



## CHAPTER 1

### Introduction

Spirituous liquors or alcoholic have been consumed by human beings for many thousands of years. Drinks have been produced in the home, using simple techniques, since ancient times. This kind of production was for domestic use and for use within the local community. Nowadays, home production still continues while consumption rate increase continuously. However, most of time alcohol consumption today is produced industrially and many beverages such as white liquors, extra-mixed liquors, wines or beers contain ethyl alcohol.

Alcohol plays an important role in the economy. First, alcohol production is a source of employment, household income and government revenue. Although alcohol drinkers feel relaxed and happy, on the other hand, liquor consumption has side effects, which are both acute and chronic. The most common side effects are to the brain and nervous system, cardiovascular, gastro-enteric, liver, kidney, muscular and reproductive organs. Besides this, liquor consumption also has a negative effect on an individual's social behavior towards family, friends and colleagues. It also affects the drinker's productivity, income, premature mortality or recurrent illness and their susceptibility to accidents such as motor accidents, fire. Alcohol is often related to criminal behavior.

In economics, externalities are the effects of production and consumption activities indirectly reflected in the market. They can arise between producers, between consumers, or between consumers and producers. When externalities are present, they can have a harmful or beneficial effect on people who are not directly involved in the markets. The effects are external. When the effects are beneficial, they can be called external benefits. When they are harmful, they can be called

external costs. In addition, externalities can be harmful or beneficial on those participating in the markets, which are called private costs or benefits. If externalities refer to the costs or benefits to all members of society, they are called social externalities.

Therefore, alcohol-related costs can be divided into production costs and cost consequences of consumption. First, the production costs are the value of the resources used to produce alcoholic beverages. The price of alcoholic beverages consists of production costs plus tax per unit of alcohol. Second, cost consequences of consumption i.e., social costs of alcohol consumption, consist of private and external costs. Private costs are costs borne by alcohol drinkers as a result of alcohol abuse and alcoholism such as costs occurred from loss of income due to unemployment because the drinkers could not do their work, or expenditure related to medical treatment. External costs are real costs incurred as a result of damage or injury to others and the cost of government intervention. Consequently, the social costs of alcohol consumption occur as a result of alcohol-related problems. The problems can be summarized as follows:

- Loss of total production due to alcohol-related problems
- The commitment of health service resources to the treatment of people with alcohol-related problems
- A real loss to society from traffic and other accidents, fire and criminal acts where alcohol is a major factor
- Expenses by social welfare and the education service for prevention or alleviation of alcohol-related problems.

Accordingly, costs of alcohol-related problems can be summarized as follows:

1. The economic costs of loss of production due to alcohol abuse and alcoholism
2. The economic health care costs of alcohol abuse and alcoholism
3. The economic costs of fire where alcohol is a major factor
4. The economic costs of crime related to alcohol
5. The economic costs of social response to alcohol abuse
6. The economic costs of motor vehicle accidents that result from alcohol abuse.

In Thailand, liquor consumption trends are increasing. From Table 1.1, in 1988 liquor consumption was 376,341 million litres, in 1996 liquor consumption was 627,600 million litres. It can be seen that in 1996 liquor consumption was 1.7 times that of 1988. For beer, consumption increased continuously between 1988 and 1996. Consequently, the level of consumption in 1996 was 5.6 times that in 1988. However, during some periods, demand for other types of liquor decreased. For consumption per capita, it can be seen that liquor consumption per capita increased from 1988-1990, and then stabilized between 1990-1996. However, beer consumption per capita increased continuously between 1988-1996. The figure of consumption per capita in Table 1.1 illustrates that should be 1) the amount of alcohol consumed increased considerably, while the number of alcohol drinkers increased less or decreased, or 2) the amount of alcohol consumed was constant, while the number of alcohol drinkers decreased, or 3) the amount of alcohol consumed was constant, while the number of alcohol drinkers decreased considerably.

The calculation shows that rate of beer consumption per capita increased due to beer consumption increased by 4.62 times, the number of drinkers increased by only 0.34 times. Like wise, rate of liquor consumption per capita increased due to liquor consumption increased by 0.67 times, while number of drinkers increased by 0.17 times.

Table 1.1 Consumption of Alcoholic Beverages in Thailand, 1988-1996

Alcohol Consumption	1988	1989	1990	1991	1992	1993	1994	1995	1996
Liquor Consumption									
-Total (thousand litres)	376,341	408,480	657,980	622,467	614,591	678,072.6	645,396.6	605,360	627,600
-Average (litres/person)	20.2	21.2	33.3	30.7	29.6	32.65	31.07	29.14	30.2
Beer Consumption									
-Total(thousand litres)	127,035	178,634	260,672	278,480	320,151	421,776	467,053.2	619,210	714,400
-Average (litres/person)	6.5	9.3	13.2	13.7	15.4	20.2	22.46	29.77	34.34

Source: The Excise Department, Ministry of Finance.

The amount of imported alcohol and tax revenue from imported liquor increased between 1987-1996. Table 1.2 shows that the amount of imported liquor was 5.1 million litres in 1987 and increased to 32.2 million litres in 1996, which was 6.3 times that of 1987. Even though, the figure dropped in 1992, the figure began to increase in 1993 and continued to do so. In 1992, the decrease was probably caused by the imposition of value added tax. During this period, tax revenue from imported liquor also changed in the same direction from 433.4 million baht in 1987, to 2,301.5 million baht in 1996.

Table 1.2: The amount of liquor imported and the amount of tariff tax, 1987-1992

Year	Amount (Million litres)	Taxation (Million baht)
1987	5.1	433.4
1988	7.5	635.7
1989	10.6	892.9
1990	14.0	1,186.5
1991	17.6	1,462.5
1992	12.8	1,085.7
1993	14.8	1,227.2
1994	21.2	1,603.3
1995	21.4	1,671.1
1996	32.2	2,301.5

Sources: Economic Industry Department, Ministry of Industry and the Excise Department, Ministry of Finance

The 1990 survey on health and welfare by the National Statistical Office reports on the alcohol consumption of Thai people. An estimated 12.2 million Thais consumed alcoholic beverages of which 84.8% were male and 15.2 % female. The numbers of alcohol drinkers differed by region. In 1990, 4.8 million drinkers were from the Northeast. Approximately 3, 2.4, 1.1 and 0.9 million drinkers were from the North, Central (excluding Bangkok), Bangkok and the South, respectively.

The survey also reported the alcohol drinking rate by region. Approximately 28.34% of the population in the North drink alcohol. The percentage of 25.21, 19.87, 18.7 and 12.62 were from the Northeast, Central (excluding Bangkok), Bangkok and the South, respectively as shown in table 1.3. It can be seen that a percentage of alcohol drinking in the North is the highest, while the South is the lowest. The differences in the rate of alcohol drinking between region could be related to religion and local culture.

Data analysis relating to age, reasons for consumption and alcohol consumption patterns, which help to understand the causes and problems of alcohol drinking. It also helps to find solutions to alcohol related problems. The survey reports that more than 60% of drinkers started drinking liquor between the ages of 15 and 24 years. The main reasons were the imitation of their peers and a wish to be part of society. The varieties of liquors mostly drunk were rice whisky, household brewing liquor, tonics and beer respectively. Approximately 63% of drinker consumed 1-2 times each month, 9.23% drank daily, and 10.2% were women who drank during pregnancy.

Table 1.3 Percentage of alcohol drinkers in each region in 1990

Region	Population (persons)	Number of alcohol drinkers (persons)	Percentage of alcohol drinkers(%)
Northern	10,584,443	3,000,000	28.34
Northeastern	19,038,497	4,800,000	25.21
Central(exclude Bangkok)	12,076,724	2,400,000	19.87
Bangkok	5,882,411	1,100,000	18.70
Southern	6,966,455	900,000	12.92
Total	54,548,530	12,200,000	22.37

Source: National Statistic Office

Excessive alcohol consumption is directly related to social and health problems. For example, in 1989, a traffic accident survey discovered that 62 % of road accidents were caused by alcohol consumption and 77 % of road accident fatalities were alcohol related. Rakkhwan Tosutho (1997) estimated the trends of the economic loss and cost indicator of road accidents between 1981-1995, and analyzed the related factors to the number of deaths from road accidents. The results of the study show that the economic loss and cost indicator of road accidents

(such as the cost of treatment, the cost of damaged property, opportunity costs of injured persons, opportunity costs of disabled persons) was 6,898 million baht in 1981 and increased to 41,397 million baht in 1995. The trends of economic loss increase every year. Factors relating to the number of deaths from road accidents are the economic growth of the service sector, or increasing number of bus registrations, speed limit legislation and alcohol consumption. Health problems relating to alcohol abuse are also important. The statistical data of Thanyarak Hospital, whose main function is to treat drug addicts, shows that the numbers of alcoholics has been increasing. Between 1994-1998, the number of alcoholics increased from to 368, 393, 434, 537 and 585, respectively. The cost of treatment for these patients is still unknown.

This fact is the basis of this study related to the cost of treatment for alcoholism. Thanyarak Hospital has been chosen as a case study. This study also intends to calculate the treatment costs of alcoholism so that related agencies can be made aware of the importance of the reduction of alcohol consumption in Thailand.

### *Research questions*

- What are the cost components of the treatment of alcoholism?
- What are the costs of treatment with regards to alcoholism?

### *Research objectives*

- To indicate various factors influencing the treatment costs of alcoholism.
- To estimate the treatment costs of alcoholism.