

3rd IRCMALS Seoul 2019 022-015 Sukrita Pumkaew, 3rd IRCMALS Seoul 2019  
030-017 Abdulroman Salah

**THE EFFECT OF INCREASING ALCOHOL EXCISE TAX ON DRINKING  
BEHAVIOR OF PEOPLE IN THAILAND**

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**Abstract**

The research was the analysis of the effect of increasing alcohol excise tax on the drinking behavior of people in Mueang District, Yala province. The objectives of this study were 1) to study the effect of increasing alcohol excise tax on the drinking behavior starting from 16 September 2017 of alcohol excise tax increase, 2) to compare the amount of alcohol consumed before and after the alcohol excise tax increase, 3) to compare the factors in decision making on drinking alcohol before and after the alcohol tax increase. Quantitative research was done by using questionnaires for data collection, and the data were analyzed by using percentage, arithmetic mean, standard deviation, and Paired Samples t-test. The results of the research revealed that before the increase in alcohol excise tax, the average drinking was once a week and only a-half-bottle of alcohol was consumed each time. Drinkers acknowledged the increase in the tax but it did not have any effect on their drinking behavior. After the increase in alcohol excise tax, the average drinking still was less than one bottle each time of drinking. However, they turned to drink other types of alcohol instead. Moreover, it also showed that the increase in tax did not have any impact (effect) on the amount of alcohol consumed as well as no any effect on taste, price, brand (image of the brand) and types of alcohol (white spirits, color spirits). However, the tax increase had an effect on other influencers; promotion (discount, premium) seller's recommendation, and convenience and distribution channels.

*Keywords:* Effect, excise tax, alcohol

### **Introduction**

Government announces the public spending policy targeting quality of life improvement in many aspects such as education, public health, agriculture, transportation as well as social security. Therefore taxation becomes an important generating income vehicle for the government. The ministry of finance is the core agency that is responsible for tax collecting (Chumcharoen, 2016, p. 1). According to excise tax, this tax is an additional charge for particular goods that tends to harm person's health or social moral and luxury goods, for example, liquor, this particular tax is collected by the department of excise (Advanced Research Group, 2017, Online).

Conversely, liquor tax has been exercised by the government in order for the country development purpose, however, the liquor itself causes the consumer health deterioration. Recently, the study found that drunken condition is the most leading cause of death, quarrel, murder as well as suicide (Honestdocs, 2017, Online). The statistic shows 17.7 million people are considered 32.2 % that accounts for one-third of Thai population consuming alcohol products.

With respect to alcohol consumption in southern Thailand, the number of consumers was 1,440,976 from 7,133,544 people who are adult age over 15 years old, the number is considered 20.20% of southern population (Thai Health Promotion Foundation, 2015, online). According to three southern border provinces; Yala, Pattani, and Narathiwat, the alcohol consumption accounted for 12.10%, 35.60%, and 6.60% of adult population in each province, respectively (Center for Alcohol Studies, 2011, Online). The studies support that many factors influence alcohol drinking, which are personal condition, social context, environment, marketing, and management. However, the product category does not have an impact on consumption rate (Hashim, Lerdsuwansri & Srihera, 2017; Kriangkraiwanit, 2007; Poljang, 2013). Furthermore, the study by Santhisat (1995) found that increasing tobacco price by increasing excise tax led to slightly decrease in demand, but the government was able to obtain concrete revenue from particular mechanism.

The new Excise Tax Act was established from combining from 7 previous versions which has been applied since 16 September 2017. The Act demonstrates a new excise tax calculation method and increases the tax ceiling. The new Act would be applied at least 20 years. The new excise tax rate leads to higher prices of some liquor products. However, excise tax department mentions that the World Health Organization (WHO) has suggested 3 measures aiming to reduce prevalence drinking. One of measures is price and taxation, price mechanism allows liquor products to gain higher prices in order to make the goods less affordable, therefore people will have less consumption (Borluea, 2017, online).

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Due to the new law enforcement, the price of liquor products increases; therefore this study aims to investigate the effect of increasing tax on drinking behavior particularly in Mueang district, Yala province. The study results were deemed worthy of using as baseline information for establishment to provide appropriate excise tax rate or alternative solution aiming to decrease drinking rate in the future.

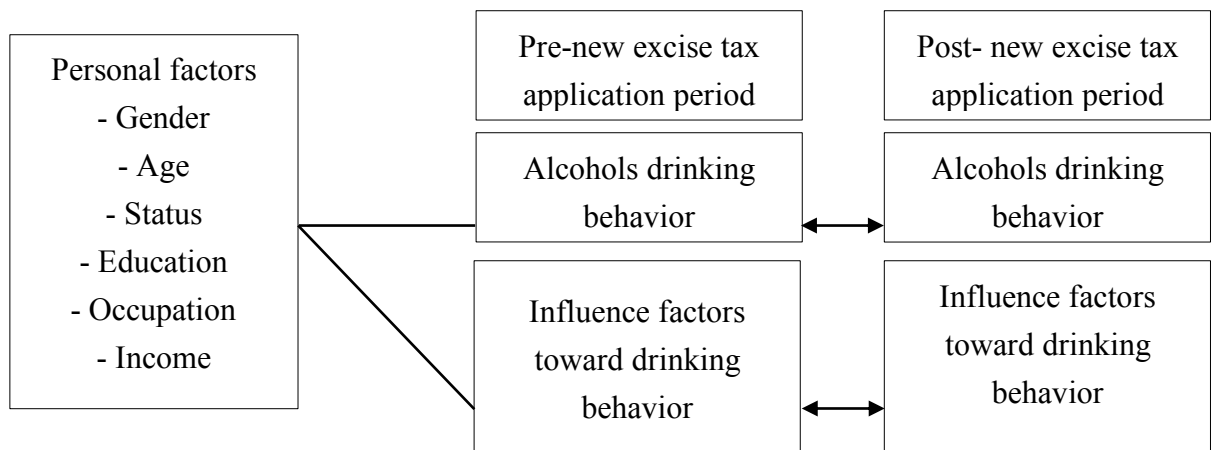
### Objectives

1. To analyze the impact effect of the increasing excise tax (since 16 September 2017) on alcohol consumption behavior.
2. To compare the alcohol consumption level between pre and post period of the new excise tax measure enforcement.
3. To compare the factors affecting alcohol consumption between pre and post of new excise tax measure enforcement.

### Research Questions

1. Does the increase in alcohol excise tax affect drinking behavior? And how does it affect drinking behavior?
2. Is the amount of alcohol drinking before and after increasing the alcohol excise tax different? And how is it different?
3. Are the factors affecting the decision making on drinking alcohol before and after the alcohol tax increase different? And how they are different?

### Conceptual Framework



### **Scope of study**

*Context:* the study emphasizes personal factors, alcohol consumption behavior between pre and post period of new excise tax measure applying which include consumer's opinion and decision factors.

*Area:* Mueang district, Yala province

*Population:* age 16 years old and above.

*Period:* October 2017-September 2018

### **Methodology**

This study was quantitative research.

*Population and samples:* the population of an adult who was 16 years old and above in Mueang district, Yala province consisted of 182, 659 persons (The Bureau of Registration Administration (BORA), 2016, Online). The sample size was 384 samples by employing the Krejcie and Morgan method and non-probability sampling which was convenience sampling technique.

*Research tools:* the study utilized the questionnaire divided into 3 parts, which were personal and general information, alcohol consumption behavior and level of importance of affecting factors to drinking decision.

*Data collection:* the study collected primary information by using questionnaires. Secondary data would be derived from academic journals and studies as well as relevant theories.

*Data analysis and statistic method:* the study was applied various statistic methods which were percentage, average, standard division and t-test.

### **Literature reviews**

The Theory of Triadic Influence (TTI) describes the relationship with the health of a person who has the behavior of alcoholic addict associating with an individuality which is the genetic traits and personality traits which include the self-efficacy to refuse the alcohol drink, propensity to drink, social anxiety disorder, and seeking for challenges, or the relationship with the society associating with the personality trait and personal behavior considered as a role model of each life span which causes the imitation, or the social drinking, or having friends who drink alcoholic beverages, and the alcoholic drink of the family members, etc., and might be caused by the cultural context associating with the culture which affects the attitude, sentiment, or priority of a person, for example, the attitudes on drinking the alcoholic beverages, expectation of drinking good alcoholic beverages, values of drinking the

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alcoholic beverages, and knowledge on drinking the alcoholic beverages (Chantaramanee, et.al., 2017; Flay, Snyder, & Petraitis, 2009; Chanpen, 2011).

In addition, Kotler (1997) identifies the meaning of the marketing mix as an indicator which is a marketing tool usually controllable. The private sectors are used to integrate to respond the needs of the customer groups, which include Product, Price, Place, Promotion, People, Physical Evidence, and Process, to be in accordance with the crucial concepts of the modern marketing, especially with the service businesses. Therefore, it can be entirely called the 2Ps marketing mix (Kotler, 1997, 2016).

The study of Hashim, Lerdsuwansri & Srihera (2017) found the factors that had an influence on alcohol consumption behavior were internal personal conditions, social context, and environment. Furthermore, it also stated that marketing mechanism, management, and personal factors also affected beer consumption. Regarding to personal factors, the study from Poljang (2013) found that the gender had an influence on drinking behavior. Conversely, personal preference such as type of liquor did not lead to any differences of frequency and occasion.

With respect to personal perspectives toward excise, it stated that the difference of particular elements; age, education level, and income had different perspectives at the significance level of 0.05 (Chumcharoen, 2016). Furthermore, the study from Phutthabucha (2013) found that the particular factors also had an impact on income tax as well.

According to Santisart's study (Santhisart, 1995), the increasing price by imposing excise tax on particular products such as cigarette led to slightly decrease in volume of consumption. Moreover, higher domestic prices led some customers to switch to consume imparted cigarettes. However it claimed that the price had little impact on cigarette demand, therefore, the volume of production and employment in tobacco sectors still remained. It referred that the excise tax policy was efficient enough to control the consumption as long as it was a small industry in the economy.

This research emphasizes the study of drinking behavior before and after the announcement of increasing the alcohol excise tax. The study focuses on the personal factors under the Theory of Triadic Influence (TTI) and the factors affecting the decision making to drink under the 7Ps marketing mix concepts as follows: Product, which includes taste and alcohol types (white spirits, color spirits), Price, which includes alcohol price, Place, which includes the easiness and convenience of purchase, Promotion, which includes sales promotion (discount, exchange, give out, and giveaway), People, which include the recommendations from sales personnel, Physical Evidence, which includes brand (image of alcohol), and Process, which includes advertisement (TV, radio, board).

### Findings

The analysis results were divided into 4 parts as follow;

*First part: personal and general information*

The data that obtained from questionnaires revealed that the majority of the sample group were male which accounted for 68.60%, age between 30-34 years old, and 19.30% were married. The percentage of person who had attainment higher vocational certificate was 44.8%. The employees in the private sectors accounted for 69.1%. The majority had income range between 10,000 – 20,000 baht which consisted of 53.8%

*Second part: Alcohol consumption behavior*

*Pre new excise tax measure period (before September 2017)*

The sample group had experienced of drinking alcohol 1-5 years accounted for 62.0%. The percentage of beer and wine consumption consisted of 66.70%. The reasons for drinking were related to health benefits which were represented by 68%. Before applying new excise tax period of time, the frequency for alcohol drinking was once a week which accounted for 50% and 66.40% would drink less than one bottle.

*Part III: The level of importance of affecting factors to drinking decision compared between pre and post applying the new excise tax measure.*

Pre new excise tax measure execution, the study found that the most influencing factors to least factor of consumer’s drinking decision respectively were taste, price, promotion (discount), seller’s recommendation, convenience, advertising, brand (brand image) and liquor type. Furthermore, the standard deviation of all 8 factors that had been tested was 0.53 which refers that data point tended to close to the mean or relatively low variation. The level of importance of affecting factors to drinking decision was displayed in the following Table:

**Table no.1:** the level of importance of affecting factors to drinking decision- Pre new excise tax measure execution.

Relevant factors	$\bar{X}$	S.D.	the level of importance
1. Taste	4.06	0.28	Accurate
2. Liquor price	3.99	0.23	Accurate
3. Band (Brand image)	3.44	0.60	Accurate
4. Liquor type (rice whisky, distillation spirits)	3.27	0.62	Accurate
5. Advertising (TV, radio, billboard)	3.53	0.71	Accurate
6. Promotion (discount, premium gifts)	3.81	0.57	Accurate
7. Seller’s recommendation	3.78	0.61	Accurate
8. convenience to buy	3.76	0.62	Accurate
<b>Total</b>	<b>3.71</b>	<b>0.53</b>	Accurate

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After executing the new excise tax measure, it was found that the most influencing factors to least factor of consumer's drinking decision was the same as before applying new excise tax period. The data demonstrated that relevant factors were as follows; taste, price, promotion (discount), seller recommendation, convenience, advertising, brand (brand image), and liquor type were accurate. The standard deviation of all 8 factors that had been tested was 0.51 which refers that data point tends to close to the mean or relatively low variation. The statistic data were displayed in the following Table.

**Table no.2:** the level of importance of affecting factors to drinking decision- Post new excise tax measure execution

Relevant factors	$\bar{X}$	S.D.	the level of importance
1. Taste	4.05	0.27	Accurate
2. Liquor price	3.98	0.29	Accurate
3. Band (Bran image)	3.52	0.68	Accurate
4. Liquor type ( rice whisky, distillation spirits)	3.33	0.57	Accurate
5. Advertising (TV, radio, billboard)	3.34	0.60	Accurate
6. Promotion (discount, premium gifts)	3.94	0.46	Accurate
7. Seller's recommendation	3.87	0.55	Accurate
8. convenience to buy	3.84	0.68	Accurate
<b>Total</b>	<b>3.73</b>	<b>0.51</b>	Accurate

### *Part IV: Hypothesis testing*

Firstly, the research was testing that if there was any difference of liquor consumption level between pre and post period of new excise tax execution, and where the hypotheses were?:

$$H_0 = \mu_d = \mu_1 - \mu_2 = 0$$

It was referred that there had no significant differences between pre and post period of new excise tax execution.

$$H_1 = \mu_d \neq 0$$

It was referred that there had significant differences between pre and post period of new excise tax execution.

Where;  $\mu_1$  is the amount of liquor consumption pre-new excise tax execution period.

$\mu_2$  is the amount of liquor consumption post new excise tax execution period.

Hence, the acceptance of  $H_0$  means that the excise tax does not have an influence on the level of liquor consumption. On the other hand, the rejection of  $H_0$  refers that the excise tax has an influence on the level of liquor consumption.

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The analysis result found that t-test value was -2.22 and p-value was equal to 0.03 which the significance level was less than 0.05, therefore it failed to accept  $H_0$ . Failure to accept  $H_0$  mentions that it contains significant differences in the amount of liquor consumption between pre and post period of new excise tax execution at the level of significance 0.05. The statistic result was shown in the following Table.

**Table no. 3:** Analysis result of the amount of liquor consumption

The average amount of consumed liquor (bottle) Pre-tax executing period	The average amount of consumed liquor (bottle) Post-tax executing period	The level of difference	t-test	p-value
1.05	1.23	-0.18	-2.22	0.03*

\* $p < 0.05$

Secondly, the study investigated the difference of the importance level of affecting factors to consumer consumption behavior regarding to pre and post excise tax application. Statistically, the result revealed that the affecting factors, which are taste, price, brand and liquor types, had no difference on the level of importance between before and after new excise tax applying. The data accepted  $H_0$  where p-value was greater than 0.05.

Nonetheless, the advertising, promotion, seller's recommendation, and convenience to buy were rejected  $H_0$ . The data obtained p-value which was less than the level of significance at 0.05. The statistic details are represented in the Table below.

**Table no. 4:** the level of importance of affecting consumption factors between pre and post new excise tax measure execution.

Factors	Average level of importance in pre new tax execution	Average level of importance in post new tax execution	t-test	p-value	Results
1. Taste	4.05	4.05	0.20	0.84	Accepted
2. Liquor price	3.99	3.98	0.69	0.49	Accepted
3. Band (Brand image)	3.44	3.52	-1.78	0.08	Accepted
4. Liquor type (rice whisky, distillation spirits)	3.27	3.33	1.58	0.12	Accepted
5. Advertising (TV, radio, billboard)	3.52	3.34	4.30	0.00*	Rejected
6. Promotion (discount, premium gifts)	3.81	3.94	-3.44	0.00*	Rejected



**Table no. 4** (Continue)

Factors	Average level of importance in pre new tax execution	Average level of importance in post new tax execution	t-test	p-value	Results
7. Seller's recommendation	3.78	3.87	-2.39	0.02*	Rejected
8. convenience to buy	3.76	3.84	-2.05	0.04*	Rejected

\* $p < 0.05$

### Discussion

The majority of the sample in this study were male aged between 30-34 years old, married and obtained high vocational certificate. Most of them were employees in the private sectors and had the average incomes between 10,001-20,000 baht. Considering the pre new excise tax execution period ( before September 2017), the consumers mentioned that they had been drinking for 1-5 years and mostly consumed beer or wine instead of rice whisky and golden spirits. The drinking reason was regarding to health benefit from alcohol products. Drinking frequency was about once per week and less than 1 bottle. It is regarded as in accordance with the Theory of Triadic Influence (TTI) which indicates the self-efficacy to refuse or choose to drink the alcoholic beverages, or drink for imitation, or for social drinking, or having friends who drink alcoholic beverages, and the alcoholic drink of the family members, etc., or it is caused by the results of attitudes affecting the sentiment, or valuing something important of a person, such as attitudes toward drinking alcoholic beverages, expectation of drinking good alcoholic beverages (Chantaramanee, et.al., 2017; Flay, Snyder, & Petraitis, 2009; Chanpen, 2011).

After applying the new excise tax regime (after September 2107), most of the consumers were aware of applying the new tax rate regarding to the government that had been promoting for a period of time through multiple channels such as television, newspaper as well as on line channels. However, the new tax regime did not have an impact on drinking behavior, preference, and amount of consumption. Increasing excise tax led to the higher price, but the liquor price is still in the medium range that the consumers were able to afford it at the same level of drinking.

Comparison between before and after applying new tax rate, it was found that the influencing factors on drinking behavior in Meaung district, Yala province all were accurate. The most relevant factors were taste, price, promotion, sell recommendation, convenience to buy, advertising, and liquor type, respectively. The

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results were aligned with other studies. (Kriangkraiwanit, 2007 ; Suksawad, 2015 ; Poljang, 2013).

The average of drinking quantity was affected at the significant difference of 0.05 level in both periods of time. Therefore, the consumers were emphasized the excise tax regime (Buaphan, 2010, p. 66). As a result, after increasing tax, some consumers tended to consume less comparing to before applying the new tax rate. Some customers switched to other alcohol products such as wine or beer. The consumers mentioned that they drank alcohol products because of health benefits from it.

Statistically, the study was found that the taste was not a priority for customers. The excise tax also did not contain an impact on taste, price, and brand image, where is different from the previous study from Buapan (2010, p. 71-72) due to the different area context, where Mueang Yala district was recognized as a political conflict area, then it led to diverse the drinking behavior. The study from Boapan which examined the case in Bangkok and metropolis areas, found that the consumers were emphasized the type liquor. (White liquor, Color liquor) (Boapan, 2010, p. 73)

The consumers tend to emphasize the advertising, promotion, sell recommendation, and convenience to buy. To clarify, applying the new excise tax measure had an influencing on the particular factors at the significance level. The results were not aligned with the previous study from Hashim, Lerdsuwansri & Srihera (2017), which claimed that the social context consisted of the effects on alcohol consumption behavior as well as types of products.

According to such results, it indicates that increasing the alcohol excise tax can reduce the quantity of drinking through consumers. However, if such alcoholic drink is required by its taste or brand, they will not consider the increase of tax anymore. Nevertheless, if other alcoholic products are advertised via television, radio, or publication board together with sales promotion, or have the sellers giving the recommendation, or easy to find or buy them, it will make the consumers realize the increasing tax according to the announcement, and it might affect them not to decide to drink such alcoholic types.

### **Limitations**

This study was examined only in Mueang district, Yala province which is located in southern border areas. This area is considered a high degree of political conflict area, therefore, it has noteworthy context compared to other parts in Thailand.

### Suggestion and Application

The study result is beneficial for the policy analysis of particular government agencies, such as Excise Tax Department, Thai Health Promotion Foundation, as the baseline information especially for policies that are relevant to decreasing alcohol rate measure.

### Conclusion

After the government applied the new excise tax act on 16 September 2017, people in Mueang district, Yala province which is located in the southern borders of Thailand, the population has been acknowledged and aware of the increase in tax and price of alcoholic products, therefore, it has an impact on their consumption amount and leads them to decrease their drinking level and drink other brands of alcohol. According to the comparison of before and after the increase of alcohol prices, it was shown that the increase of tax did not have an impact on taste, price, or brand but it had an impact on other influencers; promotion (discount, premium) seller's recommendation, and convenience and distribution channels. Hence, this can help the government sectors be able to apply the results to plan the policies or determine the measures for controlling the drinking rate reduction further.

### Acknowledgement

This research was granted by the Faculty of Management Sciences, Yala Rajabhat University under the research fund 2018.

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