

THE INCIDENCE OF INDIRECT TAXATION IN INDIA (1973-74)

I INTRODUCTION

1. The Concept and Measurement of Incidence

The question of incidence of taxation has been of long-standing interest and intense debate among professional economists. It is one of those economic questions the interest in which is shared by political leaders and the public at large, because taxes are seen and felt to affect the lives of households and fortunes of business. The incidence of taxation has traditionally been defined to mean the final resting place of the money burden of taxation. For every unit of revenue raised by the Government, there is a corresponding reduction in the income of some one or another and tracing the incidence of a tax is therefore to find out whose incomes are reduced as a result of the imposition of that tax. Going behind the monetary phenomena, one could consider the action of the governments in terms of the use of real resources. Generally speaking, it could be said that the government uses the tax proceeds to divert real resources to itself and that this causes a reduction in the real income available for private use. The incidence of taxation is on those who ultimately suffer the reduction in real incomes equivalent in total to the amount of resources which the Government has appropriated. A measure of incidence is hence obtained by expressing the money burden as a percentage of the money income of the individuals or groups concerned.

Besides enabling the Government to transfer real resources to itself, taxes (may) have other effects: they often interfere with consumers' choice and distort expenditure patterns; they may lead to less efficient use of factor inputs and thus affect total output; and they may affect the rate of savings and investment and hence the rate of growth. All these effects may impose additional burdens and hence the total reduction in income available for private use caused by a tax may be greater than that corresponding to the amount of revenue obtained. However, these secondary

effects are generally excluded from the concept and measurement of incidence of taxation and attention is concentrated on the direct money burden as being the most important aspect of the matter.

The traditional concept of incidence has been criticised in recent years and new ways of looking at the question have been suggested. It is pointed out that taxation by itself does not cause a reduction in real income available for private use; it is public expenditure that absorbs real resources. Taxes may be increased or reduced for any number of reasons without changing the level of real public expenditure. It is argued therefore that taxation only changes the distribution of income and that the incidence of taxation should accordingly be defined as the *change* in the distribution of real income available for private use.

The magnitude and nature of change in real income can only be studied by comparing two situations: the state of distribution before the tax with that after the imposition of the tax (or situations without and with the tax). The problem here is that if we assume that a tax is imposed (or an existing tax increased), something else also changes; either public expenditure increases or there will be a change in the budget balance. In either case, the change in the distribution of real income will be due to the combined effects of the tax and something else and not those of the tax alone. Professor Musgrave has suggested that the combined effect of an equal increase in tax and public expenditure might be termed "budget incidence". If the effect on the distribution of a given tax is to be isolated, other things must be held constant. This can only be done by replacing one tax by another of equal yield. The distributional consequence of substituting one tax for another of equal yield is termed "differential incidence". Currently, most fiscal theorists seem to prefer the concept of differential incidence.

However, the concept of differential incidence relates to a *change* in the tax system. It cannot, strictly speaking, be applied to measure the incidence of an *existing* structure of taxation. On the other hand, if one wishes to apply the concept of budget incidence, one would have to compare two situations—the state of distribution without a budget and that with the existing budget. But it is impossible to wish away the entire budget, for it would make no sense to make a comparison with a state of the economy without a Government. Some writers try to get out of this difficulty by assuming that the existing tax system is being substituted for a hypothetical, neutral tax, such as a proportional income

tax, of equal yield.¹ But this conceptual device would make no difference to the numerical results; one would get the same results if one simply measured the absolute incidence of the system as such.²

Despite the theoretical arguments that several economists have adduced in favour of the concept of differential incidence, the fact remains that the public are interested in knowing whether the existing tax system distributes the burden in an equitable manner. While from the econometric point of view, the concept of differential incidence lends itself to more accurate measurement, it would by no means be illegitimate to ask the question: "Who pays the existing taxes?", although there are difficulties in providing an accurate, quantitative answer. In the present exercise, according to our terms of reference, we shall be attempting to measure the incidence of the existing system of indirect taxes in India on the implicit assumption that the volume and pattern of government expenditure is given and that all the tax revenue is spent.

The theory of incidence in economic literature is largely based on deductive reasoning; it attempts to trace the direction and the relative magnitude of shifting of particular taxes under different circumstances. One way of measuring the incidence of a given tax or a set of taxes is to quantify the conclusion of such deductive reasoning. However, the results of this reasoning are not always logically conclusive; and furthermore, one would like to empirically test conclusions based on deductive reasoning before applying them to real world situations. Ideally, therefore, one should prefer the alternative method of specifying tentative hypotheses regarding shifting and of econometrically testing them. The results of the econometric exercise would provide the empirical basis for working out the incidence of the tax system. While this might be the conceptually perfect solution, formidable statistical and other difficulties arise in carrying out the needed econometric exercises. In fact, in order to deal satisfactorily with broad-based taxes such as excises and the general sales tax, we would need a full-fledged econometric model of the economy. The formulation and estimation of such a model for India lies in the future. Again, the econometric method is more relevant for the measurement of differential incidence than for estimating the incidence of an existing tax system. For these reasons, we have to

¹Pechman, Joseph A. and Okner, Benjamin A., *Who Bears the Tax Burden? Studies in Government Finance*, The Brookings Institution, Washington, D.C., 1975.

²Luc De Wulf, "Fiscal Incidence Studies in Developing Countries: Survey and Critique", *IMF Staff Papers*, Vol. XXII, No. 3, March, 1975, p. 97.

take recourse to the method of quantifying the conclusion of deductive reasoning in the theory of incidence.

Commodity taxes could be selective or general. It is generally argued that the incidence of a selective tax on a commodity would be divided between the buyers and the producers (factor owners) in the proportion of the (price) elasticity of the supply of the commodity to the elasticity of the demand for it. Only if the supply were perfectly elastic, the entire burden would be shifted to the consumers; conversely, only if the demand were perfectly elastic, the entire burden would remain with the factor owners. The elasticity of supply depends crucially upon the capacity of, and the scope for, the factors of production in the taxed industry to move to untaxed fields. If a factor of production is specific to a particular industry, i.e., the industry that is taxed, then it would have to stay there and accept a cut in earnings. On the other hand, if the factor is capable of being employed in alternative industries, some units of the factor would move out, the supply of that factor to the taxed industry would be cut and the level of earnings would not be significantly affected. The price of the product would correspondingly rise. Now, in the short run, it may not be possible for several factors of production to move out of a taxed industry. In the long run, however, new vistas open up, old machines get worn out and need not be replaced, and similarly the existing work force is not fully replaced. As time passes, therefore, supply can be expected to become more and more elastic. Hence the assumption that in the long run supply is more or less perfectly elastic and that the incidence of a selective commodity tax will be fully shifted on to consumers.

Let us now consider a general excise or sales tax falling on all commodities and services. One school of thought believes that if such a tax were to be levied at one rate covering all goods and services, it would be equivalent to a proportional income tax on all factor earnings. This conclusion is based on the reasoning that since all industries are taxed, there are no untaxed fields to which factors could migrate even in the long run in an effort to avoid a cut in their earnings as a result of the tax. This means that all factors will have to accept a proportionate reduction in their incomes. One could even assume that prices rise as a result of the general tax. But since the general tax applies to consumer goods as well as capital goods, consumers as well as investors will be affected. In other words, the tax will fall on consumption and saving, which is equal to income. Thus, it is argued, whether the general price level rises or not as a result of the tax, the burden of the tax will be distributed

in proportion to incomes.

In examining the above view, one has to rule out the hypothetical case in which prices do not rise as a result of the general tax. Since we are assuming that all tax revenue is spent, the demand for factors and factor incomes will not fall and prices will have to rise. The argument of such writers as Professor Musgrave that even if prices rise, the burden of the general tax is distributed in proportion to income and not consumption is based on the premise that the tax on capital goods rests on the investors. A more plausible view is that in course of time the tax on the capital goods also will be shifted to the consumers of the products for whose manufacture the former are used. If this happens, the burden of a general commodity tax will rest ultimately with the consumers.

Even this last conclusion will be fully valid only on the assumption of the existence of competition and long-run mobility of factors of production and of the absence of controlled markets and wholly specific factors of production such as land that can be put to only one use. All these assumptions and the reasoning given in the previous paragraph are implicit in the view that all commodity taxes are, sooner or later, fully shifted on to the consumers. Since every one of the needed assumptions will not always be fulfilled, this view of incidence will not turn out to be entirely correct. Moreover, since considerable time may elapse before certain factors can move out of various taxed industries, part of the incidence of a number of taxes may be on the producers at any given time. What may broadly be true, however, is that the major part of the burden of commodity taxation as a whole will be on the consumers.

In the present exercise, we proceed on the assumption that the entire burden of commodity taxes is shifted to consumers who bear it in proportion to their consumption of the various taxed commodities. Indeed, in a sense, our empirical effort amounts to nothing more than working out and applying techniques of quantifying that assumption. Most of the earlier studies, referred to below, also had attempted to measure incidence on the basis of the same assumption.

2. Earlier Studies

A number of attempts have been made over the last two decades or so to estimate the incidence of taxes in India. Of these several relate to taxes in particular States or to particular taxes in the country. Examples of the former are the studies by the National Council of Applied Eco-

conomic Research (NCAER) on the incidence of taxation in the States of Gujarat and Mysore.³ Agricultural taxation has claimed particular attention and several scholars have attempted to estimate the burden of taxes on agriculture or on agriculturists. Special mention may be made of Hanumantha Rao's study of agricultural taxation in Andhra Pradesh,⁴ Pathak and Patel's study on the same in Gujarat⁵ and Ved Gandhi's study on the burden on Indian agriculture.⁶

The first systematic study of the overall incidence of indirect taxes in India was carried out by the Taxation Enquiry Commission, 1953-54 (TEC). This study was based on consumer expenditure data collected by the National Sample Survey (NSS) in the fourth round for the period April/September, 1952, and worked out the burden of indirect taxes in terms of percentages of expenditure in different monthly expenditure classes. More or less the same exercise was repeated for the years 1958-59 and 1963-64 by the Economic Division in the Ministry of Finance, Government of India⁷ (MF). The present study looks at the incidence of indirect taxes exactly a decade after the last comprehensive study employing the same methodology as the Ministry of Finance studies, two Taxation Enquiry Committees in Uttar Pradesh in 1968-69 and 1974 have also attempted to estimate the incidence of indirect taxes on NSS expenditure groups in rural and urban areas.⁸

The late Dr. Banamali Dey attempted a study of the shifting and incidence of indirect taxation for the year 1964-65⁹. His study was also based on the NSS consumption expenditure data, but it experimented with a more sophisticated methodology than the earlier studies. Dr. Dey's approach will be explained in the next Chapter which deals with the basic methodological issues relating to the allocation of the taxes on

³NCAER, *Incidence of Taxation in Gujarat*, New Delhi, 1970 and *Incidence of Taxation in Mysore State*, New Delhi, 1972.

⁴Rao, C. H. Hanumantha, *Taxation of Agricultural Land in Andhra Pradesh*, Asia Publishing House, Bombay, 1964.

⁵Pathak, Mahesh T. and Patel, Arun S., *Agricultural Taxation in Gujarat*, the Council of Economic Education, Bombay, 1970.

⁶Gandhi, Ved P., *The Tax Burden on Indian Agriculture*, Harvard Law School, Mass, 1966.

⁷Ministry of Finance, *Incidence of Indirect Taxation, 1958-59 and Incidence of Indirect Taxation, 1963-64*, New Delhi, 1961 and 1969.

⁸Government of Uttar Pradesh: (i) *Taxation Enquiry Committee Report, 1968-69* (ii) *Taxation Enquiry Committee Report, 1974*.

⁹Dey, Banamali, "Impact of Indirect Taxes on the Distribution of Consumer Expenditure", *Economic and Political Weekly*, September 7, 1974.

different commodities.

We have defined incidence of taxation to mean the distribution of the reduction in real income available for private use. Since incomes are the most important indicators of the relative economic positions (in terms of welfare) of different individuals, we are really interested in knowing how taxes affect the incomes of different individuals, households, or social groups. That is why, progression and regression are measured with reference to income. If the percentage of taxes increases with income, they are said to be progressive; and conversely, if the percentage falls as income rises, the taxes are said to be regressive. Unfortunately, however, we do not have for India adequate data on income distribution nor expenditure data by income groups. NSS provides details of expenditure only by expenditure groups. Hence, most of the earlier studies of the incidence of commodity taxation have had to be content with working out the burden in terms of percentages of expenditure of households in different total or per capita expenditure classes. Notable exceptions to this general practice are a study of the incidence of taxation undertaken by the Orissa Taxation Enquiry Committee, 1961¹⁰ and an attempt by Lydall and Ahmed (1961) to allocate all taxes among income groups in urban and rural areas.¹¹

In the former study, on the basis of certain assumed propensities to save, the expenditure groups were converted into income groups. In the Lydall and Ahmed study, income tax statistics, unsatisfactory as they were, were combined with NSS data to derive estimates of income distribution for 1955-56. The same distribution was assumed to exist in 1965-66. While such attempts are valuable as experiments in methodology, it is doubtful if the results obtained could really be taken as being reliable for policy formulation. Income tax revenue statistics themselves are subject to several limitations and in their present form cannot be combined with expenditure data for given years. It would seem that much remains to be done before we obtain a satisfactory picture of income distribution for our purpose. In the present exercise, therefore, we are following the example of TEC and the MF studies in working out the incidence only in terms of percentages of expenditure.

¹⁰Government of Orissa: *Orissa Taxation Enquiry Committee Report*, Bhubaneswar, 1961.

¹¹Lydall, H.F., and Ahmed M. "An Exercise in Forecasting Consumer Demand and Taxation Yields in India in 1965-66", *Indian Economic Review*, August, 1961.