

# Study Report

## Price and affordability of alcohol in Vietnam in the period 1998-2016

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## Executive Summary

**Background:** Alcohol use is responsible for more than 200 types of illnesses, and is one of the top 10 risks of death in the world. In Vietnam, the consumption of alcohol is increasing alarmingly.

**Objectives:** The aim of this study was to estimate the average retail price and affordability of 11 alcohol products in Vietnam in the period 1998 to 2016.

**Methods:** From the average retail price data collected in June 2014 and the monthly CPI of beer and wine products collected for the period 1998 to 2014 from the General Statistics Office (GSO), the nominal price of 11 alcohol products was calculated for each month and then for a year in the period 1998 to 2013. The average retail price data of these alcohol products for 2015 and 2016 was collected from GSO. To estimate the affordability of alcohol from 1998 to 2016, the study used the Relative Income Price (RIP) measure developed by Blecher and Van Walbeek as well as the “minimum wage” method. The RIP is defined as the percentage of per capita GDP (or of minimum wage) needed to purchase one litre of an alcoholic product. The lower the RIP, the more affordable the alcohol products are.

**Findings:** The annual average price (VND/liter) for alcohol products such as “Hanoi Vodka” (39.5% alcohol), homemade rice spirit (35% alcohol), French red wine (9-14% alcohol) and local produced red wine (14-16% alcohol) increased by 2.5, 2.9, 3.0 and 3.1 times respectively between 1998 and 2016. For beer products, the average price of types of beer in 2016 increased by 1.8-2.0 times compared to 1998. Tiger canned beer (5% alcohol) and draft beer (4-6% alcohol) were the two types of beer with the sharpest increase (double). Canned Heineken beer (5% alcohol) and bottled Heineken beer (5% alcohol) had the second highest increase (1.9 times). The two remaining products of bottled Saigon beer (4.9% alcohol) and bottled Hanoi beer (4.2% alcohol) increased by 1.8 times.

The percentage of wages required for purchasing 1 liter of all four types of wine/spirit and five types of beer tended to decrease from 1998 to 2016. By 2016, this percentage dropped sharply by 3 times for all four types of wine. Meanwhile, in 2016, this percentage decreased by about 4 times in all beer products compared to 1998.

Similarly, the percentage of per capita GDP to purchase 10 liters of all four types of wine/spirit and five types of beer tended to decrease from 1998 to 2016. This means that the purchasing power for both wine/spirit and beer increased over the period 1998-2016. Thus, in terms of real price, alcohol is now more affordable in Vietnam.

**Recommendations:** Increase in excise taxes on alcohol products to increase price is an effective solution to reduce alcohol consumption and related consequences, while also improving health, and increasing government revenue. Therefore, increasing alcohol tax is a priority for Vietnam, and the excise tax rate should be increased to at least keep the affordability stable.

## I. Introduction

The consumption of alcohol in Vietnam is increasing dramatically. According to the World Health Organization, the per capita alcohol consumption of Vietnamese adults has increased from 0.75 liters/ person in 1990<sup>i</sup> to 3.8 liters/ person between 2003-2005<sup>ii</sup>. Total beer consumption in Vietnam has increased from 2.8 billion liters in 2012 to more than 3 billion liters in 2013, becoming the third highest beer consumer in Asia, surpassed only by Japan and China. Wine and spirit consumption has also grown more than 7.5% in just one year, from 63 million liters in 2012, to nearly 68 million liters in 2013<sup>iii</sup>. The proportion of adolescents and young adults who have used alcohol in Vietnam has also rapidly increased. According to the National Survey of Adolescents and Young Adults (SAVY1 and SAVY2), the prevalence of alcohol use among young men increased from 69% (2003) to 80% (2008), and increased from 28% (2003) to 37% (2008)<sup>iv</sup> among young women.

Alcohol use is responsible for more than 200 illnesses<sup>v</sup>, and globally is one of the top 10 risk factors for death<sup>vi</sup>. According to the World Health Organization, 3.3 million people died from alcohol-related diseases and injuries in 2012, accounting for 5.9% of all deaths worldwide <sup>vii</sup>. Notably, alcohol use is responsible for around 20% of road traffic deaths, 30% of deaths from esophageal cancer, liver cancer, epilepsy, and homicide. It is the cause of death in about 50% of cases of cirrhosis <sup>viii</sup>. Alcohol abuse is also associated with many other negative social issues, such as crime and violence, which bring economic and social burdens to individuals, families, and society. In Vietnam, alcohol related disorders were one of the 10 leading causes of death in men in 2008, accounting for 5% total DALY. In 2012, alcohol related deaths accounted for 8.3% of total deaths. Cost for purchasing beer in 2012 was estimated at nearly 3 billion USD (2,8 billion liter), an amount equivalent to nearly 3% of the national budget revenue (not including indirect cost). The cost for purchasing beer in 2012 was three times higher than the contribution to state budget from the alcohol and beverage industry .<sup>ix</sup>

According to the WHO, high taxation and price policies are among the most effective measures to control the harmful effects of alcohol (along with retail licensing; bans on drinking and driving, bans on advertising, promotion, alcohol financing; educational communication, and detoxification)<sup>x</sup>.

In support of the development of the Law on Alcoholism Prevention in Vietnam, the Healthbridge Foundation of Canada conducted a study on fluctuations in alcohol affordability in Vietnam in the period 1998 - 2016. The results obtained will provide evidences for advocacy and help authorities develop policies on taxes and prices of alcohol in Vietnam.

## **II. Study objectives**

1. To estimate the average retail price of 11 alcohol products in Vietnam in the period 1998-2016
2. To estimate the affordability of 11 alcohol products and changing trends from 1998 to 2016

## **III. Study methodology**

### ***III1. Estimate of the average retail price of 11 alcohol products in Vietnam in the period 1998-2016***

The Consumer Price Index (CPI), one of Vietnam's key socio-economic indicators, is published once a month and reflects trends and changes in the relative prices of essential products and services over the base year (2009); over the same time last year; over the December last year; over the previous month; and over the average of the same period. The General Statistics Office (GSO) is responsible for calculating this CPI.

Information on the price of the 572 most popular consumption products and services is used to calculate the CPI. This information is collected thrice per month (alcohol products are only collected once per month) by the GSO network of information gathering staff in 64 provinces. Of the 572 consumption products and services, there are

11 alcohol products. These are the most popular brands of spirits, wine and beer (bottled beer, canned beer, and draft beer), including:

- Spirits:
  - 1 Johnnie Walker, Black Label (750ml, 43% alcohol, imported)
  - 2 “Hanoi” Vodka (750ml, 39.5% alcohol)
  - 3 Homemade rice spirit (35% alcohol)
- Wine:
  - 4 Local produced red wine (600-700ml, 14-16% alcohol, “Thang Long” wine or “Da Lat” wine)
  - 5 French red wine (600-700ml, 9-14% alcohol)
- Bottled beer:
  - 6 Hanoi Beer (450ml, 4.2% alcohol)
  - 7 Red/ green Saigon Beer (300-500ml, 4.9% alcohol)
  - 8 Heineken (300ml, 5% alcohol)
- Canned beer:
  - 9 Tiger (330ml, 5% alcohol)
  - 10 Heineken (330ml, 5% alcohol)
- Draft beer:
  - 11 Vietnamese draft (fresh) beer (4-6% alcohol)

To estimate the affordability of alcoholic beverages, information on the retail price of these products should be available along with information on average income per capita over time. However, before 2014, this figure was not recorded by the GSO. To estimate the detailed retail price of alcohol in the period prior to 2014, the team used the extrapolation method using the average retail price for each alcoholic beverage collected in 2014 and the CPI of wine and beer .

The research team collaborated with GSO's Center for Documentation and Statistical Services to collect the average retail price data for these 11 alcohol products in June 2014. The average retail price per unit of alcohol (VND/ liter), and the monthly CPI for wine and beer were calculated for the period 1998-2014. Due to dramatic price

differences between provinces, for Johnnie Walker and Black Label (750ml 43% alcohol, imported) the research team excluded these products from analysis.

Using the average retail price data collected in June 2014 and the monthly CPI of wine and beer products, the research team calculated the average retail price (nominal price) of 11 alcohol products for each month in the period 1998 - 2013. Average price of a month = Average price of next month/ CPI of the month to be calculated x 100. From the average price of each month, the average annual price was calculated.

### ***III.2. Estimate of the affordability of alcohol from 1998 to 2016***

The study used the Relative Income Price (RIP) measure developed by Blecher and Van Walbeek as well as the “minimum wage” method. The RIP is defined as the percentage of per capita GDP (or of minimum wage) needed to purchase one litre of an alcoholic product. The lower the RIP, the more affordable the alcohol products are.

Annual income per capita (Per capita GDP/year) during the period 1998-2016 was provided by the Center for Documentation and Statistical Services, GSO; and monthly minimum wages were collected from the Department of Labor-Salary, Ministry of Labor, Invalids and Social Affairs (Table 1).

**Table 1: Minimum wage/month and Per capita GDP/year**

<b>Year</b>	<b>Minimum wage (VND)</b>	<b>GDP/person (VND)</b>
1998	144,000	4,784,438
1999	144,000	5,221,413
2000	180,000	5,689,049
2001	210,000	6,121,710
2002	210,000	6,735,866
2003	210,000	7,623,400
2004	290,000	8,783,487
2005	350,000	10,185,401
2006	450,000	11,694,021
2007	450,000	13,579,916
2008	540,000	17,445,939
2009	650,000	19,278,079
2010	730,000	24,822,000
2011	830,000	31,647,000
2012	1,050,000	36,559,000
2013	1,150,000	39,989,000



2014	1,150,000	43,899,000
2015	1,150,000	45,717,000
2016	1,210,000	48,600,000

From the average retail price of 11 alcoholic beverages and Per capita GDP/year and the monthly minimum wage, the research team calculated the affordability of alcohol. Microsoft Excel was used for data analysis.

## **IV. Study results**

### ***IV.1. Annual average price of alcohol products in the period 1998-2016***

Over the past 20 years (1998-2016), the annual average price (nominal price) of alcohol products has tended to increase.

For alcohol products, the price of “Hanoi” Vodka (39.5% alcohol) increased by 2.5 times from 40,000 VND/ liter (1998) to 94,500 VND/ liter (2016). Similarly, the price of homemade rice spirit (35% alcohol) and the price of French red wine also increased by 2.9 times and 3 times respectively from 7,500 VND/ liter; 92,800 VND/ liter to 21,300 VND/ liter and 281,800 VND/ liter. Among alcohol products, the price of local produced red wine (14-16% alcohol) increased the most (3.1 times) from 28,400 VND/ liter (1998) to 88,600 VND/ liter (2016).

For beer products, the average price of beer in 2016 increased by 1.8-2 times compared to 1998. Tiger canned beer (5% alcohol) and draft beer (4-6 alcohol) were the two types of beer with sharpest increase in annual average price by 2 times from 20,100 VND/liter; 6,800 VND/liter (1998) to 39,900 VND/liter; 13,400 VND/liter (2016). The second highest increase in the annual average price was for two products of canned Heineken beer (5% alcohol) and bottled Heineken beer (5% alcohol) which increased by 1.9 times from 25,900 VND/liter; 26,500 VND/liter (1998) to 50,300 VND/liter; 50,000 VND/liter. The annual average price for bottled Saigon beer (4.9% alcohol) and bottled Hanoi beer (4.2% alcohol) increased by 1.8 times from 16,000 VND/liter; 11,700 VND/liter (1998) to 29,400 VND/liter and 21,300 VND/liter.

**Table 2: Annual average retail prices of alcohol products (VND/liter)**

Year	Alcohol prices (VND/liter)									
	“Hanoi” Vodka, 39.5% alcohol	Homemade rice spirit, 35% alcohol	Local produced red wine 14-16% alcohol	French red wine, 9-14% alcohol	Vietnamese draft beer, 4-6% alcohol	Bottled Hanoi beer, 4.2% alcohol	Bottled Saigon beer, 4.9% alcohol	Bottled Heineken beer, 5% alcohol	Canned Tiger beer, 5% alcohol	Canned Heineken beer, 5% alcohol
1998	39,084	7,447	28,361	91,200	6,759	9,962	16,023	26,495	18,825	25,934
1999	40,964	7,805	29,725	95,587	6,799	10,020	16,116	26,650	18,935	26,085
2000	41,377	7,884	30,024	96,550	6,756	9,957	16,014	26,481	18,815	25,920
2001	42,638	8,124	30,939	99,492	6,745	9,942	15,990	26,441	18,787	25,881
2002	43,349	8,260	31,455	101,152	6,804	10,029	16,129	26,672	18,951	26,107
2003	44,314	8,444	32,156	103,403	6,956	10,252	16,488	27,265	19,373	26,688
2004	46,289	8,820	33,589	108,012	7,266	10,709	17,223	28,480	20,236	27,877
2005	48,612	9,262	35,274	113,432	7,630	11,246	18,088	29,910	21,252	29,276
2006	50,099	9,546	36,353	116,902	8,081	11,910	19,155	31,675	22,505	31,004
2007	53,372	10,169	38,728	124,540	8,630	12,720	20,458	33,829	24,037	33,113
2008	61,317	11,683	44,494	143,080	9,355	13,788	22,175	36,669	26,054	35,893
2009	67,929	12,943	49,292	158,508	10,138	14,942	24,032	39,740	28,236	38,898
2010	74,338	14,164	53,942	173,462	10,748	15,841	25,478	42,131	29,935	41,239
2011	82,519	15,723	59,879	192,553	11,491	16,937	27,240	45,044	32,005	44,091
2012	88,439	16,851	64,174	206,367	12,194	17,973	28,906	47,800	33,963	46,787
2013	93,394	17,795	67,770	217,929	12,805	18,873	30,354	50,193	35,663	49,130
2014	98,472	18,455	70,283	230,046	13,114	22,660	31,086	51,404	39,000	50,315
2015	99,979	18,919	72,905	235,574	13,715	22,459	31,924	52,757	40,062	51,123
2016	99,475	21,281	88,582	281,775	13,357	21,281	29,383	50,019	39,940	50,336

## ***IV.2. Affordability of alcohol in the period 1998-2016***

### ***IV.2.1. Price index by percentage of the minimum wage***

Figure 1 shows that for all four types of wine/spirit (French red wine, “Hanoi” Vodka, local produced red wine and homemade rice spirit), the percentage of wages required for purchasing 1 liter of alcohol tended to decrease from 1998 to 2016. Similarly, for 5 types of beer (Vietnamese draft beer, bottled Hanoi beer, bottled Saigon beer, bottled Heineken beer, canned Tiger beer and canned Heineken beer), the percentage of wage required for purchasing 1 liter of beer also tended to decrease from 1998 to 2016. However, the purchasing power increased over the period 1998-2016. Thus, in terms of real price, alcohol is now more affordable in Vietnam.

For wine/spirit products, drinkers spent the highest percentage of their wages to purchase a liter of French red wine, followed by “Hanoi” Vodka, local produced red wine, and homemade rice spirit during the period 1998-2016. In 1998, this percentage corresponded to 63.3%; 27.1%; 19.7% and 5.2% respectively. In 2016, this percentage dropped sharply by 3 times for all 4 types of wine/spirit, 23.3%; 8.2%; 7.3%; and 1.8% respectively.

For beer products, bottled and canned Heineken beer required the highest percentage of wages to purchase 1 liter, at 18.4% and 18.0% respectively (in 1998); the cheapest was Vietnamese draft beer, accounting for 4.7% (in 1998). In 2016, this percentage decreased by about 4 times in all products compared to 1998.

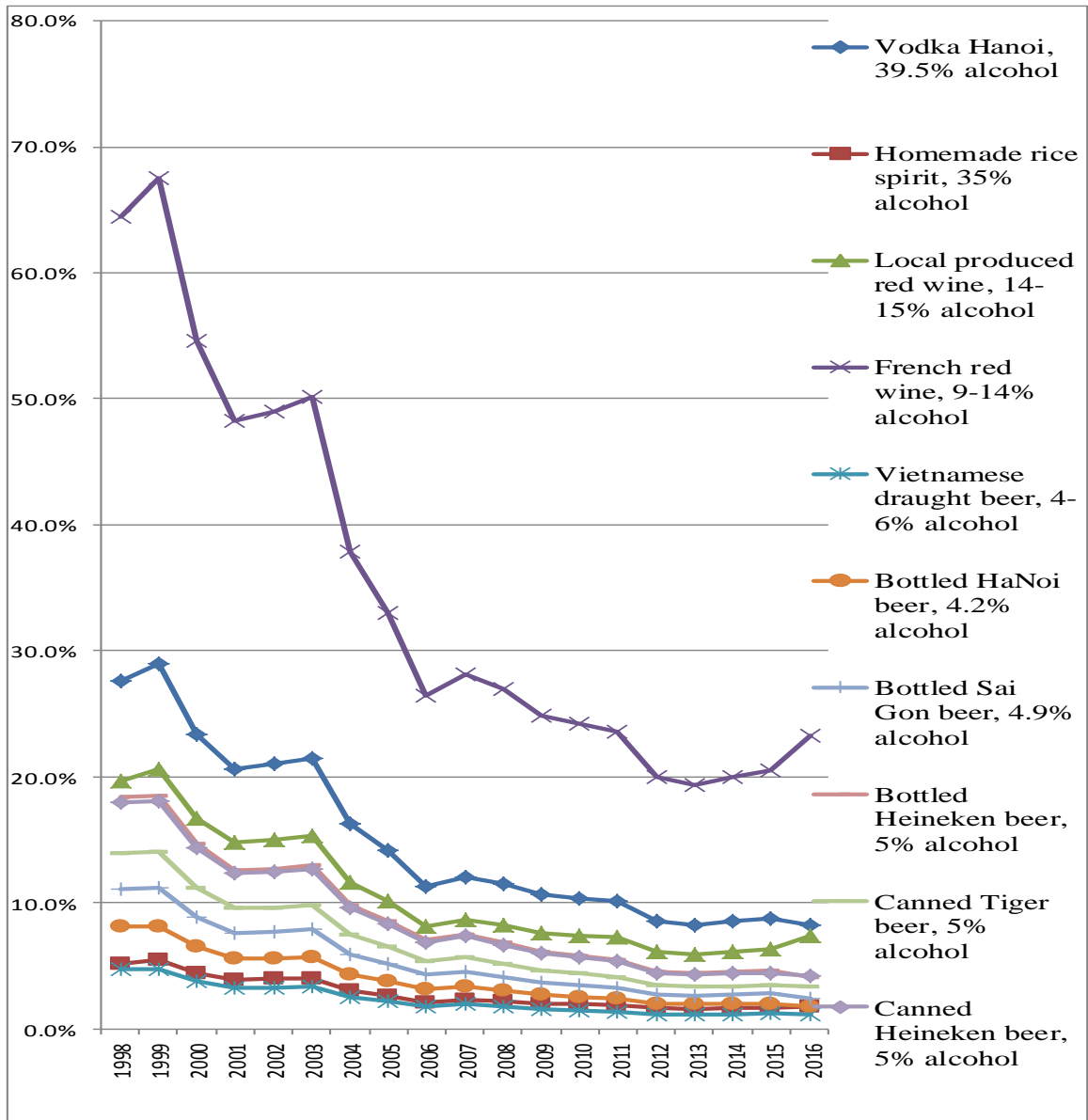


Figure 1: Price of alcohol products relative to percentage of the minimum wage (%)

#### IV.2.2. Price index by percentage of per capita GDP

According to Figure 2, for all four types of wine/spirit and 5 types of beer, the percentage of per capita GDP to purchase 10 liters of wine/spirit tended to decrease from 1998 to 2016. This highlights that with increasing purchasing power, both wine/spirit and beer became more affordable over the period 1998-2016. This means alcohol is becoming increasingly accessible in Vietnam.

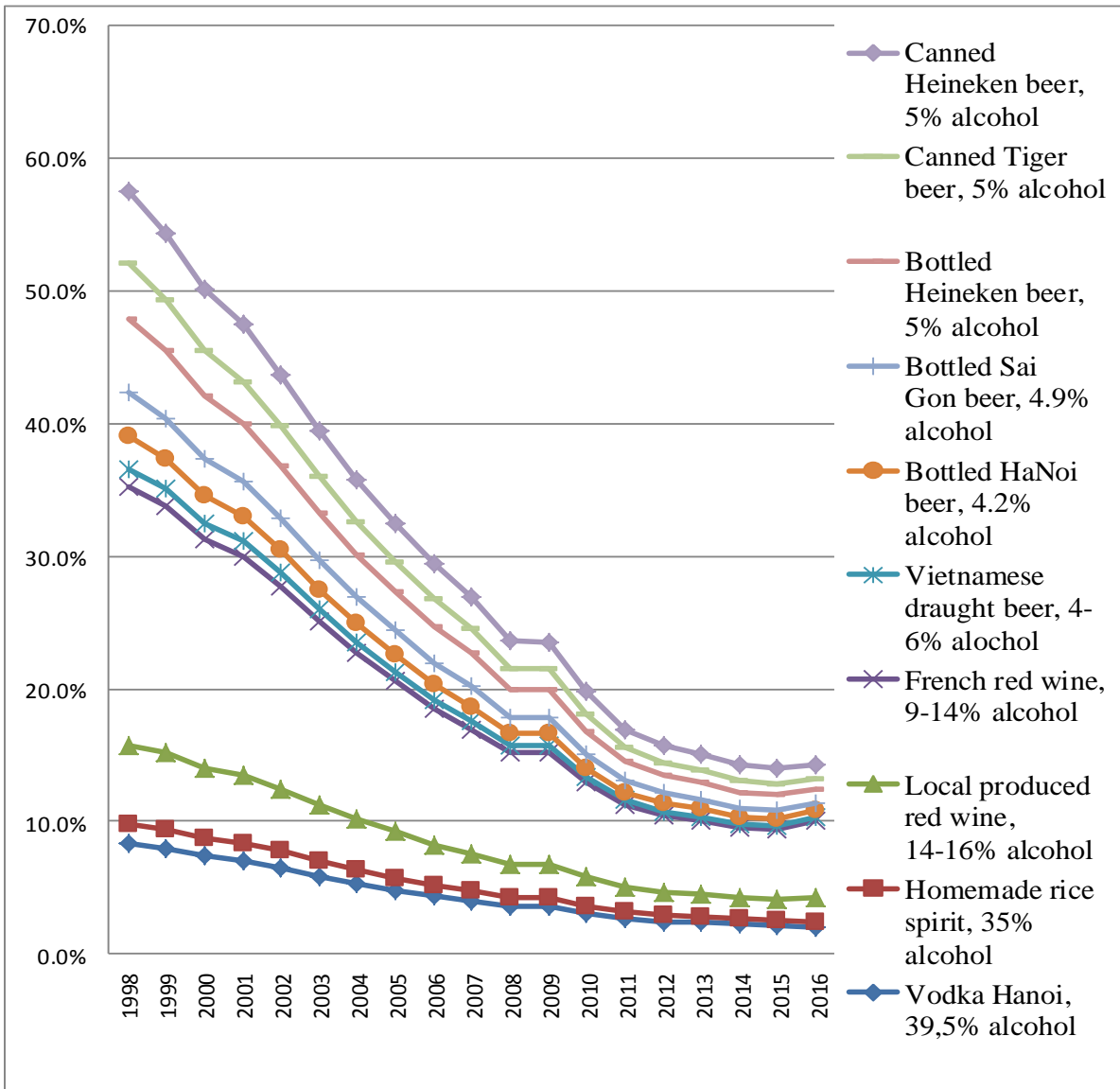


Figure 2: Price of alcohol products relative to percentage of per capita GDP (%)

## V. Conclusion and recommendations

The study indicates that although the average price of alcohol increased during the period 1998-2016, given the increase in income over that same period, alcohol actually became more affordable. This is shown by a very sharp decrease in the percentage of the Vietnamese minimum wage, and the percentage of per capita GDP/year that is required to purchase a liter of alcohol (the percentage of the minimum wage decreased by 3 times for wine and 4 times for beer) over the 20 year period. These findings are similar to the research conducted in European countries, and demonstrate that an 84% increase in alcohol affordability is due to increasing incomes<sup>xi</sup>.

Alcohol pricing is one of the most important measures to control levels of alcohol consumption<sup>xii</sup>. Tax policies are developed to influence the alcohol prices<sup>xiii</sup>. Recent studies on the effects of alcohol pricing have shown that an increase in alcohol price through a hike in excise taxes will reduce alcohol consumption and related consequences (e.g. traffic accidents, injuries and deaths from alcohol abuse, violence and crime) in all age groups and especially among heavy drinkers and young people<sup>xiv,xv,xvi,xvii</sup>. In addition, the increase in excise taxes on alcohol also contributes to improving health, increasing productivity, creating jobs and reducing the high costs associated with excessive alcohol use<sup>xviii</sup>. Increasing alcohol taxes also increase public revenue and benefits social policies<sup>xviii</sup>. Therefore, increasing the excise tax on alcohol products in order to increase their price is an effective solution proven in European and American countries<sup>xviii, xix,xx</sup>.

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