# THE RETAIL SALES TAX: AN ECONOMIC STUDY

by KENYON E. POOLE

A study prepared for The Ontario Committee on Taxation

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# Preface

THE present study was submitted at the beginning of 1964. Much has happened since then with respect to all systems of taxation, including those of the Canadian provinces and the American states. Time limitations have prevented bringing these data up to 1968. The author would like, moreover, to take this opportunity to emphasize that his favourable view with respect to the sales tax is based on two considerations. First, the sales tax is only one tax in the revenue system as a whole. Second, exemptions can be provided for food, clothing, etc., which make the tax at least proportional in the first several thousand dollars of income and spending. In a recommendation in favour of a sales tax there is no implication that any desired use may not be made of a progressive income tax, a graduated inheritance tax, or even a graduated net worth tax. The several taxes can be combined in such a way as to satisfy the public's view on the desired after-tax distribution of income and wealth.

The author's thanks are gladly given to those who contributed to the study at key points along the line of its development. Robert Evans is due special thanks for preparing the first two chapters. The penultimate draft was read and criticized by Professors John Due of the University of Illinois and Donald MacGregor of the University of Toronto. They are not to be held responsible for the views expressed, which are the author's alone. Others who read the manuscript and offered helpful suggestions are Robert Coen, Irving Goffman, Eric Ford, John Scadding, and Bredin Stapells. Dr. Robert Clark, Director of Economic Studies for the Ontario Committee on Taxation, also read the entire manuscript and made many helpful comments. The author is greatly indebted to Warren Hurst, Executive Director, for constant help throughout the writing of the study. Finally, thanks are due to Joseph Perry, for able research assistance, and to Mrs. Gerda O'Malley, for extremely competent typing services. Barbara Urquhart prepared the manuscript for publication and Hugh Hanson provided indispensable help throughout, particularly in the final stages of publication.

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# CHAPTER 1

## Introduction

ALL governments, however diverse their nature, have one primary feature in common. They need money. But the severity with which this need is felt will depend on the tax or other financial resources available to the government, and on the extent of its fiscal responsibilities. Thus the government of a wealthy community, where citizens demand only a limited range and depth of public services, may find that it can meet its fiscal needs by imposing relatively light burdens upon its citizens, and without paying undue attention to its revenue sources. Unfortunately such governments are few and far between. More commonly, the demand for public services in a modern community is large and rapidly growing while tax revenues grow somewhat more slowly; and the government faced with such a budgetary squeeze is forced to devote considerable attention to expanding its revenue base.

Over the past several decades, most Canadian provincial governments have faced this problem in a particularly acute form. Under the Canadian federal system, the division of fiscal responsibility is such that provincial governments must meet the demand for public services in just those areas—education, welfare, highways—where the demand is rising most rapidly. At the same time they are constitutionally empowered to levy only direct taxes; and the major taxes in this field, the individual and corporate income taxes, are shared with the federal government. The remaining direct tax revenues, supplemented by federal grants, have not expanded rapidly enough to keep pace with provincial expenditures. The resulting budgetary squeeze can only be alleviated by an unacceptable reduction in the level of public services, or by the exploitation of some major source of new revenues. The retail sales tax has provided such a revenue source, and eight of the provinces have now yielded to the pressure of continuous and growing deficits and have enacted such a tax. The first provincial sales tax was enacted in Alberta in 1936 and removed in 1937, but the Saskatchewan tax enacted in 1937 became a permanent part of the provincial revenue system.[1] Ontario, possessing by virtue of her wealth and economic diversity one of the strongest provincial revenue bases, nevertheless found herself in 1961 requiring funds on a large scale to meet the costs of a new hospitalization system, from a budget that had been running deficits of the order of $100 million for the previous five years. Thus she became the eighth province to bow to fiscal necessity and introduce a sales tax.

The Ontario retail sales tax was announced by the Provincial Treasurer in his budget statement of March 9, 1961, and was enacted with some amendments to become effective on September 1 of that year. It placed on every purchaser of tangible property for consumption or use in Ontario a tax of 3 per cent of the fair

value of such property. Following the accepted pattern of provincial sales taxes, the tax was imposed on the purchaser, but the seller was designated as the agent of the Province for the purpose of collection of the tax. In this way the tax becomes a direct tax on the consumer or final purchaser of the property, cannot be shifted by him, and is hence *intra vires* the Province. If the same tax were placed on the seller of such property in the expectation that he would shift it forward to the consumer, it would become an indirect tax and as such could not constitutionally be levied by the Province.

The Ontario sales tax rapidly established itself as a major source of provincial revenues, yielding $179 million in its first full fiscal year of operation.[2] In that year, 1962-63, it supplied 21.2 per cent of Ontario provincial tax revenues. This proportion, though substantial, is below the Canadian average, since in the eight provinces using such taxes the sales tax contributed 27.6 per cent of total tax revenues in 1962-63.[3] This presumably reflected both Ontario's 3 per cent tax rate (all provinces but New Brunswick taxed at a higher rate) and the wide range of other tax revenues available to Ontario. The low rate, however, provided some scope for expansion of the tax in the event that general revenue needs continue to outrun resources.

Unlike many American state sales taxes, provincial sales taxes are not applied to all classes of retail sales. Thus the Ontario tax exempts a wide range of commodities, for a variety of reasons. In general, however, exemptions from the Ontario tax may be grouped into three categories according to the grounds on which the exemption is granted. Some exemptions may fall into more than one of these categories, while others may be made for the sake of administrative efficiency or other *ad hoc* reasons.

First of all it is recognized that a tax on the sale of intermediate or producers' goods is both inequitable and inefficient and leads to pyramiding of the tax. The tax on goods used in the process of production is inevitably passed on in a higher price of final output, and the tax-included price of final output is then subjected to further tax. The result is distortion of the economy to the disadvantage of both producers and consumers of goods that go through several stages of production, as well as an unjustified advantage to vertically integrated production. To avoid these ill effects the Ontario tax exempts all purchases by manufacturers of goods that enter into output as physical components or are consumed in the production process as catalysts. All machinery directly used in production is also exempt. Thus the Province goes part way in the exemption of goods on which the tax is likely to be shifted forward. The principle on which these exemptions are based, if rigorously applied, would call for full exemption of all purchases by manufacturing firms, since sales of output must cover all costs of a business, not merely its direct production costs. On the other hand, such an extension would lead to numerous problems in distinguishing between purchases by a business for the production of its product and purchases for the consumption of the business owner or operator.

The same principle of avoiding the inequities and inefficiences of tax pyramiding justifies the exemption of purchases by farmers, fishermen, and fur trappers, made in connection with the pursuit of their respective trades. These purchases are

looked on as intermediate commodities in the production of a final output, and a tax on such commodities could only be passed forward in the price of the output.

But even if a sales tax could be structured so as to have no pyramiding effects whatsoever, its effects would still be undesirable in that such a tax would inevitably be regressive. Lower income families spend a higher proportion of their incomes on commodities than do higher income families; consequently they would pay a proportionately higher tax. Families forced by adverse circumstances into unusually heavy expenditures would similarly be heavily taxed. To remove these regressive effects the Ontario tax exempts food (though not candy and confections) and fuel because these items form such a large proportion of lower income budgets. The exemption of fuel can also be justified on the grounds that it is an intermediate good in many of its uses. The exemption of food and fuel changes the incidence of the sales tax considerably, and the resulting tax burden is believed to be roughly proportionate to income on the average. Similarly expenditures on drugs and medical supplies are exempt because expenditure on such items is likely to be inversely related to ability to bear taxation, as well as being unrelated to income. The exemption on children's clothing is likewise intended to lighten the burden of the sales tax on large families whose resources at any given income level are likely to be stretched thinner than those of smaller families.

Certain exemptions are also granted with a view to promoting socially desirable ends. These may be distinguished from the second category of exemption in that they are presumed to serve as positive encouragements to socially desirable forms of activity while the former types are intended to alleviate inequities otherwise present in a fully general tax system. Thus the exemption of books and classroom supplies is justified by the desirability of promoting education, while exemptions for certain purchases by hospitals and other charitable institutions reflect a desire to encourage the activities of these institutions. This principle is not applied with much consistency, however, in that many purchases essential to the operation of such institutions are taxed simply because they are items not directly related to the performance of the institutional function. Religious articles and certain purchases by religious institutions may perhaps be included in this category, though one may question whether the encouragement of religious activity is a proper function for a provincial government.

Certain other exemptions have been made since the tax has come into effect, to eliminate awkward administrative problems or specific discriminatory effects. Thus all purchases over 17¢ were originally taxable, but the prevalence of transactions involving two ten-cent items in certain lines of retailing led to the raising of the limit to 21¢. Similarly ready-mixed concrete and asphalt is now exempt, since under the original Act the delivered product was fully taxable while on-site concrete was not. The discrimination was all the more severe in that the sand and gravel used in concrete manufacture are exempt as being producer goods, while the purchaser of pre-mixed concrete was liable for tax on the proportion of final-output cost represented by these materials.

With the exception of certain of these specific types, however, the broad categories of exempt commodities were established on one or more of the grounds mentioned above. This is not to say that the justification is in all cases adequate,

or that the exemptions are all consistently granted or effective in their purposes. But we have outlined the grounds on which the presently existing exemptions can be defended. Whether they can be successfully defended is another matter.

With this pattern of exemptions the Ontario tax seeks to avoid the most serious problems of regressivity and pyramiding, while at the same time supplying a large and broadly based source of new provincial revenues. Popular opposition to the tax was initially quite marked, but died away rapidly in the following months. In this respect Ontario experience paralleled that of those provinces which had previously adopted a sales tax: very rarely has the principle of a sales tax been an important political issue long after its introduction. Debate centres on how it is to be applied rather than whether. Probably the success of the tax in seven other provinces and a sense of its necessity and inevitability were partially responsible for its rapid acceptance in Ontario. It would appear that the tax in its present major outlines is now well established in Ontario and is about as "popular" as any tax can hope to be.

## FOOTNOTES

[1]John F. Due, *Provincial Sales Taxes* (Canadian Tax Papers, No. 37), Toronto, The Canadian Tax Foundation, 1964, pp. 3-5.

[2]*Ibid.*, p. 43.

[3]*Ibid.*, p. 36.

## CHAPTER 2

# The Sales Tax in the Provinces

THE Canadian provincial sales taxes differ considerably in matters of detail, but in broad outline they are all very similar. The Ontario tax, in responding to the same fiscal problems under the same constitutional constraints, follows quite closely on the lines laid down by its predecessors. Thus all provinces tax the consumer or user of goods and designate the vendor as collection agent. This does not appear to have impaired the effectiveness of the tax at all, once the initial "shake-down" period of developing collection procedures is past. But the use of the vendor as agent has led all provinces to adopt vendor remuneration schemes. In most provinces 3 per cent of the tax revenue is turned over to the vendor to cover his collection costs. Quebec turns over 2 per cent. It is recognized, however, that this percentage may bear very little relation to the actual costs of collection. Saskatchewan and British Columbia lower the percentage returned on tax collection over a certain amount, on the presumption that there are economies of scale in tax collection. Ontario has introduced a more involved scheme under which remuneration runs from ½ per cent to 4 per cent of collection depending on the average value of the individual sale and the ratio of taxable to total sales. This presumably improves the relation between collection costs and vendors' allowances, but at a cost of introducing considerable complexity into the system. In 1963 the scheme was altered to take into account total tax collected.[1] The Ontario tax also differs from some earlier taxes in that it is levied on the "fair value" of purchases. British Columbia, Quebec, Nova Scotia, and Newfoundland levy tax on the purchasing price, and Saskatchewan, New Brunswick and P.E.I. on the "value". Thus the Ontario system gives more discretition to the Provincial Treasurer in setting values for tax purposes in non-arm's-length transactions.

The outline of Ontario exemptions sketched above is similar to that of all other provinces, though there is a wide range of differences in matters of detail.[2] All provinces exempt food for off-premises consumption, and most exempt meals below a certain price. Quebec exempts all meals from sales tax but subjects them to a 5 per cent hospital tax, while Saskatchewan and Newfoundland tax meals over 14¢ and 17¢ respectively. Ontario's exemption of meals under $1.51 is relatively generous, since all other provinces set the limit at $1.01. On the other hand, Ontario and Quebec alone tax pet supplies. Saskatchewan is the only province to exempt candy and soft drinks. All provinces exempt prescription drugs, several including non-prescription drugs and medicines as well. Ontario does not, but does follow the other provinces in exempting all forms of medical, dental, and optical appliances when sold on prescription.

All provinces appear to approve in principle the exemption of intermediate producers' goods, but they differ in the extent to which they follow the implications

of the principle. Items entering into farming or fishing production are exempt in all provinces, with minor exceptions in Saskatchewan and Newfoundland. All provinces exempt material consumed or expended in production, and (except Quebec) catalysts, but British Columbia, Saskatchewan, Quebec and Newfoundland tax industrial machinery. Quebec rebates a portion of this tax proportionate to a manufacturer's out-of-province sales, a practice unrelated to the desirability in principle of exempting manufacturers' purchases. On transportation equipment, Ontario exempts aircraft and repairs, railway rolling stock and repairs, and commercial vessels over 500 tons. Most motor vehicles, however, are taxed. This follows quite closely the patterns of the Maritime provinces, but British Columbia, Saskatchewan and Quebec are somewhat less generous. British Columbia and Saskatchewan tax aircraft, and Quebec taxes railway stock. Saskatchewan even taxes freight charges.

In the area of utilities and fuels other than as used for production and manufacturing, Ontario exempts gas, electricity, water and steam, telegraph services, long-distance telephone calls, wood and coke, fuel oil, coal and gasoline. Local telephone calls, however, are taxable. Again, the Maritime provinces also follow this pattern, though Nova Scotia exempts local telephone calls and Newfoundland taxes steam, fuel oil and coal. Saskatchewan taxes electricity and exempts telephones, while British Columbia and Quebec tax gas, electricity and steam.

The Ontario exemption scheme is broader than most in the field of publications and educational materials. It exempts all books, newspapers, periodicals, and student and classroom supplies. All other provinces tax student supplies, though all exempt school texts and all but Newfoundland exempt religious publications. All other items from the above list are taxable in British Columbia, Saskatchewan and Newfoundland and exempt elsewhere, except for newspapers and magazines sold by subscription which are exempt in Saskatchewan.

There are also a number of miscellaneous exemptions which vary from province to province, though all provinces but Saskatchewan and Newfoundland exempt children's clothing. In general the Ontario exemption pattern is broader than those of most other provinces, though New Brunswick, Nova Scotia, and Prince Edward Island also have extensive exemption lists. The Ontario list appears to represent a more consistent development of the basic principles of exemptions outlined above. The result is a certain loss of revenue and an increase in administrative complexity, but such considerations hardly outweigh the need for an equitably and efficiently based tax.

The Ontario tax has also been one of the most successful from a revenue point of view. In 1963 its 3 per cent rate was, along with that of New Brunswick, the lowest in the country. Prince Edward Island levies 4 per cent and Quebec 6 per cent (local, provincial and school taxes), all other taxing provinces levy 5 per cent. As a result its yield of $28.78 per capita in 1962-63 was fifth out of eight provinces. The national average was $33.03. Yet its per-capita yield for each percentage point of tax rate was $9.59, second only to British Columbia with $12.26. And British Columbia's exemptions are substantially narrower. Yield per dollar of Ontario personal income was only 1.6¢, lower than in any other province but New Brunswick.

The above figures merely display Ontario's position as a wealthy province with a low sales tax rate and broad exemptions. But the tax also forms a smaller part of the provincial tax system in Ontario than it does in any of the other seven provinces. It supplied 21.2 per cent of Ontario's tax revenue in 1963, while British Columbia drew 43.9 per cent of its revenue from this source, and Newfoundland 47.1 per cent. Ontario correspondingly takes a less than average amount from its citizens through the sales tax, both per capita and per dollar of income.[3] This leads to higher relative collection costs, since a 3 per cent tax is no easier to administer than a 5 per cent tax. Thus Ontario's collection costs as a per cent of levy were 1.5 per cent in 1963, second highest of the six provinces for which data were available.[4] Of course this figure was for the first full year of operation of the tax; and the figure may be too high owing to original set-up costs, or too low owing to lags in the implementation of the audit program.

## FOOTNOTES

[1]Due, *Provincial Sales Taxes*, pp. 151-3.

[2]The following paragraphs on exemptions are based on Appendix B of a study prepared for the Ontario Committee on Taxation by J. Eric Ford, C.A., in November 1964, entitled "The Structure of the Ontario Retail Sales Tax Act".

[3]Due, *Provincial Sales Taxes*, pp. 36, 38.

[4]*Ibid.*, pp. 150-51; and Ontario Treasury Department.

## CHAPTER 3

# The Sales Tax and the States of the United States*

THIS chapter compares the Ontario retail sales tax with the sales taxes of some of the states of the United States and summarizes experience under the latter as a benchmark for the evaluation of Ontario's sales tax experience.

### INTRODUCTION: POPULARITY OF THE RETAIL FORM OF SALES TAX AMONG THE STATES

Sales taxation at the level below that of the national government has been in large measure a contribution of the American states to tax practice. Although sales taxes are used by many national governments, including Canada, no federal sales tax has been accepted in the United States, though substantial revenues are derived from an extensive system of excise taxes. For years sentiment has been strong in some quarters for a federal manufacturers' sales tax, and extensive hearings were held on the possibility of a federal general sales tax as early as 1943.

Among the states the retail sales tax is by far the most popular type of sales tax. As of 1962 thirty of the thirty-seven sales tax states used the retail form, and Indiana, famous for its gross income tax, moved to introduce a 2 per cent retail sales tax in 1963. Moreover, some of the other sales tax states—for example, Arizona and North Carolina—use forms that come rather close to the general sales tax. A number of states have demonstrated considerable independence in evolving their own brand of sales tax. Thus the Indiana gross income tax, on both businesses and persons, is a rough approximation to the European type of turnover tax. The business receipts tax (including retailers) is normally at a rate of 0.375 per cent, while the rate on personal income is 1.5 per cent. Indiana has no other form of income tax. Michigan has a "business activities" tax, in addition to a retail sales tax, imposed on business receipts exceeding $20,000 a year. The rate is 0.775 per cent. West Virginia, in addition to the retail sales tax, imposes a gross income tax with wide coverage. But there is little point in detailing the special features of the sales taxes of the various states. The picture rapidly becomes exceedingly complex. Rather, an attempt will be made to focus on features that are common to many or most of the states, and to draw conclusions on the prospects for the gradual emergence of a generally rather similar pattern of sales taxation in the American states. If there is any evidence that such a pattern may be developing, this is of obvious interest to Ontario in its long-range tax structure planning, although it is not intended to suggest that the experience of the states is necessarily a model to follow. Table 3:13, taken from Alfred Buehler's Connecticut tax study, with 1963 rate changes added, presents information for the states.

*I wish to express my thanks to Mr. Joseph Perry, formerly a graduate assistant at Northwestern University, for able research on the sales tax experience of the states.

In some respects trends in U.S. state sales tax experience do indeed point to certain common developments that will prove of interest to Ontario, and to the provinces generally:

(1) Rates have been gradually rising, and the example of states in the vanguard tends to influence other states.

(2) Rising revenue needs are common to all the states, and a continuance of sales tax rate increases seems likely.

(3) The states have not been greatly concerned over the economic consequences of the absence of sales taxes in some states and high sales tax rates in others. All states have a collection of indirect taxes that affect prices of final goods. Moreover, regional and other advantages and disadvantages peculiar to particular states have a greater impact on comparative costs than do differential sales tax rates by themselves.

(4) There is, to be sure, no very definite trend toward a common exclusion and exemption policy among sales tax states. One reason for this is often the state constitutional restraints, which may restrict the state's own freedom of action. Another is the fact that considerable legislative inertia often hinders the adoption of changes in the law. A further obstacle is differences of opinion on exemption philosophy. Still another is the fact that considerable similarity in exemption practice among the states already exists.

(5) Yet the pressure for revenues has forced the states to make the sales tax a more effective revenue producer, and this has been an influence that favours a similar pattern of development where particular situations do not prevent this.

(6) Sales tax states do vary tremendously in the per-capita yield of sales taxes, and in the percentage of personal income taken in sales taxes. This reflects so many different influences, however, that it is not in itself clear-cut evidence of differing views on the role of the sales tax. The largest variations result from the inclusion or exemption of off-premises food, but relatively few states now exempt it.

The preference of the states for the retail sales tax over the earlier-stage taxes stems partly from constitutional reasons (the control of the federal government over interstate commerce) and partly from the administrative problems involved in the interstate taxation of sales by wholesalers and manufacturers. Moreover, the retail form has the advantage that the burden of the tax is more definite than is that of earlier-stage taxes, and exemptions can more easily be made to fall where intended. A tax clearly measured by consumption spending avoids the distortion of business decisions and resource use at earlier stages, as well as pyramiding. Despite these advantages, even states taxing only retail sales use an impure form of the tax. (1) In quite a few states there are in addition low-rate taxes on manufacturing and wholesaling; (2) retail sales taxes usually include considerable amounts of sales of tangibles to businesses (because of limitations involved in the physical ingredient and direct use rules); and (3) there is considerable taxation of services, both to firms and to individuals, despite a widespread reluctance to adopt outright the principle of taxation of services. Thus, for example, Arizona, Hawaii, Indiana, Mississippi, New Mexico, and West Virginia

include many services. This variety of treatment makes generalization on the nature of state sales taxation very difficult.

Another advantage often asserted for the retail sales tax among the U.S. states is that it can be (indeed, it is usually required to be) stated separately from price. This eliminates the uncertainties facing business firms' price policy that arise if the seller is allowed to advertise that he absorbs the tax. These uncertainties, incidentally, cannot be easily avoided when the sales tax is applied at a stage prior to retail: diversity of practice with respect to vertical integration sometimes creates problems of ascertaining price.

## FORMS OF SALES TAX

In view of the constantly changing nature of sales tax practice in the states, it is useful to review briefly the forms that sales taxes may take. In terms of coverage they may apply to retail sales, general sales, gross receipts, and gross income taxes. This classification, due to Haig and Shoup, *The Sales Tax in the American States* (1934), pp. 3-4, is based on an ascending degree of generality; but sales taxes in the U.S. states are so diverse that the classification is rough. The category "general sales tax", incidentally, is not a turnover tax, but implies that there is substantial taxation of producers' goods in addition to retail sales. The retail sales tax is imposed only on sales of tangible personal property at the retail level, but may include some services (e.g., admissions), restaurant meals and public utility sales. The general sales tax is broader, including also sales of manufacturing, extractive, and wholesaling industries. If, in addition, personal and professional services are included, the tax is called a gross receipts tax, and if wages and salaries are also included, a gross income tax.

Another classification of state sales taxes ought to be mentioned, namely, the distinction between a general sales tax and a selective excise. The latter can be either specific or *ad valorem,* while the general sales tax is necessarily *ad valorem.* An *ad valorem* tax automatically reflects changes in the price of the taxed commodity, while a specific tax of so many cents a gallon or pack does not. For this reason it is often pointed out that the yield elasticity of an *ad valorem* tax is greater than is that for a specific tax, of which the yield is a function of volume of sales only. This is a true and important statement, but it does overlook one point. The history of state taxation is one of a veritable tapestry of changes in rates and exemptions under the various taxes, and "yield elasticity" has been achieved through the enactment of frequent rises in specific tax rates, particularly on gasoline, tobacco products, and wines and liquors.

This is vividly illustrated by a partial summary of the changes recorded by the Tax Foundation for 1963. Arizona increased the gasoline and fuel tax from 5¢ to 6¢ a gallon, California raised the gasoline tax from 6¢ to 7¢ a gallon, and imposed an additional tax of 1¢ a gallon for the storage of fuel in excess of 1,000 gallons, and increased vehicle weight fees. Connecticut raised the cigarette tax from 5¢ to 6¢ a pack, and Florida raised it from 5¢ to 8¢. Other states raising the number of cents per pack tax on cigarettes were Idaho, Indiana, Iowa, Pennsylvania, North and South Dakota, Tennessee, Utah, Vermont, Wisconsin, Minnesota, Nebraska, and New Jersey. Florida also raised the alcoholic beverage taxes on

beer and liquor, as did a number of other states. Each year a variety of such increases in specific tax rates are enacted by the states, and they have the effect of permitting specific sales taxes to keep pace with price rises.

## EARLIER HISTORY OF STATE SALES TAXES

Since West Virginia introduced a permanent sales tax in 1921, the trend has been one of ever wider adoption throughout the United States. There is little smoothness in the trend, however. The dates of adoption tend to fall within three main time periods: 1933-37, 1947-55, and 1960-62. During the first period, that of the Great Depression, twenty-three states enacted a sales tax on a permanent basis. Nine other states likewise enacted sales tax laws, but allowed them to lapse or repealed them. Hawaii (not a state at that time) passed sales tax legislation in 1935. During the second wave of adoptions, 1947-55, ten more states levied sales taxes. The final period, 1960-62, saw three additional states adopt this type of legislation, bringing the total of states having sales taxes to thirty-seven (including Hawaii). The District of Columbia adopted a sales tax in 1949. It is probable that more states will introduce a sales tax, though the slow rate at which the tax has been introduced in recent years indicates that it would take a great financial crisis among the states to force its general adoption. Some states have found other revenue sources adequate for their needs. This is particularly true of some states in which corporate and/or personal income is high. In some instances there is a traditional preference for income taxation over sales taxation, just as the reverse feeling exists in other states.

TABLE 3:1 Adoption of U.S. State General Sales Taxes (as of July 1963)

| Year Effective | State |
|---|---|
| 1921 | West Virginia |
| 1929 | (Georgia—1931) |
| 1930 | Mississippi |
| 1932 | (Pennsylvania—1933) |
| 1933 | Arizona, California, Illinois, Indiana, Michigan, (New York—1934), North Carolina, Oklahoma, South Dakota, Utah, (Vermont—1935), Washington |
| 1934 | Iowa, (Kentucky—1936), Missouri |
| 1935 | Arkansas, Colorado, (Florida—1941), Hawaii, (Idaho—1936), (Maryland—1936), (New Jersey—1935), New Mexico, North Dakota, Ohio, Wyoming |
| 1936 | (Louisiana—1940) |
| 1937 | Alabama, Kansas |
| 1942 | Louisiana |
| 1947 | Connecticut, Maryland, Rhode Island, Tennessee |
| 1949 | Florida |
| 1951 | Georgia, Maine, South Carolina |
| 1953 | Pennsylvania |
| 1955 | Nevada |
| 1960 | Kentucky |
| 1961 | Texas |
| 1962 | Wisconsin |

Note: Parentheses indicate that the state allowed original sales tax legislation to lapse, or repealed it; date indicates the time of lapse or repeal. If the tax was later re-adopted, the state is entered again under the year of re-adoption.

Source: U.S. Advisory Commission on Intergovernmental Relations, *Tax Overlapping in the United States: 1961* (Report M-11, Advisory Commission on Intergovernmental Relations, September 1961), p. 15. Due, *Sales Taxation*, p. 292.

## THE SALES TAX–USE TAX COMBINATION IN THE UNITED STATES

Sales in interstate commerce have generally remained among the items exempted from a general sales tax. As in the provinces, this precedent caused much concern among state officials, since goods purchased in another state could be easily brought into the taxing area without the payment of sales tax. In 1935 and 1936, five states attempted the imposition of a type of use tax, placing a levy on "the use, storage, or consumption of tangible personal property that would be subject to the sales tax if bought in the state."[1] In 1937 the United States Supreme Court validated the use tax imposed by the State of Washington, thus opening the door to use tax adoption by other states. By 1945, seventeen of the twenty-three states having a sales tax also employed a use tax. Today all of the states having sales taxes (Delaware and Alaska excepted) impose a use tax as well. Ever since their inception, use taxes have been levied at the same rate as state sales taxes.[2]

The use tax movement was a means of avoiding significant revenue loss, but it could never be policed to the point of covering all taxable purchases. The trend has been for out-of-state sellers to be increasingly regulated by the states in which they do business. First, those sellers having a place of business in the state were compelled to collect taxes. Next came out-of-state sellers with an agent in the state. The situation is as follows: all states and the District of Columbia require an out-of-state seller with either an agent or a place of business in the state to collect tax. If title to property passes within a state, fourteen states require the collection of tax. In addition still other business practices, varying widely from state to state, require the collection and remittance of sales or use tax: e.g., advertising or catalog sales in a state by an out-of-state seller.[3]

The use tax cannot be fully effective, but in a province the size of Ontario it can make a significant contribution to the enforcement of the retail sales tax. Purchases from mail-order houses have been made subject to the tax by court decisions in the U.S. states, and the use tax on imported autos can be, and is, enforced through the state auto registry. Casual sales, and importation of goods by individuals, cannot effectively be taxed under the use tax. An undesirable element of regression is thus introduced into the retail sales tax, since it is typically the higher income shopper who shops by mail at considerable distances.

A partial answer for Ontario would be the integration of the retail sales tax at the federal-provincial level, with all provinces having the tax at the same rate. Importation from U.S. cities would be taken care of at the customs. These two devices taken together would appear to make the use tax unnecessary for Ontario and the other provinces.

## REASONS FOR ADOPTION OF SALES TAXES BY THE STATES

The obvious reason for the adoption of a sales or use tax is the revenue such a tax will bring in. This was the paramount consideration during each of the three movements toward sales tax utilization.

The first great movement was totally Depression-inspired. The legislatures in all twenty-three states were motivated by either a manifest lack of revenue or a

fear that such a lack was imminent. A combination of other causes was also to be found in most states, but all had some relationship to the level of state revenue. The following summary indicates the major reasons behind the movement during the years of the Great Depression.

(a) A sharp decline in state revenues, especially due to Depression-caused declines in yields of property inheritance and income taxes. The most damaging decline was doubtless in property tax revenues, resulting from falling valuations and mounting delinquencies.

(b) A stubborn tendency, undoubtedly reflecting an underlying social pressure, of state legislatures to oppose all cut-backs in appropriations and expenditures.

(c) An increasing burden on state funds due to unemployment, state shouldering of local school expenses, and the need to aid local government in other functions as well.

(d) Pressure from interest groups trying to improve their own tax situation or to shift the burden of expected new taxes onto some other segment of the state economy (real estate dealers, corporate management, tobacco farmers, etc.).

(e) The failure of some essential industry that had accounted for a large proportion of total employment and tax revenue (copper in Arizona, oil in Oklahoma).

(f) The fear that the revenue-expenditure relationship, although holding up well during the early part of the Depression, might worsen in the near future (Iowa, for example).

Some combination of these six maladies will explain sales tax adoption in every state during this first period.[4]

The second wave of sales tax adoptions, 1947-55, was an aftermath of World War II. Ten states adopted a permanent sales tax during this period, four of them in 1947. *Business Week* reported in 1949 that "most states . . . are in a financial jam. Their operating expenses have skyrocketed."[5] The high dollar level of operations brought on by the war persisted, capital and other spending projects forestalled because of war-time production controls had to be made up, and the release of long-suppressed inflationary tendencies aggravated the state revenue situation.[6] By the mid fifties population increases and both urban and suburban development brought "mounting pressure for more schools and hospitals, better roads, expansion of water and sewerage systems."[7] Since the general sales tax had proved to be a major source of revenue for those states using it, the ten states mentioned above put it into operation. The lag between the war's end and tax adoption was in some cases explained by the existence of a surplus, built up over the war years, and only slowly expended. Those states without such a buffer sought financial relief at once.

The third wave of sales tax adoptions may be viewed as an extension of the second wave, even though five years intervened. During this last period, Kentucky,

Texas, and Wisconsin all passed sales tax legislation, motivated by the same general forces that prevailed in the previous period: increased demand for state and local services, population growth, increasing city size, much greater traffic load, and (not less important) inflationary tendencies in some areas.[8]

A review of some of the financial forces active during these last two periods will indicate the magnitude of the changes which took place: between 1950 and 1961, expenditures by state governments for all purposes increased by 130 per cent; state debt *quadrupled* during this period; and the average ratio of federal aid (all states) to total state and local revenue rose from 11.9 per cent to 17.8 per cent.[9]

## TRENDS IN SALES TAX YIELDS

Since their inception in the 1930's, sales taxes have grown to be the major financial support of state governments. By 1944 the general sales tax was the primary revenue source for the states despite the fact that over half the states did not have a sales tax. At the present time it accounts for almost one-fourth of state revenues. Table 3:2 indicates comparative magnitudes of tax revenues over the years:

TABLE 3:2 Revenue From General Sales Taxes, Selected fiscal years, 1932-1962

| Year | Revenue (millions of dollars) |
|---|---|
| 1932 | $ 7 |
| 1940 | 499 |
| 1946 | 899 |
| 1950 | 1,670 |
| 1955 | 2,637 |
| 1960 | 4,302 |
| 1961 | 4,510 |
| 1962 | 5,111 |

Source: U.S. Bureau of the Census, *State Tax Collections,* annually.

General and selective sales and gross receipts taxes together accounted for 58 per cent of all tax revenues received by the states in 1962. Twenty-nine states relied on the general sales tax for more than one-fourth of their total revenue. Seven states derived 40 per cent or more of their tax revenues from this source: Arizona, Hawaii, Illinois, Indiana, Michigan, Washington, West Virginia.[10]

The Advisory Commission on Intergovernmental Relations stresses that the contribution of both general and selective sales and gross receipts to total state tax revenue seems to have held steady at about 58 per cent ever since the early 1950's.[11]

Table 3:3 indicates the relationship of general sales tax yields to total tax revenues in the sales tax-levying states for 1962. The low per-capita figures for the United States as a whole are explained by the inclusion in the population figures of states that do not levy a sales tax.

TABLE 3:3 General Sales Tax Yield Data For Individual States

| State | Sales tax yield (millions of dollars) | Sales tax as percentage of state tax collections | Per-capita sales tax payments | |
|---|---|---|---|---|
| | 1962 | 1962 | 1961-62 | 1955-56 |
| Total, all states | 5,068.0 | 24.6 | | |
| Alabama | 94.3 | 31.9 | $28.6 | $22.5 |
| Arizona | 75.9 | 40.6 | 54.6 | 32.5 |
| Arkansas | 60.7 | 34.2 | 33.8 | 17.8 |
| California | 755.1 | 31.9 | 46.2 | 23.1 |
| Colorado | 55.5 | 23.7 | 31.2 | 26.1 |
| Connecticut | 93.1 | 30.0 | 35.6 | 31.4 |
| Florida | 181.7 | 32.2 | 34.8 | 24.9 |
| Georgia | 157.3 | 39.1 | 39.5 | 32.9 |
| Hawaii | 65.9 | 49.8 | 100.4 | — |
| Illinois | 466.4 | 47.6 | 45.5 | 27.5 |
| Indiana | 204.5 | 48.7 | 43.4 | — |
| Iowa | 83.5 | 30.2 | 30.1 | 29.9 |
| Kansas | 79.8 | 34.9 | 36.4 | 25.1 |
| Kentucky | 96.3 | 31.3 | 31.5 | — |
| Louisiana | 90.1 | 18.6 | 27.1 | 25.1 |
| Maine | 29.5 | 31.6 | 29.8 | 17.7 |
| Maryland | 91.0 | 22.5 | 28.5 | 15.6 |
| Michigan | 460.4 | 45.7 | 57.9 | 45.1 |
| Mississippi | 75.8 | 37.1 | 34.2 | 21.4 |
| Missouri | 128.3 | 32.5 | 29.3 | 24.3 |
| Nevada | 15.2 | 28.7 | 50.9 | 29.8 |
| New Mexico | 37.4 | 27.1 | 38.0 | 42.2 |
| North Carolina | 131.2 | 24.3 | 28.4 | 16.7 |
| North Dakota | 14.8 | 23.1 | 23.1 | 20.5 |
| Ohio | 262.8 | 29.5 | 26.6 | 25.7 |
| Oklahoma | 60.4 | 19.6 | 25.6 | 22.7 |
| Pennsylvania | 418.5 | 31.7 | 35.6 | — |
| Rhode Island | 26.7 | 27.6 | 30.8 | 17.6 |
| South Carolina | 73.8 | 30.3 | 30.7 | 23.2 |
| South Dakota | 17.3 | 30.5 | 25.1 | 27.7 |
| Tennessee | 112.6 | 34.2 | 31.2 | 26.1 |
| Texas | 103.2 | 11.0 | 10.5 | — |
| Utah | 36.8 | 31.7 | 40.1 | 28.2 |
| Washington | 287.5 | 55.0 | 99.1 | 59.4 |
| West Virginia | 97.7 | 45.9 | 52.8 | 14.4 |
| Wisconsin | 13.9 | 30.3 | 34.6 | — |
| Wyoming | 12.4 | 28.2 | 36.7 | 30.5 |

Computations were made on the basis of data from *State Tax Collections in 1962*, Tables 3 and 4. This table may be compared with that presented by Due in *Sales Taxation*, p. 310. Column 4, for the 1955-56 fiscal year, is reproduced from his Table III.

## RELATIVE REVENUE IMPORTANCE OF THE STATES' SALES TAXES

Tables 3:4 to 3:7 summarize information on the status of the general sales tax in the United States. Table 3:4 indicates that whereas sales taxes, as a percentage of total state tax revenues, had virtually stabilized early in the decade of the fifties, the relative importance of the corporate and personal income taxes was

TABLE 3:4 Growth of State Taxes in the United States

| Year | Total state taxes | General sales taxes | Sales taxes as a percentage of total | Individual and corporate income taxes | Income taxes as a percentage of total | Other state taxes | Other taxes as a percentage of total |
|---|---|---|---|---|---|---|---|
| | | | | (dollar amounts in millions) | | | |
| 1931 | $ 1,778 | $ 4 | .2% | $ 51 | 2.9% | $ 1,723 | 96.9% |
| 1937 | 2,759 | 431 | 15.6 | 245 | 8.9 | 2,083 | 75.5 |
| 1941 | 3,606 | 575 | 15.9 | 422 | 11.7 | 2,609 | 72.4 |
| 1946 | 6,014 | 900 | 15.0 | 831 | 13.8 | 4,283 | 71.2 |
| 1950 | 7,912 | 1,670 | 21.1 | 1,310 | 16.6 | 4,932 | 62.3 |
| 1955 | 11,597 | 2,636 | 22.7 | 1,831 | 15.8 | 7,130 | 61.5 |
| 1958 | 14,919 | 3,507 | 23.5 | 2,562 | 17.2 | 8,850 | 59.3 |
| 1961 | 19,057 | 4,510 | 23.7 | 3,621 | 19.0 | 10,926 | 57.3 |

Source: A. James Heins, "Sales and Use Taxes", Table 2, Chapter XX, in *Report* of the Commission on Revenue, State of Illinois, 1963.

still rising in 1961. This reflects partly the earlier, more intensive use of the sales tax in some states; but it also appears to give evidence of a somewhat greater responsiveness of the income tax than of the sales tax to increased revenue needs, at least in the circumstances obtaining from 1953 to 1961. However, since corporate net income tax receipts react violently to cyclical fluctuations, it is perhaps safer to stress the roughly similar development of sales and income taxes over the entire period 1946-61.

Table 3:5 indicates the relative importance of the general sales tax for six important sales tax states, and Table 3:8 does the same thing for the provinces. Of these states, only California utilizes the individual income tax, and this, together with the food exemption, accounts largely for the low relative importance of the sales tax in that state, equipped as it is with an especially efficient sales tax collection agency.

TABLE 3:5 State Tax Collections by Type of Tax, Selected States, 1963 (preliminary)

| State | Total tax collections | Sales tax | Col. 2 as % of Col. 1 | Individual income | Corporate income | Motor fuels | Tobacco and alcohol |
|---|---|---|---|---|---|---|---|
| | | | (millions of dollars) | | | | |
| California | 2,559 | 813 | 31.8% | 322 | 311 | 387 | 129 |
| Connecticut | 337 | 102 | 30.3 | — | 47 | 52 | 34 |
| Illinois | 1,080 | 545 | 50.4 | — | — | 156 | 98 |
| Michigan | 1,143 | 500 | 43.6 | — | — | 158 | 117 |
| Ohio | 927 | 277 | 29.8 | — | — | 225 | 102 |
| Pennsylvania | 1,268 | 398 | 31.4 | — | 143 | 245 | 135 |

Source: Bureau of the Census, *State Finances, 1963* (August 1963).

In view of widespread concern over the question whether or not the retail sales tax ought to be applied to commodities already excise-taxed, it is of interest, in Table 3:6, to note the heavy use made by the U.S. states of selective excises in addition to sales taxes. The advantage of non-exemption of excise-taxed goods from the retail sales tax must lie in the belief that in the relevant price range consumers are willing and able to pay the tax without significantly curtailing purchases. Where this is not true, or if it is believed that the excise tax is already sufficiently high, an adjustment should be made in the excise tax rate.

It is noteworthy that states using general retail sales taxes nevertheless continue to derive very large revenues from selective excise taxes. Table 3:6 makes the comparison for the six states included in Table 3:5. Three of the states (Connecticut, Ohio, and Pennsylvania) obtained greater revenue from selective sales taxes than from the general tax. For the country as a whole, selective sales taxes yielded over $7,326 million in revenues, while general sales (or gross receipts) taxes yielded about $4,533 million. This is to be expected, since only thirty-seven states have a general sales tax. But even if the non-sales tax states are excluded, selective excises and general sales taxes in the states make about the same contribution to tax revenues.

TABLE 3:6 States' Revenue from General Sales and Selective Sales Taxes, Fiscal Year, 1963

| State | General sales tax | Selective sales tax |
|---|---|---|
| | (millions of dollars) | |
| California | 813 | 665 |
| Connecticut | 102 | 128 |
| Illinois | 545 | 366 |
| Michigan | 500 | 309 |
| Ohio | 277 | 417 |
| Pennsylvania | 398 | 443 |

Source: Bureau of the Census, *State Finances, 1963.*

TABLE 3:7 Per-Capita Sales Tax Payments, Selected States, 1956 and 1962

| State | Per-capita sales tax payments 1956 | 1962 | Percentage increase |
|---|---|---|---|
| California | $23.10 | $46.05 | 99 |
| Illinois | 27.50 | 45.47 | 65 |
| Florida | 24.90 | 34.80 | 40 |
| Michigan | 45.10 | 57.90 | 28 |
| Ohio | 25.70 | 26.61 | 4 |
| Washington | 59.40 | 99.07 | 67 |

Source: John F. Due, *Sales Taxation* (Urbana: University of Illinois Press, 1957), p. 310; reproduced by permission of the University of Illinois Press. Bureau of the Census, *State Tax Collections, 1962.*

TABLE 3:8 Provincial General Sales Tax Revenues as Percentage of Provincial Total Tax Revenues, Fiscal Year Ending March, 1963

| Province | Percentage |
|---|---|
| Newfoundland | 47.2 |
| Prince Edward Island | 24.1 |
| Nova Scotia | 31.2 |
| New Brunswick | 25.3 |
| Quebec | 24.9 |
| ONTARIO | 19.8 |
| Saskatchewan | 36.0 |
| British Columbia | 41.8 |

Source: Dominion Bureau of Statistics, *Financial Statistics of Provincial Governments,* November, 1962.

## BASE AND EXEMPTIONS OF THE STATES' RETAIL SALES TAXES

There are two ways to obtain an idea of the base and exemptions of the typical state sales tax for comparison with the retail sales tax of Ontario. We can look at the *central tendency* of these state taxes, and we can fix our attention on the *dispersion* in state retail sales tax practice. In fact, we shall do both. Both of these "parameters" relate to a moment of time. Therefore a *third* type of description is needed. We want evidence on the way in which the states and provinces have altered the retail sales tax and exemptions over time, especially in the period since World War II.

A useful task has been performed by Reed Hansen in setting forth the base and exemptions of the "typical" state sales tax in the United States during the year 1957. This is, of course, the central tendency concept. We can do no better than to let him speak for himself:

> The procedure for selecting those family expenditures to be taxed under the "typical" retail sales tax needs clarification. This tax is a hypothetical one incorporating the provisions most commonly found in state retail tax laws in the United States, 1957.
>
> On this basis the following list of family expenditures is considered taxable at the *two* per cent rate:
>
> (a) Food: Among the thirty-three states applying the sales tax, twenty-four taxed food that was consumed off the premises where it was sold. (Food consumed where purchased and alcoholic beverages were also taxed.)
>
> (b) Clothing: Among the thirty-three states, thirty of them taxed all types of clothing.
>
> (c) Fuel, light, and refrigeration: The majority of retail sales tax states included home-consumed fuel and public utility services in the tax base.
>
> (d) Furnishings and equipment: These items were subject to the sales tax in most cases.
>
> (e) Household operation: This category includes water, telephone, laundry, paper supplies, moving costs, etc. The majority of states taxed household supplies and public utility services.
>
> (f) Toilet articles and preparations: In most states these items were taxable, but personal care services were exempt.
>
> (g) Radios, T.V., and musical instruments: These items were taxable in most states together with miscellaneous items listed under "other" recreational expense which included toys, sporting goods, photographic equipment, and hobbies. Unfortunately, non-taxable dues and licenses were included in this group, making it difficult to determine the actual tax base for the "other" group.
>
> (h) Automobile purchases: Majority of states taxed this item. However, only a net figure was given, thereby understating the tax by the amount due on the value of the car traded in. Automobile operational expenses were both taxable and non-taxable. A ratio of taxable operational expenses was computed from the *Study of Consumer Expenditures.*
>
> (i) Medical expenses: Medical supplies are taxable in the typical state and have been computed from a ratio of taxable to total medical expenses.

The "typical" retail sales tax exempts from taxation many items in the family budget. The most significant exemptions are savings and expenditures for services. None of the sales-tax states, for example, taxed professional services, and only five of them taxed dry cleaning, photography, or repair. The impact of these exemptions upon relative tax burdens among families can be appreciated from the fact that personal savings and expenditures for services represented thirty-two per cent of the 1955 personal income figures—not an insignificant amount to escape taxation.[12]

One warning is necessary in interpreting this list. Hansen is concerned with retail sales taxes only, and therefore some of the items listed as exempt are taxed in states whose sales taxes are not of the retail type, or which also have gross receipts or gross income taxes. An example is the Indiana gross income tax, which taxes professional services. Obviously if we admit gross receipts, gross income, business activities, and such complex indirect taxes, there is no longer a typical state retail sales tax. Since the Ontario tax is levied at the retail level, interest centres here mainly in those states that employ the retail form.

As of the present time the majority of the states tax food consumed off the premises (all tax food consumed on premises), a fact that may seem surprising in view of the widespread disapproval of the practice by tax economists. The loss from off-premises food exemption is usually estimated at from 20 to 25 per cent of the base. School lunches are now exempted by all states, but only five states exempted them in 1945, and the figure had risen to only twenty-nine by 1956. Only three states exempt children's clothing. As of 1963, twenty-six states exempted sales to state and state subdivisions, and twenty-one exempted sales to non-profit, religious, and charitable organizations. About a third of the states continued to exempt gas and electricity, and nearly half (seventeen) exempted admissions. The exemption to transient lodgings seems to be on its way out, having declined from eighteen states in 1956 to nine by 1962. Nearly half (sixteen) of the states continued to exempt telephone and telegraph charges in 1962. Thirty-four of the states exempted casual or isolated sales in 1963; and thirty-one exempted installation charges.[13]

For purposes of comparison, the Ontario retail sales tax states that "every purchaser of tangible personal property shall pay . . . a tax . . . at the rate of 3 per cent, on retail sales . . . for the purpose of consumption or use and not for resale." Exemptions are as follows:[14]

Food products, including insulin and vitamins
Meals at $1.50 and under
Gasoline, diesel fuel, fuel oil, coal, coke, wood, gas, electricity
Farm implements and supplies, agricultural products
Boats and other fishing apparatus
Prescription drugs and optical appliances, artificial limbs, hearing aids, dentures
Railway rolling stock
Children's clothing and footwear
Religious and educational publications, classroom supplies
Newspapers, subscription magazines
Draft beer
Long-distance telephone charges
Sales for delivery outside the province

### STATE SALES TAX RATES

The trend in sales tax rates is markedly upward. In the 1930's, the most common sales tax rate was 2 per cent. In the late 1950's, when more states had adopted sales taxes, and when soaring expenditures necessitated rate increases in states already levying sales taxes, 3 per cent became the modal rate. Today, 3 per cent remains the most common rate, but four states now have rates of 4 per cent,

and one state, Pennsylvania, has just raised its rate to 5 per cent. Since some states allow their municipalities and counties to levy sales taxes in addition to the state tax, the rate paid by the consumer may be even higher than the state rate. Table 3:9 indicates the frequency of tax rates for selected years.

TABLE 3:9 General Sales Tax Rates by Frequency of Use, Selected Years, 1938-63

| Year | Number of States With Given Rate | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ½% | 1% | 2% | 2¼% | 2½% | 3% | 3⅓% | 3½% | 4% | 5% |
| 1938..... | 0 | 2 | 15 | 0 | 0 | 6 | 0 | 0 | 0 | 0 |
| 1945..... | 0 | 2 | 15 | 0 | 1 | 5 | 0 | 0 | 0 | 0 |
| 1952..... | 1 | 0 | 17 | 0 | 2 | 11 | 1 | 1 | 0 | 0 |
| 1963..... | 0 | 0 | 11 | 1 | 1 | 17 | 0 | 3 | 4 | 1 |

Sources: American Retail Federation, *Sales Taxes; A Digest of 25 State Laws in 23 States,* Washington: American Retail Federation, 1938, p. 4; Roy G. Blakey and Gladys C. Blakey, *Sales Taxes and Other Excises,* Chicago: Public Administration Service, 1945, Table 9; Clinton V. Oster, *State Retail Sales Taxation,* Columbus: Ohio State University, 1957, Table 15; Commerce Clearing House, *State Tax Guide,* p. 6021.

## YIELD AT 1 PER CENT RATE

Table 3:10 presents per-capita state sales tax yields at a 1 per cent rate, for selected states, and Table 3:11 compares the yield of the Ontario sales tax with those of several of the states, at 1 per cent rates.

TABLE 3:10 Ontario and Selected U.S. State Sales Taxes, 1961 Per-Capita Yield at 1% of Tax Rate

| State | Per-capita yield | Per-capita yield per 1% of tax rate |
|---|---|---|
| ONTARIO (1963)..... | $25.59 | $ 8.53 |
| California..... | 45.10 | 15.03 |
| Connecticut..... | 31.23 | 10.41 |
| Illinois..... | 37.96 | 12.65 |
| Michigan..... | 49.71 | 14.84 |
| Ohio..... | 26.11 | 8.70 |
| Pennsylvania..... | 34.11 | 8.53 |

Source: Heins, "Sales and Use Taxes," Table 5, from John Due, *State Sales Tax Administration* (tentative) published by Public Administration Service; Dominion Bureau of Statistics, *Financial Statistics of Provincial Governments,* November 1962.

TABLE 3:11 Ontario and States' Sales Tax Yields at 1% Rate, Fiscal Year 1963

| State | Rate % | Yield | Yield at 1% Rate |
|---|---|---|---|
| | | (millions of dollars) | |
| ONTARIO..... | 3 | 165 | 55 |
| (Estimated 1963) | | | |
| California..... | 3 | 813 | 271 |
| Connecticut..... | 3.5 | 102 | 29 |
| Illinois..... | 3.5 | 545 | 156 |
| Michigan..... | 4 | 500 | 125 |
| Ohio..... | 3 | 277 | 92 |
| Pensylvania*..... | 4 | 398 | 100 |

*Raised to 5% effective June 1, 1963. Expected revenue increase $102.5 million.

Sources: D.B.S., *Financial Statistics of Provincial Governments, Revenues and Expenditures 1956-62;* U.S. Bureau of the Census, *State Tax Collections in 1963.*

The purpose of comparing retail sales tax yields at a standard 1 per cent rate is, of course, to eliminate the effects of rate differences; and the purpose of reducing these data to a per-capita basis is to eliminate the population variable. However, in using Table 3:10 it is necessary to bear in mind that per-capita yields at a 1 per cent rate do not reflect solely the breadth of the tax base. Consequently comparisons must be made with caution. The care with which Musgrave and Daicoff (1958) have estimated the proportion of Michigan sales taxes paid by non-residents is an indication of the influence of a variable other than the breadth of the base. If tourists pay a relatively substantial proportion of the tax, even a narrow-based tax will yield a relatively high revenue at a 1 per cent rate. A state or province having a large tourist trade has, for sales tax purposes, a relatively large population. Variations in the number of tourists, and in the nature of tourist spending, reduce the meaningfulness of per-capita data. The opposite situation obtains (as Heins points out) in a state such as Connecticut, which has a large commuter population spending in New York City. The Connecticut base is actually broader than per-capita data indicate, since in a sense its sales tax population is overstated. A given per-capita sales tax yield is achieved only with a relatively broad base when a considerable portion of retail spending is made outside the state.

Correction for population differences does not, of course, take account of differences in wealth and incomes among provinces and states, or in differences in propensities to consume. With the same exemptions, two taxing jurisdictions will differ in per-capita sales tax yields at a 1 per cent rate if in one of them the per-capita consumption level is higher. Nevertheless, exemptions play the fundamental role in the ranking of provinces and states by the per-capita sales tax yield criterion. Specifically, the food exemption is so important that it goes far to offset an otherwise broad base, as in California; and conversely, (e.g., in Illinois) the inclusion of food in the base helps offset a narrow sales tax base. At the same time, Illinois, without a food exemption, was near the bottom of the list in 1961. The influence of the food exemption is strikingly brought out in Table 3:16, reproduced from Heins, "Sales and Use Taxes", Table 5 (from John Due).

### COSTS OF ADMINISTRATION

The costs of administering any tax are of two kinds, the expenses of collection, enforcement, audit, and litigation borne by the province, and the costs to the taxpayer of compliance, negotiation with the tax authorities if there is a difference of opinion, and costs of litigation. The latter are usually ignored in cost-receipts estimates, however, comparisons of costs of administration being limited to estimates of administrative costs per $100 of sales tax revenue. Vendors' discounts, granted in about half of the states, do transfer part (or even more than the whole) of compliance cost to the taxing jurisdiction, but bear no clear relation to the actual compliance costs incurred by particular vendors. Vendors' discounts have been too generous, and in any event a single discount for all types of retail

enterprise obviously is a too simple solution of the matter. It has been suggested that the cost of collection for different types of vendors could be ascertained by sampling. It should be noted that under an income tax the costs of payroll deduction are borne by the firm, and a case can be made for handling the retail sales tax in the same way. The case does not appear to be very strong for vendors' discounts.

It is tempting, and indeed usual, to take the ratios as partial evidence of efficiency of collection. It is never done, however, without calling attention to the potentially misleading nature of such comparisons. The difficulties are in part statistical, involving problems in obtaining truly comparative data for costs of collection, and even for sales tax collection data. In part they are conceptual, going to the root of the practice of using cost of collection per $100 of revenue as an index of administrative efficiency.

On the statistical side, tax jurisdictions differ substantially in the effectiveness with which they present information on cost of collection. Moreover, comparability is difficult to obtain, because of differences in statutory provisions, retailers' accounting usages, and practice with respect to vendor discounts. Accounting procedures become especially important when the tax is applied to retail sales between business firms, since the impact on the timing of capital outlays affects the timing of sales tax receipts. Some departments of revenue do not clearly separate out the costs of collection of different types of taxes. Again, administrative costs to the superior governmental level will be somewhat higher where the latter administers the tax for the municipalities.[15]

Perhaps even more serious than the problems of comparing collection costs are the conceptual problems involved in utilizing cost-receipts ratios to measure efficiency of performance. Given the total cost of collection, factors unrelated to efficiency cause considerable variations in tax collections, and thus in the ratio of cost to collections.

(1) A wealthy, high-spending province or state will automatically tend to enjoy higher revenues per dollar of administrative costs. Retail outlets are likely to be larger, and more efficiently run, and better records kept.

(2) The rate of the tax is an important element in the determination of the size of the cost-receipts ratio. Higher rates mean proportionately larger receipts (at least at non-prohibitive rates of tax) but relatively little rise in collection or compliance costs. It should be noted in passing, however, that vendor discounts automatically rise with tax receipts when rates of tax rise, without any increase in compliance cost. This represents a serious inefficiency, from the point of view of the government, that is more serious the greater the use made of the tax. It is a pure windfall to the vendor at the expense of the tax jurisdiction, and highlights the arguments commonly made against the method of computing vendors' discounts.

(3) The number of exclusions and exemptions is also a factor. The fewer the exemptions, the higher the yields at a given tax rate. Moreover, a sales tax with relatively few exempt items means better standards of compliance, and thus also higher yields with given expenditures for enforcement.

(4) A larger field audit force is known to produce added revenues substantially in excess of its marginal cost. California is the outstanding example of success along these lines. Thus a high collection cost by no means reflects inefficiency. More than this, knowledge by the taxpayer that collection is efficient itself stimulates greater honesty on his part.

Maloon and Oster[16] estimated state collection costs per $100 of sales and use tax revenues for 1940, 1948, and 1955, and John Due has brought the data down to 1959-60. This Table, taken from Heins's study for Illinois (Table 14) is reproduced here as Table 3:12.

TABLE 3:12 Sales Tax Collection Costs Expressed as a Percentage of Sales Tax Revenue

| State | 1959-60 | 1959-60 per 1% of tax rate | 1940 | 1948 | 1955 |
|---|---|---|---|---|---|
| Illinois | .87 | .29 | 2.0 | 2.0 | 1.5 |
| Michigan | .8 | .27 | 1.7 | 1.0 | .9 |
| Ohio | 1.2 | .40 | 1.9 | 1.1 | 3.8 |
| Iowa | .9 | .49 | | 1.1 | |
| Missouri | 1.6 | .80 | 2.0 | 1.0 | |
| Kansas | 1.4 | .36 | 2.5 | | |
| North Dakota | .63 | .31 | | | 1.3 |
| South Dakota | .98 | .49 | | 1.5 | |
| Tennessee | .67 | .22 | | 1.1 | |
| Kentucky | 1.3 | .44 | | | |
| Colorado | 1.6 | .80 | 6.0 | 1.4 | 1.4 |
| Utah | 1.0 | .50 | 2.2 | .9 | |
| Wyoming | 1.0 | .50 | 3.1 | 1.5 | |
| Arizona | | | 4.0 | 1.3 | |
| New Mexico | | | | 1.9 | |
| Nevada | 1.4 | .70 | | | |
| California | 1.7 | .59 | 2.6 | 1.9 | 2.0 |
| Washington | .8 | .20 | | .7 | |
| Arkansas | | | 3.0 | 2.0 | |
| Oklahoma | 1.4 | .70 | .9 | | |
| Louisiana | | | | | |
| Mississippi | 1.03 | .34 | 3.6 | 1.6 | |
| Alabama | 1.6 | .55 | 4.5 | 2.2 | 1.7 |
| Florida | 1.1 | .37 | | | 1.9 |
| Georgia | 1.1 | .37 | | | |
| South Carolina | | | | 1.2 | 1.6 |
| North Carolina | 1.36 | .45 | | .7 | 1.6 |
| Maine | 1.5 | .50 | | | |
| Rhode Island | | | | | |
| Connecticut | | | | | |
| Pennsylvania | 1.8 | .45 | | | |
| Maryland | 1.15 | .38 | | | |
| West Virginia | .79 | .26 | | 1.0 | |

Source: Heins, "Sales and Use Taxes".

It is generally agreed that the states would be well advised to devote more resources to the audit and efficient collection of their sales taxes. California's success has proved an example to all.

In concluding this section, it may be pointed out that Ontario's cost of administration in fiscal 1963, for collecting $175.7 million of sales tax revenue, was $2.6 million or a cost-collection rate of 1.5 per cent.

Since this was written the following data have become available from John Due, "The Provincial Sales Taxes and Their Relationship to the Federal Sales Tax", written for Canadian Tax Foundation, a submission to the Royal Commission on Taxation, p. 10.

| Province | Costs of collection as a percentage of sales tax revenue | Tax rate 1962 |
|---|---|---|
| British Columbia..... | 0.5* | 5 |
| Saskatchewan..... | 0.7 | 5 |
| Newfoundland..... | 1.0 | 5 |
| Nova Scotia..... | 1.5 | 5 |
| Ontario..... | 1.7 | 3 |
| New Brunswick..... | 1.88 | 3 |

*Direct costs only. Indirect costs would bring this to 0.7 per cent.

## APPENDIX

TABLE 3:13 State General Sales Tax Rates* as of September 1, 1962

| State | Type of tax† | Rate‡ |
|---|---|---|
| Alabama..... | Retail sales and use; in 1963 raised to 4% | 3% |
| Alaska..... | Gross receipts§ | .5¶ |
| Arizona..... | Gross sales and use | 3 |
| Arkansas..... | Retail sales and use | 3 |
| California..... | Retail sales and use | 3** |
| Colorado..... | Retail sales and use | 2 |
| Connecticut..... | Retail sales and use | 3.5 |
| Florida..... | Retail sales and use | 3 |
| Georgia..... | Retail sales and use | 3 |
| Hawaii..... | Gross receipts and use | 3.5 |
| Illinois..... | Retail sales and use | 3.5†† |
| Indiana..... | Gross income (a 2% retail tax scheduled for 10/22/63) | .375 |
| Iowa..... | Retail sales and use | 2 |
| Kansas..... | Retail sales and use | 2.5 |
| Kentucky..... | Retail sales and use | 3 |
| Louisiana..... | Retail sales and use; also a 1% tax imposed by localities | 2 |
| Maine..... | Retail sales and use; in 1963 raised to 4% | 3 |
| Maryland..... | Retail sales and use | 3 |
| Michigan..... | Retail sales and use | 4 |

TABLE 3:13—Continued

| State | Type of Tax† | Rate‡ |
|---|---|---|
| Mississippi | Gross receipts and use | 3 |
| Missouri | Retail sales and use; in 1963 raised to 3% | 2 |
| Nevada | Retail sales and use | 2 |
| New Mexico | Gross receipts and use; in 1963 raised to 3% | 2 |
| North Carolina | Retail sales and use | 3 |
| North Dakota | Retail sales and use | 2 |
| Ohio | Retail sales and use | 3 |
| Oklahoma | Retail sales and use | 2 |
| Pennsylvania | Selective sales and use effective 6/1/63, 5% | 4 |
| Rhode Island | Retail sales and use | 3 |
| South Carolina | Retail sales and use | 3 |
| South Dakota | Retail sales and use | 2 |
| Tennessee | Retail sales and use | 3 |
| Texas | Retail sales and use | 2 |
| Utah | Retail sales and use; in 1963 raised to 3% | 2.5 |
| Washington | Retail sales and use | 4 |
| | Gross income | .44 |
| West Virginia | Retail sales‡‡ | 2§§ |
| Wyoming | Retail sales and use | 2 |

*Where rates on business receipts and transactions other than retail differ, they are excluded.

†Type of tax:

(1) Retail sales: imposed on sales of tangible personal property at retail or for consumption; in most states also on admissions, restaurant meals, public utility sales, and hotel rooms.

(2) Gross sales: applies to retailing, wholesaling, extractive industries, and/or manufacturing.

(3) Gross receipts: includes sales of personal and professional services in addition to transactions and receipts under (1) and (2).

(4) Gross income: applies, in addition to all transactions and receipts under (1), (2), and (3), to receipts from non-business activities such as wages and salaries of employees, interest, rents, and dividends.

(5) Selective sales: retail sales and use tax imposed upon selected tangible personal property.

‡Sales and use tax levied at same rate, except no use tax imposed in Alaska and Indiana and no use tax coupled with the Washington gross receipts tax and West Virginia gross income tax. Several states tax retail sales of certain automotive vehicles and/or aircraft at rate below standard retail levy: Florida, New Mexico, and North Carolina, 1%; Alabama, 1½%, Mississippi, 2%.

§Excludes wholesaling, extractive industries, and manufacturing.

¶Applies to gross receipts in excess of $20,000 but less than $100,000. Flat fee of $25 on first $20,000 of gross receipts and rate is .25% of gross receipts over $100,000.

**Local sales taxes of 1% bring total to 4%.

††Local sales taxes of .5% bring total to 4%.

‡‡Includes the furnishing of all services except professional or personal.

§§Tax rate composed of 2% tax on gross proceeds plus temporary additional tax of 1¢ per dollar on proceeds in excess of $1. Expiration of additional tax scheduled June 30, 1963.

Source: Commerce Clearing House and Tax Foundation, Inc.; Alfred G. Buehler, *Tax Study of the State of Connecticut* (1963) Table 52; and Tax Foundation, data provided by Alan Donheiser.

TABLE 3:14 General Retail Sales Tax by States: Year Effective and Rate of Tax

| State | Year effective | Retail rate (percentage) | |
|---|---|---|---|
| | | Original | 1962 |
| Alabama | 1937 | 1.5 | 3.0 |
| Arizona | 1933 | 2.0 | 3.0 |
| Arkansas | 1935 | 2.0 | 3.0 |
| California | 1933 | 2.5 | 3.0 |
| Colorado | 1935 | 2.0 | 2.0 |
| Connecticut | 1947 | 3.0 | 3.5 |
| Florida | 1949* | 3.0 | 3.0 |
| Georgia | 1951* | 3.0 | 3.0 |
| Hawaii | 1935 | 1.25 | 3.5 |
| Idaho | 1935 | 2.0 | † |
| Illinois | 1933 | 2.0 | 3.5 |
| Indiana | 1933‡ | 0.25 | 0.375 |
| Iowa | 1934 | 2.0 | 2.0 |
| Kansas | 1937 | 2.0 | 2.5 |
| Kentucky | 1960* | 3.0 | 3.0 |
| Louisiana | 1942* | 2.0 | 2.0 |
| Maine | 1951 | 2.0 | 3.0 |
| Maryland | 1947* | 2.0 | 3.0 |
| Michigan | 1933 | 3.0 | 4.0 |
| Mississippi | 1930 | 0.25 | 3.0 |
| Missouri | 1934 | 0.5 | 2.0 |
| Nevada | 1955 | 2.0 | 2.0 |
| New Jersey | 1935 | 2.0 | † |
| New Mexico | 1935 | 2.0 | 2.0 |
| New York | 1933 | 2.0 | † |
| North Carolina | 1933 | 3.0 | 3.0 |
| North Dakota | 1935 | 2.0 | 2.0 |
| Ohio | 1935 | 3.0 | 3.0 |
| Oklahoma | 1933 | 1.0 | 2.0 |
| Pennsylvania | 1953* | 3.0 | 4.0 |
| Rhode Island | 1947 | 1.0 | 3.0 |
| South Carolina | 1951 | 3.0 | 3.0 |
| South Dakota | 1933 | 1.0 | 2.0 |
| Tennessee | 1947 | 2.0 | 3.0 |
| Texas | 1961 | 2.0 | 2.0 |
| Utah | 1933 | 0.75 | 2.5 |
| Vermont | 1933 | 2.0 | † |
| Washington | 1933 | 2.0 | 4.0 |
| West Virginia | 1921 | 2.0 | 2.0 |
| Wisconsin | 1962 | 3.0 | 3.0 |
| Wyoming | 1935 | 2.0 | 2.0 |

Source: Heins, "Sales and Use Taxes", Table 1.

*Year present tax became effective. Previous tax levied as follows: Florida 1935-1941; Georgia 1929-1931; Kentucky 1934-1936; Louisiana 1931-1940; Maryland 1935-1936; Pennsylvania 1932-1933.

†Does not currently impose tax which was repealed or allowed to expire as follows: Idaho 1936; New Jersey 1935; New York 1934; Vermont 1935.

‡Gross income tax.

TABLE 3:15

Items Excluded or Exempted From Michigan Sales Tax
(as of January 1, 1958)

Deduction of $50 monthly from a sales tax licensee's taxable gross proceeds.

All property other than tangible personal property (including electricity, gas, and steam).

Property to be resold at retail.

Services (except when performed jointly with the sale of tangible personal property and not itemized and charged for separately).

Isolated transactions by persons not engaged in retail business (but the use tax applies to casual purchases of vehicles).

Sales in interstate and foreign commerce.

Sales to: The United States, its wholly-owned agencies and instrumentalities; the State of Michigan, its departments, institutions, and political subdivisions; organized churches, and non-profit educational, health, welfare, charitable or benevolent institutions and agencies (except for commercial activities).

*Specified commodities:*

Water delivered through mains, or in tanks of at least 500 gallons.

School books and food sold to students by schools and educational institutions not operated for profit.

Property for loan or lease to public or parochial schools for driver-training courses.

Copyrighted motion picture films.

Newspapers and periodicals (under prescribed conditions).

Artificial limbs or eyes (made for a particular individual).

Vessels over 500 tons for use in interstate commerce, together with their fuel and supplies.

Motor vehicles used as demonstrators (within prescribed limits).

New motor vehicles specially registered for delivery in Michigan to non-residents for out-of-state use.

Commercial advertising (such as catalogs or price lists) produced on special order.

*Agricultural production:*

Tangible personal property used or consumed in the business of growing and harvesting agricultural and horticultural products, and raising or caring for livestock and poultry, except materials to be permanently affixed as a structural part of real estate.

*Industrial processing:*

Materials which become an ingredient or component part of the finished product to be sold.

Fuel and other tangible personal property consumed, destroyed, or which has lost its identity in a manufacturing process.

Machinery and equipment (but only that used specifically in the *processing* operation. The processing exemption does not extend to building materials and other things to be permanently affixed as a structural part of the real estate).

*Commercial radio or television stations:*

Property for direct use or consumption in processing commercial radio or television transmision by persons licensed to operate commercial stations.

Source: Michigan Tax Study, *Staff Papers*, 1958; Denzel C. Cline, "The General Sales Tax", pp. 417-18.

TABLE 3:16 Per-Capita Yields of State Sales Taxes in 1961

| State | Per-capita yield | Per-capita yield per 1% of tax rate | Per-capita yield per 1% of tax rate as a percentage of per-capita personal income |
|---|---|---|---|
| Hawaii | $89.15 | $25.47 | 1.12% |
| New Mexico | 36.01 | 18.00 | 1.00 |
| Mississippi | 32.90 | 10.96 | .93 |
| Utah | 32.85 | 16.42 | .86 |
| Arizona | 51.17 | 17.06 | .85 |
| Nevada | 48.04 | 24.02 | .84 |
| Louisiana | 26.01 | 13.50 | .84 |
| Georgia | 37.49 | 12.49 | .78 |
| Arkansas | 31.11 | 10.38 | .77 |
| Wyoming | 35.68 | 17.84 | .76 |
| Washington | 71.34 | 17.58 | .76 |
| Iowa | 30.15 | 15.07 | .75 |
| North Dakota | 24.74 | 12.37 | .71 |
| South Carolina | 28.73 | 9.58 | .69 |
| Kansas | 34.81 | 13.92 | .67 |
| Oklahoma | 24.94 | 12.43 | .67 |
| South Dakota | 24.24 | 12.12 | .67 |
| Missouri | 28.79 | 14.39 | .65 |
| Colorado | 29.68 | 14.84 | .64 |
| Michigan | 49.71 | 14.84 | .64 |
| Tennessee | 29.88 | 9.96 | .64 |
| Alabama | 27.83 | 9.28 | .63 |
| Kentucky | 26.10 | 8.70 | .56 |
| California* | 45.10 | 15.03 | .55 |
| Florida* | 31.04 | 10.35 | .52 |
| Maine* | 29.30 | 9.73 | .51 |
| Illinois | 37.96 | 12.65 | .48 |
| West Virginia | 18.66 | 8.04 | .48 |
| Rhode Island* | 28.76 | 9.59 | .43 |
| North Carolina* | 19.68 | 6.56 | .42 |
| Pennsylvania* | 34.11 | 8.53 | .38 |
| Ohio* | 26.11 | 8.70 | .37 |
| Connecticut* | 31.23 | 10.41 | .36 |
| Maryland* | 24.64 | 8.21 | .34 |

*Indicates state has food exemption.

Source: Heins, "Sales and Use Taxes", Table 5, p. 662.

## FOOTNOTES

[1]Roy G. Blakey and Gladys C. Blakey, *Sales Taxes and Other Excises* (Chicago: Public Administration Service, 1945), p. 19.

[2]*Ibid.*, pp. 18-21.

[3]*Ibid.*, and Prentice-Hall, *All States Tax Guide*, Englewood Cliffs: Prentice-Hall, 1963, Vol. 1, par. 92,970.

[4]Robert Murray Haig and Carl Shoup, *The Sales Tax in the American States*, New York: Columbia University Press, 1934, pp. 111-317; Oster, *op. cit.*, pp. 23-33; Blakey and Blakey, *Sales Taxes and Other Excises*, pp. 2-5.

[5]"State Taxes," *Business Week*, August 27, 1949, p. 52.

[6]"Sharp Rise in State, City Taxes," *U.S. News and World Report*, September 10, 1948, pp. 50-52.

[7]"Where Taxes are Rising," *U.S. News and World Report*, October 14, 1955, pp. 116-20.

[8]"State Tax Boost", *Nation's Business*, May 1961, pp. 61-62; "State and local taxes," *Changing Times*, August 1961, pp. 45-7.

[9]John F. Sly, "The Outlook for the State Taxpayer", *Tax Review*, XXIV, 5 (May 1963), p. 21; "State Tax Action in 1962 and the Outlook for 1963", *Tax Review*, XXIII, 11 (November 1962), pp. 43-5.

[10]*Illinois Tax Facts*, Taxpayers' Federation of Illinois, Column #774, August 2, 1963.

[11]Advisory Commission on Intergovernmental Relations, *State Constitutional and Statutory Restrictions on Local Taxing Powers*, October 1962, p. 72.

[12]Reed R. Hansen, "An Empirical Analysis of the Retail Sales Tax with Policy Recommendations", *National Tax Journal*, March 1962, pp. 1-2 (footnote 1). See also Appendix Tables 3-5. Quoted by permission of the *National Tax Journal*.

[13]From data collected from miscellaneous sources by Joseph Perry.

[14]Dominion Bureau of Statistics, *Principal Taxes and Rates, Federal, Provincial and Selected Municipal Governments* (1962), p. 13.

[15]James H. Maloon and Clinton V. Oster, "State Sales Tax Administration Costs", *National Tax Journal*, September 1957, p. 229.

[16]*Ibid.*, Tables 1 and 2.

## CHAPTER 4

# Shifting and Incidence of the Sales Tax

### INTRODUCTION

IN this chapter the theoretical background will be given against which the reader may evaluate the policy implications of the problems in the allocation of the retail sales tax burden by income bracket discussed in the following chapter. Studies of the income distribution of the burden of taxes necessarily proceed from a theory of tax incidence. Incidence is defined by Richard Musgrave, a leading finance theorist, as the effect of the tax on the distribution of income available for private use. The full meaning of this definition will become apparent as we proceed.

First, the comparative statical approach to the incidence of selective excises and a "truly general" retail sales tax is discussed. This is a geometrical analysis which analyses the consequences of imposing a tax *per unit of output.* A retail sales tax is an *ad valorem* tax, but the nature of the argument is not affected. This initial analysis is only partial. That is, the incidence of the tax is analysed solely in terms of the output response of the taxed firms without reference to repercussions on the firms' demand and supply curves. Moreover, a single diagram is taken to be representative of all taxed firms. At first the effects of the disposition of the proceeds of the tax are ignored. Moreover, partial equilibrium analysis abstracts from monetary effects and the role of the central bank, since these are relevant only in a general equilibrium context. Allowance is made for the existence of imperfectly competitive markets, but when this is done question arises as to the very existence of supply curves, or even demand curves. Thus our conclusions necessarily become less precise.

Next, dynamic considerations are introduced, and we take account of economic events associated with the collection of the tax. Thus we no longer ignore the path by which a new price equilibrium is reached; and for reasons to be explained, the disposition of the proceeds of the tax by the province or state (whether held idle, spent on goods and services, or used to repay debt) must be taken into account. These alternatives affect income, saving, consumption, investment, and employment, and therefore the level and distribution of income *prior* to tax. They are consequently highly relevant to a dynamic concept of sales tax incidence. In brief, the interrelations between incidence and economic effects of the tax, and the disposition of its proceeds, are revealed. Dynamic considerations require us to come to grips with the question of whether or not price inflation can proceed from the cost side. The possibility must be considered that under imperfectly competitive conditions the introduction of a retail sales tax, a rise in the rate of a tax already in existence, or a decrease in the scope of exemptions from the tax can lead to direct mark-ups of prices and wage rates.

Finally, attention is paid to the potential effects of the introduction of a retail sales tax on the flow of savings, and on the conversion of those savings into investment. These effects need to be discussed separately for spending of the proceeds and for debt retirement. The importance of this lies in our wish to draw conclusions on the effect of financing an expansion of Ontario's expenditures by the use of a tax which, as in the writer's opinion the sales tax does, extends the limits of taxable capacity.[1] One of the major arguments in favour of a retail sales tax at either the national or the provincial and state level lies in the scope that it gives for assuring that balance between private and public investment expenditures which will optimize the rate of growth.

As was emphasized in Chapter 1, the limits of taxable capacity are extended when a tax system makes use of a number of taxes; for the rate, or rate schedule, of any particular tax can be kept lower than it must be if dependence is on one or two types of tax. Moreover, the disincentive effects on the production of national product associated with a sales tax are different from those caused by the individual and corporate income taxes. Therefore the adverse impact of the *tax system* on output and growth is reduced when a given amount of public expenditure is financed by a combination of income and sales taxes. This, in turn, permits a larger volume of public expenditure; and to the extent that public investment expenditures contribute to growth, saving and investment are in the long run encouraged. But this means that by permitting a higher level of public investment than otherwise, use of the sales tax along with income taxes may ultimately contribute to a higher level of output of public and private consumer goods. The contribution of the sales tax in this respect serves to minimize the question of the impact of the sales tax, or indeed the tax system as a whole, on the distribution of income by income size. If this view is accepted, much of the opposition to the retail sales tax on grounds of its regressiveness is misguided.

### PARTIAL VERSUS GENERAL APPROACH TO THE THEORY OF SALES TAX SHIFTING

Traditional incidence theory attempted to locate the ultimate situs of the burden of a tax. This burden was thought of as a money amount, in part passed forward by the taxpayer to the consumer, or backward to the agents of production. Modern incidence theory, on the other hand, recognizes that the real burden of the tax is not identical with the money payment that constitutes the tax. In the aggregate this burden is the reduction in the physical output of the private sector brought about by the transfer of resources to government use. The structure of the tax system determines the distribution of this burden. The tax system does, of course, affect physical output in the private sector by way of incentive effects on consumption and investment spending, and responses to these effects. Moreover, the tax system creates a burden in still another sense. Consumers' preferences are distorted in different ways depending on the particular tax system adopted. (They are also distorted if the public spending is non-tax financed, say by inflationary sales of securities to the central bank.) Some of the ultimate effects of resource transfer from the private to the governmental sector are very long-term indeed (for example, public investment in education). Consequently neither the burden of taxation nor its distribution among taxpayers can be established without taking into account the

present valuation of benefits and hurts that are widely distributed over both time and space. In other words, resource transfer, incidence, and output effects are interdependent.[2]

In the assessment of the distributional effects of the burden of a sales tax interest centres in what we can learn for policy decisions. Consequently an incomplete or partial theory of incidence is not of much use except in a restricted context. The interdependence of all the aspects of a budgetary change has to be recognized.

This chapter is divided into five parts. The first part indicates the difference in the implications for incidence theory between regarding the general retail sales tax as a collection of excise taxes, and viewing it as a modification of a truly general one-stage tax covering all goods and services sold at retail to consumers. The second part summarizes accepted theory with respect to the short-term and long-term shifting of an excise tax, and is based on a comparative statical model. The third part does the same thing for a general retail sales tax. The fourth indicates the modifications that have to be made in the theory of excise and general sales tax shifting to take account of the fact that we live in a dynamic, not a static, world. It is also concerned with the long-term aspects of excise and sales taxation, and their implications for economic growth and income distribution. The last part summarizes the entire section in terms of its importance for legislative policy decisions based on estimates of the distribution of the burden of the retail sales tax.

A general retail sales tax may be looked at from either of two points of view. It may be regarded as merely a modification of a truly general one-stage tax, or it may be considered to be an extensive collection of excise taxes.[3] If one starts with the former view, the appropriate analytical method is to build a model of a sales tax that is uniformly applied to all goods and services at the retail level, excluding sales of goods and services to other than final consumers, but including sales to the taxing government itself. The next step is to indicate the nature of the qualifications that have to be made to take account of the lack of true generality of the tax in practice.

The latter view, on the other hand, implies basic stress on the distorting nature of the excise tax on a limited number of commodities and services arising out of the possibility of substitution by consumers of untaxed for taxed commodities. The analysis is partial in nature, stressing the alternatives with respect to untaxed commodities that are available to consumers and to the agents of production that co-operate in producing taxed commodities. Under this approach, we then move to the greater generality of real world general sales taxes, as compared with a limited number of excise taxes, by recognizing the reduced number of alternative opportunities available to consumers and producers as the tax approaches greater generality.

Before commencing our discussion it is useful to call attention to the implications for the effect of the tax on the distribution of income of the direction in which shifting of the tax occurs. It could be imagined that regardless of how the tax is shifted, the after-tax distribution of income remains about the same. In other words, the distribution of income of consumers might prove to be not greatly different from that of the productive agents. The fact that the bulk of consumers are also workers lends support to this view.

Nevertheless three important points make this a somewhat too easy solution. First, to the extent that profit receivers and bondholders are in the upper brackets, and wage-earners are in the lower, the *distribution* of backward shifting is important for after-tax distribution of income. Second, wealth owners living off their capital are unaffected by backward shifting. Third, frictional unemployment attributable to reduced output in the taxed industries affects the wage-earner more than it does the salaried worker or management.[4] While static models of tax incidence assume full employment (or no change in the level of employment), this is not inconsistent with frictional unemployment associated with the mobility of resources. Therefore even in the highly abstract comparative statical model conventionally employed in incidence theory (with which we shall commence our discussion), loss of income due to frictional unemployment is not excluded from consideration.

The importance of the distinction between forward and backward shifting can also be illustrated by reference to the intent of a sales tax.[5] Clearly the objective is to tax consumers of the commodity or commodities taxed. If the intent were to tax the incomes of productive agents, it would have been preferable to use an income tax in the first place. If we regard a general retail sales tax as basically a collection of excises, and thus focus on the distorting effects of the tax, it is easy to see that backward shifting to production factors will have a haphazard effect on the distribution of after-tax incomes. This point is emphasized by John Due, who argues that "if the taxes are not shifted, a capricious distribution of burden may result which cannot be justified under usually accepted principles."[6] Indeed, forward shifting of a sales tax is what the law-makers intended.

Still, forward shifting is likewise not without its caprices, since under a general retail sales tax law-makers are not in a position to take account of the cross-elasticities of supply and demand of the taxed commodities. The point is this: even if the sales tax is quite general, commodities will differ in their demand and supply elasticities within the price range that is relevant to the rate of the tax. A 3 per cent rise in the price of a package of cigarettes may have little effect on the quantity sold, while for some other commodity the same tax rate increase may push the price up into the demand-elastic range. This will produce the same species of differential welfare and employment effects that may occur if the tax is shifted backward.

## SHORT-TERM AND LONG-TERM SHIFTING OF THE EXCISE TAX

### *Perfect Competition*

If we recognize at once that no sales tax in actual use is truly general, a possible approach to the incidence question is to work up from a single excise tax to a large collection of them, levied at flat rates. The standard procedure, which will be followed in this section, is to imagine an excise tax levied on one or a few commodities, and to indicate the nature of the principles governing shifting of the tax. The tax is levied on the producer, becoming part of his cost of production. The tax either remains where it is or is shifted forward. If it is not shifted forward, the firm's reaction to the tax is to reduce the level of employment of productive resources in the taxed industries. Although the firm must bear the

tax on all units of commodity sold, the effect of this fact on the firm's production decision will be to spread the effects of the tax backward to the agents of production.

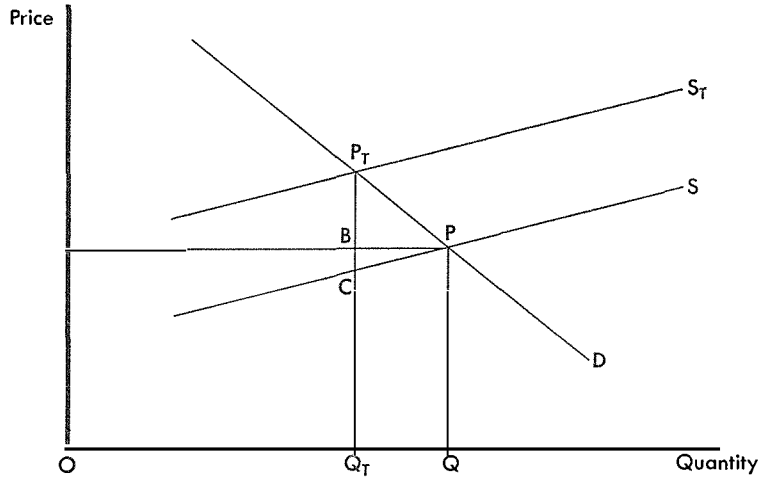
Emphasis in the theory of shifting of the excise tax is on the partial nature of the tax. The same analytical approach is used for an excise on one commodity as for an excise on several, while an aggregative approach is employed to analyse the incidence of a flat-rate general sales tax. As excises are applied to a greater and greater number of commodities, the partial approach must eventually give way to an over-all aggregate analysis.

In view of the wide extent of imperfectly competitive conditions in retail markets, it may be thought that undue attention is devoted to the perfectly competitive case. It is believed that the procedure here is justified both by the nature of incidence and shifting controversy in recent years, and by the light thrown on the mechanism of resource transfer out of taxed industries.

We start with the short-run incidence of a tax per unit of output. The tax is on the firm, becomes part of cost, and causes the supply curve to shift vertically upward. This case is visually simpler than the non-parallel shift in the *ad valorem* case, while the principles are the same. In Figure 1 we are concerned with the short run, and the typical falling demand curve of the industry. The straight-line curves are another concession to visual clarity. Drawing the industry supply curve at all (or for that matter the demand curve) implies that we assume perfect competition in the taxed industry.

FIGURE 1

Per-Unit-of-Output Tax, Short-Run Incidence




P Price before tax
$P_T$ Price after tax
S Supply curve before tax
$S_T$ Supply curve after tax
Q Quantity sold before tax
$Q_T$ Quantity sold after tax

B and C indicate intersection points. $P_TB$ represents the portion of the tax passed forward to the consumer, and BC represents the part of the tax that is passed backward to the productive agents.

It is assumed that firms respond to a rise in their costs due to the tax by continuing to maximize profits as they had done prior to the tax. Production factors likewise respond to any reduction in the demand for them by commencing to move out of the taxed into untaxed industry. The scope for this is greater, of course, the narrower the coverage of the sales tax. It is assumed that the proceeds of the tax are not spent by the government, though the diagram would look the same if the product of the taxed industry received none of the benefit of the government spending, either directly or indirectly.[7] Had we been dealing with the long run instead of the short run, the supply curve of a constant cost industry would have been horizontal. Infinite elasticity of this curve means that agents of production are so mobile that any reduction in their rewards causes them to leave the taxed industry. Thus they are not specialized to the industry, and units are interchangeable. Since time is required for this to occur, however, short-run analysis depicts the supply curve as upward sloping.

Attention is called also to the fact that although it is usually intended that a sales tax should be paid by the consumer and that it should constitute a reduction in his after-tax income, the analysis proceeds by assuming that the tax falls initially on the firm. Thus it is intended that the tax be shifted, and in a formal sense the tax can be considered indirect.

It should be repeated that this analysis is what is called comparative statics. A disequilibrium is allowed to occur, which takes the form of the imposition of a new sales tax, or an increase in the rate of an existing one, or even a change in the structure of production and distribution which changes the distribution of exemptions and exclusions. No attempt is made to trace out the path by which the new equilibrium price and output are reached. Only two output points (Q and $Q_T$) and two price points (P and $P_T$) are considered. Therefore dynamic aspects of the response to the tax are ruled out. To the extent that alternative responses were to occur prior to the achievement of the new equilibrium, a number of alternative new equilibria might have been possible. The present analysis selects only one of them, in line with the assumptions that have been listed. At a later stage the consequences of dynamizing the analysis are considered.

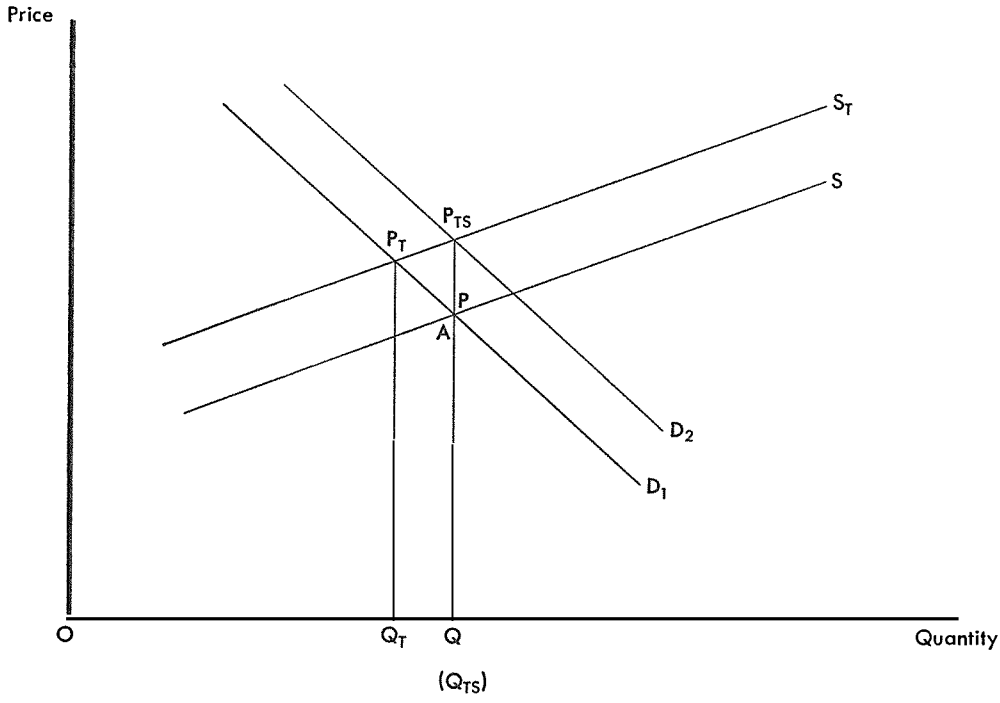
Finally, it is noted that if the tax is not an excise on the product of a single industry, but is a flat-rate tax applying to several industries (though in the present discussion, not to *all* industries) the use of a single diagram necessarily implies that supply and demand curves have the same slopes in all the taxed industries. In practice this will not be so: industries will be differentially affected by the tax. A great deal of the actual shifting mechanism is concealed when a single diagram is taken as typical of the set of all firms.

The geometry of Figure 1 is intended to illustrate the case in which, when the new equilibrium has been reached, the new price ($P_T$) is higher than the old (P), and quantity sold has fallen from Q to $Q_T$. Price has not risen by as much as the tax, and the latter has been incompletely shifted forward. The smaller supply can be provided at a lower price per unit, since a smaller output means a lower demand for inputs.[8] Had we taken into account the spending of the proceeds of the tax, and had we assumed that the taxed industries benefited from the increased government spending in exactly the amount of their own tax

liability, the demand curve would have shifted up to intersect the after-tax supply curve at a point directly above Q. The industry would have sold the same amount as before, but at a higher price than $P_T$. There would have been no decline in the demand for factors, and no stimulus for firms and productive agents to leave the industry. Price would have risen by exactly the amount of the tax, and the incidence would have been entirely on the consumer. This is depicted in Figure 2.

FIGURE 2

Per-Unit-of-Output-Tax, Proceeds Devoted to the Product of the Taxed Industry




An argument in favour of ignoring the spending of the proceeds of the tax is the fact that when only one or a few industries are subject to the tax, the total proceeds of the tax being relatively modest, the taxed industries are likely to receive only a small part of the proceeds back in the form of government demand for their product. (An exception would occur if an excise-taxed industry happened to benefit heavily from the spending of the tax proceeds.) This argument becomes weaker the more general and the more quantitatively important the sales tax. Even in the general case, however, government spending of the proceeds will benefit different industries differentially, while the tax will apply to the sales of all of them.

The assumption that firms are free to move from one industry to another, and that factors of production are fully mobile and non-specialized, and their units thus interchangeable, means that over a longer period of time the industry supply curve

is more nearly horizontal. As profits and factor rewards decline in the taxed industry, resources gradually move out. It is assumed, of course, that the quantitative impact of the tax on costs is large enough to make it worth while for this to occur. Under the marginal analysis of the economist, any significant rate of tax is assumed sufficient to accomplish this. In practice, however, the effects would not be very noticeable at moderate rates of tax.[9] It is further assumed that both firms and factors refuse in the long run to accept rewards inferior to those which they could obtain in untaxed industries. To the extent that either firms or factors are specialized to a taxed industry, the mobility has to take the form of failure to maintain capacity in that industry, and of the refusal of younger men to enter the industry to replace retiring workers. But this is only a matter of the length of time involved, and does not affect the principle. The implication of these statements is that eventually, but not in the short run, rates of return of factors must be equalized in the taxed and untaxed industries. This follows from the assumptions of factor divisibility and mobility, rational economic behaviour in the sense that firms and individuals try to achieve maximum returns, and full employment. The situation is depicted in Figures 3a and 3b.

Per-Unit-of-Output Tax, Long-Run Incidence, Constant Cost

FIGURE 3a
Inelastic Demand

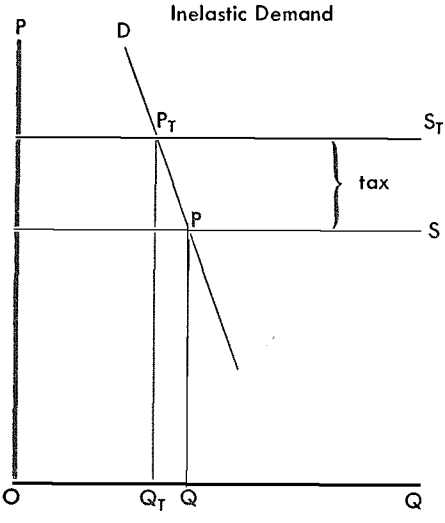
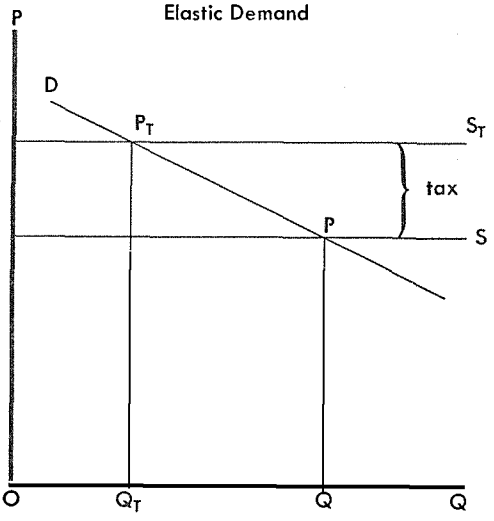



FIGURE 3b
Elastic Demand




It is not the same thing to say that factor rewards, including the profits of firms, must eventually be equalized in the taxed and untaxed industries, and to say that productive agents do not bear any of the tax. Factors of production cannot move out of taxed industries into untaxed industries without driving down rates of return to factors in the latter. This is implied in the fact that returns are equalized in the taxed and untaxed industries, and that they have initially (that is, in the short run) fallen in the taxed industries.[10]

Figures 3a and 3b indicate that, regardless of the slopes of the demand curves, consumers *of the taxed commodities* cannot protect themselves against the tax in

the constant cost case. Price rises by the same amount in each instance. In the elastic demand case (Figure 3b), however, consumers greatly reduce the quantity taken.[11] This means that the taxed industries will be differentially affected, depending on the nature of the demand for their products. This will have a very important significance for the distribution of the burden of the tax, as well as for its indirect economic effects, *within* (as well as outside) the taxed industry sector of the economy. Output must decline by a much greater amount in the elastic case. Therefore a larger proportion of the firms and resources employed in the industry must move out than in the less elastic demand case.

The larger the required movement of firms and resources, the more difficult it will be for the movement to be effected. This can be translated, of course, into a lengthening of the time period relevant to the "long run" that is, to the length of time required for the taxed industries to be constant cost rather than increasing cost industries. This is a manifestation of the inadequacy of diagrammatic analysis to deal with the problem of incidence. At the same time, however, the ambiguity created by the failure of the analysis to take account of this case is lessened as the years pass after an excise or sales tax has been introduced. Once the resource transfer has finally taken place, these effects disappear. After-tax shifting and capitalization effects having been finally accomplished, they come to be accepted and protests on this score die down. It is still true, nevertheless, that the welfare effects of this tax-induced redistribution of resources have been distorting, by virtue of the interposition of the tax wedge, which operates differentially both as among industries and among firms.

One analytical aspect of the above discussion needs particular emphasis. In partial equilibrium analysis we assume the positions of the supply and demand curves to be independent of one another. This assumption may not always be justified. The flatter the demand curve, the greater the job that has to be done to move resources out of the taxed industry. Since the slope of the supply curve becomes more nearly horizontal the greater the lapse of time (factors require time to move out in response to any reduction in after-tax incomes), this slope is not independent of that of the demand curve.[12] A flat demand curve means that more resources have to move in order to make the industry qualify as constant cost in the long run. The slope of the demand curve for any particular taxed industry is, moreover, dependent on other industries' demand curves. In other words, cross-elasticities of demand become very relevant to the resource transfer problem facing any particular industry subject to the tax. Moreover, the same phenomenon carries through to the untaxed industries. Some will be under more pressure than others from the influx of resources from the taxed industries.

This distinction between the elastic and inelastic demand cases is important in the real world. Demand schedules obviously differ from industry to industry. Therefore the distortion is not solely attributable to the lack of generality of a collection of excises, or to a supposedly general retail sales tax. It is intrinsic in the differential demand responses of consumers when they confront a changed price structure and when (as producers) they find their relative after-tax incomes changed as a result of the tax.

The discussion thus far assumes that the only way consumers can maintain

their real purchases of taxed commodities, whose prices per unit have risen by virtue of the tax on output, is to curtail their money spending on untaxed commodities. If elasticity of demand of taxed commodities is less than unity, a larger number of dollars is necessary to finance the higher level of money spending. Elastic demand, on the other hand, means a release of purchasing power for spending on untaxed commodities, or for additional saving by consumers.

If elasticity of demand for the taxed commodities is less than unity, consumers may prefer to draw down savings rather than to curtail purchases of untaxed commodities. Under the assumption of full employment, however, this means that business firms accustomed to borrowing these savings must curtail investment. Intended investment equals intended saving, and there are no idle hoards to permit firms to maintain their previous rate of investment without a rise in interest rates. In brief, if consumers maintain their total taking of real goods, in taxed plus untaxed industries, and since the prices of the former are now higher, saving and investment must decline correspondingly. This result implies a monetary policy aimed at price level stability. The monetary authority, by refusing to intervene, is acting so as to ensure an immediate transfer of resources from the private to the public sector, without regard to the impact on the consumption-investment ratio as consumers indicate their preference for reduced saving rather than reduced consumption. The banking system is acquiescing in the maintenance of the consumption rate at the expense of the investment rate, and therefore of the productivity and growth rates of the economy. Thus the importance of monetary policy for the "ultimate burden" of the tax is obvious.

If, on the other hand, the central bank pursued an easy money policy, it could encourage private investors to maintain borrowing and investment rates by preventing a rise in the rate of interest. The result would be a tendency to rising prices, competition by business firms to consumers for the smaller volume of resources following the resource transfer to the state, and "forced saving" by owners of dollar wealth and income receivers lagging the price rise. As compared with the previous case, the rate of consumption is lower and the rate of saving and investment higher. In conclusion, if consumption demand in the taxed industries is inelastic, the monetary authority may have to choose between more inflation and more investment and growth, and less inflation and a lower growth rate.

In real world circumstances the monetary authority is hardly likely to pay attention to these implications of the introduction of a tax. Rather, if the tax happens to be introduced during the downward phase of the cycle, when some resources are unemployed, an easy monetary policy will be adopted to encourage firms to increase their borrowing and investment. During the later stages of the upswing, abetted by the monetary authority, interest rates will be tending to rise. Fewer resources will be unemployed, and reluctance of consumers to reduce their real consumption will, in these circumstances, be likely to slow down the rate of increase of investment characteristic of the cyclical upswing.[13]

The foregoing discussion must be rounded out by taking account of the increasing cost case. In practice this case is very important as describing all situations in which insufficient time has elapsed to permit full resource mobility. It has been stated above that the shape of the market demand curve is irrelevant to the

extent of the rise in prices of taxed commodities in the constant cost case. Nevertheless the flatter the demand curve the more acute are the resource transfer problems that are posed to productive agents and firms in the taxed industries. Under rising cost conditions the shape of the demand curve not only has the effect just mentioned, but in addition contributes to the extent to which price of the taxed commodities will rise in response to the tax. This is illustrated in Figures 4a and 4b.

Per-Unit-of-Output Tax, Long-run incidence, Increasing Cost

FIGURE 4a

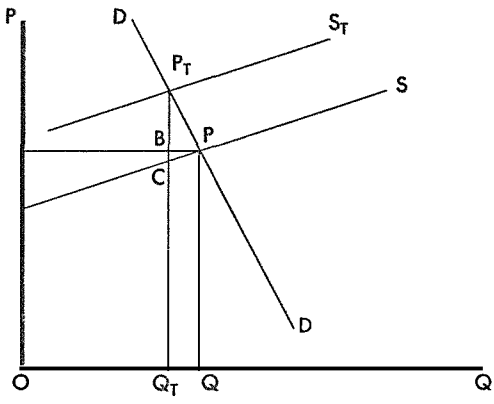
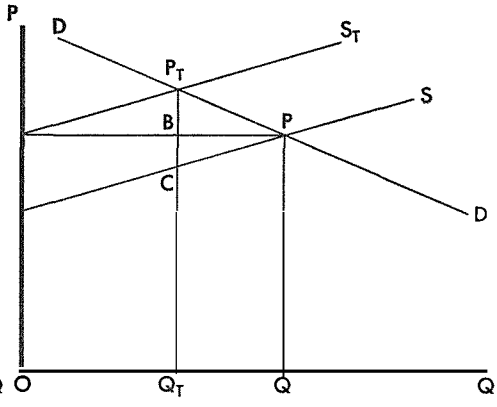



FIGURE 4b




As before, the decline in quantity of goods bought in the taxed industries is greater when the demand curve is relatively flat. But in this case the more elastic (flatter) demand curve is also able to play a role in reducing the extent of the price rise of the taxed commodities. Figures 4a and 4b indicate that the proportion of the tax borne by the consumer, $P_TB/P_TC$, is smaller in the more elastic demand case. A further point emerges.[14] The steeper the slope of the supply curve, the less of the tax that is shifted forward, and the proportion of the tax borne by the consumer and by the resource owners will be the same if the slope of the supply curve is equal to the (negative) slope of the demand curve in the relevant range of output.

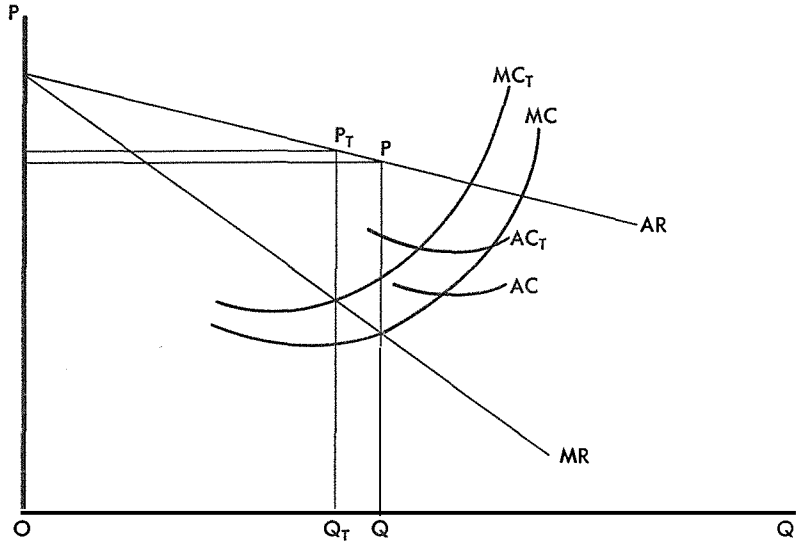
*Imperfectly Competitive Conditions*

The conventional analysis of excise tax shifting under the pure monopoly case is essentially similar to the foregoing. The basic assumption is that firms attempt to maximize profits.[15] (By profits is meant profits in the short run; that is, short-run receipts minus short-run costs. Profits are to be thought of as the dollars accruing to equity owners, whether distributed as dividends or not.) In other words, firms in the taxed industries strive to equate marginal revenue and marginal cost both before and after the tax is imposed on their products. Figure 5 presents the case of a tax per unit of output of a monopolist. The tax raises the marginal cost curve and causes the intersection of marginal cost and marginal

revenue to move to the left, corresponding to a higher product price and some shifting forward to the consumer. It will be noted that the rise in price is less than the tax per unit of output, reflecting the shapes of the cost and demand curves in Figure 5.[16]

FIGURE 5

The Monopoly Case: Short Run




MC Marginal cost curve
MC$_T$ The same including tax
AR Average revenue curve
MR Marginal revenue curve
AC Average cost curve

The effect of the tax is to lift the AC curve as indicated, and to raise price from P to P$_T$. It will be noted that price rises by less than the amount of tax, so that the difference is passed backward to the agents of production.

Since Figure 5 depicts a fairly typical condition with respect to the short-term cost and demand curves of the monopolist and oligopolis, we may conclude that ignoring the disposition by the government of the proceeds of the tax, not the whole of the tax can be passed forward in the short run. In the long run, as in the perfectly competitive case, the tax must be passed forward if the firms were previously making only normal profits, have no cash reserves, and price their product to maximize profits. If the firms have been making monopoly profits (the case depicted in Figure 5) they might absorb a portion of the tax even in the long run. They will not do so, however, if the effect of the tax is to bring their monopoly profits below the rate (per dollar of invested capital) that they could earn in an untaxed industry. This assumes, of course, that the rate of tax is high enough to make it worth while for resources to move, as it was in the perfectly competitive case considered earlier.

The excise taxation of commodities produced by monopolists and oligopolists

sharply underlines the importance of special cases in the shifting of this type of tax, and lends support to the view that in considerable measure both the partial excise and the general flat-rate tax on retail sales require an *ad hoc* analysis for particular cases. The monopoly position enjoyed by firms may reduce their mobility, as well as that of labour and other factors employed in the industry, and thus force them to bear a relatively large proportion of the tax even in the long run. This is an example of the practical operation of the theoretical notions of opportunity cost and next best alternatives. In the monopoly case there may be a sizeable jump to the next best alternative.

In concluding this discussion of the shifting of one or a collection of excise taxes, it is worth while to recall the truly impressive number of simplifying assumptions on which the analysis rests. The analysis is so far from depicting real world conditions that it is fair to ask whether or not it even provides a basis for straight thinking about the question of who bears the burden. In point of fact it does, but care must be taken to avoid making tax policy recommendations unless all necessary qualifications have been entered. The findings must be regarded as merely a prelude to a generalized and dynamic analysis.

If all the assumptions made thus far are retained, it is possible to come out with the neat conclusion that as the number of excise taxes becomes so great that the tax becomes more and more general, the scope for resources to shift out of the taxed industries becomes less and less, until with a truly general tax no resources can shift out at all. In that polar case the tax must be borne entirely by the productive agents, and not at all by the consumer. It must be remembered that this conclusion ignores the disposition made by the government of the proceeds of the tax. Again, it abstracts from inter-industry differences in supply and demand conditions. Moreover, since the analysis is static, it neglects the economic processes that may be set in motion by way of temporary shifting, which could induce a rise in cost-of-living-determined wage rates and other price-escalated incomes and wealth. These dynamic aspects, which cannot be neglected in a realistic discussion of tax burden, will be introduced in the last two parts of this chapter.

Before taking leave of our discussion of the shifting of the excise tax under competitive and non-competitive conditions, it is useful to bring together the points with respect to which assumptions have been made throughout the text. This will provide a background for relating the above discussion to the shifting and incidence of a general retail sales tax.

## SALES TAX SHIFTING

### Summary of Points on Which Assumptions Have to be Made

1. State of competition
2. Substitutability and mobility of productive agents
3. Flexibility of prices and wage rates
4. Maximization objectives and price policy of firms
5. Statics versus dynamics: consideration of the time path
6. Level of employment; relation between intended investment and saving

7. Monetary policy
8. Distinction between incidence of tax and combined incidence of tax plus spending of proceeds
9. Height of tax and firms' incentive to take action in response to the tax
10. Pre-tax composition of output of goods. (This has been assumed to be ideal.)
11. Simplifying geometrical assumptions (for convenience):
    Straight-line supply and demand curves
    Per-unit-of-output tax
    Tax treated as addition to unit cost of the firm
12. Partial versus general sales tax
13. Consumer demand responses to rise in price of commodities of taxed industries
14. Closed versus open economy (International balance of payments considerations have been ignored.)

## SHIFTING OF THE RETAIL SALES TAX

As pointed out earlier, a general sales tax may be looked at analytically from two quite different points of view. A truly general retail sales tax is thought of as applying to all final sales at retail at a relatively low (2-5 per cent) flat rate. The distorting effects of such a tax are far less than those experienced under a single excise, or under a fairly short list of sales taxes.[17] The substitution effects of general sales taxes are limited by their wide coverage.

Even under a general sales tax substitution is important, however, because of the various exclusions and exemptions, particularly of services. Moreover, even if completely general, the tax is limited to retail sales (ideally to consumers only). Therefore some substitution may come about as between consumption and saving. It should be noted that a sales tax will favour saving over consumption only to the extent that individuals do not feel that all their savings will ultimately be subject to tax when converted to spending.[18] In fact, however, not all saving is done with the intent to consume taxable commodities in later life. Moreover, wealth does accrue more rapidly when individuals abstain from consumption in order to accelerate saving. A sales tax will encourage this.

Under the assumption of perfect competition and equilibrium at full employment the above phenomenon means a shift of resources into capital goods industries.[19] However, retail sales taxes always apply to some sales to businesses. To the extent that there is an adverse effect on profits, therefore, investment may be somewhat discouraged via both profit incentives and increased cost of capital (unless the monetary authority prevents interest rates from rising). Obviously these effects are neither sufficiently ascertainable nor quantitatively important enough to warrant much attention, and it is hard to believe that substitution effects between consumption and investment are very important.

Much of the analysis of the incidence of a general retail sales tax is similar to

that already presented for the excise tax (or taxes). But there are some differences, as follows:

First, if we think of a general sales tax as an alternative to selective excises yielding a given amount of revenue, the rate of the general tax will be substantially lower. This will have obvious consequences when we consider the strength of the reaction of producers to the tax. Moreover, imposed at lower rates, the general tax will bring into play movements along a much smaller range of the industry demand curve than the alternative system of excises will. At the least we can say that the economic consequences of the general sales tax will be more easily predictable, since shorter segments of both the supply and demand curves will be involved.[20] An example is the reaction of a firm to a kinked demand curve. (See footnote 16.)

Second, the circumstances in which sales taxes at the provincial and state level have actually been introduced have special implications for the effects of a rise in the size of governmental budgets on the demand curves faced by various industries. (This statement is true, however, only to the extent that the sales tax has permitted a rise in public expenditures that could not otherwise have been undertaken.) In both Canada and the United States sales taxes (in contrast to excise taxes) have typically been introduced to finance a highly specialized group of government programs, namely, relief and public school education.[21] Consequently, if we consider *direct* spending effects only, the economic effects of the spending of the tax proceeds are highly concentrated. Thus, despite the fact that the tax is general, there will be an inducement (in theory, at least) for firms and resources to try to move into these "industries". The importance of this point is reduced by the fact that the immediate beneficiaries of the government spending pass the purchasing power along. The multiplier effects of relief payments are high, so that other consumer goods industries quickly benefit, and they therefore increase purchases from their suppliers. Spending on education involves considerable school construction, thus producing derived demand effects that may spread quite rapidly through the economy.

Third, if the tax is truly general (or quite close to it), the extent to which relative prices can change is reduced. The direction of change of the general price level will depend on monetary policy.[22] Easy monetary policy means a rise in the general price index; rigid monetary policy means a fall. A reasonable assumption would appear to be that on the introduction of a sales tax at the *national* level the monetary authority would attempt to satisfy the rise in transaction demand for money, and therefore permit the economy to move to equilibrium at a higher price level. This conclusion would not follow, however, if the tax happened to be introduced during a stage of the cycle at which the fear of inflation was becoming marked. In any event, it is not to be expected that the monetary authority will take explicit account of the introduction of a sales tax by a single province, nor will it do so when rates are raised or exemptions reduced. The most reasonable conclusion appears to be that chance will largely determine the extent to which changes in provincial sales tax law will occur in the context of tight or easy monetary policy, and that generalization is impossible.

If we remove the assumption of a validating monetary policy, and refuse to allow the price level to rise, we have (retaining the assumptions of perfect com-

petition and homogenous factor units) an approximation to the view that a general sales tax amounts to a proportional tax on the incomes of the agents of production. Going further, however, and recognizing that supply and demand elasticity relationships in the various taxed industries are highly complex (the curves often do not even exist under imperfectly competitive conditions), we find that a general sales tax, even under restrictive monetary policy, proves to be a very haphazard proportional income tax on factor incomes.

It is not possible to infer from the direction of movement of the price level the direction of sales tax shifting. The mere fact that the price level rises by the amount of the tax, or does not rise, tells us nothing about whether the burden of the tax is on the consumer or on the agents of production. We need to know also the impact of the tax on the incomes of consumers, and on the prices paid for commodities by the productive agents. But the difficulty is that price flexibility, both upward and downward, varies greatly among different commodities and among different agents of production. Professor Due gets out of this difficulty by pointing out that the distribution of the burden of a sales tax depends on the pattern of consumer expenditures, regardless of whether, in response to the tax, the price level rises or the incomes of the productive agents fall.

This conclusion appears acceptable so long as we are concerned with a limited time period, one significantly shorter than the average lifetime of the consumer. If, on the other hand, we consider the tax as permanent, account must be taken of the fact that the average individual either converts all his savings to consumption before death, or bequeaths the remainder to heirs who ultimately do so. This changes the significance of consumption spending as determining the distribution of the tax burden. It is now lifetime income that determines consumption spending, and it is indifferent whether we speak of the tax as a proportional income tax or as a flat-rate sales tax. However, it may be conceded that in any reasonably short period of time consumers are scarcely aware of the lifetime income and consumption concepts, and may well allow their consumption decisions to be affected by the tax.

Provided that the tax permits an increase in public spending—that is extends the limits of taxable capacity—it is important to note the role of the distribution of the spending of the proceeds of the tax by the government. Whether the incidence of the tax is found to be on the agents of production or on consumers, the government is not likely to purchase solely, or even significantly, the same bundle of goods as that previously purchased by those on whom the incidence of the sales tax (or any other tax) has fallen. In other words, the composition of output is likely to be significantly changed as a result of the imposition of the tax and the spending of its proceeds. The consequence of this is that further price effects are superimposed on those attributable to the tax itself. That is, further distribution effects are produced in addition to those of the tax proper.

The resource transfer is complicated when (as is usual) the government purchases a bundle of goods differing from that released by consumers. The mechanism has to operate at an earlier production stage. Factors released by consumer goods industries are (at full employment) hired by industries producing the goods the government wishes to buy. The frictional aspects of this, and the

time lag that permits temporary unemployment, are particularly noticeable when (as with state and provincial sales taxes) the tax proceeds are devoted to education and welfare. It takes time for sons and daughters of storekeepers to become public school teachers.

The response of consumers to the higher prices of consumer goods including tax is not likely to be such as to yield at once the required amount of resources. In a high real income economy consumers will spend more and save less than before, thus not readily releasing consumer goods and factors of production to the government. Consumers decrease their taking of real goods by an amount less than that by which the government wishes to increase its own real purchases. A rise has occurred in total public and private money spending. This rise is made possible either via dis-hoarding (excluded under the full employment assumption) or through an increase in the money supply (unaccompanied by a rise in the rate of interest). In this situation the government's spending program has partially failed. Prices rise against it, as they do against consumers, and either the government's real spending program has to be curtailed, or it too must borrow. In a full employment situation a national but not a provincial government can do so via the banking system, and if the process is carried far enough, consumers are ultimately forced to forgo the amount of real goods and factors that the government wishes to divert from the private sector.

All this is particularly relevant to spending programs financed by provincial and state sales taxes. If the effect of consumer resistance to the release of resources to the government is to cause a rise in prices exceeding that due to the addition of the tax, either government spending programs have to be cut back or a higher sales tax is necessary. The alternative open to the national government, of unlimited borrowing, is not available.

### DYNAMIC MODIFICATIONS OF EXCISE AND GENERAL SALES TAX BURDEN[23]

We have already stressed that comparative statical analysis is a seriously inadequate basis for inferences concerning the burden of an excise or a general sales tax. Its failure to consider alternative paths of events subsequent to the imposition of the tax necessarily means that any particular conclusion has no claim to uniqueness. The firm reacts to the initial impact of the tax. But how rapidly? Are there differences among firms within an industry, or as between industries? If prices and wage rates are flexible, how flexible are they? Does the speed of response vary as among different firms and industries? How soon do consumers reach their final adjustment with respect to a new saving-consumption ratio in response to forward shifting of the tax? These are far from the only differential lag responses that have to be taken into account in a thoroughly dynamic treatment of the incidence of a sales tax.

Under dynamic analysis the whole concept of the long run, as distinct from short-run adjustment to the tax, takes on an entirely new aspect. The long run is no longer an equilibrium position finally reached after short-run adjustments have been accomplished. The nature of the long-run adjustment is determined by the short-run adjustments; and since the latter are continually occurring in any economy subject to constant change with respect to the process of production

and distribution, as well as subject to cyclical changes and random shocks, there is in fact no necessary movement toward long-run adjustment.

Nevertheless, the transition to dynamic analysis is not as difficult as might at first appear. Some important assumptions, directly or indirectly related to dynamics, can be allowed for by adhering to the more likely case. For example, the government usually does not hold the proceeds of the tax idle, and the tax is normally introduced along with a definite, ascertainable monetary policy.[24] Again, assumptions can be made on the price policy alternatives of average cost pricing or profit maximization (equation of marginal cost and marginal revenue).

A major assumption that cannot be adhered to in a dynamic analysis is that of full employment equilibrium. Another is the assumption of independence of factor incomes and money wealth from movements in a cost-of-living index that includes the tax. Again, flexibility of prices and wage rates can no longer be assumed, particularly in the downward direction. Independence of demand and cost curves must also, of course, be given over, since dynamic analysis stresses demand and supply shifts and interactions. Finally, it is highly misleading to regard any given geometrical representation of cost and supply conditions as typical of "all industry".

The present section is mainly concerned with dynamic shifting analysis. Whatever action is taken by the seller in response to the tax, someone's after-tax real income—either that of consumers or of the factors of production employed in the taxed industries, or both—is reduced by the tax. The action taken in response to this naturally determines the subsequent course of events. The shifting of the tax now becomes inextricably bound up with indirect economic effects, of which the significance for employment and output may transcend that of the burden of the tax itself. These effects are subsumable under fiscal and monetary policy, and under the incentive aspects of taxation.[25]

It is necessary to have in mind some conception of the kind of modifications introduced into the analysis by dynamic considerations, and thus to assess their probable importance. The repercussions of spending reactions by firms and individuals to the income changes caused by the tax are most pronounced during the short run. During the few weeks after the imposition of the tax consumers shift their purchases, firms revise output and investment decisions, unions take note at the bargaining table of effects on the workers' cost of living, resources commence to move in response to lack of generality in coverage of the tax, and most of the capitalization effects occur. In the longer period, on the other hand, resource movement and shifts in demand, which take time to accomplish, have gradually absorbed the shock effect of the introduction of the tax.

Although no one today speaks of "tax diffusion" as a serious explanation of tax shifting, it is none the less true that a combination of capitalization and tax shifting tends gradually to bring about a situation of equilibrium so far as the role of the tax in the economy is concerned.[26] It is therefore possible to overemphasize the long-run importance of the dynamic effects of the tax, a *caveat* that is necessary in a discussion dealing with these effects. At the same time, the operation of dynamic factors may radically alter the conclusions reached on the basis of comparative statics. In particular, we must always bear in mind that the dynamics of

the structure of production and distribution continually inject new short-run effects even when no legislative changes occur in either the rate or the exemptions of the tax. Changes continually occur in eligibility for exemptions, thus creatintg an effect similar to legislative changes in exemptions.

Another important dynamic consideration arises out of the separate quotation of the retail sales tax. There is general agreement that separate quotation of the tax, which tends to come about naturally even if not required by provincial or state law, facilitates forward shifting in the short run. Theorists point out, however, that elasticities of demand determine whether or not such forward shifting is definitive.

The function of dynamic incidence is to make it quite clear that it is not merely the elasticities of these curves that determine ultimate incidence, nor are the pre-tax elasticities necessarily relevant. Tax-induced changes in the incomes of productive agents (particularly via escalation and price mark-ups under easy money conditions), together with changes in the tax, cause complex and unpredictable shifts in demand curves. Moreover, a shift in a demand curve may be accompanied by a change in its elasticity in the neighbourhood of before- and after-tax price.

It is therefore concluded that while separate quotation is admittedly primarily important for short-run shifting, the latter itself exerts important effects on long-run incidence, as well as the long-run economic effects of the tax. It follows that, contrary to the usual interpretation, separate quotation of the tax is likely to be an important influence on long-run shifting and on the indirect economic effects of the tax. It is also obvious from the above discussion that once dynamic influences are introduced, any simple theory of shifting becomes impossible under presently available methods of data gathering and interpreting.

Another preliminary to be disposed of is to note the alternative assumptions that may be made with respect to the purpose of introducing the tax. Four possibilities must be considered:

1. The tax proceeds are spent. This is the balanced-budget incidence case, to be discussed below. Its importance derives from the evidence supporting the view that in particular circumstances the use of a sales tax may extend the limits of taxable capacity. That is, increases in public expenditures may be made possible by the sales tax.

2. The tax is introduced to permit debt repayment, or to obviate an increase in the debt. The importance of this case derives from the fact that a sales tax may be, and has been, introduced to prevent a rise in provincial or state debt. Political opposition to, say, a rise in individual income tax rates might mean that in the absence of a sales tax public debt would go on increasing. This case also will be discussed below.

3. The proceeds of the tax are held idle. Since this never occurs (except as a possible temporary anti-inflation measure), it does not merit discussion. As Musgrave has made clear, this case involves simultaneous consideration of two types of incidence, tax incidence and the incidence of deflation.

4. The sales tax replaces an income tax. This would be a rare occurrence indeed. However, it is worth while to consider the comparative impact-inflationary effects of sales taxes and individual income taxes. Here the effects of government spending of the proceeds of the tax do not come into consideration, since the two taxes are merely alternative means of financing a given amount of public expenditure.

The levying of an income tax means that taxpayers' incomes are reduced, and consequently also their capacity to consume and to save. Thus the transactions demand for money in the private sector is reduced, and given the money supply, there is some downward pressure on interest rates. Because of the comparative unimportance of the interest rate in the investment function, it may be supposed that the monetary effects are relatively unimportant, and that the effect of the income tax is to reduce spending power, and thus cause a reduction in flexible prices.

The individual income tax may, however, also produce disincentive effects on willingness to put forth effort. To the extent that this is so, a leftward shift occurs in supply curves, which under comparative statical analysis means a rise in the prices of the commodities involved. On the other hand, some salaries and bonuses are geared to individual income tax rates, so that an escalator effect is experienced. (This phenomenon is supported by high corporate income tax rates, for the federal government then bears part of the cost of the higher salaries of corporation executives.) As we shall see below in the discussion of price mark-ups in response to increases in sales tax rates, it is not possible to say what effect this has on the general price level.

The difference between the dynamic effects of a sales tax and an individual income tax stems from the difference in their impact effects. The mark-up effects under the income tax, mentioned above, are of relatively little quantitative importance. Those under the sales tax, on the contrary, are of great importance in view of the widespread market imperfections at the retail level.

If firms find themselves able to shift the tax forward through price mark-ups, an autonomous rise in a cost element has been reflected in price of product. This tells us nothing about the general price level; only that the price of the taxed product has risen in response to a development on the cost side. On the other hand, consumers are bound to respond to any significant rise in price of product.[27] As stated earlier, even if the tax were completely general, differences in the slopes of the demand curves for different goods and services would bring about shifts in demand for competing goods, and thus in relative prices.[28] If prices are more flexible in the upward than in the downward direction, the effect is inflationary.

*Retail Sales and Excise Taxes, and Autonomous Inflation*

The complexity of the pricing policies of firms, given the real world mixture of competition, monopolistic competition, oligopoly, and monopoly, makes impossible any generalization on the price consequences of the random upward shocks that are constantly occurring on the cost side. The one-time introduction of a

sales tax, or rise in rates, is a different thing, however. Whether the tax is selective or general, firms in the taxed industries know that all must pay the tax. Average cost pricing probably cannot be used if competition is severe, or if, in the price range before and after tax, demand curves are highly elastic. But under a general retail sales tax these phenomena are less widespread.

Indeed, even in the perfectly competitive case firms may in effect employ average cost pricing. As stated earlier, it is necessary to be clear on what price it is that the firm has to take as given in the market. This price may well include tax if the competitive industry produces a commodity that has no close substitutes that are exempt from tax. In that case an effect much like average cost pricing would be produced even in a competitive industry. This is the more likely if the law requires, or custom dictates, the separate quotation of the tax at the retail level.

A sales tax can come to rest on the consumer via forward shifting only if monetary policy is permissive. However, the existence of idle cash and deposits over a good part of the business cycle can make possible some rise in the general price level even without an easing of monetary policy. Moreover, economists (for example, John Due) have pointed out that a slight reduction in the demand for money probably occurs owing to the fact that government usually purchases production factors rather than the later-stage consumer goods surrendered by the taxpayer. Despite these supply contributions to the transactions demand for money, a restrictive monetary policy will make forward shifting difficult. As pointed out in footnote 24, if forward shifting runs against a monetary restriction due to central bank fears that a business cycle upswing may be too rapid (in the United States the Federal Reserve authorities move early in the upswing), the shifting process may be delayed (or inhibited) for months. It will not be *obviated*, however, since when monetary policy is subsequently eased the pressure on costs is reduced and prices will tend to rise. Yet clearly the dynamic shifting process will look quite different in the two cases.

A very basic question is whether or not cost inflation is possible at all.[29] If not, the tax cannot be directly shifted forward, but shifting can occur only in response to a reduction of output by the taxed firms. It would carry us too far afield to do justice to this debate, but a few remarks are pertinent.

Several kinds of autonomous shock on the cost side are possible. The shock may be either a rise in a cost other than a tax, or a rise in cost curves caused by the imposition of a sales tax. The tax may be a selective excise or a retail sales tax. The nature of the inflationary pressure is likely to be different in each of these three cases, but in all of them the impact on the price *level* will depend on the extent of administered pricing and monetary policy.

When a cost rise occurs with respect to the factor inputs of a firm or industry, this may be due to one of two causes. A given supply of inputs (production factors) may have run into diminishing returns to scale; that is, with given inputs, the output of the industry may have declined. On the other hand, the autonomous cost rise may be due to a successful wage demand, or to a decision to increase the profit mark-up. In the former case no change has (yet) occurred in factor rewards, but physical product has declined. Thus price must rise, and real incomes of the agents of production (here synonymous with consumers) decline.

Any one group (say a particular type of labour) may be able to compensate for the price rise through a cost-of-living-determined rise in factor income, for example, a wage escalator. But this will be at the expense of other agents of production (or owners of dollar wealth, if we broaden the model to include them). If all groups were to do so, however, and if there were no escalator time lag, the impossible situation would develop that the reduction in output could not be allocated among the productive agents. This unrealistic case would, in any event, produce hyperinflation.

In the real world there are lags in the operation of escalators. These lags in the incomes of the various agents of production (combined with the decline in the real value of money wealth) permit the reduction in real output to be successfully but haphazardly accomplished. Prices must rise, and incomes fall, sufficiently that consumers as a whole will make the required curtailment in their real taking of goods. The initial price rise is not in practice followed by a cost-price inflation spiral, for the process is likely to be strongly damped.

When the autonomous cost rise is due to a successful wage demand, or to an increased price mark-up, there is no reduction in total output available to consumers. It is possible that a rise in total spending may occur. If so, assuming a validating monetary policy, the general price level will rise. The net effect will depend on the change in the distribution of income (as between wages and profits, or as between profits and consumers' income) and a changed aggregate average propensity to spend resulting from the changed income distribution. In any event, unless "lagless" escalator contracts characterize virtually the entire economy, with the money supply infinitely elastic, only a once-for-all rise in prices is likely to occur, not an inflationary spiral. Moreover, the net effect could be deflationary, particularly when the source of cost-push is wage increases in excess of productivity increments. The adverse effect on profit prospects could discourage investment.

If it can be shown that cost-push inflation is possible, and if the reason for it is the introduction of a sales tax or excise, or a rise in rates of tax, a potential feed-back effect may come into play that is not present in the non-tax autonomous cost rise. This arises out of the fact that given a period of time public spending programs rather than sales tax rates may be the action parameter of the province or state. Spending programs, in response to rising prices, may be gradually revised upward. Consumers of the taxed products may spend more than before, the same amount, or less. If they spend more—for example, if they refuse to reduce their taking of real resources—either the government must reduce its spending program or it must discourage private *investment* spending by marketing its own bonds at lower prices. Alternatively, but only at the federal level, it can attract goods and factors away from the private sector by selling securities indirectly to the central bank. An inflationary spiral is possible in this case, though it would probably be greatly damped. In any event, the government could increase its spending faster than consumers could do, even though factor incomes would rise.

The implications for cost inflation of the distinction between excises and a general retail sales tax are important because of the controversy among inflation theorists over the role of autonomous cost rises in the inflationary process. Two

relevant issues are in contention. *First*, as stated earlier (see footnote 29), there are two schools of thought with respect to the possibility that cost-push inflation can exist at all. The negative view stresses the dominant role of excess demand even in periods of rising prices in which the initiating factor appears to be autonomous cost rises. *Second*, some quantity theorists believe that in the absence of prior developments on the monetary side, sectoral cost and price rises must be accompanied by compensating price declines in other sectors, with the result that the general price level does not rise at all.[30]

The latter view appears to depend heavily on the assumption of perfect price flexibility. In view of the high degree of downward stickiness in many prices and wage rates, the assumption does not seem to be realistic enough to require much discussion. Selective excise taxes can produce sectoral price rises that are confirmed either by dis-hoarding or new borrowing from banks, or by demand shifts. In either case price rises may not be matched by price declines in other sectors of the consumer goods industries, and the general consumer price index thus rises. This in turn can set in motion cost-of-living-determined rises in wage rates. Whether or not this results in a further rise in prices will depend on the spending reactions of individuals and firms. In any event, one would suppose the spiral, if it eventuates, to be quite damped. Granted an easy monetary policy, a lengthening of the list of excise taxes can result in price rises not offset by price declines. Any rise in the general price level is to be ascribed to the initiating event, namely, the extension of excise taxation, not to the merely permissive role of the money supply.[31]

The implications for inflation of the introduction of a general sales tax differ somewhat from those of selective excises. Since there are relatively few commodities not subject to the tax, it is even more difficult than with excises to make the argument that some prices will fall to compensate for the rises in others. At the same time, many economists believe that unless there are pockets of excess demand distributed about the economy, even a generalized cost rise of the type associated with the imposition of a general sales tax cannot raise the general price level.[32] What they are arguing is that such a cost rise cannot create the net rise in money spending that permits the price rise. They believe that inflationary gaps must be widely distributed throughout the economy if a general cost rise (general retail sales tax on sellers) is to cause a general price rise. Seen in this way, as suggested in footnote 31, the argument appears to become quite picayune. Nevertheless, there seems little doubt that no very substantial inflation, and almost certainly not an inflation spiral, will ever be produced by the introduction of a general sales tax. Remembering, however, that the widely accepted definition of inflation is "a rise in the general price level", there seems equally little doubt that the introduction of a general sales tax will be inflationary, though not seriously so, provided monetary policy permits.

*Fiscal Effects of a Combined Sales Tax-Expenditure Policy*

The present subsection is concerned with the case in which the government's disposition of the proceeds of the sales tax is explicitly taken into account.[33] The importance of this case is based on the contention that in certain circumstances

the sales tax, or an increase in its rate, permits government fiscal action that otherwise would not be undertaken. We are now concerned with the effects on demand of what the government does with dollars that it would not get if it did not have the sales tax in its armoury of tax measures.

*The balanced-budget multiplier.* The following well-known equations demonstrate logically that under assumptions to be noted, a rise in public spending, matched by a rise in tax receipts, causes national income to rise by an amount equal to the government spending. The symbols Y, C, G, and T are in terms of increments. ($\triangle I=O$).

Symbols:

Y=Gross national product
I=Investment (regarded as constant)
G=Government spending (taken as a function of income only)
C=Consumption
c=Marginal propensity to consume
T=Tax receipts

(1) $Y=C+I+G$ (identity)

(2) $C=cY$ (consumption function-behaviour relation)
$\therefore Y=cY+I+G$ (substituting (2) into (1))
and $Y-cY=I+G$
$Y(1-c)=I+G$

(3) $Y=\frac{1}{1-c}(I+G)$

$\frac{1}{1-c}$ is the multiplier; $I+G$ is the multiplicand
$\triangle I=O$; $\triangle G=1$

Let $+G=+T=\$1$ billion (Tax receipts and government spending rise together)

(3a) Then $Y=\frac{1}{1-c}(G)+\frac{c}{1-c}(-T)$

or $Y=\frac{1}{1-c}(1)-\frac{c}{1-c}(1)$

(4) $+Y=\frac{1-c}{1-c}=+1$

The balanced-budget multiplier of 1, derived above, states that an equal rise in public expenditures and in tax receipts will be inflationary in the sense that money national income rises. It is assumed that the full multiplier effects occur: that is, no pressure on the interest rate is exerted by the increased transactions demand for money. At substantially less than full employment, although there will be a rise in G.N.P., most of the income-inflationary effect will take the form

of rising factor employment rather than rising prices. At full employment, a rise in government spending, even if tax-financed, will mean upward pressure on prices. This result, as is well known, stems from the appearance of the marginal propensity to consume in the numerator of the second term in equation (3a). The government spends the entire proceeds of the tax, while the taxpayer reduces his spending on consumer goods by less than the reduction in his after-tax income.

If classical full employment is assumed, the decline in the taxpayer's savings that makes up the difference between the decline in his income and the reduction in his consumption spending means that firms hitherto borrowing these savings must reduce investment, and thus their taking of resources. In this case the transfer of resources from the private to the public sector is brought about partly from consumption and partly from investment, in a ratio determined by the marginal propensity to consume (save). The propensity is regarded as a constant, and thus is not affected by the imposition of the tax or the spending of the proceeds of the tax by the government.

If, on the other hand, the monetary authority at the same time encourages a fall in interest rates, firms can maintain their previous rate of money investment. In this case the transfer of resources to the government can be effected only by virtue of the resulting price rise. Those whose incomes lag behind the price rise, and whose wealth is in dollar terms (bonds, savings deposits) will, in the aggregate, curtail real expenditures sufficiently to bring about the resource transfer to the government. One of the social costs of such a resource transfer, inevitable because the government does not buy the same bundle of resources that is released by the private sector, is the simultaneous existence of frictional unemployment and random price rises that results from the imperfect mobility of productive agents.

The balanced-budget multiplier concept is highly aggregative. Therefore it can form no very useful basis for prediction of the inflationary effects of a rise in government spending financed by an equal rise in an excise or general sales tax rate, or the introduction of a new tax. But the concept performs the important service of focusing attention on the fact that a tax-financed rise in public expenditures is very likely to be more or less inflationary in the short run, or in other words, until the resource transfer has been accomplished. Once the latter has been accomplished, the price level may be permanently higher, but the inflationary pressure incident to resource movement gradually disappears. During the transition a series of price-cost reactions may be set in motion which affect the pattern of inflation, and thus also the short-term distribution of income, and possibly the long-term distribution as well. In a word, to the extent that the balanced-budget multiplier adds to the inflationary pressure arising out of causes previously mentioned (cost-push and demand-shift inflation), it is a potentially important phenomenon even though its effects cannot be easily quantified.

In the equations set forth above, no distinction was made among different types of taxes. The marginal propensity to consume was taken as an average for all income units in the entire economy. Government spending was a homogeneous unit, no account being taken of the possibility that particular taxes may be earmarked for particular types of public spending. Moreover, G and T were taken as parameters subject to the discretionary authority of the State, whereas actually

it is government spending *programs* and tax *rates* that are at the disposal of government action. The dollar amount of spending, and tax receipts, are only partially subject to government discretion. They are also affected by prices of factors purchased by the government and by the complex of factors affecting the levels of income and spending in the private sector. Actually, at given tax rates the automatic rise in tax receipts as gross national product rises means that the multiplier formula is $\frac{1}{1-c(1-t)}$ rather than $\frac{1}{1-c}$ (t is the tax *rate*), and is thus smaller. On the other hand, government spending may likewise be a function (positive) of G.N.P. If so, this will to a greater or lesser extent offset the braking effect of the automatic rise in tax receipts.

When we disaggregate, by considering the particular tax or taxes employed to finance a given rise of public expenditures on particular objects, it is apparent that there is a separate balanced-budget multiplier for each tax. It will be sufficient for our purposes, however, to indicate the nature of the multiplier when, at the provincial and state level, a general retail sales tax is introduced to finance increased expenditures for public education and/or relief.

Sales taxes and indirect business taxes fall primarily on the consumer, while the personal income tax (and, many economists also believe, the corporate income tax) falls to a considerable extent on savings. Therefore a sales-tax financed rise in public spending is likely to cause a reduction in consumption spending that is larger than that indicated by an *average marginal* propensity to consume for the economy as a whole. But this does not affect the value of the balanced-budget multiplier. It will be noted that in equation (4), any value for c (the marginal propensity to consume) will give a value for Y of $+1$. Nevertheless, a large marginal propensity to consume is important because a relatively small decline in saving and a relatively large decline in consumption spending have obvious implications for the composition of the immediate release of resources by the private sector. This in turn affects the composition and importance of price rises resulting from shifts in demand. Again, a large marginal propensity to consume means a relatively small reduction in personal saving in response to the tax. Therefore, the flow of savings to investors (i.e., firms) is only moderately reduced, and the incentive (at full employment) to the monetary authority to ease monetary conditions, and thus contribute to rising prices, is correspondingly weaker.

In real terms, the balanced-budget multiplier concept leads us to the following conclusion. In the case of an excise or general sales tax the masses of consumers are likely to reduce consumption by much more than they reduce savings. Much of the latter is contractual (e.g., payroll deductions). The commodities and resources surrendered by them are quite different from those likely to be demanded by the government, and substantial scope therefore exists for demand-shift inflation. Depending on underlying economic conditions, the latter may be reflected in the consumer price index, and thence in cost-of-living wage increases. Nevertheless, barring a general excess demand inflation, no important inflationary spiral is to be expected.

If the additional public expenditures were to be financed by a rise in income tax rates in the middle and upper brackets, taxpayers would largely curtail their

residual saving rather than their consumption. This would mean, at full employment, a large decrease in the savings flow to firms desiring to maintain their previous rate of investment. The incentive of the monetary authority to accommodate them would be substantial, unless the tax was introduced during a period when inflation was feared on other (business boom) grounds. In the latter event the monetary authority would encourage interest rates to rise, and the resource transfer would be largely from interest-elastic types of investment (including provincial, state, and municipal investment). An interesting sidelight stems from the contention that monetary policy is not very effective in restricting investment spending by oligopolistic and monopolistic firms, but impinges primarily on smaller competitive firms.[34] This view appears to ignore the possibility of increased inter-business credit from larger to smaller firms, e.g., by sellers, to customers.

*Economic Aspects of Sales Taxing to Retire, or to Prevent a Rise in, Provincial and State Debt*

This heading is included here primarily for completeness. It is not easy to make a very convincing generalization. The distinction between taxing to prevent a debt rise and taxing to permit increased (education and relief) spending is blurred, for subjective motivation is involved. At any rate, an increase in the size of a balanced budget has significance both for increased spending and for the economic role of the public debt. On the debt side implications arise for the price level and economic growth. Major interest attaches to the impact of changes in the level of the debt on growth. It is assumed here that there is a country-wide movement toward higher taxes to prevent a debt increase at the provincial or state level, and that the use of a sales tax facilitates this movement. Since the proceeds of a new tax are rarely used to retire debt, that alternative will not be discussed.

What are the probable price level effects of sales tax increases to avoid a debt increase? They are to be found primarily in terms of the fiscal alternatives facing the provincial or state government. In many instances, and they include Ontario, sales taxes have been introduced after several years of rising debt.[35] The purpose of the tax has often been to permit a further rise in expenditures without another increase in the debt. The inflationary implications depend on what expenditures become feasible by introducing the tax in circumstances in which a further debt rise appears impracticable, or is constitutionally prohibited.

The marginal spending programs are in general public investment projects. Education is one of them, and public roads and provincial aids to economic development are other examples. If a debt ceiling had prevented such investment, demand for certain types of goods would have been lower. At full employment, an expansion of public investment has no net inflationary effects, whether financed by taxation or borrowing, only if the purchasing power transfer corresponds to that of real resources from the private to the public sector. It is possible, however, that an expanded provincial or state investment program tends to encourage ancillary investment expenditures in the private sector. For example, a more highly educated labour force makes possible private investment in more complex types of investment goods. Although the point may not be an especially strong one, it appears that

public investment spending may act as a catalyst to private investment, thus under full employment conditions creating some inflationary pressure. By obviating a cut-back in public investment programs, tax-financing may induce a train of inflationary private spending even though the former is tax-financed. The inflationary impact will depend on monetary policy. Obviously a much more important effect is that on the rate of productivity increase, which in the long run may (not must) prove to be an anti-inflationary factor.

### LONG-TERM ASPECTS OF THE USE OF SALES TAXATION TO REDUCE GOVERNMENT DEBT

The price level effects of using sales taxation to avoid an increase in public debt have some minor importance for the distribution of income and wealth, and therefore for the long-term propensity to save and the growth rate. Of more significance, however, is the fact that the alternatives of taxing and permitting an increase in the debt exert differential effects on the ability and willingness of the private sector to invest, and on the terms on which provincial and state governments can enter the capital market. These terms not only affect the timing of public investment, but may modify the scope of investment programs. That this carries implications for the growth rate is obvious. It should be noted, however, that public spending projects at the provincial and state levels vary widely in their effect on the productivity of the economy as a whole and on the growth rate. Moreover, a comparison always has to be made with the probable productivity of alternative private investment projects that have to be forgone or delayed when the government decides to increase its share of the capital market.

Despite the fact that sales taxes have usually been introduced with the idea of preventing a rise in debt rather than of retiring debt, the discussion can conveniently proceed in terms of the latter. When a sales or any other tax is introduced in order to retire provincial or state debt the proceeds of the tax become available to government debt owners. Since they are savers it is unlikely that they will use any of their newly acquired cash to increase consumption expenditures. While the sales tax causes a reduction in both saving and consumption spending, the proceeds of the tax come into the hands of those who will not increase their consumption spending. There is, therefore, a net decline in the demand for consumer goods. The consequence is either unemployment of factors in those industries or pressure for backward shifting of the tax. The same reasoning applies to sales tax rate increases enacted in order to avoid an increase in the debt. Current savings that would otherwise have been directed to government securities must seek another outlet. The decline in the demand for consumers' goods occurs as before.

The disposition made of their released savings by private savers is crucial to the short- and long-term economic implications of financing debt retirement (or avoiding debt increases) by raising sales tax rates. Three alternative, and realistic, cases must be considered. (1) The economy may have a strong tendency toward full employment. (2) Periods of cyclical unemployment have to be faced. (3) The rate of population growth, and the proportion of the population accounted for by

young new entrants to the working force, may be such as to make it difficult for the economy to absorb these net annual increments.

(1) If the maintenance of full employment is no problem, the savers have a ready alternative to investment in government securities. The released savings can be smoothly absorbed in private investment issues, with little if any change in the rate of interest. In a way, the operation amounts to compulsory saving, the government turning over to the private investment sector the savings effected through the reduction in taxpayers' consumption spending. The sales tax is not, of course, a tax on consumption only. The marginal propensity to consume has to be aggregated for the various income groups. As we have seen, families in moderately high and high income brackets will not curtail consumption at all, since they treat saving as a residual after the desired level of living has been achieved. Many families in lower income groups perform virtually all of their saving on a contractual basis (e.g., withholding from pay envelopes for purchase of annuities). Thus for them the tax causes a reduction in consumption, but not in saving. Most families fall within these two extremes.

The government places the full amount of the tax receipts into the hands of savers, and under full employment equilibrium firms invest the proceeds. Part of these savings originates in the reduced consumption of sales taxpayers, and the rest represents a transfer from business firms previously borrowing the savings now no longer made available to them by the sales taxpayers. Clearly monetary policy must be called into action to permit smooth accomplishment of this transfer. The problem does not exist in aggregative terms, since firms hitherto borrowing from sales taxpayers are now borrowing the same amount from those whose government securities have been redeemed. In practice, however, interest rates tend to rise against previously borrowing firms, and to be somewhat lower to firms benefiting from the flow of investment funds from former government bondholders. Some resource transfer is therefore to be expected among investing firms. Depending on the interest-elasticity of investment within the two groups of firms, appropriate monetary policy may be either slightly restrictive or aimed at forcing interest rates slightly downward. In general, it is likely that smooth operation of retail sales taxation to repay debt under full employment conditions calls for a fairly easy monetary policy to prevent a temporary dip below full employment. Monetary, fiscal, and tax policy must be integrated.

(2) The above analysis can be easily modified to take into account cyclical unemployment. Particularly during the early stages of a business contraction, when interest rates are still falling, the private sector is not very keen on borrowing the savings released via the redemption of government securities. To the extent that sales taxpayers are fixed-target consumers, and thus reduce their saving by the amount of their sales tax liability, a contribution is made to the alleviation of the oversaving that is characteristic of the recession. To the extent that consumption is reduced, on the other hand, unemployment rises during the short run in the consumer goods industries. It should be remembered, however, that except for consumer durables, unemployment in the consumer sector of the economy is rather small in a moderate recession. During the rest of the cycle, including the

period of the upswing soon after the trough has been passed, business firms will become increasingly interested in utilizing the savings released to the private sector through government debt repayment or a reduction in government borrowing. In the United States, at any rate, monetary policy is ordinarily made less easy in a matter of a very few weeks after the trough has been passed.

Thus it cannot be argued that whenever sales tax rates are raised monetary policy will be such that firms will smoothly borrow and invest the proceeds of government bond redemption. Monetary policy in this case depends on a complex of considerations, not merely that of effecting a smooth investment shift. Consequently a sales tax, to the extent that it discourages consumption, may have an adverse effect on both induced investment and employment.

(3) A major problem confronted at the present time by countries like Canada and the United States is the absorption of the annual increment to the working force. The key to the smooth integration of young adults into the ranks of the employed is an adequate secular rise in investment in plant and equipment, always assuming also the economic need for such investment in the maintenance of an optimum relationship between consumption and investment. In what way does a sales tax, intended to prevent further increases in provincial or state debt, contribute (positively or negatively) to this goal?

Let us assume that no problem exists in keeping the level of intended investment abreast of the rate of saving. (Keynesian unemployment of this type would obviously require a vigorous monetary and fiscal policy.) Under this assumption the cause of unemployment in an economy characterized by rapid population growth is undersaving, not underinvestment. That such unemployment can be serious is evidenced by the experience of Germany after the currency reform of 1948. The German economic miracle was retarded by the need to build up plant capacity and housing for workers coming from the East Zone. On a less serious level the same phenomenon confronts any nation enjoying (or suffering from) a rapid population increase.

The role of the sales tax in this situation is determined by its contribution to the rate of saving, at least so long as investment incentives remain strong. To the extent that the tax results in a reduction in consumption, resources are released for investment. If the proceeds are used by the government to buy back its securities, they are made available to business firms desiring to invest. To the extent that firms invest in capacity-creating plant and equipment, workers are absorbed into employment. (It has to be assumed that automation does not belie this conclusion.) A similar conclusion is reached if the proceeds of the tax are used to obviate the need of the government to compete with private investors by means of new securities' issues. To the extent that the sales tax is more effective in reducing consumption (rather than saving) than any alternative tax, the net effect is to cause an increase in the rate of saving to the advantage of the private sector. This may (not must) lead to a productivity increase, and under conditions of equilibrium between intended investment and saving, an increase in the demand for labour. The latter increase, as remarked above, depends on the efficiency of the additional private investment in absorbing labour into employment.

## INCIDENCE THEORY AND THE INCOME SIZE DISTRIBUTION OF THE BURDEN OF THE RETAIL SALES TAX

The major function of the first four sections of the present chapter is to provide background for an evaluation of the techniques ordinarily used in the allocation of the sales tax burden by income brackets. At the same time, the theoretical discussion throws light on the effect of the tax on the horizontal distribution of income.

The present section makes use of the findings thus far to re-emphasize and extend the warnings made by those who have estimated the sales tax and other tax burdens by income brackets, namely, that the findings are to be used with great caution. These studies extend themselves pretty far when they distribute the benefits of provincial or state, as well as national, spending by income bracket. Most have restricted themselves to the tax distribution side only. Even with respect to the estimates of tax burden distribution, the use of a fairly simple concept of shifting may give a distorted view of the actual welfare effects of taxation. The results can perhaps too easily be displayed through the use of Lorenz curves, while the wider effects of taxes and public benefits are not amenable to simple graphical representation; and it may be the latter which, at least in certain circumstances, are the more significant.

The present discussion, therefore, is intended to serve two purposes. It briefly summarizes the findings of the foregoing theoretical treatment, and it forms an introduction to the discussion in the next chapter of problems in the allocation of the burden of the retail sales tax employed at the provincial and state level.

The most important incidence findings of the present study may be quickly summarized. There is widespread agreement that the burden of the retail sales tax itself may be properly allocated in accordance with the spending by individuals and families on the taxed commodities. It is likewise recognized that under specified circumstances a number of important modifications have to be made in this conclusion. Moreover, the inclusion of sales to business firms complicates the shifting process, and increases the likelihood of some backward shifting.

It is found to be imperative to take some account of the benefits from the spending of the proceeds of the tax. Admittedly, however, the only benefits that are relevant are those that would have to be sacrificed if the fiscal system did not include a sales tax. If they can be shown to be distributed among the income brackets in a fashion similar to the distribution of the tax itself (or more regressively), at least a part of the doubts frequently expressed about the equity of the retail sales tax would be resolved. This amounts to saying that the increased balanced budget would to this extent be distributionally neutral. In marginal terms, and considering the reasons for introducing the Ontario tax (and other provincial and state sales taxes), the direct benefits of the spending of the proceeds (relief, education, state institutional services) do indeed appear to be distributed either proportionally or perhaps somewhat regressively (that is, to favour the lower income brackets).

But the benefits resulting from the use of the sales tax go beyond the immediate provision of public goods and services. The indirect benefits, detectible only in

the long run, may transcend the direct benefits. These indirect benefits stem from the effect of the sales tax on aggregate taxable capacity, and therefore on the operation of the mechanism for transferring resources from the private to the public sector. The sales tax, it is argued here, greatly facilitates this transfer, provided that individual and corporate income tax rates are already widely regarded as too high. Consequently if it can be shown, as indeed it can be, that economic growth depends on the maintenance of some rough relation between growth in the private and public sectors, and that the retail sales tax contributes importantly to the maintenance of this relation, it follows that the inclusion of this tax in both the national and provincial tax systems can contribute importantly to economic progress. Furthermore, since the retail sales tax interferes with the production and distribution processes less than do alternative forms of sales tax (except the value-added tax), and the (so far) politically unacceptable expenditure tax, this tax should be considered at both the national and provincial levels if it is agreed that the tax system should make the maximum contribution to the economic growth rate.

If our argument is accepted that the inclusion of a retail sales tax in the provincial tax system, as well as at the national level, may extend the limits of taxable capacity and thus the potential magnitude of the provision of public services, the entire question of the impact of the sales tax on the distribution of income becomes somewhat less important. On the one hand a large part of the public consumer goods and services otherwise unobtainable will be consumed on a per-capita (e.g., schools) basis; in other words, they will be distributed regressively (compare the distribution of a poll tax). Again, as stated earlier, the governments at both levels will be enabled to provide public capital, which confers external economies on firms in the private sector in the form of roads, information services, rural and urban redevelopment, and so on. A further advantage is that if growth in public capital equipment is stimulated by means of more ample budgets at the provincial and national levels, the nearer approach to economic balance thus provided will assure a smoother absorption of annual increments to the working population into the labour force. Here, again, the major part of the advantage accrues to the lower income groups.

The theme is, in a word, that the retail sales tax, to the extent that it extends the limits of taxable capacity, helps to provide the balanced growth that is the best safeguard of the long-term economic interests of the population. For this reason, among others, judgments on the sales tax based on income bracket allocations of the sales tax by itself rest on a weak reed. In this very broad context the sales tax actually assists in raising the level of total per-capita and family real income, both publicly and privately produced; and, paradoxically, this is not inconsistent with the prevalent view that a sales tax is a "necessary evil". (It is not denied, of course, that there are social costs involved in its use.) Furthermore, in these circumstances income inequality becomes less and less important over time, as productivity increments become translated into real wage rate rises. (This statement is made despite the objection of some labour unions to the "trickle down" theory of wage

determination.) Thus the sales tax contributes to a gradual decline in importance of the very issue being discussed, namely, the direct redistribution of income brought about by the tax itself. In concluding this point, it may be remarked that at least a part of present concern with the distributional effects of the retail sales tax is a holdover from the unfortunate circumstance that at the provincial and state level this tax was originally conceived and brought forth during deep depression, when the lower income groups suffered appallingly from unemployment.

Another point deserving consideration is the contention that sales taxes are shifted backward. If so, some changes are called for in the practice of allocating the burden of the retail sales tax in accordance with spending on taxed commodities. Previous arguments will not be repeated. Merely their effect on the conclusions will be stated, and a remark will be made in passing on the incidence of *exemptions* from the retail sales tax.

If one accepts the Rolph view that the retail sales tax (under his assumptions) is passed back to the agents of production in the fashion of a proportional personal income tax, the implications for the rationale of exemptions emphasized by Rolph become important. It is not enough to assert that the redistributive effects of the tax are much the same whether the tax is pushed forward or backward, despite the fact that most of the agents of production are workers and most of the consumers are likewise workers. Rolph points out that if the incidence of the tax is not on the consumer, there is no point in allowing him to deduct sales taxes from taxable income under the individual income tax. Exemption from tax of sales to charitable agencies or to governmental agencies likewise makes no sense. Much more important, in the present context, is the inference that the case for eliminating food from the sales tax base is "seriously weakened".[36]

The potential importance of these considerations requires us to take account of the circumstances in which Rolph's conception of sales tax shifting is likely to have practical relevance. No significance attaches to the view that the price level, and thus factor prices, is forced down if the proceeds of the tax are held idle, since this is unrealistic. Moreover, we reject the contention that if monetary policy is kept easy when sales tax rates are increased, the rise in the price level is due to monetary policy, not to the tax. On the other hand, circumstances do exist in which something like the Rolph argument will hold. If the monetary authority and the tax authority do not integrate policy (this is particularly likely when a rise in the sales tax rate, or decreases in exemptions, at the *provincial or state* level is in question), the increased transactions demand for money can force up the rate of interest. Therefore the tax can result in a decline in interest-elastic investment, and thus in factor demand. This can lead to some unemployment and/or decline in downward-flexible factor rewards.

We can only conclude, however, that these effects are hardly significant. They might have considerable significance if both junior and senior levels of government introduced the sales tax at the same time, but not otherwise. Consequently this view does not appear to derive much support even from the fact that if the monetary authority begins to fear inflation during a relatively early stage of the

upswing of the cycle, tightening of monetary policy for reasons unassociated with the introduction of a sales tax (or rises in its rate) could encourage backward shifting. If we take account of pockets of liquidity during most of the business cycle, there seems little reason to believe that the pressure on transactions demand for money resulting from ½ or 1 per cent rises in the retail sales tax rate of a particular province or state would be a serious consideration.

Finally, the effect of cost-of-living escalation of wage rates and other factor rewards must be taken into account. So far as inflation attributable to the introduction of (or rise in rates of) a sales tax is concerned, the inclusion of the sales tax in the cost-of-living index would mean an automatic rise in such factor rewards. It would be impossible to insert a wedge between, say, the wage rate and the price of commodity after tax. As a practical matter not enough types of income are rigidly and laglessly tied to the index to prevent the tax from being shifted back onto production factors. Thus backward shifting cannot be excluded on the ground of prevalence of escalators. What does happen is that those factors and money wealth owners whose incomes and/or wealth lag behind the rise in the consumer price index find their real incomes decreased, while the others do not. There is thus a redistribution of income among production factors, and a rise in the consumer price level depending on the extent to which autonomous cost inflation arising out of the escalation of sales tax rate increases induce rises in prices of consumer goods and services. Clearly there is no rise in the price *level* if there is merely a redistribution of relative prices. But to the extent that there is resistance (i.e. presence of monopoly power) to declines in prices, there is an asymmetry between upward and downward price movements. On balance, there can be a rise in the price level provided a new higher level of spending is induced, or provided pockets of unemployment develop that are not eliminated by declines in flexible prices. In the real world these latter two developments cannot be excluded, and it is concluded that a rise in the price level is possible. In any event, for the consumer the distribution of the real burden of the tax will be determined, as always, by expenditures on taxed consumer goods.

## FOOTNOTES

[1]See Chapter 7.

[2]Richard Musgrave, *The Theory of Public Finance*, pp. 207-8. Musgrave defines *incidence* as the change in the distribution of income available for private use. If a sales tax is levied to finance increased public expenditures, two sorts of distribution effects are involved (under the assumption of full employment). The tax gives rise to short- and long-term effects on the distribution of real income. And the benefits of the public spending program obviously have distributional effects, though they may be difficult to allocate. Tax burden analysis is, of course, only concerned with the former. On this problem see also John Adler, "The Fiscal System, The Distribution of Income, and Public Welfare", in K. E. Poole, ed., *Fiscal Policies and the American Economy*, Prentice-Hall, 1951, pp. 384ff., and Musgrave and Daicoff, "Who Pays the Michigan Taxes?", *Michigan Tax Study*, Staff Papers, 1958.

[3]This distinction is well brought out in the contrasting approaches of two prominent experts in public finance, John F. Due and James M. Buchanan. Due (*Government Finance,* 1963, p. 276) makes the following statement:

> "The analysis of the preceding pages is directly applicable to excise taxes. In large measure it is also relevant to the question of the shifting of a sales tax, which in a sense is merely a combination of a wide range of taxes on the sales of particular commodities."

He goes on to say:

> "But for the explanation of the direct shifting of a sales tax to be complete, the significance for shifting of the general character of the tax must be considered."

In contrast, Buchanan has this to say: (*The Public Finances,* 1960 p. 430)

> "Differentially, the general sales tax, precisely because it is general, must be quite similar in effect to the proportional income tax."

The important thing to note here is that while both economists say essentially the same thing, one stresses the generality of the tax, and speaks of lapses from generality as essentially a modification of the analysis, and the other stresses the distorting "excise" nature of the general sales tax in practice, and speaks of moving to generality as a necessary further step to make the analysis complete. This difference in approach can lead to significant differences in one's conclusions with respect to the direct incidence of the tax. Buchanan in general accepts the view of Earl Rolph. Buchanan avers "that a genuinely general excise tax is shifted backward and that the incidence rests upon the owners of productive resources is substantially correct." ( *Fiscal Theory and Political Economy,* p. 138) Due, on the other hand, is led to the view that the tax is shifted forward to consumers, in the sense that the pattern of distribution of burden is determined by the pattern of consumer expenditures.

It is not meant to suggest that the only reason for the difference of opinion between Brown-Rolph-Buchanan and Due on this point is the generality of the tax. But it appears to be true that the concept of generality plays an important role in the two approaches.

[4]If industrial workers ultimately succeed in gaining salary status (the guaranteed work year) the significance of this point will be drastically altered.

[5]A historically interesting issue raised by incidence analysis is the fact that the British North America Act denies the provinces the right to indirect (i.e., shifted) taxes. A conclusion that consumers bear the burden of the tax would seem to imply shifting. But the tax is also shifted (from the taxed firms) to the extent that it reduces incomes of production factors. Thus one might regard the tax as not shifted (i.e., direct) only to the extent that it rested on monopoly or windfall (not *normal*) profits. Downward inflexibility of prices and wage rates, along with the general tendency rule, the designation of vendor as collection agent, and separate billing of the tax to the purchaser, combine to make a good case for regarding the general retail sales tax as a direct tax.

[6]John F. Due, *Government Finance,* Richard D. Irwin, Inc., 1963, p. 262.

[7]This statement points up the distinction between partial and general equilibrium analysis. In general equilibrium analysis it is a violation of *ceteris paribus* to assume that the government holds the proceeds of the tax idle.

[8]In the relevant range, the output of a particular industry can usually be increased only at higher unit cost. Firms must try to hire at least some specialized productive agents away from other industries. (Thus the full employment assumption is an important one.) Even if each firm is so small that expansion of its own output will not significantly affect the demand for productive agents, expansion of the industry as a whole will do so. Naturally the mechanism operates in reverse, provided wage flexibility and price flexibility of production factors exist in the downward as well as the upward direction.

[9]Threats of firms to move out of sales-taxing provinces and states are not an accurate measure of the reaction to a tax. Evidence for this statement lies in the fact that once a sales tax has been introduced, opposition gradually dies down. Firms find that they do not necessarily bear the whole of the tax, and they have to take into account the cost of moving.

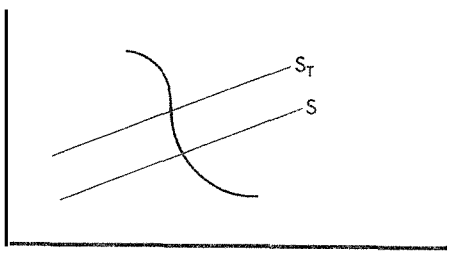
[10]This point has received great emphasis from Earl Rolph (*cf.* Rolph and Break, *Public Finance*, p. 290). Factor prices and profits of firms tend to fall in the untaxed industries as factors and firms leave the taxed industry. But Rolph asks how realistic it is to infer that merely because in a constant cost industry resources leave the industry until price has risen by the full amount of the tax, consumers bear the entire incidence of the tax. Against the rise in price in the taxed industries must be set the fall in factor rewards and prices (flexibility is assumed) in the untaxed industries. Rolph buttresses his argument further by pointing out that if demand is inelastic for commodities in the taxed industries, spending will be diverted away from the products of the untaxed industries (retaining the full employment assumption, which is consistent with the view that consumers cannot maintain spending in the taxed industries by spending out of hoarded cash). This will be a further source of downward pressure on factor rewards and prices in the untaxed industries. Thus there is a redistribution of after-tax income among consumers, depending on their relative purchases of taxed and untaxed commodities. But for consumers as a whole one cannot say that price rises by the amount of the tax even in a constant cost industry.

[11]The slope of a curve and its elasticity are used interchangeably here, in accordance with general, but loose, practice. Properly speaking it is the slope that is relevant.

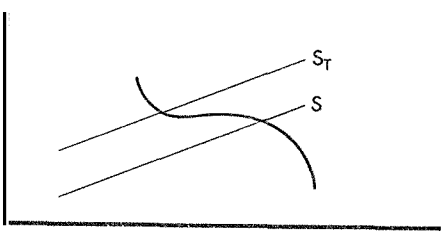
[12]This is not the usual case of supply and demand interdependence, where a shift in one curve causes a shift in the other. Rather the *slope* of the demand curve affects the time period in which, for a given taxed industry, the supply curve achieves a particular flatness of slope. This case is thus quite different from that illustrated in Figure 2.

[13]These statements are made with primary reference to U.S. Federal Reserve policy during the 1950's and early 1960's.

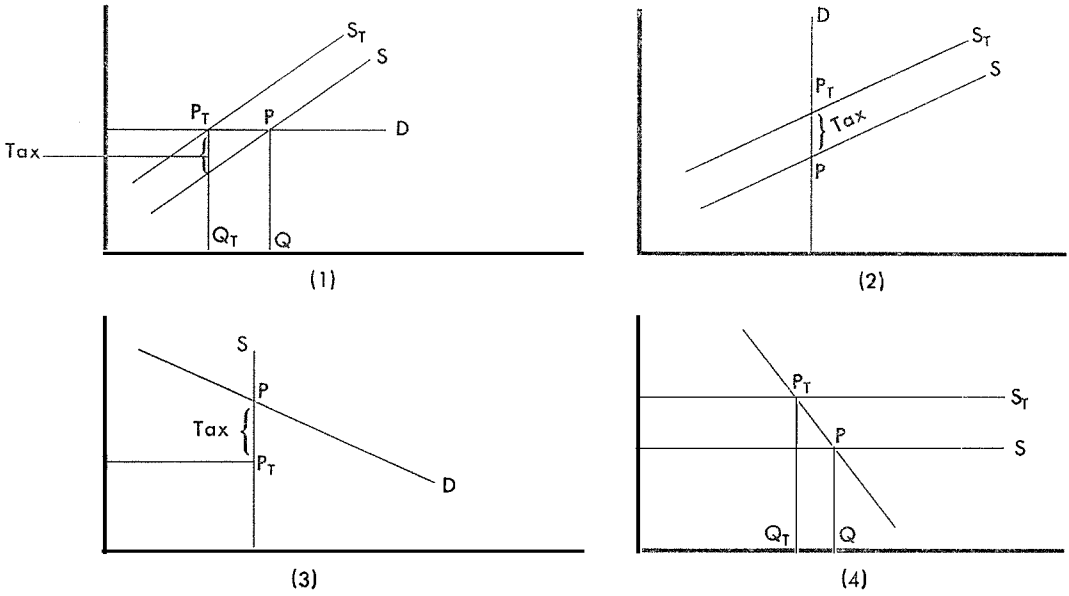
[14]It may be of interest to consider the four polar or extreme cases: vertical and horizontal supply curves and vertical and horizontal demand curves. We have already seen the relevance of the horizontal supply schedule. The vertical supply schedule is a real case: in a perishable-commodity market, or in a period of time too short for production factors to move, the entire tax rests on the firms and the production agents. A completely inelastic (vertical) demand curve is possible over limited ranges of price, as follows:




Similarly, a market demand curve (owing to the chance way in which particular components of demand add up to form the total curve) may be horizontal over a limited range:



The four polar cases appear diagramatically as follows:




In case 1, demand is perfectly elastic, and productive agents and firms cannot all move into untaxed industries to escape the tax, and in any event, factor rewards tend to be driven down in the untaxed industries. The entire tax is borne by those profit receivers and productive agents who are unable to leave the industry together with those who move into untaxed industries. Those that remain unemployed bear a burden that has no direct relation with the size of the tax.

In case 2, demand is perfectly inelastic, that is, consumers will pay any price (over the relevant range determined by the price units depicted on the Y axis) in order to command quantity OQ. Therefore price rises by the full amount of the tax.

In case 3, firms will supply amount OQ regardless of price. (Obviously case 3 can be imagined only in connection with some time period, unless firms have no costs of production whatever.) In this case none of the tax can be pushed forward to consumers.

Case 4 has been discussed in the text in connection with the industry horizontal long-run supply schedule.

[15]This assumption by no means always applies, and when it does not the owners of the firm may absorb part of the tax. The firm's maximization function may contain a number of alternative terms, some of which may act as fixed constraints. For example, a firm may maximize profits over the short run, subject to the condition that it achieves some minimum measure of consumer goodwill over a longer period of time, or some desired position in the industry. These constraints can greatly complicate the theoretical model, and potentially they are therefore not unimportant for the shifting of excises and sales tax under imperfectly competitive conditions.

[16]The extent of the price rise, and thus the proportion of the tax passed on to consumers and borne by the owners of the firm and productive factors, depends on such matters as whether the marginal cost curve is rising or falling, the linearity or degree of non-linearity of the average revenue curve, and the elasticity of the demand curve in the range above the pre-tax price. These details are important, but are not required in the present discussion. *Cf.* John F. Due, *Government Finance*, pp. 266ff. Due considers also the case of monopolistic competition, which is "a spectrum of many cases", and the oligopoly case, as well as oligopoly with a kinked demand curve. Monopolistic competitors have quite flat demand curves, and the small rise in price would encourage firms to leave the industry. This would leave fewer firms remaining in the industry to share the (fixed) industry demand, and the tax would be gradually shifted forward. If the upward shift in the *firms'* demand curves was a

parallel one, and if the industry operated under constant costs (see the same provision in the perfectly competitive case treated earlier), price would rise by the amount of the tax.

The oligopoly case is tricky, because the firms will take account of the reactions of the (few) other firms in the industry to the tax. Whereas the monopolist is likely to continue to equate marginal cost and price, the oligopolist may believe that his relatively few competitors may react as he would like to, namely, mark up price by the amount of the tax. It must be remembered, however, that we are not considering the spending of the proceeds of the tax by the government. Consequently we cannot assume that the oligopolists can suppose that their (tax) cost mark-ups will be "validated" so that they can sell the same output as before at a higher price that includes tax. The oligopolists as a group are likely to react in the same manner as the monopolist (see Figure 5 in the text of the present study) unless a non-co-operative spirit among the oligopolists had prevented the group from maximizing their collective profits prior to the tax. In that case more of the tax—perhaps all of it—can be passed forward to the consumer. The same situation would exist, of course, in the case of perfect monopoly, if the monopolist had not been maximizing profits prior to the imposition of the tax. In the text, however, we are assuming that the firm constantly aims at maximizing profits.

Finally, note that when dealing with monopoly we no longer use diagrams relevant to the taxed *industry,* but to *firms* in the industry.

[17]In practice exemptions may introduce important distortions into a general retail sales tax. An example is the exemption of trade-ins of durable consumer goods, e.g., automobiles. The tax exemption of trade-ins encourages the purchase of cars through dealers, when an individual might have preferred to sell his old car to an acquaintance at a price better than the dealer would offer him. (The trade-in exemption is hard on a young new purchaser, who has no car to trade.)

[18]The idea expressed in the text can be put as follows. Assume a completely general retail sales tax, such that all consumption spending during a man's lifetime is subject to tax, and that he knows this will be so. Assume further that individuals in brackets under, say, $15,000 a year either consume their entire lifetime income, or bequeath it to a member of the family who will spend his legacy on consumption goods. Abstract from the fact that by deferring consumption spending in earlier years a man can earn compound interest on the saved sales tax, and that by anticipating spending, he pays compound interest on earlier-incurred sales tax.

In this case the tax can be regarded indifferently as a sales tax borne by the individual as a lifetime consumer, or a proportional income tax borne by him as a lifetime income-receiver. In some contexts it is preferable to think of the tax as an income tax, for his lifetime sales tax liability is determined by his lifetime earnings, which in turn determine (and are equal to) his consumption.

It is true that in practice, under this "truly general" sales tax, the time-pattern of his consumption spending is likely to be affected by the existence of the tax. If he wishes to enjoy greater lifetime earnings and therefore greater lifetime consumption, he will defer consumption in earlier years in order to earn compound interest on the tax. Another man may derive greater aggregate lifetime happiness by spending earlier, paying compound interest on the accelerated tax, but enjoying at an earlier stage of his life his accretion to intellectual or material consumer capital. (Presumably it would be irrational to behave in this fashion in order to anticipate consumption of non-durable goods, though even this exception does not hold if he believes his capacity to enjoy non-durables is greater in youth than in age.)

[19]Rolph and Break (*Public Finance,* pp. 291-2) argue that a retail sales tax on goods and services (a very general tax at the consumption level) will divert resources from consumption to investment. This, it is alleged, will accelerate the rate of economic growth. Thus it is concluded that although consumers bear a tax burden in the short run, they will be recompensed in the long run because the economy will be more productive, and will ultimately produce more consumer goods "than would have been attainable in the absence of the sales tax".

If this mechanism had any significant application to reality it would imply a more equal distribution of income on two grounds. (1) Stimulation of the growth rate would contribute to the more rapid absorption of (low-paid) new entrants to the working force, and (2) the ultimate increase in consumer goods output would create social and political pressure to move further toward a high family real income economy. This seemingly important consideration with respect to a general retail tax on final goods is relegated to a footnote, however, because of the following consideration.

The full employment assumption appears to be unjustified in this case. Unless there is some external force holding the economy at full employment (which can hardly be assumed forever, as the increasing European and other competition offered to the United States in the late 1950's testifies), any tax that discourages consumption is likely to discourage investment as well, via indirect demand. Rolph and Break's conclusion depends strictly on the classical full employment equilibrium assumption. The same criticism may be made against the *permanent* (not the wartime) spendings tax, particularly if graduated in the lower and middle income ranges.

[20]Due, *Government Finance* (1963), p. 276 has a few words to say on the effect of general taxes levied at *non-retail* sales levels, including the turnover tax. The qualifications are minor.

[21]At a later stage it will be emphasized that the association of increases in the base and rate of the retail sales tax with the provision of mass-consumed public benefits (education, relief, hospitals, etc.) means that *both* the tax and the benefits are regressive, and thus may not greatly affect the distribution of income.

[22]This distinction is sharply made by Buchanan, *The Public Finances,* pp. 428-30. Under partial excises, he states, it is not necessary to make any explicit assumptions about the money supply. Regardless of what happens to the general price level, the analysis must work through changes in the prices of all goods and services.

Buchanan then goes on to say that if the monetary authority does not permit a rise in the general price level, factor prices must be driven down (retaining the classical assumption of equilibrium at full employment). He concludes that in this (perfectly competitive) case, the tax acts essentially as a proportional income tax on factor rewards, thus agreeing with Rolph.

The defect in Buchanan's analysis is his belief that "The most appropriate monetary assumption for incidence theory is governmental action to stabilize some index of final product prices." (*Fiscal Theory and Political Economy,* p. 139, Proposition 8.) Not since the 1920's has there been any sentiment even among economic theorists, let alone policy-makers, to stabilize the price level.

[23]The theme of the present chapter is well conveyed in the contention of de Viti de Marco (*First Principles of Public Finance,* transl. Edith Marget, London, Jonathan Cape, 1936, pp. 159ff), that traditional analysis of the shifting of a sales tax halts at the beginning of the process. Shifting of the tax to the consumer is merely the first step in a series.

The problem is well recognized by Musgrave (*Theory of Public Finance,* p. 209), who points out that different lags are involved "as various parts of the system adjust to the change".

[24]In a laudable effort to scotch the idea that sales taxes are usually introduced in circumstances of a rigid ceiling on the money supply (the full employment assumption also precluding a rise in velocity without forcing interest rates up), John Due argues (*Sales Taxation,* p. 14) that a social preference for price increases over unemployment "virtually compel[s] abandonment of the deflationary monetary policy". Nevertheless, the present writer believes that if a sales tax is introduced by a state or province during that phase of the upswing of the business cycle when the monetary authority is fearing inflation on other and much more serious grounds than merely that of the introduction of a sales tax, the operation may nevertheless run against restrictive monetary policy. This may set in motion direct and indirect economic responses to the tax which can hardly be fully reversed some months later when monetary policy is eased again.

[25]Incidence in the sense of a reduction in someone's after-tax income is understood in the sense of income effects of the tax. There are also relative price effects, which are separate from the burden in the sense of a diversion of resources from the private to the public sector. Some call the price effects "false incidence", that is, effects that transcend the value of government goods and services corresponding to the tax itself. On this see Buchanan, *Fiscal Theory and Political Economy,* pp. 134-5, and the references to Rolph and Jenkins.

[26]It is interesting to note that an argument against the sales tax—namely, that as an indirect tax its burden is not definite (so that taxpayers are not able to assess properly the opportunity cost of public expenditures)—applies more clearly in the long run than the short run. Experience indicates that after two or three years, spending habits of consumers adapt to the tax, and most of the movement of firms and factors of production from taxed to exempt industries has been accomplished.

In the months immediately following the introduction of the tax, however, considerable adaptation to the tax is occurring, and tax consciousness is at a high level.

Yet are we to suppose that during this relatively brief period citizens take a "new look" at public expenditures and their justification? This is doubtful. While it is highly desirable for individuals to know what taxes they are paying, the link between this and an effective evaluation of public spending programs is very tenuous.

[27]A study by Murray Haig and Carl Shoup in the thirties found that a low rate of tax (1 per cent) did not produce much forward shifting, but significant shifting did occur at 2 and 3 per cent rates. *The Sales Tax in the United States*, Columbia University, 1934, Chapter 2, quoted by Due, *Sales Taxation*, p. 303.

[28]Charles Schulze, in the Joint Economic Committee Study Paper No. 1 ("Recent Inflation in the United States") explained rising prices in the United States during the 1950's largely in terms of changes in the composition of aggregate spending. Chapter 3 of his study emphasized that inflation can spread throughout the economy via demand shifts which drive up flexible prices, while no compensating fall occurs in the prices of many goods and services because they are inflexible downward. It should be noted that to a considerable extent inflation from this source is additive to inflation resulting from autonomous cost rises, for example, prices marked up on the introduction of a sales tax. A major source of demand shifts resulting from the forward shifting of a sales tax is the fact that exemptions are unavoidable, and considerable scope exists for substitution by consumers of untaxed for taxed commodities and services. Not all economists recognize demand shifts as an independent cause of inflation. See A. J. Hagger, *The Theory of Inflation*, Melbourne University Press, 1964, pp. 78-80.

[29]This subject was given a full-dress debate over a period of many months by the Congressional Joint Economic Committee, *Hearings* and *Study Papers*, 1959 and 1960. See also A. J. Hagger, *Theory of Inflation*, Chapter 5.

[30]See Richard T. Selden, "Cost-Push versus Demand-Pull Inflation, 1955-57", *Journal of Political Economy*, February 1959, especially p. 9.

[31]If the money supply is allowed to rise in this situation, some economists argue that it is this, and not the initiating cost rise, that is responsible for the rise in the general price level. If this is anything more than an argument about definition, the view is erroneous. Logically, if the cost rise precedes the rise in the money supply, the latter can hardly be called the causal force. Perhaps the case is less clear where a central bank collaborates with the fiscal authorities to permit a rise in the money supply simultaneously with the imposition of the tax. This case is, however, an imaginary one, since tax authorities usually operate independently of the economic stabilization authorities, and is in any case irrelevant to a state or provincial sales tax.

Rolph and Break (*Public Finance*, p. 293) take the position that if the substitution of a sales tax for another tax (a poll tax in their illustration) leads to increased borrowing or dis-hoarding in order to maintain real consumption purchases, this is an "explosive monetary environment". In their analysis there is, however, only a one-time price increase in response to the tax, and a permanent, but finite, increase in the money supply. This is not an explosive situation, since it does not lead to a price spiral, only to a permanently higher price level. Rolph and Break regard "the willingness and ability of the economic system to initiate and support a monetary expansion" as "a necessary condition and hence should be regarded as the primary causal factor". (p. 294). The fact is, however that the price rise would not have occurred without the rise in tax rate.

[32]This argument appears to be similar in nature, and no more (or less) convincing than that which maintains that a rise in a balanced budget is likely to mean a net increase in factor demand because the tax is partly absorbed from saving. The latter argument assumes the existence of "pockets" of hoarded cash.

[33]In terms of incidence analysis this is what Musgrave (*Theory of Public Finance*, p. 215) calls balanced-budget incidence, which he regards as close in usefulness to differential tax incidence (comparing the effect on the distribution of real income of substituting one tax for another, the level of public expenditures being given). Balanced-budget incidence is the relevant concept when a province or state decides to finance an additional public spending program by raising the rate of a (sales) tax sufficiently to cover the estimated cost of the program.

[34]J. K. Galbraith, "Market Structure and Stabilization Policy", *Review of Economics and Statistics*, May 1957.

[35]Province of Ontario Direct and Indirect Debt Per Capita, 1957-1961

| | *1957* | *1958* | *1959* | *1960* | *1961* |
|---|---|---|---|---|---|
| Net Direct Debt | $208 | $216 | $261 | $272 | $272 |
| Net Indirect Debt | 198 | 230 | 233 | 242 | 249 |

Source: Dominion Bureau of Statistics, *Financial Statistics of Provincial Governments*.

[36]Rolph and Break, *Public Finance*, p. 295.

## CHAPTER 5

# Problems in Estimating the Distribution of the Burden of a Retail Sales Tax by Income Size

IN Chapter 4, reasons have been given for suggesting that, except as part of a much larger fiscal picture, the usefulness of distributing the burden of the Ontario, or any other, retail sales tax by income size is somewhat limited. Part of the reason for this position is that there are some doubts about the incidence of the retail sales tax. This is not the major reason, however. The standard assumption is that the tax is shifted forward to consumers in accordance with their spending on taxed goods and services, and arguments have been presented in Chapter 4 for believing that this assumption does not do serious violence to the facts.

The major reason is that interest centres on the impact on the distribution of income and wealth of the fiscal system as a whole, taking into account both public spending and the entire federal, provincial, and local tax system. There are no grounds for disapproving of a particular tax because it is regressive, or because it is insufficiently progressive, so long as the desired after-tax distribution of income and wealth can be achieved through a combination of fiscal and other measures available to the several levels of government.

The danger in the practice of estimating ratios of retail sales tax liability to income size lies in the fact that users of such studies are apt to accept or reject the *sales* tax on the basis of their notions of the desirable *total* impact of the fiscal system on the distribution of income and wealth. This reaction is quite justified when it is a question of choosing between the sales tax and some other tax, say a personal income or inheritance tax. But it is not appropriate if we can show that a *combination* of taxes is needed to finance the desired level of government spending, provided only that the weight of the sales tax in the total fiscal system is not so great that its failure to provide progressivity cannot be compensated for by other taxes. This proviso is satisfied so long as the retail sales tax is levied at moderate rates, say up to 5 per cent, and so long as the contribution to regressivity made by the inclusion of food, housing, fuel, and clothing in the tax base is counteracted by the inclusion of those services that tend to be bought in proportionately greater amounts by higher income receivers. At very high rates any regressivity (or lack of "adequate" progressivity) attributable to the sales tax might be difficult to compensate for by income tax progression. It should be noted, however, that if really effective inheritance tax progression were politically acceptable, even a high rate retail sales tax would present no serious difficulties in the long run. The importance of these considerations for Ontario lies in the possibility that a decision might be made to integrate the federal and provincial sales taxes at the retail stage, and at the high rate of, say, 10 to 12 per cent.

It is not easy to decide how heavily we should weight the lack of progressivity (even with a food exemption) of the retail sales tax, in view of the role it plays in extending the limits of taxable capacity, and thus in enabling provincial public investment projects to contribute to balanced economic growth. We have to compare considerations of the *size* of national output with those relating to its *distribution.*

In part the decision is a value judgment, and is thus political rather than economic. Some may prefer not to make heavy use of a sales tax solely because it can be shown that in given circumstances it can contribute to the achievement of a higher level of national income. They do not wish to aim at a higher level of income at the risk of ending up with a distribution of income that is relatively less favourable to the lower income groups than would be the case if more reliance had been placed on taxes other than the sales tax, say the progressive income or inheritance taxes. Others may take the opposite point of view. The range of the difference of opinion is narrowed, however, when account is taken of the distribution of the *benefits* from the spending of the proceeds of sales tax receipts. At the provincial level the direct benefits from much of the expanded public spending made possible by inclusion of the sales tax in the fiscal system are appropriately distributed on a per-capita basis, and thus favour the lower income groups. For example, expenditures on education, public relief, parks, public institutions, and even services to industry, commerce, and agriculture, produce benefits that are widely distributed throughout the population, either in the form of public consumption or of reduced cost of output and relatively lower prices.

Of course the foregoing considerations do not remove the necessity of estimating the distribution of the burden of the retail sales tax by income size. The sales tax itself will have different effects on income distribution depending on the range of its exclusions and exemptions, and on the composition of consumer spending. Therefore estimations of burden distribution are useful in helping us to draw conclusions on the form that the retail sales tax should assume. Time does not permit the making of an independent estimate of the burden of Ontario's retail sales tax by income size. But this is not the serious gap that it might at first appear, for a number of such estimates have been made for various U.S. states. The approach here will be to compare the results of such estimates, and to indicate which of them comes closest to reflecting Ontario's experience. But before doing this, it is necessary to call attention to the deficiencies inherent in merely estimating effective sales tax rates by income level, without reference to family size or non-homogeneities (to be discussed below), or whether it would not be conceptually preferable to relate sales tax liability to family spending rather than to family income.

Non-homogeneities comprise such matters as the relation between income size and age of family head; whether residence is in an urban, suburban, or rural area; the relation of an individual's wealth to his income; recency of entry of a family into its income bracket; expected permanency of its stay in that bracket; size of the family unit; net borrowing and debt position of the family; tastes as between taxable and exempt goods and services; and ability to produce or grow

goods and services directly for family consumption. The fact that families differ greatly in respect of one or more of these characteristics means that burden comparisons can be quite misleading.

Differences in family tastes result in differential sales tax liability even for families having similar incomes but different expenditure patterns. Two hypothetical studies, for families with similar incomes but different tastes, have recently been made. One is by Reed R. Hansen for a "typical" U.S. state retail sales tax (*National Tax Journal,* March 1962), and the other by A. James Heins, in the *Report* of the Commission on Revenue for the State of Illinois (1963). These are reproduced below. It should be noted that the authors both compare families with polar tastes in respect of taxed and exempt commodities, so that the distorting effects of the tax on consumer preferences are intentionally exaggerated. Nevertheless, their results are sufficiently striking to make it clear that problems of horizontal equity may be quite as serious as those of vertical equity under the retail sales tax. Vertical inequities can be compensated for by other elements in the total tax system, as well as, if desired, by subsidies. Horizontal inequities require exemptions which may complicate the administration of the tax.

TABLE 5:1* Hypothetical Expenditures for Two Families, Each With Four Members (Children Aged 5 and 7) and Each Family Earning $6,800, Spending $6,750, and Saving $50. Both Families Have Similar Occupations and Ethnic Backgrounds, and Live in the Same Community

| | Taxable | Family A | Family B |
|---|---|---|---|
| Food | Yes | $ 900 | $1,750 |
| Beverages | Yes | 120 | 360 |
| Tobacco | No | 220 | 0 |
| Total housing | Yes | 1,400 | 1,400 |
| Household operation | Yes | 400 | 480 |
| Furnishing and equipment | Yes | 120 | 800 |
| Clothing | Yes | 140 | 400 |
| Medical care | No | 1,700 | 30 |
| Personal care service | No | 50 | 50 |
| Personal care articles | Yes | 75 | 100 |
| Recreation: | | | |
| (a) Radio, T.V., Music | Yes | 25 | 350 |
| (b) Admissions | No | 120 | 10 |
| (c) Reading | No | 150 | 20 |
| (d) Education | No | 300 | 75 |
| Transportation: | | | |
| (a) Auto purchase | Yes | 0 | 750 |
| (b) Auto operation taxed | Yes | 30 | 100 |
| (c) Other transportation | No | 150 | 75 |
| Miscellaneous (legal fees) | No | 850 | 0 |
| Savings | No | 50 | 50 |
| Total expenditures taxable | | $1,810 | $5,090 |
| Total expenditures exempt | | 4,990 | 1,710 |
| Tax bill at 3% | | 54.30 | 152.70 |
| Effective Tax Rate | | 0.80% | 2.52% |

*Reed R. Hansen, "An Empirical Analysis of the Retail Sales Tax with Policy Implications", *National Tax Journal,* March 1962, Table III. Reproduced by permission of the *National Tax Journal.*

A difficult conceptual problem faces the sales tax treatment of families of differing size. It is common to regard as an example of fiscal "perversity" the fact that the relatively large expenditures of a large family attract a greater amount of sales tax liability than do those of a smaller family. This is particularly noticeable if food and children's clothing are subject to tax. In other words, there is said to be a horizontal inequity as between families of different size but having the same income. A broader concept of perversity includes both this horizontal discrimination and the vertical discrimination associated with different effective rates of tax in different income brackets.

TABLE 5:2* Sample Budgets for Two Families with Similar Incomes and Savings and the Resulting Sales Tax Paid

| Item | Status** | Consumption Expenditures Family No. 1 | Family No. 2 |
|---|---|---|---|
| Housing | P | $1,400 | $1,450 |
| Food and Drink | T | 1,400 | 1,300 |
| Tobacco | T | 50 | 150 |
| New Auto (annual ave.) | T | 200 | 600 |
| Auto repairs | N | 300 | 50 |
| Auto operation | T | 180 | 400 |
| Household operation | T | 300 | 400 |
| Clothes | T | 200 | 800 |
| Clothes cleaning | N | 300 | 50 |
| Beautician and barber | N | 200 | 50 |
| Personal articles | T | 50 | 200 |
| Radio, T.V., and Hi-Fi | T | 20 | 200 |
| Admissions | N | 300 | 50 |
| Babysitters | N | 600 | 100 |
| Other entertainment (books, etc.) | T | 140 | 500 |
| Dancing school | N | 300 | |
| Toys and athletic equipment | T | 60 | 300 |
| Medical care | N | 600 | 500 |
| Lawyer's fees | N | 400 | 200 |
| Education | N | 600 | |
| Miscellaneous | T | 200 | 600 |
| Savings | N | 200 | 200 |
| Total taxable expenditures | | $3,500 | $6,175 |
| Total non-taxable expenditures | | 4,500 | 1,825 |
| Sales tax paid (4% rate) | | 140 | 247 |

Source: Based on Heins's hypothetical figures

*A. James Heins, "Sample Budgets for Two Families with Similar Incomes and Savings and the Resulting Sales Tax Paid", Table 13, Chapter XX, in *Report* of the Commission on Revenue, State of Illinois (1963).

**P — partially taxable; T — taxable; N — non-taxable.

Hansen compares hypothetical budgets of two families "of the same size, income, expenditures, savings, race, vocation, and location," but with consumption patterns markedly differing as between taxed and exempt items.

The fact that a large family with a given income pays more sales tax than does a small one with the same income should not be accepted as providing an instance of fiscal perversity without consideration of the issues involved. Unpopular as the statement may be, the rearing of a large family is obviously an alternative to the consumption of other forms of enjoyment which, under a general retail sales tax, are included in the tax base. It is possible, of course, that children may be regarded by the government as a capital asset, investment in which should be encouraged through various forms of income, sales, and other tax exemption. But this decision should be taken on the basis of national and provincial economic and social objectives, and should not overlook the fact that large families are a form of conspicuous consumption. In any event, it is hard to see that the problem of family size is typically much better handled under an individual income tax than under a sales tax. Under the individual income tax the size of the exemption is necessarily arbitrary, and thus bears no ascertainable relationship to the cost of rearing a child. Moreover, it is usually stated in terms of dollars, and thus erodes in the event of creeping (or rapid) inflation.

The case against pinning the "perversity" charge on the retail sales tax alone is further strengthened by another consideration. It has been repeatedly argued in this study that in present political and institutional circumstances in both Canada and the United States, as well as in most countries, the adoption of a retail sales tax may permit the expansion of public services. These are likely to be directly allocatable in considerable part to the relatively low income groups. Moreover, to the extent that an improved balance between public and private investment is achieved, growth is stimulated. This, too, is likely to benefit particularly the lower income groups by helping to permit a secular growth in employment, thus absorbing increments to the labour force associated with a growing population. The case seems strong for applying the benefit principle here. Large families are an aspect of population growth; and unless a case can be made for a rapid population rise on grounds other than the pleasure derived from a large family, it can be reasonably argued that family expenditure is properly one of the components of the federal-provincial-municipal tax base.

The exemption or taxability of food, and to a lesser extent clothing, is crucial to the family-size question. Because of overcrowding of large families, purchases of durable consumer goods and fuel consumption are not importantly a function of family size. Food consumption obviously is such a function, however, and clothing consumption likewise, except to the important extent that clothing is handed down from older to younger children. Hansen points out in the study cited above that "a food exemption almost eliminates the tax differential among family sizes. . . ." If to this consideration is added the fact that under standard shifting assumptions a food exemption converts the retail sales tax from a slightly regressive tax in the below $10,000 range to one that is roughly proportional in that range, some will support the exemption of food and children's clothing despite the serious impact of these exemptions on the revenues.

Another difficulty confronting the drawing of tax policy conclusions from burden distributions by income size arises out of the necessity of making a choice between family income and family expenditure as the base for calculating effective

tax rates. Is the relevant effective rate the ratio of sales tax payments to size of income or to size of expenditure? Expenditures exceed income during a period of family borrowing. This issue has been considered by Davies (*Journal of Political Economy,* February 1959, pp. 72ff). His concept "corrected disposable receipts" or "observed consumption" gives a larger "income-plus-borrowing" base for the lowest income brackets. Using this base, we arrive at a lower effective rate of tax for the low income, borrowing families, and the sales tax does not appear so regressive as it looks when income alone is used as the base of the effective tax ratio. Davies's position (p. 77) may be quoted:*

> Since consumption, then, is a partial function of past and present income experiences, and to some extent future income expectations, the traditional method of computing effective tax rates might be improved by incorporating into the denominator of the tax-to-receipts ratio some of the influence of past and expected income along with current income.
>
> In an effort to get a more meaningful denominator, I propose to substitute corrected disposable receipts for current income as the basis on which to compute effective tax rates.

In line with this suggestion, Davies regards the liquidation of assets accumulated in the past as increasing current ability to pay sales tax. Borrowing now to spend in anticipation of the accumulation of savings in the future performs the same function. The effect of thus correcting the tax base is to mitigate the apparent regressivity of the tax. Davies finds that when, in addition, off-premises food is exempt, the retail sales tax becomes progressive for all income classes except one (p. 78).

With the foregoing considerations as background, we turn to a summary of findings of the burden distribution of the retail sales tax by income size for U.S. states. These findings can then be interpreted in the context of Ontario's fiscal circumstances.

Studies of the burden distribution of the retail sales tax for various U.S. states confirm the view that without a food exemption the tax is highly regressive at the very lowest income levels. Food is an extremely important item in the family budget when income is below, say, $3,000 a year. This is due not merely to the fact that families permanently in the low brackets have little left to spend on non-food items, but also to the circumstance that families temporarily in low brackets are not likely to make very large purchases of non-food items in the year during which their incomes are temporarily low. The importance of food in the very low family budget is brought out by William Hickman, in his 1958 study for the California State Board of Equalization. His Table 5 estimates the effect on the size distribution of the sales tax burden if certain exempt items were taxed. The data are for 1950, and a correction should be applied to take account of changes in family income and spending since that time. Hickman estimates that if food had been taxed, families with annual net income below $1,000 would have paid 1.61 per cent of their incomes in tax. He thus concludes (p. 24) that, if food for

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home consumption were taxed, "regressivity forces would be strongly reinforced." This statement is borne out by his statement that for the $2,000 to $3,000 income group the proportion was 0.68 per cent, a far lower effective tax rate.

When we look at the comparative rates of tax resulting from the removal of the food exemption in the brackets above this low range, however, Hickman's data do not show substantial regressivity in the income range up to $7,500. His Table 5 is reproduced here (see Table 3 below). The big drop in the rate occurs between the under $1,000 and the $1,000 to $2,000 class, and the rate does not fall rapidly again until the $6,000 to $7,500 class is reached. Nevertheless, this does bear out the assertion that non-exemption of food contributes importantly to regressivity. The qualification needed, however, is that it is primarily with respect to the very low income groups that the contribution of the non-exemption of food to sales tax regressivity is a serious matter.

The Michigan sales tax is an example of one that provides for limited exemptions. It taxes restaurant meals and off-premises food, children's clothing, fuels, and 50 per cent of the cost of prescription drugs. A chart presented by the Indiana

TABLE 5:3* Estimated Distribution of the Burden of Sales Taxes Relative to Income which would have been Borne by California Families in 1950 if Goods Exempted from Taxation Were Subject to Tax, by Income Class

| Annual net income class | Utilities | Gasoline | Food | Newspapers and periodicals | Total exemptions | Total taxable items and major exempt items |
|---|---|---|---|---|---|---|
| Under $1,000 | .22% | .10% | 1.61 | .05 | 2.11 | 5.56 |
| 1,000–2,000 | .17 | .10 | .68 | .03 | 1.04 | 4.50 |
| 2,000–3,000 | .13 | .11 | .74 | .03 | 1.07 | 4.25 |
| 3,000–4,000 | .12 | .14 | .69 | .02 | 1.02 | 4.42 |
| 4,000–5,000 | .11 | .13 | .63 | .02 | .95 | 4.21 |
| 5,000–6,000 | .10 | .13 | .59 | .02 | .90 | 4.42 |
| 6,000–7,500 | .10 | .13 | .57 | .02 | .88 | 4.56 |
| 7,500–10,000 | .09 | .13 | .50 | .02 | .79 | 4.14 |
| 10,000 and over | .06 | .09 | .25 | .01 | .45 | 3.44 |

*Source: William Hickman, *1958 Study for California State Board of Equalization*, Table 5. Reproduced by permission of the author.

Commission on State Tax and Financing Policy (First Report, 1962, Figure 2) indicates that the Michigan sales tax is decidedly regressive in the income range up to about $5,000. Above that level, however, even with limited exemptions, the Michigan tax evidences much the same moderate regressivity that characterizes the California, Washington, and District of Columbia taxes. The tax exempts off-premises food, while taxing restaurant meals, children's clothing, household furnishings and fuel. Above the very low income brackets there is relatively little regressivity until the $7,500 to $10,000 income level is reached. The latter is an inevitable accompaniment of the taxing of consumption spending at flat rates, and the former, as mentioned above, is due to the special circumstances (i.e., non-homogeneity) of the very low income groups.

In the light of the fact that the Ontario retail sales tax exempts restaurant meals costing less than $1.50, off-premises food, children's clothing, and electricity, gas, and fuels, it seems likely that the Ontario tax is probably at least proportional

in the $2,000 to $10,000 range, not becoming regressive until the individual income tax (and *a fortiori* an effective and progressive inheritance tax) is in a position to offset, and more than offset, the regressivity that puts in its appearance in incomes above about $10,000. Even with Ontario's liberal exemptions, the tax is probably regressive at the bottom of the income range, a circumstance that argues for subsidies to necessitous families and individuals rather than the exemption of particular items of consumption from the tax.

The Ontario exemption list is quite similar to that of Connecticut. They both exempt off-premises food; Connecticut exempts restaurant meals under $1.00; and both exempt children's clothing, newspapers and subscription magazines, and fuels. In his *Tax Study of the State of Connecticut (1963),* Alfred Buehler made a comparison of estimated average family sales tax payments, selected states, for the calendar year 1962. The percentage of sales tax payments (at a rate of 3.5%) fell continuously from 1.36% in the $2,000 to $3,000 bracket to 1.04 in the $16,000 to $18,000 bracket. The decline to the $8,000 to $9,000 bracket, however, was only from 1.36% to 1.24%. These data appear to indicate that (excluding the very low incomes) if Ontario's retail sales tax is regressive in the income brackets up to a level substantially above median family income, it is only very slightly regressive.

It should be repeated that no attempt is to be made here to estimate the actual distribution of Ontario's retail sales tax burden by income groups. But by comparison with the experience of the U.S. states having rather similar taxes it seems clear that above the lowest income bracket (say up to $1,000), Ontario's tax in present circumstances is slightly if at all regressive in the income range up to, say, $7,500. Removal of food, children's clothing, fuel sold to consumers, and other items from the exemption list would certainly make the Ontario tax somewhat regressive in the $2,000 to $10,000 range, and quite seriously so at the bottom end of the range of family incomes. Although no policy recommendations are made in the present chapter, it may be pointed out that moderate regressivity in the $2,000 to $10,000 income range is not a serious matter; and that although regressivity in the range below $2,000 is decidedly to be deplored, there may be better ways to compensate for this defect than by exempting all food, fuel, children's clothing, etc., irrespective of family income size. A better route would appear to be direct subsidies to the very low income families, measures to alleviate unemployment, possibly a minimum wage, and similar measures.

## CHAPTER 6

# Analysis of Tax Base and Exemptions under the Ontario Tax

Under the terms of reference, this chapter is to deal with the "philosophical justification" of Ontario's exemptions and exclusions from the sales tax base, with the quantitative importance of these exemptions, and with their impact on the sales tax revenues.

Exemptions under the Ontario tax, as listed by the Dominion Bureau of Statistics, *Principal Taxes and Rates, Federal, Provincial and Selected Municipal Governments* (1962), p. 13 (reproduced in the present writer's Chapter 3), are as follows:

Food products, including insulin and vitamins
Meals at $1.50 and under
Gasoline, diesel fuel, fuel oil, coal, coke, wood, gas, electricity
Farm implements and supplies, agricultural products
Boats and other fishing apparatus
Prescription drugs and optical appliances, artificial limbs, hearing aids, dentures
Railway rolling stock
Children's clothing and footwear (by size, not by age)
Religious and educational publications, classroom supplies
Newspapers and subscription magazines
Draft beer
Long-distance telephone charges
Sales for delivery outside the province

In addition, the following exclusions or exemptions are in force: (1) water, clay, sand, gravel and unfinished stone, (2) producer goods, (3) equipment of railways, airlines and steamship companies, and (4) purchases costing less than 21¢.

The arguments against exemptions most frequently made are (1) they add to the administrative difficulties, as well as to compliance costs, (2) they violate the principle of equal treatment of taxpayers in similar economic circumstances, and (3) they reduce the tax base, and therefore require a higher rate to achieve given revenues. An aspect of point (3) is that the discrimination against those who are not exempt is thereby made all the more acute.

In evaluating these strictures we should note that a blanket indictment of this sort attempts to prove too much. Some exemptions and exclusions contribute to, rather than derogate from, the neutrality of the sales tax. The major example is the exclusion of producer goods and services sold to other than final consumers. Since the tax is intended to be on consumption spending, and to be measured by the consumption spending of the individual, removal of all stages prior to the

final or consumer stage makes the tax more rather than less neutral. The incidence of a tax imposed at the consumer stage is significantly more ascertainable than is the incidence of prior-stage sales taxes. Thus limiting the retail sales tax to the final consumer stage contributes to the satisfaction of Adam Smith's maxim of *certainty*.

Exemptions obviously reduce the tax base. Yet no one would seriously consider making a crude comparison between total consumer expenditures on goods and services and total taxable expenditures, and asserting that the difference is erosion of the tax base. Under a sales tax each exemption must be examined on the basis of its merits. The difficulty, of course, is that legislative decisions are made in a political atmosphere, so that exemptions are often made on the basis of sentimentality, a desire to favour some social group, political pressures of organized groups, tradition, and so on. Exemptions of this sort represent true erosion, and should be held to the minimum politically possible.

### PRODUCER GOODS

The Ontario retail sales tax provides that tangible personal property purchased for the purpose of being processed, fabricated, or manufactured into, attached to, or incorporated into tangible personal property for sale is exempt from tax. The Ontario provision on direct use follows that of the federal government. Since the tax is defined as applying to tangible *personal* property, sales of real estate are excluded from the tax. Materials consumed or expended directly in the process of manufacture or production of tangible personal property for sale are exempt from tax. Moreover, machinery and apparatus used directly in the manufacture of tangible personal property for sale are exempt.

In general, provisions restricting exemption of producer goods to direct use, physical ingredient, and the like, weaken the logic of excluding producers' goods from the tax. The only argument in favour of taxing producer goods is the need for revenue without regard to equity or economic consequences. It would be preferable to get this revenue through a higher rate of tax on final goods, or by eliminating exemptions that make little or no sense. However, an important justification for including some producer goods may be found, as it has in Ontario, in the compliance and administrative problems involved in excluding them.

Experience with retail sales taxation in both Canada and the United States indicates that exemption of certain classes of purchasers from tax, once introduced, is very difficult to eliminate. Moreover, the total exemption of producer goods would result in a very substantial reduction in revenues. If, at the same time, off-premises food is exempt, the tax capacity of the retail sales tax (at least in the typical U.S. sales tax state) would be reduced by almost one-half. Consequently, full exemption of producer goods is not likely, especially since the food exemption has already gained acceptance in the provinces.

Most of the sales tax states in the United States have made use of the physical ingredient provision, which makes for a broader base (and even less logic) than does the direct use provision. A few years ago a memorandum of the Ohio Department of Taxation found that Ohio's low collection ratio of 2.01 per cent reflected in substantial part the direct use (rather than the physical ingredient)

provision in the taxation of sales prior to the final consumer stage. It may be noted that while Ontario's treatment of producer goods may fall somewhat short of that dictated by logic, it is more generous than the treatment accorded them in most of the U.S. sales tax states.

When sales at earlier stages of production are subject to tax, a result somewhat similar to that of a turnover tax is produced. The effective rate ultimately payable at the final consumer goods stage will be greater, the larger the number of occasions on which producer goods along the route from raw materials to finished product are subject to tax. Distorting effects are produced on consumer choice by the failure to exempt producer goods. The practice results in a higher effective rate of tax at the final stage for some consumer goods than for others. In addition, to the extent that cost-plus pricing is successfully employed (monopoly power coupled with a monetary policy that permits a tax-cost-induced rise in the price level) early-stage sales taxes may be pyramided. At later production stages the tax rate is applied to a base that includes taxes levied at earlier stages. A disability is thereby imposed on consumer goods that pass through a relatively large number of fabrication stages. It should be noted that it is only argued that pyramiding occurs where cost-plus pricing is employed.

Because of these undesired effects caused by the imposition of the retail sales tax on producers' goods, it is recommended that the exemption for producer goods be made as wide as possible. In view of the position taken by the present writer on the food exemption (see below), it is further recommended that the elimination of that exemption be made the occasion for more liberal exemptions with respect to producer goods.

It is possible to justify limited taxation of producer goods on the ground that it contributes to the expansion of aggregate taxable capacity of the province or state. This expansion may be desirable, even if distortions are produced in the private sector, if badly-needed provincially supplied goods and services cannot otherwise be provided. This is another way of saying that provinces and states may be forced to include significant taxation of producer goods in the retail sales tax base because of revenue needs. But it must be stressed that revenues from this source are obtained at the cost of substantial distortions in the production process, and in resource use, and this cost should be recognized as an offset to the social benefit of expanded provincial expenditure programs.

### FOOD

In contrast with the sales tax states, most of which do not exempt food, the provinces do not include off-premises food in the retail sales tax base. Ontario does, however, tax restaurant meals costing over $1.50. There is no particular reason for this price distinction, unless perhaps the objective is to exempt office and other workers' midday lunches from the tax. The distinction between catered meals and meals prepared at home likewise seems unfounded. Indeed, the difference between the two is that catered meals involve service, and services are in any case exempt under the Ontario tax.

The present writer does not come to the conclusion, however, that the food exemption should be retained. On the contrary, it is argued that all food should be

subject to sales tax, both restaurant meals and off-premises food sales, but that a retail sales tax credit (not directly geared to food) should be employed. (For a brief note on the Indiana tax credit, see page 93.)

The compelling argument for taxing food is that the exemption of food from the base frees millions of individuals from the tax who are quite able to pay it. The sacrifice in terms of tax base and revenue is enormous. Typically, at the provincial and state level, food accounts for 20 to 25 per cent of the tax base. Of this, a very small proportion is attributable to families to whom it is truly a hardship to pay the tax. It is no justification of a food exemption to say that food should never be taxed as long as there is a single family that is hurt by the tax. Common sense requires us to take account of the high average level of living in both Canada and the United States. Moreover, if food is taxed at a 3 per cent rate, the poor have to meet 97 per cent of their food cost in any event.

Families with incomes below what is regarded as acceptable in an economic society like that of Ontario should receive financial support in other forms. These aids should not be limited to poor relief, which is admittedly socially undesirable except in emergencies. They should include forms of social insurance that are compatible with human dignity, respectable public works projects to absorb the technologically unemployed and the superannuated, labour exchanges, area redevelopment, and so on. Federal and provincial programs should be co-ordinated. Furthermore, it should be recognized that many individuals and families are only temporarily in the lowest income brackets, and that still others are living off savings.

The food exemption appears to be rooted in the traditional view that most of the working population receives only an iron ration. The facts are otherwise. The vast bulk of the population regards many items that are actually subject to the Ontario sales tax as part of "subsistence", and the argument for exempting food is no stronger than that for exempting purchases of second-hand automobiles, gasoline, cheap clothing, and so on. Not only this, but the exemption of food means that at a given level of provincial expenditure, the sales tax rate on other commodities must be correspondingly higher. Thus in terms of the distribution of the sales tax burden by income level, the food exemption does not have nearly the alleviating effect that it appears to have.

It is obvious that even with the various tax exemption measures that might be employed to take account of the very low income case, some families would still be forced to pay sales tax on food at the cost of a reduction of consumption below acceptable minimum standards. Consequently one might wish to remove all possibility of hardship by allowing a family sales tax exemption. An additional advantage would be that account could be taken of family size (and thus higher sales tax obligation) by making the exemption dependent on the number of individuals in the family.

Most studies of distribution of the sales tax burden find that the retail sales tax is roughly proportional up to about $10,000 of income, so long as food is exempted. It is somewhat regressive, on the other hand, if food is included in the base. The tax credit device (which assumes that the province or state has a personal income tax) has been advocated to permit food to be included while

avoiding the charge of regressivity. Under this plan a flat credit would be allowed, say $5 to $10 per family member, to be deductible from the income tax due the province (or, with federal-provincial co-operation, even from the federal income tax). The sales tax credit in many instances would exceed income tax liability. The latter would in fact be zero in many instances. Income taxpayers would then receive a refund. An advantage of the system is that it would encourage everyone to make out an income tax form, while a disadvantage is that many more forms would have to be processed. (Simplified declarations would mitigate the objection, however.) This procedure would serve to eliminate the regressivity of the sales tax.

It has been argued elsewhere in this study that burden distribution studies purporting to throw light on the progressivity or regressivity of the sales tax are subject to serious drawbacks. The problem with respect to a food exemption is not to try to inject progression into an otherwise (slightly) regressive sales tax in the up to $10,000 income level. It is simpler to regulate tax progressivity through the individual income tax. Rather, it is to make the inclusion of all food sales in the tax base palatable by eliminating hardship cases.

An alternative version of the plan might, however, be considered by the Province of Ontario, assuming, of course, that the administration of the federal-provincial income tax makes this feasible. Simply provide that the sales tax offset to the income tax disappears at a low level of income. The plan described above gives a tax rebate to a millionaire with ten children that exceeds that to a poor family with five. The result is a gratuitous loss of tax revenues. It would be a simple matter to fix on a maximum income tax liability ($500?) above which no sales tax could be deducted. Difficulties would arise with respect to families with income tax liability in the neighbourhood above and below this figure, and these would call for step provisions. Since it does not appear likely that any state or province will consider a plan of this sort in the foreseeable future, no details will be given of how this plan would operate. But it is contended here that it would be better to consider such a plan than to exempt food from the retail sales tax base. It should be stated, however, that some sales tax authorities regard the refund cut-off as impracticable.

It may seem that an important consideration with respect to the exemption of food has thus far been overlooked. An unfortunate aspect of the taxation of food is the inelasticity of response of spending on food over the business cycle. In a recession lower income groups spend a greater proportion of income on food (and the same is true of fuel to heat homes). Therefore, if the inclusion of food in the retail sales tax base makes the tax somewhat more regressive during a period of reasonably full employment, regressivity is even more pronounced in a recession. It is contended, however, that the proper policy is not to exempt food (unless the exemption is limited to very low income groups, or possibly to foods such as bread, milk, eggs, etc., bought by low income groups), but for the central government to pursue an effective counter-cyclical monetary and fiscal policy. If recessions can be kept moderate, a liberal system of unemployment benefits should successfully mitigate the hardships that would otherwise occur when, during recession, sales tax liability of the low income groups rises as a percentage of family income. Since the provinces and states cannot do without tax revenues even in recessions,

there is no room for a suggestion to the effect that food, fuel, etc., be temporarily exempted from sales tax. It is administratively simpler to avoid tampering with the tax structure, while relying on relief, subsidies, unemployment insurance, and public works programs to maintain adequate after-tax purchasing power of the low and lowest income groups.

### CLOTHING

Clothing should be fully included in the retail sales tax base. The exemption of children's clothing, particularly when the criterion is size, invites evasion. This provision is rarely found in the retail sales tax laws of the U.S. states. The advantage to large families of exempting children's clothing is in any case considerably less than at first apears. Garments are handed down from child to child, whereas in a smaller family they tend to be discarded or given away when outgrown. Again, it does not make much sense to exempt children's clothes bought by rich families, while taxing adults' clothes bought by poor families.

Exemption of all clothing has not been contemplated, but one might argue that utility clothing should be exempt. This does not mean merely overalls, uniforms, etc., but also low-quality garments presumably bought by lower income families. The administrative difficulties make this device unduly cumbersome, though Britain managed it under the graduated purchase tax during World War II. The same objection applies to the exemption to clothing as to the exemption of food. Vast numbers of families benefit who do not need the advantage. However, clothing might be joined with food in the suggestion made above. That is, an addition might be made to the sales tax offset against the income tax (or subsidy if no income tax is due) to eliminate the impact of the sales tax on clothing bought by lowest income families. Indeed, this is to be recommended, since clothing is as much a necessity as food. In general, the principle should be to exempt all spending of the "very low" income groups from tax. This would involve a tax credit of 3 per cent of (say) $3,000 per family of four, or $90.

### DRUGS, ORTHOPAEDIC APPLIANCES, ETC.

The case for exempting these (as well as medical services) is very strong at low and even middle levels of income. The reason is that illness and accidents strike at random. Thus we are not in this case worried that an exemption designed to benefit the very poor also benefits those with higher incomes. The problem is, rather, one of reducing somewhat the intra-income-bracket inequity arising out of the capricious incidence of illness. Health insurance eliminates this problem, of course.

### FUEL

It is recommended here that all fuels be sales-taxed except those used in connection with production or distribution. The exemption is in line with the recommendations that so far as possible producers' goods be excluded from the domain of the retail sales tax, and that exemptions not be wasted on those consumers who are able to pay.

Two reasons may be brought forward to justify the sales taxation of fuels already subject to the excise (namely, fuels used in motor vehicles). These reasons are alternative rather than additive. *First*, the excise may have been introduced in the first place because consumption of motor fuels by final consumers was thought to represent a particularly high degree of taxpaying power. *Second,* if the proceeds of a motor fuels excise tax are devoted to highway construction and repair, this type of consumption is making no contribution to general tax revenues, and at least the pre-excise tax price could be made subject to the retail sales tax. This might indeed prove an excellent device for getting around the hoary argument, so widely respected in the states, that there is something wrong with diverting motor fuel taxes to spending programs unconnected with motoring.

The case for exempting fuel used by the very low income families is especially strong in a northern country such as Canada. If they are also exempt from tax on food and clothing, a calculation could be made of expenditure subject to sales tax, adjusted for family size. This amount could then either be deducted from the family's income tax liability, if any, or paid back in the form of a sales tax rebate. An advantage of the rebate on the income tax (or lump-sum payment if there is not income tax liability) is that the federal government income tax administration set-up could be used to handle the sales tax rebate. Moreover, there would be an encouragement to lower income families to file returns. On the other hand, there would be a large increase in the number of returns not liable for income tax that would have to be processed. If each individual were given cancelled sales tax stamps up to an amount of the annual exemption per person, it would be more difficult to take account of income size. This would be immaterial if it were decided to give everyone the same exemption regardless of income size. There might be objection to the stamp method on the ground that it smacks of war-time rationing, but this objection does not seem important. What does seem important, however, is the nuisance of having to carry a pass-book. On the whole, the income tax (or subsidy) method seems to be at least a little more dignified. Administrative work could be saved by estimating the sales-taxable expenditure of the typical family (making a distinction between urban, suburban, and rural families) and rebating a putative amount of sales tax liability.

### TRADE-INS

It is recommended that the general rule on trade-ins be that tax is due only on the difference between the value of the goods purchased and that of the goods traded in. There is no point in the treasury gaining because a durable good item, such as an automobile or a sewing machine, happens to be turned over a number of times during its lifetime. The rule should not be restricted to trade-ins on similar articles. In general, it would seem that the proper objective in sales-taxing durable consumer goods should be to collect the same amount of tax that would be collected if it were administratively possible to tax such goods as they are actually consumed, rather than taxing them on the date they are purchased. If this view is accepted the case is strong for exempting the value of goods traded in.

The rationale of a retail sales tax on final consumption goods is that the use or consumption of the good is one of the valid measures of an individual's taxable

capacity. When sales tax is paid on a durable consumer good, which yields its utility to the purchaser only over a period of time, there is prepayment of tax. It should be noted that the tax authority gains compound interest on this prepayment, and the purchaser of the taxed consumer durable correspondingly loses. Lack of concern for this aspect of the matter stems from its lack of quantitative importance to the taxpayer. Thus the $120 of tax due on a $3,000 automobile at a 4 per cent sales tax rate, the vehicle having an estimated life of ten years, involves in the first year an advance payment of tax of $108, or $120—($120 × 10%). Interest on this in the first year at 5 per cent is $5.40, and it is compounded. But it is not very significant, and can be ignored.

A much more important consideration is the fact that the original purchaser often (in the case of a motor vehicle, usually) does not retain the durable consumer good until it is ready to be junked. Thus the trade-in problem arises. Although Ontario law requires each successive purchaser to report his purchase of a used durable consumer good, and pay tax on it, the rule cannot be enforced except for automobiles. The Registry of Motor Vehicles can refuse to issue a licence unless sales tax is paid. A car is usually traded in for another car, and (contrary to the requirement in the case of trade-ins of articles unrelated to one another, for example, a table for a stove), tax is due only on the difference between the value of the goods purchased and that of the goods traded in.

Of course the sale price of a car, when it is turned in, will reflect the tax that was initially paid, and the tax prepayment will be allocated between the original and subsequent purchasers in accordance with market forces. The fact that the purchaser of the used car is required by the interaction between the new and used car markets to pay his share of the tax originally levied on the purchaser of a new car weakens the case for taxing the car dealer on used car sales. As stated, the tax is distributed over the series of owners during the lifetime of the vehicle. If used car sales are taxed, the amount of tax depends on the number of times a car is sold during its life. The effect of the tax is therefore arbitrary. Long-time ownership of a motor vehicle is favoured over frequent turn-ins, despite the fact that no substantive legislative decision has been made that this is the proper social policy.

We conclude that when the taxing authority permits exemption from tax of the trade-in value of a durable consumer good there is no multiple taxation or compounding of the tax on the commodity. On the other hand, as stated in the previous paragraph, there is also no account taken of the fact that so long as an article remains in use the tax authority has enjoyed prepayment of tax, plus compound interest on the prepayment. Even if the latter consideration is ignored, there is no point in limiting the trade-in exemption to the exchange of autos for autos, or furniture for furniture. In effect, to repeat, there is no such limitation, since the taxation of casual exchanges and sales cannot be enforced.

An interesting issue is brought into focus when we consider the rationale of a retail sales tax on consumer goods as stemming from the use or effective consumption of the good. Certain commodities, such as paintings, sculptures, coin and stamp collections, rare books, do not necessarily diminish in value over time.

In fact, the contrary may occur. Moreover, these articles may turn over frequently. Should the Ontario sales tax apply to such repetitive sales? Aside from considerations involved in governmental sponsorship of certain types of cultural activity, there appears to be no reason why tax should not apply at each sale. Taxable capacity is certainly present, particularly when market forces drive prices up over time. On the other hand, the article is not used up in the sense of a gradual decline in value associated with depreciation. The article is used, however, in the sense that the possessor enjoys the object, indeed with no diminution, or even an increase, in its value during his period of possession. Therefore the article should be taxed on each sale or trade-in (for example, a vintage, unused car), though this is difficult to enforce when sales are casual. Generally speaking, there is nothing wrong with duplicate taxation provided that it is not inequitable, and it does not appear to be inequitable in regard to the type of article under consideration.

### CLASSROOM SUPPLIES, BOOKS USED FOR EDUCATIONAL PURPOSES, NEWSPAPERS, PERIODICALS

There is no room under the retail sales tax for provisions designed to encourage types of consumption approved of by the Province. In the first place, the addition of 3 per cent of the purchase price of a periodical or book can hardly often make the difference between purchase and non-purchase. Indeed, the forces that determine willingness to absorb educational materials are not such as to be greatly affected by price considerations. Even if they were, any threatened bankruptcies occasioned among publishers and booksellers ought to be a subject for outright subvention by the Province. Tax exemption is hardly likely to make the difference between survival and failure, whereas public subsidies for desirable educational publications and activities can do so.

### SERVICES

Ontario, like virtually all of the U.S. sales tax states, does not in principle include services in the tax base. One exception, in Ontario, is local telephone charges, which are treated as the sale of tangible personal property, and another is transient room rentals. By comparison, in Illinois the only services taxed (under special statute) are gas, electricity, telephone, and telegraph charges. Transient room rentals are also taxed in Illinois, as in most sales tax states.[1]

The economic argument in favour of taxation of all services bought by consumers is that the consumer makes his choice between spending on tangible goods and spending on services. Therefore there is no sense in exempting consumer spending on services. Moreover, in recent years this choice has involved a very substantial increase in the proportion of consumer income devoted to services. Table 6:1 shows the great increase in spending on services in the United States during the decade 1949-1959. The trend is similarly visible in Canadian statistics. This means that the failure to tax all services bought by consumers implies a secularly declining ratio of total retail sales tax receipts to total consumer spending. The long-run productivity of the tax would be enhanced by taxing at least all those

services that ought not to be exempt for compelling reasons. It is unlikely that the exemption of services from tax has been a significant element in the consumption of services. Such spending is in the main rather inelastic to price, and the increase has been primarily due to (1) rising per-capita real income, and (2) the alacrity of firms in developing new standards and forms of services to satisfy this trend in tastes.

TABLE 6:1—A Decade of Change in Personal Expenditures for Services

| | 1949 | 1959 | Per cent change |
|---|---|---|---|
| | (million dollars) | | |
| Total personal consumption expenditures | 181,160 | 313,840 | + 73 |
| Durable goods | 24,580 | 43,360 | + 76 |
| Non-durable goods | 96,610 | 147,650 | + 53 |
| Services | 59,970 | 122,830 | +105 |
| Housing | | | |
| Rental value of owner-occupied homes | 10,920 | 25,680 | +135 |
| Rents paid by tenants | 6,370 | 11,590 | + 82 |
| Household operation | | | |
| Electricity | 1,750 | 4,540 | +159 |
| Gas | 1,030 | 2,880 | +180 |
| Telephone | 1,740 | 4,040 | +132 |
| Domestic servants | 2,360 | 3,520 | + 49 |
| Recreation | | | |
| Radio and TV repairs | 200 | 780 | +290 |
| Motion pictures | 1,450 | 1,280 | − 12 |
| Legitimate theatres | 180 | 340 | + 89 |
| Spectator sports | 240 | 270 | + 13 |
| Clubs and lodges | 460 | 740 | + 61 |
| Net loss on racetrack betting | 250 | 470 | + 88 |
| Foreign travel | 850 | 2,110 | +148 |
| Education | | | |
| Higher education | 780 | 1,720 | +121 |
| Elementary and secondary | 480 | 1,360 | +183 |
| Transportation | | | |
| Auto repairs | 2,360 | 4,540 | + 92 |
| Auto insurance—less claims paid | 560 | 1,670 | +198 |
| Tolls | 90 | 280 | +211 |
| Streetcars and buses | 1,400 | 1,240 | − 11 |
| Taxicabs | 580 | 630 | + 9 |
| Commutation | 80 | 120 | + 50 |
| Inter-city R.R. | 520 | 350 | − 33 |
| Airlines | 150 | 740 | +393 |
| Personal services | | | |
| Shoe repairs | 200 | 240 | + 20 |
| Cleaning and laundering | 2,280 | 2,770 | + 22 |
| Beauty and barber shops | 1,040 | 1,980 | + 90 |
| Physicians | 2,340 | 4,600 | + 97 |
| Dentists | 920 | 1,960 | +113 |
| Undertakers | 950 | 1,510 | + 59 |
| Financial | | | |
| Brokerage charges | 250 | 960 | +284 |
| Bank service charges | 310 | 750 | +142 |
| Lawyers' fees | 830 | 1,660 | +100 |
| Interest on non-mortgage debt | 1,500 | 5,540 | +269 |
| Other | | | |
| Religious and welfare | 2,240 | 4,280 | + 91 |
| Cash sent abroad | 190 | 260 | + 37 |

Source: Federal Reserve Bank of Chicago, *Business Conditions*, November 1960. Reproduced by permission of the Federal Reserve Bank.

Urgent demands for the inclusion of services have come from those who deplore the loss of revenue involved in a palpably incomplete sales tax coverage. There is no point, of course, in taxing services to firms. Like tangible personal property used in production, these services should be excluded from the base. Services sold to firms would be hard hit if taxed, since they would fail the physical ingredient rule. If directly used, services could be exempted, but this likewise is an arbitrary criterion. The best procedure is to exempt all services, as well as all tangible goods, sold to business firms engaged in further processing or distribution.

Should *all* services sold to consumers be included in the retail sales tax base? The answer must be given largely in terms of the administrative problems involved. Certainly sales of services by casual domestic servants and baby-sitters do not lend themselves to inclusion in the base. On the other hand, it would be a simple matter to include in the tax base the service element in sales of tangible personal property requiring various forms of services, for example, installation. Indeed, it is administratively easier to tax such service than to exempt it. Again, sales of services by service enterprises registered as business firms involve no particular administrative problems beyond the necessity of policing a larger number of firms. Professional services are usually regarded as beyond the pale in the taxation of retail sales. It is sometimes argued that this would amount to imposing a proportional income tax. In view of the inelasticity of demand for lawyers' and doctors' services, however, this argument must not be taken too seriously. The tax can easily be passed forward. Moreover, no administrative problems of importance would be involved.

An objection to the sales taxation of professional (particularly medical) services, on the other hand, is that in many cases they do not involve a free choice by the consumer, and thus a hardship may arise in the form of both a vertical and horizontal inequity (the former an inequity as between individuals in different income size brackets, and the latter one as between individuals in the same income bracket). The need for legal, medical, and dental services arises capriciously, both as between different income brackets and between individuals in the same bracket. Thus to the burden of having to utilize the service in the first place is added another one in the form of the tax. Part of this problem disappears, however, under a system of medical insurance, and it is submitted that the objection to the inclusion of medical, dental, legal, and other services to consumers on grounds of capricious incidence will have less and less weight as various forms of social insurance are developed further.

Following is a list of services that might be included in a general retail sales tax base, together with brief comments. (Table 6:2 summarizes practice by the states.)

Transient lodgings

> House rent would not be subject to sales tax, since no comparable tax could easily be exacted on the imputed rent of an owned home.

Laundry and dry cleaning

> Inclusion of this element in the base would make a substantial contribution to increasing the progressivity of the tax, since demand in this instance is highly income-elastic up to medium incomes, at least.

Auto repair and services

Here, too, demand is quite income-elastic as between low and medium incomes.

Barber and beauty shop services

These should be subject to sales tax.

Upholstering, carpet cleaning, exterminating, storage charges, house repairs, decorating, delivery services, etc.

In this group there are several types of service which can be performed by the man of the house. Thus both income tax (on own work) and sales tax can be saved by those in lower income groups who wish to do so. Consequently their inclusion would contribute significantly to the objective of taxing according to ability to pay.

Electricity, gas, telephone, telegraph, water

Inclusion of utilities would rest largely upon the fact that they do not differ essentially from tangible personal property. However, little contribution would be made to the progressivity of the retail sales tax by their inclusion.

Funeral service

Taxing of funeral service would probably run against strongly held human sentiments.

Admissions

Although substantial excises on admissions have been thought to discourage the arts, this is not an adequate argument to prevail against including admissions under a tax that covers all types of consumption.

Legal, medical, and dental services

In the light of what was said in the text, above, these services ought to be taxed to final consumers, but they have not been regarded as "sales" of services. They are, however, quite income-elastic, and it is largely a matter of sentiment and concession to custom that they have been excluded. A program of insurance would remove the hardship of capricious incidence of the need for these services.

Lease and rental of personal property

Ontario's practice with respect to rental contracts (the tax applies to 80 per cent of the charge when the rental period is longer than one month) makes only partial recognition of the fact that a rental charge includes both consumption and interest costs, as well as installation. The taxation of full rental value would, therefore, represent a discrimination against rentals unless all services, including interest cost on consumer loans as well as instalment charges, were subject to tax. If services are exempt, the tax ought to be on purchase of the goods by the lessor, with rentals exempt.

Interest on loans to consumers (hire-purchase, etc.)

This is a form of service that permits the individual to enjoy durable consumer goods on the anticipation of future income. In a sense, it ought to be taxed. However, it would inject much regressivity into the sales tax base, and inclusion is not recommended.

In concluding our discussion of services, a comment should be made on the implications of including most or all services to consumers in a retail sales tax base. The objective is to tax all consumption, at a flat rate. With only saving exempt, full success would make the retail sales tax equivalent to a flat-rate

TABLE 6:2—Sales Tax Treatment of Selected Services in Selected States, 1962

| Service | Conn. | Calif. | Fla. | Ill. | Ind. | Md. | Mich. |
|---|---|---|---|---|---|---|---|
| Advertising agencies | X | X | X | X | T | X | X |
| Admissions | X | X | T | X | T | X | X |
| Automobiles | | | | | | | |
| Repairs | X | X | X | X | T | X | X |
| Refinishing | X | X | X | X | T | X | X |
| Storage and parking | X | X | X | X | T | X | X |
| Washing and lubrication | X | X | X | X | T | X | X |
| Barber and beauty shop | X | X | X | X | T | X | X |
| Exterminating | X | X | X | X | T | X | X |
| Funerals | X* | X | X | X | T | X | X |
| Lease or rental of personal property | X | X | T | X | T | X | X |
| Laundry and dry cleaning | X | X | X | X | T | X | X |
| Legal | X | X | X | X | T | X | X |
| Medical and dental | X | X | X | X | T | X | X |
| Painting | X | X | X | X | T | X | X |
| Repairs | X | X | X | X | T | X | X |
| Newspaper sales | X | X | X | X | T | X | X |
| Transient rooms | T | X | T | T | T | T | T |
| Utilities | | | | | | | |
| Electricity | X | X | X | X | T | X | T |
| Gas | X | X | X | X | T | X | T |
| Telegraph | X | X | X | X | T | X | X |
| Telephone | X | X | X | X | T | X | X |
| Transportation | X | X | X | X | T | X | X |
| Water | X | X | X | X | T | X | X |

| Service | N. Car. | Ohio | Penn. | R.I. | Texas | Wis. |
|---|---|---|---|---|---|---|
| Advertising agencies | X | X | X | X | X | X |
| Admissions | X† | X | X | X | X | T‡ |
| Automobiles | | | | | | |
| Repairs | X | X | X | X | X | X |
| Refinishing | X | X | X | X | X | X |
| Storage and parking | X | X | X | X | X | X |
| Washing and lubrication | X | X | X | X | X | X |
| Barber and beauty shop | X | X | X | X | X | X |
| Exterminating | X | X | X | X | X | X |
| Funerals | X | X | X | X | X | X |
| Lease or rental of personal property | X | X | X | T | T | T |
| Laundry and dry cleaning | X | X | T | X | X | X |
| Legal | X | X | X | X | X | X |
| Medical and dental | X | X | X | X | X | X |
| Painting | X | X | X | X | X | X |
| Repairs | X | X | X | X | X | X |
| Newspaper sales | X | X | X | X | X | X |
| Transient rooms | T | T | T | X | T | T |
| Utilities | | | | | | |
| Electricity | X | X | T | T§ | T¶ | X |
| Gas | X | X | T | T§ | T | X |
| Telegraph | X | X | T | T | T | X |
| Telephone | X | X | T | T | T | X |
| Transportation | X | X | T | X | T | T |
| Water | X | X | X | T§ | X | X |

*One-half exempt.
†Taxed by separate admissions tax.
‡Admissions to motion pictures costing less than 75¢ are exempt.
§Exempt if used in manufacturing.
¶Exempt if used in agriculture, manufacturing, or mining.

Source: Alfred G. Buehler, *Tax Study, State of Connecticut*, Table 58. (Illinois in effect taxes utilities, through special provisions.)

expenditure tax. Under an expenditure tax the individual reports his net assets as of the beginning of each year, together with his net income. This combination of information permits taxable spending to be estimated indirectly, and saves the work of taxing each separate sale. Moreover, the expenditure tax is an *ad personam* tax, and could be equipped with a progressive (spending) rate structure. The charge of regressivity levied against the retail sales tax could thereby be avoided.

This is no place for a detailed discussion of a quite difficult and relatively novel tax concept. The present writer has argued (*American Economic Review*, March 1943, pp. 63-74) that the administrative difficulties of an expenditure tax are by no means insuperable. Even so, formidable obstacles do appear in the definition of taxable expenditure. The major objection to an expenditure tax is its perverse cyclical action, since consumption is discouraged relative to saving in depression as well as in prosperity. But at a low flat rate (3-5 per cent) this discouragement to consumption would be no more noticeable than that occasioned by a retail sales tax including both tangible personal property and most, or all, services. Therefore, the existence of sentiment among economists for an expenditure tax is hereby noted, although it is not suggested that it is a practicable tax device at the provincial and state level.

## A NOTE ON THE INDIANA RETAIL SALES TAX CREDIT

On the introduction of the Indiana retail sales tax of 2 per cent in 1963, provision was made for a tax credit of $6 per person. This exemption, equivalent to the exemption of $300 of taxable purchases from the retail sales tax, was restricted to individuals residing in the state at least six months. The credit is against individual income tax liability, and a refund is made to the taxpayer if he is not liable for state income tax, or if his tax falls short of the amount of the credit. Provision for calculating and applying for the tax credit is made in the Indiana state income tax form. The rebate is independent of the size of family income.

The rebate is made at the end of the year, which is a disadvantage to families not subject to income tax. Taxpayers are allowed until April 15 to claim the credit, or to apply for the rebate. The writer is informed that, because the rebate first became effective in January 1965, as of the spring of 1965 no official information is yet available on its operation.

The Indiana legislature has had under consideration the possibility of introducing a variable credit, which would have eliminated the sales tax on low income families (Engrossed House Bill No. 1357). The per-capita tax credit would be, under a plan submitted by Professor James A. Papke of Indiana University, $8 for families with adjusted gross income under $3,000, $7 for families with income between $3,000 and $4,999, $6 for families with income between $5,000 and $6,999, and $5 for families with income of $7,000 and over. Professor Papke notes that the plan would exempt two-thirds of the food expenditures of the average family having an income of over $7,000.

## FOOTNOTES

[1]The Illinois tax has been broadened since the above was written, and the constitutionality of the changes is being tested in the courts.

## CHAPTER 7

# Economic Consequences of the Ontario Sales Tax

THIS chapter deals with the nature of the effects of a retail sales tax imposed at the provincial level on the allocation and use of resources by governments, business firms and households; effects on consumption, saving and investment; impact on productivity and economic growth; relative stability of yield of the retail sales tax over the business cycle; secular trends in yield of the tax; and finally, implications for all of the above of integrating the federal and provincial sales taxes at the retail level, while utilizing the retail sales tax machinery already established by the sales tax provinces.

Many of the issues raised and conclusions reached in this chapter have already been touched upon in previous chapters. The present chapter is in large part an evaluation and summary of these conclusions. Since the Ontario tax has been in operation only a short time, the conclusions necessarily derive from the experience of other taxing jurisdictions.

### Effects of the Ontario Sales Tax on the Allocation and Use of Resources by Governments, Business Firms, and Households

It is necessary to be clear at the outset on the distinction between the subject matter of this section and that of the following section on effects of the sales tax on consumption, saving and investment. We are concerned at this point with the specific role played by the retail sales tax in use by Ontario with respect to the amount and the mechanism of resource transfer from the private to the public sector. We shall work under the assumption of full employment, and the conclusions are thus subject to modification to take account of periods of cyclical unemployment, as well as any tendency of the economy toward secular unemployment.

An important element in the determination of the magnitude of spending programs at the provincial and state level is the availability of tax revenues and the ability to borrow. For that reason, to the extent that it can be shown that the Ontario sales tax, like the sales taxes of other provinces and states, contributes to extending the limits of taxable capacity, the sales tax deserves independent credit for facilitating the transfer of resources from the private to the public sector. This is in contrast to the situation at the federal level. There spending programs are determined upon with less weight to tax considerations, the mode of finance being rather (though of course not entirely) secondary. It cannot be said with as much conviction, therefore, that the possession by a national government of a general sales tax contributes to the expansion of spending programs. If national welfare is thought to depend on such a spending expansion, ways will be found to finance it, if necessary by inflationary borrowing from the banking system.

In the constitutional and legislative circumstances that obtain in the province of Ontario (as well as in all the other provinces and states), it seems clear that a general retail sales tax of the kind in operation in Ontario will contribute to the

extension of the limits of taxable capacity. Therefore the limits of public spending programs may be similarly expanded. Of course, it is not the tax instrument but the act of public spending that effects a resource transfer from the private to the public sector under conditions of full employment. Nevertheless, the tax instrument plays an independent role in this mechanism since it seems evident that Ontario's expenditure programs would be less extensive in the absence of the tax.

Granted that a sales tax extends the limits of taxable capacity, the question arises whether the consequence of this fact is likely to be greater efficiency of resource use, and thus a net contribution to social welfare. The answer to this question depends in the main on the use that would have been made of the transferred resources by the private sector, in the absence of the tax, and the use that is actually made of these resources by the province equipped with the tax. Secondarily, it depends on the frictional cost of financing the transfer of the resources through the use of the sales tax rather than through an alternative mode of financing. If public spending programs are well within the limits of taxable capacity, so that the sales tax is merely an alternative to other taxes rather than an addition to the tax system, it is necessary to consider the comparative frictional aspects (i.e., social and economic costs) of using the sales tax rather than an alternative tax (or inflation). Otherwise, the comparison is between the advantages of an extension of public spending programs and the frictional and other social costs of introducing the sales tax to finance the programs.

It is conceivable that contemplated public spending programs may be expected to make such a marked contribution to social welfare that if it is the possession of a sales tax that makes them possible, the various disadvantages of the tax in terms of lack of progression, administrative problems, etc., should be overlooked. Indeed, it is precisely this consideration that has led to the introduction of sales taxes at the provincial and state level. The only question is whether or not governmental executive and legislative authorities are correct in their comparative evaluations of the benefits of an expansion of public spending programs financed by the sales tax. This is a social and political question that does not fall within the purview of the economist, and it will be accepted here that the demand for public services provided by the Province of Ontario has grown in such fashion that an undesirable brake would have been applied to their fulfilment had Ontario forgone the use of this tax.

Once we descend below this highly general level of discussion, however, the specific nature of frictional and other economic and social costs of the sales tax becomes evident. As an instance may be cited the fact that different forms of sales tax may have greater or lesser effects on the efficiency of resource use. These must be taken into account if we wish to maximize the net contribution of the tax structure of the province to social welfare.

Consider first the frictional aspects of using a sales tax to finance expenditure programs. Are these frictions more, or less, serious under a general retail sales tax than under alternative methods of financing? The answer to this question is *not* the basis for simply accepting or rejecting the sales tax, but it does serve a purpose in assisting in the evaluation of its relative efficiency. In comparison with most other forms of taxes on expenditure the retail form of sales tax comes out

quite well. To be sure, a spendings (or expenditure) tax would be superior to it. As an *ad personam* tax a spending tax could be easily made subject to exemptions and a progressive rate structure. Moreover, assuming that a viable distinction were satisfactorily made between consumption and saving under an expenditure tax, this tax could rather easily be administered in conjunction with the personal income tax (and, if desired, a net worth tax). General lack of legislative and public support for the expenditure tax, however, makes it scarcely worth while to consider it seriously.

The retail form of sales tax is superior to the tax applied at the wholesalers' or manufacturers' stage, and is far superior to a turnover, or gross income or receipts tax. The incidence of the tax is more definite, and the frictions involved in shifting of the retail-stage tax are obviously much less serious. Far less interference occurs with respect to the pricing structure. Again, shifts in the composition of demand for goods, services, and productive agents are easier to ascertain under the retail sales tax. On the other hand, the number of taxpayers is much larger under the retail sales tax than under the manufacturers' or wholesalers'; but under the turnover, value-added, gross receipts and gross income taxes the number of taxpayer units is likewise very large. Frictional costs of a sales tax are not merely a function of the number of taxpayer units, however. Also involved are the more difficult definitional problems and classification decisions that have to be made under the manufacturers' and other earlier-stage taxes. These constitute an administrative (and therefore social) cost of these forms of sales tax that is in addition to collection costs.

One of the frictional costs of the transfer of resources from the private economy to the Province arises out of the necessity of using the financial instrument of taxation rather than the direct transfer of productive agents and resources by governmental fiat. The possibility exists that a retail sales tax is subject to either more or less criticism on this score than are alternative revenue sources. This kind of friction will be minimal the more nearly the composition of additional governmental demand for commodities and resources accords with that of the taxpayers who are forced to curtail their taking of commodities and resources by virtue of a decline in after-tax income.

The burden of a retail sales tax will rest on consumers if as a result of the tax the prices of consumer goods rise more than factor incomes do. Although it is far from certain that this is the inevitable result of the tax, it is a very likely one. The burden is distributed in accordance with the composition of consumer spending as between taxed and untaxed goods. This in turn determines the distribution of the reduction in demand by consumers, as well as that of firms producing consumer goods (and so on back through the production stages).

Since sales taxpayers will also reduce their saving (in accordance with their aggregate marginal propensity to save), firms hitherto borrowing and investing these savings will be forced to curtail their demand for investment goods and labour. They will not need to do so, however, if the economy has been subject to underemployment, or if the banking system increases the level of loans to compensate for the diminished flow of savings from sales taxpayers. In the latter case the effect is to force a rise in prices, and the social cost of this price rise (in terms

of distortion of spending patterns, accelerated private spending, shifts in demand, etc.) must be taken into account. In any event, we must conclude that sales taxpayers' actions in bringing about a reduction in demand for privately produced consumption and investment goods releases a given set of commodities and production agents. But the additional demand of the Province will certainly not be for precisely this bundle of resources. The greater the divergence, the greater the frictional costs involved in effecting the transfer of resources from the private to the public sector.

This phenomenon is not restricted to the sales tax alone, of course, but is characteristic of all methods of financing a rise in public spending, including inflationary borrowing from the banking system. It is largely absent, moreover, if there are significant amounts of involuntary unemployment, for in that case a large part of the additional public demand for goods and resources is satisfied from the ranks of the unemployed and from inventories of commodities and resources. One point may be made, however. Since the incidence of the retail sales tax is largely, or almost entirely, on the consumer, the composition of the additional governmental demand for resources is likely, in the short run at least, to differ from that of the taxpayers to a greater extent than would be the case if a tax were used that rests more heavily on business saving. The composition of government demand probably more closely resembles that of investment demand than it does that of consumer demand. On this score it may be argued that the economic cost of the resource transfer would probably be somewhat lower if the personal or corporate income taxes had played a more important role relative to the sales tax.

More important than the frictional costs of resource transfer are the distortions caused by exemption policy under the sales tax. Some of the effects on resource use are obvious from the nature of the exemption, and do not require discussion. The food and children's clothing exemptions, exemptions to certain classes of purchasers, and the like, have the effect of increasing after-tax purchasing power of favoured groups. This fact will be reflected in the structure of demand and output. The effects are not great under a 3 per cent tax, become more noticeable at the 5 per cent rate in force in a number of provinces, and would become highly important if the federal and provincial sales taxes were to be integrated at the retail stage at a combined rate of perhaps 11 or 12 per cent. The reason is that exemptions would likewise be integrated at the federal and provincial levels, so that there would be considerable pressure for resources to flow into exempt categories of spending. An implication of the otherwise very desirable procedure of integrating the federal and provincial sales taxes is therefore the need to re-examine most carefully the rationale of every exemption. By the same token, taxability where exemptions or exclusions ought to be granted would likewise create serious distortions under a federal-provincially aligned sales tax system. Great care would thus have to be taken to eliminate from the tax sales to producers, whether the personal property involved is a physical ingredient, merely a catalyst, directly used in production, or machinery not directly used. Not only does violation of this principle create haphazard tax shifting and incidence, thus creating distortions of resource use domestically, but it also raises total production cost, with adverse effects on the nation's balance of trade position.

The ideal policy with respect to exemptions may be expressed as follows. Every effort should be made to maximize the scope of exclusion of producer goods from the tax, while exemption of tangible consumer goods and services should be held to a minimum. Most of Ontario's present exemptions (except for food) accomplish little by way of contributing to equity among income groups, and are hardly worth the administrative cost they entail. Moreover, the food and children's clothing exemptions are, as they stand, a gratuitous boon to thousands of families who are quite able to pay the tax.

## EFFECTS OF THE ONTARIO SALES TAX ON SAVING, CONSUMPTION, AND INVESTMENT

The usual argument with respect to the effect of a retail sales tax on the saving-consumption ratio, and on investment, is that it encourages saving and discourages consumption. Those who adopt this view would grant that at the low rate of 3-5 per cent the effects are not great. At the high rate that would be applied were the federal-provincial sales tax integrated into a retail sales tax, they would suppose the consumption-saving distortion to be substantial.

In evaluating this argument it is necessary to bear in mind that the effect on the consumption-saving ratio of a sales tax whose burden is assumed to fall on the consumer depends on income size. Those in fairly high brackets will simply reduce saving, since for them saving is a residual after achievement of the desired level of living. Similarly, some low income families do not have a systematic saving program, and to the extent that they have a margin of saving out of income, here, too, the effect may be primarily a reduction in saving rather than in consumption. Other low income families, however, not at the margin of subsistence, have quite fixed saving commitments in the form of various types of insurance. For them the tax can mean reduced consumption. A wide range of middle income families may react to the tax by reducing either saving or consumption, or some combination of the two.

A further consideration is the fact that under a permanent retail sales tax there may be little point in the typical middle and lower income family's reducing consumption spending in order to avoid tax. In later life, when savings will be converted into consumption spending, they will become subject to tax, though it is true that compound interest on deferred tax will have been saved. In particular, there is no point in deferring purchases of very durable commodities, e.g., furniture, tableware and the like. Since some illusion of tax avoidance will probably exist even though people know the tax to be permanent, the lifetime consumption-saving pattern of the family will be somewhat affected, particularly at high rates of tax. On the other hand, for those families in the aggregate any reduction in consumption spending in early life in response to the tax is likely to be offset by a corresponding addition to spending and tax liability by those family units that are advanced in age. In the aggregate, assuming stable population, the distorting effect should be minor. The exception to this is the family dynasty, in which saving is carried on for reasons other than subsequent consumption. In this case lifetime sales tax liability could be avoided by reducing consumption. But families in these high

income brackets do not have an incentive to reduce living levels in order to reduce tax. We conclude that it is important not to overestimate the distorting effects of a permanent sales tax on the saving-consumption ratio.

The exemption or taxability of services plays a significant role in the effect of the sales tax on the saving-consumption ratio. It is generally agreed that, although "services" is a complex concept, their exemption favours the higher income groups, who consume a relatively large proportion of services relative to tangible personal property. This raises the average propensity to save of the economy as a whole, and stimulates the ratio of saving to consumption.

From the belief (if this is accepted) that a sales tax is not likely to have a great effect on the saving-consumption ratio of most families it must not be inferred that a sales tax will not affect aggregate investment and national income, and therefore aggregate saving. Some economists believe that by discouraging consumption, sales taxation may have the effect of discouraging the inducement to invest. It is true that if a national economy suffers from an excessively high ratio of saving to national income, any aggregative discouragement to consumption will worsen the situation. A sales tax would not appear to be an ideal tax for an economy suffering from secular stagnation. But evidence of the past twenty years does not lend much support to the view that this will soon be a problem in the typical economy of the second half of this century. At any rate, there does not appear to be evidence that the rapidly rising popularity of sales taxes has actually discouraged consumption, and thus investment.

## EFFECTS OF THE ONTARIO SALES TAX ON PRODUCTIVITY AND ECONOMIC GROWTH

Despite substantial differences in the fiscal systems of Canada and the United States, the use of a (retail) sales tax at the provincial and state level has been thought in both countries to make an indispensable contribution to productivity and economic growth. This belief is based on two considerations. (1) In the post-war period balanced economic growth has called for a very sharp and long continued rise in provincial and state expenditures, to finance the kinds of public investment and services that are customarily made at this level of government. (2) As matters have stood institutionally and politically, the sales tax has played an indispensable part in extending the taxable capacity required to permit the needed expansion of investment at the provincial and state level. It was not until 1961 that Ontario had to make a decision between the alternatives of debt expansion beyond the rate believed by the government to be safe, and the introduction of a new tax revenue source. The retail sales tax was settled upon because of the limitations imposed by federal-provincial fiscal relations and in the light of the productivity of the sales tax in other provinces, particularly Quebec.

Like the United States, Canada has experienced difficulty in maintaining an adequate growth rate and a high level of employment. Under the Tax Sharing Agreement of 1962, Ontario received the right to levy personal and corporate income taxes at whatever rates it chose. It was decided, however, to introduce a sales tax because (according to the Budget Statement) it was thought that the income tax, added to that of the federal government, would be unfavourable to incentives to save and invest.

It is not possible to assess this argument in the non-specific form in which it was made. A condition of maximum (or optimum) economic growth is indeed an optimum relation between consumption and investment. In practice, however, this optimum is not easily identifiable. Moreover, it varies with the stage of the business cycle. Differences of opinion exist among cycle theorists on the relative roles of consumption and investment in contributing to the maintenance of economic stability at high levels of employment. When this disagreement among theorists is compounded by the opposition between the interests of "consumers" (the lower income groups) and "savers and investors" (the higher income groups), it is easily seen that the debate is likely to be permanent.

One can concede that a schedule of personal income tax rates might conceivably be so high as to stifle incentives to work, save and invest. On the other hand, an extremely heavy tax burden on the mass of consumers can, via income effects, seriously weaken the objective of all investment, which is to produce consumer goods. Unfortunately, in the light of the highly dynamic nature (cyclically and secularly) of the optimum relationship between aggregate consumption and saving, there is within broad limits no particular set of progressive income tax rates that can be permanently denominated either as "too high", or as still providing scope for a further rise without damaging incentives.

Despite these *economic* doubts, the contribution of the retail sales tax to productivity and growth can be shown to be both positive and significant if the centre of political gravity is such that additional public investment (1) is required for balanced growth, and (2) is only possible if a sales tax is introduced (or its rate raised). Another way of stating this is that political constraints may make the sales tax the only feasible road to the extension of taxable capacity, and thus to the acceleration of economic growth by way of an improved balance between consumption, private investment and public investment.

An important aspect of the problem is the extent to which the sales tax, in comparison with other modes of financing public investment expenditures, contributes to tax consciousness and a critical evaluation on the part of the public of proposed provincial spending programs. It is hard to see that either the retail sales tax or the individual income tax comes off substantially the better on this criterion of performance. But it may be conceded that the retail sales tax is superior to sales taxes imposed at earlier stages, and thus concealed from the view of the taxpayer, just as the individual income tax is superior to the corporate income tax for the same reason.

Still another aspect of the impact of a sales tax on productivity and growth is the (rather remote) possibility that the tax may cause a rise in the general price level, and thus contribute to the tightening of monetary policy. If this were to occur, the sales tax would be directly responsible for the adoption of a control measure that would tend to put a brake on output and employment, particularly in the upswing phase of the business cycle. This would likewise have adverse effects on the long-term growth rate. Admittedly this would be a rare event, and would only have significance if sales tax rates were sharply raised in the midst of a wage-price spiral.

There are two ways in which the sales tax might motivate the monetary

authority to apply the brakes. (1) If it be accepted that the imposition of a sales tax, like an autonomous wage or price mark-up, can produce a rise in the cost-of-living index, the transactions demand for money will increase provided output does not decline proportionately. Under prosperous conditions output is not likely to decline, and transactions demand will in fact rise. If the monetary authority feels itself faced with the necessity of stabilizing the price level, it will refuse to satisfy the rise in the transactions demand for money. The ceiling imposed on the money supply in the face of the rise in transactions demand will force up the rate of interest, and the latter development will discourage those marginal investment projects that are sensitive to interest rates. The quantitative importance of this chain of events is not likely to be very great, however, when sales taxes are initially introduced at modest rates, with rises in the rate coming gradually over a lengthy period of years.

(2) A sales tax is an *ad valorem* tax, and the proceeds of the tax therefore rise automatically in response to rising prices. To be sure, the proportion of the sales price accounted for by the tax does not change. However, if the cause of the rise in the general price level is a demand inflationary gap, forward shifting is encouraged. The sales tax, therefore, contributes to furthering the rise in the price level, and thus adds its pressure to the forces moving the monetary authority in the direction of restriction. The quantitative effects in this case are not likely to be very important under a 3 or even a 5 per cent retail sales tax. The picture may be different, however, when account is taken of the federal sales tax along with that of the province. A retail sales tax rate totaling 11-13 per cent or more could exert perceptible effects on the general price level as conditions favouring forward shifting varied in response to the several stages of the business cycle. It should be noted that this argument is not based on the usual assumptiton, followed in this as well as most other studies of the incidence of the retail sales tax, that the tax is largely shifted forward to the consumer. The present model allows a varying forward-backward shifting ratio in response to the operation of dynamic economic conditions; and it assumes that the monetary authority is sufficiently sensitive to these forces that its decisions with respect to the money supply are visibly affected by them.

Finally, the fact that elimination of the federal manufacturers' sales tax, and its replacement with a retail tax, reduces tax pyramiding is an anti-inflationary influence. To the extent that sellers who have a degree of control over price elect to mark up tax cost at each stage, the reduction of the number of stages to one (the retail stage) eliminates this inflationary factor originating on the cost side. This is a one-shot affair, however. Its beneficial effects are felt at the time the transition to the retail sales tax is made.

## CYCLICAL STABILITY OF YIELD OF THE RETAIL SALES TAX

Retail sales tax yields are less responsive to cyclical fluctuations in business than are those of a progressive income tax. During the upswing, individuals are thrown into higher brackets, so that effective income tax rates rise. Conversely, in a recession characterized by declining personal incomes, not only does the

income base decline, but the average effective income tax rate likewise falls. Individual income has not fluctuated violently in the post-war cycles, however, and this has been particularly noticeable in the contraction phase. Consequently it is important not to exaggerate the built-in flexibility of the individual income tax. On the other hand, once a contraction (or expansion) has developed into something more than "minor", individual incomes must reflect this; the full effects of rate progression are brought into play, and the income tax proves to be highly sensitive to the cycle. This sensitivity is felt only under a progressive rate schedule. In the U.S. states, for example, rate progression is very limited, and the states' income taxes are consequently not likely to be much more sensitive to cyclical movements in gross national product than is the sales tax.

This statement holds good for the relatively moderate cycle characteristic of the post-war period, but would have to be modified for a severe cyclical movement. In the latter event personal consumption spending would undoubtedly hold up better in recession than would taxable personal income. Thus Ontario's retail trade (current dollars) has risen every year (according to Dominion Bureau of Statistics, *Retail Trade Ontario, 1941-1962, Statistics on the Ontario Economy*, 1962), though the rise was insignificant in 1954 and again in 1960. One important reason for the continued (though slower) rise in recessions is that individuals reduce saving, or draw on savings accounts, to prevent consumption from falling. Another is the automatic (and sometimes legislated) rise in unemployment relief and other types of transfer payments during a recession. It is probable, in any future *severe* depression, that unemployment benefits will be extended as long as need be. Therefore in a depression, in contrast to a minor recession, consumption expenditure, and provincial sales tax receipts are likely to be more stable than are individual income tax receipts.

We must not overlook the fact, however, that each business cycle has characteristics of its own, and that one of these characteristics is the composition of consumer spending. Spending on non-durables tends to hold up well in any minor recession, but spending on durables depends significantly on the nature and causes of a particular cyclical episode. So far as it is safe to make inferences from retail sales data (without taking into account special situations unrelated to the business cycle) the differential behaviour of important components of total retail sales value is strikingly illustrated by Ontario data. According to the above-cited source, the value of sales by grocery and combination stores rose in each year from 1942 to 1962. Even more important, it would be difficult to identify recession years on the basis of any significant slowdown in the rise in sales in this sector. Much the same picture is shown by sales of clothing stores, though there was a moderate decline in 1961. The fuel sales contour is less clear, declines having occurred in both 1952 and 1953, and again in 1960.

Sales by department stores rose in every post-war year. Sales by garages and filling stations declined in only one year, 1960, and even then the decline was hardly significant. Thus it seems clear that the yield of the general retail sales tax would be somewhat more impervious to recessions if the fact that gasoline is already subject to a special excise were not made the ground for exemption from the retail sales tax.

The picture is quite otherwise with respect to sales by (1) motor vehicle dealers; (2) hardware, lumber and building material dealers; and (3) sellers of furniture, appliances and radios. Substantial declines in the value of sales of motor vehicles occurred in each of the years 1954, 1957 and 1961. Declines occurred in sales under the second category in 1952, 1957 and 1960, and again (slightly) in 1961. In the third category declines occurred in 1954, 1957, 1958, 1960 and 1962. A rough idea of the relative importance of those three classes of sales, which strongly reflect the recession, may be gained from the fact that in 1962 they represented 44.5 per cent of total sales.

Finally, the role of "other" should be noted. Only in 1954 was there a decline, though the rise was very small in 1960, and not very great in either 1961 or 1962. This item accounted for 30.8 per cent of the total in 1962, and therefore must be considered as making an important contribution to the cyclical stability of the retail sales tax.

A very substantial contribution would be made to the cyclical stability of the retail sales tax if the taxability of services sold to consumers were considerably broadened. Experience in all countries indicates that in the post-war type of business cycle sales of services go right on up through recessions. Indeed, it is sometimes difficult to detect the presence of recession if this variable is examined in isolation. Since the demand for public goods provided at the provincial and state level likewise shows imperviousness to recession, it seems appropriate that the sales tax, one of the major revenue sources of the provinces and states, might include in its base the bulk of consumer services.

Another aspect of the special demand (and supply) situation with respect to consumer services is the tendency for service prices during a boom to rise more rapidly than the prices of tangible personal property, and indeed to continue to rise into or through a minor recession. This fact not only enhances the potential contribution to cyclical stability of sales tax revenues, but it likewise implies a contribution to minimizing the regressivity of the sales tax. Higher income groups consume relatively more services, they pay higher prices per unit of services because of a secular shift to services that is noticeable even in recession, and the relative inelasticity of supply of labour available to service industries adds its weight still further to the price rise of services. From this point of view the argument seems unanswerable that the consumer services category ought to be included in the Ontario retail sales tax, and ought to include as large a number of services as possible. We are not arguing, of course, for the blanket inclusion of all services. (See Chapter 6.)

## SECULAR TRENDS IN SALES TAX YIELDS

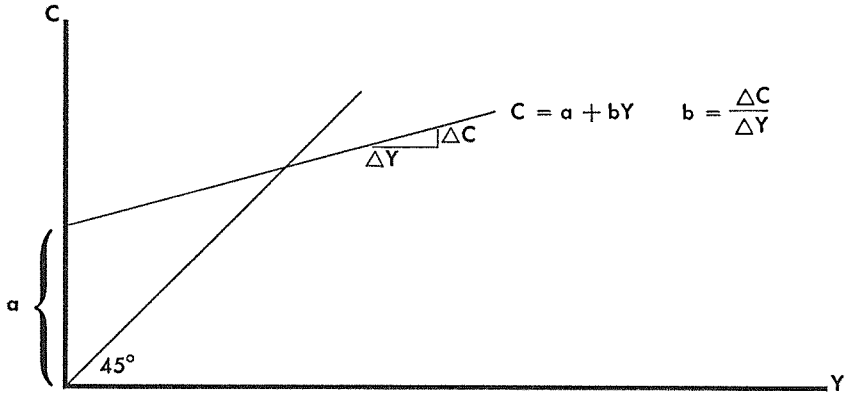
Long-term trends in the yield of the retail sales tax at given rates and with given exemptions are determined by the elasticity of spending on taxable commodities with respect to secular movements in disposable personal income. They are also affected by trends in the retail price level, or more accurately, by relatively long-term movements in the prices of taxable and exempt goods (and services). A further influence is the trend and the age distribution of the population. Increasing

average family size means higher sales tax receipts in proportion to the incomes of heads of families. Age distribution is important because different age groups devote different proportions of their incomes to taxable and exempt goods and services. Thus a relatively high proportion of children and the aged means, under the Ontario sales tax law, a relatively large amount of spending on exempt children's clothing and exempt medical and other services largely consumed by the elderly. Large numbers of individuals concentrated in the age brackets forming new marriages mean relatively heavy sales tax receipts from spending on house furnishings, etc., which are taxable. Not only this, but the practice of taxing *expenditure* on durables, rather than the *consumption* of durables, serves further to concentrate sales tax receipts from this source into periods when family formation is high. It is important to note that if exemptions are minimized, and if most services are subject to tax, the importance of the age contour of the population is reduced as a determinant of trends in sales tax yield.

A potential long-term influence on retail sales tax yields is the behaviour of the consumption function in response to rising per-capita real income. Economists have given a great deal of attention to this phenomenon because of its implications for the maintenance of full employment. But it also has implications for the yield of the sales tax. The widely accepted Keynesian consumption function states that as personal income rises, consumption will rise but not by as much as income. That is, part of any increase (other than a random increase) in disposable income will be devoted to saving. In terms of economic stability this poses the problem of assuring that intended investment rises along with the increase in intended saving. In terms of sales tax yield, it means that rises in taxed sales of consumer goods fall short of rises in disposable personal income.

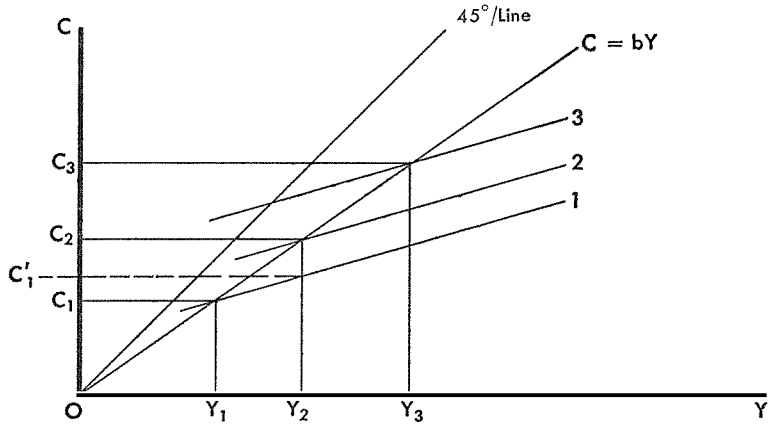
Keynes went further and speculated that over the long period the average propensity to consume might fall. That is, with rising per-capita real income in response to productivity advances, more and more families would find themselves in a position to save a portion of income. If this supposition were to be borne out, it would mean that the secular yield-elasticity of the retail sales tax would fall short of that of a *proportional* individual income tax; and it would fall still further short of the yield elasticity of a *progressive* income tax. Many economists believe that in time the public's absorptive capacity for durable and non-durable consumer goods will begin to decline. If and when that day came, the growth potential of the retail sales tax would become circumscribed.

Statistical studies of the long-term consumption function, however, do not thus far give much reason to fear that a substantial rise will occur in the proportion of aggregate disposable income that is saved, and thus not subject to retail sales tax. On the contrary, a number of explanations have been set forth to account for the apparent inconsistency between a short-term marginal propensity to consume that is non-proportional and less than unity, and a long-term propensity that appears to be proportional. If we express the short-term consumption function as a linear equation: $C=a+bY$, we are saying that at any level of income (Y), aggregate consumption is a constant (a) plus a proportion (b) of income. That is, the consumption function is a straight line with a slope less than 45°, and cutting the Y axis above the origin, thus:




If the consumption function has a slope flatter than 45°, and a positive Y-intercept, a, the average propensity to consume must fall with rising income. That is, in the preceding diagram, a straight line drawn from the origin to successive points on the consumption function becomes flatter and flatter. The average and marginal propensities are equal only when the consumption function passes through the origin (not necessarily at 45°). But if the average propensity is to remain constant over the decades rather than to fall (and *a fortiori*, with Keynes, if the average propensity it to *rise* over the long run), how can this be reconciled with the short-term consumption function as described above?

It is not necessary to go into the explanations of this that have been given by various economists. It is sufficient to point out as an illustration that one explanation is that over time the short-run consumption function keeps shifting upward, thus tracing out a long-period function that is proportional (that is, goes through the origin), and describes a situation in which rising productivity and rising per-capita real income do *not* result in a rising proportion of income devoted to saving for society as a whole. This is illustrated as follows:

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If income in Year 1 was $Y_1$, consumption function 1 applicable to that year would indicate an amount of consumption equal to $OC_1$. If income rose in year 2 to $Y_2$, with no change in the consumption function, consumption would be $OC'_1$. But suppose the consumption function had shifted up in the meantime. Then consumption would be $OC_2$, a larger amount. This phenomenon is described in more detail by Ackley,[1] who points out that Kuznets's data support the view (for the United States, 1868-1938) that the equation for the long-period consumption function was roughly $C=0.9Y$. That is, the consumption function was gradually shifting up so that the long-term marginal propensity to consume (b) was about nine-tenths, and proportional.

No one can say with confidence that the trend in the consumption-income ratio that has become established in Western World economies in the last 100 years or so will be maintained in the future. At the same time there is no evidence that any significant change is in prospect. Therefore we conclude that for the foreseeable future the provinces and states may anticipate that consumption spending will rise secularly about in proportion to the rise in income. If this proves to be so, then retail sales tax yields can be counted upon to rise in proportion to the rise in the yield of a proportional income tax. One proviso is, of course, that gradually rising per-capita real income does not involve a significant shift to non-taxed consumer goods and services.

A few words need to be said about the impact on sales tax receipts of long-term movements in the consumer goods price level. Productivity increments affect per-capita real income, and thus the secular movement of the average propensity to consume. But they also affect cost of production. If technological advance is partly translated into lower costs and prices, both sales tax receipts and costs of provincial investment projects fall. In the event that in the consumer goods industries competition is keener, and downward flexibility of prices greater, than in the industries producing commodities for government use, the upward secular trend in technology works against the real productivity of the retail sales tax. For real wage rates rise in the consumer goods industries by virtue of *falling* prices and relatively stable wage rates. Provincial revenues therefore tend to decline (or rise relatively slowly) because of the falling prices of taxed commodities. In the investment and intermediate goods industries, on the other hand, which sell to the Province, real wage rates rise by virtue of rising money wage rates and *fairly stable* prices. Thus on the expenditure side the Province does not gain from falling prices of governmental purchases, while on the tax side it loses because of the decline in the prices of sales-taxed consumer goods. This imbalance between revenue and expenditure experience might conceivably add to provincial fiscal difficulties, although there is no reason to believe that this is likely to be serious. The considerations of the present paragraph have been introduced primarily for completeness.

## THE QUESTION OF INTEGRATING THE FEDERAL AND PROVINCIAL SALES TAXES

The federal manufacturers' sales tax became law on January 1, 1924. It was intended to do away with the complex problems of equity and administration that had made the turnover tax of 1920 increasingly unacceptable. (The turnover tax was originally introduced at a rate of 1 per cent, but the rates were later differenti-

ated and increased.) The new tax was introduced at a 6 per cent rate, but in the face of opposition spearheaded by the Canadian Manufacturers' Association steps were taken to reduce the rates gradually, with the ultimate objective of the elimination of the tax. The Great Depression, and later World War II, prevented the achievement of this goal. Nevertheless, considerable sentiment arose to replace the manufacturers' tax with a wholesalers' tax. The reason was the difficulty of arriving at a fair tax base for direct sales by manufacturers to retailers or consumers. The details need not concern us here, but they may be summed up in the statement that direct sales require the construction of a putative tax base, with corresponding difficulties of administration and compliance. The complexities of manufacturers' sales practices, characterized by a rise in the proportion of direct sales, made it increasingly apparent that the manufacturers' sales tax is difficult to administer. The problem is in essence one of the complexity of channels of distribution, together with the fact that in a dynamic economic society these channels are in a constant state of flux.

Other advantages and defects of the federal manufacturers' sales tax may be mentioned. An outstanding advantage is the relatively small number of taxpayers, about one-fifth of the number that would be subject to tax were the tax applicable to the retail stage. Moreover, the manufacturer generally is larger and keeps better records than the retailer. But the disadvantages are thought to outweigh the advantages. Early-stage taxes are subject to pyramiding, and the complex exemption system results in a heterogeneous burden on the ultimate consumer, who is generally assumed to bear the tax. In Canada the advantage of fewness of taxpayers is lost in view of the fact that the retail sales tax is in any event employed at the provincial level.

The evidence seems to be that a retail sales tax is easier to administer, and with a carefully worked out system of exemptions, a more precise instrument of taxation, than a manufacturers' sales tax.

On the other hand, it would not make much sense for the national government to set up separate administrative machinery to levy a retail sales tax along with that of the provinces. A decision would have to be made on whether the tax was to be administered by the federal government or by each province. Possibly there could be joint administration. If so, one of the objections to integration, namely that tax sovereignty of the provinces might be impugned by federal administration, would probably be removed. To make still more sure, one might opt for provincial administration. With federal co-operation in administration, the difficulties encountered in taxing interprovincial sales and imports would be eliminated. Joint administration would likewise imply a uniform sales tax law at both levels of government. Double taxation of tangible property transferred from one province to another would no longer be a problem. Finally, the task of audit would be performed more effectively.

In the writer's opinion, as mentioned earlier in this chapter, integration of the sales tax at the federal and provincial levels at the retail stage would require great care in exemption policy. At present, Ontario's exemptions and the exemptions under the federal manufacturers' sales tax, though indeed involving duplication, are by no means fully integrated. Consequently a move to integrate the two taxes into

a single tax applied at the retail stage would represent a much more severe distinction between taxability and exemption than exists at present. At the high combined tax rate the difference to the consumer, and to the vendor as well, of being subject to or exempt from tax would be very important. Much distortion of resource use would result unless exemptions were held to a minimum, and the tax interference with consumer sovereignty would be severe. Even exemptions enacted to achieve ends regarded as socially desirable become suspect when the non-exempt purchaser finds himself paying a tax of 10 per cent or more. By the same token it seems likely that lobbying for favoured treatment would become quite acute when federal-provincial integration of the tax was recognized as concentrating the impact of exemption and taxability.

A partial offset to the above criticism is the fact that the incidence of exemptions is more definite under a final-stage sales tax than under earlier-stage taxes. Although there is, to be sure, substantial scope even under the retail sales tax for changes in production and distribution processes to change the tax status of particular sales, this phenomenon would be much more widespread under the manufacturers' sales tax. Thus integration of the tax at the manufacturers' level would be a less satisfactory solution than integration at the retail stage.

A final point may be made. Integration of the retail sales tax under federal administration, or under joint federal-provincial administration, opens up the question of the use of the tax instrument for economic stabilization. The general sales tax has not been so used in Canada, but federal excises have been used to control consumption spending, for example, during World War II. The provinces can hardly submit to sacrificing tax revenues for purposes of economic stability, but the national government might conceivably wish to correct an inflationary tendency by raising the general sales tax rate, and immobilizing the proceeds to reduce aggregate spending. It could do this by increasing the federal rate, the provinces' tax rates remaining unchanged. It is true that any consequent decline in consumer spending would then reduce the base of the tax, and thus the yield to the provinces. This, however, would be true of any anti-inflationary federal measure aimed at reducing consumption spending. The difficulty, however, would be the natural tendency of the provinces to resent a fiscal measure of this sort at the hands of the national government under a jointly administered tax. The perhaps not especially novel inference is that the federal government would be more committed than it is even at present to restricting flexible consumption taxation to the excise taxes.

On the whole it seems advisable to integrate the federal and provincial sales taxes at the retail level, with provincial administration. Great care should be taken to exclude from tax all sales made prior to the final consumer stage, and minimum use should be made of exemptions under such an integrated tax to confer subsidies on particular classes of consumers.

The independence of the provinces should be upheld by restricting the federal role to the collection of the federal retail sales tax, and to lending assistance in efficient administration. If the provincial sales tax machinery were to be utilized, the sales tax-levying provinces should move to standardize their legislation and administrative machinery. The advantages of integration are many. Nation-wide

application of a uniform sales tax would at one stroke eliminate the difficulties caused by the existence of provincial boundaries. Effective pressure would be brought on the provinces to establish a uniform sales tax administration. The collection and audit forces would be trained under the terms of a single sales tax Act, simultaneously legislated at the national and provincial levels. This would not only reduce cost of collection and improve efficiency; it would also reduce compliance costs in comparison with the present system under which each province makes its own sales tax rules. Problems of tax avoidance arising out of the existence of provincial borders would be eliminated, and it would no longer be possible for imports to escape taxation by the provinces. Interprovincial double taxation in connection with the movement of tangible personal property across provincial borders would disappear.

The integration of the retail sales tax as between the federal and provincial levels does pose problems with respect to the fiscal independence of the provinces. A province obviously has more fiscal independence if it levies its own tax independently, retaining its rates and exemptions, than it has if it parts with a portion of its fiscal sovereignty in the interests of all the provinces and of the national government. But the federal government likewise sacrifices some of its tax sovereignty.

Regardless of whether the tax is administered by each province (but, of course, all operating under the same administrative set-up) or by the federal government, it seems clear that some provinces may at times feel that their sales tax revenues fall short of (or exceed) spending needs in the light of other revenue sources. This is not really loss of fiscal sovereignty, however, which occurs at the revenues fall short of (or exceed) spending needs in the light of other revenue encroaches on expenditure decisions that are best made at the provincial governmental level. There seems no reason to believe that this would occur under a retail sales tax administered co-operatively by the federal and provincial governments.

### THE MUNICIPAL SALES TAX

The question of the municipal sales tax lies outside the terms of reference of this submission. But if the municipalities were permitted to impose a sales tax, the problem of integration would extend through all three levels of government. Indeed, the case for administration of the tax by the Province, as standing in the middle, would be strengthened. A few comments on the potential role of the Province in the administration of a municipal sales tax therefore form a logical extension of the subject matter of the preceding subsection.

The basic question is the distinction between a shared tax, the Province collecting the tax and sharing a designated proportion with the municipality (minus the latter's share of collection costs), and permission to the municipalities that opt to do so to levy a tax in addition to that of the Province, again sharing collection costs.

Municipalities in Canada and the United States have often found the traditional local tax sources inadequate to cope with expanding demands for locally provided public services and the secular trend of rising prices. The city sales tax has made some progress in certain of the U.S. states; and the Province of Quebec,

alone among the provinces, permits its municipalities to levy a sales tax. On the whole, municipal general sales taxes have not been a very important source of revenue to the municipalities in the United States. In fiscal 1962 somewhat less than $1 billion was derived from this source out of total local tax revenues of $20.6 billion, or less than 5 per cent. Is this tax source likely to become substantially more important in the future?

Experience with municipal sales taxes has been favourable in Illinois and California, which have used the percentage addition approach to local sales taxation. An advantage of this device is that the municipality can itself decide whether or not it needs the tax, though most have decided that they do. In unincorporated areas the locality's share can revert to the county, if the locality does not wish to impose the tax. Otherwise, no local tax is levied. There is no problem in allocating the revenues to the municipalities in accordance with their collections. Merchants keep records in connection with provincial and state sales tax records, and code machines can quickly process the data. One difficulty is that some municipalities, lying outside metropolitan areas, are virtually shopping areas and nothing else. Their revenues therefore far exceed their needs. An advantage of the percentage addition device is that such municipalities do not have to impose the local tax if their revenue needs do not require it. However, if they do not impose the tax, their advantage over city merchants deriving from location is still further enhanced. It must be admitted that the percentage addition tax is significantly damaged by the growing popularity of the isolated shopping area. On the other hand, with the gradual expansion of city limits, this difficulty literally becomes engulfed. In any event, counties should have the right to levy tax in areas not taxed by municipalities.

The shared tax has the advantage that the state or province can, if it desires to, ignore source of collection of the sales tax, and distribute the proceeds in accordance with municipal revenue needs. On the other hand, this advantage may exist more on paper than in actuality. If distribution were on the basis of population within the municipality, this would take care of the shopping area problem mentioned above. But per-capita distribution may be a very poor measure of municipal revenue needs, which are the sum of many factors. A distribution formula, based on several criteria, could of course be worked out. But this might open the door to considerable bickering among the municipalities over the terms of the formula.

Perhaps the greatest advantage of the shared tax over the optional percentage addition is that localities are spared pressure to refrain from imposing the tax in order to favour the competitive position of local merchants. If the localities are to be given the right to utilize the retail sales tax, the total provincial and municipal sales tax rate ought to be uniform throughout the province. In brief, the retail sales tax should be integrated at all three governmental levels. This should by no means preclude a system of federal and/or provincial grants-in-aid to poorer municipalities, but this might well be independent of the sales tax. There is no reason to limit the distribution of revenues to the municipalities to the total proceeds of the sales tax alone, nor is it always appropriate for the Province to distribute any particular minimum percentage of the proceeds of the sales tax.

## CHAPTER 8

# Conclusions and Recommendations

The present chapter summarizes the recommendations with respect to the Ontario retail sales tax that have appeared throughout the study. In addition, specific recommendations are made on the sixty exemptions now in effect under the Ontario tax.

Ontario adopted the correct policy in introducing a retail sales tax in 1961. Like other provinces and states, Ontario needs independent revenue sources to finance expanded public investment and public consumption expenditures without a continued significant rise in the size of the provincial debt. Provincial expenditures promise to continue to rise in the foreseeable future. It is likely, moreover, that the ratio of provincial to private spending will also tend to rise. Regardless of one's philosophy of public spending, this calls for an extension of Ontario's taxable capacity.

In present economic, political, and institutional circumstances, the retail sales tax is the best practicable means of facilitating an expansion of Ontario's expenditures. By comparison, higher income tax rates might discourage investment, or tend to drive it outside the province. Therefore every effort should be made to improve the effectiveness of the tax. This involves the achievement of high standards of administration and equity, as well as steps to minimize its adverse effects on economic incentives.

An important incidental advantage of extending Ontario's taxable capacity through the use of the retail sales tax is that the size of the public debt can be kept from rising excessively. This will improve the financial position of the Province, and will enhance its borrowing capacity should a fiscal emergency arise at a future time.

The tax system at the provincial level should consist of several different types of tax. Not only does this make possible an expansion of tax revenues, but distorting and disincentive effects are spread over a wider area of the economy, and thus not concentrated at a few points. Moreover, possession of such disparate revenue sources as the sales tax, individual and corporate income tax, death duties, and possibly even a property tax or a net wealth tax could provide a province or state with a defence against adverse effects on tax receipts of cyclical fluctuations in national income.

The sales tax stands up well in depressions, and particularly so in the minor recessions that have typified the post-war period. Moreover, this tax has a good record of productivity during recovery periods. In view of the limited borrowing powers of junior levels of government, the sales tax has much to offer the provinces during periods of recession. In the expansion phase of the cycle its fairly elastic response to rises in income is likewise a count in its favour. Finally, in an

economy characterized by rising per-capita real income, a general public desire for secularly rising consumption standards contributes to an assured growth in the productivity of the sales tax.

Stability of sales tax revenues in recession is not costless from a social point of view. The ratio of sales tax liability to family income rises during the contraction phase of the cycle. Family spending on consumer goods declines less than disposable personal income. This is hard on the very low income receiver, who is unable to reduce taxable consumption spending very much despite declining income or even the loss of his job. This calls for an adequate system of relief and unemployment insurance; and to the extent that this is financed by the Province rather than by the national government, it works to offset the fiscal advantage of "recession-proof" sales tax revenues.

No concern need be felt that the adoption of a sales tax, or a moderate rise in its rates, is in any significant sense inflationary. It is true that a rise in retail sales tax rates can encourage cost-of-living rises in wage rates. Moreover, earlier-stage sales taxes in addition push up production costs, and to the extent that firms are in a position to translate cost rises into higher prices, the price *level* may rise. However, cost-push inflation is not likely to be important unless accompanied by substantial demand-pull. The latter can be eliminated by appropriate monetary policy. It is obvious that the use of sales taxes at earlier production stages can increase costs and prices, and thus injure the nation's export position unless appropriate monetary and fiscal policies are adopted by the federal government to offset this effect.

The sales tax, retail or otherwise, is not the ideal measure of taxpaying capacity based on consumption spending. An *expenditure tax* is to be preferred. This is a tax measured by the aggregate annual consumption spending of an individual or family—in other words, an *ad personam* tax. Such a tax can be subject to graduated rates, and thus can be made as progressive as desired. An expenditure tax, however, is not at present politically feasible. Moreover, this tax finds its most important function as an instrument for stabilizing the economy and contributing to its rate of growth. It is therefore more appropriate to the federal than to the provincial government.

The retail sales tax, provided producer goods are carefully excluded from the base, is superior to other forms of sales tax. When restricted to sales to the final consumer, the retail sales tax, like the value-added tax, is relatively free from undesired distortion of resource use. So restricted, the retail sales tax is likewise free from the tax pyramiding associated with whatever power monopolists and oligopolists may have to mark up price inclusive of taxes imposed at earlier stages.

As compared with sales taxes applied at earlier stages of the production and distribution process, the retail form has the advantage that the distribution of its burden and its economic effects are relatively definite and ascertainable. Earlier-stage sales taxes are more likely to become diffused as sales are made from stage to stage. A corollary of this advantage of the retail form is the fact that if it is desired to provide exemptions, such exemptions can be made to accord more closely with legislators' intentions. The incidence of *exemptions* under earlier-stage taxes is less clear, just as the incidence of earlier-stage *taxes* is more difficult to ascertain.

Appropriately defined, a retail sales tax on final consumer goods and a value-added tax amount to the same thing. Some tax experts favour the value-added tax, and this tax does have the advantage of avoiding concentrating the impact of collection on retailers. Moreover, the value-added tax facilitates the exclusion of producer goods from the tax base. Nevertheless the retail sales tax (if restricted to final consumer goods) is to be preferred to the value-added tax. An important reason for this is the long experience with retail sales taxation at the provincial and state level of government. Again, the number of taxpayers under a value-added tax is large, though compensation for the added administrative cost is found in the closer scrutiny of returns made possible to the auditing department when all firms are taxpayers.

To a limited extent a case can be made for the retail sales tax on the basis of the benefit principle of taxation. The Province produces public goods and services that benefit the mass of consumers in two ways. (1) If the inclusion of the sales tax in the armoury of revenue sources available to the Province permits a desired expansion of provincial institutions, (hospitals, penal institutions, etc.), parks, education, and the like, the direct benefits from such spending accrue roughly on a per-capita basis. Thus the distribution of the direct benefits is much like that of the sales tax utilized to finance them. (2) Many public activities at the provincial level contribute to the external economies of business firms. Thus production costs are lowered, and the consumer shares in the benefits. It is not inappropriate that part of the cost of financing these services should rest on individuals in proportion to their spending on consumption.

It should be held as no count against the retail sales tax that it begins to become markedly regressive at incomes above about $10,000 a year. Nor should there be concern that even with a food exemption the retail sales tax is only roughly proportional to incomes up to about $10,000, and slightly regressive if there is no food exemption. What counts is the impact of the entire federal-provincial-local fiscal system (including benefits from public spending as well as taxes) on the distribution of income and wealth. The desired after-tax and after-spending distribution should be achieved by a combination of inheritance taxes, an adequately progressive income tax rate schedule (federal and provincial combined), and the provision by all levels of government combined of the desired quantity of those types of public benefits that accrue primarily to the lower income groups.

The retail sales tax is therefore recommended as a good tax, subject to the condition that all possible measures be taken to avoid inflicting hardship on the very poor. Particularly if the scope of exemptions is narrowed, it is imperative *at the same time* to provide an adequate system of unemployment insurance, relief, and, possibly, a minimum wage.

A device sometimes urged to alleviate the impact of the retail sales tax on the very poor is to provide for a tax rebate to each member of the family, the rebate to be based on estimated annual consumption spending per person. The rebate could take the form of a deduction from income tax liability. If no income tax were due, it could take the form of a subsidy. This plan would involve a great expansion in the number of families making out income tax returns.

It is not recommended that if this plan were accepted the rebate would be available to individuals or families in income brackets above the very low levels. It is recommended that the exemption disappear at a low income level, say family income of $5,000 a year. Otherwise there is a great loss of revenue from those quite able to pay the tax. Admittedly the administrative problems might prove excessive, however, and this suggestion is left open for further study.

An alternative to the above device for alleviating the position of the very poor is to provide each individual with a book of stamps in the amount of an exemption from the sales tax. Collection of sales tax from him each year would not commence until these stamps were exhausted. This device is not commended, however, because of administrative difficulties involved in policing the system, and because of additional compliance costs. It is difficult to assess the political impact of the objection that is often made that this device smacks of war-time rationing. In any event, the loss of revenue from those able to pay the tax is to be deplored.

Ontario should support any move to integrate the rates, exemptions, and administration of the retail sales tax at the federal and provincial levels (as well as at the municipal level if it should be decided to empower the localities to participate in the retail sales tax). Administration should be provincial. Exclusion and exemption policy should be closely scrutinized. The higher the rate of tax, the more acutely the distinction between taxability and exemption will be felt by taxpayers. At a combined federal-state-municipal rate as high as 12-15 per cent, borderline decisions on taxability or non-taxability of particular classes of sales become immensely important in terms of equity, distortion of consumer spending decisions and resource use, and relative impact of the tax system on different types of enterprise. For this reason, it is recommended that if the retail sales tax is integrated at more than one level of government, exemptions be kept to a minimum.

Again, if the retail sales tax is adopted by more than one level of government it becomes imperative to minimize the taxability of producer goods. The rationale of a retail sales tax is the taxation of sales of goods and services to the ultimate consumer. Exemptions should be very few indeed. But care should be taken, consistent with administrative feasibility, to exclude from the base sales of goods and services that are not made to the consumer. At present much of the revenue from the retail sales tax is in fact derived from the taxation of goods and/or services prior to the final stage of the production process. Such revenue should be sacrificed, and the retail sales tax should be made *so far as administratively feasible* what it is supposed to be, namely, a tax on consumption spending. The desired level of revenues should be achieved by adjustment of the rate of tax.

Adoption of the rule that only goods and services sold to the ultimate consumer should be taxed would in principle eliminate the necessity for arbitrary rules with respect to physical ingredient, direct and indirect use, and catalyst. These provide objective bases for administration of the tax, but are irrelevant to the objective of sales taxation. They result in haphazard taxation of goods and services at the final stage, since the proportion of final product that is (1) physical ingredient, (2) producer goods used directly or indirectly, or (3) catalyst, is purely a technical

production matter. Against this view, however, it may be urged that any attempt to exclude all purchases for production would run against serious administrative difficulties.

The Ontario retail sales tax base ought to be broadened to include a much wider list of services. Theoretically all sales of services to final consumers, and no services to business firms, should be taxed. In practice the separation bristles with difficulties, and no solution will be perfect.

Services to consumers can be taxed either by providing that all services be taxed, and then proceeding to exempt certain categories; or by making a list of services to be taxed, with those not mentioned in the list being exempt. Both methods have been used in the U.S. states. The *general* approach, however, has been restricted to very low rate (0.5 per cent) gross receipts or gross income taxes. The problem is obviously more serious at a 3-5 per cent retail sales tax rate, and much more so under an integrated federal-provincial tax with a 12-15 per cent rate.

Under the selective approach it would seem to be impossible to satisfy the canon of tax neutrality. Discrimination is inevitable, for some services will be excluded on administrative grounds, or in response to political pressures. It seems reasonable to suppose that if all services were in principle subject to tax, it would be easier to avoid exemptions to benefit pressure groups. The possibility must be admitted, however, that there may be little distinction between the general and selective approaches to the taxation of services from the point of view of tax neutrality and administrative problems. Much the same kind of problem exists in working down from generality as in building up a list of specific exemptions of services.

It is recommended that all sales of services to ultimate consumers be subject to tax except those provided by non-commercial suppliers, e.g., part-time painters and decorators, baby-sitters, domestic servants, etc. The discrimination against commercial and professional suppliers of these services is not likely to be important.

Sales of services by doctors, dentists, lawyers, veterinarians, funeral directors, architects, etc., should in principle at least, be taxed to the extent that such services are sold to the ultimate consumer. The incidence of medical and dental services is, of course, highly capricious. But this difficulty can be removed by a well-thought-out system of personal disaster insurance. In effect, the tax would apply to the insurance premiums. Some of the revenue derived from the taxation of professional services would be offset through the exemption of sales of tangible personal property to the providers of these services, but this fact should not be allowed to affect the decision to tax them. It is recognized, however, that sentiment is strong among tax experts against the taxation of professional services.

If the rule is not adopted that all services are taxed unless specifically exempt, the following services may be enumerated as being properly subject to tax:

Services of the type mentioned in the preceding paragraph

Long-distance telephone calls originating in Ontario, unless collect

Gas, electricity, and water

> There might be some doubt about water, owing to differences in cost of bringing water to communities differently endowed with water supplies.

Transient room rentals

> Room rentals only if the imputed rent on owned homes is taxed.

The service element in sales of tangible personal property to consumers

Laundry and dry cleaning; auto repair and services; barber and beauty shops; upholstering, carpet cleaning, exterminating, storage, house repair and decorating; delivery services

Admissions

Transportation of persons

It does not appear that the sales tax exemption ought to be used to improve the position of the railroads, as some authorities hold. If bus companies receive highway services from the government, and railroads are forced to keep up their own road-beds, this should be remedied through appropriate non-tax legislation. However, if this is lacking, railroad passenger transport should not be taxed.

Finally, interest on loans to consumers might logically be subject to sales tax, since in a sense it is a payment for a service. This is not recommended, however, because of its highly regressive nature.

The next task is to comment on the sixty exemptions presently in effect under the Ontario retail sales tax law. The views will be expressed in the light of the basic contention that logically all sales of goods and services to final consumers ought to be taxed, and that no sales of goods and services to producers should be taxed. A side comment is called for on sales of goods and services to governments. Many of the services they supply accrue to consumers and many others to business firms. Moreover, it is often extremely difficult, if not impossible, to separate them. An example is personal and commercial use of highways. Administratively it appears advisable to tax all sales to governments. Moreover, if this is done, governments do not receive an advantage over private producers in those instances where government is in business (e.g. sales of power).

Exemption numbers:

1-2 All on- and off-premises food sales should be taxed.

3 In general sales tax should be applied to all excise-taxed commodities, for example, gasoline. However, it is conceded that compliance cost would be great (new gasoline pumps needed to record sales tax). Moreover, it is said that at present Ontario has to deal with fewer than fifty firms under the gasoline tax. Therefore collection costs would be considerably greater if gasoline were subject to the retail sales tax. It has been suggested that 1¢ be added to the delivered price of each gallon of gasoline to satisfy the sales tax.

4-11 Fuels and electricity used by consumers should be taxed, but their use in production should be excluded from tax.

12-20 All the items in this group should be excluded from tax.

21-23 Fruit trees, shrubs and plants, and trees sold by the Department of Lands and Forests should be taxed if, and only if, sold to ultimate consumers.

24-25 Aircraft sold to airlines should be exempt, and tickets sold to travellers taxed on administrative grounds. Tickets sold to commercial travellers would have to be taxed, even though this is not a sale to a final consumer.

26 On the whole it is probable that water ought not to be taxed, even to consumers. This recommendation would be revised, however, if there were reason to believe that costs of delivering water to households do not vary substantially within the province of Ontario.

27 Clay, sand, gravel and unfinished stone may be presumed purchased mainly by business firms, and hence excluded.

28-29 Fishing and other boats ought to be excluded if used commercially.

30-36 Drugs, medicines, artificial limbs, orthopaedic appliances, equipment used by the handicapped, hearing aids, dentures, and optical appliances ought all to be subject to tax. If classes of hardship cases exist (for example, any of the above sold to the blind) the proper approach is through governmental subsidy rather than through a hodge-podge of tax exemptions.

37 Equipment purchased by a hospital ought to be taxed. If hospitals require financial help, it should be provided by provincial (or federal) subsidy.

38-39 The direct use limitation ought to be eliminated. Its only significance is technical.

40-42 These items are producer goods, and should be excluded.

43 There should be no exemption for children's clothing.

45-48 Classroom supplies, students' supplies, books, and magazines should be taxed. Newspapers bought at news stands ought to be exempt because of the exemption of items costing less than 21¢. However, if the sales tax were to be integrated at the federal-provincial levels at a 12-15 per cent rate there is no reason why the daily paper could not bear a tax of 1¢.

49-51 The beer exemption, both draft and by the glass, is based on technical considerations. Draft beer in bulk is sold to a "producer", and therefore is excluded and does not need to be exempted. Draft beer sold by the glass comes under the 21¢ clause so long as each glass is required to be paid for separately. Since the latter requirement probably does not contribute much to aggregate sobriety, the Province may as well collect tax by requiring the customer to pay his bill at the close of his session at the bar.

52 Long-distance telephone charges should bear tax, unless made collect.

53 Works of art sold to museums should be taxed provided the Province or federal government subsidizes the arts. This would simplify administration.

54-55 Stamps and coins sold at no more than face value should continue to be exempt.

56 The exemption of equipment purchased by a religious institution ought to be abolished.

57-58 Trapping equipment used commercially ought to be exempt, and it would appear to be administratively impracticable to distinguish between the sportsman and the man who does it for a living. Machinery purchased by advertising firms, as well as advertising itself, ought to be exempt, on the ground that these are sales to producers. The ultimate product is subject to sales tax to consumer.

59 Religious and educational publications, if sold to the ultimate consumer, ought to be taxed like any other publication.

60 Tangible personal property purchased at a price of less than 21¢. This exemption should remain unless the retail sales tax is integrated at more than one level of government. In that event, this exemption might be lowered to 10¢.

If Ontario should accept the principle of the municipal retail sales tax, a decision would have to be made between percentage addition by the municipality to the Ontario tax (the system used in Illinois and California), and the shared tax. Percentage addition leaves discretion to the municipality, but by the same token works against uniformity throughout the province. If the tax is shared, with administration by the Province, a formula must be developed on the basis of the locality's population, sales tax collections, revenue needs, and so on. On balance, the shared tax would seem to have a moderate advantage over the percentage addition. The latter is a more flexible device, but leads to violation of the principle that the sales tax rate and exemption schedule ought to be uniform throughout the province and the nation.

Tax liability should be related to location of vendor, not to delivery destination; and counties should be empowered to levy tax in (suburban shopping) areas not subject to local tax.

### VENDOR DISCOUNTS

Vendor discounts should not be given. If given at all, they should be brought into closer accord with the actual expenses to which retailers are put in collecting the tax. These discounts are usually too high. Collection expenses are virtually unrelated to the height of the tax, and in the event of integration of the sales tax at more than one level of government at a rate of perhaps 12 per cent or higher, a far lower percentage discount would be in order. Moreover, expenses of collection differ as between different types of enterprise. If vendor discounts are nevertheless to be given, a sampling study should be made to ascertain what collection costs actually amount to in different types of retail outlets.

### TRADE-INS

The object of retail sales taxation is to tax the consumption of goods and services. Durable consumer goods pose a problem, however, in that the tax is levied and collected at the time of purchase, not over time as the good wears out, or in other words, is consumed. It is not practicable to shift to taxation according to consumption. At the same time, the aim of retail sales taxation of durable consumer goods ought to be to approximate the effects of taxing their consumption. A contribution to this end is made if durable consumer goods are taxed only once in their lifetime. This would be achieved if the full purchase price of all new automobiles, for example, were taxed, but used cars not taxed at all. The first purchaser would recover from subsequent purchasers their share of the tax originally paid for them by him. An alternative is to tax trade-ins only on the difference between the sales price of the newly purchased good and the trade-in value of the good turned in. A

third method would be to allow no deduction whatever for trade-in value. In all three cases the interactions between used and new car markets would distribute the tax burden in accordance with market forces. But the third method would yield the Province tax revenues in excess of those to which it is entitled if the retail sales tax is regarded as a tax on consumption. It seems likely that restricting the tax to the amount paid to the seller when a durable consumer good is traded in will strike most people as a satisfactory way to handle the tax There is an administrative advantage in taxing new cars only, however, and making no tax allowance for trade-ins. No thought would have to be given to taxing casual sales when one second-hand good is traded in for another.