunitz, and others, 1998).

Summary

Throughout human history, alcohol use has evolved many profound meanings in culture and religion. Particularly among men, it has served to facilitate social interactions.

Alcohol use is one of the major causes of the global disease burden. Among men in the industrialized regions, alcohol ranks as the first cause of disability; in the developing world, it ranks fourth. Adverse effects of alcohol consumption on disease are well documented in the scientific literature. These range from acute maladies to a host of long-term chronic conditions, among them brain damage, high blood pressure, stroke, cancers, and muscle and bone diseases—as well as injury and its consequences.

Evidence has emerged to indicate that alcohol consumption has a protective effect against coronary heart diseases in men above forty who drink in moderation. The evidence for such a protective effect against coronary diseases in women remains inconclusive. Medical research carried out in industrialized countries has found that girls and women have far more biological vulnerability to alcohol-related problems.

The LAC region has the highest percentage of total deaths attributed to alcohol use. Men bear most of the burden of alcohol-related diseases, such as alcoholism and cirrhosis. Moreover, a higher proportion of diseases and injuries among men are attributable to alcohol than among women. It is also important to emphasize that the individual who consumes the alcohol is not the only one affected by it. The drinker’s family and community also bear its costs. In addition, alcohol plays an important role in instigating unsafe sex practices and violent behaviors, particularly within the family. A primary example is domestic violence, much of which is directed against women and children.
III. Gender Dimensions of Alcohol Use in Latin America and the Caribbean

This section examines alcohol consumption at the country level in LAC; discusses findings from epidemiological and ethnographic studies, particularly focusing on gender differences in alcohol use; and examines socio-cultural factors influencing these gender differences.

Alcohol Consumption Data at the Country Level

Alcohol consumption is most often measured as an arithmetic mean of per capita consumption, often generated by data on production, sales, and import and export alcohol beverages in a given country or region. Such estimates only consider alcohol that is legally available on the market. That is, the typical alcohol consumption data fail to capture information about a large share of the alcohol consumed in the developing world—illegal alcohol, including home brews, moonshine, and smuggled liquor. This data gap is particularly significant in LAC, where two-thirds of all fermented and distilled alcoholic beverages are illicit (Coombs and Globetti, 1986, Cercone, 1993, Velasco, 1998). For example, half the alcoholic beverages on the market in Brazil come from illegal production. In Ecuador, illicitly produced alcohol accounts for three times the official production. In Chile, when clandestine production was taken into account, statistics about per capita alcohol consumption increased by 20 percent (Caetano and Carlini-Cotrim, 1993). However, despite its limitations, the mean per capita consumption indicator has become a widely used measure of alcohol consumption because it enables researchers to standardize alcohol consumption over and across time and between different societies (Grant and Litvak 1997, Cercone, 1993).

Variations in the level of alcohol consumption among countries in LAC are considerable. Paraguay consumes on average the highest amount of alcohol (liters per capita) in LAC, at 9.7 liters, followed closely by Argentina with 9.4 liters. Ecuador, with 1.6 liters, consumes the least (WHO unpublished data). Figure 2 portrays not only the wide-ranging per capita consumption levels in the region, but also provides a diverse breakdown of the total by type of alcoholic beverage—beer, spirits, or wine. In Argentina, Uruguay, and Chile, for example, wine is the most popularly alcoholic beverage. Spirits, on the other hand, dominate alcohol consumption in Haiti, Paraguay, the Dominican Republic, Costa Rica, and Nicaragua.
In the 1980s, when the region was undergoing an economic crisis, consumption levels in Mexico and Peru remained relatively constant, whereas they declined significantly in Chile and Argentina (see Figure 3). Interestingly, during that period Brazil and Colombia saw significant increases in mean consumption levels. Cercone (1993) noted that the dramatic changes in alcohol consumption during the 80s could have been caused by such factors as the increase in alcohol production or the decrease in its relative price. Other researchers suggest that in Brazil this trend, which continues up to the present day, is most likely propelled by an increase in the buying power of the middle class, by national economic stability, and by a sharp decline in tariffs on imported beverages (Carlini-Cotrim, 1999).

**Epidemiological Findings**

Mean per capita consumption hides an enormous variation in the distribution of alcohol consumption in a given society. Epidemiological studies on alcohol provide insights into the distribution of drinking levels and patterns. They also afford a glimpse into alcohol-related problems within a population.
Researchers have been studying alcohol consumption in LAC for the past four decades. However, Caetano, who in 1984 reviewed the epidemiology literature on alcohol consumption in the region, found that the studies were often sporadic and narrowly focused. With the exception of Mexico, Brazil, Chile, and Costa Rica, LAC countries have not shown a sustained interest in conducting continuing studies of alcohol use.

In his review of the literature, Caetano (1984) identified the following as the most commonly used operationalization:

- **Abstainers**: those who have never drunk alcoholic beverages or who have drunk less than 100 cc of straight alcohol on fewer than five days in the year preceding the survey.7

- **Moderate drinkers**: those who may drink often, but whose regular intake does not exceed 100 cc of straight alcohol a day, or who experience less than 12 episodes of drunkenness a year.

- **Excessive drinkers**: those who drink habitually (more than three days a week) and who commonly consume over 100 cc of straight alcohol a day, or who experience 12 or more episodes of drunkenness a year.

- **Alcoholics**: individuals who lose control over their drinking and who lack the ability to abstain or stop.

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7 One hundred cubic centimeters of straight alcohol is equivalent to about nine drinks, each with nine grams of straight alcohol (that is, a half pint of beer, a four-ounce glass of wine, or a one-ounce shot of spirits). Marconi selected 100cc (80 grams) as his estimate to comprise about 20 percent of daily calories required (3000 calories). He determined that moderate drinkers should not exceed that amount.
A breakdown of the drinking categories by sex shows vast differences in alcohol consumption between men and women in LAC. According to community-based studies conducted in the region in the 1960s and 1980s, a higher proportion of men than women are heavy or excessive drinkers. Women were found to be more likely to abstain from alcohol than were men. In Mexico, for example, the Second National Survey on Addictions found that 27 percent of the men and 63 percent of the women had drunk no alcohol in the past year. About 14.2 percent of the men and less than 1 percent of the women were considered heavy drinkers (Medina-Mora, 1999). Moreover, in Argentina, although three quarters of the women in the Buenos Aires metropolitan area were considered light or moderate drinkers, only 1 percent drank heavily, as compared to 12 percent of men (cited in Caetano, 1984). This pattern was repeated in all other countries in the region (see Table 5).

Variations also exist within a country. A national survey of alcohol consumption in seven regions in Costa Rica conducted in 1981 showed that among women the proportion of abstainers ranged from 34 percent in Limon to 61 percent in Santa Cruz, compared to 12 percent to 22 percent respectively among men (Caetano, 1984). Once again, a very small proportion of women were found to be heavy or excessive drinkers, and an even smaller proportion were identified as alcoholics.

Gender also interacts with other variables, such as age, socio-economic status, region (urban vs. rural), and ethnicity, to affect consumption levels and patterns. In Argentina, among men residing in wealthy areas, 0.6 percent were found to be alcoholics and 7.5 percent excessive drinkers. These figures were considerably lower than rates among men residing in poor areas, where 13 percent were found to be alcoholics and 20 percent were excessive drinkers (cited in Caetano, 1984). Another study found that alcoholism was four times greater in the slums than in higher income areas (cited in Caetano, 1984). In a study of an indigenous community in Ecuador, drinking was associated with being male, single, young, and having low socio-economic status (cited in Caetano).

With respect to age, the majority of alcoholics and excessive drinkers in Argentina were between the ages of 25 and 54. Among moderate drinkers, however, there was no variation by age (cited in Caetano, 1984). Among men in Mexico, heavy drinkers were concentrated within the 30-39 age group, whereas no significant variation existed among women across age groups (Medina-Mora, 1999).

The majority of the community-based studies that illustrate the distribution of alcohol use were conducted in the 1970s. According to Caetano (1984), a review of alcohol studies in the 1960s and 1970s in the region faced a number of difficulties: the literature was widely scattered, often remained unpublished, and, when published, appeared in journals with limited and irregular circulation. Caetano highlighted the limitations of the studies as follows:

- Studies focused only on severe forms of drinking, based on a theoretical approach that considers alcoholism to be a disease.

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8 The relationship between poverty and alcohol will not be discussed in this paper—such a discussion would demand in-depth analysis of the very extensive literature, particularly that written in the United States. But some research findings should be mentioned here. For example, in the United States, the poor are more likely to abstain and less likely to be moderate or light drinkers, but are more likely to report alcohol-related problems. Income interacts with other demographic variables, such as gender, age, and race, supporting the hypothesis that these bear a complex relationship to drinking behaviors (Mosher, 1994).
Studies focused on urban and working class populations, largely ignoring higher socio-economic classes, marginalized groups in urban areas, and rural populations. In contrast, studies of indigenous populations and their drinking practices have employed ethnography rather than epidemiology.

Studies focused on the epidemiology of alcoholism and not on the epidemiology of alcohol-related problems, such as injuries, traffic accidents, and violence.

Studies often had methodological shortcomings. Among them lack of consensus on definitions and operationalizing alcoholism, as well as problems in sampling and data collection.

The past two decades, however, have witnessed dramatic improvements. The alcohol studies that were conducted in LAC in the 1980s and 1990s focused on the effectiveness of alcohol dependency and abuse treatments, development and testing of standardized instruments for data collection for research, screening, and diagnosis of alcoholism (the instruments are generally in Europe or the United States), and psychiatric problems. Research continues to be heavily based on the disease model (Monteiro, 1996), and assessments of the social dimensions (both social impacts and socio-cultural patterns of drinking) are still lacking.

**Trends in Alcohol Consumption**

Alcohol consumption levels and patterns change over time. Sex-disaggregated trend data about these changes remain scant. A recent WHO-sponsored study in Brazil provides a mere glimpse of what has been occurring in LAC over the past two decades (Carlini-Cotrim, 1999). The survey, conducted in 1987, 1989, and 1993, looked at lifetime prevalence of alcohol use among secondary students in nine cities. It found that drinking among students in seven of the cities increased significantly over the three study periods. It also noted striking differences between males and females. For female students, alcohol consumption rose significantly in eight out of nine cities, whereas for male students, it increased in only three cities. In Salvador, in contrast, the lifetime prevalence of alcohol consumption among young men declined significantly over the six-year period.

A similar study of alcohol consumption among high-school students was recently carried out in Mexico City, which generally reports a higher proportion of alcohol intake than the national average (Medina-Mora, 1999). The study revealed that, among male students, the proportion of boys engaging in alcohol use increased over the three time periods, 1989, 1991, and 1993. The proportion of girls using alcohol increased from 13 percent in 1989 to 19 percent in 1991, but then declined slightly, to 17 percent in 1993.
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1. Samples from Buenos Aires city proper and from district of Lanus (industrial suburb); use the Marconi's criteria described above.
2. Sample of 3,357 Buenos Aires residents; uses a modified—more inclusive—version of Marconi's criteria.
3. Sample from Ribeirao Preto, Sao Paolo State; definitions not provided by researchers.
4. Sample of Mapuche Indians from five reservations.
5. Sample from a working class suburb of Santiago.
6. Sample from two urban and two rural communities of Talca Province.
7. Sample from rural eastern community in Colombia.
8. Range is provided for seven survey areas representing all regions of Costa Rica.
9. Sample of 550 from northern community of Mexico City.
10. Criteria used: moderate—drinking that did not interfere with social responsibilities; excessive—drinking beyond cultural norms, for instance, losing work days; and alcoholic—failure to meet social obligations.
11. Sample from community in Central Lima.
Figures 4-5. Lifetime Prevalence of Alcohol Use among Secondary Students in Nine Brazilian Cities by Gender

Lifetime prevalence of alcohol use among secondary students in nine Brazilian cities (Male)

Lifetime prevalence of alcohol use among secondary students in nine Brazilian cities (Female)

Source: Carlini-Cotrim, 1999 (*** Statistically significant at the 1 percent level; ** Statistically significant at the 5 percent level; * Statistically significant at the 10 percent level; ns: not statistically significant)
The general population cannot be characterized by findings about drinking patterns and trends among students. However, the studies in Brazil and Mexico indicate that greater attention must be paid to the possibility that alcohol consumption among adolescents, in particular girls, is increasing. This is a critical matter, not least because of females’ greater biological vulnerability to alcohol-related problems.

Drinking Norms in Latin America and the Caribbean

Every social grouping establishes norms and rules for who, where, when, and how to drink alcohol. Social norms vary not only between countries but also within countries. The variations in the way the rules are applied become most evident in the case of gender. Men and women are subject to different sets of expectations about alcohol use. Those include the way each gender consumes alcohol and the way each responds. Anthropological research has contributed greatly to the knowledge on consumption patterns and norms (Heath, 1998; Harvey, 1994; Bacon, 1973; Bunzel, 1973). Ethnographic studies have enriched the discourse by demonstrating cross-cultural variations, as well as similarities, in people’s drinking patterns. These studies reveal that deeply embedded meanings are placed on the act of drinking. The studies also emphasize the need to understand drinking behaviors and the consequences of drinking within the socio-cultural context. It is socio-cultural forces that influence why, when, and how people drink and act out. In addition, they shape how alcohol-related problems manifest and how people seek help to resolve these problems.

LAC possesses a multitude of drinking cultures that reflect such variations in consumption level and preferred beverage. Mexico, for example, is often characterized as a dry culture—a society where daily consumption is not a common practice. Alcohol use there is marked by infrequent, heavy binge drinking, occurring at times of fiestas (Medina-Mora, 1989 and 1999). Brazil presents a very different drinking pattern. Drinking begins early in life, commonly involving family, and appears to be integrated into everyday life. The first alcoholic drink frequently takes place within a family setting. A study of adolescents in the urban area of Porto Alegre reveals the family’s important role, not only in providing the first drink to boys and girls, but also in supporting continued drinking (1999). (Carlini-Cotrim, 1999). Yet in Brazil, occasions of excessive drinking are also common, especially during Carnival, soccer games, and holiday celebrations. Carnival is considered to be a “time out in which rules and rites of everyday life are turned upside down” and “not a time for moderation and control” (Carlini-Cotrim, 1999, p. 16-17). Social norms in the region shape drinking patterns by stressing the circumstances of drinking and one’s drinking companions, rather than the volume of drink one consumes (Medina-Mora, 1999). Ethnographic studies depict drinking as a critical aspect of social events. Alcohol facilitates social interactions, particularly among men (Heath, 1973, Coombs and Globetti, 1986).

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9 Alcohol consumption patterns pertain to how and where alcohol is consumed, and in what context the consumption takes place. Variables of interest include temporal rhythm of drinking, settings and activities associated with drinking, drinking peers, and types of beverages. The temporal rhythm of drinking would be operationalized as the number of occasions when the subject consumed a large amount of drinks in the past period of time or the number of drinks consumed during the subject’s last drinking occasion. Very little research has been conducted, however, to determine how an individual decides what a drinking occasion is. The particular setting, such as a bar or fraternity house, is considered to be an important variable, because drinking in different settings is related to different behaviors and risks.

10 Violent incidents, injuries, and accidents are prevalent during Carnival. The role of alcohol in these incidents, however, has not been studied (Carlini-Cotrim, 1999).
Supporting this finding, epidemiological studies indicate that men in LAC are more likely to consume and abuse alcohol and that women are more likely to abstain. Norms support, and in many cases encourage, drinking among men, whereas they impose conditions and restrictions on drinking among women. Women often face strict social scrutiny about many behaviors, drinking among them. In Mexico, for example, young unmarried women are discouraged from drinking in public, particularly in the company of men (Medina-Mora, 1999). Men's consumption of alcohol transpires in the public realm, whereas women's more often occurs in private. Group discussions with men in Honduras and with men and women in the southwestern part of Mexico City indicated that men often drank in public places, while women often drank at home (Caetano, 1984). Drinking in bars and other public places is considered unsuitable for women. The exception: during festivals and celebrations. In addition, men also drink in public because they are presented with more social occasions that promote drinking, such as sporting events.

Men, however, also are conditioned to recognize social distinctions between appropriate and inappropriate drinking patterns. A study of the people living in Ocongate, a small town in Peru, highlights the importance of understanding the meanings attributed to drinking behaviors and the norms and customs that differentiate acceptable drinking from unacceptable drinking (Harvey, 1994). In Ocongate, drinking is perceived as a means of maintaining good relationships. The acts of offering and receiving drinks are vital parts of the social contract. It is expected that both men and women will drink during agricultural, domestic, Catholic, and state festivals. Drinking also has a spiritual and sacred dimension. A refusal to accept a drink can imply lack of trust and a denial of mutual respect and affection.

Socially accepted drinking in Ocongate is drinking as a social affair. It is characterized by two specific stages (Harvey, 1994). The first stage begins with a ritual, such as roofing a house. It always consists of drinking to “liven up.” This stage involves singing, dancing, talking, joking, and swearing. The second stage signifies a social duty successfully achieved; it is always marked by excessive drinking. When a drinker does not abide by the two-stage norm, however, drinking is seen as motiveless and unacceptable, for both men and women.

Another aspect of drinking—intoxication—also exposes gender differences in the application of norms. Binge drinking resulting in drunkenness, which often characterizes alcohol consumption during festivals, is a common practice among Latin American men. In general, intoxication of men is more socially acceptable than of women. Focus group discussions with men in Honduras (cited in Caetano, 1984) revealed that men perceived that women tolerate male partners’ intoxication (that is, women are expected to understand that intoxication is a natural condition of manhood, undesirable yet acceptable).

Behaviors brought about by intoxication are also gender defined. For example, the study of the Ocongate community demonstrates that in that particular society, alcohol provides room and opportunity to stretch the boundaries of appropriate behavior.

Ethnographic literature asserts, however, that this is not a universal phenomenon. A cross-cultural study of 113 societies revealed that in 109 societies, both women and men drank (Bacon, 1973). Only in four societies was drinking restricted to one sex, and in each of these cases, the men drank and the women did not. Where there was a gender difference, men always engaged in alcohol consumption to a greater degree than women.
Drinking sessions represent a time when women may openly discuss the limitations and difficulties of being wives and mothers—getting drunk legitimizes the opportunity to complain about gender roles and power relations.

Furthermore, these drinking sessions also signify a time when both men and women may express their sexuality. In Ocongate, for example, drunken men are often expected to express their heterosexual virility. Women also associate drinking with sexual activity. Harvey (1994) found that first sexual experiences among women often occurred during drinking sessions. In a review of anthropological studies, Heath (1998) also found that in many societies women who drank, in particular those who got drunk, were regarded as sexually promiscuous or sexually available.

Theoretical Perspective on Gender Differences in Alcohol Use

Prevailing explanations for the gender differences in drinking levels and patterns include positional and status roles; gender role identity; and gender role stress. As in the discourse on gender and health, the theoretical perspective on gender and alcohol is dominated by social role theory (Walsh and others, 1995), which claims that “certain positions in society are related to sets of expectations, which give direction to the behavior of individuals and to societal reactions to this behavior” (Neve and others, 1997).

Positional and Status Roles of Gender

Gender can be defined as both a status and a positional role, which can affect drinking levels and patterns. Status role refers to “social expectations based on characteristics that the individual cannot easily influence” (Neve and others, 1997, p. 1441). Positional role, in contrast, is “expectations related to position in social networks such as work and family.” Women’s role in society is deeply embedded in nurturing activities and obligations. Thus based on concepts of gender status and position, heavy drinking and intoxication would conflict with the idea of the nurturing female. Some alcohol researchers assert that, as more women move into the workplace and gender roles change, the gap between male and female drinking behaviors will narrow. We are already witnessing this in more industrialized countries, where women entering formal employment outside their homes are more likely to consume alcohol. Researchers offer two possible explanations: as women take on a dual role, in family and in the workplace, the new stress in their lives leads to more drinking; and as women break down the social barriers to formal employment, they gain greater freedom to engage in behaviors traditionally associated with men, including drinking (Del Boca, 1994).

Gender Role Identity

Differences between men and women in drinking levels and patterns have also been explained by gender role identity, which asserts that the internalization of conventional gender stereotypes influences drinking behaviors. Drinking and drunkenness are more often perceived to be consistent with a traditional notion of masculinity and inconsistent with femininity. Therefore, men who conform more closely to cultural norms are more likely to drink, while the reverse is true for women (Huselid and Cooper, 1992).
**Gender Role Stress**

Related to the notion of gender identity is that of gender role stress. Such stress arises when women and men confront difficulties in fulfilling socially imposed and internalized gender expectations. According to this hypothesis, men drink because they cannot live up to their gender identity (Silberschmidt, 1988). This hypothesis is commonly employed to explain drinking among men in communities that have experienced socio-economic and political upheavals. For example, colonization and commercialization transformed the traditional power structures within many indigenous communities, fostering alienation and frustration. This was particularly true among men, who found themselves unable to maintain jobs and unable to support their households—that is, unable to live up to the traditional expectations of being men. Drinking eased their stress over this transformation of their lives.

**Role of Machismo**

Much of the empirical work testing the above three hypotheses is based on populations in the United States and other industrialized countries. Although the applicability of these explanations to the LAC region needs further exploration, an examination of gender roles in LAC has provided insight into how gender identity—in particular the role of machismo—is constructed. Researchers in LAC recognize the importance of sexuality—masculinity/femininity—in shaping alcohol consumption and related problems. Writes de Keijzer (1998): “It is clear how dominant (hegemonic) masculinity affects the lives of women and children in the areas such as social and domestic violence, reproduction, and sexuality. It is not so clear, at least to men, that the same masculine traits also affect our own lives causing disease and early deaths because of accidents, AIDS, alcohol and other drugs, suicide, violence…”

A study in Micronesia reveals how socio-cultural concepts of masculinity affect drinking among men (Plange, 1998). In Truk, Micronesia, young men consume excessive amounts of alcohol with the intention of getting drunk. Drinking excessively, as well as getting drunk quickly, celebrates male courage and forges solidarity among male youths. Unleashing aggression is also an essential activity of these drinking episodes. Young men are under great pressure, once drunk, to demonstrate their courage and their maturity by enduring physical combat and pain. Binge drinking is tied to risk-taking behaviors that are regarded as proofs of strength and bravery: fighting and canoe voyages out onto the open sea. Homicides, brutal fights, and suicides are not considered acceptable behaviors in Truk; but when these things happen in the context of drinking among young men, they are regarded as tolerable outcomes. The interesting findings of this Micronesian study suggest how a similar study conducting inside the LAC could illuminate regional dimensions of the idea of masculinity.

A study conducted by the Costa Rican Demographic Association highlights the relationship among machista, alcohol use, and sexual risk taking (that is, unsafe sex) (Madrigal and Schifter, 1992). It found that among the general population in Costa Rica, machista and homophobic attitudes were closely related to higher levels of alcohol consumption, in addition to sexual risk taking. Men, that is, intertwine alcohol consumption with notions of sexual prowess and domination. Drinking, most often excessive drinking, is one manifestation of the dominant (hegemonic) masculinity that is promoted in many societies in the region (Smart and Medina-Mora, 1986; Medina-Mora, 1999). Studies appear to indicate
that masculinity plays a significant role in explaining gender differences in alcohol use and alcohol-related problems in LAC. However, there are areas related to gender roles that need further investigation:

- The hegemony of masculinity needs to be unpackaged. Does alcohol use, and its attached meaning to machismo and sexuality, vary across age, racial, and social class lines?

- Social expectations about the ways men and women drink need to be more thoroughly understood. How does socialization links notions of masculinity and femininity with particular drinking behaviors, values, and meanings, both at the individual and societal levels?

- The mechanisms that socialize males and females about drinking also need study. Thus far, examination of the roles of family, schools, and media in reproducing these values and norms in LAC has been neglected.

- The manner of initiation to drinking also calls for attention. This important dimension of socialization varies tremendously within the countries of the LAC.

**Summary**

Within LAC, there are large variations in the levels of alcohol consumption and the preferred types of alcoholic beverage (beer, wine, or spirits). Distribution of alcohol drinking levels and patterns, as demonstrated by epidemiological studies, shows that men are more likely to drink heavily and excessively than are women, and that women are more likely to abstain than are men. Gender also interacts with other variables such as age, socio-economic status, and race to influence drinking levels and patterns. Variations among men by age and socio-economic status are greater than the variations among women.

Gender-disaggregated information on drinking trends is scant. The longitudinal studies of secondary students in Brazil and Mexico, however, provide a glimpse of what may have been occurring over the past two decades. Alcohol consumption among female students in Mexico rose in eight out of nine cities, as compared to three cities among their male counterparts. In Brazil, the proportion of boys engaging in alcohol use increased from 1989 to 1993, whereas the proportion of girls increased but then slightly decreased. Increased alcohol consumption among youths, in particular girls, demands closer attention.

Drinking norms influence gender differences in alcohol consumption. Drinking rules are applied differentially and this is most evident in the case of gender. Men and women are subjected to different expectations and meanings in their use of alcohol, as well as in the way they respond to it.

The socio-cultural forces influence why, when, and how people drink and act out. In addition, they shape how alcohol-related problems are manifested and how help is sought to resolve these problems. This elucidates the need to understand drinking behaviors and the consequences of drinking within the socio-cultural context.

Socio-cultural forces affect both men and women. In general, men are expected and encouraged to drink, whereas women face greater scrutiny in their drinking behaviors.
Although both women and men in LAC engage in drinking during festivals, binge drinking is more common among men. In addition, men have more opportunities to drink—they are provided with more social occasions that promote drinking, such as sporting events, than are women.

Prevailing explanations for gender differences in alcohol use—gender as positional and status roles, gender role identity and stress—are largely based on empirical work among populations in the United States and other industrialized countries. Gender studies in the region have, however, identified gender roles, in particular the social construct of masculinity, as contributing to alcohol use and abuse among men. Drinking, most often excessive drinking, is one manifestation of the dominant (hegemonic) masculinity that is promoted in many societies in LAC.
IV. Alcohol Policies in Latin America and the Caribbean

The first section of this paper examined the effect of alcohol on health (disease and injury) and on social well being at the global level as well as in LAC. The second section highlighted the gender differences in alcohol use and the socio-cultural norms influencing these differences. This section focuses on the interventions that have been implemented to prevent and mitigate alcohol-related problems.

High-risk drinking and alcohol-related problems are prevalent in LAC. They place a heavy burden on the well being of individuals, families, and communities, and they impose great costs on the health care system and on society at large. From a public health perspective, such damaging alcohol use demands that governments take action. From a gender perspective, men are being disproportionately affected by alcohol abuse and alcohol-related problems, which harm not only physical but also psychological well being. From a family perspective, the impact of drinking behaviors among men is also borne by women and children, not least because they may become victims of violence and sexually risky behaviors. The socio-cultural context of drinking, particularly in regard to gender roles and relations, is critical in identifying the causes of the problem, then in formulating possible solutions.

An important tradeoff is inherent in governments' alcohol policies. Governments look through the lens of welfare economics, preferring not to become involved in an issue unless it has produced market failures. With respect to alcohol, the primary market failure is the negative externalities brought on by drinking. Furthermore, interventions that target a market failure may entail high transaction costs, while interventions that are untargeted (population based) may result in loss of welfare for some consumers. Government interventions, that is, must balance the marginal social costs alongside the marginal social benefits. However, the welfare economics perspective need not contradict the goals of public health and gender equality. What actions should a government take in order to reduce alcohol consumption to a socially efficient level? There are interventions that make good sense from a public health perspective, such as taxing alcoholic beverages and levying fines; but because these interventions maintain high transaction costs that may outweigh the social benefits of a reduction in drinking, they may not be justified from the welfare economics perspective. The decision about the type of alcohol policies a government adopts should be based on effectiveness as well as cost of implementation. One key problem that limits the ability to formulate economically sound alcohol policies is the dearth of information on the effectiveness of such policies in developing countries. Evaluation of alcohol policies and programs has primarily been carried out in industrialized countries. (The economics perspective has been well presented in the previous Bank reports and papers. See World Bank Group, 2000, and Cercone, 1993 for detailed analysis. Policy options and their tradeoffs are summarized in Annex 3.)

Types of Alcohol Policies

Alcohol policies can be classified by their objectives: preventing drinking and high-risk drinking behaviors; reducing harm on individual consumers as well as on families and communities; regulating availability and conditions of alcohol use; and providing treatment for individuals with drinking problems.
High-risk drinking behaviors may be prevented by prompting individuals to change their behavior, through information, education, and communication (IEC) and through disincentives and punishment. The IEC approach provides potential drinkers with information on the harm posed by alcohol, intending to prevent or at least delay drinking, or to change the drinking norms (this was the approach taken by many anti-tobacco campaigns). Another prevention method is to put in place disincentives or punishments for irresponsible, risky drinking. For example, laws such as prohibition and penalties for drunk driving can act as deterrents.

Governments have also chosen to put in place environmental interventions, such as creating alternatives to alcoholic beverages and developing recreational activities for youths that do not involve drinking. These strategies focus on promoting an environment that supports abstention from or limited use of alcohol.

The second area of intervention can be labeled harm reduction. It aims not to stop any kind of drinking, but to prevent drinking's negative consequences, such as drunk driving. Examples of these interventions include the use of designated drivers and the provision of free public transportation during festivals and holidays, both during and after regular transit service hours.

The third type of alcohol policy involves regulating the availability of alcohol and its conditions of use. Regulation can range from total prohibition to imposing taxes. Availability is affected by restricting production, requiring licensing of sales outlets, restricting days and hours of sales, rationing sales, limiting drinking to specific designated settings, and limiting the number of places of sale. Other common policy actions include setting a minimum age limit for serving and buying alcohol, refusing to serve those already intoxicated, and regulating the advertising of alcoholic beverages by private companies.

The fourth area of policy intervention is providing treatment for individuals who engage in problem drinking. Such treatment may be offered by specific programs or may be integrated into existing health and social services provisions.

Some alcohol researchers have criticized current alcohol policies, maintaining that a focus on the level of consumption—often referred to as the amount of alcohol consumed as indicated by mean per capita consumption—is insufficient and misleading (Grant, 1997 and 1999). These researchers have argued against the single distribution theory, which assumes that a mean level of consumption is closely related to the number of persons drinking at levels associated with a high risk of developing alcoholism or alcohol-related problems. They also criticize the epidemiological studies for focusing on quantity-frequency scales of average consumption and on mean per capita consumption at the societal level, claiming that this focus inevitably leads to alcohol control measures rather than to targeting those drinking occasions that are most harmful.

Grant and Livak (1997) point out that episodic heavy drinking is the problem, not moderate daily consumption. These researchers call for a focus on alcohol consumption patterns, which pertain to how and where alcohol is consumed and in what context the consumption takes place—looking at such variants as the temporal rhythm of drinking; settings and activities associated with drinking; personal characteristics of drinkers; drinking peers; and type of beverages.
A large body of evidence, however, supports a correlation between levels of alcohol-related problems and levels of per capita consumption in the society (World Bank Group, 2000). The multiplicity of factors influencing the rate of alcohol-related problems clearly indicates that policy options need to consider per capita consumption, patterns of drinking, and other qualitative aspects of the drinking culture.

**Alcohol Legislation in LAC**

Beginning in the 1960s, a few LAC countries formulated explicit national alcohol policies. The proposed measures were driven by fiscal motives, rather than by public health concerns. They concentrated on taxation of production and sales (Madrigal, 1998). Religious and moral arguments also propelled these policies (Smart and Medina-Mora, 1986).

Table 6 shows the types of legislation that have been enacted in LAC to curb alcohol-related problems. Current legislative actions primarily seek to limit the availability of alcoholic beverages. Alcohol control measures take diverse forms: government monopolies on production and sales; special taxes on alcohol beverages; minimum age limits; sales restrictions set by licensing outlets, rationing purchases, and limiting times of sale.

In Costa Rica, the government holds a monopoly over the production and sale of alcoholic beverages (Caetano and Carlini-Cotrim, 1993). In Paraguay, the state agency Paraguayan Alcohol Administration (APAL) maintains a monopoly on purchasing, distributing, and quality control of all alcohol products (Madrigal, 1998, p. 251). Moreover, many LAC governments earn revenues from alcohol taxation (Madrigal, 1998; Caetano and Carlini-Cotrim, 1993).

As shown in Table 6, a minimum drinking age is the most common restriction on alcohol use. Almost all countries in the region have set 18 years of age as the minimum. Chile, where the drinking age is 21, is the sole exception. Across the LAC, laws prohibit selling alcohol to minors and prohibit minors from buying alcohol—but these laws are seldom enforced. A study in Brazil showed that 5 percent of children between the ages of 9 and 11 years of age and 9 percent of children between 15 and 17 drank in bars (Carlini-Cotrim, 1999).

The governments of Chile, Venezuela R.B., and Colombia have restricted drinking to certain times of day and limited it only to specified venues. Venezuela R.B. additionally regulates drinking on planes and boats and in sports centers. Brazil is the only country in LAC that levies penalties and fines to discourage drinking in the workplace.

Bans and restrictions on advertising have also been adopted across the region. Costa Rica’s National Institute on Alcoholism and Drug Dependence has been screening alcohol-related advertising since 1975. entirely bands alcohol advertising on radio and TV. El Salvador and Paraguay have enacted legislation regulating alcohol advertising on TV and in movies; both countries also require alcoholic products to bear warning labels.

Government efforts to prevent and mitigate alcohol-related problems face a number of limitations:
• Legislation and policies generally are not enforced, due to a lack of political and social will to view either alcohol misuse or alcohol-related problems as a societal issue.

• LAC governments have focused on regulation of alcohol’s availability, rather than on harm reduction and on education campaigns. There are a very few exceptions: Chile and Colombia have enacted legislation to prevent alcohol-related problems through IEC; in Colombia, bylaws exist that specifically call for educational programs at the school level, as well as preventive campaigns targeting tobacco and alcohol (Madrigal, 1998).

• Governmentally set standards for treating alcohol dependency and rehabilitating alcoholics are limited by a lack of early detection and care. Moreover, treatment or support services are not coordinated with punitive measures, such as fines and arrests. These failures limit the effectiveness of legislation in such countries as Honduras, Ecuador, and Argentina (Madrigal, 1998).

Overwhelmingly, alcohol policies in the LAC region focus on control of availability and access to alcohol. The effectiveness of these interventions has been difficult to assess because implementation and enforcement remain superficial.
### Table 6: Legislative Efforts in Latin America

<table>
<thead>
<tr>
<th>Country</th>
<th>Prevention</th>
<th>Harm reduction</th>
<th>Minimum age</th>
<th>Taxes</th>
<th>Labeling</th>
<th>Import controls</th>
<th>Sales</th>
<th>Advertising</th>
<th>Treatment</th>
</tr>
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<tbody>
<tr>
<td>Costa Rica</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Argentina</td>
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<td>Colombia</td>
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<td>X</td>
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<tr>
<td>Ecuador</td>
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<td>X</td>
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<tr>
<td>Nicaragua</td>
<td>X</td>
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<tr>
<td>Peru</td>
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<tr>
<td>Venezuela R.B.</td>
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<tr>
<td>Mexico</td>
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<td>Chile</td>
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<td>Honduras</td>
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<td>El Salvador</td>
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<td>Guatemala</td>
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<td>Paraguay</td>
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<td>Panama</td>
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<tr>
<td>Brazil</td>
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<td>Bolivia</td>
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<td>X</td>
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<tr>
<td>Dominican Rep</td>
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</table>

Source: Madrigal, 1998
V. Recommendations

The World Bank has a significant role to play in the prevention and mitigation of alcohol-related problems in the LAC region. The Bank—and the human development sector in particular—should increase its efforts to prevent alcohol abuse in client countries that bear a heavy burden of alcohol-related problems. The Bank should identify and support effective policies to reduce the impact on human capital, especially in countries with high per capita alcohol consumption, as outlined in the World Bank Group Note on Alcohol Beverages. Taxation policies are among the measures that should be considered. Other priorities should include increasing the knowledge base by supporting research efforts; developing indicators to measure alcohol consumption level and patterns among men and women, as well as to measure the economic and social consequences of alcohol use; systematically integrating questions of alcohol use and related problems in consultations with governments and civil society organizations; and providing investment lending where there is adequate data and a political and social will to address the issue. The rest of this section offers policy and programming recommendations and proposes further research for the region.

Policy and Program Interventions

Alcohol policies should address the multiple determinants of alcohol abuse by putting in place cost-effective, culturally appropriate, sustainable interventions; preventing alcohol abuse and dependency; and reducing alcohol-related risks to the individual, whether drinker or non-drinker, as well as to the society. The recommended public health approach includes a focus on risk behaviors and the enabling and reinforcing factors influencing those behaviors, as well as a focus on the individuals or populations at risk. Alcohol consumption, use, and abuse is a continuum. The economic and public health perspectives on alcohol use are not mutually exclusive. An ideal policy decision should identify the optimal strategies and intervention points within a specific country context.

Alcohol policy options for LAC include levying taxes, setting product safety standards, licensing production, promoting health education, controlling advertisements, enacting drunk driving laws and minimum-age limits, and restricting the times and conditions of beverage sales. Public education could encompass school health education programs, media campaigns, and educational approaches targeting pregnant women, commercial sex workers, and victims of physical and sexual abuse. Consumer information, such as facts about the dangers of drinking during pregnancy, is an important public health tool. However, because the informal sector supplies a significant proportion of the alcoholic beverages consumed in LAC, all these measures and their tradeoffs have to be carefully evaluated, especially the measures aiming at reducing access to alcohol (see also Annex 3).

Currently the majority of alcohol policies in LAC focus on controlling the availability of alcohol. At the very minimum, these policies need to be enforced and their effectiveness evaluated.

Note, however, that the existing policies neglect the stark gender dimensions of alcohol consumption and alcohol-related problems. As indicated by epidemiological and anthropological studies, LAC countries vary in levels of alcohol consumption but also in patterns of drinking. Gender differences are acute. Despite the overwhelming representation
of men in alcohol-related problems, and the prevailing norms that support and encourage drinking among men, no existing interventions in LAC explicitly consider gender.

Gender analysis of alcohol consumption and alcohol-related problems indicates that interventions, particularly in the areas of prevention and harm reduction, ought to focus on changing socio-cultural norms about gender and drinking. It is especially important to focus on the norms that promote high-risk drinking behaviors among males and to target the mechanisms that socialize both genders about drinking and drunkenness. Interventions should be specific to the socio-cultural context in which drinking occurs, including gender roles and identity. In designing interventions, gender differences in alcohol consumption levels and patterns should be assessed along the following dimensions using appropriate quantitative and qualitative methodologies:

- **What:** What are the preferences of women and men with respect to alcoholic beverages? Are some types of beverages considered acceptable or unacceptable for women or men?

- **When:** When do men and women drink? For instance, do certain occasions, such as festivals or soccer games, prompt drinking? How do these occasions shape the level and pattern of drinking?

- **Where:** Where do women and men drink? For instance, do they drink in bars, at work, in school, at home? How does a setting shape the level and pattern of drinking?

- **How:** How do women and men pace their drinking? What other behaviors accompany drinking—for instance, is there other substance use?

- **With whom:** With whom do women and men drink? For instance, do they drink alone, or do they drink with family members, peers, or co-workers? How do drinking companions shape the level and pattern of drinking?

- **Why:** Why do women and men drink? Do they drink to live up to social expectations, to cope with stress, to facilitate social interactions, to ease sexual inhibitions, to enhance masculinity? Do they abstain?

Using these dimensions to understand gender differences in drinking behaviors would enhance the efficiency and effectiveness of policy interventions that aim to reduce or prevent alcohol-related problems in the LAC region.

**Research**

To create alcohol intervention policies, much more research in a number of areas is necessary. Such research needs to consider the following:

- Alcohol research in the region is uneven. While some countries, such as Brazil, Mexico, and Costa Rica, have produced studies that provide insight into patterns of drinking and socio-cultural factors, other countries in the region have remained unexplored.
Attention should be paid to countries where consumption levels are high, such as Paraguay, Argentina, Venezuela R.B., Uruguay, and Chile, and where there is limited information on the patterns of alcohol consumption, in particular its gender dimensions.

- The public health literature remains largely entrenched in the medical “disease” model. It still lacks information on the social impacts produced by alcohol use through violence and sexual risk behaviors. LAC needs further studies of gender differences in the social impacts of alcohol on families and communities, including suicide, crime, and violence (among men as well as against women and children).

- Alcohol's impact on household dynamics also needs more investigation. Such studies should include the impact of drinking on income and expenditures and its impact on gender roles within families. Such studies can be achieved through analysis of household data from surveys that are already supported by the Bank.

- Longitudinal studies should be considered. Such studies would provide invaluable information on trends and patterns of alcohol consumption among men and women and particularly among the young.

- Unanswered questions remain about gender roles. Though limited, studies on alcohol use and gender already have revealed that masculinity plays a significant role in LAC's gender differences in alcohol use. But a number of gender role topics remain unexplored, including how alcohol use, interrelated with manifestations of machismo and sexuality, varies across age, racial, and social class lines; and how males and females are socialized about drinking. What are the agents and mechanisms of socialization in LAC countries? How are drinking behaviors initiated and perpetuated? These should be the topics of further research.

- There is no inventory of current anti-alcohol interventions inside the LAC. Such an inventory, listing who is doing what and evaluating the interventions governments and civil society organizations in LAC countries are carrying out, needs to be undertaken.
ANNEX I. World Bank Group Investments in Alcohol

**Table A1. Alcohol-Related Projects in the Health Sector**

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Project name</th>
<th>Approval date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECA</td>
<td>Kazakhstan</td>
<td>Health Restructuring</td>
<td>04/01/1999</td>
<td>Alcohol consumption is highlighted as a risk factor for leading causes of death in Kazakhstan, such as cancer, CVD, and accidents. The project focuses on increasing knowledge about alcohol consumption and developing policy interventions.</td>
</tr>
<tr>
<td>Latvia</td>
<td>Health</td>
<td></td>
<td>11/12/1998</td>
<td>Alcohol related injuries, poisonings, and suicides contribute to the declining health status in Latvia. The project focuses on developing prevention and treatment of alcohol misuse and abuse.</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>Health I</td>
<td></td>
<td>09/22/1998</td>
<td>The project supports public education programs to decrease the prevalence of alcohol abuse.</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Social Policy and Community Social Services</td>
<td></td>
<td>02/18/1997</td>
<td>The project assists populations at risk of alcohol abuse and dependency through community-based social services and rehabilitation centers.</td>
</tr>
<tr>
<td>Estonia</td>
<td>Health</td>
<td></td>
<td>01/19/1995</td>
<td>The project supports health promotion and alcohol abuse prevention programs and builds capacity of health workers to address alcohol related problems.</td>
</tr>
<tr>
<td>LAC</td>
<td>Argentina</td>
<td>Integrated Drug Addiction Prevention Pilot Project</td>
<td>07/01/1999</td>
<td>The project aims to obtain a more accurate picture of drug use (illicit and licit) in Argentina, by identifying an epidemiological profile of drug addiction and estimating consumption levels. In addition, it will assist local authorities, organizations and networks in developing and implementing plans to prevent drug use.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Project name</th>
<th>Approval date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECA</td>
<td>Moldova</td>
<td>First Agriculture</td>
<td>05/07/1996</td>
<td>The project aims to improve the quality of Moldovan wine through research and development of grape varieties, to improve materials and infrastructure for wine production, and to test new production methods and systems.</td>
</tr>
<tr>
<td></td>
<td>Portugal</td>
<td>Tras-Os-Montes Regional</td>
<td>04/11/1989</td>
<td>The project supports modernization of agroindustries and replanting of existing vineyards that produce port.</td>
</tr>
<tr>
<td></td>
<td>Hungary</td>
<td>Agroprocessing Modernization</td>
<td>05/05/1988</td>
<td>The project provides funding to agroprocessing enterprises in selected agricultural subsectors, one of which is wine, through modernization of facilities and improvements in management, marketing, and technology.</td>
</tr>
</tbody>
</table>

### Table A3. International Finance Corporation (IFC) Alcohol-Related Projects and Guarantees

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Company</th>
<th>Activity</th>
<th>Approval</th>
<th>Loan and guarantee</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAC</td>
<td>Argentina</td>
<td>Brahma</td>
<td>Beer</td>
<td>FY 96</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>Argentina</td>
<td>Malteria Pampa</td>
<td>Malt</td>
<td>FY 92, 93, 96</td>
<td>15.0</td>
</tr>
<tr>
<td></td>
<td>Argentina</td>
<td>Quilmes</td>
<td>Malt</td>
<td>FY 94</td>
<td>19.0</td>
</tr>
<tr>
<td></td>
<td>Argentina*</td>
<td>ROB-Malteria</td>
<td>Malt</td>
<td>FY 89</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Argentina</td>
<td>BGN-Flichman</td>
<td>Wine</td>
<td>FY 87</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>Argentina</td>
<td>ROB-Cuyo</td>
<td>Beer</td>
<td>FY 86</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Bolivia*</td>
<td>CBN Malt</td>
<td>Malt</td>
<td>FY 81</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>Brazil</td>
<td>Brahma</td>
<td>Beer</td>
<td>FY 95</td>
<td>30.0</td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td>Grupo Femsa</td>
<td>Beer</td>
<td>FY 89</td>
<td>80.0</td>
</tr>
<tr>
<td>ECA</td>
<td>Hungary</td>
<td>Albadomu</td>
<td>Malt</td>
<td>FY 95</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>Poland</td>
<td>Baltic Malt</td>
<td>Malt</td>
<td>FY 96</td>
<td>7.2</td>
</tr>
<tr>
<td></td>
<td>Bosnia and Herzegovina</td>
<td>Sarajevska Pivara</td>
<td>Beer</td>
<td>FY 97</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>Czech Rep</td>
<td>Plzensky Prazdroj</td>
<td>Beer</td>
<td>FY 97</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>Romania</td>
<td>Efes Brewery SA</td>
<td>Beer</td>
<td>FY 97</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>Yugoslavia, Fed. Rep.</td>
<td>BOAL Podrarusrstvo</td>
<td>Wine</td>
<td>FY 87</td>
<td>1.1</td>
</tr>
<tr>
<td>AFR</td>
<td>Benin*</td>
<td>Sobebra</td>
<td>Beer</td>
<td>FY 92</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>Ghana*</td>
<td>Achimoto Brewery</td>
<td>Beer</td>
<td>FY 92</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Tanzania</td>
<td>Tanzania Breweries</td>
<td>Beer</td>
<td>FY 94, 95</td>
<td>11.0</td>
</tr>
</tbody>
</table>

* Indicates projects canceled as of January 1999. There are a total of 12 alcohol-related projects, accounting for 1.2 percent of the IFC portfolio.

### Table A4. Multilateral Investment Guarantee Agency (MIGA) Alcohol-Related Projects and Guarantees

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Company</th>
<th>Activity</th>
<th>Approval</th>
<th>Loan and guarantee</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAC</td>
<td>Brazil</td>
<td>Sao Paulo Interior e Parana Industries</td>
<td>Beer</td>
<td>FY 96</td>
<td>3.9</td>
</tr>
<tr>
<td>ECA</td>
<td>Romania</td>
<td>Efes Brewery SA</td>
<td>Beer</td>
<td>FY 98</td>
<td>30.0</td>
</tr>
<tr>
<td></td>
<td>Russian Fed</td>
<td>Knyaz Rurik – Efes Brewery</td>
<td>Beer</td>
<td>FY 98</td>
<td>29.7</td>
</tr>
</tbody>
</table>

Note: Contracts for brewery investments represent 0.81 percent of the total number of contracts that have been issued by MIGA.
ANNEX II. DSM IV Classification of Substance Use Disorders

1. Dependence is a maladaptive pattern of use, leading to clinically significant impairment or distress, as manifested by three or more of the conditions below occurring at any time in the same 12-month period:
   • Withdrawal—the substance is taken in larger amounts or over a longer period than was initially intended;
   • A persistent desire or unsuccessful effort to cut down or control the use;
   • A great deal of time is spent on activities necessary to obtain the substance;
   • Important social, occupational, and recreational activities are given up or reduced because of substance use; and/or
   • The substance continues to be taken despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

2. Abuse is a maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by one or more of the conditions below, occurring within a 12-month period:
   • Recurrent use resulting in a failure to fulfill major role obligations at work, school, or home;
   • Recurrent use in situations in which it is physically hazardous;
   • Recurrent substance related legal problems; and/or
   • Recurrent use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.

3. Intoxication:
   • The development of a reversible substance specific syndrome due to recent ingestion of or exposure to a substance.
   • Clinically significant maladaptive behavior or psychological changes that are due to the effects of the substance on the central nervous system.
   • Symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

4. Withdrawal:
   • The development of a substance specific syndrome due to the cessation of or reduction in substance use that has been heavy and prolonged.
   • The substance specific syndrome causes clinically significant distress or impairment in social, occupational and other important areas of functioning.
   • Symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

Source: American Psychiatric Association Diagnostic and Statistical Manual, Fourth Edition
Annex III. Policy Options: Measures and Tradeoffs

<table>
<thead>
<tr>
<th>Policy</th>
<th>Product safety standards</th>
<th>Taxation</th>
<th>Health education</th>
<th>Advertising controls</th>
<th>Drunk driving laws</th>
<th>Age limit</th>
<th>Liquor restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market failure targeted</td>
<td>Asymmetric information/information failure</td>
<td>Externality</td>
<td>Information failure</td>
<td>Information failure</td>
<td>Externality</td>
<td>Information/Rationality failure</td>
<td>Externality</td>
</tr>
<tr>
<td>How directly addresses market failure</td>
<td>Directly: Producer licensing to control moon shining, falsified alcohol beverages. Indirectly: Prequisite for an effective taxation policy.</td>
<td>Indirectly: Taxes are a complementary good to harmful drinking.</td>
<td>Directly</td>
<td>Indirectly</td>
<td>Directly</td>
<td>Indirectly: Taxes drinkers with a high discount rate.</td>
<td>Indirectly: Targets availability or risky drinking situations, complementary goods to harmful drinking.</td>
</tr>
<tr>
<td>Effectiveness in reducing harmful drinking</td>
<td>Effective on production of dangerous beverages</td>
<td>Effective on price elasticity of demand; depends on consumption spillover to informal markets.</td>
<td>Effective on information; not effective on consumption pattern</td>
<td>Disputed effect on total demand for alcohol; affects only formal markets.</td>
<td>Effective</td>
<td>Effective</td>
<td>Effective</td>
</tr>
<tr>
<td>Welfare tradeoffs</td>
<td>May be unfair to harmless unlicensed producers</td>
<td>Heaviest burden borne by heaviest (most harmful) drinkers; unfair for harmless drinker</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Unfair for harmless drinking below age 21</td>
<td>May be unfair to harmless drinkers</td>
</tr>
<tr>
<td>Political feasibility</td>
<td>Politically feasible</td>
<td>Increasing taxes often politically feasible</td>
<td>Politically not costly if ineffective in reducing consumption.</td>
<td>Politically feasible if not stringent</td>
<td>Politically feasible</td>
<td>Politically feasible</td>
<td>Often politically feasible</td>
</tr>
<tr>
<td></td>
<td>Possible resistance from unlicensed producers</td>
<td>Resistance from alcohol industry</td>
<td>Costs if it shows effect (e.g. counter-advertising).</td>
<td>Opposition from the alcohol and media industries</td>
<td>Opposition from the alcohol industry?</td>
<td>Opposition from retailers if penalties fall on them</td>
<td>Private interests become attached to licenses, so difficult to strengthen restrictions.</td>
</tr>
<tr>
<td>Implementation cost</td>
<td>Enforcement costs high in developing countries.</td>
<td>Low or high costs, depending on form of taxation and organization of alcohol production.</td>
<td>Low or high costs, depending on level of effort. If attempts to match spending of alcohol industry, cost quite high.</td>
<td>Low</td>
<td>High - some costs can be transferred to violators.</td>
<td>Low</td>
<td>Low—costs shifted to the private licensees.</td>
</tr>
</tbody>
</table>

References


NIAAA. 2000. Alcohol and Health: 10th Special Report to the U.S. Congress. Washington, D.C.


