

# THE CONTRIBUTION MADE BY BEER TO THE VIETNAMESE ECONOMY



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## **THE CONTRIBUTION MADE BY BEER TO THE VIETNAMESE ECONOMY**

- Final Report -

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## **ABOUT THE STUDY**

### **Purpose of the study**

This study was commissioned by the Vietnam Beer-Alcohol-Beverage Association ('VBA') and aimed to quantify the economic impact of the brewing sector in Vietnam.

The current study is the first edition of the economic impact research undertaken by Regioplan and EY.

### **Economic impact**

Three different impacts were considered in order to provide a comprehensive picture of the economic impact of the brewing sector:

- Direct impacts
- Indirect impacts
- Induced impacts

For more information thereon, please consult Annexes I to III of this report which talks to the methodology of the report.

### **2012, 2013 and 2014**

Our calculations were made for the years 2012, 2013 and the first quarter of 2014.

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## EXECUTIVE SUMMARY

*In 2014, Regioplan Policy Research and EY Vietnam joined forces for the first time to conduct a study focusing on the economic impact of the production and sale of beer in Vietnam.*

### **Production and consumption figures**

Vietnam is among the largest beer-producing countries in the world. Using GSO data, our study shows that production in 2013 was 30,476,900 hectolitres. This means that, compared to 2012, the production increased with 8 per cent. The consumption of beer also increased. Vietnamese consumed around 30.5 million hectolitres in 2013. Compared to other Asian countries, the consumption of beer per capita can be considered as normal.

### **A sector with impact**

Overall, the impressive beer production and consumption figures mean that the brewing sector is of major importance to the Vietnamese economy. In both 2012 and 2013 beer had a considerable and growing effect on employment, value-added and government revenues.

### **Economic impact of beer in Vietnam (2012 and 2013)**

	2012	2013	Δ 2012-2013
Total beer-related employment (in jobs)	240,801	268,333	11%
Total beer-related value added (in trillion VND)	44.2	50.2	13%
Total beer-related government revenues (in trillion VND)	28.8	33.4	16%

*Source: calculations Regioplan 2014.*

### **Impact under pressure**

In the first quarter of 2014 it appeared the sector is facing a slowdown. When comparing the consumption and production data the brewing companies delivered separately in the first quarter of 2013 and the first quarter of 2014, we see a substantial decrease in both beer consumption (-7.5%) and beer production (-8.2%). The decline in production and consumption affects the impact of the brewing sector on the Vietnamese economy negatively. We also estimated these impact effects.

**Economic impact effects of a 2014 slowdown in the production and consumption of beer in Vietnam**

	$\Delta$ 2013 Q1-2013 Q1
Total beer-related employment	-5%
Total beer-related value added	-1%
Total beer-related government revenues	-6%

Source: calculations Regioplan 2014

The decline in beer production and consumption can be explained by two factors. One is a less positive development in the general purchasing power of mass consumers due to the overall difficulty of the Vietnamese economy. Second is the increase of excise tax on beer, effective from January 2013. Weighing both factors, we believe the latter to be the dominant one.

**Working to maintain impact**

Observing the severe negative effects of a decline in the production and consumption on the Vietnamese economy, it appears to be important that the Vietnamese brewing sector succeeds in turning around the downward trend's impact.

In theory there are many opportunities. Vietnam represents a prime market for beer producers. Unlike some of the other countries in the region, the Vietnamese have a beer-drinking tradition and express a strong loyalty to their local brands. Additionally, 70% of the non-Muslim population are less than 40 years old, with one million people turning 18 each year. In theory these are important ingredients for a positive recovery in the Vietnamese beer market in the years ahead.

However, the hoped-for recovery may also be threatened by imminent developments. The anticipated further increase to 65% in the rate of the Special Consumption tax for beer, is probably the most severe one. As in 2013, any new increase in excise tax will be reflected in the consumer price, engendering new resistance by consumers – not (only) by drinking less, but more importantly it will not stop the trend where consumers more often drink at home. Our studies show that home consumption is less beneficial for the economy.

## KEY MESSAGES

### 1. **Employment generated by beer**

The Vietnamese brewing sector is responsible for a large number of jobs. In total, beer generated 268,333 jobs in 2013. Most of these jobs (77.7 per cent) are located in the retail sector and the hospitality sector. Beer is of crucial importance for these economic sectors.

### 2. **Economic impact of the brewing sector**

As is highlighted by the facts that beer generated more than 50 trillion VND of value-added and almost 33.5 trillion VND of government revenues in 2013, the brewing sector contributes majorly to the Vietnamese economy in many different ways.

### 3. **The impact of the brewing sector is under pressure**

Considering the latest statistics, the vital impact of the brewing sector is in danger. Although demographical and cultural features provide a potentially fruitful environment for recovery, political developments affect this potential negatively.



## 1 THE VIETNAMESE BEER MARKET

### 1.1 Highlights

**Figure 1.1 Key figures for the beer sector in Vietnam**

Key figures	2012	2013	Δ 2012-2013
Production*	28,323,590 hl	30,476,900 hl	8%
Exports**	551,239 hl	627,815 hl	14%
Imports**	7,039 hl	4,418 hl	-37%
Consumption*	27,204,680 hl	30,428,280 hl	12%
Production value**	43.7 Trillion VND	49.1 Trillion VND	12%
Consumer spending on beer**	81.2 Trillion VND	90.8 Trillion VND	12%

Sources: \* GSO (collected by VBA), \*\* calculations by Regioplan and EY (2014).

### 1.2 Production

#### Beer production

Published in August 2011, the Kirin Institute of Food and Lifestyle Report Vol. 30 declared that Vietnam rose from 30<sup>th</sup> place in 2000 to 13<sup>th</sup> place in 2010, on the list of the largest beer-producing countries in the world. According to GSO data (collected by VBA), domestic beer production was 28,323,590 hectolitres in 2012. In 2013, production reached a level of 30,476,900 hectolitres, an increase of 8 per cent.

When taking a closer look at the data, it turns out that, between 2010 and 2013 the production of canned beer grew the most (65%). During this period, the production of bia hoi and other draught beer decreased.

**Figure 1.2 Developments in Vietnamese beer production**

Beer type	2010	2011	2012	2013	Δ 2010-2013	Δ 2012-2013
Bia hoi	3,744,740	3,372,750	3,493,830	3,422,560	-9%	-2%
Draught beer	85,420	60,670	62,670	63,340	-26%	1%
Bottled beer	13,327,470	14,178,320	14,724,190	15,449,570	16%	5%
Canned beer	7,002,640	8,608,690	10,042,900	11,541,430	65%	15%
<b>Total volume</b>	<b>24,160,270</b>	<b>26,220,430</b>	<b>28,323,590</b>	<b>30,476,900</b>	<b>26%</b>	<b>8%</b>

Source: GSO (collected by VBA).

We estimate the value of 2012 beer production (beer-related turnover of the brewing companies) at 43.7 trillion Vietnamese dong. In 2013, the production value had risen to 49.1 trillion Vietnamese dong, an increase of 12.4 per cent.

### Brewing companies

Bia hơi is a type of draft beer popular in Vietnam, produced mainly by small and informal breweries. The other types of beer are produced by regular brewing companies focused around population centres in the South-East, Red River Delta & Central regions. There are two large Vietnamese brewing companies, Sabeco and Habeco. Both are state-owned. Sabeco beer is consumed mostly in the south of Vietnam and Habeco beer in the north. Together the two companies have a market share of more than sixty per cent. International breweries with large production facilities in Vietnam are Carlsberg and Heineken (including Tiger). Other breweries are Đại Việt, SABMiller and Red Rock lager. All produce international lager beers.

As can be read in the next section, Vietnam's beer consumer market is experiencing rapid growth. As a result, international brewing companies are moving into the country's market even more, and local firms are increasing the size of their operations in response to the increase in competition. A positive effect for the Vietnamese economy is that it features increasing investments in the brewing sector, from both domestic and international companies.

**Figure 1.3 Beer-producing companies in Vietnam**

Brewing company	Number of breweries in Vietnam	Number of brands on Vietnamese market	Brands
Sabeco	20	5	Sài Gòn Lager, Sài Gòn Export, Sài Gòn Special can and bottle, 333 can, 333 premium bottle, Bia Hoi
Habeco	14	5	Hanoi 450ml and 330ml bottles and 330ml can, Hanoi Premium, Hanoi can, Truc Bach, Hanoi Lager, Bia Hoi, fresh beer
Heineken (including Tiger)	4	8	Heineken: bottle 33cl, can 33cl, Extra Cold, STR) Others: Tiger, Bivina, Biere-Larue, BGI
Carlsberg	3	5	Carlsberg, Huda, Huda Gold, Festival, Halida
SABMiller	1	4	Zorok, Pilsner Urquell, Peroni, Gambrinus
Đại Việt	1	2	Dai Viet super: 450ml black bottle, 330ml black can, 330 ml yellow bottle; Dai Viet: 450ml gold bottle pull cap, 330ml gold can, 450 gold bottle normal cap
Red Rock lager	Na	Na	Na
<b>Total</b>	<b>&gt;43</b>	<b>&gt;27</b>	

Source: VBA.

### Exports of beer

Based on the answers given in the questionnaires, we calculated that in 2012 the brewing companies exported 1.97% of the beer they had produced in Vietnam that year. In 2013 this percentage increased slightly to 2.05%.

## 1.3 Consumption

Vietnam has 90 million non-Muslim inhabitants and beer is their favourite alcoholic beverage.

Using GSO-data, the Vietnam Beer Alcohol Beverage Association (VBA) reported that the Vietnamese consumed around 3 billion litres of beer in 2013. Compared to the 2012 consumption level this is an increase of 12 per cent. The consumption of canned beer increased the most; the consumption of Bia hoi and other draught beers decreased by 2 and 21 per cent respectively between 2012 and 2013.

**Figure 1.4 Developments in Vietnamese beer consumption<sup>1</sup>**

Beer type	2010	2011	2012	2013	Δ 2010-2013	Δ 2012-2013
Bia hoi	3,713,480	3,326,290	3,472,170	3,410,920	-8%	-2%
Draught beer	86,290	59,820	54,490	66,190	-23%	21%
Bottled beer	13,296,270	14,068,170	14,046,880	15,494,340	17%	10%
Canned beer	6,698,340	9,333,160	9,631,140	11,456,830	71%	19%
Total volume	23,794,380	26,787,420	27,204,680	30,428,280	28%	12%

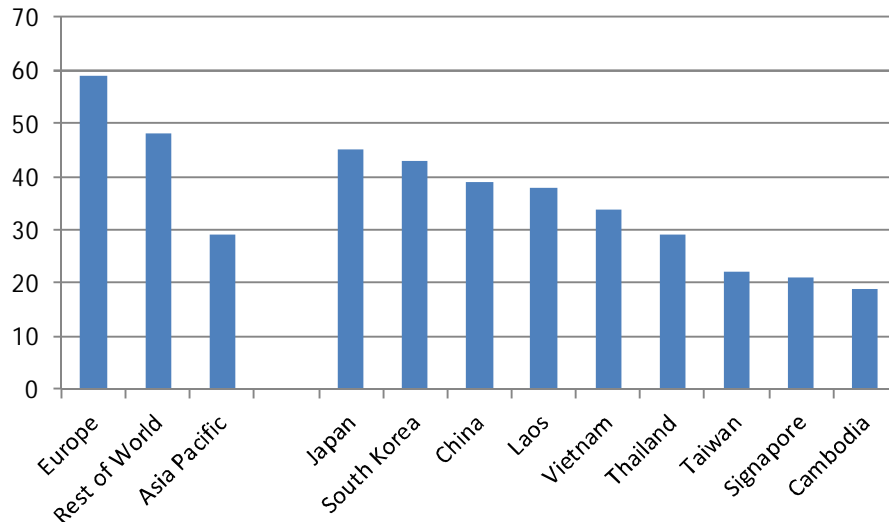
Source: VBA

### Beer consumption per capita

According to market research by Canadean, the 2013 Vietnamese beer consumption per capita stands at 34 litres per year. This figure has more than tripled since 1995. Although beer consumption per capita has increased to a large extent, it is still lower than that of Japan, South Korea, China and Laos. Accordingly, there is still potential room for brewing companies to develop business in Vietnam.

<sup>1</sup> In its statistics VBA uses the term 'shipments' for consumption.

**Figure 1.5 Per capita consumption 2013 (in litres per annum)**



Source: Canadean.

### Imports

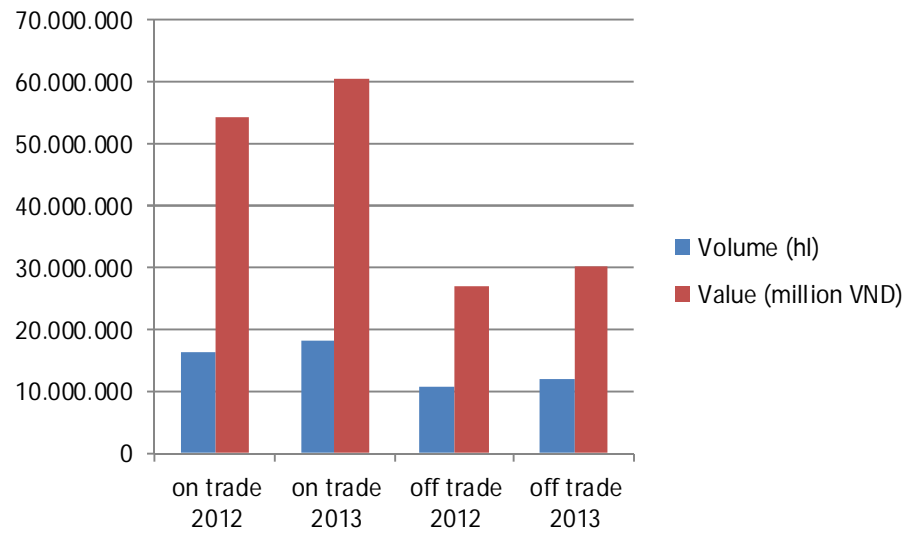
A very small part of the beer consumed in Vietnam is not produced locally, but imported from abroad. Based on the answers in the questionnaires, we calculated that in 2012 the brewing companies imported 0.03% of the beer they sold to Vietnamese beer consumers. In 2013 this percentage decreased to 0.01%. Obviously these percentages are negligible. We believe this can be explained by the fact that Vietnam also levies a 45 per cent import tariff on imported beers. Probably as a result, in previous years the brewing companies operating in Vietnam have benefited considerably from the increase in Vietnamese beer consumption.

## 1.4 Distribution channels

Of all the beer consumed in Vietnam, about 40% is purchased in traditional groceries and other retail outlets, referred to as the off-trade channel, and consumed at home. The other 60% is purchased in the on-trade sector (bars, restaurants etc.).

We estimated the value of 2012 consumer spending on beer at more than 81.2 trillion Vietnamese dong. In 2013, this value had risen by 12 per cent to more than 90.8 trillion Vietnamese dong. Because a litre of beer in the on-trade sector is more expensive than in the off-trade sector and more beer is consumed in restaurants and bars, the largest part of the consumption value of beer is created in the hospitality sector (see figure 1.6).

**Figure 1.6 Volume and value of beer sales 2012 and 2013**



Source: calculations Regioplan and EY (2014).



## 2 BEER RELATED GOVERNMENT REVENUES

### 2.1 Total beer-related government revenues

**Figure 2.1 Beer-related government revenues (in million VND)**

	2012	2013	Δ 2012-2013
VAT hospitality	4,924,559	5,508,091	12%
VAT retail	2,457,040	2,748,185	12%
PIT (breweries)*	177,061	179,898	2%
PIT (other sectors)	2,547,451	2,231,301	8%
Social security contributions (breweries)	76,303	84,737	10%
Social security contributions (other sectors)	1,252,916	1,396,461	11%
Corporate Income Tax*	2,444,934	2,839,282	16%
Royalty tax*	11,305	9,438	-17%
License tax*	135	129	-5%
Import Export duties*	223,502	270,043	21%
Special Consumption Tax**	14,674,000	18,171,000	24%
<b>Total beer related government revenues</b>	<b>28,789,206</b>	<b>33,438,564</b>	<b>18%</b>

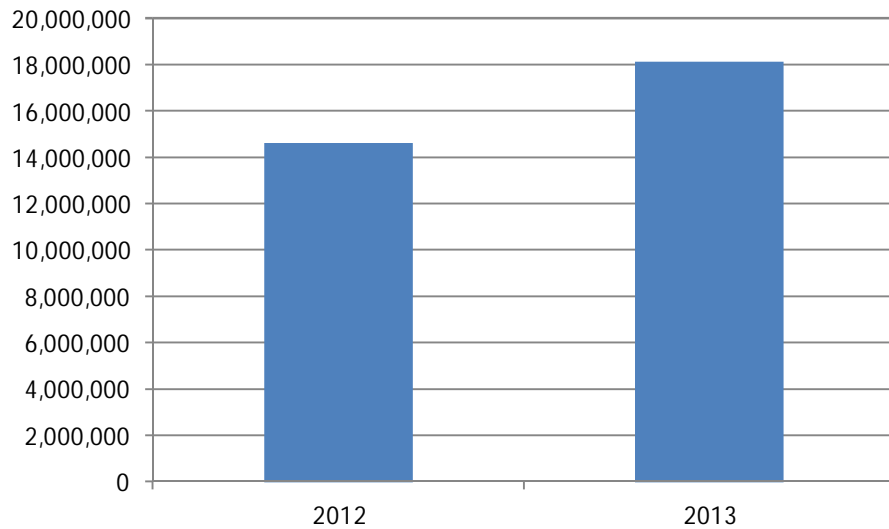
Source: calculations Regioplan (2014), except \* data from brewing companies' questionnaires and \*\* data GDT

### 2.2 Special Consumption Tax (SCT)

The Vietnamese government benefits from the production and sale of beer. First the government receives revenues based on the so-called Special Consumption Tax (SCT). SCT is a type of excise tax applying to the production or importation of specific goods and the provision of certain services.

The current SCT Law was promulgated by the National Assembly on 14 November 2008 and came into effect on 1 April 2009. For beer the SCT was applicable from 1 January 2010. According to the SCT Law, SCT is levied on the production and importation of eleven categories of products and six types of services considered to be luxurious or non-essential. For beer the current SCT rate is 50% of the selling price. In 2012 the SCT rate for beer was 45%.

**Figure 2.2 Special consumption tax on beer (in million VND)**



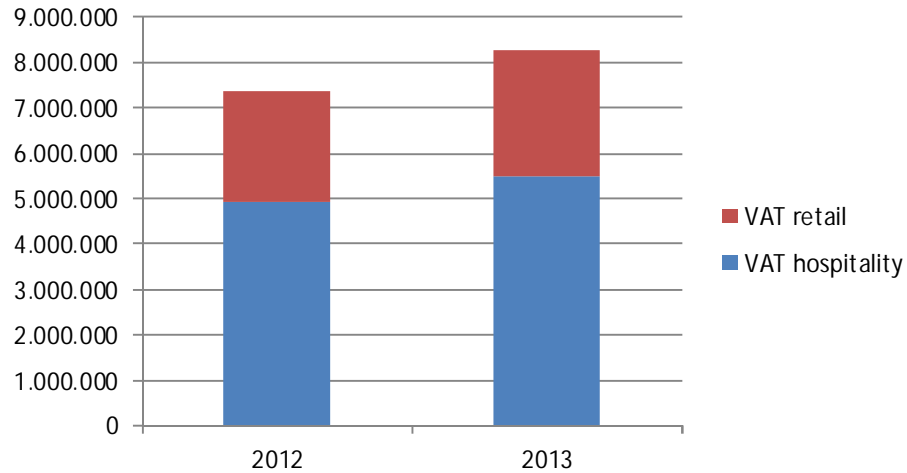
Source: General Department of Taxation of Vietnam

Figure 2.2 shows that in 2012 the Special Consumption Tax on beer led to a revenue of 14,674,000 million dong. Over 2013 these revenues increased by 24% to 18,171,000 million dong. This increase in revenues is partly caused by of the 2013 rise in the SCT rate (45 to 50%).

### **2.3 Value-Added Tax (VAT)**

Beer sales to consumers in the Vietnamese retail and hospitality sector are subject to Value-Added Tax (VAT). The general rate of VAT in Vietnam (10%) applies to beer. The basis of VAT calculation is the selling price plus the SCT. We estimate the total VAT revenues for 2012 due to the sale of beer reached almost 7.4 trillion dong, while in 2013 the VAT revenues increased to almost 8.3 trillion dong.

**Figure 2.3 VAT revenues on the sale of beer (in million VND)**



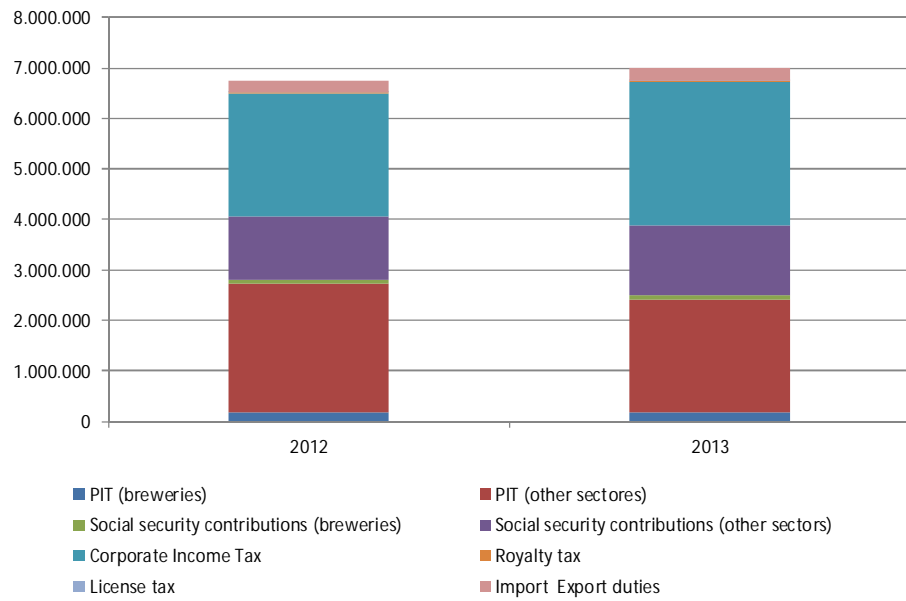
Source: calculations by Regioplan (2014)

## 2.4 Other beer-related government revenues

Besides the aforementioned SCT and VAT revenues, the production and sale of beer in Vietnam also yields the government other revenues. Brewing companies for example also pay Corporate Income Tax, Royalty Tax, Licence tax and Import/Export duties. On top of that are the Personal Income Tax (PIT) and Social Security Contributions paid by workers and their employers in the brewing sector, and in other sectors whose jobs can be attributed to beer (supply sectors, hospitality and retail sector).

The brewing companies Habeco and Sabeco are state-owned. These companies pay out dividends to the Vietnamese government. The two companies are the largest brewing companies in Vietnam with a huge combined market share, so it is believed that the dividends they pay to the government will constitute significant amounts. Because we do not have exact figures available, these beer-related government revenues are not taken into account in figure 2.4.

**Figure 2.4 Other beer-related government revenues (in million VND)**



Source: Brewing companies' questionnaires and calculations Regioplan (2014)

### 3 BEER-RELATED EMPLOYMENT

#### 3.1 Total beer-related employment

Figure 3.1 Number of persons employed due to beer production and sale in Vietnam

	Number of Jobs in 2012	Number of jobs in 2013	Δ 2012-2013
Direct employment by breweries*	13,823	15,351	11%
Indirect employment (in supplying sectors)	40,666	44,594	10%
Induced employment (retail and hospitality)	186.311	208.388	12%
<b>Total beer related employment</b>	<b>240.801</b>	<b>268.333</b>	<b>11%</b>

Source: calculations Regioplan, (2014) except \* data from brewing companies' questionnaires

#### 3.2 Direct employment

The five brewing companies that responded to our questionnaire together had 10,168 employees in 2012. Extrapolated to the whole Vietnamese brewing sector, 2012 direct employment is estimated at 13,823. In 2013 the number of direct jobs grew to 15,351 (+11%).

If we compare our calculation of the 2012 direct employment by the brewing companies with the GSO figure on this topic, our figure (13,823 persons) seems to be slightly conservative. The GSO figure for 2012 is 14,496 persons.

#### 3.3 Indirect employment

The Vietnamese brewing sector also generates considerable indirect employment in the economy. The production and sale of beer by breweries is only possible when various sectors provide the necessary goods and services, ranging from agricultural input to energy and transportation capacity, as well as a variety of industrial products and services. In 2012, the total local spending (73% of the total spending on intermediate goods and services) of the brewing sector on goods and services was estimated at 12.7 trillion VND, in 2013 this was 14.1 trillion VND. Because of the local spending of brewing companies on intermediate goods and services, in 2012 almost 41,000 jobs were created. For 2013 we estimate an indirect employment effect at around 45,000 jobs. Figure 3.2 shows the distribution of the indirect employment across the sectors supplying to the brewing companies. For further details on how we estimated the indirect employment generated in the supply sector, we refer to annex III.

**Figure 3.2 Indirect employment in Vietnamese supplying sectors**

	Number of Jobs in 2012	Number of jobs in 2013	Δ 2012-2013
Agriculture	17.452	18.492	6%
Raw material	1.909	2.163	13%
Utilities	406	427	5%
Packaging industry	12.073	13.125	9%
Auxiliary materials	1.151	1.229	7%
Transport and storage	1.567	1.622	3%
Equipment and other industrial activities	980	814	-17%
Media and marketing	2.115	2.994	42%
Other services	3.013	3.729	24%
<b>Indirect employment (in supplying sectors)</b>	<b>40.666</b>	<b>44.594</b>	<b>10%</b>

Source: calculations Regioplan (2014)

### 3.4 Induced employment

In addition to the direct and indirect impact of the Vietnamese brewing sector on employment, the number of jobs generated by beer sales in the Vietnamese hospitality (on-trade) and by groceries (off-trade) has an even greater effect.

#### On-trade sector

In 2012, around 173,400 of the total number of jobs in the on-trade sector can be attributed solely to the sale of beer<sup>1</sup>. The other jobs in the on-trade sector can be attributed to the sale of other products such as food, wine, spirits, coffee and tea. In 2013 the number of beer-related on-trade jobs grew to 193,947. This is due to the increased beer consumption.

<sup>1</sup> For jobs, working years can also be used. The number of jobs is calculated by dividing the total beer turnover in the Vietnamese hospitality sector (distributed over more than 900,000 outlets) by the GSO figure on the average turnover per capita in this sector. Besides the beer related turnover the more than 900,000 hospitality outlets also generate turnover from their sales of other products such as food, wine, spirits, coffee and tea.

### Retail sector

Also the Vietnamese retail sector benefits from the sale of beer. In 2012 12,911 jobs in the retail sector can be attributed entirely to the sale of beer<sup>2</sup>. In 2013 beer accounted for 14,441 jobs in the retail sector.

**Figure 3.2 Induced employment in Vietnamese hospitality and retail sector**

	Number of Jobs in 2012	Number of jobs in 2013	Δ 2012-2013
Hospitality	173,400	193,947	12%
Retail	12,911	14,441	12%
<b><i>Induced employment (retail and hospitality)</i></b>	<b>186,311</b>	<b>208,388</b>	<b>12%</b>

Source: calculations Regioplan (2014)

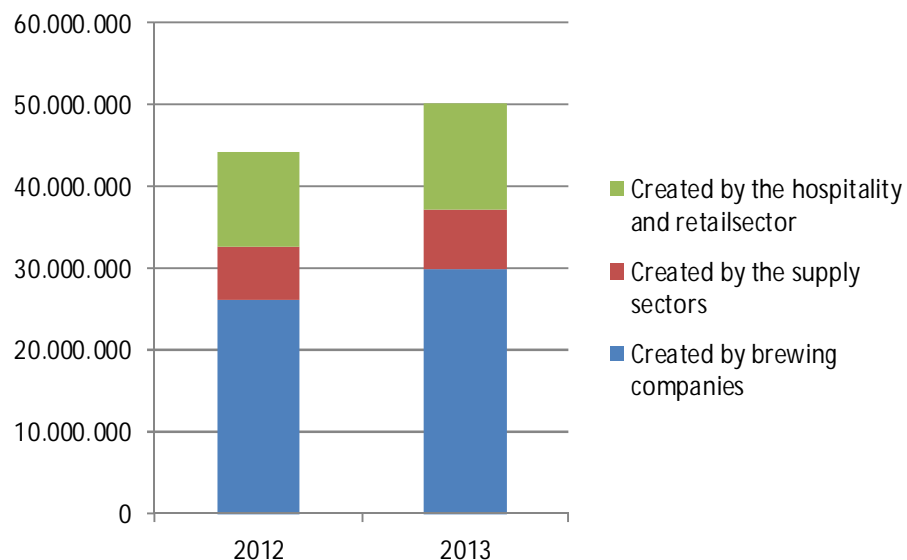
<sup>2</sup> See the previous footnote. The explanation also accounts for the beer-related retail sales.



## 4 BEER-RELATED VALUE-ADDED

In 2012, the value-added generated by the production and consumption of beer in Vietnam totalled more than 44 trillion dong. In the production and consumption of beer, brewing companies create value-added for themselves, their suppliers and for the retail and hospitality sectors. Added value pays tax liabilities, employees' wages, and rewards lenders and entrepreneurs for their investments. For the Vietnamese government, it is the source of VAT revenue. The total beer-related value-added in 2013 was over 50 trillion Vietnamese dong, an increase of 13.5% compared to 2012.

**Figure 4.1 2012 and 2013 value-added related to the production and consumption of beer in Vietnam (in million VND)**



Source: calculations Regioplan (2014)

The Vietnamese brewing sector's share in overall value-added arising from the production and sale of beer is 58%, which is much higher than the brewing sector's share in total employment arising from beer (3%). A significant explanation for this is the higher productivity of employees in the brewing sector compared with the productivity of those in other sectors.

An important note is that the value-added is needed to pay for most of the tax liabilities. For the brewing companies these are relatively large; see Chapter 2.



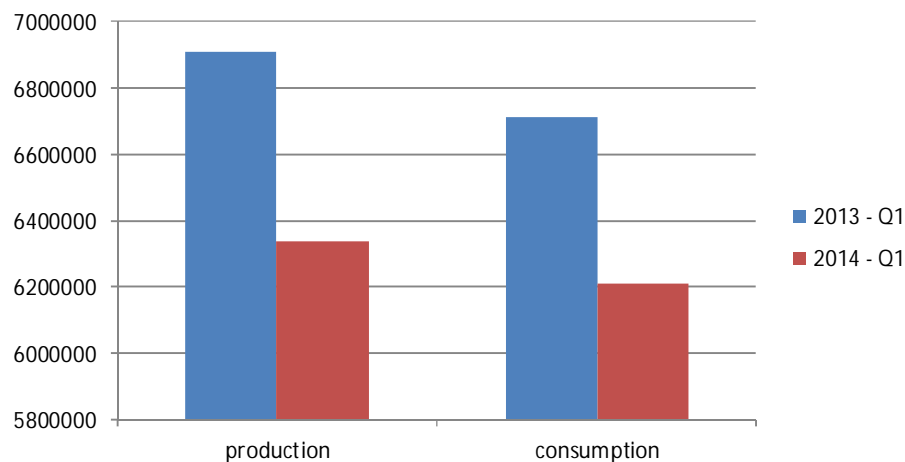
## 5 ECONOMIC IMPACT UNDER PRESSURE

### 5.1 Decline in beer production and consumption

As mentioned earlier in our report, over the past decade Vietnamese beer production and consumption have increased enormously. However, it seems the sector is now facing a slowdown. When comparing the consumption and production data the brewing companies delivered individually for the first quarter of 2013 and the first quarter of 2014, we can note a strong decline in both beer consumption (-7.5%) and beer production (-8.2%).

For 2014 as well, VBA identifies a trend of consumers drinking beer at home more often instead of in the hospitality sector. The so-called off-trade percentage grew from 39.6% to 41.5% in the first quarter of 2014.

**Figure 5.1 2014 slowdown in the production and consumption of beer in Vietnam (in hectolitres)**



Source: brewing companies' questionnaires

We believe the decline in beer production and consumption can be attributed mainly to two issues:

- Firstly, the general purchasing power of mass consumers has declined because of the overall difficulties experienced by the Vietnamese economy. According to GSO statistics, the average CPI of Q1 2014 increased by 4.83% compared to the same period in 2013. This is the lowest growth rate over the past 10 years.
- Secondly, an explanation can be the increase in excise tax on beer, effective from Jan. 2013. Accordingly, the increase in excise tax has been reflected in the consumer price and it faces resistance by consumers.

In essence, it is often observed that decreasing beer production and consumption coexists with a general economic downwards trend. However, the Vietnamese GDP in the first quarter of 2014 increased and has been at its highest rate over the past three years (i.e. 4.75 for Q1 2012; 4.76 for Q1 2013 and 4.96 for Q1 2014). The aforementioned positive macroeconomic figures signal that the economy has improved. However, we still note a decline in beer production and consumption. This could be an indication that the second explanation for the production and consumption decline (i.e. an increase in excise tax) is the key determinant. Although excise tax on beer increased from 45% to 50% in 2013 and the tax rate remained unchanged during the 2013-2014 period, excise tax changes could still be a determinant. It is not uncommon for there to be a delay in any impact caused by an excise increase.

## 5.2 Impact under pressure

The decline in beer production and consumption consequently affects the impact of the brewing sector on the Vietnamese economy. To quantify these effects, we performed extra calculations with our economic impact model using only the figures the brewing companies delivered for the first quarter of 2013 and the first quarter of 2014. Figure 5.2 summarises the impact effects.

**Figure 5.2 Economic impact effects of the 2014 slowdown in the production and consumption of beer in Vietnam**

	<b>Δ 2013 Q1-2014 Q1</b>
Direct employment by breweries	10%
Indirect employment (in supplying sectors)	10%
Induced employment (retail and hospitality)	-10%
<b>Total beer related employment</b>	<b>-5%</b>
<b>Total beer related value added</b>	<b>-1%</b>
VAT revenues hospitality	-10%
VAT revenues retail	-3%
Special Consumption Tax*	31%
<b>Total beer related government revenues</b>	<b>-6%</b>

Source: calculations by Regioplan (2014) based on questionnaire data from brewing companies, except \* data GDT

Comparing the first quarter of 2014 against the first quarter of 2013, it can be stated that the overall effect on employment and government revenues is negative. One explanation for this is, of course, the overall decline in production and consumption, but the move of consumers to home drinking also plays a role. From a macroeconomic perspective, there is more benefit to be gained from beer being consumed in bars, pubs or restaurants, than of beer being bought in a grocery outlet and consumed at home. Beer sales

through the hospitality sector are more labour-intensive than retail sales, and consumers are willing to pay more for their beer in a bar, pub or restaurant than in a grocery shop. In other words, beer sales in the on-trade sector create more employment.

The sale of beer in the hospitality sector is not only important in terms of creating employment, but also for government revenue. With the average price of beer being somewhat higher in the on-trade sector than in the off-trade one, beer consumed in the hospitality sector generates more VAT revenue per litre sold.

The increase in direct employment is a result of the fact that it takes some time for the companies to adapt to the decreased consumption. As a result, beer production in Vietnam exceeds the beer needed for local sales. The higher indirect employment is a result of brewing companies buying more intermediate goods and services within Vietnam.

### 5.3 A prosperous future?

Given the rough time that lies ahead for the Vietnamese brewing sector, it is of pivotal importance that the sector anticipates and aims to turn the downward trend around.

In theory there are many opportunities. Vietnam represents a prime market for beer producers. Unlike some of the other countries in the region, the Vietnamese have a tradition of drinking beer and express a strong loyalty to their local brands. In addition, 70% of the population are less than 40 years old and one million people turn 18 every year. In theory these are important ingredients for a positive recovery in the Vietnamese beer market in the years ahead.

However the hoped-for recovery may also be threatened by imminent developments. We will mention the two most important.

#### **Cheaper imports, less local beer production**

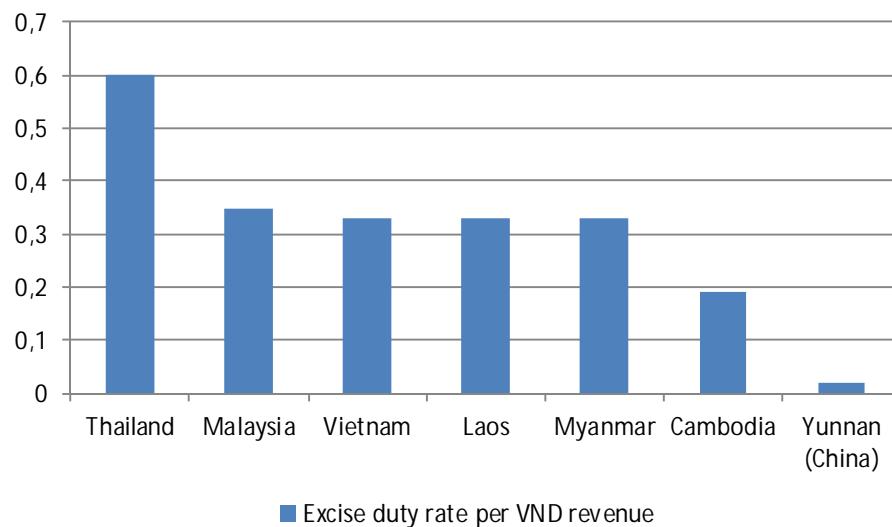
It is expected that in the wake of the free trade agreements Vietnam is going to sign in the years ahead, many tariffs will be lifted for imported beers. Imported beers are currently subject to a 45 per cent import tariff, a 50 per cent excise tax and a 10 per cent value-added tax. All of these duties will be exempt once the Trans-Pacific Partnership (TPP) agreement comes into effect. With this, imported beers will become cheaper on the Vietnamese market. An increase in beer imports is awaited, alongside a decline in local production. Because imported beers are produced outside Vietnam, an increase in imported beer at the cost of local beers will have a negative impact on Vietnamese suppliers of intermediate goods and services to the brewing sector.

### A further increase in the SCT rate for beer

It is expected that in 2015 the Vietnamese government will increase the rate of the Special Consumption Tax for beer further, to 65%. In the last increase, effective from January 2013, the rate was raised from 45% to 50%. As in 2013, any new increase in excise tax will be reflected in the consumer price and it will face new resistance from consumers – not (only) by drinking less, but more importantly it will not stop the trend where consumers drink more often at home. As previously mentioned, domestic drinking is less beneficial for the economy.

Finally, figure 5.3 shows how countries differ in their excise duty rates per VND revenue of breweries. Even with the current SCT rate of 50%, in the neighbouring countries of Laos and Myanmar, beer is taxed as highly as in Vietnam. In Cambodia beer is taxed to a much lower extent.

**Figure 5.3 Differences in excise duty rate per VND revenue**



Source: EY

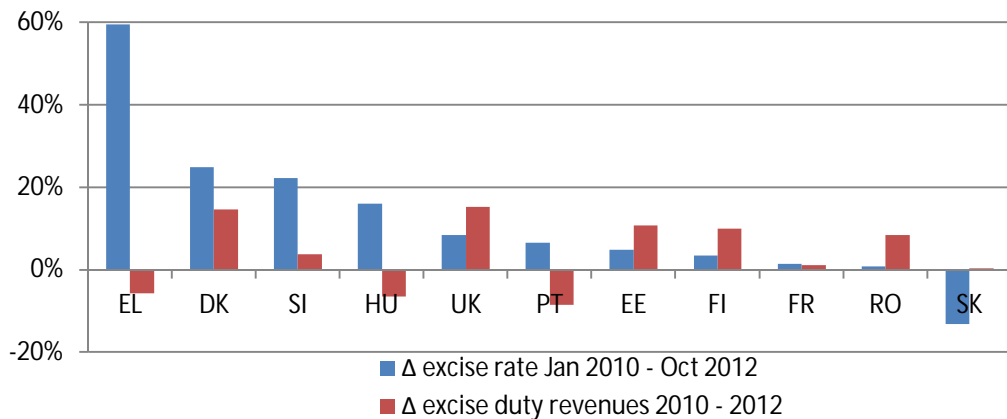
## 5.4 Raising the SCT rate, optimum tax strategy?

Because we have conducted several studies on the economic impact of the European beer market, we have a large data set on this market and were able to perform an analysis uncovering the relationship between an increase in excise duty rates and the extent of beer-related government revenues over several years. The outcomes of this analysis are presented below because of their relevance in relation to the expected 2015 increase in the SCT rate. Comparable data sets are not available for the South Asian beer market, so we were unable to produce a more tailor-made analysis.

Our analysis of the European data shows that an increase in excise duty and VAT rates did not optimise government revenue from beer. Although government revenues may have risen between 2010 and 2012, our analysis indicates that in most Member States of the European Union, excise duty revenues grew less than the percentage increase in the excise duty rate. Revenues even dropped in some countries. This can be explained by the fact that excise duty and VAT rates are passed on to the consumer, in the price of beer leading to higher beer prices and ultimately to lower sales. This undoubtedly also explains why the governments in Denmark and the United Kingdom decided to lower excise duties.

Figure 5.4 shows the relationship between excise duty rate changes and the development of excise duty revenues per EU Member State. Statistics for Malta have been omitted. The Maltese government tried to raise excise revenues by increasing the excise duty rate on beer by 100 per cent. This turned out to be unsuccessful. Because beer sales decreased, excise duty revenues did not increase at all in proportion to the duty increase.

**Figure 5.4 Relationship between excise duty rate changes and the development in excise duty revenues per EU Member State between 2010 and 2012**



Source: Regioplan/EY calculations (2013).

We also analysed the relationship between changes in VAT rates and the development in VAT revenues. However the results of this analysis were diffuse. This is due to VAT revenues being affected by far more than just the rate of VAT. For example, changes in consumer prices and shifts in consumer preferences also exercise a marked effect on VAT revenues. Since VAT is also levied on excise duties, changes in excise duty rates also influence VAT revenues. It is therefore not possible to isolate the direct effect of VAT changes on government revenue, obtained from beer-related VAT revenues.

A combination of factors explains why government revenues were not as high as expected. Firstly, higher excise duty and VAT rates are more likely to be passed on to the customer through higher prices in the hospitality sector than

through higher prices in the retail sector.<sup>1</sup> As demand for beer is also more price-elastic in the hospitality sector, an increase in the tax burden will lead to a greater fall in on-trade consumption compared to off-trade consumption. Ultimately, higher beer prices result in a fall in demand for beer.

Furthermore, a drop in beer sales in the hospitality sector inevitably results in less employment. In terms of government revenue, this means lower levels of income tax and social security contributions and higher unemployment compensations. All in all, government tax revenues are higher when beer is consumed on-trade; higher prices and lower employment in the hospitality sector will cause tax revenue to fall.

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<sup>1</sup> An explanation for this is that off-trade excise duty rises can be absorbed more easily, because there are many more different product streams than in the hospitality sector.



## **ANNEXES**



## ANNEX I

### METHODOLOGY & SCOPE

This study focuses on the economic impact of the brewing sector in Vietnam. Our calculations were made for the years **2012, 2013** and the **first quarter of 2014**.

Some of the reported outcomes are estimates based on a **model** constructed by Regioplan Policy Research. For this reason these outcomes are not a direct representation and are dependent on decisions made by Regioplan. These decisions are elucidated in Annex III.

To represent the economic impact of the brewing sector, three different effects can be distinguished:

- direct impact;
- indirect impact; and
- induced impact

The **direct impact** is defined as the effect generated directly by the Vietnamese brewing sector.

The **indirect impact** represents the impact of breweries on their suppliers. To be able to produce beer, Vietnamese breweries need to purchase a highly diverse range of goods and services, such as cereals, hops and water, and many types of packaging materials such as glass and aluminium. They also hire engineers, marketers, communications agencies and many more services. In this study, seven supply sectors are defined as: agriculture (raw materials); utilities; packaging and bottling industry; transport and storage; media, marketing and communication; equipment, manufacturing and other industrial activities; and other services.

The sale of beer by retail outlets and hospitality establishments in Vietnam is the most important source of economic benefits. The economic contribution of both sectors arising from the sale of beer is labelled in this study as the brewing sector's **induced impact**.

The above-mentioned effects have been measured in three areas (**employment, value-added and government revenues**). It is important to stress that these are not additional effects, but rather three ways in which the same effects can be perceived. Together, these effects and areas result in nine dimensions:

### Dimensions for measuring the economic impact

	<b>Direct impact</b>	<b>Indirect impact</b>	<b>Induced impact</b>
<b>Employment</b>	Total number of people employed by brewing companies active in Vietnam	Total number of jobs in the supply chain resulting from the production of beer in Vietnam	Total number of jobs in the hospitality and retail sector resulting from the sale of beer to Vietnamese consumers
<b>Value-added</b>	Value-added created by the brewing companies active in Vietnam	Value-added in supply chain resulting from the production of beer in Vietnam	Value-added in the hospitality and wholesale/retail sector resulting from the sale of beer to Vietnamese consumers
<b>Government revenues</b>	Excise duty revenues resulting from the sale of beer as well as income tax and social contributions from by the brewing companies active in Vietnam and their employees	Income tax and social contributions from employers and employees in the supply chain	VAT revenues, income tax and social contributions from employers and employees in the hospitality and wholesale/retail sector resulting from the sale of beer to Vietnamese consumers

### Calculations

Calculations have been based on original data provided by five of the largest brewing companies in Vietnam (representing 99% of the total beer production) in response to questionnaires issued by Regioplan. However, where data points are quoted, rounded figures have sometimes been used for ease of presentation. Consequently, there is not always precise correlation between total sums and corresponding data sources and the data as quoted and derived percentages. Nevertheless, this is not a material issue.

## ANNEX II

### DATA SOURCES

The results presented in this report are derived from multiple data sources. In hierarchical order of importance these sources are:

- data obtained directly from the Vietnam Beer-Alcohol-Beverage Association ('VBA');
- data collected directly from the five largest brewing companies in Vietnam (summed up to market share of 99%) through a detailed questionnaire;
- data from General Statistics Office of Vietnam (GSO);
- data from the General Department of Taxation of Vietnam;
- data from additional public and confidential sources, such as Canadean, Nielsen and The Brewers of Europe.

#### VBA

VBA delivered us some key data on the Vietnamese beer market such as on the distribution channels used for beer on the Vietnamese beer market.

#### Brewing companies

The brewers received a detailed questionnaire on the companies' key (financial) data, expenditures and purchases. All five large brewing companies (representing 99% of the Vietnamese beer production) responded to our survey.

#### GSO

GSO delivered us more general economic data such as macroeconomic indicators (turnovers and value added per capita for different sectors) and statistics on beer production, consumption, exports and imports.

#### General Department of Taxation

The General Department of Taxation delivered us the official figures on the collected Special Consumption Tax related to beer.

#### Additional public and/or confidential sources

From public and confidential sources, we retrieved data on topics as beer consumption per capita (Brewers of Europe and Canadean) and the average beer price in Vietnamese retail and hospitality outlets.



## ANNEX III

### MODELING DECISIONS

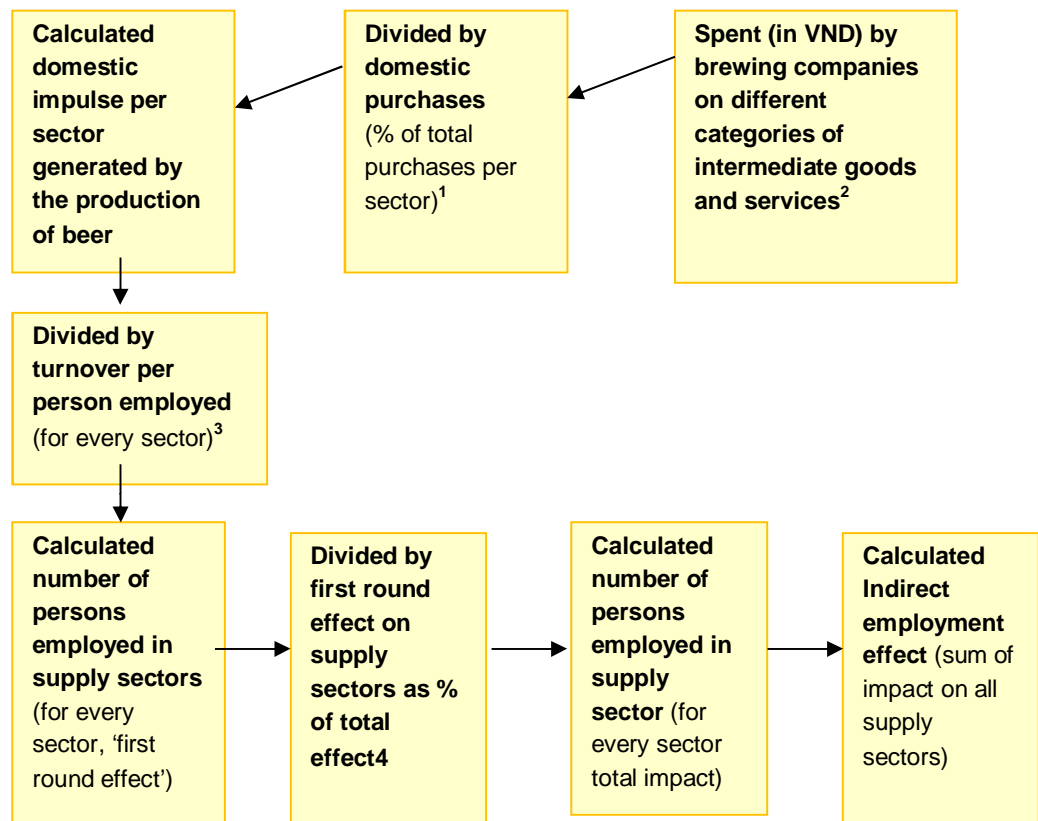
Some of the reported outcomes concerning the economic impact of the brewing sector are based on estimates, derived from a **model** constructed by Regioplan Policy Research. We illustrate here how the variables and estimates were calculated, focusing on:

- indirect and induced employment effects;
- value-added due to the production and sale of beer; and
- government revenues due to the production and sale of beer

#### **Measuring the indirect and induced employment effects**

The **indirect employment** effect is the employment generated in the supply sectors due to the production and sale of beer. See figure annex III.1 (underneath) for an explanation on how we calculated the indirect employment effect of the brewing sector.

Figure annex III.1 Model for measuring indirect employment effect



<sup>1</sup> Source: Questionnaires among brewing companies

<sup>2</sup> Source: Questionnaires among brewing companies

<sup>3</sup> Source: GSO figures for 2012

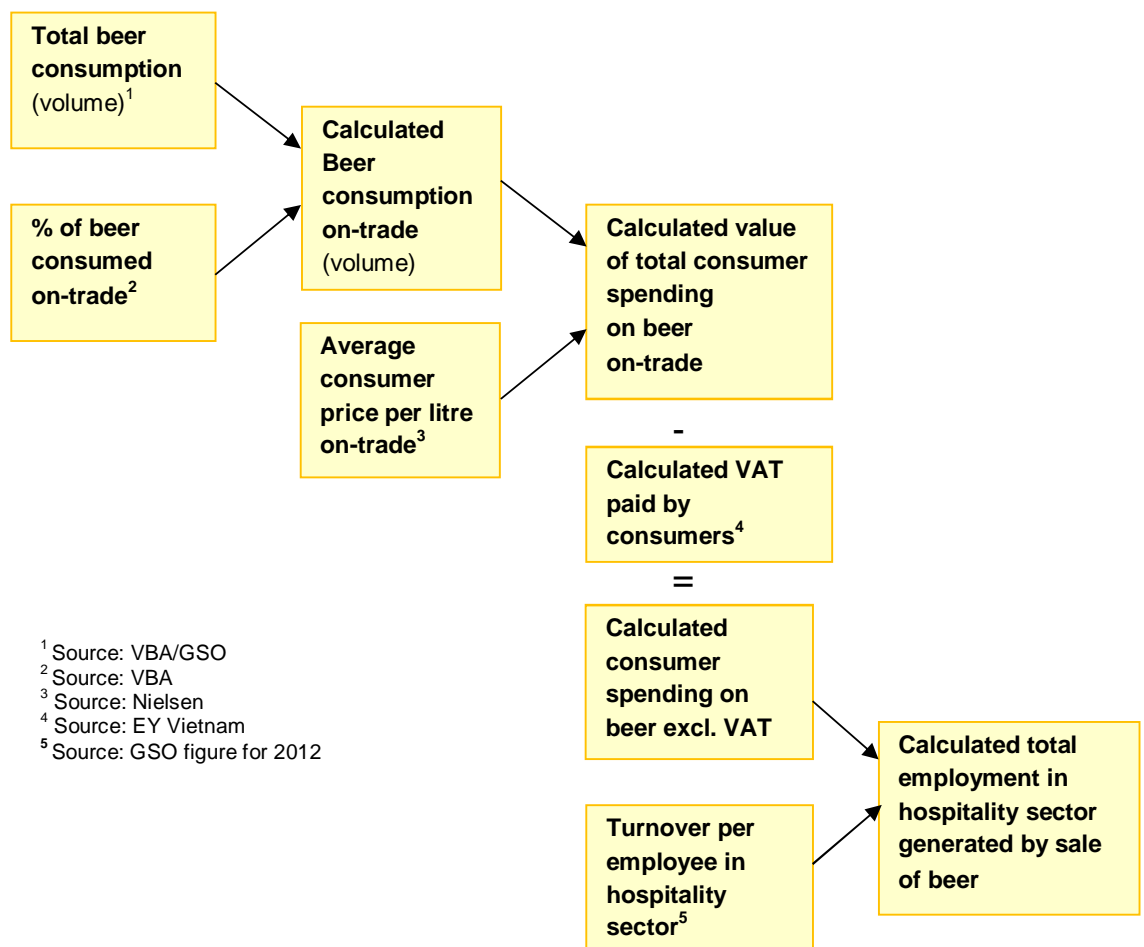
<sup>4</sup> Source: Based on macroeconomic input output tables, we estimate that the first round indirect employment effect is approximately 65 percent of the total indirect employment effect

Data on turnover and value-added per employee per sector were obtained from the General Statics office of Vietnam. As in previous studies, macro economic data were also in Vietnam not available on exact all specific sectors identified in our impact model. As a result of this, for sectors not identified by GSO, we had make a modelling decisions on which sector we will use the macroeconomic data instead.

Sector identified in our model	Macroeconomic figures used belonging to GSO sector
Agriculture	Agriculture, forestry and fishing
Other raw material	Equipment and other activities
Utilities	Electricity, Water, Gas
Packaging	Packaging
Auxiliary materials	Other services
Transport and storage	Transportation and Storage activities
Equipment and other industrial activities	Equipment and other activities
Media and marketing	Broadcast and television activities
Services and other	Other services
Hospitality	Restaurant, hotel and tourism activities
Retail	Retail

The model for calculating **induced employment**, employment due to the sale of beer in the retail and hospitality sectors is as follows:

**Figure annex III.2 Model for measuring induced employment effect**



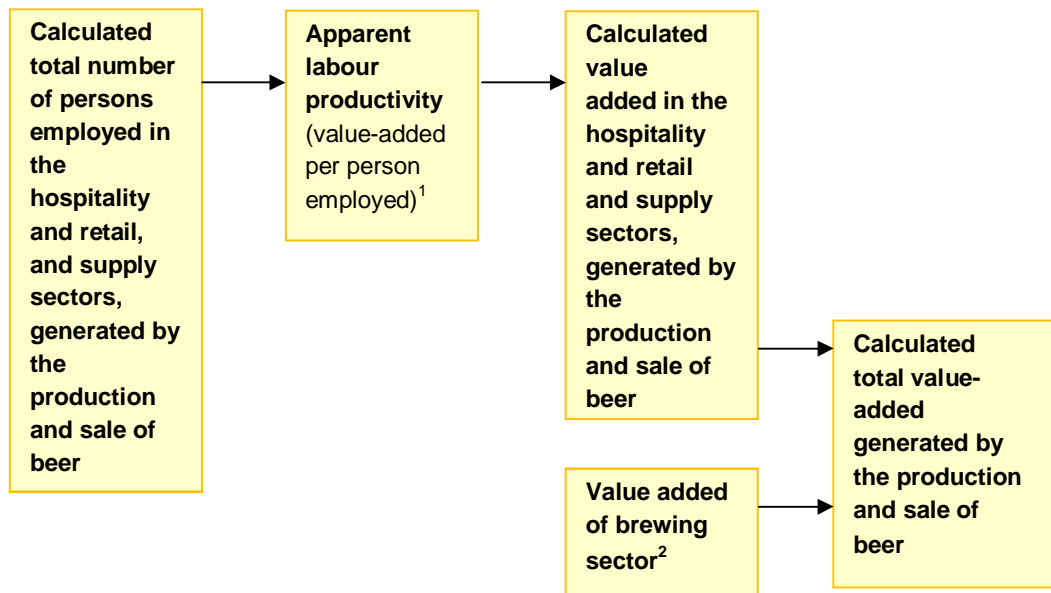
Estimates for the employment impact in the retail sector were calculated in a similar way to the hospitality sector.

### Measuring the total value added generated by the production and sale of beer

The **direct value-added** in the brewing sector was obtained through the questionnaires completed by brewing companies.

The value-added in other sectors resulting from the production and sale of beer (**indirect and induced value-added**) were estimated using the employment effects. It was estimated by multiplying the employment effect by the apparent labour productivity (gross value-added per person employed) in the sector.

**Figure annex III.3 Model for measuring the direct, indirect and induced value-added**



<sup>1</sup> Source: GSO figures for 2012

<sup>2</sup> Source: Questionnaires among brewing companies

## Measuring the total government revenues due to the production and sale of beer

When it comes to government revenues generated by the brewing industry, our study sheds light on the following three segments:

- a) Special consumption Tax
- b) Corporate Income Tax
- c) Royalty Tax
- d) License Tax
- e) Import Export duties
- f) Personal Income Tax (collected by brewing companies)
- g) VAT revenues; and
- h) Personal Income Tax (collected by other sectors)
- i) Social contributions payments (by all sectors)

Data on **special consumption tax** were acquired from General Department of Taxation in Vietnam.

On the **tax segments b) to f)** the data were filled out by the five largest brewing companies in their questionnaire to this study.

**VAT** revenues resulting from the sale of beer were calculated by multiplying the total on-trade and off-trade consumer spending on beer with the VAT tariff in Vietnam (10%).

**Personnel Income Tax revenues (collected in other sectors)** were estimated by multiplying personnel costs with a PIT rate of 17 percent<sup>1</sup>. The personnel costs in the brewing sector were obtained from the questionnaires filled out by the brewing companies. Personnel costs in the supply, hospitality and wholesale and retail sectors were calculated by multiplying indirect and induced employment by the mean personnel costs per person employed (figure by GSO).

### **Social contributions payments**

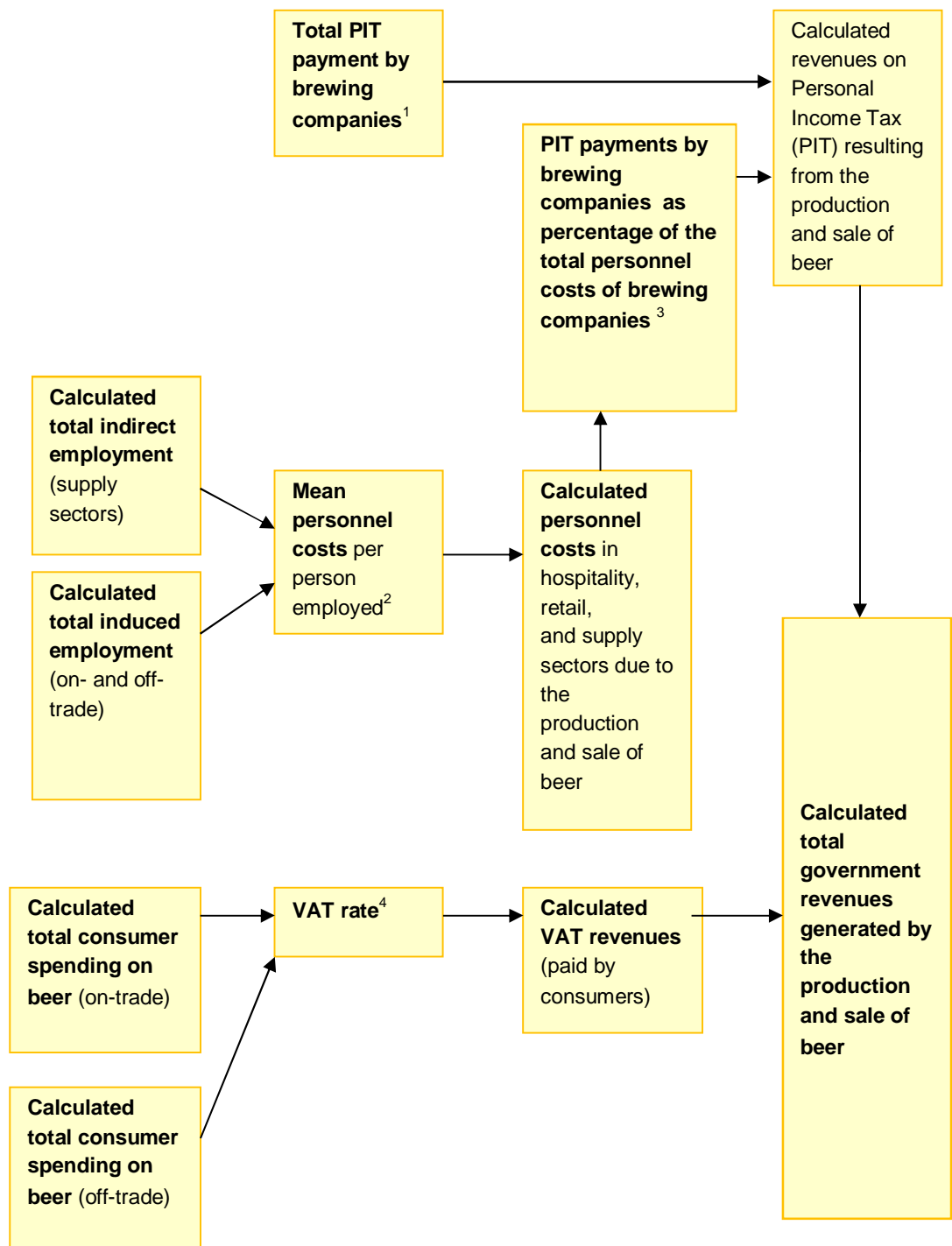
We estimated the social contributions payments off all sectors (including the brewing sector) by multiplying the number of jobs by the maximum contributions by employers and employees (5.520.000 VND). The reason for this is that we calculate that for all jobs the average income is above 23,000,000 VND. By a salary above VND 23,000,000 the contribution is under current regulation calculated on this cap level at its maximum. Based on this we calculated that the maximum sum of social contributions in the following way payments:  $24\% (17\%^2 + 7\%^3) * 23.000.000$ .

<sup>1</sup> This is the ration (percentage) between the total sum of Personnel Income tax paid in 2012 by brewing companies to the total sum of their personnel costs in 2012.

<sup>2</sup> Percentage of social contributions payments made by employers.

<sup>3</sup> Percentage of social contributions payments made by employees.

Figure annex III.4 Model for measuring PIT and VAT revenues



<sup>1</sup> Source: Questionnaires among brewing companies

<sup>2</sup> Source: GSO

<sup>3</sup> Source: EY Vietnam and for PIT calculation by Regioplan on data brewing companies on PIT payments and their personnel costs

<sup>4</sup> Source: EY Vietnam

## **GLOSSARY**

### **Alcohol by volume**

Indication of alcoholic strength expressed as percentage in the final product

### **Brewing sector**

All the brewing companies located within a certain geographical area.

### **Brewery**

A plant or an establishment for beer production.

### **Brewing company**

A company which produces and / or sells beer, operating one or more breweries.

### **Corporate tax**

Corporate tax or company tax is the tax imposed on the income of companies.

### **Excise duty**

Indirect taxes on the consumption or the use of certain products. They are mainly specific taxes, in other words, expressed as a monetary amount per quantity of the product.<sup>4</sup> The most commonly applied excise duties are those on alcoholic beverages, manufactured tobacco products and energy products.

### **GDP**

Gross domestic product (GDP) is a basic measure of a country's overall economic health. As an aggregate measure of production, GDP is equal to the sum of the gross value added of all residential units (i.e. industries) engaged in production, plus any taxes, and minus any subsidies, on products not included in the value of their outputs<sup>5</sup>.

### **GDP in PPS**

Gross domestic product in purchasing power standards (GDP in PPS) is the gross domestic product (GDP) converted into purchasing power standards (PPS), an artificial currency unit. The GDP in PPS represents pure volume, after subtracting for price-level differences between countries.

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<sup>4</sup> General Overview, Excise duties on alcohol, tobacco and energy, Taxation and Customs Union, European Commission.

<sup>5</sup> Glossary: Gross domestic product (GDP), Eurostat, European Commission.

**Government revenues**

The income a government receives. For the purpose of this study, it includes excise duty revenues on beer, VAT on beer sold in the on-trade and off-trade sector and all income-related revenues from jobs in the brewing sector and jobs in other sectors generated by beer production and sales. These income-related revenues include personal income tax, social security contributions paid by employees and employers and payroll taxes.

**Hectolitre (hl)**

A hectolitre is a metric unit of volume or capacity where one hectolitre equals 100 litres.

**Indirect employment**

Impact of the brewing sector on supply sectors (e.g. farmers, packaging industry) in terms of employment.

**Induced employment**

Employment at companies that distribute or sell beer, mainly in the wholesale, retail and hospitality sectors. For the purpose of this study, the induced employment is confined to the retail and hospitality sectors.

**Inflation rate**

In this report, the inflation rate refers to the rate of inflation based on the consumer price index (CPI), measuring changes in the average price level of a market-based "basket" of goods and services bought by consumers.

**Off-trade sector**

Beer sales through wholesale and retail (shops, supermarkets and other outlets).

**On-trade sector**

Beer sales through (licensed) pubs, clubs, bars, restaurants, etc., also called the hospitality sector.

**Personal income tax (PIT)**

A tax levied on the personal income of citizens..

**Personnel cost**

Total remuneration, in cash or in kind, payable by an employer to an employee (regular and temporary employees, as well as home-workers) in return for work done by the latter during the reference period. Personnel costs are made up of wages, salaries and employers' social security costs. They include taxes and employees' social security contributions retained by the employer, as well as the employer's compulsory and voluntary social contributions.<sup>6</sup>

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<sup>6</sup> Glossary: Personnel Cost -SBS, Eurostat, European Commission.

**Production value**

The actual production of a company, calculated as follows: turnover, plus or minus the changes in stocks of finished products, work in progress and goods and services purchased for resale, minus the purchases of goods and services for resale, plus capitalized production; plus other operating income (excluding subsidies). Income and expenditure classified as financial or extraordinary in company accounts are excluded from production value.

**Purchases**

The value of all externally sourced goods and services purchased during the accounting period for resale or consumption in the production process, excluding capital goods.

**Social security contribution (SSC)**

Financial contributions paid by employees and their employers giving access to the social security system and entitlement to certain benefits in situations of unemployment, sickness, disability or old age.

**Value-added**

Value-added is the difference between the market value and the purchasing value of the goods and services needed for production. It describes the enhancement of production on the value of a good. In the production and consumption of beer, breweries create value-added for themselves, their suppliers and for the retail and hospitality sector. Added value pays employees' wages, and rewards lenders and entrepreneurs for their investments.

**VAT**

Value-added tax (VAT) is a general, broadly based consumption tax assessed on the value-added to goods and services. VAT is charged as a percentage of price, meaning that the actual tax burden is visible at each stage in the production and distribution chain<sup>7</sup>.

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<sup>7</sup> Glossary: Value added tax (VAT), Eurostat, European Commission.





## ANNEX V

### ACKNOWLEDGEMENTS

This is the first study on the economic impact of the brewing sector in Vietnam commissioned by the Vietnam Beer-Alcohol-Beverage Association. A study of this scale could only be possible with the assistance of the staff of VBA and the five largest brewing companies in Vietnam. They all were involved by providing us the needed information. We would like to thank VBA and the brewing companies for their commitment to this study.

The study was conducted by a dedicated team of economic researchers from Regioplan Policy Research (see title page of this report). They have done a great job. The involvement of EY team members was also of great value. They collected for us the macroeconomic figures and checked our calculations. The EY team were also responsible for all local communication.

Amsterdam, July 2014

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## ANNEX VII

### CONTACT INFORMATION

#### **About Regioplan Policy Research**

Regioplan Policy Research has been active in the Netherlands since 1983 as a policy research agency specialising in social and economic research. Our expertise covers a broad range of subjects, and we offer a number of services, such as research studies, monitoring and evaluation, policy advice, product development and secondment for most knowledge areas within policy research. In addition to assignments for Dutch organizations, Regioplan Policy Research is also very active in the international market. One of Regioplan's large international clients is the European Commission and its various Directorates General. Regioplan was a subsidiary of EY until 1 July 2008.

For more information and for new requests for proposals please consult our English pages on [www.regioplan.nl](http://www.regioplan.nl)

#### **About EY**

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#### **About Vietnam Beer-Alcohol-Beverage Association**

VBA (Vietnam Beer-Alcohol-Beverage Association) is a voluntary organization of non-governmental enterprises. It has become the most important center of knowledge and professional activities regarding the industries involving beer, wine and other beverages. As such, it has a major voice when it comes to representing this economic area in public debates. Moreover, its goal is, among many other things, to create collaboration between different societal actors when it comes to the services, legal rights and health of employers and employees within the beer, alcohol and beverage industry.

For more information see:

<http://www.vba.com.vn/>



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