A Chinese Recipe for Curbing the Evasion of Commodity Taxes?

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Tax evasion is a widespread phenomenon. Indirect anecdotal evidence is provided by the latest public economics textbooks, which regularly include chapters on tax evasion; this would have been unusual just ten years ago. A recent textbook on public economics (Hindriks and Myles 2006) states that the hidden economy (which forms the primary basis for tax evasion) has reached at least 10 percent of GDP in advanced countries and it can grow to much higher levels (sometimes topping 70 percent) in developing countries. Moreover, the trend shows no sign of stopping.

Standard economic models focus on two basic means of discouraging tax evasion. One is the probability of audit and the other is the steepness of sanctions to those who are caught. The specific effectiveness of these tools is confirmed both by common sense and by many of the tests used by scholars (experiments, surveys, econometric studies; Marchese 2004). Nevertheless, they do not offer a complete solution, because their reliance on clear-cut antagonism between the state and the individual tax evader leads to a cat and mouse problem.[1] Thus, they are best accompanied by a combination of other strategies. Since tax evasion involves a sizeable share of the population that wields a certain social and political weight, it should be possible to design policies that in some way target the collective nature of such a phenomenon.

As long as tax evasion is pervasive, it will give rise to positive externalities among evaders, who create a network that makes incomes and sales easier to hide. In this context, it becomes far less likely for those who infringe the law to be caught and punished. As tax evasion grows more common, the tax administration undergoes increasing pressure to be lenient or to accept bribes; political backing for dissuasive policies may also wane. Hence it seems important to devise policies that will weaken the confidence evaders have in the social acceptability of their conduct. Ideally, these policies should bolster political support for policies aimed at reducing tax evasion.

One common strategy for weakening ties among potential evaders is to introduce various forms of conflicting interests. For example, VAT is designed to give rise to a chain of conflicting interests by encouraging each firm to procure invoices for its inputs in order to reduce tax outlays for its outputs. Of course, the results often fall short of the potential benefits, since VAT evasion is generally extensive and there are cases in which even stronger networks arise in order to hide a full chain of transactions. Yet one can also consider the glass to be half full rather than half empty. A recent appraisal of VAT (International Tax Dialogue VAT Conference, 15–16 March 2005, Rome) revealed a major increase over the last 20 years in the number of countries applying VAT (with the US and the Middle East being the main exceptions), with proceeds accounting for a rise in percent of GDP.[2] As M. Keen puts it (2005): "More fundamentally, however, in many transition and developing countries ... [VAT] … is a catalyst for modernization" as it fosters "voluntary compliance based on self-assessment (meaning that taxpayers calculate and pay tax due with minimal intervention by authorities, but subject to audit and penalty) shifting tax administration from a system based on direct and often face-to-face assessment to one based on self-assessment."

The presence of conflicting interests, which is just one of the many characteristics of VAT, undoubtedly contributes to reinforcement of a voluntary compliance system. One can thus infer from experience with VAT that the conflicting interests approach merits at least some consideration in the design of tax systems.

Empirical evidence concerning rewards to consumers

One problem noted by practitioners and in the press is that the chain of conflicting interests created by VAT is interrupted when the consumer comes into play. In one sense, this is an unavoidable consequence of the fact that it is the consumer who must

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[1] See, for example, Cowell (2004).

[2] VAT in fact has been attacked since it would be a too easy way for governments to raise money. For this point, see Keen (2007).

bear the brunt of VAT. One can wonder, however, if introducing partial forms of conflicting interests during this final step might improve the working of either VAT or sales taxes, and also more generally help prevent evasion of other taxes, such as the income tax owed on the same economic activity. This approach inevitably implies a cost (since government revenues are reduced if consumers who resort to legal transactions are rewarded). It is therefore necessary to ascertain the cost effectiveness of such a policy in comparison with other forms of intervention. To assess the pros and cons of the method, it is useful to examine cases in which it has already been applied.

Tax receipt lotteries

Positive reports have recently come from China, where a novel system of controlling sales tax evasion was introduced on an on-going experimental basis in 1989.[3] To encourage customers to request official receipts as proof of payment in the service and retail commerce sectors, local tax authorities in many provinces now issue a special type of receipt that doubles as a lottery ticket. To prevent forging of receipts, businesses must purchase special, patented machines for printing them. Records of the printed receipts are automatically transmitted to the tax authorities and are used to calculate the taxes payable on sales. Clearly the lottery should ease the adoption of secure cash registers apt at enriching the information available for the tax administration. The receipts can be used as scratch cards to win small amounts of cash, but they also serve as lottery tickets for winning larger amounts. A similar system is in use in Taiwan and has been used in other countries in Asia and in Latin America.

The Chinese tax lottery experiment has gradually been extended to include about 8 percent of districts or cities. It has grown to include not only restaurants, beauty salons and real estate agencies but a number of other services and retail stores as well. The experiment has been widely reported on in the Chinese media. More recently the municipality of Beijing decided to tax prizes of above 800 yuan (just short of 80 euros). While this move will reduce the rewards to consumers, it is a good indicator of the increasing popularity of the system, for such a tax would only make sense with a sizeable tax base. According to Wan (2006) and to the sources quoted therein, the lottery has had a positive impact upon business tax[4] revenue and upon the growth of total tax revenue. The lottery approach is of course just one of the many tools used in China for fighting tax evasion. The list also includes some which are much less acceptable from a European point of view, such as the death penalty.

Systems of rewards for consumers in the form of coupons, monetary or in-kind prizes, etc., are often used in the commercial sector. Lotteries are also used as a marketing device, sometimes on a systematic basis. For example, banks in Latin America offer lottery-linked deposit accounts. Those who keep an account for a given period are entered into lotteries for small and large prizes. According to Gillén and Tschoegl (2001) these accounts are a cheaper source of funds for banks than other accounts. Lotteries are particularly appealing for low income agents, and behave as inferior goods.

Monetary subsidies

Another popular means of rewarding consumers for combating tax evasion is to offer them monetary subsidies. In the fight against VAT tax evasion, some developing countries have introduced a far-reaching refund system for consumers who collect official receipts. Berhan and Jenkins (2005) studied how this system works in Northern Cyprus and in Bolivia. The scheme in Northern Cyprus has been in use since 1996, and resembles the system in use in Turkey. It offered a refund of 5 percent of taxable purchases until 2000 and 2.5 percent thereafter, in contrast to the standard VAT rate, which is 13 percent. The limit on purchases claimed is given by the monthly salary for employees. Employers collect the receipts for their employees and claim refunds on their behalf.

In Bolivia, a withholding tax on wages, salaries and pensions (the so-called complementary tax), was introduced in 1986 with the aim of improving the efficiency of VAT. Consumers are allowed to deduct the VAT paid on purchases of goods and services, so the withholding tax has zero expected net revenue.

Berhan and Jenkins (2005) found that these systems are burdened with very large administration and

[3] For a description of this system and an evaluation of its effects, see Wan (2006).

[4] This is a turnover tax paid on gross revenue from sales.

compliance costs, compared both to the VAT proceeds and to the corresponding costs of other taxes in the two countries. The process of collecting and verifying claims is extremely time-consuming, and the net benefit for taxpayers is low. Moreover, the method is vulnerable to illicit practices. In Northern Cyprus this mainly consists in the collection of receipts issued to foreigners, students, etc., who cannot claim their own refunds. In Bolivia, instead, there is a black market where false receipts are also sold, at a price of around 1 percent of their face value. The Bolivian system seems to work badly overall, yet abolishing it would damage some groups and therefore does not seem politically viable. Past attempts at abolishing the refund system, and at transforming the withholding tax into a revenue producing tax (while giving up the potential benefits in terms of VAT), have resulted in riots.

Overall, it thus seems that the main obstacle to an effective system of monetary rewards to consumers in developing countries is the cost associated with preventing illegitimate claims. Recently, the IMF recommended that the Turkish government eliminate its refund system and replace it with other instruments, such as a fixed deduction from income (IMF 2007, 16–17). From this point of view, the approach based on in-kind transfers, and specifically on lottery tickets, represents a clear cut potential improvement upon monetary subsidies, since far fewer claims must be verified by the tax administration.

Monetary subsidies to consumption are also often granted in developed countries for a variety of purposes, not least of which is fighting tax evasion. One form of subsidies is introduced by allowing deduction of a fixed percent of expenses for specific items from the income tax. In Italy, expenditures for home improvements have been partially deductible from income tax for the past ten years. The main purpose of this provision was to improve tax compliance by firms in the housing sector. New regulations in this sector have recently been introduced with the specific aim of cracking down on moonlighting. Under the 2007 financial law, those who claim the home improvement deduction must supply an invoice from the building contractor, including specification of the expenditure for labor input.

The results in terms of the reduction of tax evasion have been mixed. The bulk of claims for the subsidy[5] come from Northern Italy, which is commonly considered as less prone to tax evasion to begin with. While there are some cases of illegitimate claims under investigation there is no black market for receipts; fraud seems to arise mainly through falsified invoices furnished by firms to unsuspecting consumers. While econometric studies of this experience are not available, raw data show an increase in reported income and in the number of firms and official workers. However, taxable income in the sector is still growing at a slower rate than gross income as measured by national accounts.

The economics of rewards

Can monetary subsidies constitute an effective incentive for consumers to request compliance with sales taxes? Do they represent a more cost effective solution than other strategies with the same aim? One argument in favor of the reward system is that consumers have an informative advantage over tax auditors, given they are necessarily in frequent contact with suppliers. Subsidies may therefore operate as a type of sanction on firms resorting to tax evasion, so long as the consumers involved ask for compensation. Moreover, subsidies are welcomed by those entitled to claim them, and are thus more politically viable than sanctions applied to consumers participating in illegal transactions.

While these arguments are reasonable, one must also factor in the costs and the many possible undesired effects stemming from this approach. When the system works smoothly, it is likely to give rise to some kind of "market revenge" through an increase in prices. In fact, rewards represent an expansionary policy; they therefore create an opportunity for some backward shifting of benefits to the producers. Hence, the net gain of consumers is likely to be smaller than the subsidy, and one might construct extreme scenarios in which an increase in prices, net of the subsidy, may actually arise. In these cases, firms would be able to neutralize the system to a large extent. Nevertheless, the cost of hiding sales and thereby evading the tax is likely to increase somewhat, as long as the expansionary effect either on quantity or on price implies greater visibility of the activity for the tax auditor. In fact, many economic models assume that the cost of concealment increases as the value of sales rises.

Consumer reaction also plays an important role. When tax evasion is extremely common, taxpayers

[5] See Di Lorenzo et al. (2006). Data refer to the period 1998–2006.

are likely to experience high transaction and psychological costs in resorting to tax auditors to enforce the issuing of receipts. However, if consumers bear the brunt of costs for reporting violations to the authorities, subsidies may nevertheless induce them to seek out vendors willing to offer legal transactions. Yet these efforts are also costly. Whenever a firm chooses to evade, it originates a positive externality for the whole set of suppliers by causing an increase in the search costs for the customers, i.e., it becomes increasingly difficult to find a vendor willing to engage in legal transactions. When alternatives become difficult to find, the compensation requested for accepting an illegal transaction falls. As typically happens in these cases, once a critical mass of tax evasion is reached, it can jump to much larger values. This process might also explain why, although many reward systems have proven successful at the beginning, their benefits quickly fade. As Richard Bird puts it, "Unless the public perceives a significantly improved tax administration that will actually utilize such information and enforce taxes and unless this perception is soon reinforced by action, any initial illusory effect seems likely to erode quickly, leaving the administration buried in a sea of unused (and probably often falsified) VAT receipts" (Bird 1992).

Can lotteries work?

The resort to in-kind transfers[6] seems to have one main advantage over monetary transfers. This is because at least some consumers are likely to have a large demand price for the good chosen for the in-kind transfer, even larger than its marginal cost. Thus each firm's decision to evade entails a negative externality, as it contributes to depletion of the pool of agents not so interested in the good and who are willing to accept an illegal deal for low compensation. In-kind transfers are therefore more cost effective than monetary ones as long as those who receive them value the transferred good more than its marginal production cost. A price above the marginal cost is generally seen as a source of inefficiency by economists. However, this is not necessarily the case with lotteries. Since gambling produces negative externalities, it is everywhere routinely regulated and taxed all over the world. Lotteries offer the further advantage of low administrative costs.

[6] Lottery tickets can be considered as a form of in-kind transfer.

While for an amoral taxpayer tax evasion may be seen as a form of gambling whose prize is the unpaid tax, rewards to consumers in the form of lottery tickets aim at creating a symmetrical wager, in which the prize is a share of the paid tax. This leads inevitably to smaller prizes than the tax evasion, so long as a share of the tax is kept as revenue by the state. However, the tax receipt targets agents for whom its legal character and concomitant lack of shame or stigma, potential social approval, emphasized by the media, for performing a meritorious task and an appeal to those who like gambling might contribute to its effectiveness. A further critical factor for success is the competitive nature of the market in which the system is introduced. In particular, a large number of smaller suppliers makes it more difficult to coordinate efforts to internalize the externalities. Epidemics of tax evasion are obviously still possible, unless other standard forms of intervention such as controls and sanctions can guarantee a large enough basis of compliance to make it worthwhile to seek vendors willing to trade legally.

From the point of view of equity, so long as lotteries are inferior goods they should give rise to transfers that have a larger value for the poor who receive them. On the other hand, one of the drawbacks to the lottery scheme is the possible substitution effect upon the demand for other forms of gambling supplied by the government. A more general caveat relating to both monetary transfers and lotteries concerns the potential for crowding-out effects in the realm of intrinsic (moral) motivations for paying taxes and obeying fiscal laws. This is a matter for concern, since, in a certain sense, compliance becomes conditional on some form of compensation.

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