

# **Dynamics of Missing Trader Fraud in VAT Regime: Evidence From Pakistan**

(DRAFT -NOT FOR REDISTRIBUTION)

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## ***Abstract***

*Missing trader fraud in VAT regime deprives revenue authorities worldwide to the tune of billions of dollars. This paper uses administrative tax data for the universe of VAT returns (9.69 million returns in total) filed in Pakistan from tax year 2009 to 2016 to estimate the impact of a reform to curb domestic missing trader fraud and false input tax credit adjustments by the registered firms operating domestically. The reform introduced a formidable tool for the enforcement regime by enabling a software based objection on an invoice as the grounds to reject the input claims without requiring a further inquiry. Using the exporters as a control group, I find that the input tax claims fell by 2.2 million Pak Rs. per treated firm on average, representing a drop of approximately 50% for the treated firms. This represents a decline in input tax claims to the tune of Pak Rs. 86.2 billion approximately. Surprisingly, the corporations and partnerships who are large and formal organizations also show significant reduction in input tax claims from 50-70%. The paper also shows that a meaningful increase in capacity of the tax administration substantially increases the compliance even in a developing economy with large informal sectors.*

**Keywords:** Tax Evasion, Tax Compliance, VAT, Carousel Fraud, Missing Trader Fraud

## **1. Introduction**

VAT (Value Added Tax) is the choice consumption tax in the world. The EU and IMF led adoptions waves resulted in implementation of VAT regimes in the developed as well as the developing countries. The positive attributes of VAT are its neutral treatment of exports, fair taxation of business inputs, efficient taxation of services and its ability to raise revenue collection

with minimal effort (Fox, Luna, & Murray, 2001; Keen & Lockwood, 2006). VAT also fares much better in terms of revenue principles of equity, accountability, and administrative efficiency (Tax Analysts, 2011). Theoretically, VAT gives fair treatment to businesses. It doesn't tax inputs multiple times and is far more efficient in relieving businesses from the impact of tax on services compared to other commodity taxes. It provides a neutral pitch to industries and small businesses that otherwise bear an unfair burden in traditional RST and excise regimes (Bickley, 2003; Fox, Luna, & Murray, 2001; Fox & Luna, 1999). These properties make VAT a desirable policy choice for the policy makers. But VAT also has its fair share of drawbacks. Keen & Smith (2006) point out the frauds that can be committed under both VAT and RST regimes. The firms may under report their sales or not register at all under both taxes. The firms can also misclassify their taxable sales as non taxable sales under both VAT and RST. There are also other minor loopholes common to these taxes but in the case of VAT there exist frauds that are uniquely or principally VAT specific. VAT regimes can have bogus traders who only register to serve as "invoice-mill" and generate fake invoices. These invoices can then be used as input tax credit to lower the liability of the purchasing firm at the cost of revenue. False claims for credit or refund of input tax paid are VAT specific fraud mechanisms which generally rely heavily on the fake invoices issued by bogus firms. Even in the developed countries such as those in EU, the Missing Trader Intra Community (MTIC) or "Carousel" fraud, is rampant. EU almost gave up the destination based taxation principle as it couldn't cope with volume of revenue leakage under carousel fraud. Annually, more than hundred billion Euros worth of taxes are lost in EU. Therefore, it's not hard to imagine the scope of difficulties faced by the revenue administrations in the countries with large informal economies in curbing fraudulent practices. Interestingly, in the countries with large informal economies these frauds become more easier to execute because of lax enforcement.

The operation and extent of the MTIC fraud varies from one VAT regime to another but the central idea is the same. A group of traders purchases and sells goods between themselves in a manner that one or several of them vanish without remitting the tax collected, thereby forcing tax authority to allow credit for the amount, which was never deposited in the first place. The VAT invoice is similar to an income tax deduction certificate for a buyer. The invoice shows that the tax has been collected by the seller and the buyer is now entitled to deduct this amount from any sales made during the same tax period. If the tax deducted at the purchases is more than the tax required to be deposited on the sales than the business can either carry it forward to the next period or seek refund. In European countries, the carousel fraud is an inter country but intra community phenomenon as the EU countries don't collect tax at the import stage for imports originating from member countries. But in most developing countries, who charge tax on every import without any exception to a particular origin, domestic variants of carousel fraud exist. Consequently, the tax authorities come up with a variety of enforcement and legal measures to curb this phenomenon (Crawford, Keen, & Smith, 2010).

In this paper, I analyze the impact of a software based policy intervention which is aimed at reducing fake input tax claims by building on invoice summary provisions already available in many VAT regimes. I exploit the exogenous variation created by a tax law reform in Pakistan to study the dynamics of missing trader fraud using micro administrative data for the whole universe of VAT returns filed in Pakistan from the financial year 2009 to 2016. The domestic carousel fraud in Pakistan can be divided into two categories; fraudulent tax credit to claim refund against zero rated supply and false input tax credit claim against a purchase from unregistered person by fraudulently obtaining a tax invoice. Pakistan has a large informal sector providing significant incentive to claim input tax credit against purchases, which are actually made in informal sector.

The invoice summary provisions exist in most VAT regimes requiring the businesses to submit an electronic summary of sale and purchase invoices to substantiate their VAT return. The backward and forward linkage is designed to enable the tax authorities to comprehensively check the invoice trail in suspicious transactions. The non-deposit of input tax credit claimed on the basis of invoice issued by a non-existent seller can be denied retrospectively or through audit, making both the buyer and seller jointly and severally responsible for the deposit of tax.

The extant studies on MTIC fraud and the effect of invoice summaries are very limited in scope. For example, very recently, there are some studies coming out on Chinese VAT system but the Chinese trade and tax regime is different in some material aspects from the standard VAT regime. Moreover, these studies are not based on Administrative micro-data of tax returns, focus on a particular sector only or on reforms that are of little consequence to a standard VAT setting. To the best of my knowledge, there's no study that analyzes the missing trader fraud through administrative VAT data.

Fan, Liu, Qian, & Wen (2018) study the impact of computerized invoices on Chinese manufacturing firms for the period 1998-2007. They find that computerization explains 14.38% of cumulative VAT revenues and they also find a 4.7-14% increase in the average effective tax rate for seven subsequent years of the reform. Chinese system is however different from standard VAT system implemented in Pakistan in some critical respects. First, the Chinese invoice system always bound firms to generate invoices through a system which is built on old excise regimes invoice system. In Chinese system, the firms are bound to come to the tax authorities each month for the issuance-cum-certification of the invoices. The government approved unique ID enabled card is issued to each firm and a software with printer is physically installed in the premises which keeps track of the invoices issued. At the end of each month the record is updated by providing the IC

card to the government authorities. It's not obvious whether the system is applicable to all VAT paying firms or manufacturing units only. Pakistani system makes the invoice summary an annexure and mandatory part of the monthly return. Since all returns are filed electronically, the system automatically takes care of the filing requirements. However, cross checking is a different story.

## **2. DMT Fraud**

The MTIC fraud in Europe involves traders in different countries but another variant of that fraud can exist within a country. I shall refer to this type of fraud as "Domestic Missing Trader" or DMT fraud. It's therefore pertinent here to explain the mechanism of DMT fraud. I explain this in the context of Pakistani VAT regime.

The DMT fraud operates in a chain. In Pakistani case, one firm issues invoices to the other and so on. Usually, the first supplier S<sub>1</sub>, issues sales invoices of the desired goods to a buyer without actually supplying them. The buyer in these cases is a well-established business operating in formal sector, generally a manufacturer. The invoice issued by S<sub>1</sub> gives the buyer right to claim input tax credit although she actually purchased those goods from unregistered suppliers in the informal sector. In order to reduce her tax liability, the buyer now has legal claim of input tax against purchases, which never physically occurred. This can reduce the tax liability of the buyer significantly. For example a buyer who made purchases worth ten million Pak Rupees from the unregistered or informal sector can reduce her payable VAT by 1.5 million rupees (assuming a 15% tax rate). The self-enforcing mechanism of VAT demands that the seller S<sub>1</sub> has a large amount of output tax which must be deposited in the treasury but to this end S<sub>1</sub> is backed by a chain of suppliers say S<sub>2</sub>, S<sub>3</sub>, S<sub>4</sub> S<sub>5</sub> etc. who can provide the fake input tax credit to reduce the actual tax payment by S<sub>1</sub> to zero or a negligible amount. One such network of suppliers who are criminally

colluding with each other can deprive the exchequer to the tunes of millions of rupees each month. These fake suppliers exploit the difficulty of audit and enforcement faced by the tax administration to get away with this fraud. The EU analogy is applicable here. In Pakistan, audit and enforcement jurisdictions are territorial and the auditors lack the authority and resources to conduct audit and verifications beyond their geographical limits. If the suppliers are carefully registered in different jurisdictions then these geographical limits work in a manner similar to the countries in EU but with far more ease of operation for the fraudsters. Clearly, if the suppliers  $S_1, S_2 \dots S_n$  are registered in different audit and enforcement jurisdictions, then practically there's very little an auditor can do. The investigation can further be impeded by two critical factors. First, the audit normally requires a period of year or more of activity and can take months or even years to complete and still more time is needed to get an enforceable order of recovery from the court. Second, once in the court, the courts are reluctant to buy the argument that based on a presumption some of the suppliers never existed at the time transaction took place. The government ends up giving refund or tax credit for the tax, which was never deposited in the treasury.

I elaborate it with an example. Suppose "X" is a manufacturer who buys recyclable paper and paperboard from large wholesalers operating in informal sector. It costs "X" ten million Pak Rupees to purchase this recyclable paper. X manufactures paper from it and sells it for Rs.12.5 million. X is required to collect and remit a tax of Rs. 1,875,000 (assuming a 15% tax rate) on this sale. If X can get an invoice from  $S_1$  for its purchase, then it reduces X's tax liability by Rs. 1,500,000. A now collects full Rs. 1,875,000 from its buyers but remits only Rs. 375,000.  $S_1$  provides this fake invoice to X through a chain extending to  $S_2, S_3, S_4, S_5$  and so on. The situation gets worse when X passes on some of this gain to the market through a reduced price. X starts capturing market which has no other way but to lower its cost by either engaging in similar fraud

or changing its operations. Since the capital cost of changing operations is high and benefits risky, the slippage to fraud is a more realistic and economically rational choice for the firm. This leads to an exponential growth where large segments of the industry get involved in these transactions.