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This journal is dedicated to the late Professor Graeme Hugo

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## SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF POOR ALCOHOL CONSUMERS IN SRI LANKA

Ruwan Jayathilaka\*

**Abstract:** *The investigation of the link between poverty and alcohol consumption plays an important role in designing poverty reduction strategies in some African and Asian developing countries. In this study, Sri Lanka used as a case study to analysis the socioeconomic and demographic characteristics of Alcohol Consuming Households (ACHs) and Non-Alcohol Consuming Households (NACHs) focusing on poverty. This study used data from the most reliable survey, which was Household Income and Expenditure Survey (HIES) 2006/07, conducted by the Department of Census and Statistics in Sri Lanka. This study used the cost of basic needs approach poverty line to capture the number of poor, depth and severity of poverty among ACHs and NACHs. The basic statistical techniques, measurements of poverty were used in the study, and found that the social characteristics related to the ACHs were significantly different from other households. For instance headship, average number of younger and elderly people, education attainment, marital status and usual activities were significantly different in poor ACHs. This study also found that ACHs had a relatively higher percentage of dependents and a lower percentage of working persons. It recognised that illegal alcohol consumption is popular in the rural and estate sector and that legal alcohol consumption is popular in the urban sector. Furthermore poor ACHs and households belonging to the lowest income (expenditure) deciles tended to consume more kasippu and toddy. In addition, this study concluded that kasippu and toddy consuming households faced a relatively higher incidence, depth and severity of poverty.*

**Keywords:** Alcohol consumption, poverty, household characteristics.

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### Introduction

Over the course of history, alcohol has served a variety of functions within many different cultural and religious contexts. Whilst mistakenly regarded to be a product designed for social consumption, the uses of alcohol can also extend to a tranquilizer, appetizer, disinfectant, anesthetic, food, solvent, and economic commodity. In spite of these seemingly positive applications however, alcohol does become toxic if taken in excessive quantities. Although some alcohol users do not harm themselves or others in terms of health, the implications of alcohol toxicity does mean that a sizeable proportion of users do create health and economic problems to themselves, their families and the wider society. Therefore, researchers in a number of disciplines including health, sociology and economics are currently paying a great deal of attention to these topics because of the importance of their ill-effects on society. As a

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result of this attention, two distinct bodies of literature on the topic have emerged; the first dealing with alcohol consumption, and the second with poverty.

A large number of studies have been carried out to examine the biological, psychological, social and cultural determinants of alcohol consumption over the last five decades (e.g., Edwards et al. (1972), Prescott et al. (1994) and Trollidal (2005)). Similarly, a large number of studies have been carried out to examine the link between alcohol consumption and economic variables. In these latter studies, alcohol related issues have been framed as one of the most controversial topics in the world due to different cultural values and its negative social and health outcomes (University College London, 1999). Given the addictive nature of alcohol, it is also viewed as different from many other consumer products and for governments especially, taxes on alcohol can be an easy means of revenue generation.

In view of the fact that excessive alcohol consumption is associated with a plethora of health, social, legal and economic issues, the costs often outweigh any positive impacts generated through revenue generation for the state (Harris, 2010). That is, whilst some studies have shown that moderate consumption of alcohol can be good for health (Gunzerath et al., 2004; Moore & Pearson, 1986; Price, 2004; Suzuki et al., 2009; Vliegthart et al., 2004), many others suggest that alcohol consumption is harmful (Bawaba, 2009; Bell, 1996; Ferreira & Willoughby, 2008; Jansson, 2008; Martin & Dombrowski, 2008; Stibler, 1991). Similarly, non-health related studies have suggested that alcohol consumption is associated with celebration and pleasure, relaxation and reward (Gronnerod, 2002; Ling et al., 2012; Rohsenow, 1983) yet there is also an abundance of literature demonstrating alcohol's association with health issues (Macdonald & Europe, 1999; Martin, 2000; Single, 1984) and criminal offences (Poldrugo, 1998; Terranova et al., 2013). In particular, excessive alcohol consumption is found to have direct and indirect effects on poverty (Bawaba, 2011; de Silva, Samarasinghe, & Hanwella, 2010; Gmel & Rehm, 2003; Khan, Murray, & Barnes, 2002; Neufeld et al., 2005; Schootman et al., 2013). Reflecting on this literature, many developed and developing countries are increasingly looking to restrict consumption of alcohol through various measures such as prohibitive taxes, bans on alcohol related advertising and restrictions on the times during which alcohol sales can be made.

Apart from the money spent on purchasing the products, excessive alcohol drinkers often suffer many economic problems such as indebtedness, lost employment opportunities, reduced wages and increased medical expenses. Normally, heavy drinkers' expenditure on alcohol takes up a large share of their income and as such, their households may get affected by indebtedness. This can subsequently affect the education of children in these households as well because if a parent is addicted to alcohol, a child's mental and social development can be implicated through exposure to adverse stimuli such as domestic violence (Institute of Policy Studies, 2008). Hence, the relationship between alcohol and poverty is more than just the money spent on it.

The main aim of this study is to examine the differences of poor alcohol consumers across socio economic and demographic characteristics. Further, to determine whether differences in characteristics exist between alcohol consumers and non-consumers,

these characteristics have to be compared between the two types of households: Alcohol Consuming Households (ACH) and Non-Alcohol Consuming Households (NACH).

### **Data and methodology**

The data used for this study is from the micro level national Household Income and Expenditure Survey (HIES) in year 2006/07 for Sri Lanka.<sup>1</sup> HIES is conducted every five years by the Even though the HIES 2009/10 data are also available now, as this survey was done very close to the end of the 30-year war in Sri Lanka, the data are not reliable.

Department of Census and Statistics (DCS). HIES of 2006/07 was the sixth in the series and was conducted during the period from July 2006 to June 2007. This survey covered 18,544 households (76,749 persons) in all provinces in the country excluding Northern Province and Trincomalee district in the Eastern Province due to the unavailability of proper sampling frame and civil war in those areas. The HIES data for Sri Lanka include economic, social and demographic information on households (e.g. household income and household consumption expenditure on 14 different major food items and 10 other major non-food items). In terms of alcohol consumption, information at the disaggregated level is available for household expenditure on a number of alcoholic beverages, including Toddy, Arrack, Kasippu<sup>1</sup>, Beer/Stout, Whiskey/Brandy, Gin and Wine.

The study uses a cross sectional approaches to examine the socio economic and demographic characteristics of alcohol consumers and non-consumers. This study used to compare the level of poverty and level of inequality between the rich and the poor among various populations. These are based mainly on the poverty line and include the Foster Greer-Thorbecke (FGT) Index, Headcount Index, Poverty Gap Index, Squared Poverty Gap Index (SPGI) and Gini Index. In addition to these traditional measures of poverty indices, there are other ways of measuring the level of poverty. Take for example the absolute poverty measures which look at the number of people living below a certain expenditure threshold. This study measures the level of absolute poverty using the Cost of Basic Needs (CBN) approach.

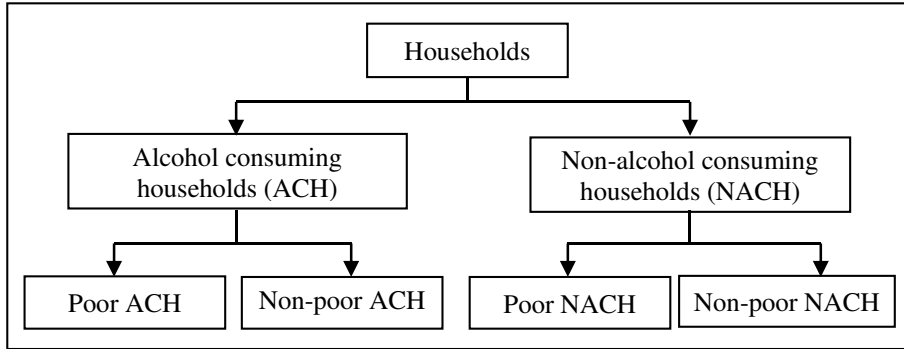
The CBN approach has the advantage of ensuring consistency in treating individuals with the same living standards (Thorbecke, 2004). Measuring poverty levels based on the household expenditure is also assumed to be more reliable and more stable than using household income (Klasen, 1997). The reasons for this have been highlighted by Christiaensen, Scott, and Wodon (2002) and Haughton (2009). For instance, people might forget what they may have earned over the past period or not disclose the full extent of their income. Due to these reasons, this study uses the CBN approach to identify the poor and non-poor households. According to the DCS, in Sri Lanka, a household who had real per capita monthly total consumption expenditure below SLRs. 2,233 during 2006/07 is considered as a poor household. This is the first study to apply the Cost of Basic Needs approach to poverty to analyse the level of poverty among the alcohol consuming and non-alcohol consuming households in Sri Lanka.

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<sup>1</sup> This is the most common and accepted name of illicit brewing in Sri Lanka.

For this analysis, this study categorises the households into four groups: Poor ACH, non-poor ACH, Poor NACH and non-poor NACH (see Figure 1).

**Figure 1: Classification of the households**



**Distribution of the alcohol consuming and non-alcohol consuming households in Sri Lanka**

Table 1 presents the disaggregated frequency and relative frequency distributions of alcohol consuming households (ACHs) and non-alcohol consuming households (NACHs) by sectors and provinces. Column 4 of the table presents the total number of households from the survey belonging to each geographical location. Columns 5 to 9 present the number of ACHs and NACHs in each of the geographical locations as well as their percentages.

**Table 1: Distribution of ACHs and NACHs by sectors and provinces**

Sector/Province	Households			Percentage within groups			Percentage within sectors/provinces	
	ACH (2)	NACH (3)	All (4)	ACH (5)	NACH (6)	All (7)	ACH (8)	NACH (9)
<b>Sri Lanka</b>	2,578	15,964	18,54	100.0	100.0	100.0	13.9	86.1
<b>Sector</b>								
Urban	526	4,107	4,633	20.4	25.7	25.0	11.4	88.7
Rural	1,539	10,649	12,18	59.7	66.7	65.7	12.6	87.4
Estate	513	1,208	1,721	19.9	7.6	9.3	29.8	70.2
<b>Province</b>								
Central	417	1,902	2,319	16.2	11.9	12.5	18.0	82.0
Eastern*	174	1,296	1,470	6.8	8.1	7.9	11.8	88.2
North Central	143	1,092	1,235	5.6	6.8	6.7	11.6	88.4
North Western	225	1,632	1,857	8.7	10.2	10.0	12.1	87.9
<i>Sabaragamuw</i>	194	1,424	1,618	7.5	8.9	8.7	12.0	88.0
Southern	520	3,091	3,611	20.2	19.4	19.5	14.4	85.6
<i>Uva</i>	272	1,014	1,286	10.6	6.4	6.9	21.2	78.9
Western	633	4,513	5,146	24.6	28.3	27.8	12.3	87.7

Source: Based on HIES, DCS (2007) data.

Note: \*The database does not include the Trincomalee district in the Eastern Province.

As can be seen from the first row of Table 1, about 14 per cent of Sri Lankan households are alcohol consuming and about 86 per cent are non-alcohol consuming. Even though the percentage of ACHs seems low (14 per cent), it is relatively high for a country where alcohol consumption is considered to be against the religious and cultural beliefs of society.

A sector-wise comparison from columns 8 and 9 reveal that among the urban households, 11.4 per cent are ACHs; among the rural households, 12.6 per cent are ACHs; while among the estate households, 29.8 per cent are ACHs. In other words, about one-tenth of the urban and rural households consume alcohol, whereas about one-third of the estate households consume alcohol. That is, in comparison with the urban and rural households, the proportion of ACHs among the estate sector households is about three-fold.

As can be seen from the provinces section of columns 5-7 of Table 1, a higher number of ACHs are found in the Western (24.6 per cent), Southern (20.2 per cent) and Central (16.2 per cent) provinces. The North Central (5.6 per cent) Province has recorded the lowest percentage of ACHs, followed by Eastern (6.8 per cent) and Sabaragamuwa (7.5 per cent) provinces. Looking at columns 8 and 9, within each Province, it can be seen that the highest percentage of ACHs were from the Uva (21.2 per cent) and Central (18.0 per cent) provinces whereas the lowest ACH were from North Central (11.6 per cent) and Eastern (11.8 per cent) provinces.

Table 2 presents the demographic characteristics such as age, headship, marital status and family size for those aged 10 years and over living in both types of households, ACHs and NACHs. Columns 2-4 present the distribution within the ACHs, NACHs and overall Sri Lanka, respectively.

As can be seen, the age distribution within the ACHs and the NACHs are similar, except for the 60+ age group which is higher among the non-alcohol consumers (11.4 per cent) compared to alcohol consumers (8.2 per cent). This difference is statistically significant and points in the direction that non-alcohol consumers live longer than the alcohol consumers. This is also reflected in the average age of the alcohol consumers, which is 30.7 years, compared to a slightly higher average age of 31.7 years among the non-consumers. The median ages are slightly lower than the mean age in all three categories, indicating a slightly right-skewed distribution of household age.

**Table 2: Main characteristics of alcohol consuming and non-alcohol consuming households, Sri Lanka\***

<b>Characteristics</b>	<b>ACH</b>	<b>NACH</b>	<b>All</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>Age Distribution</b>			
Less than 10	17.1%	17.1%	17.1%
10-19	17.2%	15.9%	16.1%
20-29	17.3%	17.5%	17.4%
30-39	13.1%	13.9%	13.8%
40-49	15.1%	13.2%	13.5%
50-59	12.1%	11.0%	11.2%
60+	8.2%	11.4%	10.9%
Total (N)	11,311	69,561	80,872
Mean Age	30.7	31.7	31.5
Median Age	28	29	29
<b>Headship**</b>			
MHHs	89.5%	74.1%	76.2%
FHHs	10.6%	26.0%	23.8%
Total (N)	2,578	15,964	18,542
<b>Marital Status**</b>			
Never Married	35.9%	35.4%	35.4%
Married	58.0%	55.3%	55.7%
Widowed	5.3%	8.1%	7.7%
Divorced	0.2%	0.3%	0.3%
Separated	0.6%	1.0%	0.9%
Total (N)	9,340	57,354	66,694
<b>Household Size</b>			
1	0.7%	1.0%	1.0%
2-3	14.5%	21.6%	20.5%
4-5	48.9%	48.7%	48.8%
6-7	26.8%	21.9%	22.6%
8+	9.1%	6.8%	7.2%
Total (N)	11,549	65,195	76,744
<b>Average household size</b>	<b>5.2</b>	<b>4.8</b>	<b>4.8</b>

Source: Based on HIES, DCS (2007) data.

Note: \*The database does not include the Trincomalee district in the Eastern Province.

\*\*Data based on those aged 10 years and over.

Considering the headship, in general, the head of the household is defined as the person who is instrumental in making household decisions. The headship is classified into two categories, male-headed households (MHHs) and female-headed households (FHHs). In most surveys, including the HIES, households where no husband or no adult male is present for a long period is also identified as a FHHs. As can be seen from Table 2, a majority of the households in Sri Lanka are male-headed in both ACHs and NACHs. Overall, about 76 per cent of the Sri Lankan households are male headed. However, the proportion of FHHs is significantly greater among the NACHs (26.0 per cent) compared to among the ACHs (10.6 per cent). In other words, it is 15 per cent more likely that an ACH is headed by a male compared to a NACH.

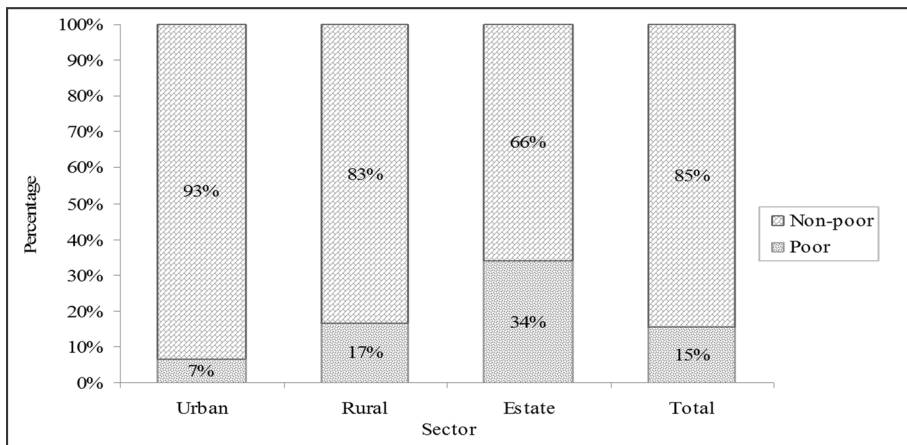
The distribution of the marital status of those aged 10 years and over is presented in the table in the marital status section. As can be seen, more than one-third (35.4 per cent) of the population is ‘never married’, whilst about 56 per cent is ‘married’. Also, the percentage of married among the alcohol consumers (58.0 per cent) is higher than that among the non-consumers (55.3 per cent). On the other hand, the percentage of widowed among the alcohol consumers (5.3 per cent) is less than that among the non-consumers (8.1 per cent). The ‘divorced’ constitutes the minority followed by ‘separated’ in both alcohol consumers and non-consumers. A test of overall differences in the proportion of the marital status showed significant difference between alcohol consumers and non-consumers ( $p$ -value =  $0 < 0.01$ ).

Looking at the average household size from Table 2, it can be seen that the average household size in Sri Lanka is 4.8, while it is 5.2 among the ACHs and 4.8 among the NCAHs. Considering the distribution of the household size between alcohol consumers and non-consumers, a larger proportion of alcohol consumers (84.8 per cent) live in households comprising four or more compared to non-consumers (77.4 per cent). That is, alcohol consuming households tend to have larger families compared to non-alcohol consuming households.

**Characteristics of the poor and non-poor households by alcohol status**

This section considers the poverty status of Sri Lankan households based on the 2006/07 HIES survey data. Figure 2 presents the poverty status of the households for the three sectors as well as for the whole country. As can be seen from the total, about 15 per cent of the households are poor and the remaining 85 per cent of the population are non-poor. Comparing the three sectors, the urban households have the lowest proportion of poor with only 7 per cent, while 17 per cent of the rural households and 34 per cent of the estate households are poor. That is, compared to an urban household, a rural household has a 10 per cent greater likelihood of being poor, while an estate household has a 27 per cent greater likelihood of being poor. Even though poverty has declined considerably for the urban and rural households compared to estate households, poverty is more prevalent among the estate households.

**Figure 2: Distribution of the poor and non-poor by sector and for Sri Lanka as a whole**



Source: Based on HIES, DCS (2007) data.



Next, a comparison of the poverty status between ACHs and NACHs is presented. The distribution of 'poor' and 'non-poor' households is presented in the Table 3. In the total population, as summarised below, the 15.5 per cent poor households is divided into 2.0 per cent ACHs and 13.5 per cent NACHs; while the 84.5 per cent non-poor households is divided into 13.0 per cent ACHs and 71.5 per cent NACHs. It can also be seen that, among the poor households, about 12.9 per cent would belong to ACHs and among the non-poor, 15.4 per cent would belong to the ACHs.

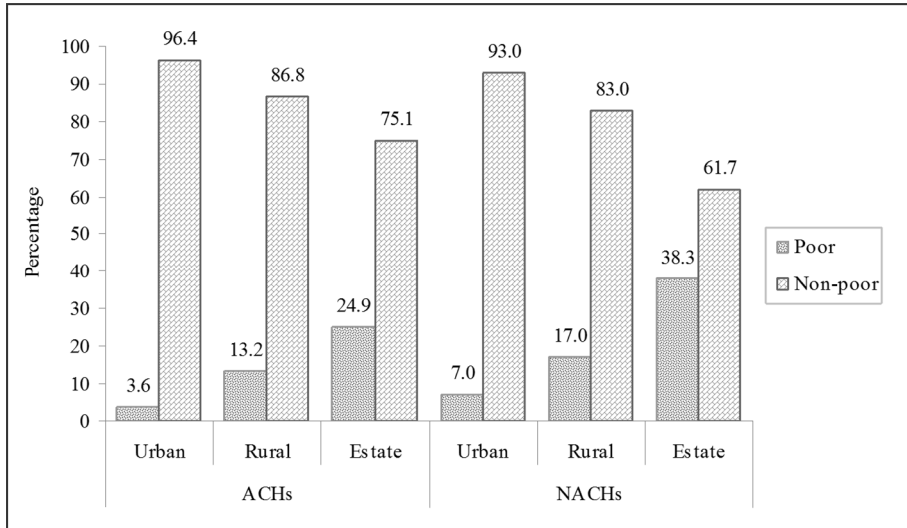
**Table 3: Distribution of poor and non-poor within the ACHs and NACHs by sector and province (in percentages)**

Sector/Province	ACH		NACH		Total	
	Poor	Non-Poor	Poor	Non-Poor	Poor	Non-Poor
<b>All</b>	2.0	13.0	13.5	71.5	15.5	84.5
<b>Sector</b>						
Urban	0.5	12.1	6.1	81.4	11.2	29.2
Rural	1.8	11.7	14.7	71.8	68.4	63.5
Estate	8.2	24.7	25.7	41.4	20.4	7.3
<b>Province</b>						
Central	19.9	15.8	16.6	10.7	17.0	11.5
Eastern*	2.8	7.2	3.9	9.2	3.8	8.9
North Central	4.8	4.5	7.3	6.2	7.0	5.9
North Western	11.9	7.7	10.7	9.6	10.8	9.4
<i>Sabaragamuwa</i>	15.5	6.4	16.2	7.4	16.1	7.2
Southern	16.6	21.5	18.4	20.1	18.1	20.3
<i>Uva</i>	21.0	9.5	13.6	4.8	14.6	5.6
Western	7.6	27.4	13.4	32.0	12.6	31.3
<b>Total (N)</b>	1,559	9,990	10,3	54,862	11,89	64,852

Note: \*The database does not include the Trincomalee district in the Eastern Province.

Figure 3 presents the distribution of poverty among the alcohol consuming and non alcohol consuming households by sector. Among both ACHs and NACHs, the urban sector has the least poor, the rural sector has about a 10 per cent higher proportion of poor than the urban sector and the estate has the highest proportion of poor households.

**Figure 3: Poverty distribution of Sri Lankan households by alcohol status and sector**

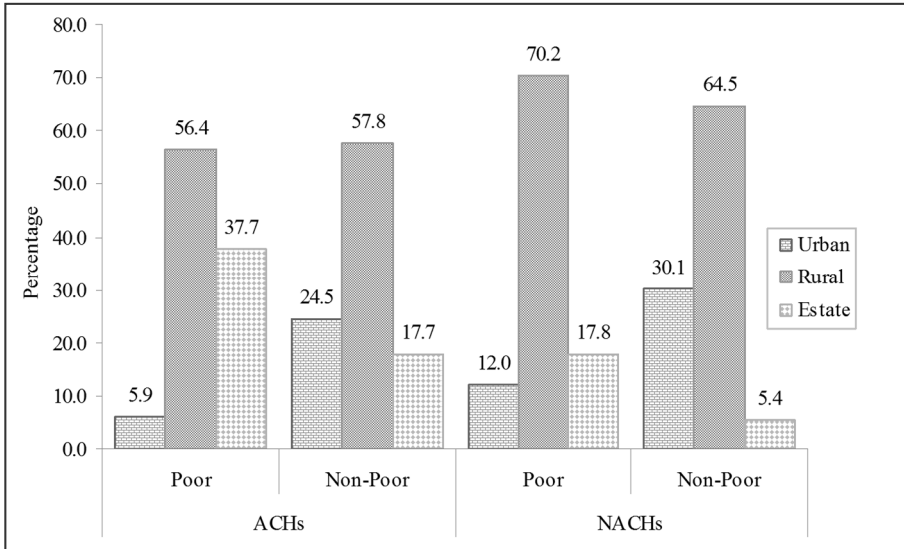


Source: Based on HIES, DCS (2007) data.

The sector-wise distributions among both the ACHs and NACHs are depicted in Figure 4. As can be seen from this graph, within the ACHs, 37.7 per cent of the poor live in the estate sector, while only 17.7 per cent of the non-poor live in the estate sector. Within the NACHs, 17.8 per cent of the poor live in the estate sector while only 5.4 per cent of the non-poor live in the estate sector. Even though only 19.9 per cent of the households live in the estate sector, the sector's share in the ACHs is disproportionately much higher (37.7 per cent). This points in the direction that alcohol consumption associates more with the poor sectors of the country than the non-poor sectors.

The demographic characteristics of the poor and non-poor households can be clearly understood by comparing the age and gender distribution of the poor and the non-poor households. The age-gender distribution presented in Figure 5 provides a visual insight into the relative sizes of various age groups in Sri Lanka. Within these groups, the male and female distribution seems to be relatively similar. It is also clearly visible from the figures that the distribution of the 'poor' group has the shape of a pyramid while 'non-poor' has more of a barrel shape. This shows that there is a higher percentage of population in the 50+ age groups in the non-poor households than the poor. That is, the average life expectancy of the non-poor is much higher than the poor, regardless of their alcohol consumption status. This obviously points in the direction that compared to the poor; the non-poor are in a better position to afford a healthy life as well as access good medical facilities.

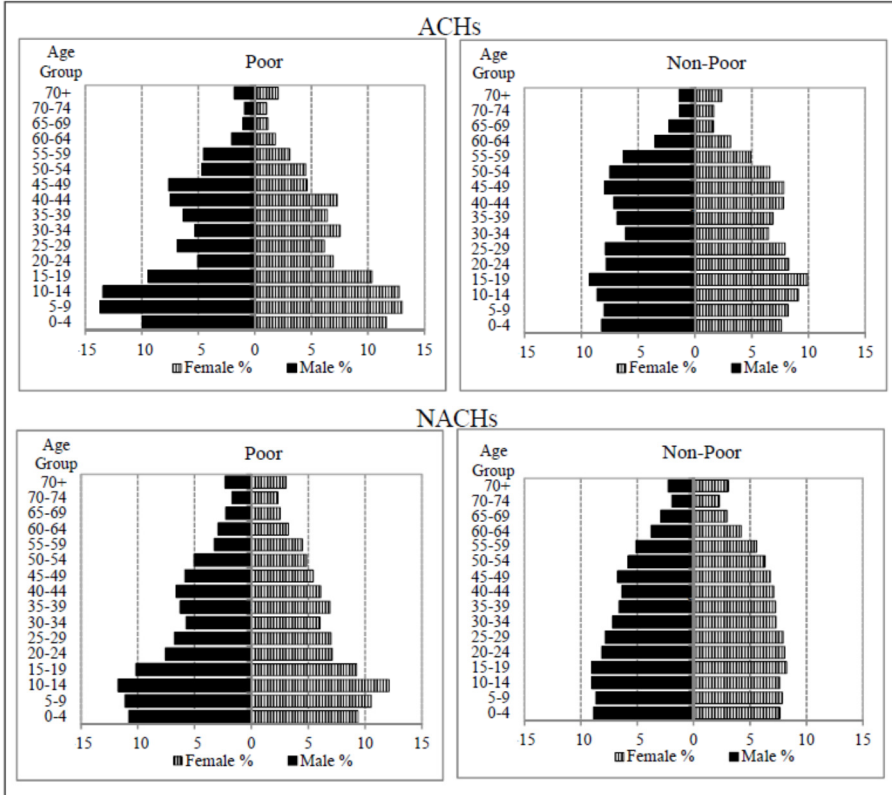
**Figure 4: Sector-wise distribution of Sri Lankan households by alcohol consumption and poverty status**



Source: Based on HIES, DCS (2007) data.

In addition, the age-gender pyramid further indicates that the proportion of the younger dependents (0-9 years) is relatively higher among the poor (more than 20 per cent), compared to the non-poor (15 per cent). Also, the proportion of people of working age (20-59 years) is lower in the poor (47 per cent) than in the non-poor (56 per cent) households. Further, it is seen that a relatively higher percentage of dependents (0-9 years) and relatively lower percentage of old people (50+) live in the poor ACHs than in the poor NACHs, indicating that the alcohol consuming poor households tend to have larger families and shorter life expectancy. However, there is no significant difference in the proportion of dependents and older aged persons among the non-poor ACHs and NACHs. Further, the cone shaped distribution of the poor shows that their life expectancy is much shorter than the non-poor. In summary, poor alcohol consuming households tend to have larger families and have shorter life expectancy compared to their non-alcohol consuming counterparts.

**Figure 5: Age-gender distribution of the poor and non-poor population by alcohol consumption status**



Source: Based on HIES, DCS (2007) data.

**Characteristics of the heads of household**

As discussed earlier, the head of a household is a person who is instrumental in making household decisions. It is therefore important to consider the characteristics of the head of the households. The distributions of the basic demographic and social characteristics of the head of the household of poor and non-poor households are given in Table 5. It should be noted that the column sum is 100 per cent for each characteristic listed.

**Table 5: Demographic and socio-economic characteristics of the head of the household in ACHs and NACHs**

Characteristics	ACH		NACH		Poor	Non-Poor	Total
	Poor	Non-Poor	Poor	Non-Poor			
<b>Sex</b>							
Male	90.2%	89.4%	75.0%	73.9%	76.8%	76.1%	76.2%
Female	9.8%	10.6%	25.0%	26.1%	23.2%	23.9%	23.8%
<b>Age Group</b>							
10-19	0.0%	0.0%	0.1%	0.2%	0.1%	0.2%	0.2%
20-29	6.0%	3.8%	4.7%	5.7%	4.9%	5.4%	5.3%
30-39	21.8%	17.0%	18.1%	18.0%	18.5%	17.8%	17.9%
40-49	33.3%	29.4%	27.2%	25.0%	27.9%	25.6%	25.9%
50-59	24.2%	30.7%	22.4%	24.6%	22.6%	25.5%	25.1%
60 +	14.7%	19.3%	27.5%	26.5%	26.0%	25.5%	25.6%
Mean	47.6	49.79	50.81	50.6	50.43	50.49	50.48
Median	46	49	49	50	49	50	50
<b>Marital Status</b>							
Never Married	0.4%	2.3%	1.8%	2.3%	1.6%	2.3%	2.2%
Married	89.5%	86.4%	77.3%	77.7%	78.8%	78.9%	78.9%
Widowed	9.8%	10.3%	18.3%	18.1%	17.3%	17.0%	17.0%
Divorced	0.0%	0.2%	0.5%	0.4%	0.4%	0.4%	0.4%
Separated	0.4%	0.9%	2.1%	1.6%	1.9%	1.5%	1.6%
<b>Education Level</b>							
No schooling	19.7%	6.2%	14.3%	4.4%	14.9%	4.7%	6.0%
Less than 6	59.3%	38.3%	48.9%	28.7%	50.2%	30.1%	32.7%
Grade 6-9	20.0%	36.5%	32.2%	37.5%	30.8%	37.4%	36.5%
G.C.E (O/L)	1.1%	12.6%	3.6%	17.4%	3.3%	16.7%	15.0%
G.C.E (A/L)	0.0%	4.8%	0.8%	8.9%	0.7%	8.3%	7.3%
Higher	0.0%	1.7%	0.1%	3.0%	0.0%	2.8%	2.5%
<b>Employment</b>							
Employed	83.9%	83.4%	70.0%	69.5%	71.6%	71.4%	71.5%
Unemployed	1.4%	1.4%	1.8%	1.9%	1.8%	1.9%	1.8%
Student	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
Housework	2.1%	3.8%	8.9%	11.8%	8.1%	10.6%	10.3%
Retired/unable	12.6%	11.2%	18.8%	16.5%	18.1%	15.7%	16.0%
Other	0.0%	0.2%	0.5%	0.3%	0.4%	0.3%	0.3%
<b>Total (N)</b>	<b>285</b>	<b>2,292</b>	<b>2,113</b>	<b>13,851</b>	<b>2,398</b>	<b>16,143</b>	<b>18,541</b>

Source: Based on HIES, DCS (2007) data.

**Gender distribution of the household head**

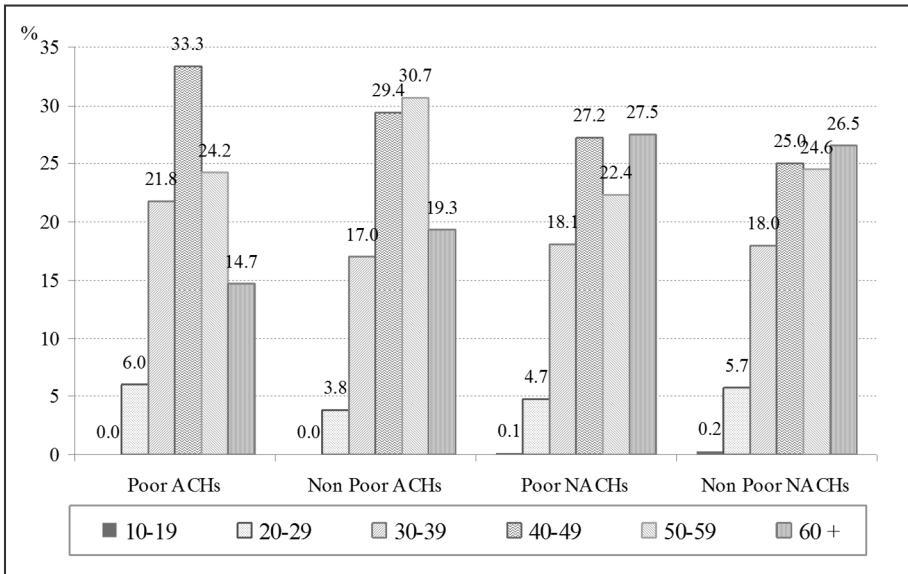
As can be seen from Table 5, 76.2 per cent of the households in Sri Lanka are headed by males and 23.8 per cent of the households are headed by females. As far as the headship of the ACHs are concerned, it is apparent that ACHs are relatively less likely to be female-headed compared with the NACHs, regardless of the household's poverty status. In general, 90 per cent of the ACH are headed by males and only 10

per cent by females, whereas about 75 per cent of the NACHs are headed by males and 25 per cent by females. That is, a male-headed household is about 15 per cent more likely to be an ACH than a female-household. This is applicable to both poor and non-poor households.

**Age distribution of the household head**

Looking at the age distribution of the household head in Sri Lanka, presented in Table 5, about 75 per cent of the household heads are 40 years or older. This distribution, also depicted in Figure 5, shows that the household head is much younger among the ACHs compared to the NACHs regardless of their poverty status. This can be confirmed by the average age of the head of an ACH, which is about 49 years, and that of the NACH, which is about 51 years. Further, looking at the poor ACHs, more than 61 per cent of the household heads are 49 years or younger (with median 46 years), whereas for all other categories, less than 52 per cent of the household heads are 49 years or younger. That is, a poor ACH is more than 10 per cent likely to be headed by a person less than 50 years old. Considering the household heads aged 60 years or over, it is more than 7 per cent likely that their household is a NACH, for both poor and non-poor households.

**Figure 6: Age distribution of the head of the household by poverty level and alcohol consumption status**



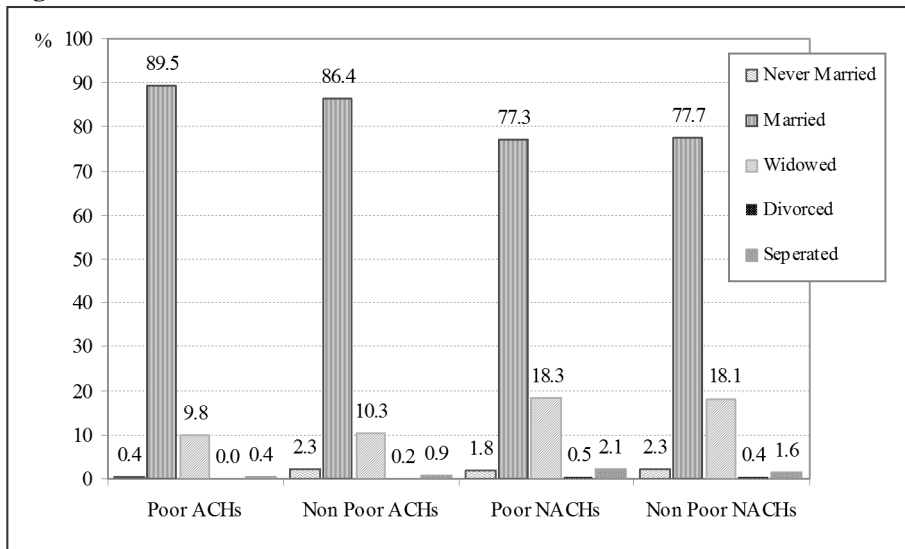
Source: Based on HIES, DCS (2007) data.

**Marital status of the household head**

The marital status classification of the HIES 2006/07 identifies five major categories: ‘Never married’, ‘Married’, ‘Widowed’, ‘Divorced’ and ‘Separated’. Based on the distribution presented in Table 5, Figure 7 illustrates the marital status of the head of household of the ACHs and NACHs. As can be seen from the table and figure, more than 77 per cent of the households are headed by a married person. This shows that more than three fourth of the households in Sri Lanka are headed by a married

household head. This percentage is also at least 9 per cent higher for ACHs compared to the NACHs. On the other hand, ‘Widowed’ represent a higher proportion (by at least 8 per cent) in the NACHs than the ACHs. Compared to the proportion of married in the general population (about 56 per cent) as highlighted in Table 2, a much higher proportion (about 79 per cent) of household heads are married. Among both the general population and household heads, alcohol consumers are more likely to be married than non-consumers. In summary, more than 75 per cent of the household heads are married and there doesn’t seem to be any significant difference in the marital status of the household heads of poor and non-poor households.

**Figure 7: Marital status of the head of the household**



Source: Based on HIES, DCS (2007) data.

**Education level of the household head**

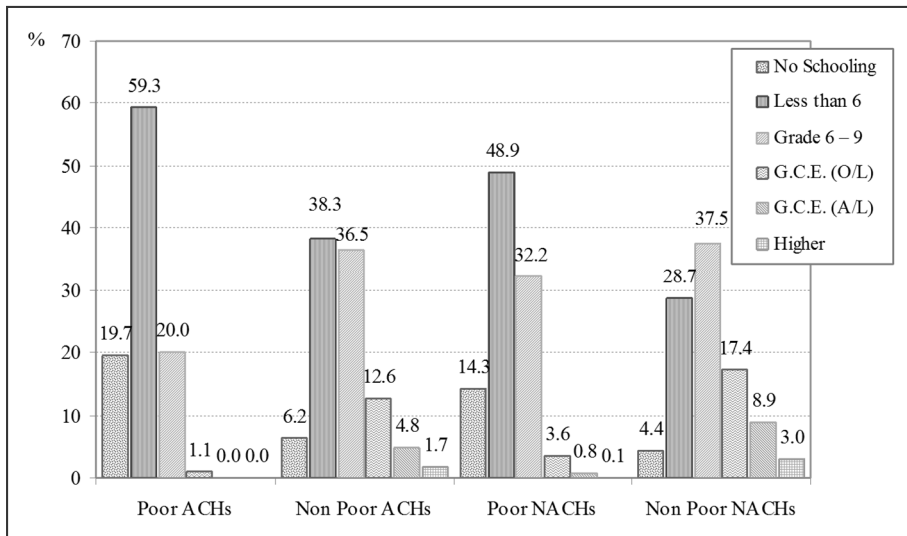
The benefit of education in improving the quality of life of people is a well known factor that contributes to a high standard of living (Haveman & Wolfe, 1894; Psacharopoulos & Woodhall, 1985). The education level section of Table 5 presents the distribution of the education level of the household head by alcohol consumption, household type, and poverty status; and this section is depicted in Figure 8 too. As can be seen from the last three columns of the table, on the whole, the head of poor households have had much less education compared to the non-poor households. This obviously explains their poverty status. Considering the disaggregated education level distribution from the table and the figure, the proportion of household heads with ‘no schooling’ is much higher in poor households compared to non-poor households.

Considering the education status of poor household heads in ACHs and NACHs, it is apparent that a head of the household in a poor ACHs is less educated compared to the poor NACHs. For example, the percentage of those with education ‘less than grade 6’ is significantly higher in poor ACHs than other groups. As one would expect, the proportion of head of households with education level ‘GCE A/L’ or ‘Higher’ is

significantly higher in the non-poor NACH compared to the other household categories. There are three main points that can be drawn from these statistics:

- Poverty status of a household is significantly associated with the level of education of the head of household;
- Heads of ACHs are less educated than the heads of NACHs; and
- A household with a less educated household head and ACH status is more likely to be poor compared to others.

**Figure 8: Education levels of head of the households**



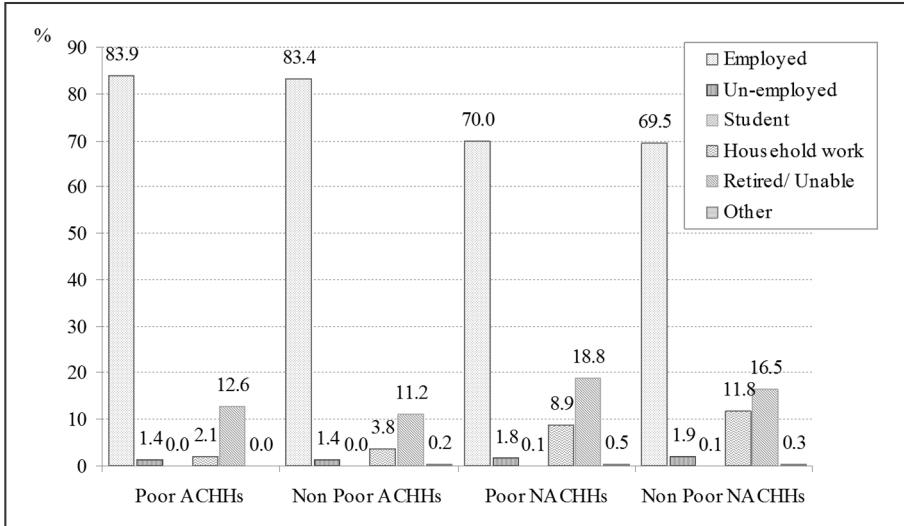
Source: Based on HIES, DCS (2007) data.

### Employment status of the household head

The distribution of the employment status, categorised as ‘Employed’, ‘Unemployed’, ‘Students’, ‘Housework’, ‘Retired/unable to work’ and ‘Others’, by household type and poverty status is presented in the employment status section of Table 5 which is also presented in graphical form in Figure 9. As can be seen, about 71 per cent of the household heads are employed among the poor and non-poor households. Although this may seem unusual, there is no government subsidy in Sri Lanka to provide to the unemployed and every household needs to earn an income to survive. This explains the high percentage of employed in the poor (as well as non-poor) households. As discussed earlier however, the poor household heads are relatively less educated and can only be employed in low-paying jobs. Therefore, even though about 70 per cent of the poor are employed, their income levels are below the poverty line. Overall, about 85 per cent of the Sri Lankan households are either employed or retired. In summary, the employment status of the household head does not determine the poverty status of a household. Rather, one would expect the employment type or salary level to determine the poverty status of a household.



**Figure 9: Employment status of alcohol consuming and non-alcohol consuming households by poverty status**



Source: Based on HIES, DCS (2007) data.

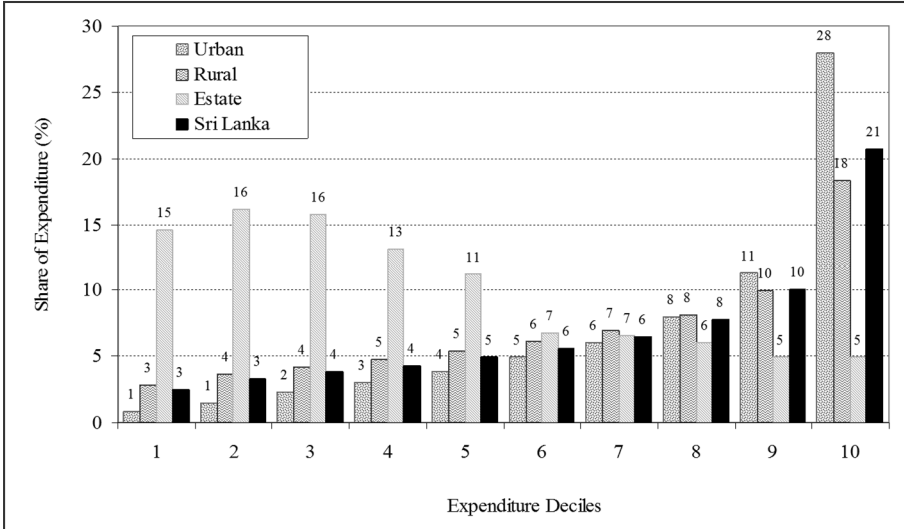
### Expenditure patterns of ACHs and NACHs

The expenditure capacity of households depends on the income. Poverty defined in terms of low consumption expenditure relates to the low levels of household income. Given the close relationship between poverty, income and expenditure, an analysis of the expenditure patterns would be sufficient.

### Expenditure patterns of households

The shares of monthly household expenditure for each sector by income decile are shown in Figure 10. It can be easily seen that the richest 20 per cent (9th and 10th deciles) dispatch nearly 30 per cent of the total expenditure in Sri Lanka while the poorest 20 per cent (1st and 2nd deciles) dispatch less than 6 per cent of the total expenditure. Further, it can clearly be seen that the 10th decile group has recorded the highest share of total expenditure for the urban sector, while the 2nd and 3rd deciles recorded the highest share for the estate sector. The corresponding figures for urban, rural and estate sectors are 28 per cent, 18 per cent and 5 per cent respectively. It can be noted that the estate sector has the highest proportion of households in lower expenditure deciles 1-5, and the rural and urban sectors have the highest proportion in the expenditure deciles 8-10. This confirms that the estate sector is the poorest and the urban sector is the richest in the nation.

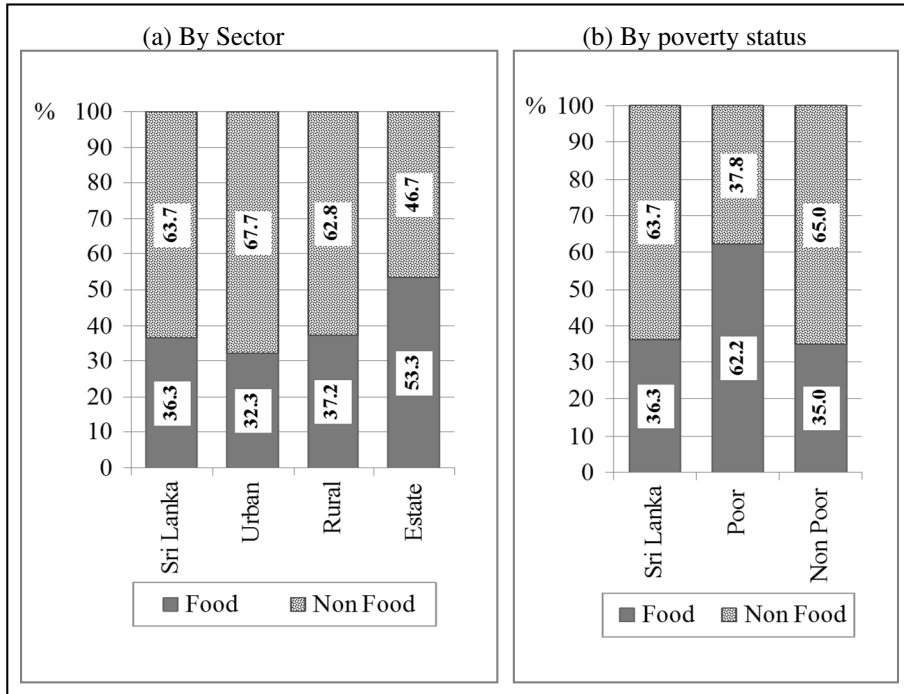
**Figure 10: Household monthly expenditure for the three sectors by income deciles**



Source: Based on HIES, DCS (2007) data.

Figure 11 demonstrates the percentages distribution of average monthly household expenditure on food and non-food items by sector and poor households. As can be seen from Figure 11(a), on average, households in Sri Lanka have spent 36 per cent for food and 63 per cent for non-food items. Percentage of food expenditure for urban, rural and estate sectors is reported as 32 per cent, 37 per cent and 53 per cent, respectively. It is worth noting that, on average, the urban sector is relatively richer than the other two sectors and the rural sector is relatively richer than the estate sector. This supports Engel's law which states that as consumer income increases, their expenditure share on food declines. This can also be seen from Figure 11(b), which compares poor and non-poor households to show that poor households spent about 62 per cent of their total expenditure on food, while non-poor households spend only about 35 per cent of their total expenditure on food. Furthermore, the pattern is similar among poor and non-poor ACHs and poor and non-poor NACHs. In summary, regardless of their alcohol consumption status, the poor tend to spend more than 60 per cent of their total expenditure on food, while the rich spend less than 40 per cent of their total expenditure on food.

**Figure 11: Percentage distribution of average monthly household expenditure on food and non-food items**



Source: Based on HIES, DCS (2007) data.

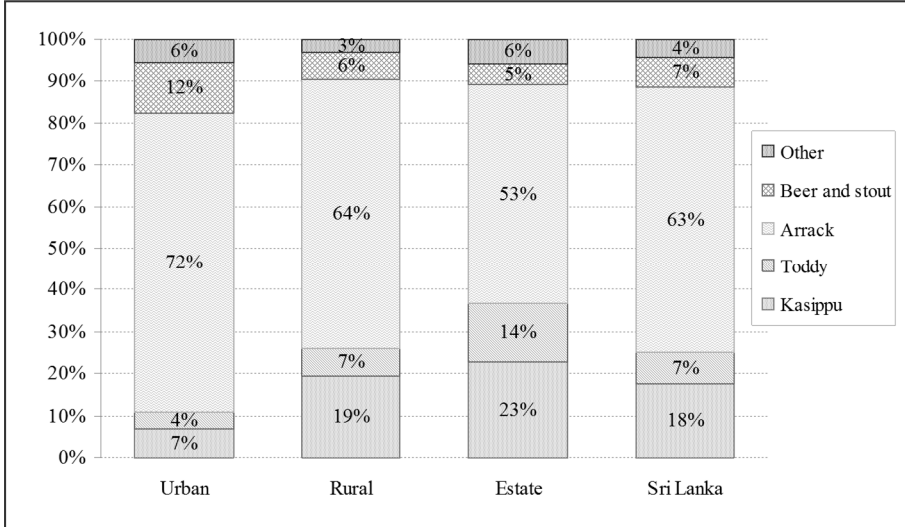
**Expenditure patterns on different types of alcohol**

Alcohol classification in the HIES 2006/07 identifies ten major categories: kasippu, toddy, arrack, beer and stout, gin, whisky, wine and others. In this; gin, stout, whisky, and wine are referred to as ‘Other liquor’ due to the unavailability of disaggregated data.

Kasippu and toddy (unless bottled) belong to the non-commercial or illegal alcohols as the production and sale of these types of alcohol are not under the authority of the Excise Department in Sri Lanka. They are basically home brewed, lower in price and readily available in remote areas. On the other hand, the other types mentioned above are legal alcoholic beverages for which the production, sales, taxes and imports are under the strict control of the Excise Department.

As can be seen from Figure 12, among the Sri Lankan population, arrack is the most popular alcoholic beverage consumed by all sector households. Among the estate sector households, of the 37 per cent that consume illegal alcohol, 23 per cent consume kasippu and 14 per cent consume toddy. Among the rural sector, 26 per cent consume the illegal alcohol which is comprised of 19 per cent kasippu and 7 per cent toddy; while the urban sector consumes only 11 per cent of the illegal alcohol which is comprised of 7 per cent kasippu and 4 per cent toddy. As can also be seen; 90 per cent of the urban, 73 per cent of the rural and 64 per cent of the estate households consume legally available alcoholic beverages.

**Figure 12: Distribution of sector-wise consumption of the five types of alcoholic beverages**



Source: Based on HIES, DCS (2007) data.

Monthly expenditure shares on various types of alcohol by expenditure deciles are presented in Table 6 and Figure 13. It can clearly be seen that there is a relationship between the expenditure on the type of alcoholic beverage and the income deciles.

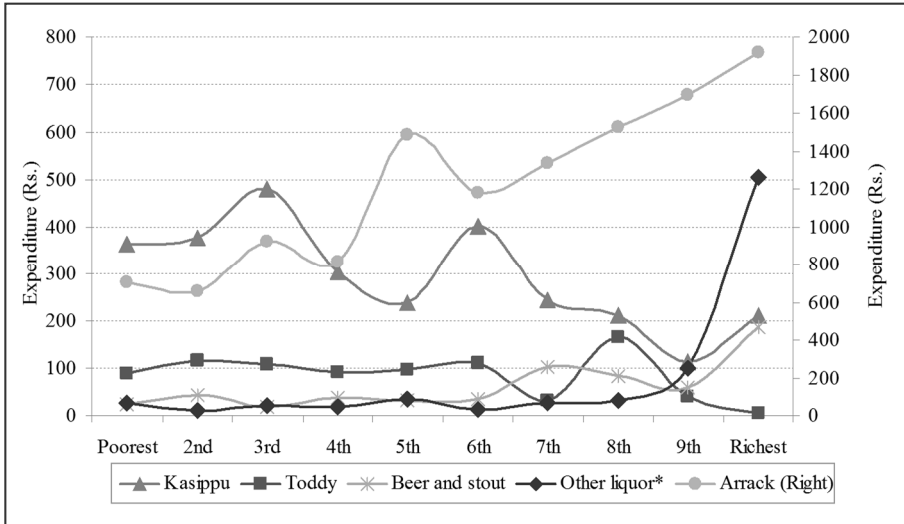
**Table 6: Monthly household expenditure on alcohol for expenditure deciles by type of alcohol**

Deciles	Kasippu	Toddy	Arrack	Beer and stout	Other liquor*
Poorest	362.1	90.2	708.0	23.7	26.0
2 <sup>nd</sup>	377.0	117.3	654.8	44.5	11.7
3 <sup>rd</sup>	480.7	108.0	922.8	20.2	21.9
4 <sup>th</sup>	304.1	93.2	812.6	38.6	18.8
5 <sup>th</sup>	238.1	98.5	1,485.6	32.2	34.5
6 <sup>th</sup>	401.5	110.0	1,180.8	34.8	14.3
7 <sup>th</sup>	243.2	33.6	1,335.6	101.9	27.7
8 <sup>th</sup>	211.8	164.3	1,523.1	82.8	31.8
9 <sup>th</sup>	114.5	39.8	1,698.0	61.0	100.6
Richest	212.1	5.0	1,918.1	187.9	504.5

Source: Based on HIES, DCS (2007) data.

Note: \*Other liquor includes gin, whisky, wine and others.

**Figure 13: Monthly household expenditure on alcohol for expenditure deciles by type of alcohol**



Source: Based on HIES, DCS (2007) data.

As can be seen from Table 6 and Figure 13, overall, the monthly expenditure on kasippu and toddy generally declines from lower deciles to upper deciles while monthly expenditure on arrack, beer, stout, and other liquor increases from lower deciles to upper deciles. Moreover, it is apparent from the figure that illegal alcohol is mostly demanded by the poorer groups compared to the richer groups. For instance, on average, per month, the poorer groups in the 1st and 2nd deciles have spent Sri Lanka Rupees (SLRs.) 362.1 and SLRs. 377.0, respectively on kasippu, while the non-poor groups (9th and 10th deciles) have spent only SLRs. 114.5 and SLRs. 212.1, respectively, on kasippu. The same trend is also visible with regard to toddy too despite the average expenditure being lower compared to kasippu. In general, when taxes on legal alcohol increase, the products of the illegal industry become increasingly attractive to the consumer. Higher expenditure on these alcoholic beverages with a high content by the poor households means that alcohol related problems would be higher in poorer households compared to richer households. Thus, excessive alcohol consumption generates a wide range of interrelated negative effects and outcomes, some primary and others secondary. These effects include reduced income, increased medical expenses, and increased incidence of mortality which, in turn, increases the level of poverty among poorer groups.

Furthermore, if one considers the expenditure patterns on legal alcoholic beverages, it can be seen that the average expenditure on each type of alcohol increases from lower deciles to upper deciles. For instance, average expenditures on arrack is SLRs. 708.0 and SLRs. 654.8 in the first two deciles (poorer groups) respectively and is SLRs. 1,698.0 and SLRs. 1,918.1 in the 9th and 10th deciles respectively (richer groups). Moreover, expenditure on arrack is higher than the expenditure on the other legal alcoholic beverages such as ‘beer and stout’ and ‘Other liquor’. This suggests that arrack is more popular compared to all other types of alcohol – a finding similarly confirmed in Figure 13. It is also interesting to note that even the poorer households

consume legal arrack. This could be because arrack is readily available and cheaper in price compared to other types of legal alcohol mentioned above.

### **Poverty and income inequity**

The focus here is on poverty and alcohol consumption and all poverty and inequality measurements are estimated using data from the HIES 2006/07. The section begins with a description of the main characteristics of poverty. The identification of the poor in this study is based on the overall poverty line in survey year. The well-known Foster-Greer Thorbecke Index (FGT index) was used mainly to derive the incidence of poverty (Headcount Index), depth of poverty (Poverty Gap Ratio) and severity of poverty (Squared Poverty Gap Index) at a disaggregated level for sectors, provinces, alcohol consumption status of households and types of alcohol. The estimated results are presented in Table 7.

The first column of this table presents the headcount poverty index which measures the proportion of population living below the poverty line. As shown in column 2 of Table 7, it is clear that the headcount poverty index is highest in the estate sector followed by the rural and urban sectors. Consistent with previous poverty studies in Sri Lanka, these results indicate that poverty in the estate sector is very high compared to the other two sectors. In other words, the estate sector is the poorest sector in Sri Lanka in terms of the headcount poverty index.

In addition to sector-wise poverty indices, Table 7 also provides a detailed picture of province-wise poverty levels, poverty levels among ACHs and NACHs, and poverty levels according to different types of alcohol consumed by households. A number of interesting features can be identified from these results. Firstly, the province-level poverty indices demonstrate that rural provinces like Uva and Sabaragamuwa are poorer than provinces with urban populations such as the Western Province. Secondly, the poverty level of NACHs is relatively higher than that of ACHs, which is a surprising result as one would generally expect the poverty level of ACHs to be higher. Thirdly, the poverty level among households consuming locally-made liquor such as kasippu (0.2177) and toddy (0.2090) is relatively higher than that of households consuming legal liquor such as beer and stout (0.0304).

**Table 7: Poverty indices by sector and alcohol group**

Households	Headcount Index (Incidence of poverty)	Poverty Gap Index (Depth of poverty)	Squared Poverty Gap Index (Severity of poverty)
(1)	(2)	(3)	(4)
<b>Sri Lanka</b>	0.1401	0.0280	0.0085
<b>Sector</b>			
Urban	0.0496	0.0090	0.0027
Rural	0.1478	0.0298	0.0091
Estate	0.2636	0.0500	0.0146
<b>Province</b>			
Central	0.1858	0.0379	0.0113
Eastern*	0.0844	0.0153	0.0043
North Central	0.1598	0.0324	0.0098
North Western	0.1568	0.0297	0.0091
<i>Sabaragamuwa</i>	0.2304	0.0459	0.0141
Southern	0.1322	0.0256	0.0074
<i>Uva</i>	0.2742	0.0635	0.0215
Western	0.0574	0.0102	0.0029
<b>Alcohol status</b>			
NACH	0.1432	0.0288	0.0088
ACH	0.1190	0.0223	0.0062
<b>Type of alcohol consumed</b>			
Kasippu	0.2177	0.0457	0.0137
Toddy	0.2090	0.0448	0.0121
Arrack	0.0854	0.0140	0.0036
Beer and stout	0.0304	0.0026	0.0003
Other liquor*	0.0716	0.0142	0.0032

Source: Based on HIES, DCS (2007) data.

Note: \*The database does not include the Trincomalee district in the Eastern Province.

In addition to the measurement of the incidence of poverty by using the headcount index of poverty, the poverty gap index can be used to measure the depth of poverty in Sri Lanka. The results of the poverty gap index shown in column 3 of Table 7 demonstrate that the depth of poverty is also higher in the estate sector (0.0500) in comparison with rural (0.0298) and urban (0.0090) sectors. The results of the provincial-level poverty gap index also demonstrate that the poverty depth is higher in provinces like Uva and Sabaragamuwa provinces, which have a greater number of rural households than the Western Province. Furthermore, the poverty gap index is relatively high among kasippu (0.0457) and toddy (0.0448) consuming households compared to beer and stout consuming households. In general, the patterns of the results of the poverty gap index are consistent with the pattern of the results of the headcount index.

Generally, the squared poverty gap index can be used to understand the poverty gap of the poorest unit and the magnitude of poverty. The estimated results for the squared

poverty gap index are presented in the last column of Table 7. Similar to the previous two indices, the detailed results of the squared poverty gap index relating to sectors, provinces, types of households and type of alcohol consumed by households, are presented in this column. In general, these results are consistent with the results of poverty headcount and poverty gap indices. The results of all three indices confirm that poverty is relatively high among households consuming locally-made liquor like kasippu and toddy compared to the poverty level among households consuming legal liquor such as arrack and beer.

After identifying the main characteristics of poverty with a special focus on different types of alcohol consuming households, the magnitude of income inequality among these households can also be examined in this section. The well-known Gini coefficient is used to measure income and expenditure inequalities among sectors, provinces and different types of alcohol consuming households using the HIES 2006/07. The Gini coefficient has been estimated using per capita expenditure and per capita income separately. The results, given in Table 8, reveal that the Gini coefficient of per capita expenditure (0.418) is lower than that of the Gini coefficient of per capita household income in Sri Lanka (0.492). Gini coefficients in terms of per capita income for urban, rural and estate sectors are 0.519, 0.463 and 0.449 respectively, indicating that the income inequality is higher in the urban sector than the rural and estate sectors in Sri Lanka. Values of Gini coefficients by provinces also indicate that the income inequality in the North Western Province is the highest (0.509) followed by the Central (0.489) and Western (0.493) provinces. Per capita income inequality is however, lower in the Eastern (0.446) and North Central (0.450) provinces. Finally, inequality in terms of per capita expenditure is higher in the Western (0.426) and North Central (0.425) provinces and is low in provinces like Eastern (0.355) and Sabaragamuwa (0.361).



**Table 8: Gini coefficient of per capita income and per capita expenditure by sector and alcohol group**

	Gini coefficient of	
	Per capita income	Per capita expenditure
<b>Sri Lanka</b>	0.492	0.418
<b>Sector</b>		
Urban	0.519	0.423
Rural	0.463	0.401
Estate	0.449	0.305
<b>Province</b>		
Central	0.498	0.393
Eastern*	0.446	0.355
North Central	0.450	0.425
North Western	0.509	0.400
Sabaragamuwa	0.478	0.361
Southern	0.489	0.399
<i>Uva</i>	0.488	0.395
Western	0.493	0.426
<b>Poor</b>		
Poor ACH	0.290	0.090
Poor NACH	0.345	0.103
<b>Non-Poor</b>		
Non-Poor ACH	0.463	0.389
Non-Poor NACH	0.485	0.388
<b>NACH</b>	0.495	0.418
<b>ACH</b>	0.469	0.414
Kasippu	0.384	0.335
Toddy	0.359	0.322
Arrack	0.445	0.397
Beer and stout	0.583	0.458
Other liquor	0.662	0.557

Source: Based on HIES, DCS (2007) data.

Note: \*The database does not include the Trincomalee district in the Eastern Province.

The Gini coefficient indicates that non-poor NACHs have the highest (0.485) inequality compared to the poor ACHs (0.290) in terms of per capita income. When considering poor households and their alcohol consumption status, inequality in terms of per capita household expenditure is highest among non-poor ACHs (0.389) and is lowest among poor ACHs (0.090).

The results shown in Table 8 clearly indicate that income disparity, both in terms of per capita income and per capita expenditure, is lower among households consuming locally-made kasippu and toddy in comparison to income disparity among households consuming legal alcohol like beer and stout, and other liquor.

## **Conclusion**

The main purpose of this study was to examine the socio-economic and demographic characteristics of ACHs and NACHs and make a comparison, in terms of differences and similarities, across sectors and provinces in Sri Lanka. After introducing the main databases to be used in the study, the study attempted to provide a comprehensive analysis of socio-economic and demographic characteristics of ACHs and NACHs across sectors (urban, rural and estate), as well as provinces, focusing on poor and non-poor households. For this purpose, HIES 2006/07 was used. Using the HIES 2006/07, poverty indices and Gini coefficients were also calculated by focusing on sectors, provinces and types of alcohol consumed by different types of households. In the context of the study's objectives, this analysis highlights a number of key features which are given below:

When compared to the rural and urban sectors, poverty is more prevalent in the estate sector although there has been a decline in overall poverty in that sector in recent years. Overall, about 85 per cent of the Sri Lankan households are either employed or retired.

The analysis identified that 15.5 per cent of total households in Sri Lanka are poor and the rest are non-poor (84.5 per cent). It can also be seen that, among the poor households, about 13 per cent would belong to ACHs and among the non-poor, 15.4 per cent would belong to the ACHs.

The analysis in this study demonstrated that alcohol consumption associates more with the poor sectors of the country than the non-poor sectors. It is also important to note here that poor alcohol consuming households tend to have larger families and have shorter life expectancy.

This study has identified that a male-headed household is 15 per cent more likely to be an ACH. This is applicable to both poor and non-poor households and it raises an important issue in terms of gender of the household head and alcohol consumption. The relationship between alcohol consumption and the age of household heads has been identified as an important feature in Sri Lanka. Considering the household heads aged 60 years or over, it is more than 7 per cent likely that their household is a NACH, for both poor and non-poor households. That is, a household with a younger household head is more likely to be an ACH. This could be a reflection of cultural change in that the younger generation lives in a society where consumption of alcohol is increasingly becoming more acceptable.

The analysis shows that more than 75 per cent of the household heads are married and there does not seem to be any significant difference in the marital status of the household heads in poor and non-poor households.

This study has demonstrated that there is a significant association between alcohol consumption and the level of education of the head of household in Sri Lanka. In other words, heads of ACHs are less educated than the heads of NACHs.

Furthermore, an alcohol consuming household with a less educated household head is more likely to be poor compared to others.

This study has identified that illegal alcohol consumption is popular in the rural and estate sectors and legal alcohol consumption is popular in the urban sector. Among the rural sector, 26 per cent consume illegal alcohol - comprised of 19 per cent who consume kasippu and 7 per cent who consume toddy. In the urban sector however, only 11 per cent consume illegal alcohol, which is comprised of 7 per cent who consume kasippu and 4 per cent who consume toddy. In contrast, 90 per cent of the urban, 73 per cent rural and 64 per cent of estate households consume commercially available alcoholic beverages.

The analysis in this study shows that households in low income (expenditure) deciles consume more locally-made liquor like kasippu and toddy, while households in high income (expenditure) deciles spend more on legal alcohol like arrack. Arrack is also more popular compared to all other types of alcohol.

Finally, the nature of poverty and income inequality in terms of sectors, provinces, types of households and types of alcohol consumption by households were examined in this study with a particular focus on households consuming different types of alcohol. The results clearly indicate that the poverty level is relatively high and income inequality is relatively low among households consuming illegal alcohol. In contrast, the poverty level is relatively low and inequality is relatively high among households consuming legal liquor.

## References

- Bawaba, A. (2009). Even low alcohol consumption is bad for health. *Asian News International*. Retrieved from <http://search.proquest.com.libraryproxy.griffith.edu.au/docview/436002187?accountid=14543>
- Bawaba, A. (2011). Excessive Alcohol Consumption - A Key Driver of Chronic Poverty [opinion]. *AllAfrica.com*. Retrieved from <http://search.proquest.com.libraryproxy.griffith.edu.au/docview/1012108530?accountid=14543>
- Bell, J. (1996). Harmful alcohol consumption. *Current Therapeutics*, 37(1), 28-29.
- Christiaensen, L., Scott, C., & Wodon, Q. (2002). *Poverty Measurement and Analysis*: University Library of Munich, Germany.
- DCS. (2007). *Household Income Expenditure Survey 2006/07 Dataset*.
- de Silva, V., Samarasinghe, D., & Hanwella, R. (2010). Association between concurrent alcohol and tobacco use and poverty. *Drug and Alcohol Review*, 30(1), 1-5. doi: 10.1111/j.1465-3362.2010.00202.x
- Edwards, G., Hensman, C., Chandler, J., & Peto, J. (1972). Motivation for drinking among men: survey of a London suburb. *Psychological Medicine*, 2(3), 260-271. doi: 10.1017/S0033291700042562
- Ferreira, M. P., & Willoughby, D. (2008). Alcohol consumption: the good, the bad, and the indifferent. *Applied physiology, nutrition, and metabolism = Physiologie appliquée, nutrition et métabolisme*, 33(1), 12-20. doi: 10.1139/H07-175
- Gmel, G., & Rehm, J. (2003). Harmful alcohol use. *Alcohol Research and Health*, 27(1), 52-62.

- Gronnerod, J. S. (2002). The use of alcohol and cannabis in non-professional rock bands in Finland. *Contemporary Drug Problems*, 29(2), 417-443.
- Gunzerath, L., Faden, V., Zakhari, S., & Warren, K. (2004). National Institute on Alcohol Abuse and Alcoholism Report on Moderate Drinking. *Alcoholism: Clinical and Experimental Research*, 28(6), 829-847. doi: 10.1097/01.ALC.0000128382.79375.B6
- Harris, E. H. (2010). The Economics of Alcohol Consumption: Exploring the Relationship between Sensitivity to the Price of Alcohol and Behavioral Consequences. *The Yale Review of Undergraduate Research in Psychology*, 64-81.
- Haughton, J. H. (2009). *Handbook on poverty and inequality* / Jonathan Haughton, Shahidur R. Khandker. Washington, DC: World Bank.
- Haveman, R. L., & Wolfe, B. H. (1994). Schooling and Economic Well-Being: the role of Non-Market Effects. *Journal of Human Resources*, 19(3), 377-407.
- Institute of Policy Studies. (2008). *Linkages between Poverty and Alcohol Sri Lanka State of the Economy 2008* (pp. 191-195): Institute of Policy Studies of Sri Lanka, 99, St. Michael's Road, Colombo 3, Sri Lanka.
- Jansson, L. (2008). Association between alcohol consumption and dental health. *Journal of Clinical Periodontology*, 35(5), 379-384. doi: 10.1111/j.1600-051X.2008.01210.x
- Khan, S., Murray, R. P., & Barnes, G. E. (2002). A structural equation model of the effect of poverty and unemployment on alcohol abuse. *Addictive Behaviors*, 27(3), 405-423. doi: 10.1016/s0306-4603(01)00181-2
- Klasen, S. (1997). Poverty, Inequality and Deprivation in South Africa: An Analysis of the 1993 Saldru Survey. *Social Indicators Research*, 41(1/3), 51-94. doi: 10.2307/27522257
- Ling, J., Smith, K. E., Wilson, G. B., Brierley-Jones, L., Crosland, A., Kaner, E. F. S., & Haughton, C. A. (2012). The 'other' in patterns of drinking: a qualitative study of attitudes towards alcohol use among professional, managerial and clerical workers. *BMC Public Health*, 12(1), 892-892. doi: 10.1186/1471-2458-12-892
- Macdonald, I., & Europe, I. (1999). *Health issues related to alcohol consumption*. Oxford: ILSI.
- Martin, C. R. (2000). *Health issues related to alcohol consumption* (Vol. 32). Oxford: Blackwell Science Ltd.
- Martin, R., & Dombrowski, S. C. (2008). *Prenatal Exposures: Psychological and Educational Consequences for Children*: Springer.
- Moore, R. D., & Pearson, T. A. (1986). Moderate alcohol consumption and coronary artery disease. A review. *Medicine*, 65(4), 242-267. doi: 10.1097/00005792-198607000-00004
- Neufeld, K. J., Peters, D. H., Rani, M., Bonu, S., & Brooner, R. K. (2005). Regular use of alcohol and tobacco in India and its association with age, gender, and poverty. *Drug and Alcohol Dependence*, 77(3), 283-291. doi:10.1016/j.drugalcdep.2004.08.022
- Poldrugo, F. (1998). Alcohol and criminal behaviour. *Alcohol and Alcoholism*, 33(1), 12-15.
- Prescott, C. A., Hewitt, J. K., Heath, A. C., Truett, K. R., Neale, M. C., & Eaves, L. J. (1994). Environmental and genetic influences on alcohol use in a volunteer sample of older twins. *Journal of Studies on Alcohol*, 55(1), 18-32.

- Price, J. H. (2004). Light drinking lowers bad proteins; Study suggests how moderate alcohol consumption helps the heart. *The Washington Times*, p. A.07. Retrieved from <http://search.proquest.com.libraryproxy.griffith.edu.au/docview/409780250?accountid=14543>
- Psacharopoulos, G., & Woodhall, M. (1985). *Education for Development: an Analysis of Investment Choices*: Oxford University Press for the World Bank, U.K.
- Rohsenow, D. J. (1983). Drinking habits and expectancies about alcohol's effects for self versus others. *Journal of consulting and clinical psychology*, 51(5), 752-756. doi: 10.1037/0022-006X.51.5.752
- Schootman, M., Deshpande, A. D., Lynskey, M. T., Pruitt, S. L., Lian, M., & Jeffe, D. B. (2013). Alcohol Outlet Availability and Excessive Alcohol Consumption in Breast Cancer Survivors. *Journal of Primary Care and Community Health*, 4(1), 50-58. doi: 10.1177/2150131912443133
- Single, E. (1984). International perspectives on alcohol as a public health issue. *Journal of Public Health Policy*, 5(2), 238-256.
- Stibler, H. (1991). Carbohydrate deficient transferrin in serum: a new marker of potentially harmful alcohol consumption reviewed. *Clinical Chemistry*, 37(12), 2029-2037.
- Suzuki, K., Elkind, M. S. V., Boden-Albala, B., Jin, Z., Berry, G., Di Tullio, M. R., Homma, S. (2009). Moderate alcohol consumption is associated with better endothelial function: A cross sectional study. *BMC cardiovascular disorders*, 9(8), 1-5. doi: 10.1186/1471-2261-9-8
- Terranova, C., Tucci, M., Sartore, D., Cavarzeran, F., Di Pietra, L., Barzon, L., Ferrara, S. D. (2013). GABA Receptors, Alcohol Dependence and Criminal Behavior. *Journal of forensic sciences*, 58(5), 1227-1232. doi: 10.1111/1556-4029.12201
- Thorbecke, E. (2004). *Conceptual and Measurement Issues in Poverty Analysis*. Paper presented at the United Nations University(UNU)-World Institute for Development Economic Research(WIDER) Conference on Inequality, Poverty and Human Well-Being, Helsinki. <http://www.wider.unu.edu/stc/repec/pdfs/rp2004/dp2004-04.pdf>
- Trollidal, B. (2005). Availability and sales of alcohol in four Canadian provinces: a time-series analysis. *Contemporary Drug Problems*, 32(3), 343-372.
- University College London. (1999). *Alcohol and Drug Abuse*. Retrieved June 17, 2013, from <http://www.ucl.ac.uk/support-pages/information/alcohol-and-drugabuse>
- Vliegthart, R., Oei, H.-H. S., van den Elzen, A. P. M., van Rooij, F. J. A., Hofman, A., Oudkerk, M., & Witteman, J. C. M. (2004). Alcohol consumption and coronary calcification in a general population. *Archives of internal medicine*, 164(21), 2355-2360. doi: 10.1001/archinte.164.21.2355