# Alcohol and corruption

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**Abstract**

This study had for objective to measure the link which exists between the alcohol and the corruption, or more exactly the relation between the drinker and the corruption. In the term of this study, it seems clearly that the relation is positive between both variables. Drinkers' quantitative increase in the country tends to increase the level of the received corruption.

If this relation is clear, it requires nevertheless a lot of caution as far as we do not supply an argument so robust.

**Keys-words**: corruption, alcohol, drinkers, institutions

**JEL : I12, O15, Z13, D73**

## 1. INTRODUCTION

There is little doubt that alcohol consumption is associated with many social problems. Not only is alcohol consumption and its adverse outcomes a concern for an individual's close partners and relatives, but it also is a cause of serious public health problems insomuch that both national and international health organizations frequently give related alerts.For example,maternal alcohol consumption during pregnancy can result in fetal alcohol syndrome in children, and parental drinking is correlated with child abuse and impacts a child's environment in many social, psychological and economic ways (Gmel & Rehm, 2003). On the other hand, according to the Worth Health Organization (2011), the harmful use of alcohol

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results in 2.5 million deaths each year. In addition, 320 young people between the age of 15 and 29 die from alcohol related causes, resulting in 9% of all deaths in that age group.).

The relationship between alcohol and health is well documented as well. Alcohol abusive consumption is shown to be the cause of several health conditions such asneuropsychiatric disorders (Samokhvalov et al., 2010), gastrointestinal diseases, cancer (Baan et al., 2007; Hamajima et al., 2002), cardiovascular diseases (Rehm et al., 2010) and diabetes mellitus (Baliunas et al., 2009a). In addition to the fact that abusive use of alcohol is an important cause of road accidents, research has also found that alcohol consumption is strongly associated with violent crime (Bushman, 1997; Graham and West, 2001) and with a substantial number of domestic violence accidents (Maffli and Zumbrunn, 2003; Gmel et Rehm, 2003 ; White and Chen, 2002 ; Obot, 2000; Jewkes, Levin and Penn-Kekana 2002; Koenig et al., 2003); although the relationship between alcohol and domestic violence is complex.

More interestingly, the impact of alcohol use has been showed on macroeconomic variables. Researchers have suggested that alcohol consumption expenditures account for a substantial part of the annual Gross Domestic Product of industrialized countries (Klingemann & Gmel, 2001).Baklien and Samarasinghe (2001) conducted a study in 11 districts in Sri Lanka, examining the link between alcohol and povertyandfound that 7% of men said that their alcohol expenditure was greater than their income. On the other hand, heavy drinking at the workplace may potentially lower productivity. Trapenciere (2000) estimated that drinking and alcoholism have reduced labor productivity by about 10%. In addition, there is ample evidence that people with alcohol dependence and problem drinkers have higher rates of sickness and absenteeism than other employees (Klingemann & Gmel, 2001).Furthermore, Klingemann and Gmel (2001) note that a number of studies have demonstrated an association between heavy drinking or alcohol abuse and unemployment. Here, a causal association may go in either direction, heavy drinking may lead to unemployment, as suggested by Mustonen, Paakkaned and Simpura (1994) and Mullahy & Sindelar (1996). However, loss of work may also result in increased drinking, which may lead to heavy drinking, as indicated by Gallant (1993), Dooley & Prause (1998) and Claussen (1999). Other links between alcohol consumption and work related issues are documented by Hughes and Bellis (2000) and Stallones and Xiang (2003).

Although many research papers have focused on the impact of alcohol consumption, none have addressed its impact on corruption. While only anecdotal evidence point to the possible link between alcohol consumption and corruption (**Ramirez Torres, 1990**), no paper, to the best of our knowledge, has systematically provided empirical evidence of such an effect. Our aim in this paper is to feel this gap in the literature.

This is organized in five section. The first section introduces the article. The following one presents the relation, apparently, anecdotal between the corruption and the alcohol. The third presents the methodological approach and the fourth presents the results. The last section is dedicated to the conclusion.

## 2. ANECDOTAL EVIDENCE

This section presents some evidence on alcohol consumption and corruption.

Insert graphical

Source: World Health Organization (2011)

A large variation exists in adult per capita consumption (Figure 1). The highest consumption levels can be found in the developed world, mostly in the Northern Hemisphere, but also in Argentina, Australia and New Zealand. Medium consumption levels can be found in southern Africa, with Namibia and South Africa having the highest levels, and in North and South America. Low consumption levels can be found in the countries of North Africa and sub-Saharan Africa, the Eastern Mediterranean region, and southern Asia and the Indian Ocean. These regions represent large populations of the Islamic faith, which have very high rates of abstention (World Health Organization, 2011).

In terms of consumption, according to the same report, the world average consumption of pure alcohol was 6,13 liters per capita of more than 15 years (calculated on an average from 2003 till 2005). The countries which consume most are Russia, the United Kingdom, France, Germany and the Eastern Europe with more than 12,5 liters of pure alcohol a year and a person, in the evening the equivalent of 500 pints of beer in 5 %. Just behind, we find the rest of Europe, Argentina and Australia, with more than 10 liters.

The WHO notes generally that the consumption is stable since the beginning of 1990s to the rich countries but that it increases strongly in developing countries, in Asia and in Africa. She also worries about the increase at the young people generally. On 82 countries having agreed to answer, 80 % would have noted such an evolution.

Obviously, the tendency varies strongly between every country. The consumption of the Russians increases to arrive at 15,7 liters a year, whereas that of the French people, with 13,7 liters, takes a nose dive, if we look since the 60s, when they consumed about 25 liters of pure alcohol a year!

The graph 2 below, besides, brings to light the perception of the corruption in the planet. A low score (red) indicates a high degree of corruption. The index assumes values between 0 (corruption) and 10 (no corruption). It is clear that the countries of the southern hemisphere and the Asian countries are the most corrupt, with regard to this indicator. Contrary to the previous graph, this one is concentrated. It is more the block of regions that is the most concerned.

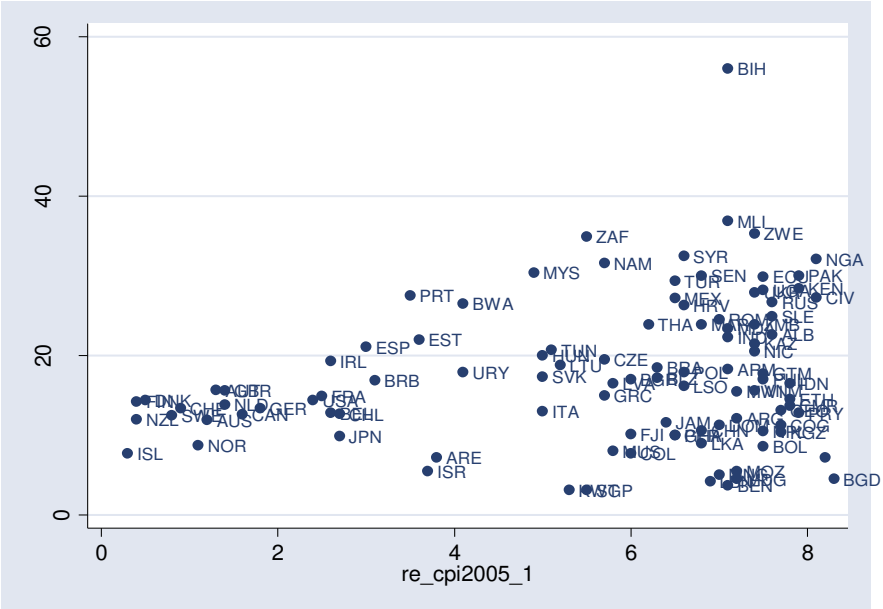
**Figure 2. Corruption perception in world**

Insert graphical

It is not obvious, from the previous figures, to establish a relationship between corruption and alcohol consumption.We plot the two variables in Figure 3. We represent the number of drinkers on the vertical axis and the corruption perception index (CPI) on the vertical axis. The data is for 2005 and comes from World Health Organization (2011) and Transparency International for CPI. In graphical, the reversed index (re_cpi) assumes values between 0 (no corruption) and 10 (extreme corruption).

It appears that countries with a low number of drinkers have lower CPI while countries with a higher number of drinkers have higher levels of CPI. However, Figure 3 also depicts the fact that some of the countries that have less drinkers have a lower CPI as well. Our aim in this paper is to check if there exists a causal relationship between the two variables.

**Figure 3. Alcohol and corruption**




## 3 EMPIRICAL MODEL

We estimate the following empirical model:

$$Cor_i = \propto + \beta Alcohol_i + \delta Z_i + \varepsilon_i \qquad (1)$$

where$Cor_i$ is the corruption index for country i. To measure corruption, I use the reversed Transparency International's Perception of Corruption Index (CPI) for the year 2005. The reversed index assumes values between 0 (no corruption) and 10 (extreme corruption). The CPI has often been used in empirical research on corruption (see the studies mentioned in section 1). $Alcohol_i$isadult per capita consumption among drinkers, both sexes, 2005 (15+ years; in litres of pure alcohol).The source of this variable is the report of World Health Organization 2011. Z =(z$1$,…$z_k$)' is the vector of control variables, and $\varepsilon_i$ is the error term that is assumed to be normally and independently distributed. Finally, $\propto$ is the intercept, $\beta$ captures the effect of adult per capita consumption among drinkers while$\delta = (\delta_1, \delta_2, \ldots \delta_k)$ is the parametervector for the control variables. Our parameter of interest is thus $\beta$.

As control variables, we include openness to trade (or KOF index of economic globalization for the year 2005 from Dreher 2006 and Dreher et al. 2008) for the year 2005 (from Penn World Tables 6.3), the logof GDP per capita for the year 2005 (from Penn World Tables 6.3), intelligence quotient for the year 2001 (from Lynn et al., 2002), democracy for the year 2005

(from Cheibub et al., 2010), average years of schooling (% of population aged 25 and over or % of population aged 15 and over) form Barro and Lee (2010), legal origin and geographical location. Following the trend in theliterature, legal origin is captured by distinguishing between the English, French, German,Scandinavian and socialist legal heritages.

We estimate the model with ordinary least squares (OLS) and robust standard errors. The constraint of a study in cross-section is due to availability of data.

## 4 EMPIRICAL RESULTS

Tableau 1.

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Drinker | 0,057*** | 0,060*** | 0,035* | 0,032** |
| | (0,019) | (0,017) | (0,020) | (0,012) |
| Africa | | 0,845 | | 3,624** |
| | | (0,529) | | (1,553) |
| America | | | | 2,460 |
| | | | | (1,634) |
| Asia | | 0,827 | | 2,946* |
| | | (0,568) | | (1,578) |
| Europa | | -1,981*** | | 0,373 |
| | | (0,624) | | (1,602) |
| Oceania | | 4,832* | | |
| | | (0,567) | | |
| LegorOrigin (UK) | | | | 1,931*** |
| | | | | (0,550) |
| LegalOrigin (french) | | | | 2,821*** |
| | | | | (0,492) |
| LegalOrigin (socialist) | | | | 4,473*** |
| | | | | (0,391) |
| LegalOrigin (scandinavian) | | | | -0,360 |
| | | | | (0,342) |
| Intelligence quotient | | | 0,050** | |
| | | | (0,022) | |
| Log GDP per capita | | | -1,849*** | |
| | | | (0,289) | |
| Democracy | | | -0,243 | |
| | | | (0,388) | |
| KOF index of economic globalization | | | -0,033* | |
| | | | (0,019) | |
| Average years of schooling | | | 0,040 | |
| | | | (0,087) | |
| Constant | 4,589*** | 4,832*** | 19,156* | 4,832*** |
| | (0,489) | (0,567) | (1,909) | (0,567) |
| Adj. $R^2$ | 0,05 | 0,38 | 0,66 | 0,63 |
| Obs. | 102 | 102 | 89 | 101 |

Notes: Absolute value of t statistics in brackets; * significant at 10%; ** significant at 5%;*** significant at 1%

## 5 CONCLUSION

This study had for objective to measure the link which exists between the alcohol and the corruption, or more exactly the relation between the drinker and the corruption. In the term of

this study, it seems clearly that the relation is positive between both variables. Drinkers' quantitative increase in the country tends to increase the level of the received corruption.

If this relation is clear, it requires nevertheless a lot of caution as far as we do not supply an argument so robust.

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