THE ROLE AND RATIONALE OF EXCISE DUTIES IN THE ASEAN COUNTRIES

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I. INTRODUCTION

The Association of SouthEast Asian Nations (ASEAN) aims at forging closer economic integration between its ten member countries.[1] According to ASEAN Vision 2020, adopted in 1997, this goal will be pursued by creating, among others, a competitive area in which there is a free flow of goods, services, investment and capital, as well as an equitable economic development and a reduction of socio-economic disparities. The creation of a competitive area, reminiscent of the European Union's single market, requires the abolition of import and export duties and the coordination of domestic taxes on goods and services to ensure that they are not used to protect domestic industries or to subsidize exports. A sales tax, for example, can be used to protect domestic industry if the compensating tax at the import stage is higher than the tax on similar domestically produced goods, while exports would be subsidized if the rebate were higher than the amount of sales tax actually paid prior to the export stage. Similarly, excise duties can be used to discriminate against goods made abroad that are close substitutes of domestically produced goods.[2]

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[1] ASEAN was established on 8 August 1967 in Bangkok by the five original member countries, namely Indonesia, Malaysia, Philippines, Singapore and Thailand. Brunei Darussalam joined in 1984, Vietnam in 1995, Laos and Myanmar in 1997, and Cambodia in 1999. In 2003, the ASEAN region had a population of about 500 million, a combined gross domestic product (GDP) of US $737 billion, and a total trade of US $720 billion.

[2] To illustrate, in the EU, France used to levy low excises on spirits made from grapes (*e.g.*, cognac) but high excises on spirits made from grains (*e.g.*, gin). Although the alcohol excise structure did not discriminate on the basis of product origin, nevertheless it protected home-made spirits, because grain-based spirits were mainly imported. In a case brought before it, the European Court of Justice ruled that the excise should be based on alcohol content rather than the nature of the raw material.

The coordination of sales taxes and excise duties requires an assessment of their role and rationale. This chapter focuses mainly on the excise duties, which play an important role in the revenue structures of the ASEAN member countries. Excises are broadly defined to comprise all selective taxes on tobacco products, alcoholic beverages, petroleum products, motor vehicles, pollutants, luxury items and other goods and services selected for specific taxation—whether imported or produced domestically.[3] Clearly, this definition goes beyond the usual Anglo-Saxon description of excises as taxes imposed on the manufacture, sale or consumption of certain domestically manufactured goods. The wide definition of excise duties, moreover, would also include sales tax rates in excess of standard rates applied to luxury goods and other products. In contrast to excise duties, sales or general consumption taxes are imposed on all goods and services, except if specifically exempted. General consumption taxes comprise value-added taxes (VATs), manufacturers' sales taxes (MSTs), retail sales taxes (RSTs) and turnover taxes.

As indicated by the examples, the distinguishing features of excise duties are selectivity in coverage and, by implication, some form of discrimination in intent. Moreover, the basis of assessment for excise duties often is some quantitative amount, for example, volume, weight or strength, to which a specific rate (an absolute amount per unit of measurement) is applied. (Exceptionally, excise duties may also be levied at *ad valorem* rates applied to the value or price of products.) Although excise duties may be imposed at any stage of the production and distribution chain, usually they are levied at the manufacturer's (and importer's) stage, primarily because the basis of assessment and the high rates require some form of physical control over production. This contrasts with sales taxes, which are imposed on actual transactions and prices throughout the entire or most of the production–distribution chain, and whose compliance is ensured through checks upon books of account.

This chapter is organised in five sections. Following this introduction, Section II reviews the nature, role and revenue importance of the excise tax systems in the indirect tax structures of the ASEAN countries. The prominence of excise tax systems in raising revenue for general purposes indicates that excise tax policy (and administration) aspects deserve to be taken as seriously as the policy aspects of general consumption taxes, such as VAT. Although revenue is the main rationale for excise taxation, their discriminatory intent also reflects various other objectives, which are examined in Section III. The discrimination in intent gives rise to specific excise tax policy and administrative issues regarding the instrument to be used: specific vs. *ad valorem* rates, and regulation, taxation or permit systems. These aspects are touched upon in Section IV. Section V summarises and concludes.

[3] In OECD terminology, excise tax systems, therefore, comprise all selective taxes on the production, sale, transfer, leasing and delivery of goods and the rendering of services (item 5120 in the OECD (2003) classification), as well as all selective taxes on the use of goods, or on the permission to use goods or perform activities (item 5200), other than general taxes on goods and services (item 5110). For more on the definitional aspects of excise tax systems, see Cnossen (1977).

The analysis in the succeeding sections applies the usual criteria in evaluating taxes; that is, economic efficiency, distributional equity and administrative feasibility. Excise duties can promote efficiency in resource allocation by internalising the social costs (not accounted for in price) of the (excessive) consumption or production of excisable products. Distributional equity has regard to the impact of the excise duties at different levels of income. As a minimum, the criterion implies that it is generally undesirable to make market-determined incomes more unequal through the tax system. Administrative feasibility means that the costs of excise tax collection and compliance should be minimised. Clearly, trade-offs must be made between efficiency, equity and administrative considerations.

Furthermore, the analysis proceeds on the assumption that excise duties are borne by consumers of the excisable products in proportion to their expenditures on those products. Although profits and/or wages in the producing industries may be squeezed to some extent by (increases in) excise duties, the relatively inelastic demand for most excisable products suggests that, in general, this assumption is reasonably realistic, particularly in the long run.

II. NATURE, ROLE AND REVENUE IMPORTANCE OF EXCISE DUTIES

This section starts by briefly outlining the forms of excise tax systems and general consumption taxes that are found in the ASEAN countries. Secondly, attention is paid to the role that excises and general consumption taxes as well as import duties should play in a country's tax system. Lastly, the revenue contribution of these taxes is reviewed.

A. *Forms of Excise Tax Systems and General Consumption Taxes*

Table 1 shows the coverage of the excise tax systems of the ASEAN countries. In all countries, traditional excise goods, such as tobacco products, alcoholic beverages, petroleum products and motor vehicles, are included in the excise tax base. Therefore, these goods are not shown in the table. In addition to the traditional excise goods, however, many excise tax systems include various products regarded as items of luxury consumption in the excise tax base. Typically, luxury goods comprise toiletries, cosmetics, perfumes, jewellery, watches, clocks, cameras, radios, televisions, pleasure boats, paintings, antiques and fireworks. Furthermore, the excise tax base in various countries includes a number of (*semi-*)*essential goods*, such as soft drinks and sugar, and sometimes *producers goods*, such as cement. Beyond this, entertainment, gambling, airport services, telecommunications, and items such as matches and playing cards are often singled out for selective taxation.

The role of the excise tax systems should be evaluated in conjunction with general consumption taxes. As indicated in Table 2, in six ASEAN countries, the general consumption tax is a VAT, which extends through the retail stage and includes all goods and services in its base except those specifically exempted. Three

Table 1. ASEAN Countries: Excise Tax Systems in 2004*

Country	Foods, soft drinks	Producers goods	Nuisance goods	Luxury goods	Entertainment, gambling	Miscellaneous services
VAT countries						
Cambodia	3%: slaughter	—	—	10%: cosmetics, telephones, video and camera equipment, airconditioners	10%: entertainment, hotels	10%: airline tickets, telecommunications
Indonesia	Sugar	Agricultural products (cesses)	—	Various goods taxed at rates of 10%, 20%, 25% and 30%, including motor vehicles and luxury housing	Hotels and restaurants	—
Philippines	Saccharine	Coal, coke, minerals	Matches	20%: perfumes, toilet waters, jewellery, pleasure boats, films, video tapes, fireworks	Hotel rooms, catering	Financial, insurance and brokerage services
Singapore	Water	—	—	Film hire, radios, televisions	Betting and sweepstakes, lotteries	Gas, electricity, telephone, airports
Thailand	Soft drinks, fruit juice	Cement	Matches, mechanical lighters, playing cards	—	—	2.5%: pawning services 3%: real estate sales, financial, insurance and brokerage services

Table 1. (*Continued*)

Country	Foods, soft drinks	Producers goods	Nuisance goods	Luxury goods	Entertainment, gambling	Miscellaneous services
Vietnam	—	—	30%: playing cards	20%: airconditioners, betting tickets, golf 25%: casinos, jackpot games, dancing halls 60%: votive paper and objects	—	—
Non-VAT countries						
Brunei	—	—	—	—	—	—
Laos	30%: soft drinks	—	70%: playing cards	10%: game tables, bowling, lotteries 12%: electrical appliances, colour televisions, VCR cameras 20%: cosmetics, perfumes	15%: night clubs, discotheques	Air travel
Malaysia	Sugar, confectionary, vinegar	Contractors, rubber products	—	Games, sport equipment, toys, electrical machinery, airconditioners, refrigerating equipment, televisions	Entertainment, gaming, betting and sweepstakes	Airports
Myanmar	Sugar, salt	—	Matches	—	—	—

Sources: International Monetary Fund, *Statistical Appendixes* (Washington DC: various years) and International Bureau of Fiscal Documentation, *Taxes and Investment in Asia and the Pacific* (Amsterdam: loose-leaf). In some cases the information may be incomplete or out of date.

*All excise tax systems cover traditional excise goods, defined as tobacco products, alcoholic beverages and petroleum products. (In countries with MSTs, the excises on traditional excise goods may be included in the MST base.) Hence, these products are not shown.

Table 2. ASEAN Countries: General Consumption Taxes in 2004

Kind of tax and country	Scope		Rates (per cent)[c] and exemptions			
	Stage(s)[a]	Tax base[b]	Standard rate	Exemptions[d]	Lower rate	Higher rate
VAT countries						
Cambodia	R	G + S	10	Public transportation	Water, electricity	Tobacco, alcohol, petroleum products, gold
Indonesia	R	G + ST	10	Basic foodstuffs and necessities Hotels and restaurants Entertainment Raw materials	5%	15%
Philippines	R	G + S	10	Unprocessed foodstuffs, fish, poultry Newspapers, magazines, books Artistic products Feed, seed, fertilizer Agricultural services Professional services	None	None
Singapore	R	G + S	5	None	None	None
Thailand	R	G + S	7	None	None	None
Vietnam	R	G + S	10	Unprocessed foodstuffs, salt Newspapers, magazines, books Public transportation	5% Fresh foodstuffs, water, animal food Medicines, medical goods Toys, school supplies Domestic cotton products Scientific and technical services Feed, seed, fertilizer	20% Gold, silver, precious stones Hotels, tourism Brokerage services Lotteries

Table 2. (*Continued*)

Kind of tax and country	Scope		Rates (per cent)[c] and exemptions			
	Stage(s)[a]	Tax base[b]	Standard rate	Exemptions[d]	Lower rate	Higher rate
Non-VAT countries						
Brunei	None	—	—	—	—	—
Cambodia	Turnover and minimum tax	G + S	2	Agricultural produce	None	None
		G + S	1	Investment projects	None	None
Indonesia	MST	Luxury goods				
Laos	Turnover	G + S	5	Rice, agricultural produce Basic transportation, wheelchairs Toys, handicraft products Newspapers, magazines, text books Independent professional services Feed, seed, fertilizer	3% Agricultural products, tea, coffee Clothes, shoes, textiles Raw materials, machinery, equipment	10% Hotels and restaurants Night clubs, discotheques, lotteries Construction services
Malaysia	MST	G + ST	10	Essential foodstuffs, necessities Pharmaceuticals, dental materials Paper products Bicycles Personal and professional services Basic building materials, real estate sales Computer hard- and software Raw materials, machinery, power systems	3% Services 5% Processed foodstuffs Building materials	15% Tobacco, alcohol

Table 2. (*Continued*)

Kind of tax and country	Scope		Rates (per cent)[c] and exemptions			
	Stage(s)[a]	Tax base[b]	Standard rate	Exemptions[d]	Lower rate	Higher rate
Myanmar	MST	G	10	Raw materials, machinery	0% Foodstuffs, necessities 5% Semi-necessities	15%, 20%, 25%, 30% Pearls, jade, precious stones, film and video exhibitions 50% Beer wine, local spirits (200% on liquors) 75% Cigarettes 170% Motor fuel

Sources: International Monetary Fund, *Statistical Appendixes* (Washington DC: various years) and International Bureau of Fiscal Documentation, *Tax and Investment in Asia and the Pacific* (Amsterdam: loose-leaf). In some cases the information may be incomplete or out of date.

[a]The letters have the following meaning: R = value-added tax (VAT) extending through the retail stage, MST = suspension method manufacturers' sales tax, Turnover = cumulative turnover tax.

[b]The letters denote the following: G = Goods, S = Services, ST = Services taxed selectively.

[c]Rates are in tax-exclusive form, i.e. specified as a proportion of the net-of-tax price. All VATs are destination based; hence, the zero rate on exports is not shown. Similarly, under MSTs manufacturers would be forward integrated with the export stage.

[d]Standard exemptions are not listed, i.e. health, education and welfare services, immovable property (unless newly created), cultural and postal services, financial services, insurance, betting and gambling, and non-profit organisations.

VAT countries have a single VAT rate without differentiating between essential and non-essential items of consumption. Vietnam stands out because it applies a lower-than-standard VAT rate to goods and services considered essential, such as fresh foodstuffs, water and medicines. In lieu of a lower (or zero) rate, Indonesia, the Philippines and also Vietnam exempt necessities from VAT.[4] Generally, these goods and services include basic foodstuffs, newspapers, books, passenger transportation, fertilisers and pesticides. Exemption means that the VAT paid in previous stages of production and distribution is not refunded. Consequently, the price of exempt products includes an amount of VAT that will vary depending on the share of the value of taxable inputs in final price. In other words, the ultimate VAT burden is indeterminate and cascading or tax-on-tax effects may occur if the exempt product is sold to a taxable producer or distributor.

Three ASEAN countries have not yet converted to VAT. Thailand and Myanmar levy an MST, while Laos still levies a turnover tax. MSTs eliminate cascading effects by suspending the liability to tax on goods that are used as inputs to other goods (a tax credit mechanism, as under VAT, would achieve the same purpose). By contrast, the turnover tax is levied every time a product changes hands, without regard to the tax paid in previous stages of production and distribution. Thus, a turnover tax becomes cumulative and capricious in its effect on prices and induces firms to integrate. The ASEAN countries without VAT also exempt various essential products from tax or apply a lower rate to them. Myanmar eliminates all tax on foodstuffs and other necessities by applying a zero rate to them.

As shown in Table 2, Laos, Malaysia and Myanmar apply higher-than-standard consumption tax rates to various luxury products. Basically, these rates are intended to serve the same function as the higher-than-standard VAT rates in Indonesia and Vietnam, namely, to increase the progressivity of the tax system. The MSTs may not achieve this objective, however, because (exempt) trading margins are typically higher on luxury goods than on essential products.

B. *Role of Excises, General Consumption Taxes and Import Duties*

Generally, taxes on goods and services are used to generate revenue, provide temporary protection to industry and improve efficiency in resource allocation.[5]

There is general agreement that the main revenue-generating role in a system of taxes on goods and services should be assigned to a general, broad-based, neutral consumption tax, such as a VAT. This implies that all goods and services, except

[4] In addition, all countries with a VAT have the usual "standard exemptions", not shown in Table 2, regarding health, education and welfare services, immovable property (except if newly created), cultural and postal services, financial services, betting and gambling, and non-profit organisations.

[5] In assigning these roles to the various taxes, it is important that they are used consistently in relation to the specified ends. Ideally each tax should be used for one goal only, although in practice there are often more goals than instruments available, the effect of an instrument may not be fully predictable or it may be used so intensively that it reverses direction.

those specifically exempted for social or administrative reasons, should be taxed at a uniform *ad valorem* rate. Neutrality in respect of such a consumption tax means that tax cascading (the taxation of successive stages of production and distribution, without an offset for taxes paid in previous stages) should be avoided, that imports should be included in the base and taxed at the same rate as domestically produced goods, and that exports should leave the country free of tax. Since a broad-based consumption tax generally is collected on a current basis, say, monthly, its revenue-generating capacity is not affected by inflation and the effect of rate changes on revenue is immediately visible. The wide introduction of VATs around the world indicates that these considerations are appreciated.

In theory, import duties should not be used as a major tax revenue source, because of their non-neutral effects. In practice, however, import duties do fulfil this role if no other convenient tax handle is available and a basic level of protection is justified. For revenue purposes, the import duty should be levied at a uniform, *ad valorem* rate on all imports.[6] As such, it would have revenue-generating properties similar to a general consumption tax: it would be collected without lags and an adjustment of the rate would immediately translate into more or less revenue. In addition, a number of carefully designed supplementary import duties would be justified to provide protection to domestic industries that the government wishes to encourage. Therefore, the latter duties would not have an important role in raising revenue. Rather they should be reduced over time as the protected industries mature and are able to compete successfully in comparison with similar industries elsewhere.

Excise duties combine the revenue role of a general consumption tax and the resource allocation role of import duties, albeit in a different fashion. Excises on selective products, such as tobacco, alcohol and petroleum products, have proven to be very productive sources of revenue. Efficiency in resource allocation, moreover, is promoted if the excises are designed to internalise the social cost of the production or consumption of the products on which they are imposed. In the absence of effective income and property taxes, moreover, excises on luxury goods, considered proxies for taxpaying capacity, may have a role in improving the progressivity of the tax system. Since excises do not have a protective function (which is performed by the import duty), it is important that imports are included in the domestic excise tax base and that the same rate applies to them.

Viewed in combination, the protective (and revenue) function of the import duties should be given priority, followed by the revenue and resource allocation function of the excises and, lastly, by the revenue role of consumption taxes. Technically, this means that at the import stage, the excises should be levied on the import duty inclusive value of goods. Since the excises would be the same regardless of the origin of the goods, the domestic industry would be neither unduly handicapped

[6] If imported services would be taxed along with goods, a generally applied import duty would be equivalent in effect to a revaluation of the currency, because the demand for foreign commodities and foreign exchange would decrease. In turn, the revaluation would act as a "tax" on exports.

(which would happen if the excises on domestic goods were higher than those on imported goods) nor unduly protected (if the taxes on imported goods were higher than those on similar domestic goods). Thus, this form of coordination would leave the protective function of taxes on goods more clearly to the import duty proper, compared to the old Anglo-Saxon approach under which the excises would not be applied to imports or assumed to be subsumed by the import duty. Furthermore, coordination with the consumption tax would be achieved by levying that tax on the excise duty inclusive value of manufactured items, while the consumption tax at the import stage would be levied on the value of imports plus import and excise duties.

C. *Revenue Importance of Taxes on Goods and Services*

As shown in Table 3, excises play an important role in the tax structures of the ASEAN countries. Apart from Brunei (whose tax revenue collections are dominated by receipts from oil and minerals) and Myanmar (whose excise duties are subsumed by the MST), excise duties contribute on average 16 per cent of total tax revenue (defined to include social security contributions) or 2.0 per cent of gross domestic product (GDP). This average conceals wide differences among countries. While excise tax collections were merely 10 per cent of total tax revenue (1.9 per cent of GDP) in Malaysia, Singapore collected as much as 26 per cent (2.0 per cent of GDP) through its excise duties. In various countries, the revenue contribution of the excises is understated, primarily because the compensating excise collected at the import stage is included under import duty receipts. Similarly, some countries apply high sales tax rates to excisable products and this revenue also is not included in excise tax revenue.

Furthermore, the table shows that on average general consumption taxes are the most important tax category among taxes on goods and services (except in Singapore and Thailand). In eight countries, the share of general consumption taxes in total tax revenue averages 21 per cent or 2.8 per cent of GDP. Five countries collect more than one-fifth of their tax revenues from general consumption taxes. VATs in particular are important revenue-generating taxes. By contrast, the share of import duties in total tax revenue is 14 per cent or 1.8 per cent of GDP.

The share of excise collections in total tax revenue would be even greater if that part of consumption taxes, for instance, VAT, which is levied on the excises proper were also included in excise receipts. It is often argued that VAT should be left out of consideration, because its imposition does not affect the price of excisable products relative to other consumer goods. This would be correct if the excises reflected the social cost of these products. To the extent that this is not the case, however, the VAT on the excess of the amount of the excises over the social cost represents an additional excise duty. The amount involved can be large. To illustrate, if an excise constitutes 40 per cent of the excise- and VAT-inclusive retail price of a particular product, then a statutory VAT rate of 15 per cent of the pre-tax

Table 3. ASEAN Countries: Revenue Importance of Taxes on Goods and Services, Various Years

Country	Excise duties[a] (1)	Consumption taxes (2)	Import duties[b] (3)	Total (4 = 1 + 2 + 3)	Total tax revenue
A. As percentage of total tax revenue					
VAT countries					
Cambodia	16.3	33.6	32.4	82.3	100.0
Indonesia	6.4	19.3	2.4	28.1	100.0
Philippines	12.9	14.4	16.1	43.4	100.0
Singapore	25.9	8.5	0.0	34.4	100.0
Thailand	25.6	21.2	12.3	59.1	100.0
Vietnam	8.8	29.8	24.0	62.6	100.0
Non-VAT countries					
Brunei	...[c]	—	13.0	13.0	100.0
Laos	18.7	26.0	16.0	60.7	100.0
Malaysia	10.5	12.3	5.7	28.5	100.0
Myanmar	1.7	45.2[d]	9.6	56.5	100.0
Averages[e]	15.6	20.6	13.6	49.8	100.0
B. As Percentage of GDP					
VAT countries					
Cambodia	1.4	2.8	2.7	6.9	8.4
Indonesia	1.0	2.9	0.4	4.3	15.2
Philippines	2.2	2.4	2.7	7.3	14.9
Singapore	2.0	0.7	—	2.7	7.9
Thailand	4.4	3.6	2.1	10.1	17.1
Vietnam	1.5	5.0	4.0	10.5	16.9
Non-VAT countries					
Brunei	...	—	2.5	2.5	18.9
Laos	1.8	2.5	1.5	5.8	9.6
Malaysia	1.9	2.2	1.0	5.1	17.9
Myanmar	0.1	1.1	0.2	1.4	2.5
Averages[e]	2.0	2.8	1.8	6.6	13.5

Sources: International Monetary Fund, *Statistical Appendixes* (various countries) and *Government Finance Statistics* Yearbook 2002. Data relate to the following budget years: Brunei (1996), Cambodia (2003), Indonesia (1999/2000) Laos (2003/2004), Malaysia (2003), Myanmar (1999/2000), Philippines (1998), Singapore (2001/2002), Thailand (2000/2001), and Vietnam (2003).

[a]Generally, excise tax revenues include receipts from all selective taxes, including motor vehicle licence fees and various other taxes on specific goods, services and activities.

[b]May include sales tax and excise duties collected on imported goods.

[c]Excise tax revenues are included under import duties.

[d]Includes revenue from excises on traditional excise goods.

[e]Averages do not include Brunei (because its tax revenue is dominated by receipts from oil and minerals) and Myanmar (which collects the excises under its highly rate-differentiated MST).

price (*i.e.*, 13.04 per cent of the retail price) is blown up to an effective VAT rate of about 28 per cent of the pre-tax price (nearly double the statutory rate), if the excise, as it should be, is also included in the VAT base. Incidentally, this is called the "multiplier" effect of *ad valorem* taxation.

Of further interest is the revenue yield of individual excisable products. For most countries, detailed data are not available, but Table 4 shows a breakdown of excise tax collections in respect of tobacco products, alcoholic beverages, petroleum products, motor vehicles and various services in Singapore. Interestingly, traditional excisable goods—tobacco, alcohol and petroleum products—account for only 12 per cent of total excise tax collections in Singapore (compared with more than 90 per cent in most other countries). As Table 4A shows, the excises on motor vehicles and gambling are the biggest money machines, contributing two-thirds of total excise tax revenue or 17 per cent of total tax revenue. As elsewhere, the automotive field clearly is the most important excise tax base, with wide ramifications in terms of economic efficiency and distributional equity. The revenue yield of selective taxes on public utilities is rather small.

Finally, there is the share of excise duties, VAT and import duties in total tax collections on individual products. As indicated in Table 4B, excise duties dominate. Import duties on excisable products account for only 15 per cent of total

Table 4. Singapore: Tax Collections on Excisable Products in 2001/2002

Excisable product	Excise duty	GST (VAT)	Import duty	Total tax by product
A. As percentage of total excise duty, VAT (GST) and import duty collections				
Tobacco	1.5	…	37.5	7.1
Alcohol	2.2	…	17.4	4.6
Petroleum	8.0	…	—	6.7
Motor vehicles	41.3	…	44.6	41.8
Gambling	25.9	…	—	21.9
Public utilities	2.8	…	—	2.3
Other	18.3		0.5	15.6
Total	100.0	100.0	100.0	100.0
B. As percentage of total tax collections per excisable product				
Tobacco	17.9	…	82.1	100.0
Alcohol	41.1	…	58.9	100.0
Petroleum	100.0	…	—	100.0
Motor vehicles	83.5	…	16.5	100.0
Gambling	100.0	…	—	100.0
Public utilities	100.0	…	—	100.0
Other	99.5	…	0.5	100.0
Total	84.5	…	15.5	100.0

Source: International Monetary Fund, Singapore: *Statistical Appendix*, Table 13. Figures may not add because of rounding.

excise tax collections and within the import duty category, excises on tobacco and alcohol are the most important.

III. Objectives of Excise Taxation[7]

The following objectives can be identified in relation to the use of excise duties:

- To raise revenue for general purposes (all excises);
- To reflect external costs associated with consumption or production but not accounted for in price (smoking, drinking, driving, polluting);
- To discourage consumption that is deemed undesirable (smoking, drinking, gambling, carbon emissions);
- To charge road users for government-provided services (particularly roadways); and
- To improve the progressivity of the tax system (luxury goods).

This section discusses each of these objectives in turn.

A. *Raising Revenue for General Purposes*

In practice, most excises have probably been enacted for revenue purposes, the main consideration being that they could be administered more easily than other taxes. Excises on tobacco, alcohol, petrol and motor vehicles are good potential sources of revenue, because the products are easy to identify, the volume of sales is high, and the fact that there are few producers (except in the case of wine) simplifies collection. Also, there are few substitutes that consumers would find equally satisfactory, so that consumption remains high despite excise-induced price increases.

The differentially higher taxation of excisable products for revenue purposes also has an economic rationale. The absence of close substitutes for addictive or indispensable products, such as tobacco, alcohol and energy, implies that the demand for them is inelastic. This means that the potential for distortion of economic decisions by the imposition of excise duties is relatively small. More generally, economic theory prescribes that as long as goods are unrelated in consumption, tax rates should be higher on the good with the lowest elasticity. This finding is known as the " Ramsey rule" (1927), which holds that, subject to certain conditions about the range of other tax instruments available to the authorities, the rate of tax set on the sale of each good should be inversely proportional to its elasticity of demand (holding the elasticity of supply constant).[8]

[7] This section draws heavily on Cnossen (2005).

[8] A problematic feature of Ramsey's analysis is that it assumes that all individuals are identical, in which case a uniform lump-sum tax would be indicated. However, Atkinson and Stiglitz (1980) have extended the analysis to include multiple persons and redistributional goals.

As an extension of the Ramsey rule, Corlett and Hague (1953) have proved that, since leisure cannot be taxed, efficient taxation requires taxing products that are consumed jointly with leisure at a relatively high rate. As a result, the second-best situation in which leisure cannot be taxed is moved closer to the first-best situation in which leisure would be taxed. In that case, a general, equal-rate, consumption tax would be equivalent to a lump-sum tax without excess burden; that is, there would be no loss of welfare above and beyond the tax revenue collected. Therefore, if cigarettes and beer, or, perhaps more likely, pleasure boats, are complements to leisure, then taxing them improves resource allocation.

Furthermore, the collection efficiency of the excises is high. The tax base is obvious, readily understood by the tax official and the taxpayer, and generally not susceptible to varying interpretations by either party.[9] The tax liability usually leaves little room for argument.[10] Furthermore, enforcement is straightforward. Basically, excise personnel guarding factories act like policemen; they simply weigh, count or establish the strength of products presented for clearance and apply a fixed monetary amount to determine the tax liability. In principle, goods are not released until the duty has been paid and there are no collection arrears. Taxpayers play a relatively passive role, and only minimal records have to be maintained. As a result, collection and compliance costs are minimal. This description applies to most excises, with the notable exception of luxury taxes and nuisance taxes on matches and playing cards.

B. *Reflecting External Costs*

Furthermore, excises are often rationalised as charges for the external cost that consumers or producers of excisable products impose on others. The principle of consumer sovereignty implies that rational, fully informed persons who weigh up all the costs and benefits of their actions should be free to smoke, drink, gamble, pollute and drive. However, physical, financial and psychological costs imposed on others should be accounted for in price, if they cannot be charged directly or indirectly (*e.g.*, through higher insurance premiums) to the perpetrators. Thus, the existence of external costs could establish a case for government intervention through, for instance, excise taxation.

Charging consumers or producers for external costs is known as the "Pigouvian prescription" (Pigou, 1932), which holds that efficient consumption or production can be achieved through the tax system by imposing an excise on the activity equal

[9] Contentious issues might arise regarding transfer prices from manufacturers to wholesale outlets controlled by them if the excise duty is levied at an *ad valorem* rate.

[10] This compares favourably with the provisions of income and consumption tax laws that, relative to conditions in developing countries, are often unclear, overly sophisticated and insufficiently attuned to business practices.

to the marginal cost of the damage caused to other people.[11] The identification and measurement of marginal costs are often difficult, however, because they depend on who does what, where, and under what circumstances. In practice, therefore, average external costs are estimated and a "pooling" approach (akin to insurance) is adopted in charging for these costs. Perpetrators as a group meet the costs by paying a uniform excise calculated as the total external costs divided by, say, the number of packs of cigarettes or drinks consumed. This average-cost approach seems acceptable if damage—for example, through smoking—is approximately proportional to cost.[12]

Global warming through fossil-fuel burning perhaps represents the classic case for internalising external costs through appropriately designed excise duties imposed on carbon emissions or, less directly, energy. The impact of burning fossil fuels on global climate change is a pure public "bad", and the damage caused to the global climate is a function simply of the total amount of carbon dioxide and other greenhouse gases emitted, which in turn can be directly related to the quantities of different fossil fuels used and their characteristics. This observation has induced various countries to redesign their energy taxes in line with environmental objectives by differentiating the related excises by type of fossil fuel. The effects of lead pollution, acid rain and other environmental "bads", furthermore, have been countered by favouring less-polluting products (*e.g.*, unleaded versus leaded petrol) and by introducing new taxes to raise the price of polluting products or processes (*e.g.*, fertilisers, pesticides, sulphur, disposable containers, basic chemicals and batteries).

An important question regarding the taxation of pollution (as well as of smoking, drinking and gambling) is whether duty rates should exceed Pigouvian levels when governments need revenue and non-distortionary lump-sum taxes are unavailable. Surprisingly, perhaps, Bovenberg and de Mooij (1994) argue that revenue considerations generally lead to taxes on "dirty" goods that are below Pigouvian levels. The reason is that in their model, government revenue is best collected with a uniform tax on all consumption; and, as the overall level of taxation increases, the marginal excess burden of a Pigouvian tax rises relative to its external benefits. Hence, differential taxation of polluting goods should fall as the overall level of taxation rises.

[11] Coase (1960) has pointed out that government intervention to deal with externalities would not be required if property rights to, say, air and water were established. But the application of this important finding is limited if resource owners cannot identify the source of damages to their property (and legally prevent the damages) or if the cost of bargaining deters the parties involved from finding their way to an efficient solution. (Even if these conditions were met, the assignment of property rights would still, of course, affect income distribution.)

[12] Of course, measurement problems come back in full force if there are threshold levels of consumption below which adverse effects are absent or attenuated: one or two glasses of wine per day are good for you. In this situation, Pigouvian taxes should exceed average external cost.

C. *Discouraging Consumption*

Information failures are other instances that justify government intervention, even in the absence of explicit external costs. Thus, research has indicated that the price elasticity of demand for cigarettes and alcoholic beverages among the young is, on average, twice the price elasticity among adults (see, Cummings *et al*., 1994). In the event, excise-induced price rises would have a powerful effect in deterring the young from smoking and drinking. More generally, public health objectives—paternalistic or not—can be furthered through the imposition of excises that restrain the consumption of products regarded as unhealthy. Although economists have little to say on the objectives as such, they can analyse the efficacy of one instrument over another in achieving the objectives. In the example, this would be the choice between an increase in the tobacco and alcohol excises, or, perhaps more appropriately, better dissemination of information on the health hazards of smoking and drinking, coupled perhaps with legislation restricting supply or (place of) consumption.

D. *Charging Road Users for Government Provided Services*

Excise taxation can also play an important role in regulating various external (including environmental) and other costs associated with road transport. Road (and similar transport) services resemble goods produced in the private sector that are used optimally when their price, commonly referred to as the economic user charge, equals the total social costs of operating the road network. Accordingly, road user charges should contain charges for efficient road use and for damage, as well as charges for externalities, such as congestion, pollution, noise and accidents. Road user charges can be set to cover the total costs of operating the road network or the difference between the marginal social cost and the average private cost of road use.

Motor fuel taxes (in contrast to motor vehicle taxes) can be set at a level that is a reasonable proxy for road maintenance charges as they reflect varying consumption per vehicle-kilometre. If most motorised traffic uses the surfaced portion of the highway system, setting the economic user charge according to the variable maintenance cost of surfaced roads may be a fair approximation of marginal cost. This applies to consumers as well as producers. In the event, the taxation of motor fuels used as production inputs does not violate the Diamond–Mirrlees (1971) theorem, which prescribes that, subject to certain general conditions, intermediate goods should not be subject to revenue-raising taxes. If they were, then producers would incur excess burdens in trying to pass the tax onto consumers in addition to the tax itself.[13] After all, the fuel excise, although levied on an intermediate good, is a

[13] More generally, the Diamond–Mirrlees theorem holds that the pursuit of production efficiency (all firms face the same input and output prices), as a policy objective takes precedence over the pursuit of exchange efficiency (all consumers face the same product prices).

quid pro quo for the cost of government-provided road services. A charge, even if indirect, is therefore fully appropriate. In addition to this user charge, externality taxes—for congestion, pollution, noise and accidents—imposed on business users at equivalent levels to those on private users, may, of course, be warranted.

E. *Promoting Progressivity in Taxation*

Historically, excises have been reviled, often vehemently, for falling more heavily on the poor than on the rich. This was certainly true for the age-old duty on salt and it still is for the sugar excise. Excises on tobacco products and popular alcoholic beverages also exhibit a very regressive burden distribution. Some progressivity, however, may be achieved through the higher-than-average taxation of goods disproportionately consumed by the rich, such as liquors, cosmetics, perfumery, electrical appliances, air-conditioning units, photographic equipment, passenger cars, foreign travel, hotel rooms, restaurant meals, admissions, gambling and club dues. The heavy taxation of items regarded as luxuries may be achieved through higher-than-standard consumption tax rates or through separate excises.[14]

Here, the central issue is whether the game of taxing luxury goods is worth the candle. Generally, for the promotion of progressivity to be appreciable and the collection of the luxury excises worthwhile, consumption by higher-income classes should be significant (Cnossen, 1977). Probably, the motoring field is the only case for which luxury excises can be recommended. The demand for passenger cars and petrol is usually highly income elastic; expenditures comprise a sizeable part of household budgets; motor vehicles can easily be broken down in subgroups that would roughly correlate with purchasing patterns of high- and low-income groups; and related excise duties are easy to administer and meet socially with a high degree of acceptance. A system of properly designed road user charges, moreover, can do a good job in identifying consumer preferences and reducing excessive use of public facilities.

IV. ISSUES IN EXCISE TAX DESIGN

Obviously, the objectives specified above require appropriately designed instruments to achieve or approximate them. In the field of taxes on tobacco, alcohol and petroleum, for instance, there is the question of whether specific rates (fixed amounts per quantity) or *ad valorem* rates (fixed percentages of trade price) or

[14] It should be noted that a single-rate VAT tends to have a more progressive incidence than separate excise duties imposed at the manufacturer's and importer's level for the simple reason that trading margins (which are higher on luxury goods than on necessities) and income-elastic services are included in the tax base.

some combination of these rates should be used.[15] Similarly, in the environmental field, harmful emissions can be restrained through taxes, tradable pollution permits or command-and-control regulations—again a choice has to be made.

A. *Specific vs. Ad Valorem Rates*

As argued by Cnossen and Smart (2005), in an imperfectly competitive market, quality levels between similar excisable products, such as cigarettes and alcoholic beverages, differ widely. In such a market, a common specific tax rate reduces relative price differences between low- and high-quality brands, while a common *ad valorem* rate does not. Standard optimal tax considerations would therefore seem to argue for *ad valorem* taxation: relative prices would be unchanged, and consumers would continue to choose brand on the basis of cost rather than tax differences.[16] The Pigouvian perspective leads to a very different conclusion, however: the damage caused by the harmful activity is independent of the price at which it is sold, so that correction of externalities favours specific over *ad valorem* taxation.[17]

These arguments apply to markets in which the set of quality levels on offer is given exogenously. If this is not the case, firms' incentives to raise price and to distort quality may be quite different under specific and *ad valorem* taxation. In the case of a monopolist, for example, specific taxation increases marginal costs by a fixed amount, whereas *ad valorem* taxation acts as a proportional tax on costs, together with a proportional (lump-sum) tax on monopoly profits. By taxing marginal revenue, *ad valorem* taxation, t_a, increases the firm's perceived demand elasticity by the multiplier $1/(1 - t_a)$ and so diminishes incentives for the firm to raise price above marginal cost. Thus one might expect consumer prices to be lower under *ad valorem* than under specific taxation. Indeed, it is possible to show, in the monopoly case, that replacing a specific tax, t_s, by its *ad valorem* equivalent, $t_a = t_s/p$, causes consumer prices to fall and tax revenue and monopoly profits to rise (Skeath and Trandel, 1994).[18] So everyone gains from *ad valorem* taxation, except the public health advocate. In the Cournot model of an oligopoly industry,

[15] Where it is clear that the tax instrument should be specific, further choices may have to be made about the precise form of the instrument. Thus, specific tobacco excises can be designed by reference to the weight of tobacco, the number of cigarettes or their nicotine or tar content, while the specific alcohol excise can be based on volume, alcohol content or some combination of these attributes.

[16] Of course, the tax would still have income effects that might induce consumers to choose lower-quality brands, but so would a non-distortionary lump-sum tax. The theory of optimal taxation implies that a uniform percentage tax on a subset of commodities is desirable only under restrictive conditions on preferences (Atkinson and Stiglitz, 1980); but in this context, those restrictions seem plausible.

[17] All else equal, the share of specific in total taxation should be smaller when the marginal cost of public funds is higher and the importance of excise duties for generating revenue correspondingly greater. To some extent, this reasoning is consistent with the *ad valorem* excise element in EU tobacco tax structures.

[18] Since the monopolist could guarantee the same profit by producing the same output as before, profits can only rise with the change. Government revenue must rise because the monopolist operates on the elastic portion of the demand curve, so that a price cut must increase total revenue.

the story is largely the same: a shift to *ad valorem* taxation will reduce prices and increase government revenues. In this case, however, industry profits may fall, as competition among firms intensifies.[19]

Just as *ad valorem* taxation seems to induce firms to cut prices, it also creates a clear incentive to downgrade product quality (Barzel, 1976), because the multiplier effect of *ad valorem* taxation makes improvements in product quality more expensive for the firm. Likewise, it reduces incentives to invest in advertising, promotion and other demand-enhancing fixed costs of production. In contrast, specific taxation does not directly distort manufacturers' decisions to invest in product quality.[20]

In short, the choice between specific and *ad valorem* taxation depends on whether the primary aim of the policy is to discourage consumption or to raise revenue and on whether improvements in product quality are deemed desirable or not. Furthermore, if the goal of policy is to reduce consumption, there is some tension between the tendency of specific taxes to lead to higher consumer prices and the tendency of *ad valorem* taxes to discourage investments in quality that keep consumers "hooked". The solution is likely to be *ad valorem* taxation at a higher equivalent rate to achieve the desired level of consumer prices, and with concomitant gains for government treasuries.[21]

B. *Taxes or Permits vs. Regulations*

Excise duties, command-and-control regulations and tradable permits are alternative, often supplemental, although not necessarily equivalent ways of achieving a given standard of environmental protection or, alternatively, achieving a greater environmental impact for a given economic cost. As Smith (2006) points out, the case for the use of excise duties over conventional regulatory policies based on technology or emission standards is now well established. If firms are faced with different marginal costs of abatement, taxes can achieve a level of abatement at lower total abatement costs. And even if the available instruments can take account of differences in abatement costs, taxes can sidestep the need for the regulatory

[19] A further, testable implication of the theory is that the pass-through of tax increases to consumer prices should be greater under specific than under *ad valorem* taxation (Delipalla and Keen, 1992). Indeed, there is some evidence that specific taxes in the EU are more likely to be "over-shifted" (consumer prices rise by more than the tax) than *ad valorem* taxes (Delipalla and O'Donnell, 2001).

[20] However, specific taxation may induce consumers to opt for higher-quality brands, if the degree of tax shifting is independent of product quality. In support of this view, Sobel and Garrett (1997) find that specific tax increases in US states are associated with significant declines in the market share of generic brands.

[21] Other, more immediate, considerations might also govern the choice of tax structure. Thus, a specific tax can be imposed at the manufacturer's or importer's stage where it is easiest to collect, whereas, under a system of free trade prices, an *ad valorem* levy must be collected at the retail stage if trade distortions and tax avoidance are to be avoided. However, a disadvantage of a specific tax is that its value erodes with inflation, unless the excise administration has the authority to adjust the tax on the basis of the consumer price index.

authority to acquire detailed information on individual sources' abatements costs. In addition, taxes provide a continuing incentive for polluters to seek ways to reduce emissions, are more robust to negotiated erosion ("regulatory capture") and insulate polluters from the risk that regulatory requirements might involve excessive abatement costs.

A drawback of ecotaxes is that they cannot guarantee that a particular environmental impact will be achieved; polluters' behavioural responses may be less, or more, than expected. By contrast, quantitative instruments guarantee a particular impact on pollution, but at uncertain abatement costs. In making the choice, the risk on environmental quality must be balanced against the risk on the costs of environmental policy. Environmental taxes are likely to be particularly valuable where wide-ranging changes in behaviour are needed across a large number of production and consumption activities. Source-by-source regulation, on the other hand, may achieve a more efficient outcome if pollution damage varies depending on the source of the emissions. A final point worth making is that minor environmental taxes may be ignored by business; hence, if enforcement is not problematical, environmental taxes should be high or not imposed at all.

This leaves the choice between pollution taxes and tradable pollution permits. In theory, taxes and permits are very similar. After all, in an efficient, competitive auction market, the market-determined price for each permit would be expected to be equal to the rate of environmental tax per unit of emissions that would otherwise achieve the same emissions reduction. However, taxes and permits differ regarding the impact of uncertainty. A system of tradable permits guarantees the envisaged quantitative reduction in pollution but at uncertain cost, while an environmental tax has an uncertain impact on the quantity of emissions but fixes the marginal cost of emission controls for polluters. A drawback of pollution permits is that they tend to deter new firms from entering a market dominated by large firms that are able to buy up pollution licences in excess of the firms' cost-minimizing requirements. An advantage is that pollutions permits can be freely distributed to existing firms ("grandfathered") and thus do not significantly increase the average financial burden on existing polluters. Grandfathering, however, forgoes the chance to raise revenue that can be recycled through cuts in the marginal rates of other more distortionary taxes.

C. *Harmonisation vs. Diversity*

Yet another policy issue concerns the desirable degree of harmonisation in a nascent customs union such as ASEAN. Harmonisation would improve the efficiency of exchange, and reduce incentives for bootlegging (the purchase of taxed products in a low excise duty state for consumption in the home state) and tax-base snatching (setting low excise duty rates to attract consumers from other states). Furthermore, if fuel and motor vehicles are used in the production process, harmonization of the related excises reduces inter-state distortions from excise-induced differences in cost structures. Harmonization, however, violates tax sovereignty, since it deprives member countries of the opportunity to set their excise tax rates in line with their own views and priorities concerning revenue, external costs, regulation, incidence and administrative feasibility. Accordingly, trade-offs must be made.

V. CONCLUDING COMMENTS

This chapter adopted a broad definition of excise duties as all selective taxes on goods and services, whether imported or produced domestically. This contrasts with general consumption taxes, such as a VAT, whose base comprises all goods and services except those specifically exempted. Furthermore, it has been made clear that excise duties are primarily levied for revenue purposes, although a good case can be made for viewing them as a *quid pro quo* for the social costs that consumers of excisable products impose on others. Like the excise duties, import duties have a resource allocation function when they are used to protect domestic industry. A VAT, on the other hand, is imposed solely for its revenue-generating capacity. Obviously, it is important that the imposition of excise duties should be properly coordinated with VATs and import duties. Accordingly, excise duties should be imposed on the import duty inclusive value of goods and services, and VATs on the import and excise duty inclusive value of goods and services.

This chapter has shown that excises play an important role in the tax structures of ASEAN countries. They contribute on average almost one-sixth of total tax revenue, which is more than import duties, although less than sales taxes. More than 90 per cent of excise tax collections is derived from the taxation of tobacco, alcohol and petroleum products. In all countries, the automotive field is the most important excise tax base. Excises on luxury goods yield very little revenue and may not be worth the trouble of collecting.

The reasons for levying higher taxes on selected goods and services are the predictability of the revenue (as indicated by the low price elasticity of demand), the belief that consumers should pay for the burden they impose on others (social costs), the need to protect the young (who may have a poor appreciation of the risk of consuming sumptuary excise goods and a tendency to undervalue the future), the imperative to charge users for government-provided services, and the desire to improve the progressivity of the tax system.

On the other hand, the reasons for moderating the level of revenue excises (not user charges) are: the principle of consumer sovereignty (high taxes imposed on fully informed individuals are a form of paternalism); the finding that the net external costs of smoking and drinking (which allow for the cost savings of premature deaths) may be low; equity considerations (taxes on sumptuary goods tend to be discriminatory and regressive); and difficulties in ensuring compliance control in view of illegal bootlegging and smuggling.

The issues addressed in this introductory chapter are dealt with at length in two volumes entitled *Theory and Practice of Excise Taxation: Smoking, Drinking, Gambling, Polluting, and Driving* (Oxford University Press, 2005) and *Excise Tax Policy and Administration in Southern African Countries* (UNISA Press, 2006). These volumes contain various essays by internationally recognized experts who systematically and often provocatively analyse the current state-of-the-art of excise taxation. The essays cover the taxation of tobacco (Cnossen and Smart, 2005; Viscusi, 2006), reflect on alcohol taxes (Smith, 2005; Bird and Wallace, 2006), deal with gambling taxes (Clotfelter, 2005), discuss environmental levies (Barde and Braathen, 2005; Smith, 2006), analyse the role of road taxes and congestion charges (Newbery, 2005; Smith, 2006a), examine distributional effects of excise duties (Cnossen, 2006a) and summarize the most salient administrative aspects (Cnossen, 2006b).

Excise duties have been called the orphans of tax policy, because they receive relatively little attention in the tax literature. The essays show, however, that excise duties are a major fiscal instrument that should not be ignored by policy-makers and students of taxation.

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