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Public Finance and Taxation:

Understanding the Policy Rationale behind Taxes

by Prasoon Agarwal in India for CAAGLOP (January 19, 2008)

Abstract

From a public finance perspective, taxes are critical to the functioning of any economy since they constitute major source of revenue for central as well as state governments. The revenue is realized through different taxes, specific and ad-valorem duties, excess and other fees that are levied on different goods and services being sold to customers. Although the different applicable taxation rates are determined largely using the principles of taxation and the theory of public finance, there are some sector specific issues that govern the decisions largely. Hence, it seems interesting to analyze the policy issues behind taxation, using the much debated case study of petroleum products taxation. When decision about taxation on petroleum products is involved, there is a large interlocking with critical issues like the theory of taxation, and several complex policy issues associated with the sector.

The article explains the policy rationale behind taxation, using the fundamental concepts from the theory of taxation. Important questions, like why do we need taxes and why taxes are the way they are have been explored. Using the conceptual framework, an analysis of the existing policies on taxation of petroleum products is presented to better the understanding of the reader.

Though abhorred by many, taxes form the backbone of any government. It forms one of the most important revenue sources for the public finance, and thus the theory of taxation is governed by few basic concepts from public finance. Any policy decision should be seen in the light of these concepts, to fully comprehend the rationale' behind policy decisions in place. The article tries to analyze the policy rationale' for petroleum products, in the light of these basic concepts from the theory of taxation. Majority of the reasons would apply to all type of economies, whereas some would be specific to the form of government and the economic condition of a particular state.

Why Taxes?

Source of Revenue

Taxation on petroleum products forms a major source of revenue for central as well as state governments. Hence, petroleum products may be taxed purely to raise revenues. Revenue from taxation of petroleum products accounts for 1% to 3.5 % of GDP in different developing countries. The specific linkage of taxes and duties to volume means that as the prices of the petroleum products go up; the revenue realized by the government also increases in the same ratio.

To Charge for Benefits and Costs

Taxes are also used as a charge for the use of public roads and bridges. These charges are slated to cover at least the maintenance costs of the roads. Such levies exist even in every country, and the taxes collected are used for building the roads, bridges and highways. Besides, taxation on petroleum products can be considered as a congestion charge levied on the usage of the vehicle, to avoid traffic jams on roads, especially in the urban settings. Taxation can also be seen as a measure of climate control. Depending on the GHG (greenhouse gas) emitted by the fuel in use, pollution can also be seen as a justification for fuel taxes. Such taxes make more sense in today's scenario, where global warming and carbon mitigation are issues being talked about everywhere.

Redistribution of Income

Taxes have a considerable impact on the distribution of incomes in developing countries. For example petroleum products are often used for heating, cooking, lighting and transport, and constitute a significant share of the consumption basket of the poor. This argument is also due to the fact that kerosene and firewood are often close substitutes; hence low tax on kerosene would provide incentive for the rural poor to shift to kerosene, which will lead to the obvious environmental benefits. On the other hand, motor vehicles will be considered as a luxury in developing economies like Africa, and hence higher taxation on petrol would mean a form of luxury tax on those who can pay, thus meeting the redistribution condition.

Signaling

Taxation policies have a direct linkage with the sectoral growth and infrastructure development in that sector. Thus it is an underlying policy

objective that needs adequate attention. For example, the petroleum sector is a capital intensive sector and in the absence of positive signals from the policy makers regarding pricing and taxation, investments will receive a possible setback.

Inflationary Buffer

Taxation policies also have implications on other issues, like balance of payments. In the case of many African nations, there is a large import dependency for crude oil, which translates to enormous foreign exchange needs to meet the oil import bills. In such a scenario, to meet the purpose of energy security and fiscal prudence against foreign exchange shortage, the policy makers may resort to higher petroleum taxes so as to suppress demand and promote efficient use. This is an important reality of the developing nations which are already frog-leaping in the direction of high growth. Energy is an important constituent of growth for any nation, and petroleum in particular has been a major cause of inflationary pressures on all economies. Thus, for a sustainable growth with least possible inflationary pressures due to petroleum, attempts should be made by the policy makers to protect the end customers from the increasing nature of the international petroleum price. The petroleum taxes and duties here act as a rescue in terms of providing a temporary cushion to take care of short term volatility, when the global crude prices are on the rise. The increasing nature is suppressed from being passed on to the consumers, by readjusting the existing tax structure. This essentially means that in case of temporary upward movements in the crude oil prices, the same can be absorbed by decreasing the tax rates, so that the effects are shared by the government and the oil companies, but the end customers are saved from the short term rise.

Why Taxes are the Way they are?

Equity Issues

Not all tax payers (in the case of direct taxes) and consumers (in the case of indirect taxes) are identical, and hence there is a need to address issues like vertical equity (How should the tax burden vary across tax payers of different means) and horizontal equity (How should the tax burden vary across taxpayers of similar means). Equity can be determined either in terms of an individual's welfare (subjectively) or in terms of his income (objectively). However, there is complexity associated in measuring any of the two, and the policies need to

be formulated within this situation of not being able to have a single accurate way to measure the welfare of two individuals or not being able to objectively determine the actual income. Having understood the concept of equity, it is important to integrate the fact that tax is equitable if the degree of inequality in the distribution of income (or any such variable) is less after taxation, as compared to the pre-tax scenario. This can be used as a basis to explain the rationale' of lower taxation of kerosene, etc as compared to petrol and ATF. The underlying assumption is that diesel, LPG (liquid petroleum gas) and kerosene are used more by the low income earners, either as a household fuel (LPG/Kerosene) by the lower socio economic class or as a transport and mandatory input (by agriculturists').

Regressive Taxation

According to Dickenson (1996), "taxes that are unrelated to the taxpayer's ability to pay are regressive". This effectively means that the rates of taxes rise less sharply than the ones of income or welfare. Hence, those who belong to the lower levels of income pay more taxes as a proportion to their earnings, as compared to those who belong to relatively high levels of income. Taxes that are levied on consumption are generally regressive in nature, since they are not related to the consumer's ability to pay. In the case of petroleum taxes, duties and taxes paid by those with low standards of living are higher as a share of their income levels, as compared to those that are economically better off. This is the conceptual explanation that can be used to explain the lower taxes on diesel and nominal or near zero taxation on kerosene and LPG. The assumption behind this policy rationale' is that by doing so, the regressive property of taxation is reduced to an extent, since the poor will largely be using either kerosene (for household lighting and heating), LPG (for cooking), and diesel (for transport, agriculture and farm equipments). Petrol and ATF (Aviation Turbine Fuel) which are supposedly used by those economically better off, have thus been taxed at a higher rate, to adjust for these regressive tendencies.

Distortion of Production and Consumption Decisions

Besides, taxes sometimes create a distortion in consumption and production. As is true for any indirect tax, they distort the consumer preferences depending on the rate at which the commodities are being taxed. Thus in the case of petroleum products, the consumption patterns are distorted either intentionally or unintentionally by the current tax structure in place. For example, lower

taxes on kerosene might have led to an extensive use of kerosene produced by the manufacturers, driven by the huge market demand. Similarly, due to minimal taxation, LPG is illegally being used as a transport fuel and kerosene is being used either as a transport fuel in heavy vehicles or as a mixture in petrol and diesel especially in developing nations like India. The distortion in consumer demand patterns will have its effect on the pattern of production. As discussed above, due to the increased demand of diesel driven cars and the low taxes on diesel, the demand for diesel has gone up in all sections of transport. This has led to serious negative external effects like increased sulphur dioxide emissions, apart from the increased loss to the government tax revenues - diesel is a substitute for petrol, and since it is taxed lower, for every liter of petrol substituted by diesel, there is a net loss of tax revenue to the government.

Macroeconomic Impacts

Tax also induces some inflationary effects on any economy. Instead of a policy of comprehensive coverage of direct taxes, the policy decision to increase the indirect taxes on essential commodities like petroleum products causes an increase in the effective prices of the products. Hence, the cost of living goes up, which calls for an increase in salaries and wages, more so since petroleum products form an essential part of the price indices. Thus, the increased prices due to excessive taxation cause an inflationary pressure on the economy.

Optimal Commodity Taxation

From an efficiency perspective, a lump sum tax is the best form of tax, since it is consistent with a Pareto-optimal allocation of resources. Beyond this, any other tax will lead to obvious losses in efficiency. However, even if lump-sum taxes are not considered, there could be taxes which are still consistent with Pareto optimality. Pigou (1920) has argued that indirect taxes can be used to improve the efficiency of market allocation of resources. However, it seems unrealistic that all state revenues can be raised from neutral or Pigovian taxes. This is where optimal taxation comes as the best of a necessarily distortionary tax system. According to Slemrod (2005), "*In the basic problem of optimal commodity taxation, the government must raise a fixed amount of real resources and can levy only commodity taxes*". Here it is believed that all taxpayers are identical, i.e. there are no horizontal and vertical equity concerns. As a solution to this, Ramsey (1927) has shown that, commodity taxes

which minimize efficiency cost will in general differ by commodity, such that more inelastically demanded goods tend to attract higher tax rates. This theoretical construct explains the high taxation rates of petroleum products in general, since they have highly inelastic demand. As anticipated, in the case of optimal commodity taxation, the taxes on luxury goods are higher than otherwise and the taxes on necessary goods are lower than otherwise. This explains the differential tax rates applicable to different types of petroleum products, depending on the usage pattern and utility perceived by the policy makers.

We have outlined a near complete picture of the policy issues that face decision makers concerning taxation in third world countries in Africa and Southeast Asia. The discussion on the scenario of petroleum sector as an example clarifies how a country could be exposed to international volatility in crude oil prices due to extremely high import dependency on crude. And besides this, we could also understand that there are some major public finance issues that govern the petroleum tax policy making process, like extremely high revenues paid by the sector to the state exchequer, ad valorem duties which increase the revenues further as the prices increase, and many other policy constraints. A brief discussion on the conceptual analysis of theory of taxation in general, and petroleum taxation in particular, helped us understand the concepts that should govern the taxation process. Thus the analyses of the different dimensions in the current paper helped us in understanding and analyzing the policy rationale' behind the current structure of taxes on petroleum products. We can appreciate why the tax structure is the way it is. The next step would be to extend this understanding further and come up with suggestions for implementing a better tax structure within the African nations.

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