

## **The Economic Cost of “Clever” Tax Administration Ideas**

**GLENN P. JENKINS**

Queen’s University, Kingston, Canada and  
Eastern Mediterranean University, North Cyprus.

**Bahro A. BERHAN**

Eastern Mediterranean University, North Cyprus.

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In the 1980’s it was popular to introduce incentive systems for the promotion of taxpayer compliance. The partial VAT refunds for consumer purchases that are examined in this paper represent one of such schemes. The partial VAT refund system was an idea that was popular amongst professional tax administrators in the 1980s and as a consequence was implemented throughout Central America, Bolivia and Turkey. Such proposals were made with little or no research on the compliance or economic costs that such provisions create. The objective of this study is to measure the compliance costs incurred by the private sector and to measure the administrative costs incurred by the tax authorities in their effort to issue partial VAT refunds for private consumption purchases in Northern Cyprus. Based on the survey of those participating in the scheme, the results indicate that the total compliance and administration costs incurred in North Cyprus in 2003 to run its VAT refund scheme was over US\$4.5 million, an amount equal to 1.5 times the total budgetary expenditures made to administer all the domestic taxes in the country, or about 5 percent of the total revenues raised by the VAT in 2003. These results indicate how dangerous it is to introduce indirect tax enforcement measures without first undertaking a careful evaluation of the compliance costs that such measures impose. From an economic perspective, these costs are a complete waste scarce economic resources.

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# **The Economic Cost of “Clever” Tax Administration Ideas**

**Bahro A. BERHAN**

*Ph.D., Candidate, Department of Economics, Faculty of Business and Economics, Eastern Mediterranean University*

**Glenn P. JENKINS**

*Prof. Dr., Department of Economics, Queen’s University,  
and*

*Prof. Dr., Department of Economics, Eastern Mediterranean University*

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In the 1980’s it was popular to introduce incentive systems for the promotion of taxpayer compliance. The partial VAT refunds for consumer purchases that are examined in this paper represent one of such schemes. The partial VAT refund system was an idea that was popular amongst professional tax administrators in the 1980s and as a consequence was implemented throughout Central America, Bolivia and Turkey. Such proposals were made with little or no research on the compliance or economic costs that such provisions create. The objective of this study is to measure the compliance costs incurred by the private sector and to measure the administrative costs incurred by the tax authorities in their effort to issue partial VAT refunds for private consumption purchases in Northern Cyprus.

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## **1. Introduction**

Since 1980's over 40 countries have introduced a value added tax (VAT) system. In many developing countries the implementation of the VAT was hampered by the poor quality of their tax administrations. While it was the goal of these countries to have a value added tax system that would extend through to the retail stage, due to the large number of retailers that would be covered by the tax, many tax authorities were unwilling to take the risk of widespread tax evasion by attempting to impose the VAT on the sales of retailers. For example, Indonesia imposed the VAT initially only on imports, the suppliers of manufacturing goods, public utilities and state owned enterprises. Only at a later date did they levy the VAT on sales at the retail stag.

Almost all countries when introducing the VAT have applied the invoice-credit method of administration. Furthermore the tax departments usually maintain a system of official invoices where the invoices/receipts are numbered and the quantity of invoices/receipts issued to each firm is recorded. Under such a system, a self-policing mechanism exists with respect to the payment of the VAT on the sales of goods and services between one business and another. Unless registered taxpayers selling items provide official receipts for their sales, the buyers will not be able to claim the input tax credits against the VAT they owe on their subsequent sales. No such self-policing mechanism exists when sales are made to final consumers. If the seller agrees with the buyer not to levy VAT on its final sale, then the government bears the full loss of tax revenue.

To encourage consumers to request an official invoice when they make purchases and hence force sellers to record a sale on which VAT was paid, several ad hoc administrative measures have

been devised to promote compliance. Often recommendations have been made to implement schemes such as the one discussed in this paper. In most cases little or no research was conducted on the compliance costs that would arise from the operation of such schemes or their likely effectiveness for enhancing taxpayer compliance.

In the case of the value added tax administration, two such schemes to promote the compliance on sales to final consumers have been most important. First, in some countries a lottery is held that draws from the official VAT receipts. Containers are placed in convenient locations where buyers after identifying themselves on the receipt can deposit them for collection by the lottery administrators. Usually a number of large prizes are given away regularly through random draws from the receipts collected. To our knowledge the effectiveness of this system has not been carefully tested, but its compliance and administrative costs are likely to be low. The prizes are but transfers of revenue from the government back to the taxpayers.

Second, an incentive device was created to refund some of the VAT paid on the purchases by final consumers where they had obtained official receipts from the sellers. This could be done in several ways. One method was to charge a slightly higher rate of VAT and then give back part of it to the final consumers through a refund system. This is the system implemented by several countries in Central America, and in Turkey in 1986. Following Turkey's lead, the same scheme was included when the VAT was introduced by Northern Cyprus in 1996. A cash refund is made to taxpayers who periodically file a claim for a refund. The refund is a percentage of the value of the consumption purchases of individuals on which VAT is paid. Individuals making claims have to justify their claims based on the official receipts they accumulated for the period of four months and submit them to the tax authorities along with an official tax refund claim form. This approach requires the taxpayer to incur compliance costs in completing the forms and submitting it while the government incurs the administrative costs of processing the claim and sending a check to the taxpayer. In this paper we attempt to measure the

compliance and administrative costs associated with this VAT refund scheme.

For individuals and employers the compliance costs include the opportunity cost of the time that they spend to comply with the law, plus any costs they need to incur for materials. For the tax authority, its administration costs include the expenses of its operations, such as its labor costs, and the costs of materials and overheads incurred to do this function.

## **2. Previous Empirical Studies of Tax Compliance Costs**

Tax compliance costs are defined as “The costs incurred by the tax payers in meeting the requirements laid on them by the tax law and the revenue authorities. They are costs over and above the actual payment of tax and over and above any distortion costs inherent in the nature of the tax” (Sandford, 1995).

An early study of tax compliance cost for the US was undertaken by Haig(1935) followed by other researchers such as Martin(1944) and Muller(1963). Later Vaillancourt (1987) made qualitative studies about the cost of tax compliance on business and individuals in Canada for the period 1935-1984 studies. In summary all the studies showed that tax compliance cost are not negligible and have high burden on business and individuals who may cause tax evasion, thus it is important for the tax policy makers take into consideration the compliance cost of any tax measure when they are designing a tax system.

Similarly Sandford assembled a team of researchers to examine and quantify the cost of operating all the major U.K taxes, their study was published as Cost and Benefits of VAT, Sandford, Godwin & Hardwick, (1981), and as Administration Costs of taxation (Sandford, Godwin & Hardwick, 1989). They found that while the VAT raised the largest of proportion of tax revenues it also was the most expensive to operate per pound of revenue raised. This was due to a complicated structure of the UK VAT system, its high VAT rate, structural and the existence of multiple VAT rates. In order for a VAT system to have low compliance costs, it should have one rate as broad base as possible (Agha and Haughton 1996, Godwin 1993, and Pope 2000,2001).

## **2.1 Measuring the Compliance and Administrative Costs of the Consumer Vat Refund Scheme**

The compliance and administrative costs imposed by this tax provision in Northern Cyprus arises from three sources: i) compliance costs incurred by individuals. ii) compliance costs imposed on employers. iii) administration costs incurred by the VAT authority.

### **2.1.2. The System for Vat Refund Administration**

The system of VAT refunds to final consumers in Northern Cyprus was designed to promote compliance with the VAT by giving an incentive for individual buyers to request an official invoice from sellers. Until October 2000 final consumers who filed for the refund were paid 5% of the value of their taxable purchases. After that date the government changed the refund rate to 2.5% of taxable purchases.

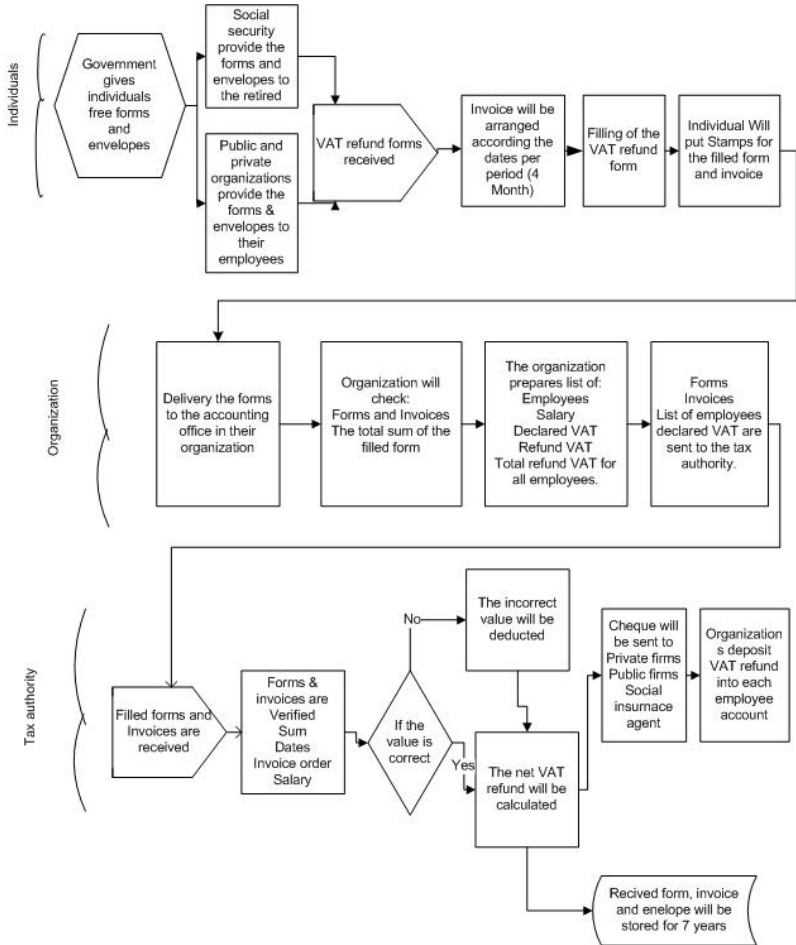
In Northern Cyprus each individual is responsible for completing the forms to obtain a VAT refund. Figure 1 is a flow chart of the procedures required to obtain a partial personal VAT refund. Individuals collect their invoices and receipts for the goods & services purchased during a period of four months, and then must organize them according to the month of purchase. The individual's net salary is also recorded for each month. The total amount of purchases allowed for each month must not exceed the individual's net salary for the corresponding month. In the case of the self employed or pensioners, the claim forms & invoices are put in a special VAT refund envelope and submitted directly to the district tax office. In the case where the individual is an employee, the forms & invoices are put in the special VAT refund envelope, and submitted to the individual's employer. The employer is legally responsible to check the invoices, and to make sure that the sum for each month does not exceed the employee's salary. A special check must be done to insure that invoices for nonrefundable purchases such as cigarettes and alcoholic beverages are not included in the refund claim. After the employer completes the audit he must prepare a list of his employees' claims and the maximum VAT refund they can claim per period. He/she

then submits the completed aggregate claim to the district tax authority together with the VAT invoices.

The tax authority in each district then checks the submitted invoices to determine if any non refundable purchases are being submitted for a claim, and also to check if the total of the purchases on which the refund is claimed is less than the employee's net salary. Then the list from each employer is sent to the central VAT office. After the amount of the final refund is determined, the main office prepares the VAT refund checks while the claim forms along with the receipts are stored by each district office for a period of seven years. When employees submit their claims via an employer, a single check is sent to each employer. The employers then allocate the amounts they receive to the employees who initiated a claim.

The main component of the compliance costs faced by individuals who are not employees is the time spent on picking up the form, arranging invoices according to months and dates, filling the forms and mailing or delivering the forms. In addition they have to purchase and place stamps on the documents to make the receipts and the VAT refund envelope official. They must then deliver the completed forms to the district tax office.

During each four-month period the VAT main office prepares and issues about 30,000 refund checks.



### 3. Empirical Results

To carry out the estimations of the scheme’s compliance costs a survey was conducted for 145 individuals selected randomly from those claiming a refund. Out of the 145 individuals selected, a total of 120 completed the questionnaire fully. A second survey was used to obtain compliance costs information from 30 companies and other large public sector establishments, such as universities. The administrative costs were estimated through interviews with government officials and direct computation of individual cost items.



In 2003-2004 about 80,390 people were eligible for the personal VAT refund, however, out of this total only 32,972 applied for a VAT refund<sup>1</sup>. For private sector employees, only 34% of the total bothered to apply for the refund. On the other hand, about 82 percent of the public sector employees made a claim. As public sector employees view it as an official duty to comply with this tax provision, much of the effort to file this claim is done during the regular government office hours. In contrast, the private sector employers do not encourage this practice, hence, employees face a much higher private opportunity cost of their time than do the public sector employees.

In Northern Cyprus the printing of false invoices has not occurred. However, local taxpayers do use supermarket receipts from sales made to the 20,000 foreign students in the country, or to tourists who also are not eligible for the VAT refund. Although the maximum amount of receipts that an individual can submit for each month is equal to his/her monthly salary, it would be unlikely that a person would spend all their income each month on taxable items. We find, however, those who make a refund claim submit a quantity of receipts equal to their full monthly salary. This indicates that these individuals are submitting some receipts that were issued to others.

The time that the employed individuals in our sample spent complying with this scheme is then multiplied by the average hourly wage of the individuals for pre-retirement. For the retired we also use the wage rates earned in the various jobs taken up by these group<sup>2</sup>. The average time spent per year for an employed

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<sup>1</sup> This total is made up of 12886 public sector employees, 2,500 contract public employees, 10933 retired public sector employees, 34,963 private employees and 19,608 retired private employees. Administrative records of the Ministry of Finance and Economy, Turkish Republic of Northern Cyprus, 2003-2004.

<sup>2</sup> In North Cyprus many individuals retire from the public service at an early age and then often take another job. Hence they will simultaneously receive a wage as well as receiving pension income. Statistics on the wages and salaries of public employees were obtained from the administrative records of the Ministry of

individual is 33 hours and for retired individuals it is 36 hours. The longer period for the retired claimants is because they have to pick up the forms and deliver the completed paper work back to the tax office<sup>3</sup>.

The final components of private compliance costs are those incurred by the employers. These include the time spent checking the completed forms and invoices, preparing the list of employee salaries and checking on the maximum amounts of VAT that can be refunded. In addition, there is the cost of the paper, the official stamps and the time cost of delivering the completed paperwork to the district VAT office. Table 1, row 6 presents the private compliance costs in 2003 for each of the three groups and their combined costs.

As reported on Table 1, column 2, the average compliance costs for the various groups of individuals' ranges from \$ 71.91 for retired from private sector employees to \$ 137.01 per year for public sector employees. The total compliance cost imposed on individuals by this refund scheme was approximately \$3.54 million in 2003, table 1 row 5.

It is important to note that total value of the refunds issued in 2003 was \$3.92 million.<sup>4</sup> Hence, the individuals who filed for a refund received a net personal benefit of approximately \$ 0.38 million in that year.<sup>5</sup>

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Finance, Turkish Republic of Northern Cyprus, 2003. The wages and salary for private employees and the retired were obtained from the administrative records of the Department Social Security, Turkish Republic of Northern Cyprus, 2003.

<sup>3</sup> Public and private employees can obtain the forms from their employer and deliver the forms to their employers. For self employed and retired individuals they must pick up the forms from the local tax office and deliver the completed paperwork to the local tax office.

<sup>4</sup> Ministry of Finance, "Taxation Statistics" Turkish Republic of Northern Cyprus, 2003

<sup>5</sup> To the degree that the time cost of public sector employees is borne by the government, this estimate will understate the private benefits perceived by individuals making a claim.

**Table 1: Compliance Costs of VAT Refund System (2003)**

Compliance cost	Average Annual Cost (US \$)	Numbers of Claimants	Total Annual Cost (US \$)
1. Public Employees	137.01	12,196	1,670,973.96
2. Private Employees	100.38	12,009	1,205,463.48
3. Retired from Public	78.30	4,622	361,902.60
4. Retired form Private	71.91	4,156	298,857.96
<b>5. Total Compliance Costs of Individuals</b>			<u>3,537,198.00</u>
6. Total Compliance Costs of the Employers	1,159.71	808	937,045.68
<b>7.Total Compliance Costs of Individuals and Employers</b>			<u>4,474,243.68</u>

In addition, Table 1 row 6 shows that the average compliance cost per year per employer is \$ 1,159.71. Considering that there were 808 such employers who in 2003 processed the claims for the VAT refund system, the total compliance costs imposed on employers in 2003 was about \$0.937 million. Hence, the total private compliance cost of the VAT refund system on final consumption was about \$ 4.47 million in 2003.

**4. Administration Costs of Program**

Because cash refunds are made to the claimants by the government, the administrative burden on the public sector is also increased. The costs include both payments for materials and services as well as the time costs of the employees involved in the administration<sup>6</sup>. The results of the estimations are reported in Table

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<sup>6</sup> Material and Service Purchases include: forms (the governments gives free four forms per individual per period); envelopes (the governments gives free one envelope per individual per period);

2 row 5. These material costs amounted to \$66,955.00 in 2003 which was higher than the personal costs of \$46,344.00. The overall administration cost incurred by government was therefore about \$113,299.00. This is an additional economic cost to the country over and above the economic cost of compliance with this scheme. The total of these two items of economic cost amounted to \$4.586 million in 2003, table 2 rows 11. This excess burden is in addition to any economic costs created by any other resource allocation efficiencies this provision might have created. The revenue cost of the refunds of \$ 3.92 million in 2003 is not an economic cost, being simply an income transfer to VAT taxpayers.

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cost of check paper; cost of storage. For the government the average for storage rental is \$8/m<sup>3</sup>/month. Personnel Costs include: Tax department staff; There are a total of 25 employees responsible for the refund system they each work on this task 30 days per period; the personnel costs of preparing the checks, classifying filing the claims in storage, and the personnel costs of destroying the materials after seven years

**Table 2: Administration and Compliance of VAT Refund System (2003)**

<b>I. Administrative Cost of Government</b>	
<b>Material and Service Costs</b>	<b>Annual Cost in US (\$)</b>
1. Envelopes	32,848.80
2. Forms	19,709.28
3. Cost of Checks (papers)	8,966.37
4. Rental Costs of Storage	5,431.05
5. Total Material and Service Costs	<b>66,955.50</b>
<b>Personal Time Costs</b>	
6. Government Personnel of VAT Administration	37,359.90
7. Preparing checks (salary)	7,173.12
8. Handling cost of storage	1,811.22
9. Total Personnel Costs	<b>46,344.24</b>
10. Total Cost of Material, Services, and Personnel Costs	<b>113,299.74</b>
<b>II. Compliance Costs of Individuals and Employees</b>	<b>4,474,243.68</b>
<b>11. Total Administration and Compliance Costs</b>	<b>4,586,466.90</b>

Source: Ministry of Finance, Tax Administrative Records, Turkish Republic of Northern Cyprus, 2003

### **5. Cost-Effectiveness of Vat Refunds to Promote Compliance**

In this paper we are not able to measure the impact of these incentives on the overall level of taxpayer compliance with the VAT systems in North Cyprus. However, they are likely to be small. There appears to be plenty of receipts available for anyone who feels it worthwhile to make a claim. These receipts are produced by the supermarkets and other large enterprises that in any case need a formal accounting system to prevent their employees from stealing from the business.

A striking indicator of the waste created by this scheme is to compare its cost with the total revenue generated by the value added tax system. In 2003 its administrative and compliance costs amounted to more than 5 percent of the revenues received from the VAT system. Normally having the total administrative costs as high as two percent of total revenues would be considered excessive. Another indicator of the effectiveness of this scheme is to compare its total compliance and administrative costs to the total budgetary costs incurred to administer the entire domestic revenue systems in North Cyprus. In 2003, Northern Cyprus incurred a budgetary cost of \$2.95 million for the administration of the domestic tax system<sup>7</sup>. By comparison, the compliance and administrative costs of the VAT personal refund system of \$ 4.58 million is 1.55 times as large.

There are many alternative methods for enhancing taxpayer compliance with the VAT that have proven track records. Auditing of the financial records of retailers accompanied by penalties for fraudulent behavior is the ultimate method for enhancing compliance. When a country's tax administration does not have sufficient accounting skills to implement a comprehensive auditing program, then a system of physical spot checks has proven to be quite effective. Under such a scheme the customers as they leave a store are asked by a tax official (usually junior employees) to show them the official invoice for their purchases. If customers are not able to show a receipt then the business is closed down for period of days or weeks. This is done with considerable publicity and usually has a dramatic effect on the compliance behavior of the merchants in the area. Another method of enhancing compliance is to require all merchants to have and use electronic cash registers. These cash registers can be used also to determine the quantities sold and greatly simplify the auditing process, and accounting skills required by the tax administration in their investigative work.

A number of countries, in particular Italy, have made considerable improvements in taxpayer compliance after the

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<sup>7</sup> Information on the administration costs of the Tax Department was obtained from Ministry of Finance, Annual Budget Estimates, Turkish Republic of Northern Cyprus, 2003.

widespread introduction of such devices. For each of these alternatives the economic cost is likely small relative to the costs imposed by the consumer refund schemes now used by North Cyprus.

## **6. Conclusions**

Most studies of the compliance of taxation have focused on the costs associated with a particular tax such as the VAT or the corporation income tax system. However in this paper we have focused on some special features of the tax system that were added to strengthen the tax administration. This study finds that the compliance costs created by these special provisions are very large relative to the overall costs of the tax administration.

In the case of Northern Cyprus more than a 100% of the refunds provided are offset by compliance costs, yet everyone perceives it to be to their advantage to continue with such an incentive scheme. Those who file for a refund or submit their invoice for a tax deduction get relief from taxes that are bigger than the compliance costs they bear. The employers see their efforts as providing a required service to their employees. Finally, the governments have come to believe that these incentives enable them to collect more revenue overall. They seldom consider the economic losses created by inflicting compliance costs on the private sector.

Developing country governments, eager to create modern tax systems, have sometimes experimented with tax administration mechanisms that have inflicted large compliance costs on to the private sector<sup>8</sup>. In this study examined here, has borne unnecessary costs for the 9 years in North Cyprus. The system was copied from the one introduced in Turkey, 19 years ago. Hence it is safe to speculate that for the past 18 years a similar level of compliance costs has been inflicted on the private sector of Turkey.

This analysis of compliance costs for the personal VAT refunds points out the danger that countries face when they simply

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<sup>8</sup> In recent years tax reform has been a favorite item of conditionality to be imposed by the International Monetary Fund or the World Bank as part of the terms of a loan agreement between the government and these international institutions.

copy, without analysis, the tax administration techniques used elsewhere. North Cyprus introduced this scheme simply because it was used in Turkey. The results of a pilot study using a sample of taxpayers might have stopped this proposal before it was implemented and thus saving the country over time from the burden of tens of millions of dollars worth of economic costs.

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