

“Alcohol, No Ordinary Commodity: Tax Policy Implications for Thailand”

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Abstract

Alcohol is no ordinary commodity. Millions of people enjoy it safely if drinking in moderation. Alcoholic beverages are big business that creates substantial jobs, pay huge tax and contribute to our economy. But if consume excessively and regularly, alcohol is **addictive substance** that can cause brain disease beyond a reasonable doubt. Despite a chronic, potentially relapsing disorder and dependence bio-behavior, alcohol is widely distributed and consumed until Thailand has become the world’s fifth largest alcohol consumption per capita behind Russia and UK.

Brewery, distilled and winery beverage industry or alike is in **the business of delivering alcohol**. Because alcohol is a practically drug-like chemical goods and its industry is natural oligopolistic, simple business concept and free market approach are not applicable for national policy making consideration. When this market fails to correct **negative externality** generating from alcohol, the government is justified to intervene, regulate and tax to redistribute for welfare enhancement.

We examine how tax structure based on obsolete assumptions has de-merit incentive for Thai people to drink *cheap beverage with high alcohol content* that is addictive and chronically harmful to public health. **Potential tax leakages with estimated over THB 30bn per annum were also discussed**. To improve social welfare, we recommend on how to narrow fiscal gap - with little or no tax rate hike. To amend specific or alcoholic tax rate ceiling is the first best solution, while synthetic volume tax rate is presented as second best with only ministerial directive. A more equitable and more simplified tax regime is needed. Public health concern, social cost, fiscal budget rational and political economic perspectives are among fine issues that need to be addressed comprehensively. Other administrative tax based measures using information technology should be utilized for *differential* measures - to effectively increase social welfare as well.

^π The contents of this paper in part or in whole are entirely those of the authors and do not represent the views and opinions of Sasin of Chulalongkorn University, Ministry of Finance and any organization associated with the authors. Comments are welcome. All correspondence is directed to Pongsak Hoontrakul, Senior Research Fellow, Sasin-GIBA, Chulalongkorn University, Sasa Patasala Building, 8th floor, Soi Chulalongkorn 12 (2), Phyathai Road, Bangkok 10330, Thailand. Private Tel. (662) 883 5548; Fax (662) 883 5547; Email: Pongsak@Hoontrakul.com URL: www.Pongsak.Hoontrakul.com

“Alcohol, No Ordinary Commodity – Tax Policy Implications for Thailand”

I Introduction:

Alcohol is no ordinary commodity. It is one of the oldest beverages and reputed to have some health benefits if drinking in moderation. Many people enjoy it safely. But if consume excessively and regularly, it is addictive substance that can cause brain disease beyond a reasonable doubt. Because of its chemical toxicity, intoxicating effect and dependence potential, alcohol is considered an almost drug-like good. Becker & Murphy (1988) claims addicts can be rational and respond to only permanent changes in prices of addictive goods like alcohol. Consequently, changes in tax regime do *distort* addictive behavior of public. On other hand, alcohol industry is a very big business - creating jobs in services and retail industry, earning income for private sector and generating huge and reliable tax revenue for government. National policy on alcohol is needed like any other major industries. Non-sensible tax raise on obsolete tax structure may impair the economic growth and human capital. The fundamental issue is how to balance the economic gain and social cost on public alcoholic consumption.

Despite a chronic, potentially relapsing quintessential disorder and dependence bio-behavior, alcohol is widely distributed and consumed until Thailand has become the fifth largest alcohol consumption per capita in the world behind Russia and UK. Because alcohol is a practically drug-like chemical goods, simple business concept and free market approach are not practical and not sufficient conditions for national policy making. Medical rational, fiscal budget consideration and historical perspectives are among main topics to be discussed. We next examine how existing tax structure based on *flawed* assumptions has long given incentive for majority of Thai people to drink cheap and high alcoholic beverage that is addictive and chronically harmful to public health. Finally, to improve social welfare, we recommend on how to maintain or even increase excise tax collection without tax increase and with reduction in alcohol consumption. Other administrative tax based

measures to effectively increase tax collection and to reduce alcohol related illness are presented as welfare-enhancement solutions.

The main argument of why alcohol is no ordinary commodity is laid down in next section. We describe the alcohol industry in Thailand and its evolution in third section. The discussion on how the past and current alcohol tax in Thailand effect the government revenue collection and public alcoholic consumption is presented in the forth section. The future challenge of tax structure, after AFTA & AEC agreements become effective, is also presented. In the fifth section, tax structure and potential tax leakages were discussed. Policy implication and recommendation are presented to improve social welfare. Last section, we conclude.

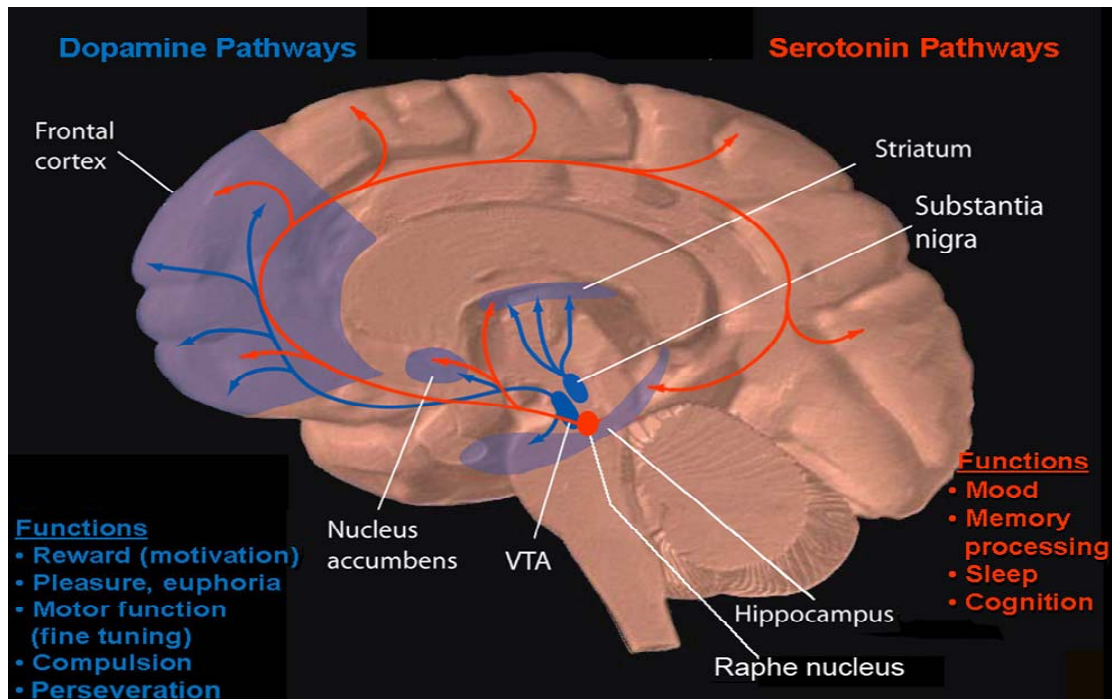
II Alcohol, No Ordinary Commodity:

1) **Alcohol is addictive substance:** By definition, **addiction** is a chronic relapsing behavioral disorder. By default, **alcohol** is a psychoactive substance that has depressant affect. **Alcohol addict** can be anyone who is alcohol substance dependence physiologically and/or psychologically (or habitually) when taking irresponsibly. Craving is naturally nurtured. Like obesity, alcohol addiction or alcoholism is a series of small day-to-day choices. Addicts typically suffer 3Cs: **Compulsive** use, inability to **Control** use and continued use despite **Consequence**. Most people drink alcohol to socialize and to feel good – sensations experiences and to share them. Many consume alcohol to feel better or to lessen negative emotion such as anxiety, worries, fear, depression, hopeless. Without a doubt, people take alcohol (tobacco and other drug) hoping to change their mood, perception or emotional state and most importantly their **brains**. In short, alcohol impairs the brains and result in addiction if used repeatedly in the same way as other drugs do.

Chemically speaking, any alcoholic beverage contains $\text{CH}_3\text{CH}_2\text{OH}$ or ethanol (commonly known as alcohol). The ethanol can breakdown first into $\text{CH}_3\text{CH}=\text{O}$ or Acetaldehyde (ADH) and further derive into chemical reaction as $\text{CH}_3\text{COOH} \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ or Acetic acid (ALDH) and water. Like all drugs and tobacco, after consumption the alcohol chemistry targets the pleasure functional part

of the brain - VTA and Raphe Nucleus via Dopamine and Serotonin pathways (also medically known as neurotransmitters) that are normally involved in communication between neurons in the brain. (See Fig. 1) It is particularly noteworthy that the **prefrontal cortex brain** is not fully developed until 20 years of age (judgment). Consequently, under-age drinkers can *permanently* damage their brains if drinking.

Fig 1: Alcohol Substance target pleasure function of the brains (source: CAS)



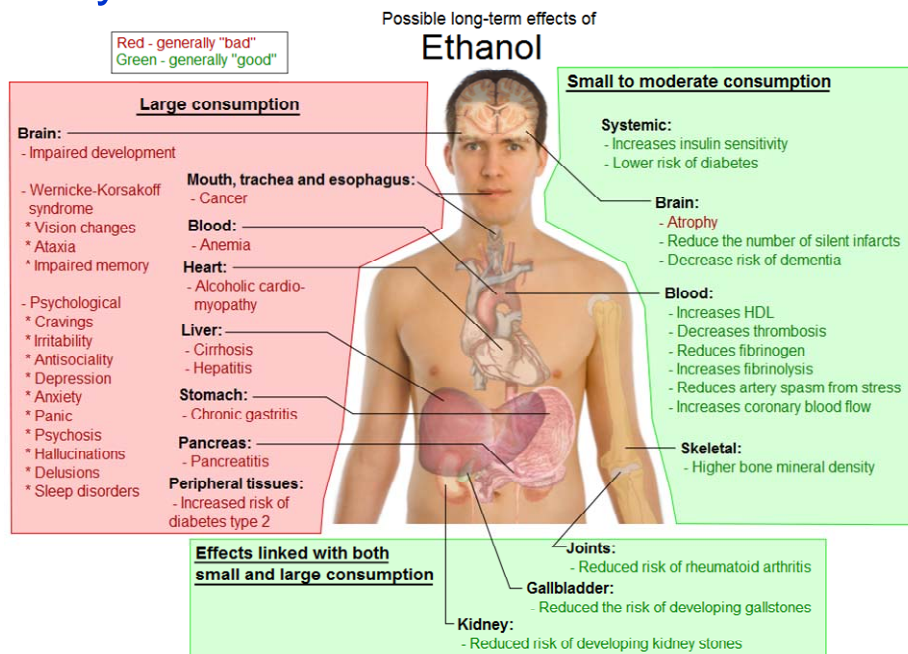
Moreover, scientifically proven that the higher level of alcohol content in the body is the more harmful to the body as described in Fig 2. It is critical to mention that body would build up its tolerance when one consumes regularly. Yet, eventually it is all chemistry that will intoxicate drinkers if consume not responsibly. Chronic illness such as liver cirrhosis, cardiovascular disease and certain cancers are commonly known to associate with alcohol abuse. The visual and explicit exposé of the good and bad of alcohol intake to our body is presented in Fig 3.

Fig 2: Alcohol Intoxication Level & Effects

Alcohol – mg/dL	Blood Alcohol Content (BAC % v/v)	Symptoms
50	0.5%	Euphoria, relaxation, talkative
100	0.1%	Central nervous system: depression, impaired cognition
>140	>0.14%	Decreased blood flow to brain
300	0.3%	Possible unconsciousness
400	0.4%	Possible death
>550	0.55%	Death

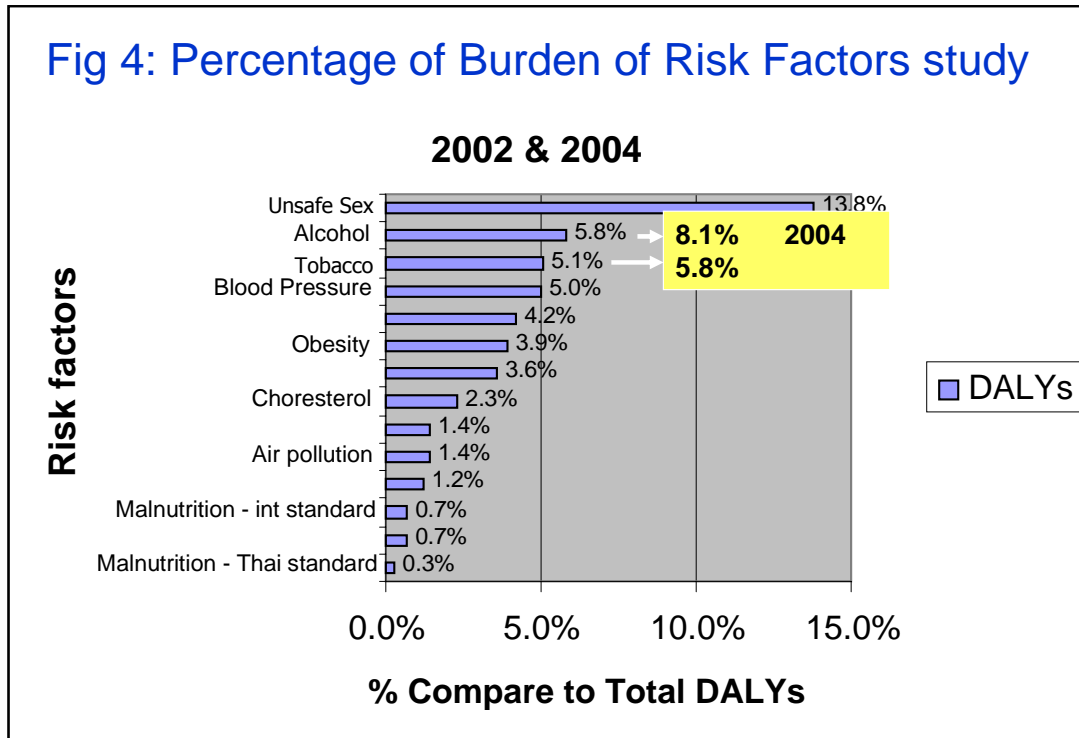
Source: <http://en.wikipedia.org/wiki/Ethanol> as of June 2, 09

Fig. 3: Possible long term effect to our body of Ethanol



Source: <http://en.wikipedia.org/wiki/Ethanol>

WHO (2003) reports that on average our disability-adjusted life year (DALY)¹ is estimated to be 4.7 year for typical drinkers. Thailand's Ministry of Public Health (2004) claims that alcohol and tobacco are the second and third highest risk factor of health burden after unsafe sex when measuring in DALY term as illustrated in Fig 4.



Source: Ministry of Public Health, 2004.

The level of alcohol consumption dictates why addiction matters as summarized in Fig 5. At the *low* consumption level, addiction is simply a **matter of choice**. Control using deterrence and education is the way to tackle the problem. On the other hand, regular *high*-level alcoholic intake, addiction becomes seriously **disorder choice**. At this stage, addict needs all the helps that he or she can get including costly medical treatment. And in the middle ground is **mental disorder**.²

¹ DALY = YLL + YLD. Where YLL = expected years of life lost and YLD = expected years of lived with disability. In other words, DALY is an integrated indicator that show the number of life years that are lost due to premature deaths (mortality) OR cases of disability occurring in a particular year (disability). For comparison, cancers (3.0) and tobacco (2.3) are ranked behind alcohol (4.7). More discussion at http://en.wikipedia.org/wiki/Disability-adjusted_life_year

² Note that the risk of addiction may be caused from 5 main sources: 1) genetic, 2) job and environment, 3) ability to drink without feeling tipsy, 4) socio- religious background and 5) socio-culture beliefs. More discussion at http://en.wikipedia.org/wiki/Alcoholic_beverage

Fig. 5: Why alcohol as addiction matters

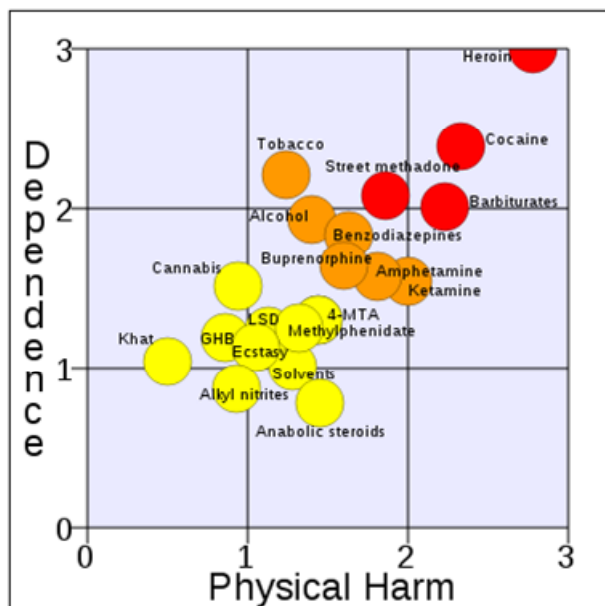
		It affects our strategy for dealing with the problem For example ...		
A L C O H O L	Low	Addiction as choice	⇒	control using deterrence + education
		Addiction as a mental disorder	⇒	control using treatment
	High	Addiction as disordered choice	⇒	deterrence + education + treatment

It is intriguing to see that Nutt et al (2007) claim that alcohol and tobacco are higher dependence, but slightly less physical harm than amphetamine (“Ya Ba”) as shown in Fig 6. Of course, heroin and cocaine are by far the worst of its kind. Nevertheless, according to Institute of Psychiatry, UK (2007), one person dies from Heroin every other day, but one person dies of alcohol related every 20 minutes.³

Moreover, about one million people are classified as alcohol dependent in UK. Reportedly UK is among the world heaviest drinker. Not far behind UK and Russia, Thailand is ranked the world fifth heaviest distilled alcohol drinker as shown on the “world alcohol consumption” map in Fig 7.

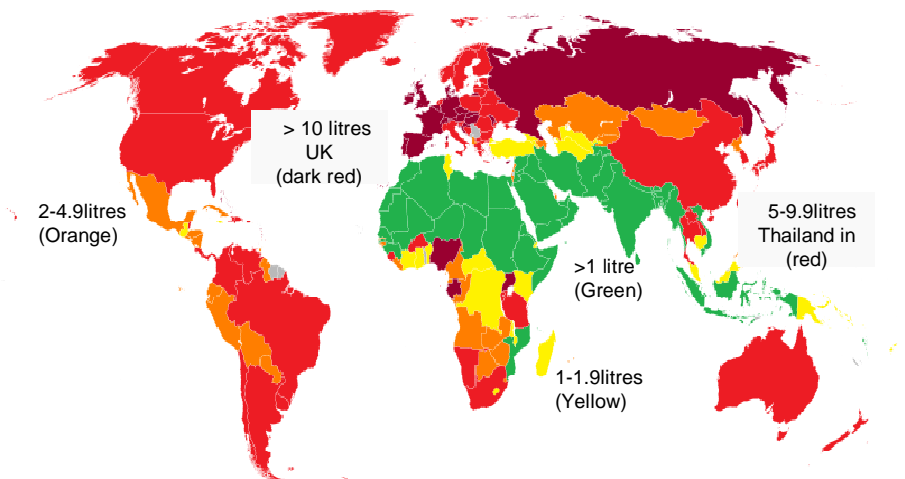
³ More discussion at <http://www.aa-gb.org.uk/southeast/westkent/Nov%2007%20Presentation.pdf> as of June 2, 09

Figure 6: A rational scale to assess the harm of drugs & alcohol



Source :Data source is the March 24, 2007 article: Nutt, David, Leslie A King, William Sautsbury, Colin Blakemore. "Development of a rational scale to assess the harm of drugs of potential misuse"

Fig 7: Map showing alcohol consumption per capita per year, by country based on WHO (2004)



Source: http://en.wikipedia.org/wiki/File:Alcohol_by_Country.png asof June 3, 09

In summary, addiction is not just physiological dependence. It is not lack of determination or poor judgment. Nor is it simple bio-behavior disorder. Alcohol addiction is simply a brain disease, beyond reasonable doubt. It is preventable easily and it is treatable but at cost, especially for its related illness.

2) Alcohol is a very big and old business: Alcohol chemical traces absorbed and preserved in pottery jar from Jiahu village in Henan province, China were uncovered as being produced 9,000 years ago. This is approximately time that Middle East had began to make barley beer and grape wine. Its first synthetic chemical (biotechnology) was recorded in 3,700 BC as Egyptians made wine and Sumerians made beer. It is intriguing to note that beer is the world's oldest and most widely consumed alcoholic beverage. It is ranked the third most popular drink overall only after water and tea.⁴

The fermentation of glucose by microorganisms for beer and wine has long been inactivated up to natural limit of 15% ABV (alcohol by volume) because most yeasts cannot reproduce at higher level. Distillation was invented in 1500 AD to separate ethanol and water for concentrate alcohol for stronger alcoholic taste like 'fortified' (sherry) or distilled (spirits⁵). Alcohol can be produced from starched sugar derived from barley (beer), grains (whiskies), corn (bourbon), grapes (wine), potatoes (vodka), rice (saki), sugar canes (rum), raisins (arak/raki) and artichokes (cinar). Billion of people have enjoyed alcohol since the ancient time. Alcohol is even reputed for health benefits, if taken in moderation.

Alcohol is a very big business. Alcohol is a legal product that millions of people spend multi-billion dollars annually to satisfy their thirsty and need. The world production of beer alone is, for instance, over 1.478 billion hectoliters (HL) in 2005. About a third are produced and consumed in Europe.⁶ The world biggest beer market in term of volume is now China, followed closely by USA and distant third Germany

⁴ More discussion at the source: <http://en.wikipedia.org/wiki/Beer> as of June 2, 09

⁵ A distilled beverage that contains no added sugar and has at least 20% ethanol or alcohol from organic material (e.g. vegetable and fruits) is called "Spirit". More discussion at the source: http://en.wikipedia.org/wiki/Distilled_beverage as of June 2, 09

⁶ See more statistic at www.europeanbeerguide.net/eustats.htm#production as of June 3, 09.

in 2005. WHO (2006) suggests there are four main modes of production and distribution of alcoholic beverages: 1) home and craft made type production of traditional beverages, 2) industrial production of traditional beverages, 3) local industrial production of cosmopolitan beverages⁷ and 4) globalized industrial production of cosmopolitan beverage. Initially, all alcoholic business starts locally for local consumption. Soon the producer would like to regularly innovate itself to new drinks to be the cosmopolitan category.

WHO (2006) furthermore claims that home and craft production remains the main source of supply, especially in emerging market like India or China.⁸ These home and craft production usually has quality and alcohol strength problems that related to harmful impurity and adulterants since most of these products are outside the reach of state control and taxation. Hence, from social welfare enhancement perspective, the government must gain effective control and oversight over informal alcohol production, smuggling, distribution and black market for tax collection and public health concerns. At the end of spectrum, it is the global production and distribution of branded beverages. More and more this production of cosmopolitan beverages is concentrated in a small numbers of multinational corporations (MNC), particularly after the great 2008 credit crisis. Though these MNC tend to be law and tax binding, they have large promotion budget and distribution network to aggressively market their products. They are always looking for new markets to expand. **Those who don't drink are natural and easy target** such as the youth, vulnerable and people in urbanization phase of emerging market like Thailand, China and India. Drinking age limit, advertising campaign restriction and sale distribution license are usually sensible administrative measures to prevent abuse in alcohol business for general public interest.

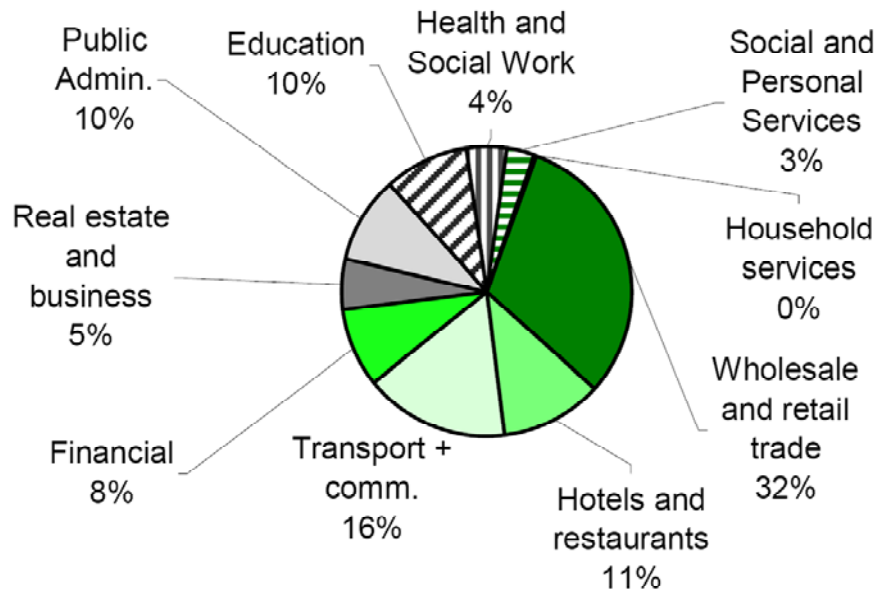
⁷ The term "cosmopolitan beverages" is meant for European-style beer, wine, brandy, whiskey, gin, vodka and other distilled spirits that distributed widely and globally.

⁸ Latter on we would discuss that this is not the case for Thailand where a few prominent producers dominates the market

Alcohol is also related to other industries range from transportation to retailing, from export-import business to agriculture, from services industry to restaurant, pub and bar businesses. Alcohol and alcohol related industries consequently generate substantial employment and tax revenue. Alcohol distribution chains normally involve three major stages: wholesaling, retailing and point of sale like pub and restaurant before reaching the end consumers. As the products move along the supply chain, on one hand, the alcohol providers may leverage their business in each and every chain to reach alcohol consumers for market potential and income. To create new market, to meet drinkers' needs and to take advantages of their tax and cost gap opportunity are among fine examples of these profit driven business engagements. It is particularly noteworthy that transfer pricing and tax-effective supply chain management that is traceable and auditable, may enhance tax collection efficiency and also to administrate public drinking pattern. In other words, alcohol distribution policies and practices may *greatly* influence alcohol public consumption behavior and tax revenue.

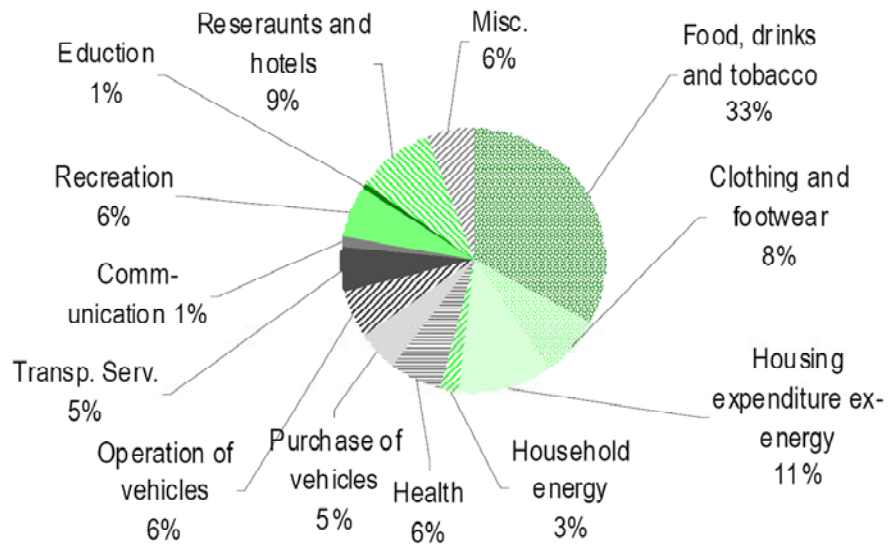
Furthermore, services industry the largest sector represents 43% in term of Thai nominal (value added) Baht 8.5trillion GDP in 2007. Of which wholesale and retail trade account for 32% as the largest sector and hotel & restaurant present 11 % (THB 402bn) as shown in Fig. 8a. By the composition of nominal consumption in 2007 from Fig 8b, food, drink and tobacco contribute the largest at 33% and the third largest sector is hotel & restaurant at 9%. In term of employment, services and agriculture sectors employ close to 40% of labor force. On the other hand, Thai government has budgeted 3 % only from beer alone and 2% from tobacco as the total tax revenue for fiscal 2007. Together is higher aim than petroleum tax or automobile tax as displayed in Fig. 8c. These economic gains should not be taken for granted. Any tax, regulation and administrative measures for alcoholic beverages industry would have percussion on services and agriculture sector as well.

Fig. 8a : Share of services sector for Thailand (in 2007 GDP)



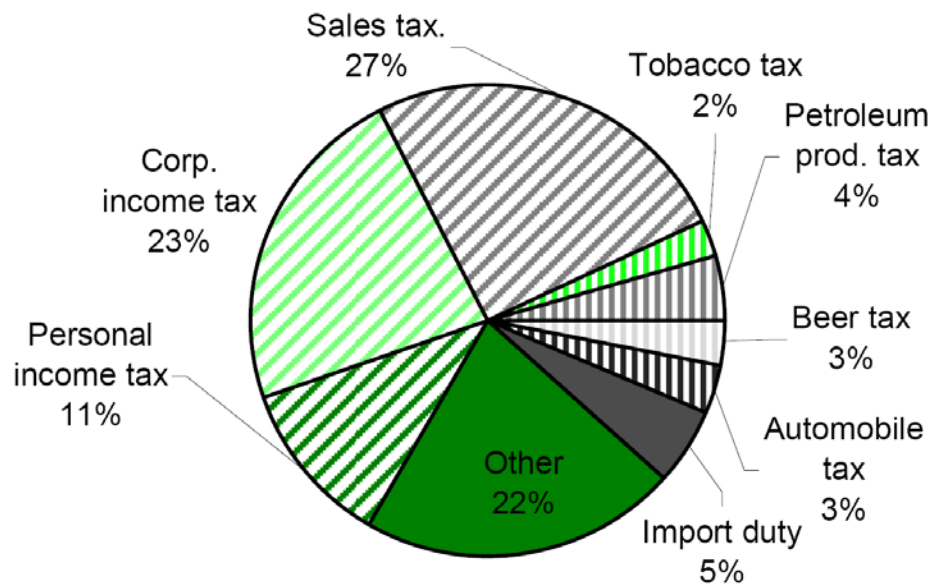
Source: CEIC, UBS (Services equated to 45% of GDP in 2007)

Fig 8b : Composition of nominal consumption (2007)



Source: CEIC, UBS

Fig. 8c: Government revenue by source (2007)



Source: CEIC, UBS

In review, the benefits connected with the productions, sale and use of alcohol beverage are vast, but come at enormous costs to society. Big alcohol commercial business gain should not be underestimated, while the public health policy concerns and needs cannot be overemphasized. One integrated national policy on alcohol is needed, not economic interest alone, but for overall public interest.

3. **WTO vs WHO:** Both organizations are Geneva based with international funding. World Trade Organization (WTO) is a free trade market promoter by eliminating import tax and tariff around the world based on its member consensus. World Health Organization (WHO) as a part of United Nation (UN) is advocator for public health development. WTO has *legal* binding measures and *tough sanctions* against its ruling, but WHO can make only *recommendation* on soft issues with *no sanction power*. However, it is *extremely* important to note that both do not agree on one particular internationally controversial policy of alcohol business trade and investment development. WTO is pressing for *cross-border* tax & barriers to converge to zero. Yet simultaneously WHO insists on any nation to maintain her sovereign right to use *within the border* tax & barrier as its alcohol national policy tool. As a matter of fact, in January 2005, WHO's executive board has recommended

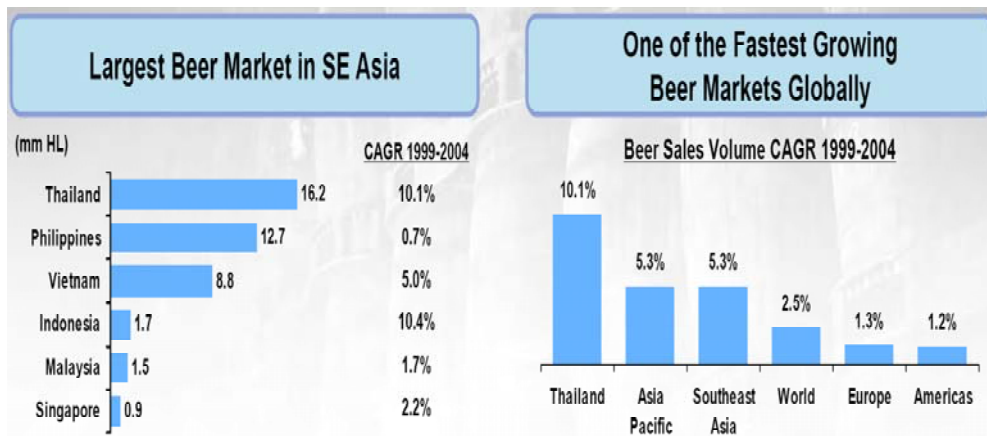
to WHO Assembly that *alcohol is no ordinary commodity*. WHO should organize open consultations with representatives of the stakeholders from industry, agriculture sector and distributors of alcoholic beverages to limit the health impact of harmful alcohol intake. Every government has its *duty* to discipline its people, especially on addictive substance in order to uphold public morals and to maintain public order. For public health benefit, the government has, thus, the *right* to regulate and to tax the use and the sale of alcohol and all other related services.

The main implication for small and open economy country like Thailand is quite clear. As Somchai Richupan (2005) addresses alcohol use problems to have 3 main concerns: public health, economy, and culture and society. First, its alcohol consumption may pose threat to public health, if not taking with care. Second, alcohol addicts reduce productivity and quality time with their family and friends. In the Economic perspective, the alcohol problem generates *negative externality*. When costs arise from alcohol consumption not fully borne by the consumers, true costs of alcohol are *not* fully reflected in market prices. In a few words, the public health concern is not taken in the alcohol beverage selling prices. This implied market mechanism *fails* to correct negative externality in which government intervention is justified. New alcohol tax structure should be introduced as a major tool to control this negative externality. In sum, Thailand should oblige to WTO and regional trade agreement(s) for converging *cross border* tax and barrier, but as recommended by WHO, Thailand must reserve her right to regulate and tax *within border* as policy tools to protect its public health & interest.

III. Alcohol Industry Overview in Thailand:

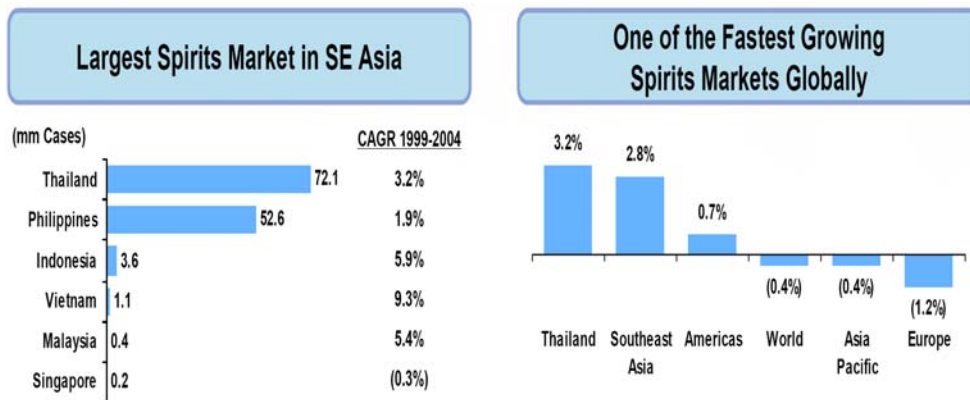
Thailand is the largest beer and spirits market in South East Asia and is one of the fastest growing markets globally as shown in Fig. 9 a and b. In 2005, about 16.2 million HL of beer were consumed in Thailand annually with compound annual growth rate (CAGR) of 10.1%, twice the rate for Asia Pacific and quadruple the world average. At the same time, Thai people drank about 72.1 million cases of spirit with CAGR of 3.2% strikingly contrast to the world trend of – 0.4%. These high growths are only possible after the alcoholic industry liberalization.

Fig. 9a Thai Beer Market Size & Growth comparing to the World



Source: http://thaibev.listedcompany.com/misc/presentations/others/ipo_presentation.pdf

Fig. 9b: Thai Spirits Market Size & Growth comparing to the World



Source: Canadean, "The Beer Service, Annual Report – 2005 Cycle, Thailand" and "The Wine and Spirits Service, Spirits Annual Report – 2005 Cycle, Thailand"

Source: http://thaibev.listedcompany.com/misc/presentations/others/ipo_presentation.pdf

Alcoholic drink producers in Thailand in 2004 are summarized in Fig 10. Initially, it seems that many suppliers, brands and a lot of small neighborhood community producers compete in the market. But the fact of the matters is through a series of merger and alliance in recent years, the alcoholic market is now concentrated in a handful of companies that we shall discuss later. It is critical to learn that more than half of the excise tax collections on alcoholic beverages are from beer. The rest are locally produced white spirits, whisky, brandy, rum and other apart from import products though these deliver high alcohol content to public at large.

Fig.10: Alcoholic Drink Producers in Thailand (2004)

Type of Alcohol Drink	Number of Producer		Sample Brand
	Import	Local	
1. Fermented Spirit			SINGHA, CHANG, HEINEKEN
1.1 Beer			Chateau De Loei, Khao Yai, Bin 2
1.2 Wine and Wine Sparling		23 major cases	
1.3 Local Fermented Spirit	13 cases	745 community cases	U, Satho, Krachae
1.4 Other than 1.1-1.3			SPY WINE COOLER
2. Distilled Spirit			
2.1 White Spirit			White Spirit 28 30 35 40 Degree, Brand Ruang Khao 28 Degree
2.2 Blend Spirit	6 cases	25 major cases 4,525 community cases	Community Distilled Spirit
2.3 Alcohol Spirit			Chiang-chun, Hongthong, Golden Dragon, Black Tiger, Boon Gui Low, Fired Tiger, Golden Karean
2.4 Special Spirit			Mae Kong, Crown 99
(1) Brandy			REGENCY, Hennessy
(2) Whisky			100 Pipers, J.W.Black, Red, Chivas, Spey Royal
(3) Other than (1) and (2)			Vodka, Gin, Rum Likeaw, Master blend, Sangsom

Note : pink – local spirit , green – import spirit

Domestically alcoholic beverage production in Thailand is roughly constituted of two main types – beer and distilled beverages as follows:

1. Distilled Beverage: The first distilled alcoholic beverage production in Thailand was created in 1959 under Sura Mahakhun Company (SMC) managed and majority owned by Mr. Sahat Mahakhun. SMC was granted concession to produce and distribute liquor from Field Marshall Sarit Thanarath without any bid and pay only annual concession fee of THB41 million annually until 1969. This is the origin of the infamous “Makhong” - Thai Whisky brand.

Despite its monopoly position and huge windfall profit, SMC had faced the internal conflict among the management team and major shareholders in the next 10 years concession. Eventually SMC associate(s) were broken into two groups after Mr. Sahat and his family decided to retire from this liquor business. First is “Sura Maharat” (SMR) group led by Mr. Sumet Tejapaiboon was backed by PM Gen. Kriengsak Chommaranan. The second group named “Sura Mahatip” (SMT) led by Mr. Talerg Lau-chinda with his top aid, Mr. Cheoren Sirivadhanabhakdi (or Sia Cheoren) that were politically backed by one political party and top military generals. Eventually, Sia Cheoren had consolidated SMR into SMT and became the dominant producer.⁹

In October 2003, through a series of group-restructuring and strategic alliance, Sia Chareon has further consolidated his alcohol empire under Thai Beverage Plc (ThaiBev) as his flagship company for production and distribution. In 2005, ThaiBev became the largest alcoholic drink company in every sector in Thailand. Its market share was 49% in the beer segment, 60% in brown spirits and 82% in white spirits. Chang (beer), Niyomthai (white spirit) and Sansom (rum) brands become household names. Undeniably the majority of ThaiBev brands target farmers and low-income population in rural since they are the largest segment of the market as suggested in its annual reports. (See more details in Fig. 11 a, b) ThaiBev went public in May 2006. Instead of listing in Security Exchange of Thailand despite of a few attempts over the years, it was eventually listed on the Singapore Exchange due to strong antagonism from social activists and NGOs at home.

⁹ The first two paragraphs are the extraction from “Legend of Liquor War in Siam” by Nuannoi Trirath (July 27, 2007), published at Matichon Daily Newspaper, in Thai.

Fig. 11a: ThaiBev – Brands under management/ distribution contracts.

Category	Market growth (07A)	Brands	Ownership
Beer	3%	Chang, Chang draft, Chang Light, Archa	Thai Bev's 100% subsidiaries
Spirits	6%	Sangsom, Mekhong, Hongthong, Mungkornthong, Crown 99, Blend 285, Blue, Ruangkhao, White Tiger, Niyom Thai, Suadum, Chiangchun	Thai Bev's 100% subsidiaries
		White bear, Mungkorn Taejean, Noble Lords Whisky, Tumbler whisky	UPC (80% stake)
	n/a	Old Pulteney, Speyburn, Kulov Vodka, Heather Cream liquor, The Beasties (RTD Vodka), etc.	Inver House (100% stake, UK)
RTD alcohol	10%	Barcadi breezer	UPC (80% stake, OEM manufacturer)
Fruit juice	17%	SPM juice, Fruitette Jelly	SPM (83% stake)
Energy drink	5-7%	Wrangyer	Wrangyer Beverage (100% owned energy drink assets)*
		Carabao, Carabao Dang	Signed an MOU to acquire
RTD Coffee	n/a	Black-up	Wrangyer Beverage (100% owned RTD coffee assets)*

* Thai Bev's Bt420m acquisition of Wrangyer Beverage includes assets and brands but does not include liabilities
Source: UBS (Feb. 22, 08)

Fig. 11b: ThaiBev Distribution Network



On February 24, 2009, TRIS rating reaffirms ThaiBev “AA-” rating. It next discloses ThaiBev, as a holding company, consists of 89 subsidiaries and associated companies conducting business from end-to-end or from production to retailers. With annual production capacities of 1,550 million liters of beer and 819 liters of spirits from its 18 local distillers cross Thailand, ThaiBev has a certain degree of market power in raw material (mostly agriculture products) purchase and acquiring services. Additionally, as indicated in Fig 11b, ThaiBev has “logistical and distribution advantage consisted of 930 agents, 680 direct sub-agents, more than 900 direct sales persons and 4,000 transportation vehicles to serve more than 400,000 retail outlets nationwide”. From its financial statement, ThaiBev total revenues is over THB100 bn with net income after tax over THB10bn with its market capitalization closed to THB175bn. About 85% of its earnings come from the sale of spirits to the poor and the rest from beer and others.

Mr. Suranand Vejjajiva who served as Minister attached to PM during PM Thaksin Shinawatra era reported on Bangkok Post dated on November 21, 08 that “ThaiBev is now the largest brewery in Southeast Asia and the 4th largest distiller in the world”. ThaiBev employs more than 22,000 people directly, excluding outsourcers and distributors. It pays approximately 4% (or over THB50bn) of all taxes collected by Thai Government. Despite of heavy spending for corporate social responsibility (CSR) program ranging from sport to education, concerns on moral grounds, practical economic, health and social issues are mounting from convincing statistics and academic studies. On the revenue side Thai government collected a total of around THB72.9 bn in taxes from alcohol industry, but on the expenditure, Thai suffered estimated economic loss of THB150.6bn from alcohol related causes as CAS asserts. As time passes by, Sia Cheoren has outshined the rest and become the richest man in Thailand and the king in white spirit, whisky and beer empires in S. E. Asia.

2. Beer Industry: Prof. Makoto Nambara (2004) provides excellent insights of the beginning of the Beer Industry in Thailand (or Siam then). Nambara first describes the beer industry in early 1930’s that typically dominated by imported products, especially from Japan and German via Singapore trade. Nambara next elaborates on the establishment of Boon Rawd Brewery Co (BRB) as the first beer producer in Thailand found in 1933 by Mr. Boonrawd Srethabutra. Interestingly the

main focus of this paper is on Mr. Boonrawd by collecting valuable data, information and chronological important events from cremation books on the founder and his family members. How did Mr. Boonrawd, for instance, decide to enter beer business?

A man whom was besotted in 1925 the aristocratic title of Praya Bhirom Bhakdi by HM the King Prajadhipok Rama VII, the last absolute Monarchy and the first constitutional King of Thailand, made the most of the business opportunity with his entrepreneurship talent and family business approach. National tax policy was also presented vividly and discussed extensively as necessity for the rapid expansion of Thai beer industry. For example, the government imposed the beer tax of THB 0.10 per liter for domestic products on April 3, 1933 comparing to the import tariff on beer at THB 0.15 per liter or 33.33% of the price (whichever was higher). It is worth noted that then there were only 4 commodities subjected to excise tax, namely cement, beer, spirit and matches. It seemed Thai government had implicitly the import substitution policy for beer at the time using taxing differential policy. Another worthy note is the half million baths initial investment for BRB was a worthy sum of money. It was half of the capital investment for the most modern Thai company, Siam Cement Co. established in 1913. This indicates that the brewing industry has long been a capital-intensive investment and technological advance machinery accounted from large portion of the total investment as per Nambara (p 9).

Since its establishment, BRB has been privately owned and operated by BhiromBhakdi family (now in 3rd and 4th generation). The best well-known brand is Singha Beer (lager type) as the best selling beer in Thailand over its first 60 years. In truth, BRB has had about 90% of the domestic beer market share until mid 1990's. After alcohol industry liberalization, BRB market leader position was challenged by economy type Chang Beer brewed by ThaiBev - formerly known as the Beer Thai Company and other imported brands, but locally produced beer like Carlsberg, Heineken and Asahi. In 2007, BRB has regained its market leader position in Thailand after successful launching flanking brand like Leo Beer - economy beer type to contest other rivals. Thai beer market may now be characterized duopolistic where ThaiBev and BRB hold more than 40% market share each. Since Sankrusme (2008) provides the extensive marketing strategy study of how BRB compete and recapture ThaiBev and other new comers for market share after the 1991 beer and liquor

liberalization in Thailand. Since claims that by using military like strategic concept of niche and flanking brands, BRB has been able to take advantage of opportunities and to avoid threats. (See Fig 12 a,b)

Fig 12a: Thai Beer Market in 1999

Market Leader, Challenger and Niches (1999)

Companies	Brand	Production (Million Liters)	Percentage (%)	Market Structure
Thai Beer (1991) Company	Chang	607.5	57.96	Leader
Boon Rawd Brewery Company	Singha Leo	364.9	34.81	Challenger
Thai Asia Pacific Brewery Company	Heineken Amstel	45.3	4.33	Niche
Carlsberg Brewery (Thailand) Company	Carlberg	17.4	1.66	Niche
Thai Amarit Brewery Company	Kloster Black Tiger Amarit Beek's Brew Max	13.1	1.24	Niche
Total		1,048.2	100.0	

Source: Sinee Sankrusme (2008) "A Study of The Beer Market Leader, Challengers and Niche Strategies"

Fig 12b: Thai Beer Marketing Strategies by different Brands in 1999

Companies	Similar Strategy	Different Strategies
Domestic Beer		
1. Thai Beer (1991) Company	Marketing mix	- Selling local liquor with beer strategy - Strong channel strategy
2. Boon Rawd Brewery Company		- Block channel strategy - Strategies in creating marketing hindrance
3. Thai Asia Pacific Brewery Company		- Music marketing
4. Carlsberg Brewery (Thailand) Company		- Product warranties and service
5. Thai Amarit Brewery Company		- Credit marketing
Imported Beer		
1. C.V.S. Syndicate Company	Marketing mix	Brand image strategy
2. TIS Worldwide (1997) Company		Proactive strategy

Source: Sinee Sankrusme (2008) "A Study of The Beer Market Leader, Challengers and Niche Strategies"

Currently, BRB produces over 1 billion liters of beer per year from its 2 breweries. It also makes soda and drinking water from 6 different factories located across Thailand. In sharp contrast to ThaiBev, BRB has no extensive distribution network and logistic division of their own. BRB remains relying on traditional intermediary (“Yee Buo”) and jobbers (“Sa Buo”). Though BRB has capital register only THB 0.6 million from onset, in 2007 the company reported its financial statements with total asset size of about THB12.5 bn with total net worthy exceeding THB8.4 bn and net income over THB1bn.¹⁰ BhiromBhakdi family members are now expanding their lines into wide ranges of business, from airline to resorts, from winery to golf course, from oversea restaurant to advertising.

According to the Bank of Thailand as cited by TRIS (2009), the average beer consumption for Thailand is considered low – 32.98 liters per person per year when compared with the top 20 beer market in the world. TRIS adds that because of oligopolistic beer market with higher degree of fierce competition, government policy can greatly influence the public demand for alcoholic beverages. Excise tax increases, advertising limits and sales restriction are among fine government actions to constrain the growth in alcohol consumption per capita in Thailand.

IV Taxing on Alcoholic Beverages in Thailand:

Taxing on alcoholic beverages is one of the main and reliable sources of Thai government’s revenue. Typically, people think of alcohol tax only as a form of excise tax, but alcoholic beverages are also subjected to customs duty, local tax, health tax, TV tax and value added tax (VAT). The excise tax liability depends on alcohol classification, their value and the level of alcohol contents. The taxing is further complicated with exclusive and inclusive tax approach embedded for domestically and import products. More details are as below:

1. **Excise Tax:** is an indirect and consumption based tax on alcoholic beverages and other policy designate commodities and services. This excise tax can

¹⁰ Due to privately owned and tightly held by Bhirom Bhakdi family, the information, particularly financial data available here are quite limited unlike ThaiBev case. Most of this paragraph information is extracted from http://en.wikipedia.org/wiki/Singha_Beer and <http://www.boonrawd.co.th/> as of June 3, 09.

be broken into 2 main categories: distilled Spirits¹¹ and fermented spirits¹². The **distilled spirits** are consist of 5 types of products, which are special spirit, absolute alcohol, the product other of special spirit and absolute alcohol, white spirit, and blended spirit. And **fermented liquors** consist of 3 types of products: beer, wine, and others. From Fig 13, alcohol tax structure that is designed during alcohol concession period more than 50 years ago indicates different tax rates for different types of alcoholic beverages. In short, there are at least 11 different excise tax rates for more than 11 different alcoholic beverages. In essence, there are two types of excise tax – *Ad Valorem* and **Specific Tax**. (See calculation example in Appendix I and Dr. Nipon et al (2007, pp 5-15 to 5-17) The former is based a percentage of the value of the product, while the later is uniform rate based on the volume of alcohol content. In theory, to maximize the tax collection, the law requires the tax liability of each classification is either the beverages value or alcoholic content that renders the higher amount of tax revenue. But in practice, alcohol content-based tax for fermented spirit or beer has been useless from the date of enactment (on Dec. 25, 1991) because of deficient, ill conceived and unrealistic low ceiling allowance (bath/liter) as shown figures in red color in the second and third column of Fig 13. The only true effective rate then is *Ad Valorem* or based on price mechanism. These give way to the huge tax collection leakages and an enormous loss in policy flexibility to optimize public interest and social welfare that we shall discuss later on.

¹¹ Distilled spirits refer to spirits made by distillation, and include distilled spirits, which have been mixed with fermented spirits, but the alcoholic content exceeds 15 degrees.

¹² Fermented spirits refer to spirits, which are not made by distillation, and include fermented spirits, which have been mixed with distilled spirits, but the alcoholic content does not exceed 15 degrees.

Fig 13: Alcohol Tax Structure in Thailand as of April 30, 2009

Type of Spirits	Excise Tax		Local	VAT	Thai Health	Thai PBS
	Ad Valorem (%)	Specific Tax (baht/litres*)	(%)	(%)	(%)	(%)
1. Fermented (Tax ceiling)	60	100				
1.1 Beer	60	100	10	7	2	1.5
1.2 Wine and Wine Sparkling	60	100	10	7	2	1.5
1.3 Local Fermented Spirit	25	70	10	7	2	1.5
1.4 Other than 1.1-1.3	25	70	10	7	2	1.5
2. Distilled Spirit (Tax ceiling)	50	400				
2.1 White Spirit	50	120	10	7	2	1.5
2.2 Blend Spirit	50	300	10	7	2	1.5
2.3 Alcohol Spirit	50	400	10	7	2	1.5
2.4 Special Spirit						
(1) Brandy	45	400	10	7	2	1.5
(2) Whisky	50	400	10	7	2	1.5
(3) Other than (1) and (2)	50	400	10	7	2	1.5

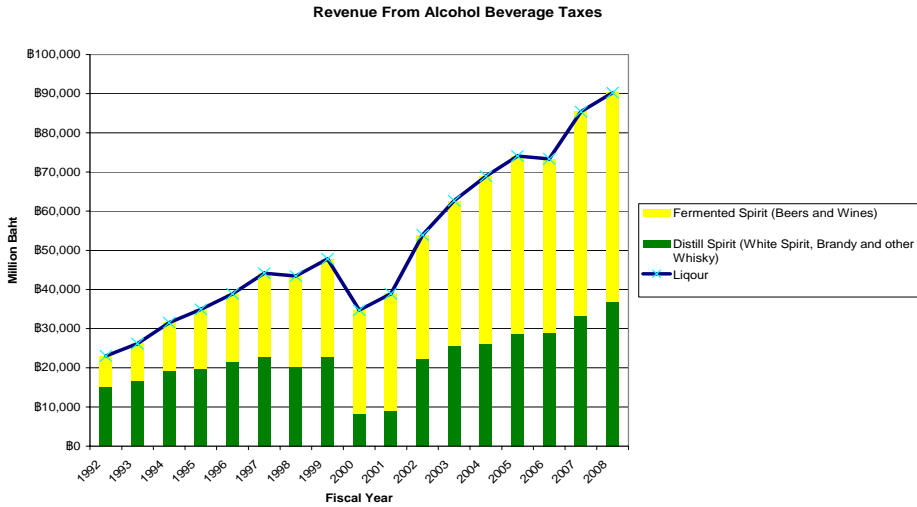
Note * litre of Pure Alcohol ; * Red – Tax Ceiling

*Chose either Ad Valorem Tax or Specific Tax rate at which ever is higher.

Source: Excise Department, Ministry of Finance as of March 2009

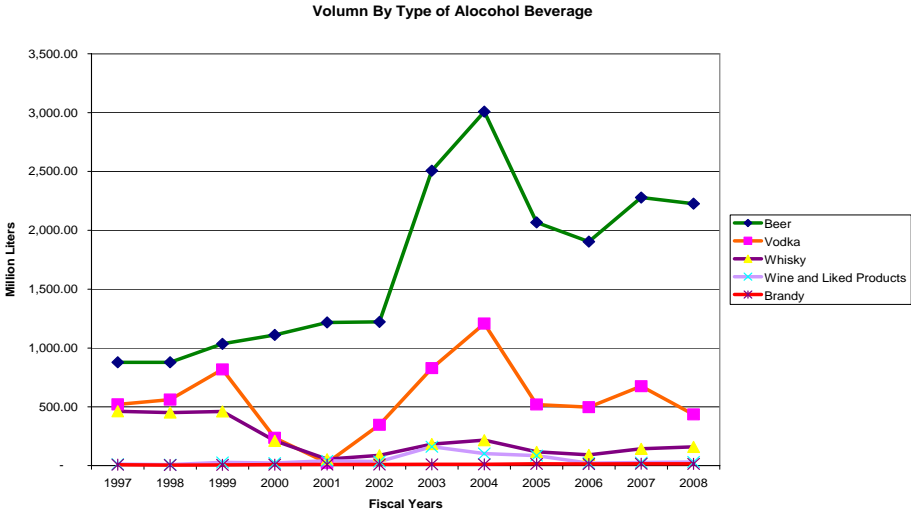
At present, the Excise Department of Ministry of Finance, Thailand by law is solely responsible to regulate and to collect the revenue. Excise tax revenue from alcoholic beverages is exhibited in Fig. 14a. The total revenues are classified by the volume and type in Fig 14b. In 2008, the total excise tax from alcoholic beverage is THB90,281 million or 32.4% of the total excise department revenue. The volume of liquor is around 2,500-3,000 million liters per year. Beer that has again alcoholic content between 3.5 to 7.3 degrees is by far the largest contributor to the coffer with increasing trend over time. Moreover that majority of contribution for tax collection and alcoholic consumption increases are essentially from economy type beer as shown in Fig. 14c. The tax contribution for white spirit or WTO classification as ‘Vodka’ type with alcoholic content of 28, 30, 35 and 40 degrees is the distant second.

Fig 14a: Excise Tax Revenue from Alcoholic Beverages



Source: Excise Department, Ministry of Finance (June 09)

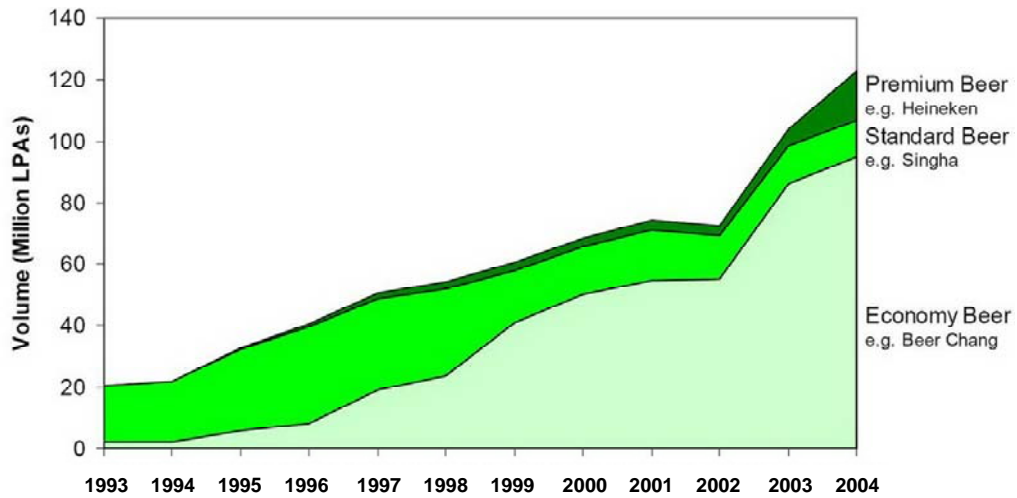
Fig 14b: Volume by Type of Alcoholic Beverages



Source: Excise Department, Ministry of Finance (June 09)

Note that white spirit is classified under Vodka type asper WTO standard.

Fig 14c: Volume of beer consumption (notified tax) by the price. (Millions of liters of pure alcohol)



Source: IWSR; Average alcohol content from representative products

Source: Nipon et al (2007, Chart 6.9 on p. 6-17)

From Fig 15, during fiscal year 2008 the excise department collected THB 95.45bn primarily from four commodities - alcohol, tobacco, oil and motor vehicles. For this 2009 fiscal year, it has 2 shortfalls derived mainly as the direct results of oil price collapse and global economic recession. It is quite puzzling to note that tax revenue on entertainment places and liquor licenses are negligible amount despite the huge alcohol tax revenue and large service sector. This anomaly will be discussed in the next section.

**Fig 15: Excise Tax Revenue Statistic:
Fiscal year 2009, YTD**

No.	Income categories	Collected FY to date		Collection last Fiscal Year
		Oct 2008 – Jan 2009		Oct 2007 - 2008
1	Taxes and fuel oil products.	6,730.63		25,387.45
2	Tobacco tax.	13,163.96		13,990.86
3	Alcohol taxes.	11,741.36		12,424.59
4	Beer tax.	16,684.13		19,043.90
5	Motor vehicle tax.	17,586.13		17,938.39
6	Beverage tax.	3,790.52		3,942.31
7	Tax electrical	1,027.08		1,142.68
8	Motor vehicle tax.	611.29		501.65
9	Duty battery	603.66		617.13
10	-Tax Services – racecourse	24.63		30.72
11	- Tax Services – Golf Course	138.90		159.95
12	Tax incense products.	64.36		50.68
13	Tax glass and glassware	13.93		26.84
14	Tax besprinkle	13.29		19.53
15	Tax card	7.85		9.7
16	Tax ship	0		0
17	Tax break of atmospheric	2.78		1.7
18	Tax marble and granite.	0		0
19	Miscellaneous income.	178.99		170.79
	Total	72,283.52		95,458.87
20	Tax nightclub and discotheque	31.31		40.01
21	Tax bathing facilities.	55.66		66.86
22	The lottery tax.	0		0
23	Telecommunications tax affairs.	0		0
	Total	86.97		106.87
	Total	72,370.49		95,565.74

Note: Data as at 27 February 2009
Source: Excise Department, Thailand

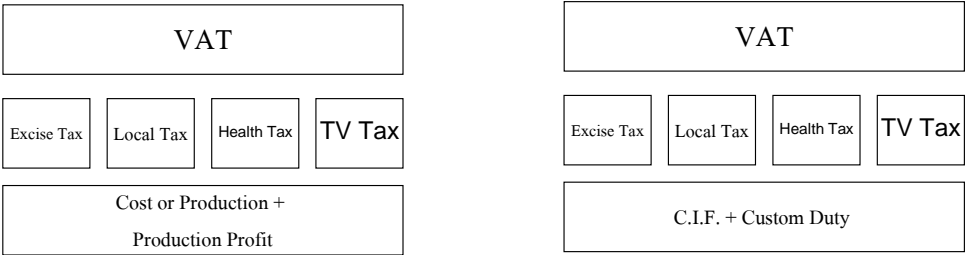
2. Inclusive vs. Exclusive Taxing Issue on Alcoholic Beverages:

Thailand's taxation on Alcohol is conceptually presented in Fig. 16a. For import alcoholic beverages, the import duty is classified into HS 2204-2208 with the 60% *Ad Valorem* WTO bound rate¹³. All imported tax and excise tax on alcohol are based on the total value of value of imported goods or Cost, Insurance and Freight (CIF) price according to Liquor Act 1950. But the domestic products are taxed based on ex-factory price. Both local and import alcoholic beverages are subjected to *Ad Valorem* or value excise tax rate with *inclusive tax* calculation unlike VAT. For instance, given nominal excise tax rate of 60 % for domestic producer, the importer would face the effective rate of 176.5% for the same alcoholic drinks, while the domestic producers may face to similar effective rate. (See more calculation in Appendix 1 and conceptual scheme in Fig 16b).

¹³ It is critically important to learn that Thailand's excise rate classification is not consistent with international alcohol beverage classification ruled by WTO. A few serious policy implications will be raised in the policy discussion section subsequently.

Fig. 16a: Thailand's taxation on Alcohol

- **Customs Duty (60%, 5%)**
- **Excise Tax(Specific, Ad Valorem)**
- **Local Tax (10% on Excise Tax)**
- **Health Tax (2% on Excise Tax)**
- **TV Tax (1.5% on Excise Tax)**

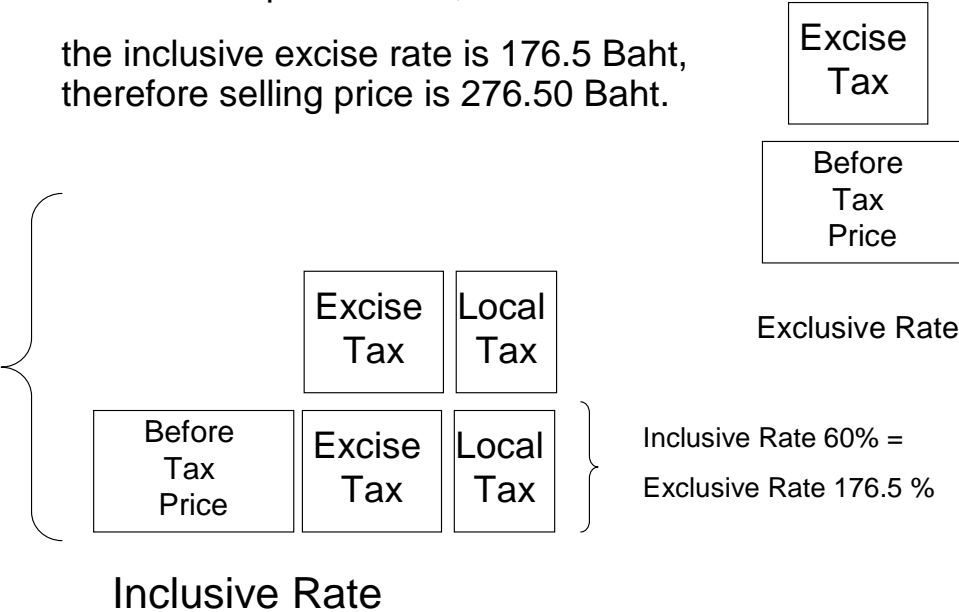


Note: ET = Excise Tax and 10% ET = 10% of Excise tax collect

Source: Dr Bundit Sornpaisarn (July 13, 05) with update modification from authors.

Fig 16b: Inclusive & Exclusive Excise Tax

If before tax price is 100,
the inclusive excise rate is 176.5 Baht,
therefore selling price is 276.50 Baht.



At the same time, both importers and domestic producers are legally facing specific or alcohol content excise tax rate that is *exclusive tax* calculation with clear transparency and without market price distortion. In principle, the government supposedly has to choose between *Ad Valorem* and specific excise tax rate that yields the higher total tax collection. But in reality, the government can *mainly* use the *Ad Valorem* or price based rate with inclusive tax because specific tax rate is not applicable due too low of the tax ceiling as discussed earlier.

It is particularly noteworthy that there is one exception. Given the same excise tax rate, the alcoholic beverage importers and domestics are subjected to identical inclusive tax system, but pay vastly differences in tax amount for cheap beverage with high alcohol content. Most of domestic manufacturers, namely white spirit are producing cheaper ex-factory prices than the CIF of the import one since the ex-factory price does not account logistic and insurance cost. Consequently, the domestic producers are facing *specific tax rate* and *exclusive tax* calculation that is collected by the alcohol content, while the imported products are handicapped and subjected to *Ad Valorem* or value excise tax rate with *inclusive tax* calculation. In other words, the domestic white spirit may simply pay tax of THB 120 per 0.75 liter *specific rate* while the import products are subjected to much higher *Ad Valorem* rate and 5 different taxes that yield effective rate of 176.5% for the same alcoholic drinks. This is directly as the result of the law stipulated to pick the rate that yield the higher total tax amount collection and ministerial directives. Because of these two distinctive tax calculations, the more excise tax rate hike is the *more amplified* of tax collection disparity between domestic and import products until officially little or no import on this particular product.

One may argue that only for white spirit both rates are applied. This is irrelevant for our discussion since at the low tax rate for the white spirit is in its own class alone. This may change if someone would challenge this white spirit as the same classification as Vodka in the near future as WTO has ruled in many precedent cases to be discussed later on.

Because of the *inclusive tax* calculation, the more excise tax rate hike is the more *amplified* of tax collection disparity between different products at different prices regardless of their alcohol content. It also creates large market *distortion* and more incentive to smuggle and falsifying or under-invoicing the CIF value. President of TDRI¹⁴, Dr Niphon and his team (2007) estimate at least 16% of all alcoholic beverages consumption are from smuggling and illegal production from more than 5,000 vendors nationwide. These estimates are derived from their field survey and questionnaire response. Crucially the government loses its flexibility for taxing and fine-tuning alcohol consumption as well as production quality control. In short, the legacy of obsolete tax based policy lives on.

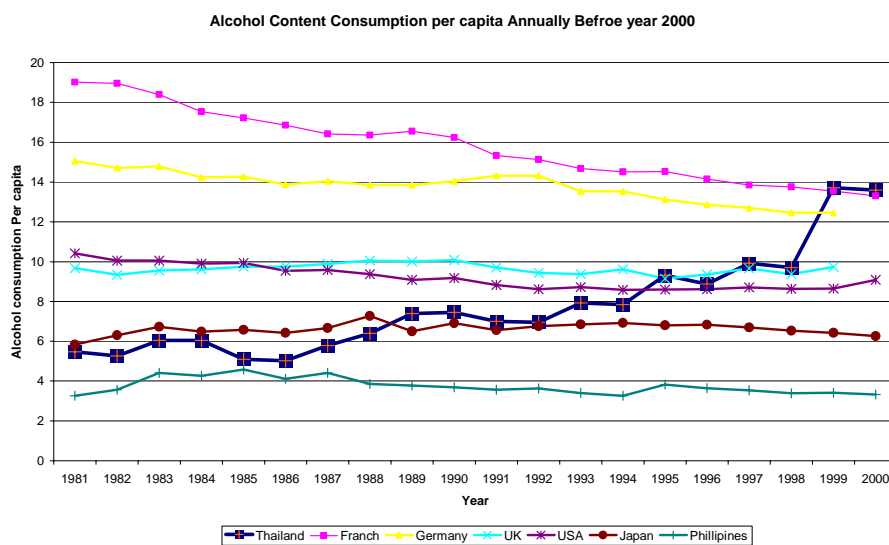
3) **Two Alcoholic Eras and Government Revenue Concerns:** The alcohol industry has long history in Thailand. It can be divided into two periods: alcohol beverage under concession and alcohol beverage under liberalization. In the first era, all 32 distilled spirit manufactures were owned by the government, but managed and distributed by private entities through concession bidding. Double taxation, distribution zoning and physical inventory count are among fine examples of the basic tax structure law to ensure cash generating concession-based distilleries to the government coffer. To raise fund and to resolve under-investment problem for high technology and capital-intensive plants, government has decided to liberate this industry by the end of 2000 or a few years after the 1997 crisis.

In the post liberalization, the government revoked the concession system and ended its monopoly in distilled spirit business. Most of the plants were privatized and a few were torn down. Some charges and revenue on distillery during the concession period are transformed to be excise tax. Perhaps, acting on the fear of tax revenue shortfall and to prepare for transition for the eventual liberalization, the government used free market concept in promoting competition among the producers. Abolishing the distribution zoning distribution, freeing retail liquor license, unrestricted promotion and changing tax base to be ex-factor price are some of the

¹⁴ TDRI = “Thai Development Research Institute”, Thailand’s government think tank

measures as requested from the industry during the transition period. The outcome is the booming alcohol and alcohol related business. Alcohol consumption and production surged. According to the Center of Alcohol Studies (CAS) in 2005, Fig 17 shows that alcohol consumption per capita by its content has been increasing over time since 1981 while another nations (e.g. Philippines, Japan and German) are stable with declining trend.

Fig 17: Alcohol Content Consumption per capital Annually

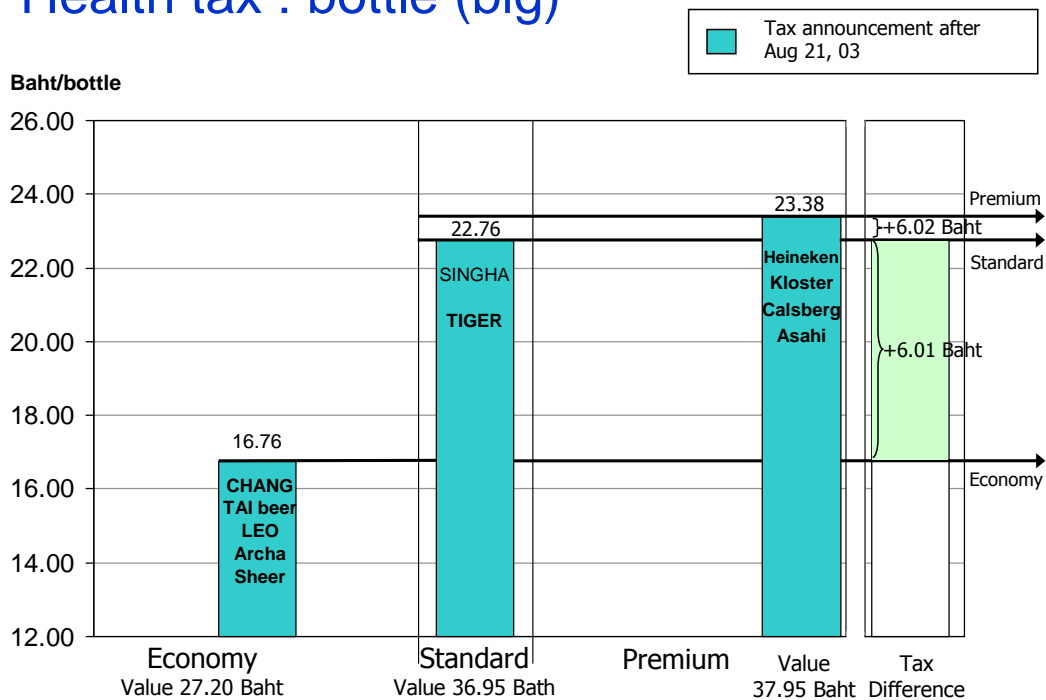


Source: The Center of Alcohol Studies (CAS) by Dr Bundit Sormpaisarn (July 13, 05)

Beer (and brandy) producers are different stories since they have long been *privately* owned from the beginning. The beer production has been steadily increased over the years as evidenced by tax collection depicted in Fig 14 a, b. The real jump has been in beer consumption occurred only after the liberalization when ThaiBev decided to launch “Chang” beer to break into monopolistic BRB beer market. The marketing and competition between ThaiBev & BRB has been severe and forceful as Sinee (2008) documents. Fierce marketing campaign and bundling promotion tactic between the two rivals has *expanded overall beer market*. The beer consumption and alcohol consumption per capita per year keep on rising at the increasing rate. It is fascinating that instead of implicit volume tax long applied to BRB, the government decided to use *Ad Valorem* excise tax rate(s) based on three different ex-factor prices in 2003. The main justification is the simple business and marketing concept of beer

product positions – economy, standard and premium. The excise tax collection for economy type beer like Chang beer, for example had to pay total tax THB 16.76 on THB27.2 bottle (61.6% effective rate) and for standard type like Singha at THB 22.75 per THB 36.95 bottle (61.6% effective rate). The premium brand like Heineken and Asahi are priced and taxed slightly higher than the standard as if it is not the true first class beer as shown in Fig 18.

Fig 18: Excise tax, Local tax and Public Health tax : bottle (big)

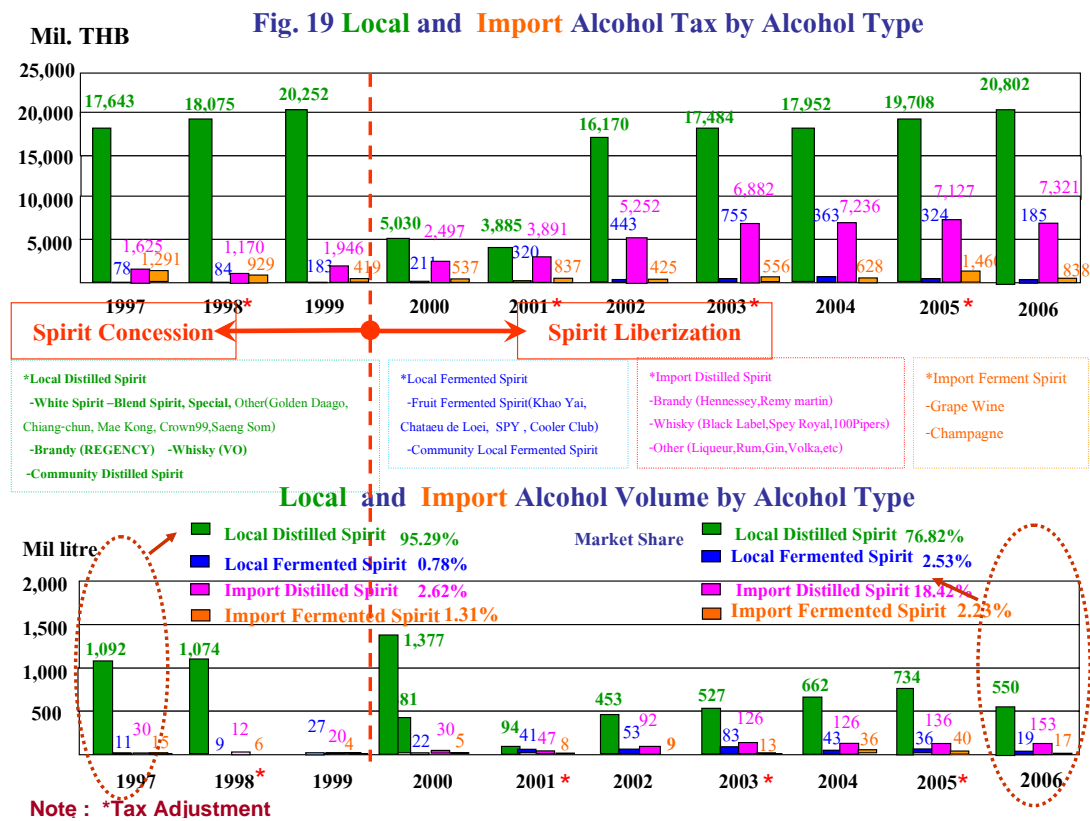


In essence, Ministry of Finance in 2003 effectively *amplifies* Thailand’s beer into three-tier. When Thailand has only **one beer producer with one price**, *Ad Valorem* rate becomes like **volume-based tax rate**. The net effect steadily rises in consumption. But when Thailand has multiple producers and products, *Ad Valorem* or value-based tax *amplifies* the market price disparity into different un-competing tier market. The cheap beer enjoys market expansion from reaching new mass market and “trading down” behavior - switch from expensive to less expensive alcoholic beverage. Consequently, the proliferation of economy type beer sale is well noted as in Fig 14c. One may infer similar phenomenon accounted in distilled beverages and smuggling products as Dr. Nihon et al assert. The *amplifier* for distilled case is the *inclusive tax system* for imported product. Intriguingly given the existing out-of-date

tax structure, the more excise tax rate hike is the more thriving black market with stronger financial incentive to smuggling and bribe.

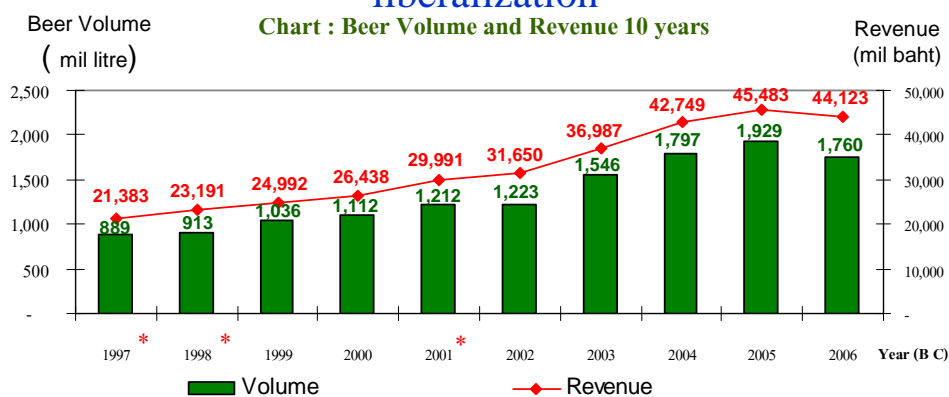
In summary, the alcohol trade and industry liberalization in 2000 has *reshaped* alcohol industry and consumption in Thailand. Simultaneously, the obsolete tax system *amplifies* and distort market in three major impacts are as follows:

First, excise tax revenue on alcoholic beverage drastically increases. This is despite the tremendous drop in distilled production for the first year due to “hold up” huge inventory by the largest supplier to deter the new comers as shown in Fig. 19. Prior to the liberalization, the local distilled spirit, namely white spirit is the major alcoholic beverage type.



Because government measures are in spirit of free market approach, the overall alcoholic beverages market has been expanded considerably. The sale of cheap beverage with high alcohol content from cheap beer, white liquor and import whisky has proliferated as evidence on Fig 20a (beer), 20b (white spirit), 20c (brandy) respectively at the expense of whisky blend production in Fig 20d. In 2008 the excise tax revenue on alcoholic beverages has climbed to the record high of THB 90,281 million or 32.4% of total excise tax revenues. This is due largely to the boom in low-cost beer and aggressive beer marketing and promotion campaign to increase consumption. Most beer products are now domestically produced. What remains unanswered here is at what high level of social cost.

Fig 20a : Beer Consumption & Tax before & after liberalization



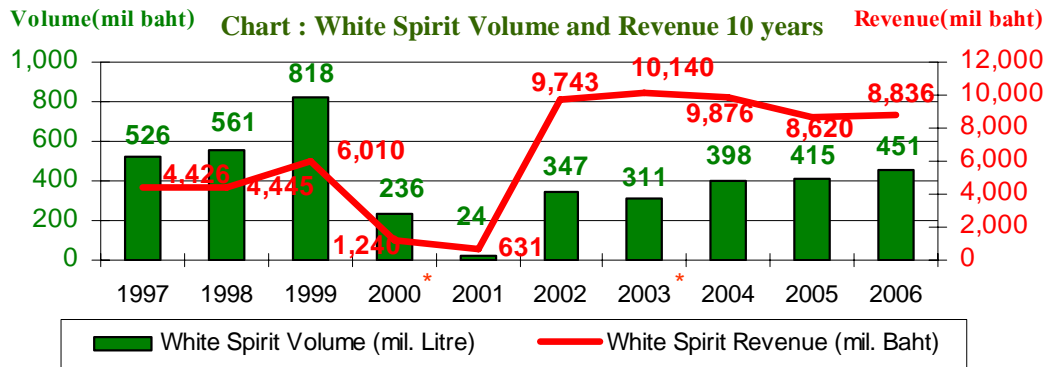
Note : Beer Tax Adjustment

Beer Tax Change from Past to Present Table

Tax Ceiling		Dec 1991		Oct.1997		Feb.1998		Mar 2001	
Ad Valorem (%)	Specific Tax* (baht/litre)	Ad Valorem (%)	Specific Tax* (baht/litre)	Ad Valorem (%)	Specific Tax* (baht/litre)	Ad Valorem (%)	Specific Tax* (baht/litre)	Ad Valorem (%)	Specific Tax* (baht/litre)
60	100	48	100	50	100	53	100	55	100

Note : * Baht/Litre Pure Alcohol

Fig 20b : White Spirit Consumption & Tax before & after liberalization



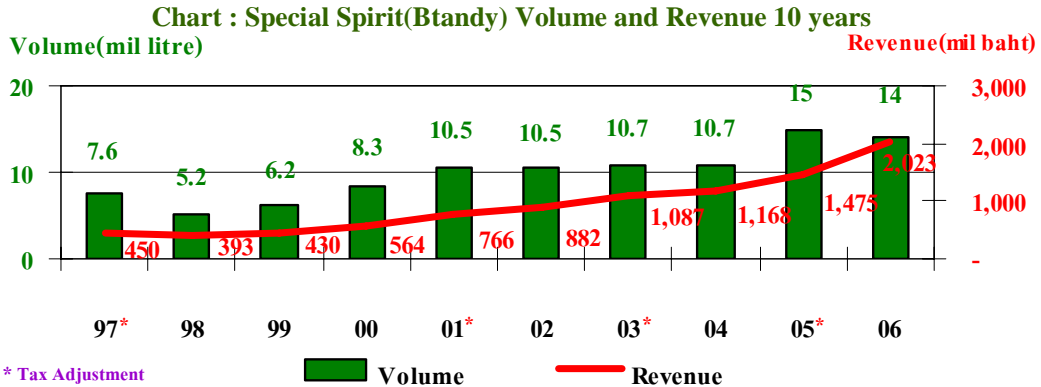
Note : * White Spirit Tax Adjustment

White Spirit Tax Change from Past to Present Table

Tax Ceiling		Dec.1991		Mar.2000		Jan.2003	
Ad Valorem (%)	Specific Tax baht/litre**	Ad Valorem (%)	Specific Tax baht/litre**	Ad Valorem (%)	Specific Tax baht/litre**	Ad Valorem (%)	Specific Tax baht/litre**
50	400	-	30	28	100	25	70

Note : * Baht/Litre Pure Alcohol

Fig 20c : Brandy Consumption & Tax before & after liberalization



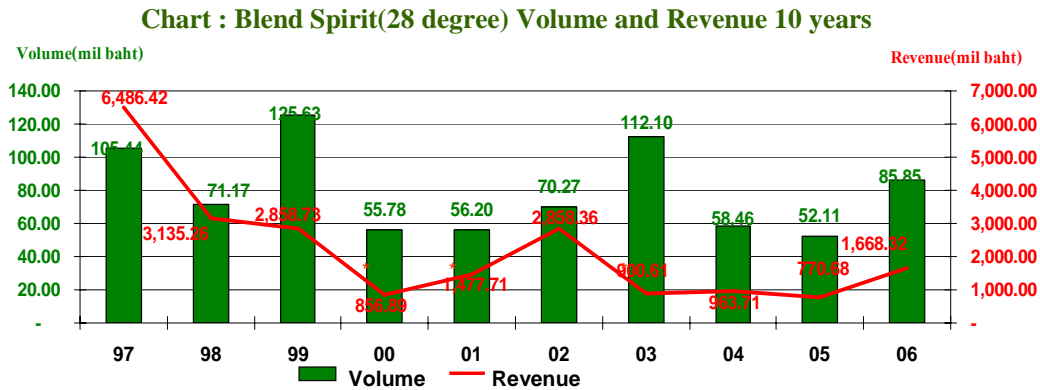
Note : * Tax Adjustment

Special Spirit(Brandy) Tax Change from Past to Present Table

Tax Ceiling		Dec .1991		Oct .1997		Mar .2001		Jan 2003		Sept 2005	
Ad Valorem (%)	Specific Tax* (baht/litre)	Ad Valorem (%)	Specific Tax* (baht/litre)	Ad Valorem (%)	Specific Tax* (baht/litre)	Ad Valorem (%)	Specific Tax* (baht/litre)	Ad Valorem (%)	Specific Tax* (baht/litre)	Ad Valorem (%)	Specific Tax* (baht/litre)
50	400	20	100	25	100	30	190	35	240	40	400

Note : * Baht/Litre Pure Alcohol

Fig 20d : Blend Whisky & Blend Alcohol Consumption & Tax before & after liberalization



Note : * Blend Spirit Tax Adjustment

Blend Spirit Tax Change from Past to Present Table

Tax Ceiling		Dec .1991		Mar .2000		Mar.2001		Mar .2003	
Ad Volarem (%)	Specifix Tax baht/litre*	Ad Volarem (%)	Specifix Tax baht/litre*	Ad Volarem (%)	Specifix Tax baht/litre*	Ad Volarem (%)	Specifix Tax baht/litre*	Ad Volarem (%)	Specifix Tax baht/litre*
50	400	35	60	35	150	45	240	50	240

Note : * Baht/Litre Pure Alcohol

The second impact is the market power. In contrary to classical free market belief, after liberalization and heavy marketing and promotion campaign, the alcohol business is more concentrated in handful of families. Under concession regime, there were 12 different distilleries with different owners for different zones until the last day. From the liberalization, there were 29 major producers and about 5,200 community producers. Nearly all community producers have given up their business due mainly to the lack of economy of scale and scope and financial strength to compete with a large corporation. Those that survive are selling their production to the large corporation with market power. At present nearly all distilled alcoholic beverage suppliers are practically consolidated into one group – ThaiBev for distilled products and into two groups in case beer to include BRB.

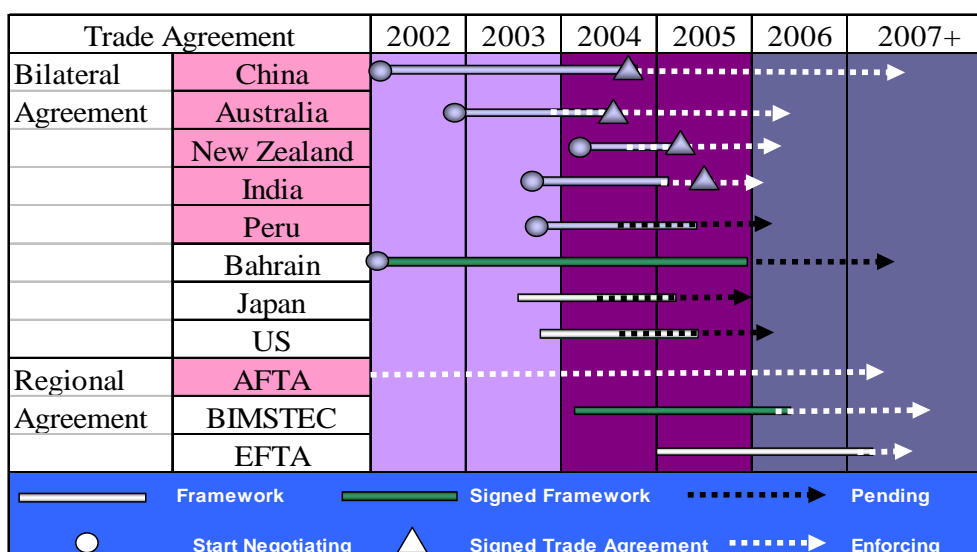
Finally, the disturbing impact is the consumption distortion and “trade down” behavior on cheap beverage with high alcohol content as evidence by Fig 20 a, d. Without doubt the current excise tax structure *distort* market and *amplify* the comparative advantages among products and suppliers because the specific rate or alcohol content based tax rate was useless from the date of enactment in 1991. The more government hikes tax rate, the higher people consume alcohol (as shown in Fig.

20 a, b, c and 14c). Implicitly with the existing tax regime is *amplifying* and *distorting* the market. People have more incentive to “trade down” and to drink cheap beverages with high alcohol content from smugglers and illegal operations along with oligapolistic suppliers.

In economic sense, alcoholic beverages *market failure exists* after alcoholic industry liberalization. The production or use of good and services by the market is not efficient in term of social welfare enhancement. Agents in the market gain market power. Furthermore, the actions of these agents create negative externality (e.g. rapid increase in alcoholic consumption, rising alcoholic addicts and related disease, etc.) that does not reflect on *market price*. Worse, these *negative externalities* are burdens to government and paid by taxpayers. Thus, the government has the right to tax and to regulate this industry prudently. The government must get out of business of magnifying business segmentation and learn to balance economic gain from the industry at the acceptable social cost.

4. Trade Agreement and Its implications for Thailand: Currently Thailand engages trade agreement to liberalize alcoholic beverages with 8 bi-lateral agreements and 3 regional agreements. Some bilateral agreement transform to regional agreement such as Asean + 3 as summarized in Fig 21. Nearly all, if not all, trade agreements will eventually cause Thai government to collect less import tax and tariff as *cross border* taxes and barriers are converging to zero. Many developed countries lower their import tariff and gain revenue from the direct taxation. For developing countries like Thailand, *within border* tax and consumption-based tax are usually deployed as the main and reliable sources of government revenue since tax from international trade activities are diminishing and income tax is volatile and pro-cyclical in nature.

Fig 21: Thailand and various trade agreement timelines



Source: Department of Trade Negotiation, Thailand. www.DTN.go.th as of 2008

Thailand was an AFTA member since 1991. According to AFTA-CEPT, Thailand agrees to reduce tariff to 0-5% among members within 6 years. This includes alcoholic beverage and tobacco to be traded freely within its regions. Thailand had also experienced the trade liberalization once after join General agreement on trade and tariff (GATT) in 1982, but the impact was not material. However, when AFTA will become ASEAN Economic Community (AEC) in 2012, all members will experience no cross boundary trade. That is to say any commodities can move freely from one member to another.

In 2001, the import distilled spirit, more often than not whisky played more roles in distilled spirit market as the direct result of the liberalization and AFTA trade impact. With short period of 7 years between 1999 to 2006, the import distilled had leaped more than 7 folds or from 20 to 153 million liters. Despite of 30 percent decrease in domestic distilled production during the same period, the distilled, specifically white spirit from local and whisky from import is still very popular.

One good preview example is the surge in imported alcoholic beverages to Thailand in 2002 from AFTA members. The importers just take advantages of zero import duty and tariff in force as evidenced in Fig 22. Distinctively, it was reported most of the surges are from Philippines since as AFTA member Philippines pay 5% import duty as opposed to WTO bound rate or 60% rate for non-AFTA source. Hence, reportedly Philippines has imported the Spray Royal (known as secondary whisky) and master blend (Special spirit) from Europe and then re-blend, re-bottling and/or re-labeling for export to Thailand. From the good old days to the present, this has normally been transshipped at the “duty free” port(s) oversea for “re-invoicing” purpose. As international trade liberalization propagates and the trade agreements become operational, **the flood of addictive substance** - cheap beverages with high alcoholic content, namely imported beer (and tobacco) are anticipated, particularly after 2012. It is mind-boggling what the future would be like when all trade agreements are in force as we have just learned from painful experience of our own domestic alcoholic liberalization in 2000.

Fig. 22: Effect of AFTA: Increase Import from ASEAN

Sources of imported alcoholic beverages of Thailand by regions (Million Bahts)

Sources	2000	2001	2002	2003	2004
World	4,177	4,587	5,097	6,064	6,147
ASEAN	34	140	172	903	1,236
EU	3,375	3,645	4,115	4,564	4,323
USA	107	130	78	100	111

*Source of data: The data from the Information and Technology Center with cooperated from the Custom Department, Thailand

CAS

Undeniably trade openness is always linked to alcohol (& tobacco) consumption. Addictive substance is easy to sell. The more open, the more liberal, Thai is the more abuse and exploitation for big profit from MNC will be. According to Brenner (2004), GATT (1990), for example, ruled Thailand violated international trade rules when Thailand restricted on import US cigarettes that contained chemical and other additives in US cigarettes more harmful than those in Thai cigarettes. In a few words, US are selling *higher nicotine* or addictive substance to Thai people more than it should against what Thailand's Public Health advised (and more than at US home market). Fast forward, in June 2009, another case appealed from US giant cigarette suppliers (Philip Morris) is, now, pending in WTO hearing. Thai authority allegedly has charged US giant for "under-invoicing" its product and potentially fined over THB 2 billions. Similar stories can also be found in alcoholic beverages and other products. There are too many to mention. The real issue is whether Thai government has priority commercial interests over health issues. Or the government has no explicit policy on alcohol and just muddle through as one administration comes and goes. Public health must be no more burdensome than necessary to generate jobs, income and tax from alcoholic (and tobacco) industry.

In addition Thailand's classification is not generally accepted among WTO nation members since this liquor tax is classified the alcohol beverages by production. Globally the WTO classifies the alcoholic beverages into 5 main types: beer, wine, whisky, brandy, Vodka, and other. WTO's Dispute Settlement Body had examined and ruled many cases in late 1990's that Sake (Japan), Shochu (Korea) and Pisco (Chile) fell into the same special liquor like Vodka (Russia) and other home made products. These rulings were done at the request(s) of European Communities (EC) first, USA subsequently and other mature economy later (at the request of MNCs)¹⁵ under Article XXII of the General Agreement on Tariffs and Trade 1994 ("GATT") concerning the internal taxes levied by their respected countries. It may be inferred that the world are paying much attention on the two most popular alcoholic beverages business – 1) beer and 2) white spirits or Vodka types.

¹⁵ See more details at WTO report of the panel no. WT/DS8/R on July 11, 1996 for Japan case; no. WT/DS75/R on September 17, 98; no. WT/DS87/R on June 15, 1999.

The corollary is Thai white spirits highly likely fall in the same category of Vodka as shown in Fig 13. To comply with WTO and other international standards, classification on alcoholic beverages and tax rates must be simplified soonest to prepare for the eventual effective trade agreements. Under the principle that is competitive product must have the same tax burden, the white spirit should have same tax rate as special spirit such as Vodka and Gin classified in subset of distilled spirits other than whisky and brandy, which is THB 400 per liter and 50% *Ad Volarem* rate, not at the low current THB140 per liter. The white spirit may be perceived as the value added from agricultural product, but most of white spirit uses molars as raw materials, which is by product from sugar industry. This is not pure agricultural after all. The production is seemed to be industrial rather than the community wisdom.

Another implication is we need to administrate our tax system productively. The tax control and administration system with advance information technology is needed, not just to identify the smuggling commodities, but also close fiscal gap. The primary sources of government income will basically be direct taxes and domestic taxes, especially value added (VAT) and excise taxes. The excise tax is a selective consumption tax on selective commodities and services. If implemented prudently, the excise tax control system will have additional and valuable information to plug the tax avoidance loopholes for other tax types like VAT and income tax. Beside, as mentioned earlier, the excise tax can be a good and reliable source of revenue and discourage undesirable economic activities and moderate certain consumption like alcohol under a new tax structure.

In short, globalization has impacted on alcoholic beverage business and tax collection in Thailand. Tax codes must be harmonized and re-classified. A new and simplified excise tax structure is needed for the government to handle tax revenue collection at less social cost.

V Potential Tax Leakages & Fiscal Gap:

The ongoing global recession parallel to the Great Depression in 1930's highlights the need for the government to use fiscal measures to stimulate its economy. As the economy plunges, the tax revenue would sharply decline and the fiscal spending has to be more sensible. To fill in the fiscal deficit gap, one has to consider both increasing revenue and reducing expenditure with minimal negative externality and social cost.

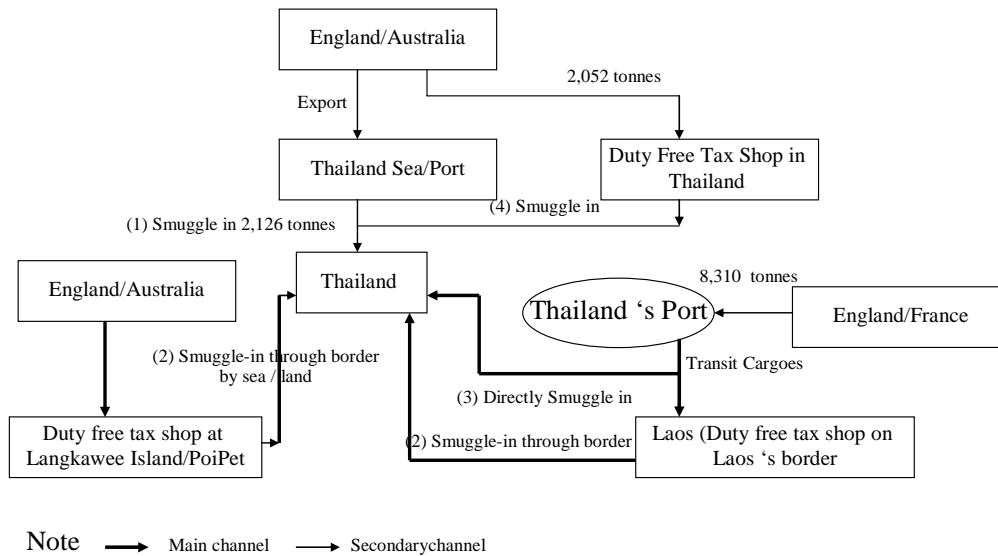
1) “Potential Tax Leakages from Illicit Alcoholic Beverage Trade”:

Alcohol taxes regimes have been designed, evolved and collected in concession era since 1950. The original objective of excise taxes on alcohol fundamentally was to maximize amount of tax revenue collection with little or no public health concern. It was also aimed to protect national interests and domestic alcohol in term of import substitution policy. They are designed to regulate and physically control the alcoholic beverage activities. With domestic alcoholic industry liberalization and soon various free trade agreements to be in force after joining WTO and AEC, the objectives, mode and mean of this tax region must be evolved.

1.1 Smuggling & Whisky: Alcohol beverages are subjected to 5 different taxes – excise, health, TV, VAT and tariff for import product only as shown in Fig 16 a and b. With highly distort inclusive tax calculation for import good based on *Ad Valorem* or value of product. This creates one of the two major tax leakages by **under-invoicing and smuggling** to take advantages of this disparity. From personal interviews with authorities and import export data reconciliation from UN, Dr Nipon et al (2006) claims that over 10,000 metric tonnages of alcoholic beverage, mostly blended whisky were brought into Thailand illegally from UK and Australia alone. Fig 23 displays the smuggling channels to Thailand. Fig 24 next indicates the drastic trend increase of the volume of the imported alcoholic beverages from the “duty free” shops. In 2005 the duty shops sell more than 80 million liters of the beverages to be brought into the country with 60 million populations. This amount represents more than half of the official import product through custom. Since the smugglers invade at least 5 different tax codes, the estimated leakages are in the multiple of THB ten billions. Law enforcement for “under-invoicing” is challenging with burden of proof.

The government is basically running against MNCs and WTO rule like in cigarette case mentioned formerly. Smuggling is difficult to control due to long-border line with our low-income neighbors.

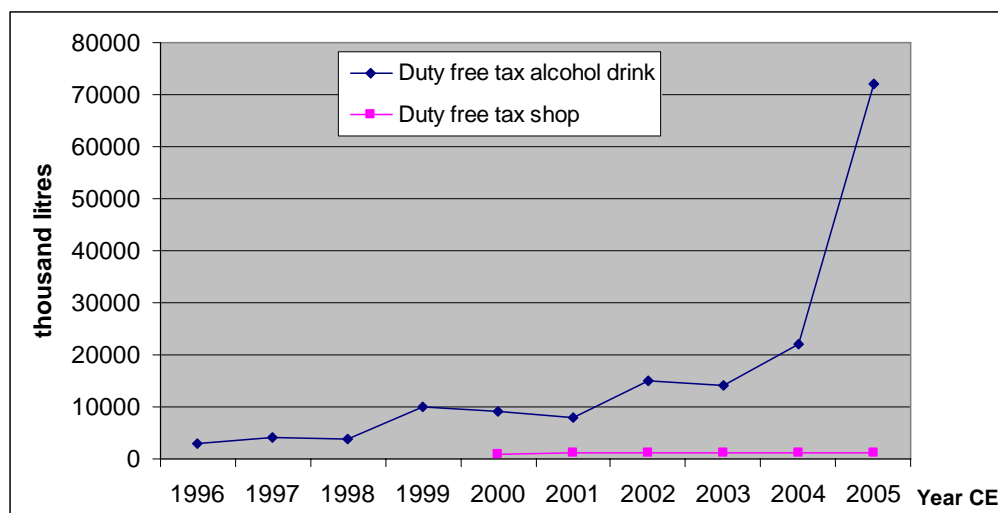
Fig 23: Smuggling Channels of Alcoholic Beverages to Thailand and its estimate in 2005



Source : interview to Alcohol beverage wholesale , custom officer and excise office

Source: Nipon et al (2007, Chart 6.6 on p. 6-11)

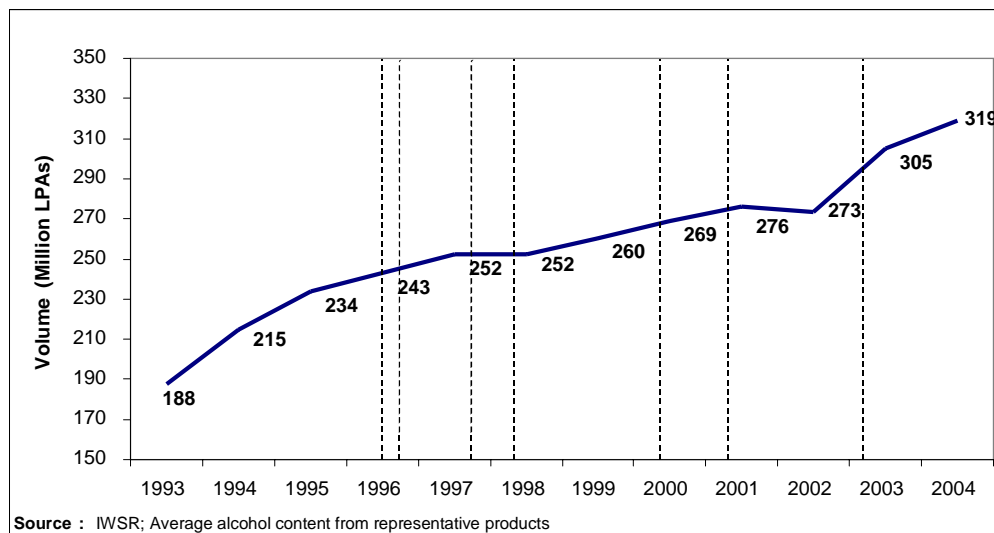
Fig 24: Volume of Alcoholic Beverages imported by “duty free shops” to Thailand



Source: Nipon et al (2007, Chart 6.7 on p. 6-12)

The most fascinating part is the government has hiked the excise tax rate for alcoholic beverage 7 times during 1996 and 2004, but the alcoholic consumption per capita per year has leaped at the increasing rate as shown in Fig. 25. The latest tax hike is in May 2009. It is likely to fuel another boost of this illicit trade unless and until a new and simplified tax approach is adopted to cope with this situation. Once more the primary reason is the inclusive tax and unrealistic high tax based on CIF invoice (*Ad Valorem*) provides strong incentive to smuggling and corruption.

Fig 25: Volume of alcohol consumption since alcohol tax Adjustment 1993-2004 AD or 2536 – 2547 BD.



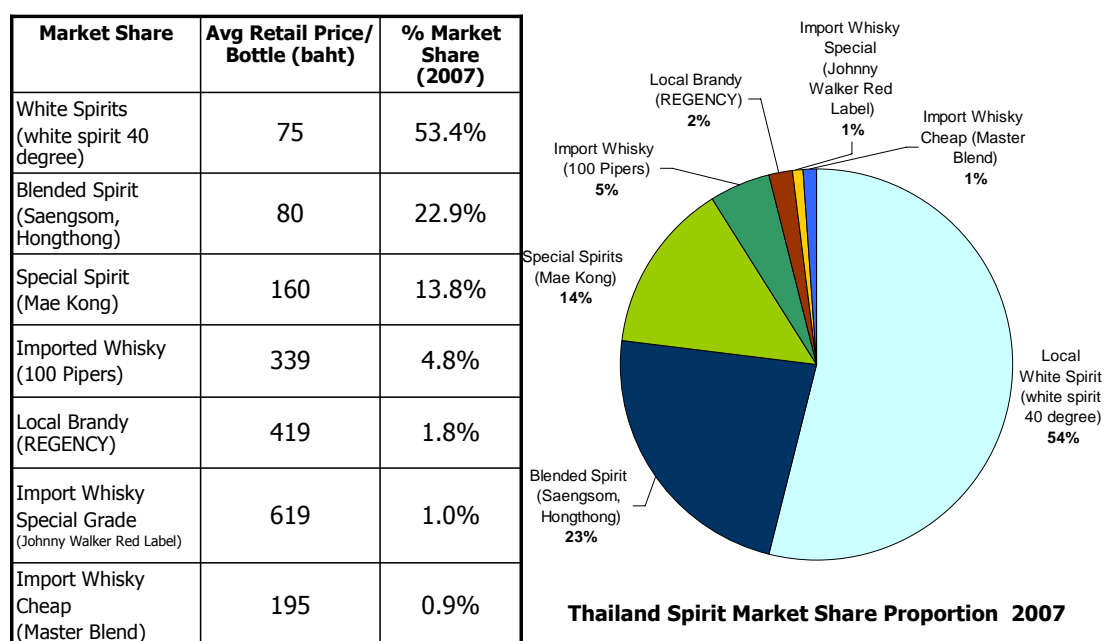
Source: Nipon et al (2007, Chart 6.3 on p. 6-7)

1.2 Illegal Production & White Spirit: Another main source of tax leakage is from unlawful local production. The most popular drink in Thailand is the white spirit and follows by the distant second - blend whisky as indicated in Fig. 26. The blend whisky like John Walker, Black or Red Label is common for smuggling because it is not easy to produce and high tax amount per bottle. But the choice for illegal production is always white spirit because it is so easy to make. One can do this, even in a bathtub. There is no need for blending and no waiting to age like whisky and beer. Addicts crave for this low-priced drinkable alcohol. For any white spirit producers, the fundamental problem is to have an extensive network to sell and to deliver this highly concentrate pure alcohol to the mass. That is why nearly all-local

community producers that can survive commercially choose to sell their white spirit product to the large distilleries for *reprocessing and resale*.

It is interesting to note that despite of the tax on white spirit per bottle is quite low – THB20, there is still incentive to evade. The main reasons are the sheer volume and low white spirit selling price. The illicit white spirit may cost about THB20 per bottle in comparison to legal product at THB 40 to 50 per bottle. At this dirt-cheap alcohol, it can penetrate the poor and have-not in rural area. Then, the real challenge is **logistic and distribution**.

Fig 26: Blended Spirits and Special Spirits are 37% of Total Distilled Spirits Production



1.3 Distribution Channels of Illicit Alcoholic Beverages: It is imperative to note that all alcoholic beverage including the smuggling products are primarily distributed into 3 channels: the traditional mom & dad store (or “Cho Huay”), modern store (or convenient stores) and restaurant, bar and pubs. Owing to the past alcohol industry liberalization and free market thinkers, one may obtain the liquor selling license at mere THB 10 cost in 10 minutes.¹⁶ There are over half millions numbers of

¹⁶ To be precise, the applicable rates of license vary from 10 to 7,500 THB/year according to selling local and/or import alcoholic beverages product and the quantity of sale requested in one year.

such licenses of which 85% for import sale permit in Thailand. Or about 1 license is for average 120 persons – kids or adults in Thailand. About 8% or 41,469 licenses are for Bangkok in 2008 and the rest are for other provinces. Out of the total are for 3,500 franchise stores (e.g. Lotus, 7-11, etc), over 5,000 entertainment services (e.g. pub and bar) and the rest for traditional stores and restaurant. (See more details at Fig 27 a, b). Indeed, our services sector is substantial as discussed earlier and shown in Fig 8 b& c.

Fig 27a: Number of Liquor Selling License in Thailand

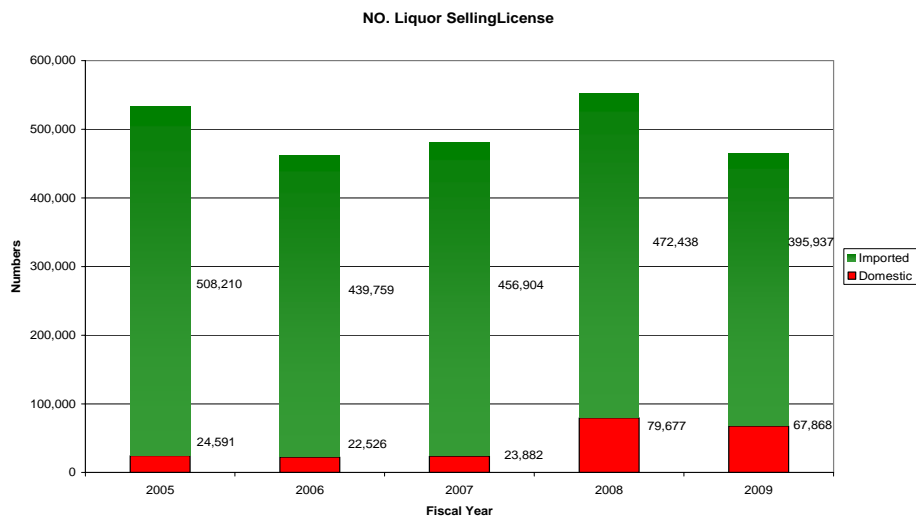
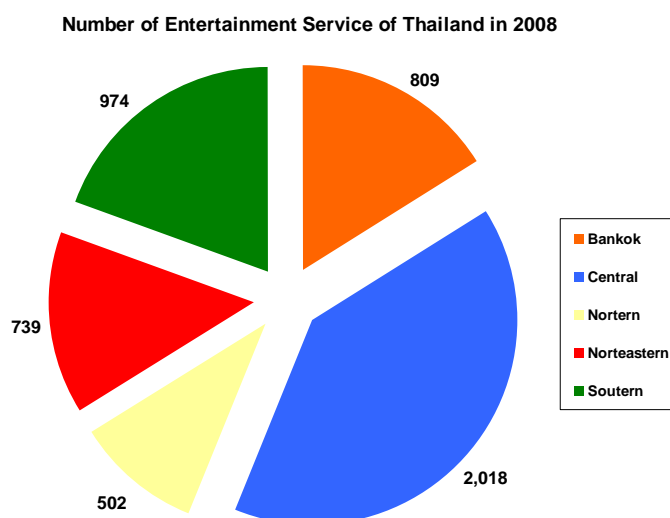


Fig 27b: Numbers of entertainment services of Thailand in 2008



Source: Department of Public Administration, Ministry of Interior (2008)

Because the excise tax administration process of alcoholic beverages has not changed over time, all processes have been aimed for concession-based distilleries. Physical controls like physical inventory counts, transport restriction and others, for example, are among the prominent measures to plug tax leakages. After the alcoholic industry liberalization, these administrative measures are inadequate. Financial audit and money trails validations are also the most important tools to counter all illicit trades, not just for alcohol. Unlike the Revenue Department for income tax, the Excise Department has no juristic authority to inspect any suspicious books. Undeniably, the reality check is needed. Rules and regulations have to be changed and adopted with time. Otherwise, illicit alcoholic beverage trades and outlets are running wildly across nation.

1.4 The Estimated Annual Forgone Taxes: There are two primary leakages of the foregone tax revenue from the alcoholic beverages - direct and indirect. The direct foregone tax revenue is excise and local taxes derived from 4 major sources: beers, white spirits, imported whisky and imported wines. The indirect foregone taxes are other taxes related these alcohol types such as health taxes,

TV taxes, VAT, and income taxes. Typically, the rule of thumb is for every foregone THB, about 10 % more of these related tax are missing.

Nevertheless, the major leakage of all is from the current inadequate excise tax structure and administration is equivalent to about **THB 17,200 to 20,200 millions** per year. Out of which over THB 13,000millions is from non-sensible different beer prices (See Fig 18 & 33) and the rest are from distilled spirits. Roughly other related taxes are 10% of the excise taxes equate to about THB 2,000 to 2,200millions. This estimation is based on the income tax withholding. Thus, the total tax leakages from *the inadequate tax structure* are about **THB 21,000 to 24,000 million** per year.

For import whisky, Nipon et al (2006, p. 6-10 to 6-12) claim that the 10,000 tons or 10 million liters is smuggling into Thailand annually via various ports and duty free shops. Given the 10mil liters equal to 13 mil bottles and the average tax per bottle of import whisk is THB 250 to 300, the total foregone excise tax alone is between **THB 3,300 to 4,000 millions of excise tax revenues**. Over half of whisky consumed at the entertainment established is illicit as Nipon et al uncover. The rough estimation of the foregone tax for other tax would be another THB 400 mil. Thus, the total leakages from the *importing whisky* are **THB 3,700 to 4,400 millions** annually.

For white spirit, the total productions that are officially acknowledged are approximately 450 mil liters per year. Of which 14% or 60 million liters is from local community production. In the latest survey report on “Impacts of alcohol control measures and alcohol taxes increase”, Nipon et al (2009, p. 23) claim that 90% of the community white spirit productions do not pay any tax. So its foregone revenue is about **THB 3,200 millions**. The ballpark estimation of the foregone tax for other tax would be another THB 400 mil. Thus, the total tax leakages from the *white spirit* productions are *conservatively* estimated about **THB 3,600 millions**.

For wines, since the market size is still elementary, there is no study estimate the size of this illicit trade. The total tax, however, is about THB 1,000-1,200 mil per year or 10-12 mil liters. Due to the high *Ad Volarem* tax rate, many studies claim that most of the premium wines are hand carry or smuggle around border as the cases of import whisky. None of the study mentions any evidence in tax evasion

despite of its potential growing market segment. The most interesting part is the domestic winery is at the disadvantage to the import one because the local production cost and prices cannot be under-declared easily unlike the import under invoicing.

To sum up on the above, about THB 30,000 millions are estimated to be leaked out per year due predominantly to illicit trade and inadequate tax structure and administration. This does not include the potential income tax and VAT gains from pressuring all retail outlets, especially restaurant, bar and pubs to officially report their cash transaction on food and other services to be in line with the new alcohol tax trails. The numbers are conjectured to be in multiple billions.

2) Potential Fiscal Expenditure Leakage from “The Health of Our Nation”: Universal health care coverage (UC) scheme or “*pakan sukphab*” for everyone was implemented on April 17, 2001 after 27 year of waiting since health financial protection bill.¹⁷ The idea is any Thai citizens with proper UC identification card can have any health care treatment for free. There are at least 46 million people registered to gain access to this health care. In fiscal year 2009, over THB 108bn was budgeted out of total budget of Ministry of Public Health. On average, the budget is allocated THB 2,317 for each registered person to the public hospitals and about 700 participating private hospitals or contractors. At this rate, over 25% of public hospital are reportedly in financial trouble. There will be little or no re-investment in the public health care system due to the lack of funding.

Health-care industry is labor intensive. The more the hospital does, the more people are needed, especially from highly trained medical doctors and nurses. Unfortunately, this is a luxury that Thailand cannot afford due to serious shortage of medical doctors and well train personals. In 2004, there ratio of the medical person to population is 1:3305 for Doctor, 1:15,143 for dentist and 1:652 for nurse. The numbers has worsen after UC implementation, namely in regional area as the demand and utilization of UC soared as shown in Fig 28. No abatement is in sight.

¹⁷ This universal health care program was widely known as “the 30 baht health care” scheme initiated by PM Thaksin Shinawattra. The idea was anyone can get any treatment and prescribed medicine for a mere 30 THB registration fee. Later in 2007, the registration fee was waived due to high administrative cost to book these fee collection.

Fig 28: Increase Demand & Utilization under UC during 2003 to 2004

Increase Demand and Utilization

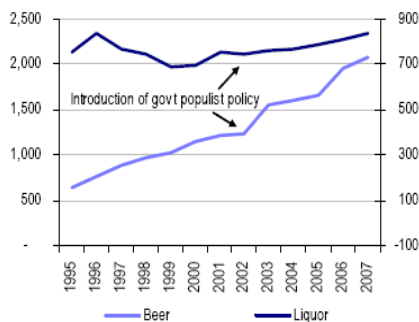
- Utilization is increasing for both out-patient (OP) and in-patient (IP)
- Utilization is shifted from provincial hospitals to primary care unit and district hospitals

Level of care	OP million visits			IP million admissions		
	2001	2003	2004	2001	2003	2004
Primary Care Unit	29.7	43.7	63.8			
District hosp.	19	36.7	46.2	1.1	2.1	2.2
Provincial Hosp.	24.5	14.8	20.1	2.1	1.4	1.8

source: NSO HWS2001, 2003 and 2004

One European investment banker observed casually that the populist policy to stimulate rural economy had improved the sales of low-end beer and white spirit (up to 25% yoy) as shown and discussed on Fig 29 in the post liberalization.

Fig 29 : Healthy beers and spirits sales post populist policy (2002)



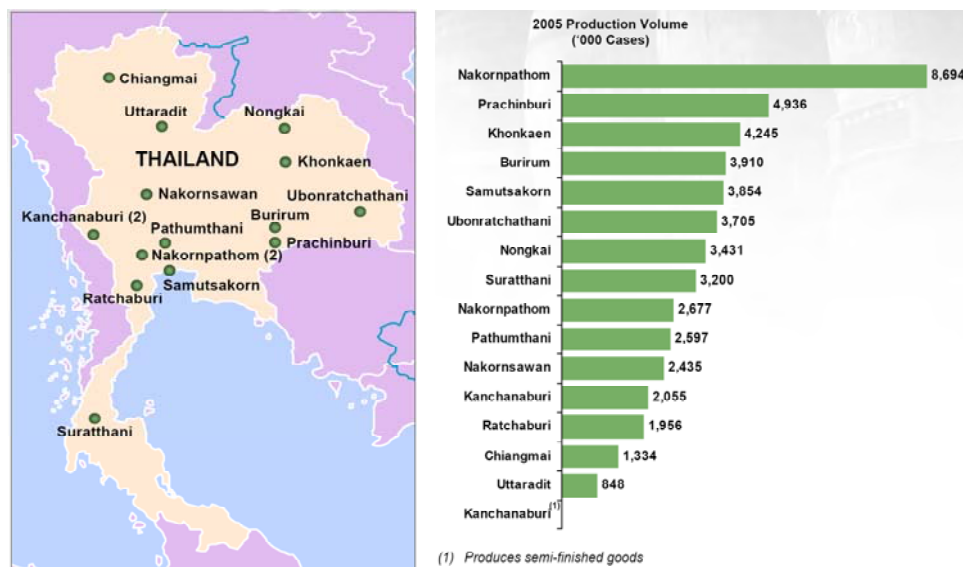
Source: Bank of Thailand

Source: UBS ()

- We believe sales of low-end beers and spirits would improve as the new government aims to stimulate rural economy coincided with the alcoholic industry liberation.
- Three key policies planned to implement in the near-term are village fund, government loan and farmer debt reduction.
- We think these policies would improve rural consumers' income (especially low-end workers and farmers) and could lead to higher spending on low-end beer and spirits in the rural areas.
- We note that the introduction of the village fund policy and economic growth back in 2003 resulted in a strong volume growth in beers (+25% y-o-y).

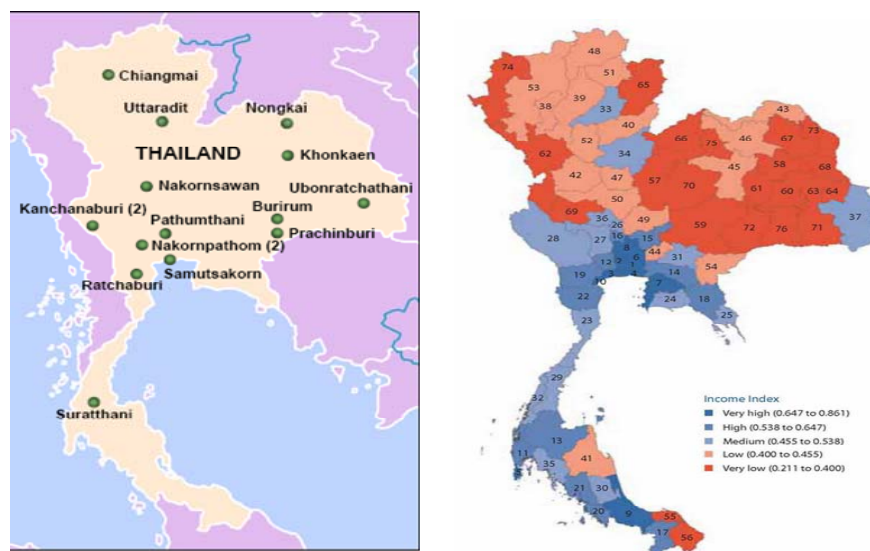
It is obvious that ThaiBev distilleries locations are strategically located mainly in North and North Eastern Thailand as shown in Fig 30a. Majority of these distilleries are conveniently located to serve the poor and poorest region of Thailand if one examine closely between the two maps of UNDP Income Index Map against ThaiBev’s production lines as evidenced in Fig. 30b. It is intriguing to learn that ThaiBev had only one factor for wealthy Southerners. The exact estimated correlation between the alcohol consumption and the disease related to the poor region is not known, but one can conjecture to be very high.

Fig 30a: ThaiBev: 16 Distilleries in Thailand as of 2005



Source: http://thaibev.listedcompany.com/misc/presentations/others/ipo_presentation.pdf

Fig. 30 b: ThaiBev: 16 Distilleries in Thailand and UNDP Thailand Income Index (2007)



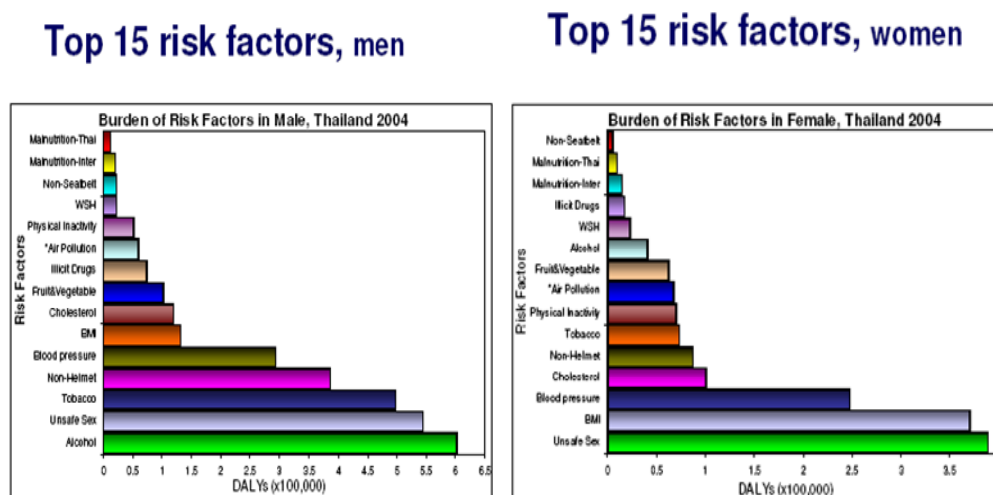
Source: http://thaibevev.listedcompany.com/misc/presentations/others/ipo_presentation.pdf
And Thailand Humand Development Report 2007 by UNDP

Generally we all agree that the more alcohol content, the more harmful is. In 2008, alcohol has now replaced “unsafe sex” to be the highest risk factor for Thai men, while tobacco comes in third as showed in Fig 30a. Normally people also agree on the health care industry mainly afflicted by chronic cost disease, especially alcohol and tobacco related. Burden of these diseases are the total significance of disease for society beyond the immediate cost treatment. Total DALY loss for alcohol alone is close to 1 million years of life. It is remarkable to note that alcohol and alcohol related risks (e.g. car accidents, liver disease, etc) caused more than 1.25 million year from conservative estimates revealed in Fig. 30b. In economic sense, one can calculate this total loss simply to be equal 1.25 million year DALY loss times the GDP per capita of THB 140,000. Hence, the economic loss on alcohol related disease is roughly about THB 177.73bn per year excluding the loss of human capital, intergenerational support and social cost.¹⁸ The economic shortfall amount is almost double the total excise tax

¹⁸ Given Thailand GDP equaled THB 9,104bn in 2008 by UBS. With estimated population of 64 million, hence, each person contributes or GDP per capita is roughly 142, 250 per year. It is interesting to note the calculation for tobacco alone about 0.65 m year Daly or THB92.4bn and for unsafe sex alone about 1 mill year DALY or THB 142bn though associated diseases and risks are ignored here.

collection on alcohol in 2008. There is a real puzzle on why our fiscal measures are for THB 1 tax, but to waste twice as much

Fig 31a: Top 15 Health Risk for Thai Men and Women in 2008



Source: Thai Health Foundation

Fig. 31b Top 10 DALY loss for Thailand 2004 Total DALY loss 9.17 million years

DALY						
		Male			Female	
Rank	Disease	DALY ('000)	%	%	DALY ('000)	Disease
1	HIV/AIDS	645	12.3	17.7	302	Stroke
2	Traffic accidents	600	11.4	7.5	291	HIV/AIDS
3	Alcohol dependence/harmful use	329	6.2	6.9	268	Diabetes
4	Stroke	300	5.7	4.9	191	Depression
5	Liver and bile duct cancer	295	5.6	3.6	140	Liver and bile duct cancer
6	Ischaemic heart disease	178	3.4	3.5	136	Traffic accidents
7	COPD	176	3.3	3.0	118	Ischaemic heart disease
8	Diabetes	169	3.2	3.0	117	Osteoarthritis
9	Depression	137	2.6	2.9	113	COPD
10	Cirrhosis	133	2.5	2.8	111	Cataracts

Top 10 DALY shares 52% of total national DALY loss

By WHO

In conclusion, what UC does to cover all, is stretching Thai public health care system very thin at the expense of declining in quality of service. To make matters worse is the alcoholic industry liberalization and implicit policy to encourage people to drink cheap beverage with high alcohol content. At the minimum, there is an urgent need to identify geographic, demographic and drinking (and smoking) behavior factors and lifestyle of the local people, alcoholic addicts and alcohol related patients enormously affecting health-care costs and hospitalization. With timely data, reliable information and research based knowledge, health-care providers may improve patient management and to reduce health-care cost by promoting more targeted health-care campaign on district and tambon level. National and regional institutional capacity building is critical to deal with pandemic alcoholic addicts, alcoholic related diseases from research based policy. Translating evidences into policy decision, program, implement and monitor in different rural area, different community needs are the aim of engagement. At national level, equitable distribution of health infrastructure and health staff must be addressed.

VI Policy Discussion and Its Implications:

On the basis of lackluster consumption and at least - 5% GDP assumption with headline deflation of 1.5% in 2009, on March 12, 2009 Citi Group estimates Thailand's fiscal deficit forecast to be 5.3% of GDP or THB 484.7 bn. As the government expenditures increase to THB 1,935bn (up 13.2%), three main sources of tax revenue are down significantly. VAT revenues fell 16.4% yoy (year on year) and 25% yoy in Jan and Feb 09 as it suffers from nominal GDP base declining by 3% and CPI down. Excise taxes in total plunged by 32.6% yoy in Jan and by 12.5% yoy in Feb since all tax collection on tobacco, alcoholic beverages and automobile all posted declines due to lower consumer spending. Though government is able to access fiscal borrowing from the local market with little debt constraints, the revenue shortfalls will not have a major feedback on the real economy side.

To think alcoholic beverage is good business and to hike "sin tax" on the alcoholic beverage is politically fine for government coffer. This is really anything, but too simplistic and one dimension to resolve fiscal deficit gap. Below are more

discussion on how to increase government tax collection and to reduce public health-care expenditure and social cost with little or no tax increase.

1) Alcohol, no ordinary commodity & Market Failures Implications:

Alcohol is addictive substance that need to be administrated. Alcohol industry is also natural oligopolistic because it has high political involvements and requires economy of scale in marketing and distribution. Liberty to all stakeholders in alcohol industry in late 1990's has tremendously increased alcoholic consumption in Thailand. The market price mechanism on these practically drug-like products fails to reflect the *negative externality* of these social costs that eventually are responsible by the government and taxpayers. *When market fails* to correct this negative externality, the government has *a right to intervene*. *When the market prices do not reflect the true social cost*, the government has its *duty to tax* and to re-distribute for social welfare enhancement. The basic business concept and free market approach to this industry may appear sensible, but not sufficient conditions for national policy implications.

After the alcoholic beverages industry liberalization, fierce marketing and promotion campaign, price cut and good bundling tactics are among fine examples of business activities to expand market and to leap profit. Price has come down or more cheap products are available for every market segment, namely the mass and the poor. Many “premium or fee-bee” at the point-of-sale are now fancy and plentiful. Massive advertising, give-away and direct sale by “pretty girls” are also common. **Those who don't drink** make *rational choice* to be addict and try to get high because of easy access and high temptation. **Those who chose to drink** casually making *mental disorder* to drink more if they can afford it. Those who are heavy drinkers become addicts and have *disorder choice* since they seemingly cannot live without it. (See Fig 5) Once one becomes addict. Only cheap beverages with high alcohol content matters. What is alarming is these cheap high alcoholic drink is clearly dominated the market at the increasing rate. In few words, we will have more alcoholic addicts at frightening rate if we do not restrain and administrate these vicious cycle.

A hike in “sin tax” or “alcohol (and tobacco)” tax rate is supposedly to push the alcoholic beverage price up and to reduce its consumption as its basic economic dictates. But in reality the reverse is true. A series of “sin tax” hikes over the last 15 years has all resulted in more alcoholic consumption per capita per year as

argued earlier and evidence in Fig 25. The latest round of “sin tax hike” in May 2009 is not going to be any different. It is just another round of booth to increase cheap alcoholic beverage sale via illicit trade. Though the excise tax collection from these beverages has increased considerably, so does the social and health care expenditure for related problems. As expositied previously, in essence, Thai government is earning 1 THB in alcoholic beverage tax, but lose 2 THB on alcoholic related disease causes.

There are at least two primary reasons why hiking “sin tax” rates do not slow down the consumption. First, the existing excise tax structure is obsolete. It has long distorted the market. Hiking “sin tax” rate is like *amplifying* the disparity of comparative prices between products and suppliers. Unrealistic inclusive tax rate gives incentives for corruption, smuggling and illicit trade in alcoholic beverage. Out of date excise regulations also make corrective measure and oversight not feasible. Second, any policy-making decisions on alcoholic beverage industry based the free market belief and business concept is imprudent because alcohol is no ordinary commodity with addictive drug like property. After the industry liberalization, all alcoholic beverage suppliers compete freely for market. Alcoholic beverages of all types are now readily available everywhere. The initial no restriction on promotion and market campaigning are awesome to expand the addictive substance market. When government hikes the tax rate, alcohol addicts and drinkers just “*trade down*” for cheaper beverages of high alcoholic content like thrift type beer, white spirit and smuggling whisky. The captive demand and craving have to be served somehow. If the official channel is not affordable, the demand for illicit trade will skyrocket.

In sum, alcohol is no ordinary commodity. Because of its addictive substance and the nature monopoly industry character, the government has the right to regulate and to tax and a duty to protect public interests and wealth. We strongly recommend the government to tackle the fiscal deficit gap from both income and expenditure perspective, namely on alcoholic beverages. On a macro level, the Nation Alcohol Policy with key policy parameters may be needed. To moderate on growth and the total consumption of pure alcohol per capita, to protect young, children and the unborn child, to increase export volume target, to set excise tax collection proportionally to alcoholic content, to reduce the expenditure on alcoholic related disease and to make policy decision based on research and quantitative analysis are

among fine examples that may be included in the policy. Alcohol for alternative fuels may be considered in conjunction to balance out consumption excess. The ways and means on how to achieve these agenda may be discussed and followed next.

2) Tax Rate Policy Implications:

Beer, winery and distilleries or similar industry is anything, but *in the business of delivery alcohol*. Without alcohol, these beverages will be like any other softer drink with different taste and color. The profit driven motivation for alcoholic beverage industry is simply to push alcohol as economically as well as efficiently to the mass market as much as it can. There is nothing wrong with this if all suppliers are working on legal limit and people drink responsibly. Without National Alcohol Policy, all stakeholders of the industry have no bound like in the post liberalization 2000 period. Alcoholic addicts and alcoholic related disease and harm are and continue to be national serious problem with no sign of relief. Setting up THB2bn Thai Health Fund in 1999 to combat multiple hundred billions THB marketing from large cooperation is noble, but is far short of resolving the above issues. What is needed is a new alcohol tax policy to maximize tax revenue target but subjected to acceptable allowance of alcoholic content per capita per year. On the other hand, administrative measures should also use to achieve other social objectives.

Market price of alcoholic beverages does not reflect the social cost that bears by the public and the government. One way to resolve this is to effectively tax these beverages on their alcohol content. Market price mechanism embedded with alcoholic content based tax will be responsive to public alcoholic consumption behavior unlike *Ad Valorem* or value price based. The concept of *more harmful, more tax* will hold if *specific tax* or alcoholic content-based tax is effective. As discussed earlier, the *Ad Valorem* or value price based tax that is currently used create *distortion* to the market as the result of inclusive tax and *amplify* the disparity between products and suppliers. Thus, the concept of *more luxury, more tax* naively intended for *Ad Valorem rate* cannot hold. This is people just keep on trade down their preference to cheap beverage with high alcoholic content. It is intriguing to note that nearly all OECD nations have gone through the same experience and now implement alcohol-based tax. Singapore and Australia just changed their tax base to

be volume based and/or alcoholic based rate as well. The summary of countries that use alcohol based tax as per Fig 32.

Fig 32: Alcoholic Beverage Excise Tax : Specific Tax system (degree)

- Excise tax collection system by volume alcohol (degree) is used widely around the world for example European countries and 28 OECD members from 30 countries use the tax system by alcohol volume (degree) to alcoholic beverage.
- In Asia Singapore use tax collection system based on service volume (degree) to alcoholic beverage.

	Beer	Wine	Spirit
Asia-Pacific (exclude OECD member)			
Cambodia	AV	AV	AV
China	U	U	U
Hong Kong	nil	nil	AV
India	Difference by state		
Indonesia	U	U	U
Lao	AV	AV	AV
Malaysia	AV U	AV U	AV U
Philippine	U	U	S
Singapore	S	S	S
Taiwan	AV	U S	U S
Thailand	AV S	AV S	AV S
Vietnam	AV	AV	AV

	Beer	Wine	Spirit
OECD			
Australia	S	AV	S
Austria	nil	U	S
Belgium	S	U	S
Canada	S	U	S
Czech	S	U	S
Denmark	S	U	S
Finland	S	U	S
Germany	S	U	S
Greece	S	nil	S
Hungary	S	U	S
Iceland	S	U	S
Ireland	S	U	S
Italy	S	nil	S
Japan	U	U	U
Korea	AV	AV	AV
Luxembourg	S		S
Mexico	AV	AV	AV
Netherlands	U	U	S
New Zealand	S	U	S
Norway	U	U	S
Poland	S	U	S
Portugal	U	nil	S
Slovak	S	U	S
Spain	S	nil	S
Sweden	S	U	S
Switzerland	S	U	S
Turkey	S	U	S
England	S	U	S
USA	S	U	S

S = liquor excise tax by pure alcohol volume(degree)
 AV= liquor excise tax by value
 U = liquor excise tax by product volume

Alcohol content based tax rate, as a social pricing mechanism on drink is not new in Thailand. Several attempts have been made in the last 20 years. But all are infertile due to strong and powerful political lobbying. To improve effectiveness in tax collection, there are two policy choices are presented as follows:

2.1 The Formal Approach to Amend the Excise Tax Law: The most dramatic legislative case for alcohol tax is the passage of the amendment on Dec. 25, 1991. The amendment was supposed to allow the excise department the choice either *specific rate* (alcohol base) or *Ad Valorem* (value price base) rate - that render the higher amount tax collection. But the amendment was futile on the date that enacted. For example, recall from Fig 13, the ceiling amount for specific tax rate collection for beer was unrealistic low at THB 100 per liter of pure alcohol content. If converting back from today total tax amount, the implied specific rate ought to be at THB700 per liter. Hence, when more revenues from beer tax are needed in May 2009, the government can only increase the *Ad Valorem* from 55 to 60% hitting the WTO's

upper bound rate. Again this round of rate hike would amplifies the price disparity and encourage people to “trade down” behavior. Coincidentally, this is the last possible hike for *Ad Valorem* without legislative amendment or breaking WTO rule.

To do another amendment on the 1991 law or to increase the ceiling to higher – say for beer at THB 1,000 per pure alcohol liter, it would take about 2 pages long of legislation to be submitted by PM and to be passed by both House of Parliament and Senate and later submit to HM the King’s approval. This is the same process that the current government has done by increasing “sin tax” based on obsolete existing structure in May 09 via PM’s executive decree and expected to pass both houses within this year. The example of the 1991 amendment and the 2 pages proposal to correct this 1991 error are available (in Thai) in Appendix II. The legislative draft is very simple; the process is the same. The government would easily gain THB 21,000 million without raising any tax rate as mention earlier. But political economic issues of the two approaches between amendment and naïve tax hike are vastly different.

Fig 34 : Comparative Specific or Alcohol based Tax Structure in Thailand with suggested new ceiling³⁰

Type of Spirits	Before May 7, 09		After May 7, 09		Suggestion	
	Ad Valorem (%)	Specific Tax (baht/litres*)	Ad Valorem (%)	Specific Tax (baht/litres*)	Ad Valorem (%)	Specific Tax (baht/litres*)
1. Fermented (Tax ceiling)	60	100	60	100	60	700
1.1 Beer	58	100	60	100	60	700
1.2 Wine and Wine Sparkling	60	100	60	100	60	700
1.3 Local Fermented Spirit	25	70	25	70	25	70
1.4 Other than 1.1-1.3	25	70	25	70	25	70
2. Distilled Spirit (Tax ceiling)	50	400	50	400	50	400
2.1 White Spirit	50	110	50	120	50	400
2.2 Blend Spirit	50	280	50	300	50	400
2.3 Alcohol Spirit	50	400	50	400	50	400
2.4 Special Spirit						
(1) Brandy	45	400	48	400	48	400
(2) Whisky	50	400	50	400	50	400
(3) Other than (1) and (2)	50	400	50	400	50	400

To take this one step further, we suggest to increase alcoholic based tax rates for the distill spirit. The specific tax rates should be increased to the ceiling of THB 400 per liter to give more flexibility to the government for the future adjustment. The comparative alcohol tax rate table between before and after May 7, 09 and suggested rates are shown together in Fig. 34.

It is fascinating to learn that the last attempt to amend the 1991 tax law was post the 2007 coup with the National Legislative Assembly (NLA). After passing extensive the NLA hearing on Sept 13, 07 and endorsed by Minister of Finance on Aug. 28, 07, the actual 2 pages amendment has never made this to the floor and mysteriously disappear. In short, political power and strong lobby from the industry cannot be underestimated. The social welfare and health of the nation is at stake if the government does not amend the excise tax rate.

2.2 Synthetic Volume Based Tax Rate: When there is one product and one alcoholic drinkable producer, the excise tax collection problem is elementary. The *Ad Valorem* or value tax rate implicitly becomes volume based tax rate. Everything is straightforward. For social welfare perspective, the tax paid is proportional to alcoholic consumption because of one price. For tax collection, the excise official just checks the production line meter. But when there are multiple suppliers, then tax assessments are complicated with multiple cots and books to monitor for ex factor prices. Using business and marketing logic, the *ministerial order in 2003* is, for example, to have three pricing for economy, standard and premium bear. With only effective *Ad Valorem* rate available, these different tax collection based on three tier prices greatly create market distortion since the Ad Valorem amplifies the disparity in pricing. Alcoholic consumption behavior changes for the worse – “trade down”

Thus, one may conjecture the *market distortion* and *amplifier problems* for domestic products that stimulate higher alcoholic consumption as per Fig 25 can be easily resolved if *synthetic volume base tax rate* is used. This can be done without passing a new law, *only ministerial order required* similar to the 2003 order¹⁹. That

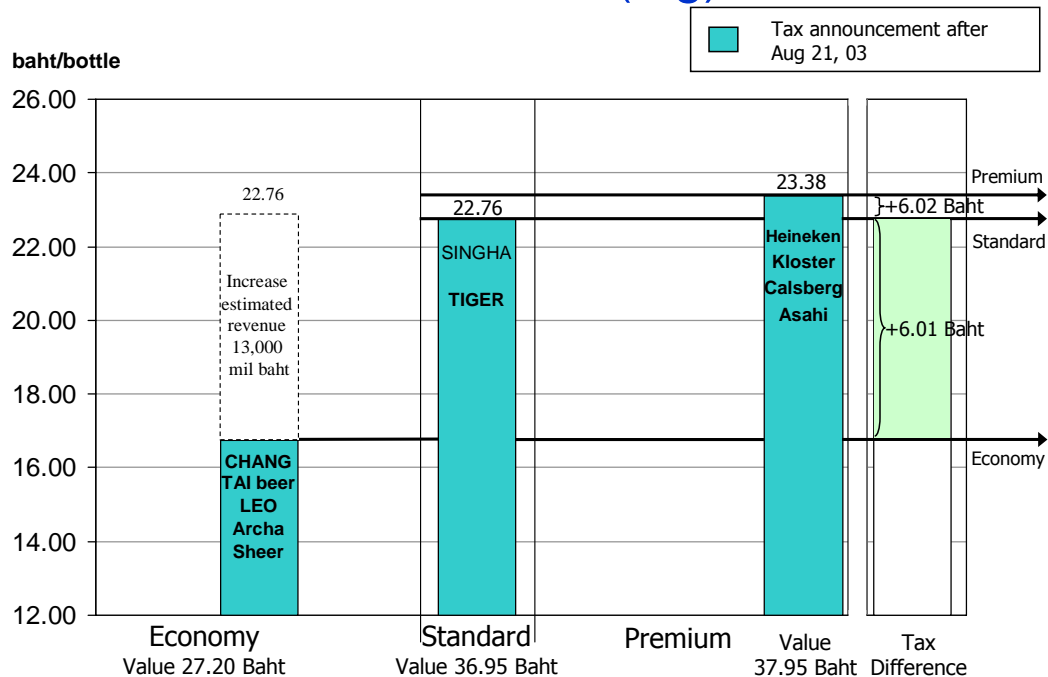
¹⁹ Using the similar legal argument of the ministerial order 2003 that has long been enforced, our claim would be valid using the Liquor Act 1950, and its Amendment (1999) Section 8 and others.

is to implicitly converting *Ad Valorem* rate to *volume based rate* by applying the average ex factory price or one standard price to all products for each categories (e.g. beer, white spirit, wine, etc). More tax will be collected because the largest volume from the economy beer or alcoholic beverages has to pay higher tax. Less alcoholic content would be consumed because volume based rate is *highly correlated* with alcoholic content in which the government may now adjust directly.

Sadly, this may not be true for imported product because of usual suspects – smuggling, under-invoicing, illicit trades and others. Nevertheless, if for a moment one ignores *cross-border tax issue* - import price and import tax collection that is converging to zero soon, the Excise Department may still be able to tax and use *synthetic volume base tax rate* with standard average pricing for level-playing field as this is *within-border tax* approach. This would not breach WTO agreement. Only the departmental and ministerial directives are required.

For the sake of hypothetical discussion, if one has chosen to amend the law to raise the impending ceiling(s), *without any increase in excise tax*, for beer alone, the department may additionally collect more than **THB 13,000 millions tax** amount from economy type beers from duopolistic producers - ThaiBev and BRB as indicated in Fig 33 though it may lose small tax sum to the premium brand. In other word, this synthetic beer volume based provides trade down effects and reduces excise tax revenues. In the beer industry, more than 70% or 1,500 million liters of beer production is economy and only 5% or 80 million liters of beer production is premium as indicated in Fig 14c. Once the uniform tax based is applied, it yield higher excise tax revenue about **THB 13,000 millions**. It is critical to note many more benefits would gain from this amendment as discussed earlier. Having flexibility in further tax hike, moderating alcohol content consumption from alcohol based tax and reducing market distortion are among fine example of public policy gains.

Fig 33: Excise tax, Local tax and Public Health tax : bottle (big)



2.3 Ad Valorem as Inclusive Tax Calculation Issue: Though import duty would be not material soon as the cross border tax is converging to zero, for sake of argument, one should consider *Ad Valorem* or value tax rate is *inherently* inclusive tax calculation. It distorts the market. The approach is also a discrimination against import products until the importers resort to “under-invoicing”. To use the retail price base or to change excise tax to progressive VAT would also have similar effects because the retail prices are subjected to variety of conditions (e.g. logistic, setting, etc.). All of these are complicated and distorted the taxing system that is not *proportionally* to alcohol content. The best tax system should be simple, transparent and level playing field with a clear objective. Particularly to addictive substance like alcohol, taxing should be *proportional* to social cost – the more alcohol, the more tax.

In summary, alcohol based tax for alcoholic beverages are urgently needed for the sake of “public health” as well as “fiscal gap”. To realign tax collection to be compatible to public alcoholic consumption is the most effective way to curve alcoholic related disease and harm and to reduce the numbers of alcoholic addicts and alcoholism cases. In order to make specific rate or alcohol content based effective, a strong political will is required to amend the ceiling rate(s) in a similar process of past

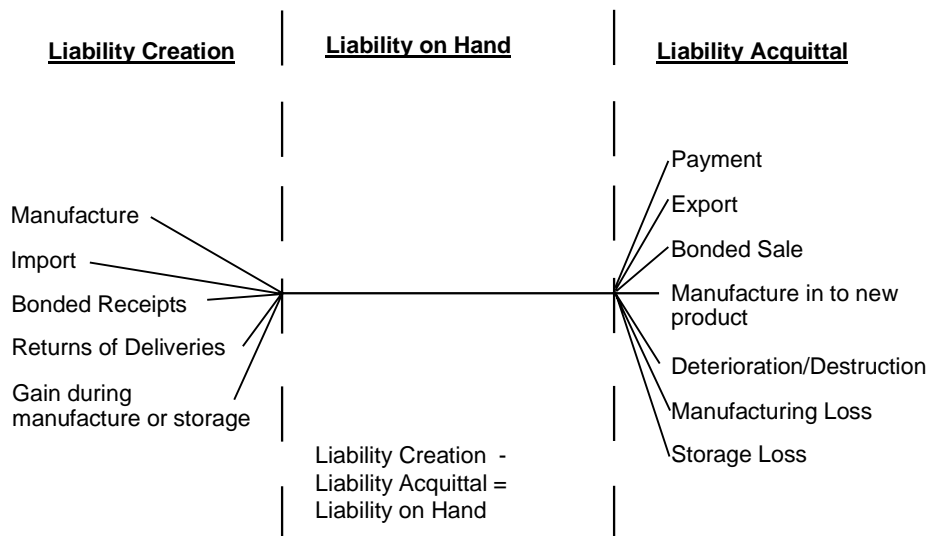
excise tax hike. The second best approach is to create synthetic volume based tax rate by using one standard value for each alcoholic beverages type. Apart from social concern, the longer we wait to restructure our tax regime, the harder we are going to cope with the economic integration and free trade agreement that will be in force.

3. Excise Tax Administrative Measures:

As *cross border tax* and barrier converging to zero, *within border tax* like excise tax, VAT and revenue are increasingly import and reliable stream of sustainable income. Because excise tax is direct and plays broader role in government policy to influence consumption of certain commodities like alcoholic beverages, the effective excise tax collection is becoming a top priority. More discussions are below:

3.1 **Excise Tax Administration:** Preece (2008) provides a good framework for key controls in the supervision of excise tax. The major components of an excise system - liability creation, on hand and acquittal are shown in Fig 35 as the three critical areas of operation.

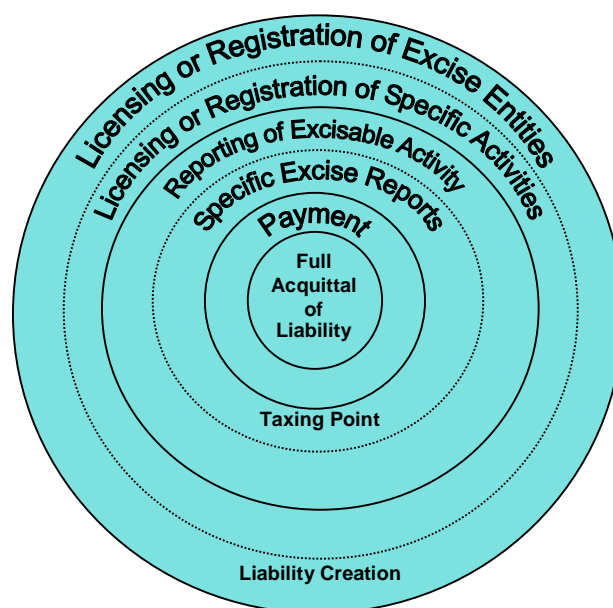
Fig 35: Tracking Excise Tax Liabilities



Domestic manufacturing and importing alcoholic beverages by entities are the common sources of excise liability creation. Once these liabilities are created, the entity can either account or acquit. At all time, liability on hand should be equal to liability creation less liability acquittal. Since Thailand views excise tax as consumption tax, the taxing point is to be at the point where the products enters the market. Because the excise liability is always transferred from one entity to another entity in the supply chain, it would be “off the books” at one firm and “on the books” at another firm. This is simultaneously re-establishing a new location of tax liability as was acquitted.

The relevant key controls in the excise duties are presented in Fig. 36. Different layers from different business activities from manufacture / import, storage, sales and deliveries occurs as the identifying the points where all tax obligation become payable and are eventually paid. Dealing all excisable goods like liquor selling license become criminal offense and subjected to fine against the relevant law. Therefore, the primary control is, for instance, to use licensing as the tool to ensure that all excise liabilities that are created, identified and later accounted or acquittal. A review process is possible with the help of modern day technology that presents next for non-compliance and loss of revenue. More stringent license renewable and registration conditions may help overall tax reinforcement. These include the accounting book audited standard, documentary or cash security and notification of changes to relevant operation matters. The discussion on the distillation of spirits and key controls examples is available at Reece (pp. 82 to 84). “Pre-paying” through a tax strip stamp system is also presented as the most popular with tobacco and alcoholic beverage to prevent tax avoidance, tax fraud and tax evasion. It is worth noted that Thailand is currently utilizing the multi-color tax strip stamp that is cost about THB3 per stamp. No tax acquittal system is in place electronically. In past, Bank of Thailand and the Lottery Department produced these stamps. But nowadays one private company seems to be the sole producer for in recent years.

Fig 36: Key controls in excise administration



The taxing trail would enhance tax collection effectively, not just for excise tax, but also for VAT and revenue department tax assessment. In addition, with more information on excise tax collection report, the government would be able to *differential measures* from one province to another in order to achieve national policy of alcoholic consumption per capita target. To implement the above administrative measures, database and computerized system is required. This shall be discussed next.

3.2 Technology for Administration System: Technology to distinguish paid tax and unpaid tax products are device to improve smuggling and counterfeit detection. There are three distinguish technologies for physical control. Bar code. RFID and Data Matrix. They have different implication for physical control. These technologies are expected to facilitate physical control and audit.

A bar code is allowed to put more information than it appears in itself or brief information. It may need a special instrument or skills to understand the information Bar code is a simply information technology for identifying products. The information technology provides the ability to tracking the product by code. That

information, put into the code, must be unique to identify the product. The barcode is commercially used to automate supermarket checkout system.

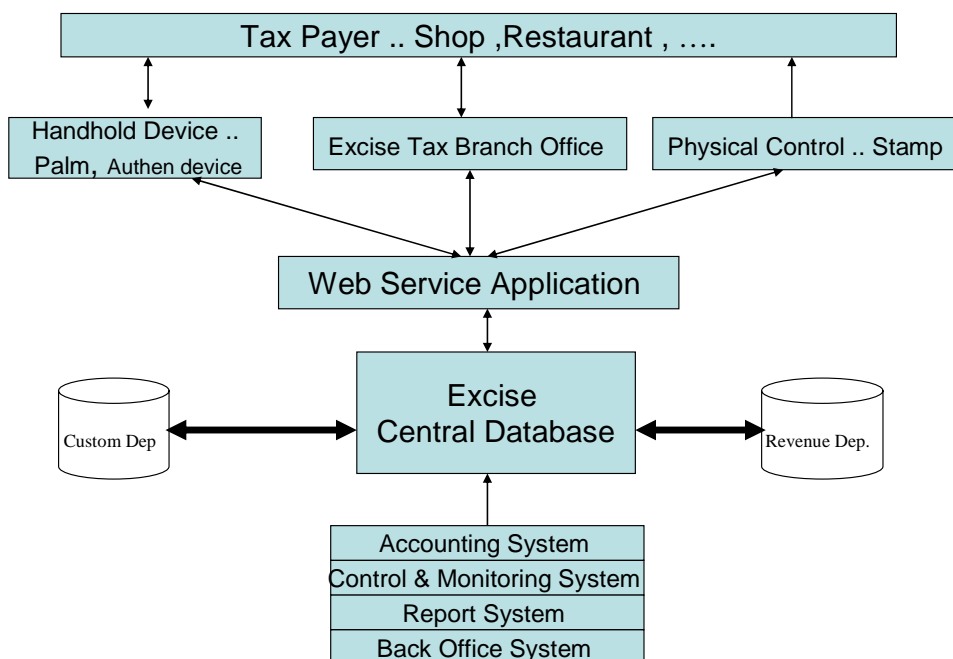
There are two types of technology use to identify and trace products, which are barcode and radio frequency identify device (RFID). The barcode system is use optical machine-readable representation of data. The Universal Product Code (UPC) is a revolution of barcode. It is widely used for tracking products. A data matrix code is more sophisticate barcode.

The data matrix can be in certain patterns of squares, dots, hexagons and other geometric patterns. Data Matrix is appropriate for small items since its readable size is 2-3 mm. The scale of Data Matrix is adjustable to fit the products protection through deterrent and robust security features. Data Matrix codes have secure trail solution by a unique security signature on each product.

RFID is a tag to identify and track by radio waves. Some tags can be read from several meters away and beyond the line of sight of the reader. There are two types of RFID: Active RFID and Passive RFID. The active RFID contain a battery to transmit the data. The passive RFID require an external source to transmit the data. Since the passive RFID require external source, the passive RFID has the same property as data matrix or barcode. The RFID is commercially used in supply chain management to improve the efficiency of inventory tracking. A good lesson learn about RFID tag is used by Wal-Mart. But this system is expensive and fit for fast moving products and inventory contorl, unlike Data Matrix.

Regardless of the type of technological code, complete supply chain should be done with security. Efficient excise monitoring system should be available at hand. In addition, each data has server should be interconnected in web service basis in which machine constantly “talk” to another machines for update between excise department and intra-departments like Custom and Revenue. Fig 37 demonstrates a simple IT architecture for consideration.

Fig 37: Simple IT Infrastructure for Excise Department



Short-term measures are not only increasing in tax rates, but bring on the appropriate technology to control the tax payment. The affixed and crossing stamps have been used for certain period of time. It is contained the three essential information, which are types of liquor, tax rates, lot or dated of produced or imported. The implication of the code is not different than the stamp, but electronically verify by information technology (IT) platform and tax control. There are three information technologies to identify the taxed and smuggling commodities, but which one is cost effectively and easy to apply The Barcode, RFID, and data matrix will be useless if the data put on them not – timely, reliable & accurate. The data must inform tax collector and auditor which one is a taxed or non-taxed or counterfeit product. The way to identify taxed commodities is similar to the way we identify the nationality of people. The auditor must know certain information to distinguish them.

To effectively manage alcohol consumption, most governments also apply some forms of licensing restriction to alcohol-serving establishment like when (date and time of serving), where (the number of venues able so sell alcohol per population density), how the environment and hospitality may accommodate) and what alcohol can be sold (e.g. wine, beer, spirit and pre-mixed). The aim may vary according to

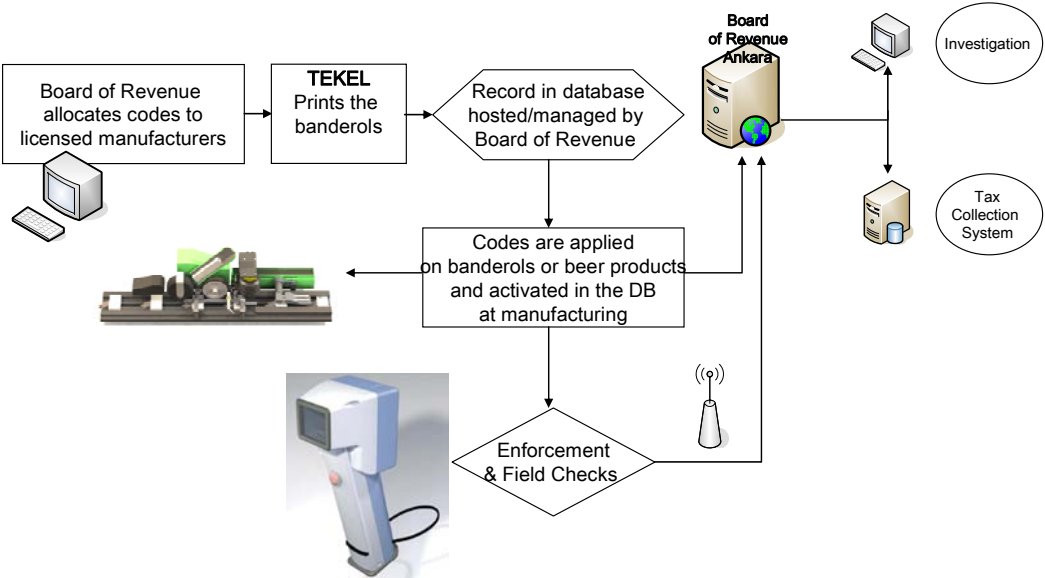
local needs. Some may restrict the hour of sale available to reduce violence and crime rate, while other may prohibit the sale of alcohol near school and temple on the moral ground. Severe restrictions may *encourage* black market and boost criminal activity. To implement effective licensing, stakeholders' participation is vital with market-based mechanism to determine the sensible outlets.

More importantly, government's controls at the point of sale are the most effective way to uncover tax avoidance, tax fraud and tax evasion. Nowadays with technology advance, it is convenient to follow e-trail and identify the offenders. Apart from higher tax collection, not just for excise department, but also VAT and Revenue, the available data on alcoholic consumption details would be valuable for policy research based for decision making. *Differential* non-tax measure for different provinces or regions may be applied to combat the surge in alcohol related harms. Some of best practices according to WHO 2003 in mixed alcohol reduction policy can be implemented with little or no cost are 1) alcohol content based tax, 2) outlet density restriction, 3) government restrictive of retail like restaurant, pub & bar. Some of the worst practices in Australia are 1) voluntary codes of bar practice, 2) promoting alcohol-free activities, 3) warning labels, 4) Public service message, 5) alcohol education in schools and college, 5) designated drivers

Turkey case may provide a good example and food for thought for Thailand. In 2006, Ministry of Finance realized and announced the need for a countrywide system to track the tax collection and its process for domestic and import products (e.g. tobacco, alcohol, beer, etc). To prevent tax evasion, to reduce unfair competition from illicit-trade and to provide valuable information system for policy-based decision are their foremost objectives for this tracking system. By March 2007, the system was successfully implemented with good results. The IT schematic overview of the tracking system and its functional attributes are shown in Fig. 37a and b. Ter-Minassian (2009) provides more boarder context on Turkish tax reform as the preparation for EU Accession.²⁰

²⁰ Available at http://www.undp.org.tr/demGovDocs/TaxPolicy/Teresa_Ter_Minassian.DOC

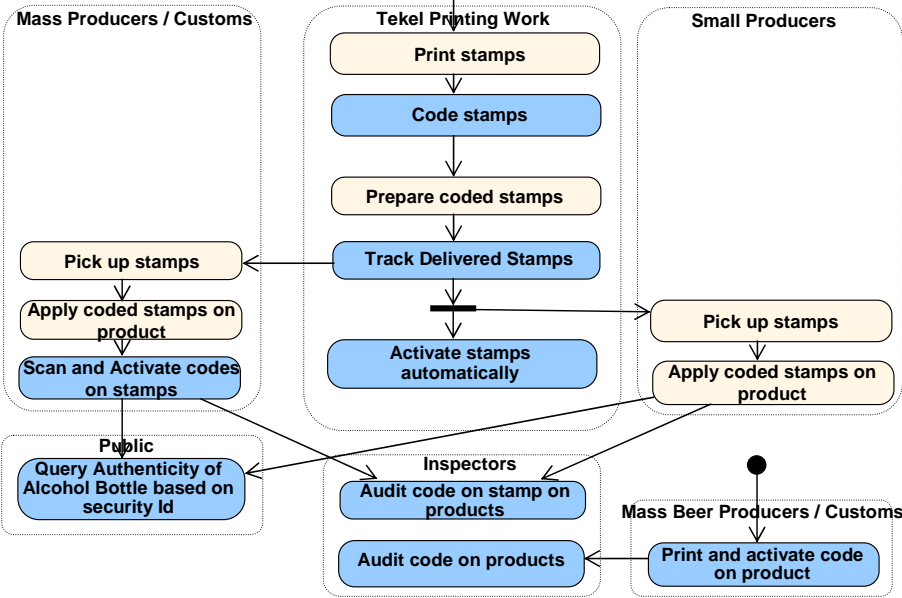
Fig 38a : Turkey Case of Alcohol Tracking System



Source: Ministry of Finance, Turkey as of 2007

Fig 38b: Turkey Case of Alcohol Tax Product Tracking System - Functional

ad Tobacco and Alcohol Producer Process flow summary



4. Fiscal Gap & Direct Sin Tax:

In the world, there are three primary ways to fund health care system: 1) most common through taxation like in Canada and UK, 2) compulsory contribution from employee and employer like in Germany and France and 3) voluntary private insurance with the only one example from USA. Though the UC is available, health services are usually mixed. For Thailand's UC budget is financed through general tax. Hence, the UC budget is annually subjected the Budget Scrutiny Committee of the House of Representatives as well as constrained by the overall fiscal budget of the government. Hence, it is vulnerable to political interference. There are tremendous outcries on the budget that is unrealistic to maintain a decent quality level, especially in rural. Over 25% of public general hospitals are reportedly to be in financial trouble.

It is particularly note worthy that following Walaporn Patcharanarumo and Michael Cichon's empirical and simulation study (2004), Dr Taweessri Greetong (2007) recommends to convert Thai Health Fund²¹ for long term funding of the UC. Dr Taweessri suggests to double excise tax on tobacco and alcohol. Then if half of the excise taxes on alcohol and two-thirds of the tobacco tax increase for UC fund, the reduction in chronic related disease and the new funding scheme would probably make the UC self-sustainable. Nonetheless, their main assumptions are 50% increase of alcohol tax lead to a reduction in alcohol intake by 20% and 100% increase in tobacco tax will lead to nicotine intake by 20%. Which is truly in most country, but maybe not for Thailand due to tax structure distortion and booming illicit trades.

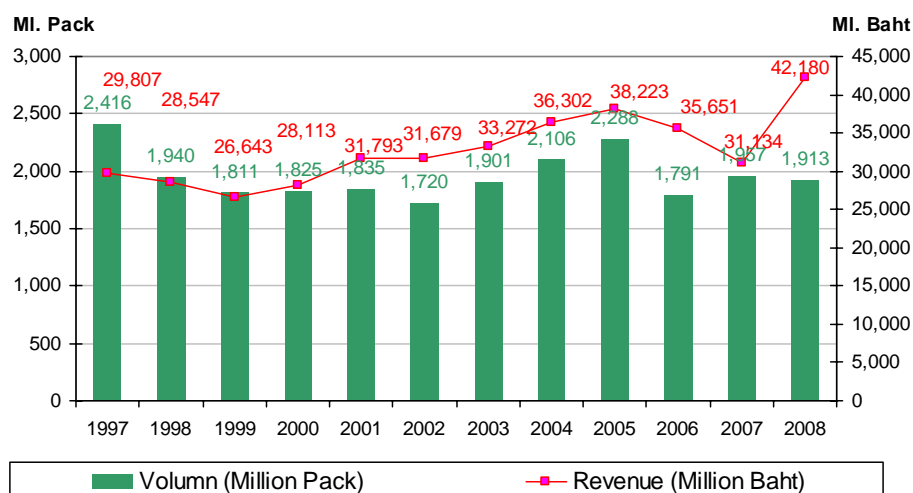
In review, the idea of using "sin tax" to finance UC is innovative to resolve fiscal gap. The public health expenditure would be proportional to the "sinner" or alcohol addict. But the tax structure has to be revised for alcohol based content rate before any consideration.

²¹ In 1999, Health Promotion Act was passed to set up Thai Health Fund by earmark tax from alcohol and tobacco for about THB 2 bn per year to promote Thai Public Health.

5. The lessons learn from the alcohol taxes to tobacco taxes: Both alcoholic beverage and tobacco share the identical and complementary product nature. Both contain addictive substance – alcohol and nicotine. Those who drink are likely to smoke too. Consumer behavior for this will be similar starting with rational choice for pleasure and potentially soon ending up as disorder choices if taking without moderation. Once becoming alcoholic addicts, only alcohol contents are counted over the taste of the products, while cigarette addict smokers enjoy nicotine in similar way. What is worth about tobacco is that the second hand smokers have adversely health problem as well. Its consumption damages consumers' health and increases health care expenditures. Thus the specific taxes on cigarette should have certain specific rates equating proportionally to public social costs. The roll by your own tobacco, shredded tobacco, is similar to the white spirit issue. Like white spirit and whisky, the shredded tobaccos are cheap and substitute with the cigarette directly.

Unlike alcoholic beverage industry, tobacco domestic production has long been monopolized by the state-owned enterprise called Thai Tobacco Monopoly (TTM). There are other 13 importers in the cigarette business. Thailand has opened cigarette market since 1991. In 2008, the total cigarette consumption is about 1,900 million packs, while the tax revenue is THB 42,180 millions as shown in Fig 39 along with its tax structure. Domestic produced cigarette has 75% of the market share or 1,400 million packs. The cigarette tax is *Ad Volarem* rate at 85%, which its effective rate is 566% of the manufacturing costs. According to the current excise rate, the different in prices between the domestic and border is about THB 40 per a pack. Though the cigarette consumption trend is decreasing due to many WHO campaign and Thai public health policy, the excise revenue is 15% of total excise revenue.

Fig 39 : Cigarette Consumption & Tax



Cigarette Tax Rate changes from the past to present

Tax Ceiling	Dec 1996	Oct. 1997	Oct. 1999	Mar. 2001	Dec. 2005	Aug. 2007	May. 2009
Ad Volarem %	Ad Volarem %	Ad Volarem %	Ad Volarem %	Ad Volarem %	Ad Volarem %	Ad Volarem %	Ad Volarem %
80	68	70	71.5	75	79	80	85

Globally there are about 300bn sticks or 6% of global volumes of cigarettes that are non-duty paid according to British American Tobacco (BAT) estimates as cited by Bloomquist and Weeman (2009). The main source of illegal volume in Europe is from brand “Jin Ling” produced in East Europe with production capacity of 24bn sticks or about 4% of the EU duty paid volume. Likely there must be some similarities and differences in illicit trade and policy implications for Thailand and upcoming AEC. But these are subjected to future study.

VI Conclusion:

Alcohol is no ordinary commodity with 2 faces. One shining face is as one of the oldest beverages and reputed to have some health benefits if drinking in moderation. Millions of people enjoy it safely. Alcoholic beverages are also big business that creates substantial jobs, pay huge tax and contribute to our economy. But another tarnished face is if consume excessively and regularly, alcohol is **addictive substance** that can cause brain disease beyond a reasonable doubt. Despite a chronic, potentially relapsing disorder and dependence bio-behavior, alcohol is widely distributed and consumed until Thailand has become the world’s fifth largest alcohol consumption per capita behind Russia and UK.

Brewery, distilled and winery beverage industry or alike is in **the business of delivering alcohol**. Because alcohol is a practically drug-like chemical goods and its industry is natural oligopolistic, simple business concept and free market approach are not applicable for national policy making consideration. Alcoholic liberalization expands the market resulting in proliferation of alcohol consumption per capita and alcoholic addicts. When this market fails to correct **negative externality** generating from alcohol, the government is justified to intervene, regulate and tax to redistribute for equitable and welfare enhancement.

We next examine how tax structure based on obsolete assumptions has demerit incentive for Thai people to drink cheap beverage with high alcohol content that is addictive and chronically harmful to public health. In the past 15 years, every time the government hikes excise tax on alcoholic beverages, the alcoholic consumption increases as the black market and illicit trade more thriving. This is due primary to the obsolete tax structure. To improve social welfare, we recommend on how to have higher excise tax collection and less public health bill – hence more fiscal surplus - with little or no tax rate hike. To amend specific or alcoholic tax rate ceiling is the first best solution, while synthetic volume tax rate is presented as second best with only ministerial directive or without legislative amendment.

Potential tax leakages that are estimated roughly around THB 30bn annually are discussed extensively. Due to ineffective specific tax or alcohol-based tax rate, the *Ad Valorem* or value-based tax *amplifies* the price disparity and *distort* market for local alcoholic drinkable products. With the first best solution of the alcohol tax amendment as suggested on Fig 34, over THB 20 bn more tax may be anticipated. Alternatively, at least THB 13bn more tax collection is possible per annum if synthetic volume base tax rate on beer as the second best solution is used only under ministerial directive.

For the import good – most pronouncing whisky, inclusive tax system compounds the market distortion. Under invoicing, smuggling and tax evasion are prevailing increasingly as the inclusive tax collection for import is much further apart from domestic product. Again synthetic volume base rate for excise tax calculation

along with increasing law enforcement may be right steps to resolve illicit trade. Similar story may be applied to wide spread illegal white spirit production throughout the countryside. Advance information technology with Turkey example is cited as one of the best way to tackle the total un-paid duty of alcoholic beverages consumption and related taxes that may be foregone as much as THB10 bn per year.

Beside these tax trail databases provide timely, accurate and valuable data and information. Research based policy decision can be done effectively for *differential* measures – to increase social welfare as well. Some of best practices according to WHO 2003 in mixed alcohol reduction policy can be implemented with little or no cost are 1) alcohol content based tax, 2) outlets and licensing density restriction, 3) government restrictive of retail like restaurant, pub & bar. Some of the worst practices in Australia are 1) voluntary codes of bar practice, 2) promoting alcohol-free activities, 3) warning labels, 4) Public service message, 5) alcohol education in schools and college, 5) designated drivers.

Finally, a more equitable and more simplified tax regime is needed. Public health concern, social cost, fiscal budget rational and political economic perspectives are among fine issues that need to be addressed comprehensively. The idea of using “sin tax” to finance universal health care scheme is innovative to resolve fiscal gap. But the tax structure has to be revised for alcohol based content rate before any consideration.

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Appendix I: Excise Tax Calculations

According to the Liquor Act 2486 or 1950, the alcohol beverage taxes are subject to tax rates and tax bases. The tax bases are either C.I.F for import commodities or manufacturing prices for domestic commodities. The tax rates are combination rates: specific and *Ad Valorem* rates. **Specific Rate** is a uniform rate based on the volume of alcohol contents. *Ad Valorem* Rate is a percentage of the value of the commodity. The applicable rate is the rate that yields the highest tax revenue. The specific tax value calculation is *exclusive tax* type determined by alcohol degree, volume of spirit in bottle and specific rate. It complies with the principle that **more harm is the more tax are**. Given that the special blended spirit 35 degrees in 750 c.c. per bottle and the its specific tax rate is 400,

$$\begin{aligned} \text{The specific tax per bottle} &= 35\% \times .750 \times 400 \\ &= 105 \text{ Baht per bottle} \end{aligned}$$

On the other hand, the *Ad Valorem* rate is *inclusive tax* or its tax must be included into the tax base also. The Ad Valorem is appropriate for the luxury perspective of alcohol beverage. The effective tax rate of the inclusive tax rates is *not* equal to the rate show by itself. The effective *inclusive tax rates* can be explained by the following formula:

$$\text{Excise tax} = \text{Tax Base} \times \frac{\text{Excise Tax Rate}}{(1 - (1.1 \times \text{Excise Tax Rate}))}$$

Given the nominal excise tax rate of 50 percent, this formula can be reduced to the following:

$$\text{Excise tax} = \text{Tax Base} \times \frac{0.50}{(1 - (1.1 \times 0.50))}$$

$$\text{Excise tax} = \text{Tax Base} \times \frac{0.50}{0.45}$$

$$\text{Excise tax} = \text{Tax Base} \times 1.11111 \text{ or } 111.11\% \text{ of the tax base}$$

If the manufacturing cost is 80 Baht per bottle, the effective tax is $1.111 \times 80 = 88.889$ Baht per bottle. Since the specific tax rate yield higher tax revenue for the special blended spirit, the spirit tax is 105 per bottle.

One single alcohol beverage is subject to 5 types of taxes: Excise Tax, Local Government Tax, Value Added Taxes, Public Health promotion Fund and Thai Public Broadcast Fund, including custom duties for imported alcohol beverages. The custom duties have two rates: AFTA member rates and the World Trade Organization (WTO) bound rates. The AFTA member custom duty is 5% for most of the commodities including alcohol beverages. The rate will converge to zero at the January 1, 2010. The WTO bound rate is the maximum tax rates that apply to non AFTA member. The alcohol beverage duties are classified into HS 2203 to HS 2208 varying by type of the commodities.

The Excise tax is either inclusive tax rate or specific tax. The import excise tax base is the C.I.F. and custom duties, while the domestic tax base is production cost plus its profit. These two tax bases are presumed to be equal treatment between import and domestic commodities.

The Public Health Promotion Fund and Thai Public Broadcast Fund are surcharge added on top of the excise taxes for both the domestics and imports. The VAT is collected at the retail prices. The alcohol beverage tax structure is designed to handle the two perspectives: luxury and negative externality at the same time. The specific tax rates account for the **negative externality**, meanwhile the Ad Valorem rates account for the **luxury**. That is, the higher alcohol content and the value of alcohol beverage are, the higher excise and other related taxes will be.

Last Update: June 11, 09

**พระราชบัญญัติ
สุรา (ฉบับที่ 7)
พ.ศ. 2534**

**ภูมิพลอดุลยเดช ป.ร.
ให้ไว้ ณ วันที่ 25 ธันวาคม พ.ศ. 2534
เป็นปีที่ 46 ในรัชกาลปัจจุบัน**

พระบาทสมเด็จพระปรมินทรมหาภูมิพลอดุลยเดช มีพระบรมราชโองการโปรดเกล้าฯ ให้ ประกาศว่า โดยที่เป็นการสมควรแก้ไขเพิ่มเติมกฎหมายว่าด้วยสุรา จึงทรงพระกรุณาโปรดเกล้าฯ ให้ตราพระราชบัญญัติขึ้นไว้โดยคำแนะนำและยินยอมของ สภานิติบัญญัติแห่งชาติ ทำหน้าที่รัฐสภาดังต่อไปนี้

มาตรา 1 พระราชบัญญัตินี้เรียกว่า "พระราชบัญญัติ สุรา (ฉบับที่ 7) พ.ศ. 2534 "

มาตรา 2 พระราชบัญญัตินี้ให้ใช้บังคับตั้งแต่วันที่ 1 มกราคม 2535 เป็นต้นไป

มาตรา 3 ให้ยกเลิกความในช่องรายการและช่องอัตราของหมายเลข 1 หมายเลข 2 และ หมายเลข 3 ในบัญชีอัตราภาษีสุราและค่าธรรมเนียมท้ายพระราชบัญญัติ สุรา พ.ศ. 2493 ซึ่งแก้ไขเพิ่มเติมโดยพระราชกำหนดแก้ไขเพิ่มเติมพระราชบัญญัติ สุรา พ.ศ. 2493 (ฉบับที่ 6) พ.ศ. 2528 และให้ใช้ความต่อไปนี้แทน

หมายเลข	รายการ	อัตรา
1*	ภาษีสุราสำหรับสุราที่ทำในราชอาณาจักรและสุราที่นำเข้ามาในราชอาณาจักร (ก) สุราแช่ (ข) สุรากลั่น	ตามมูลค่าร้อยละ 60 หรือ 100 บาท ต่อปริมาณหนึ่งลิตร แห่งแอลกอฮอล์บริสุทธิ์ ซึ่งชั้นสุตรด้วยเครื่องวัด ของกรมสรรพสามิต หรือ ที่กรมสรรพสามิตรับรอง ตามมูลค่าร้อยละ 50 หรือ 400 บาท ต่อปริมาณหนึ่งลิตร แห่งแอลกอฮอล์บริสุทธิ์ ซึ่งชั้นสุตรด้วยเครื่องวัด ของกรมสรรพสามิตหรือที่กรมสรรพสามิตรับรอง"

ผู้รับสนองพระบรมราชโองการ
อานันท์ ปันยารชุน
นายกรัฐมนตรี

*หมายเหตุ :- เหตุผลในการประกาศใช้พระราชบัญญัติฉบับนี้ คือ โดยที่ พระราชบัญญัติ สุรา (ฉบับที่ 6) พ.ศ. 2534 ได้ปรับปรุงหลักเกณฑ์ในการจัดเก็บภาษีสุราใหม่เพื่อให้สอดคล้องกับ การจัดเก็บภาษีมูลค่าเพิ่ม ตาม ประมวลรัษฎากร แต่เนื่องจากอัตราภาษีสุราตามบัญชีอัตราภาษีสุรา และค่าธรรมเนียมท้าย พระราชบัญญัติ สุรา พ.ศ. 2493 ซึ่งแก้ไขเพิ่มเติมโดยพระราชกำหนด แก้ไขเพิ่มเติมพระราชบัญญัติ สุรา พ.ศ. 2493 (ฉบับที่ 6) พ.ศ. 2528 ยังไม่สอดคล้องกับ หลักเกณฑ์ในการจัดเก็บภาษีสุราที่ได้ปรับปรุงแล้ว สมควรแก้ไขเพิ่มเติมอัตรา ภาษีสุราเสียใหม่ สำหรับสุราที่ทำในราชอาณาจักรและที่นำเข้ามาในราชอาณาจักรให้เป็นอัตราเดียวกัน จึงจำเป็นต้องตราพระราชบัญญัตินี้

(ร.จ. เล่ม 108 ตอนที่ 228 หน้า 1 วันที่ 25 ธันวาคม 2534)

พระราชกำหนด
แก้ไขเพิ่มเติมพระราชบัญญัติสุรา พ.ศ.2493
(ฉบับที่) พ.ศ. 2551

ภูมิพลอดุลยเดช ป.ร.
ให้ไว้ ณ วันที่ พ.ศ. 2534
เป็นปีที่ 63 ในรัชกาลปัจจุบัน

พระบาทสมเด็จพระปรมินทรมหาภูมิพลอดุลยเดช มีพระบรมราชโองการโปรดเกล้าฯ ให้ ประกาศว่า โดยที่เป็นการสมควรแก้ไขเพิ่มเติมกฎหมายว่าด้วยสุรา

อาศัยอำนาจตามความใน มาตรา 184 ของรัฐธรรมนูญแห่งราชอาณาจักรไทย จึงทรงพระกรุณาโปรดเกล้าฯ ให้ตราพระราชกำหนดขึ้นไว้ดังต่อไปนี้

มาตรา 1 พระราชกำหนดนี้เรียกว่า "พระราชกำหนดแก้ไขเพิ่มเติมพระราชบัญญัติ สุรา พ.ศ. 2493 (ฉบับที่ ...) พ.ศ. 2551 "

มาตรา 2 พระราชบัญญัตินี้ให้ใช้บังคับตั้งแต่วันถัดจากวันประกาศในราชกิจจานุเบกษา เป็นต้นไป

มาตรา 3 ให้ยกเลิกความในช่องรายการและช่องอัตราของหมายเลข 1 ในบัญชีอัตราภาษีสุราและค่าธรรมเนียมทำย พระราชบัญญัติ สุรา พ.ศ. 2493 ซึ่งแก้ไข เพิ่มเติม โดยพระราชกำหนด แก้ไขเพิ่มเติม พระราชบัญญัติ สุรา พ.ศ. 2493 (ฉบับที่ 7) พ.ศ. 2528 และให้ใช้ความต่อไปนี้แทน

หมายเลข	รายการ	อัตรา
1*	ภาษีสุราสำหรับสุราที่ทำใน ราชอาณาจักรและสุราที่นำเข้ามา ในราชอาณาจักร (ก) สุราแช่ (ข) สุรากลั่น	700 บาท ต่อปริมาณหนึ่งลิตร แห่ง แอลกอฮอล์บริสุทธิ์ ซึ่งชั้นสุตรด้วย เครื่องวัด ของกรมสรรพสามิต หรือ ที่กรมสรรพสามิตรับรอง ตามมูลค่าร้อยละ 50 หรือ 400 บาท ต่อปริมาณหนึ่งลิตร แห่ง แอลกอฮอล์บริสุทธิ์ ซึ่งชั้นสุตรด้วย เครื่องวัด ของกรมสรรพสามิตหรือ ที่กรมสรรพสามิตรับรอง"

ผู้รับสนองพระบรมราชโองการ
นายกรัฐมนตรี

*หมายเหตุ :- เหตุผลในการประกาศใช้พระราชบัญญัติฉบับนี้ คือ โดยที่ พระราชบัญญัติ สุรา (ฉบับที่ 6) พ.ศ. 2534 ได้ปรับปรุงหลักเกณฑ์ในการจัดเก็บภาษีสุราใหม่เพื่อให้สอดคล้องกับ การจัดเก็บภาษีมูลค่าเพิ่ม ตาม ประมวลรัษฎากร แต่เนื่องจากอัตราภาษีสุราตามบัญชีอัตราภาษีสุรา และค่าธรรมเนียมท้าย พระราชบัญญัติ สุรา พ.ศ. 2493 ซึ่งแก้ไขเพิ่มเติมโดยพระราชกำหนด แก้ไขเพิ่มเติมพระราชบัญญัติ สุรา พ.ศ. 2493 (ฉบับที่ 6) พ.ศ. 2528 ยังไม่สอดคล้องกับ หลักเกณฑ์ในการจัดเก็บภาษีสุราที่ได้ปรับปรุงแล้ว สมควรแก้ไขเพิ่มเติมอัตรา ภาษีสุราเสียใหม่ สำหรับสุราที่ทำในราชอาณาจักรและที่นำเข้ามาในราชอาณาจักรให้เป็นอัตราเดียวกัน จึงจำเป็นต้องตราพระราชบัญญัตินี้