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ORGANISED VAT FRAUD: FEATURES, MAGNITUDE, POLICY PERSPECTIVES

by Fabrizio Borselli [*]

Abstract

The European Union's VAT system has become vulnerable to organised fraud schemes. In recent years, these schemes, undergoing a change in structure, have affected services and imports of goods from third countries and may also have shifted trade in goods among EU countries. Within the EU-27, organised VAT fraud is estimated to amount to between €20 billion and €35 billion a year. The EU institutions and Member States have put forward several measures to tackle this problem, although some of these have placed a disproportionate burden on businesses. The article shows that need to maximise the effectiveness of anti-VAT-fraud strategy cannot be separated from a broad view of the problem and of the functioning of the VAT system as a whole. A drastic change in the VAT system might provide a robust defence against fraud but produce uncertain effects. Enhancing risk management and exchange of good practices is essential. Technology-based solutions appear to be a pragmatic and politically feasible approach to new challenges, with good prospects of success.

JEL Classification: H21, H26, K34.
Keywords: VAT, tax evasion, fraud.

Contents

[*] Bank of Italy, Tax Department, VAT and Other Taxes Division.

Beyond the everyday world ... lies the world of VAT, a kind of fiscal theme park in which factual and legal realities are suspended or invented. In this complex paralleled universe … relatively uncomplicated solutions are a snare and diversion.

Lord Justice Sedley, Royal & Sun Alliance Insurance Group plc v C&E Commissioners [2001] STC 1476

1. Introduction and scope of the analysis [1]

Value added tax (VAT) generates significant revenue (more than one fifth of world total tax revenue, including social contributions) and has been introduced in about 140 countries. It is the main source of revenue in some Member States of the European Union and plays an important role in ensuring public finance stability. VAT operates in a neutral and transparent manner, and its role is expected to grow in the years ahead as the economic slowdown and population ageing affect other revenue sources (EU Commission, 2010a).

VAT was introduced in the European Economic Community in April 1967 with Directive 67/227/EEC, to address the market distortions of indirect taxes applicable on the full value of transactions. Today it is governed by Directive 112/2006/EC of 28 November 2006 (the "VAT Directive") and its revenue has a direct impact on the EU's own resources.

Following the Single European Act of 1987, the question arose of the criteria for applying VAT to exchanges of goods and services between enterprises resident in different EU countries. After several proposals, the Member States adopted - as a "provisional" measure applicable only to the supply of goods between VAT taxable persons ("business-to-business" transactions, "B2B") - the principle of taxation in the country of "destination", i.e. where the goods are consumed. This provisional regime was to last a short time and be replaced with the definitive system of taxation in the country of "origin", i.e. where the goods are supplied. But the transition to the new system is still hampered by several issues. In 2010 the destination principle for B2B transactions was also extended to services. The abolition of internal borders and taxation in the country of destination led the Member States to strengthen the instruments of administrative cooperation.

The VAT system, as it ages, is displaying weaknesses and vulnerabilities and no longer fits with current standards desired by taxpayers and administrations. Its increased complexity creates unnecessary costs and burdens and it impedes the smooth functioning of the single European market. In the last decades, the development of systemic attacks by fraudsters has posed the most serious threat to the functioning of the entire system (Šemeta, 2011). The typical mechanism of deduction has itself become a source of sophisticated international frauds (Keen and Smith, 2007). Although tax authorities have fought hard to stop the phenomenon, Member States still contend with highly-organised VAT frauds, which have become an "established industry".

[1] The views expressed in this article are those of the author and do not commit the Bank of Italy. The author thanks Vieri Ceriani, Salvatore Chiri, Daniel Dichter, Carla Lucidi and David Pitaro for their useful comments.

VAT fraud is an obstacle to the smooth functioning of the single market. It has an impact on the fair competition, erodes the tax revenues of Member States and negatively affects the EU's own-resources. It also results in more burdensome obligations for legitimate businesses.

The fight against VAT fraud is supported by the VAT Directive and is consistent with the long-run objectives of "smart, sustainable and inclusive growth" (EU Commission, COM(2010)2020). The enforcement measures at EU level have mainly been based on enhanced administrative cooperation among Member States, new compliance requirements and the introduction of specific rules tailored to high-risk sectors. Some proposals have also focused on a more radical transformation of the VAT system itself.

The EU anti-fraud strategy complements the efforts at national level to increase the efficiency of tax assessments and of intelligence systems and to improve regulatory safeguards. Within the same framework, specific attention is given to the fight against money laundering.

Making the VAT system more modern and fraud-proof is one of the goals of the general consultation launched by the European Commission (2010a). The opening of a wide debate on the future of VAT and on its endemic vulnerability to fraud is a significant opportunity to analyse the results and shortcomings of current policies and to trace possible ways forward.

To this end, this study first outlines the morphology and evolution of VAT fraud schemes and presents estimates on the volume of frauds. It then evaluates the effectiveness of the measures adopted at EU and national level and identifies some new paths to take in the near future.

A general distinction paves the way for the ensuing discussion. The study concentrate on the mechanics of a specific element of the overall VAT gap between the theoretical and actual VAT revenues: the "organised VAT frauds" committed in international trade, i.e. "a deliberate and systematic attack on the tax system and government revenues, often without economic substance" (FATF, 2007), involving "a series of contrived transactions within and beyond the EU, with the aim of creating large unpaid VAT liabilities and in some cases fraudulent VAT repayment claims" (HMRC, 2011). These "large-scale thefts" concern cross-border transactions, missing traders and fictitious carousels and generally imply criminal offences (such as money laundering, counterfeiting, fraudulent VAT returns and criminal association).

In the rest of this paper the expression "VAT fraud" refers exclusively to such organised fraud. Other components of VAT gap (e.g. evasion, avoidance, failure to register, bankruptcies, falsification of records and tax reports) are outside the scope of this study.

2. VAT fraud schemes

2.1 Classic schemes: MTIC fraud

The VAT fraud discussed here is strictly linked with cross-border transactions: in a "missing trader intra-Community" (MTIC) VAT fraud, a taxable person (missing trader) purchases goods

from another EU country "free of VAT". Under the B2B destination principle for intra-EU transactions, VAT is not debited by the supplier but self-assessed by the buyer.

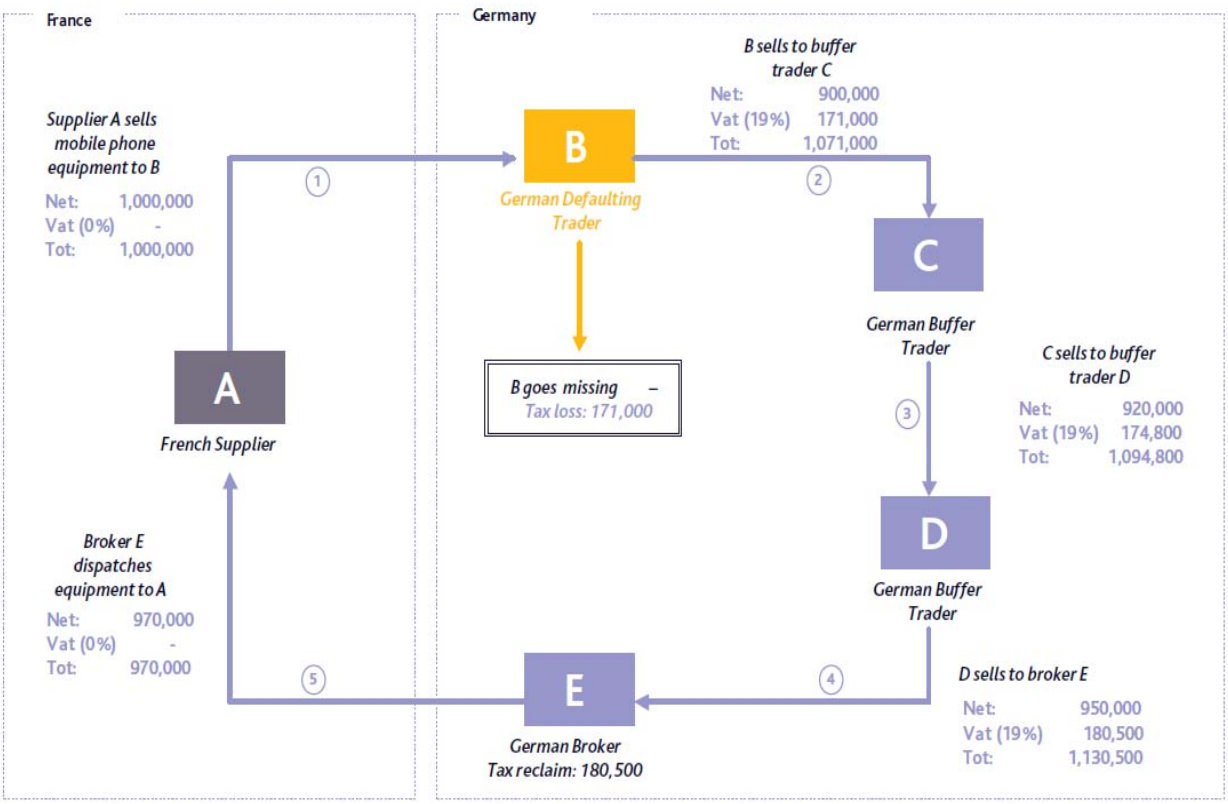
The buyer (missing trader) subsequently resells the goods to a domestic counterparty at a VAT-inclusive price and does not remit the VAT collected to the tax authority. However, the counterparty is entitled to an input VAT deduction as it is in possession of a valid invoice, regardless of the fact that VAT has not been remitted to the tax administration.

Therefore, the essential element of the fraud is the purchase of goods from another EU country, which enables the fraudster to buy without paying VAT to the supplier and, at the next step, to keep the entire amount of VAT debited to its counterparty.

The most important variations on this basic scheme are the following:

- in an "**acquisition fraud**", the missing trader supplies the goods on the final consumption market. Embezzling all the VAT debited, it generally sells the goods at a price below their market value. This fraud results in a loss of revenue and a distortion of competition;
- in a "**carousel fraud**", the same goods are repeatedly supplied in a circular pattern. After the missing trader's purchase from another Member State, goods are sold through a series of domestic companies and then re-exported to the EU country of origin (the goods move in a "carousel"). Although the missing trader doesn't remit the VAT to the authorities, the enterprise at the end of the domestic supply chain (the "exporter") claims back the input VAT paid. Therefore, at each turn of the goods the tax authorities suffer from a loss. As in acquisition fraud, the missing trader generally charges its counterparties a lower price.

An example of carousel fraud is shown in the following graph.



Source: International VAT Association (2007).

A German missing trader (B) buys goods from a French company (A) without VAT (destination principle) and sells them at a VAT-inclusive price to (C), without remitting the tax to the authorities. After several transactions the same goods are exported to (A) and the carousel starts again. At each turn, the German broker (E) claims back the input VAT paid (€180,500). The net loss for the German government is €171,000 (VAT collected by (B) and not remitted to the authorities).

The carousel fraud is not new: it can be traced back to the Benelux countries in the 1980s (House of Lords, 2007, p. 126). But from an originally relatively simple scheme it has evolved into more sophisticated forms: in order to cover up the scheme, the fraudsters set up extensive chains of transactions involving several EU and non-EU countries and all kinds of goods and services. This fraud easily migrates among EU jurisdictions and sectors. By some estimates, over forty markets are "infected" by MTIC today (Ainsworth, 2010b).

VAT fraud in trade in services will be analysed subsequently. As regards the goods involved in fraud, their common features are availability in large quantities, high value, low weight, rapid technical obsolescence, and black market diffusion. Frauds have frequently been detected involving computers, mobile phones, automobiles and car accessories, meat, wholesale trade in oil and grain, soft drinks, cosmetics, precious metals, and consumer electronic goods. But they can also be carried out through sham transactions between complicit enterprises (in such cases, goods might be exchanged only on paper and remain stored in warehouses managed by fraudsters or their accomplices).

Other common characteristics are: little physical capital needed to start a business; rapid growth in turnover; high-value repayments claimed in early trading periods; poor compliance.

The key person in the fraud is the "missing trader", a shell or short-lived company (it may last for just a few weeks or, at most, a few months) formally controlled by dummy managers who, if necessary, move their place of business abroad. Sometimes missing traders hijack VAT numbers: they buy goods from abroad under someone else's VAT number, thereby placing legitimate traders at risk of tax penalties for goods they never bought. Other actors also play an important role: a) "buffer enterprises" are, generally speaking, fully compliant traders carrying out regular business outside the fraud; they are involved in order to make the fraud pattern more complex and to hide the fraudulent transactions within their legitimate business. They may be unaware of being part of a chain of transactions aimed at stealing the VAT from the tax authority; they also make investigations more complex; b) carriers transport (or simulate transporting) the goods and provide logistical bases; c) VAT warehouses store the goods purchased in "tax suspension"; d) law firms provide support for setting up and liquidating companies.

As observed by FATF (2007), laundering the profits of carousel frauds involves sophisticated organised criminal gangs, which are attracted by the large sums available at a relatively low risk, and requires an in-depth knowledge of financial markets. It has been underscored, in particular, that the proceeds of carousel frauds may have become the main source of financing for other criminal activities. Fraudsters preserve anonymity to the greatest extent possible and obviously take pains to keep missing traders from formally become the owners of significant assets that could be seized by the tax authorities.

In 2010 the Italian Financial Intelligence Unit (FIU) established at the Bank of Italy reminded banking and financial intermediaries and professionals of the need for constant and careful monitoring of transactions by persons operating in "risk sectors", in particular with regard to the establishment and liquidation of firms and the opening, management and closing of the accounts (FIU Communication of 15 February). To this end, a specific operational plan describes possible anomalies that can be detected in the light of subjective and objective factors by checking the consistency of a given customer's volume and frequency of transactions with the actual economic activity carried out by that customer. Information on the structure and the owners of the company are also relevant.

2.2 New circuits of VAT frauds

An increasing number of frauds, in particular since 2004, involve non-EU countries (UK Office for National Statistics, 2011). Some of the main schemes are *i)* carousels on imports under customs transit, *ii)* the fraudulent use of VAT warehouses, and *iii)* under-invoicing of imports. Moreover, fraud involves the supply of tradable services acquired both from EU countries (MTIC fraud) and from non-EU countries (missing trader extra-Community fraud – "MTEC" fraud). These schemes post an especially great danger because they involve huge volumes of international trade, they are fast, agile and difficult to detect using standard tools.

Customs transit rules enable imported goods to move within the Community, free of customs duty and VAT, until they reach the Member State of final destination. These operations have been an opportunity for carousel fraud in recent years. In fact, as in the MTIC frauds described above, missing traders use the regime to introduce VAT-free goods within the EU. Submitting false documents has often enabled traders to dodge the obligation – established by the EU transit procedure – to provide adequate collateral. The inadequacy of risk analysis and the use until 2006 of a paper-based procedure of transit also contributed to the development of fraud.

For instance, a broker resident in an EU country (A) exports goods (without charging VAT) to a non-EU country (C) and claims back the input VAT from its national tax authority. Afterwards, the same good is shipped from (C) to another EU country (B) with final destination stated as country (A). On entering the EU, taxes and duties are deferred under EU transit rules. Goods are sold through a number of traders in different Member States to hide the fraud and then are bought free of VAT by the missing trader operating in (A). The missing trader resells the goods at a VAT-inclusive price to the broker resident in (A), without remitting the VAT to the

authorities. The goods are then re-exported to the same non-EU country and the carousel starts again, leaving the import duties and VAT unpaid. Alternatively, before reaching their supposed final destination the imported goods are diverted to the black market (acquisition fraud).

Another swindle takes advantage of the specific regimes for "**VAT and customs warehouses**". A tax warehouse is an authorised place where goods are imported under duty and VAT suspension arrangements. No VAT is payable when goods are placed in the warehouse, but only when they are removed from it.

This regime is often used by short-lived (6-9 months) missing traders for illicit transactions (Agenzia delle Dogane, 2011). Frauds have been identified within sectors as animal hides trade in Italy. Goods sold by non-EU companies to EU missing traders are placed in a warehouse under a VAT suspension regime. Afterwards, thanks to buffers or other fake national companies, the fraud takes place under a scheme similar to those already described.

Under-invoicing fraud involves imports from non-EU countries with cheap labour and low raw materials costs and represents a different and potentially even more dangerous kind of fraud.

Fake documentation and a network of complaisant enterprises, exporters, brokers, agents, accountants, importers, carriers, etc., enable goods (usually clothing, textiles, footwear, food) to be imported into the EU at a declared customs value substantially below their actual value, often even below the world market price of the materials incorporated in them. This under-invoicing causes a drastic reduction in the amount of taxes and duties due on the imports and enables the importers to commit VAT fraud. (Actually, VAT due on imports is reduced to practically nil, so that the subsequent transaction may become the start of an acquisition fraud or channel the goods into the black market.) In most cases all or part of the profits of the fraud are channelled back to the country of origin of the goods and are used to finance other transactions.

Initially, the exporter ships a significant number of containers of goods to the EU. The broker helps to create a fictitious business structure with which to conceal the fraudulent intention. Other elements of the organisation are: a "parent" company, which handles fictitious intra-EU trade of goods; a forwarding agent, who manages the arrival of the goods, customs clearance and other logistics; an accountant, who keeps records; and one or more compliant importers, sometimes not aware of the actual trade flows managed in their name by the broker or other third parties under a specific mandate.

In a "paper-based scheme", the importer sells the goods to the parent-company and doesn't remit the VAT to the tax authority. The parent company organises a sham sale to counterparties in another EU country and then claims back the input VAT. The EU counterparty may not even exist or may be a shell company. The carrier's false invoices show that goods have been transferred abroad, whereas they may actually be stored in warehouses and then sold on the black market. Accounting tricks obscure the traceability of the goods during possible inspections.

Given the huge volume of international trade, criminals establish themselves in port areas, purchase terminals, shipping companies and logistic centres. They expand their activities to retail chains, undermining the competitiveness of the market and harming national production.

Under-invoicing may be linked to other frauds. For instance, the VAT warehouse regime may be exploited to postpone or circumvent customs controls at borders (Agenzia delle Dogane, 2011).

Finally, swindles patterned on a MTIC or MTEC fraud have recently spread within the **tradable service markets**.

With globalisation, deregulation and evolving technology, the volume of services supplied at a distance has expanded. Following the radical reform of VAT territoriality rules introduced in January 2010, supplies of services between firms (B2B) are taxable in the country of "destination", i.e. the place where the actual consumption takes place (with some exceptions), whereas services supplied to non-taxable persons (business to consumer or "B2C") are taxed in the country of the supplier ("origin principle").

As a result, VAT taxation of cross-border services is now similar in principle to the taxation of goods. Nonetheless, the possibility for enterprises to purchase services from abroad under a reverse charge procedure has given rise to fraud schemes that are highly sophisticated, although based on the simple mechanics already described.

Legitimate trade in services is also used to cover up carousels of goods: a fraudster supplying both goods and services can offset VAT liabilities resulting from the legal activity in services with VAT claims resulting from fraudulent transactions in goods. These schemes are generally very complex and almost impossible to identify without lengthy investigation.

VAT fraud schemes reached the European carbon market in the spring of 2009.[2] Transfers of emission allowances between taxable persons are considered supply of services and are therefore taxable at the place where the recipient is established. Consequently, they constitute a "perfect underlying" for carousel fraud (M.C. Frunza et al., 2010).

Fraudsters have reportedly bought "VAT-free" quotas abroad and then sold them in the country, charging VAT to their customers; before settling the VAT debit with the authorities, the fraudsters closed their businesses. It has been remarked that such fraud is probably linked with criminal networks operating outside the EU, for instance in the Middle East.[3]

During the summer of 2009, a number of suspected cases of fraud were detected in several EU Member States. To cite one example, in France trading volumes of allowances on BlueNext-Paris for the first four months of 2009 averaged less than 7 million credits per day; after the fraud

[2] The EU CO_2 quota trading system is a cornerstone of EU climate policy and forms part of the legislative basis adopted by the European Parliament in 2008 (Directive 2009/29/EC). It is a market-based instrument that can be used to reach environmental objectives, i.e. to cut greenhouse gas emissions.

[3] Europol press release, "Further investigations into VAT fraud linked to the Carbon Emissions Trading System", 28 December 2010.

took place, daily volume jumped to 9.4 million in May and on 2 June 2009 reached a record high of 19.8 million credits.

Fake trades in emission certificates possibly resulted in tax losses of €5 billion in several European countries and accounted for up to 90 % of total trading in CO2 quotas in some countries.[4] Such fraud amounted to €850 million in Germany and €500 million in Italy.[5] In Belgium, in 2009 it caused VAT losses of €79 million, or about 85% of the entire volume of organised VAT fraud in that country (Police judiciaire fédérale, 2009-2011).

In the carbon market, fraudsters also use "phishing" scams: criminals obtain an account holder's user name, password and any other necessary information to access on-line registry accounts, in order to initiate a fraud under a false identity.

More generally, frauds have migrated in recent years to dematerialised markets. There is evidence that similar swindles have reached the gas and electricity sectors.[6]

3. Fraud estimates in the EU and individual Member States

3.1 Preliminary remarks: issues in estimating VAT fraud

Different methods have been developed to estimate the scale of tax evasion, based on conceptual and statistical improvements in estimating the underground economy. Direct methods ("bottom-up") use microeconomic data drawn from household or firm surveys or collected through auditing activity; indirect methods ("top-down") provide estimates based on the comparison between the theoretical tax base and actual tax data.

These approaches also apply to VAT evasion. The indirect methods estimate the so-called VAT gap reflecting VAT fraud, evasion, avoidance and other forms of non-compliance. The most common indirect method (recommended also by the EU Commission[7]) is based on the expenditure side of GDP calculation. Usually these estimates are taken to indicate the trend in tax evasion rather than its level (Keen and Smith, 2007). Direct methods are used mainly to get an idea of the level of tax evasion and to check top-down estimates.

Estimates of VAT frauds can be produced using microeconomic data extracted from operational evidence. An example is the method used by the United Kingdom's revenue and customs department (HMRC), which provides a range for both attempted missing trader intra-

[4] Europol press release, "Carbon Credit fraud causes more than 5 billion euros damage for European Taxpayer", 9 December 2009.

[5] *Wall Street Journal*, "German Prosecutor Confirms Tax-Fraud Damage", 3 March 2011; aforementioned Europol press release of 28 December 2010.

[6] Bundeszentralamt für Steuern (Federal Central Tax Office - BZSt), information sheet "VAT Fraud in electricity and gas trading", 18.8.2011, www.bundesnetzagentur.de. According to experts, some unique features of electricity and gas trading make these markets particularly attractive for fraud.

[7] 98/527/EC-Euratom: Commission Decision of 24 July 1998.

Community frauds and for their effect on VAT revenue. The methodology is not revealed in order to avoid a detrimental effect on compliance.

Availability and completeness of data are a major issue in estimating VAT frauds with these methodologies. Another problem is linked to the mutable nature of frauds or to the "principle of running water" (Schneider, 2000): frauds adjust to changes in the environment, legislation and auditing targets, so bottom-up methods inevitably soon become obsolete. Moreover, since data are not taken "randomly" and come from tax audits that are planned on the basis of tax risk indicators, any statistical inference can easily end up in an overstatement of VAT frauds.

A proper estimate may be even more difficult in the case of acquisition frauds, when the fraudster reduces the prices for final consumers in order to crowd out competitors. Besides the effects on the efficiency of the domestic market (distortion of competition and shift of consumption across sectors), the value added of the entire supply chain is reduced, magnifying the overall impact on VAT revenue.

As regards macroeconomic approaches to estimating VAT fraud, let us note that MTIC fraud schemes also influence the correct calculation of national accounts: while the raw data on imports from the EU do not include, in principle, fraudulent goods transactions, as the missing trader usually does not submit any VAT Intrastat declaration (see Section 4.4), the raw data on exports include the fraudulent activity, as the exporting company is generally fully compliant. Consequently, imports are under-reported in the EU country where the fraud is committed but exports are not. This produces asymmetries in intra-EU trade balance. The cross-checking of data between Member States provides evidence of MTIC fraud, although there are other factors that contribute to asymmetries (for instance, exchange rates, timing differences resulting in movements of goods reported in different months by exporting and importing countries, goods classified with different commodity codes by importer and exporter).

In general, statistics based on cross-checks of trade flows may be insufficient, either because of the escalation of huge frauds (which may distort the trade flows in the short run) or simply because estimates are limited to some high-risk goods, whereas frauds can be widespread and easily migrate from one sector to another. New forms of carousel fraud may also involve persons that are either fully compliant or fully non-compliant with VAT reporting duties (as in the case where an intra-EU buyer and intra-EU supplier agree on their respective conduct and thus avoid asymmetries). Finally, modern carousels involving non-EU countries (MTEC) cannot be detected by checks on intra-EU transactions data.

All in all, giving an exact figure of the amount of VAT fraud remains extremely difficult, although using all the information available can result in a good estimation of the volume and trend of frauds within a given sector and country.

Nevertheless, according to the above-mentioned EC-Euratom decision, Member States are required to make adjustments to national accounts in order to reflect "evasion without complicity",

including VAT fraud in any form, unless they can demonstrate that an equivalent calculation is already implicit in their national accounts.

As an example, the British Office for National Statistics (ONS, 2011) publishes import figures for trade in goods which include adjustments for the impact of VAT MTIC fraud. The estimates of fraudulent activity rely on information uncovered during HMRC operational activity. Estimates regard UK trade statistics only as aggregate adjustments and refer to the value of missing trade transactions associated with carousel fraud, not the value of the frauds by themselves. In particular, adjustments are made for trade in capital goods and intermediate goods (these categories include mobile phones and computer components).

Generally speaking, any adjustment to GDP should be seen in the light of the difficulty of determining the actual volume of frauds, the different features of fraud schemes and the different methods used by national statistical offices to calculate GDP (Ceriani, 2009).

For instance, an MTIC fraud with non-fictitious transactions (i.e. the goods are actually exchanged) has an impact both on VAT revenue (since VAT is not remitted to the tax administration by the missing trader) and on national accounts (i.e. the import-export balance). If this fraud refers to goods that enter consumption and investment statistics independently from trade balance data, the adjustment needed is an upward revision of the amount of imports (accordingly, demand-side GDP must be revised downward). By contrast, an MTIC fraud that involves only fictitious transactions does not affect the actual level of economic activity at all. Exports are overstated while imports are not. Demand-side GDP is also overstated and the adjustment should concern exports rather than imports.

The case of acquisition fraud (goods sold for final consumption, non-fictitious transactions, no export) is like that of the non-fictitious carousel: imports must be revised upwards and, depending on the way consumption statistics are built, the VAT taxable base may be increased, with a possible widening of the VAT gap.

3.2 The volume of VAT frauds in the EU and individual Member States

Several attempts have been made to quantify the VAT losses in the EU on the basis of national accounts data for specific countries, sectors and periods of time.

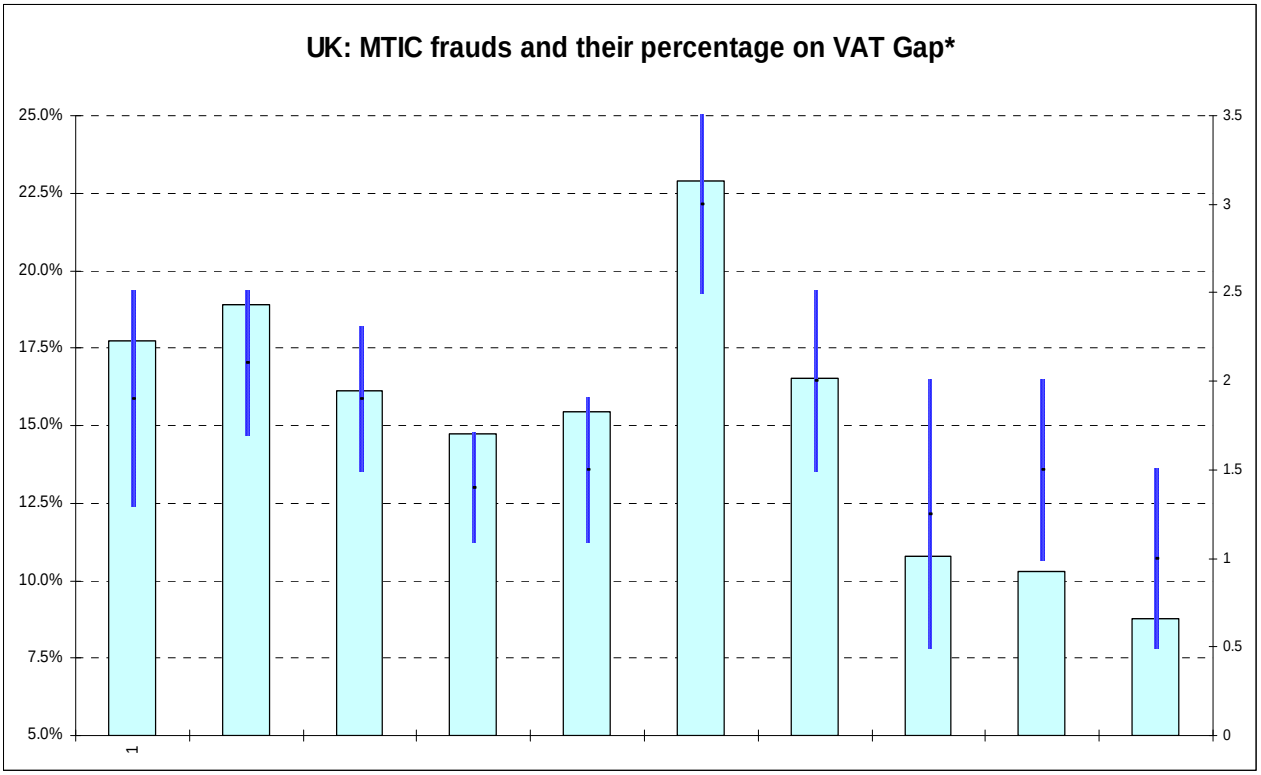
A remarkable exercise to quantify the VAT gap in all EU Member States over a period of several years was led by Reckon (2009), within a study published by the EU Commission. The study represents a step towards a common methodology of estimating the VAT gap in the EU, although the results suffer from some unavoidable shortcomings (e.g. the lack of uniform methodologies for building the national accounts and, in particular, their incorporation of the shadow economy; the complexity of individual national VAT systems and the lack of analytical data, which impedes a fine-tuned analysis at country level; and the distortive impact of MTIC frauds on national accounts).

The study comes up with an estimate of the VAT gap varying between €90 billion and €113 billion in the period 2000-2006. For 2006, this represents 12% of the overall theoretical VAT liability, with significant national differences: the gap ranges from 30% for Greece to 1% for Luxembourg.

PwC (2010), after estimating the missing values for other new EU countries and adjusting for 2009, calculates that the VAT gap for the EU-27 came to about €119 billion euro in 2009.

The Reckon study estimates the VAT gap as a whole, but it does not provide for information about the volume of VAT organised frauds (like MTIC) and does not identify the sectors, goods or types of businesses which are more susceptible to fraud. These elements of the VAT gap can be very hard to isolate and be estimated only using rough approximations. Some information can be gathered from other sources that exploit a constellation of different data collected by digital means or gathered during administrative controls.

The graph below shows an elaboration on UK data published by HMRC (2011): between 2000 and 2010 MTIC fraud impact on VAT receipts (estimated with a bottom-up approach) ranged from £0.5 billion to £3.5 billion, decreasing in the last years (although the figures up to 2004-2005 were derived with a different method of calculation). Over the same period, the percentage of MTIC frauds (median value) in relation to the overall VAT gap (the latter calculated with a top-down method) ranged between 8.8% and 22.9%.



* HMRC data. Right scale: £bn - Lower and upper estimate. Left scale: MTIC-fraud (median value) as a percentage of VAT gap.

HM Customs and Excise (2004) also produced a "bottom-up" estimate for both frauds and VAT losses: VAT missing trader frauds accounted for £1.77-2.75 billion in 2001 and 2002, while the bottom-up estimate of VAT losses was £7.17-10.25 billion. These results and those reported above differ chiefly because of calculation method.

HMRC data are basically the most precise statistics on the extent of VAT frauds and can be used to produce an inference at EU level of MTIC fraud volumes. Note that in the last few years the estimated volume of VAT fraud in the UK decreased slightly, plausibly as a result of the strengthening of national enforcement policies and the introduction of legislative measures (e.g. the "reverse charge" on high-risk sectors; see Section 4.1). While this effect may be observed in other EU countries that adopted similar enforcement policies, in many other Member States no major changes in legislation and control strategies have been introduced in recent years. To mitigate these asymmetries, the following estimate is based on average data for 2001-2010.

The average percentage of MTIC frauds (for both the lower and the upper bound) with respect to the UK VAT gap over the period 2000-2010 ranges between 11% and 19.4%. Applying these percentages to the overall EU-27 VAT gap in 2009, we get an estimate of the annual amount of MTIC frauds ranging between €13 and €23 billion.

Interestingly, this calculation is consistent with other estimates available at EU level. First, the Eurocanet project report[8] estimates the annual VAT lost due to MTIC carousel fraud in 24 EU countries at €15 billion. Europol puts MTIC frauds in the whole EU in 2006 at €23 billion euro, [9] i.e. about 22% of Reckon's 2006 estimates of the VAT gap. In the same year, as shown in the above graph, the UK registered a similar volume of MTIC frauds as a percentage of the VAT gap.

The data we have been looking at only cover MTIC frauds on goods. Fictitious trades in emissions certificates may have caused additional tax losses of €5 billion in several European countries, and fraud linked to EU customs transit rules and to under-invoicing of imports reached significant volumes in some Member States.

Thus, the overall volume of VAT frauds in the EU-27 (including MTIC, MTEC, fraud on tradable services and under-billing of imports) can be estimated within **a range of €20 billion to €35 billion a year**.[10] This calculation also takes into account Eurostat statistics on external trade flows (as far as under-invoicing fraud is concerned) and a series of data published on specific fraudulent schemes. The actual magnitude of frauds (closer to the lower or upper bound) depends

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[8] Extracts from "*Attempt to measure cross border VAT fraud. Breakdown within the EU - OCS SPF Finances Belgique*", in House of Lords (2007), pp. 126-132. The overall amount is the mean of the results obtained with four different macroeconomic approaches and should be treated as an "upper limit" measure.

[9] Europol press release: "*Experts discuss 'Missing Trader Inter-Community Fraud'*", 13 December 2006.

[10] This estimation range is consistent with calculations of PwC (2010), which applies the benchmark of HM Customs and Excise (2004) to the EU-27 VAT gap and estimates the fraud volume at between €20 billion and 31 billion. Similar estimates (€23 billion to €30 billion) are reported by Convenevole (2011). A maximum estimate of about €31 billion is obtained by applying to the EU-27 VAT gap the maximum percentage of frauds registered in the UK in the period 2000-2010 (i.e. 26.7% in 2005-06, for the upper bound). Finally, according to House of Lords (2007), a third of VAT losses (almost €40 billion in the EU-27) is attributable to VAT frauds.

on several factors, such as the escalation in a short period of time of macro-frauds on certain goods or services, the introduction of enforcement measures targeted at high-risk sectors, the performance of customs controls on imports and the consequent geographical repositioning of missing traders.

Of course, VAT fraud differs appreciably from country to country. In Germany, the losses are put at 2% of VAT receipts (EU Commission, 2006) or €4.5 billion (House of Lords, 2007). In the UK, MTIC frauds are calculated at between £0.5 billion and £1.5 billion (HMRC, 2011). In Belgium, the loss was estimated at €1.1 billion in 2001 and €29 million in 2010 (Police fédérale, 2009-2011). In Bulgaria VAT fraud is estimated to reach €400 million annually.[11] National data are rarely supported by an explanation of the methods of calculation and the perimeter of estimation, so their comparative value is scant.

As regards Italy, a first indication of the level of VAT frauds is given by the trend of VAT refunds and VAT offsetting against other tax liabilities. This phenomenon reached abnormal proportions in 2008 (about €27 billion, incomparably more than in other Member States) and is symptomatic of the presence of a significant volume of MTIC frauds (refunds and offsets of VAT credits are usually linked to buffer companies operating at the end of a chain of carousel transactions, before the goods or services are exported). VAT offsetting collapsed in 2010 as a result of specific corrective measures (see Section 4.3).

According to our method of estimation, all organised VAT frauds in Italy reduce VAT revenue by between €5 billion and €9 billion a year.

4. Measures taken

International VAT frauds of the kind we have been considering exploit a combination of factors. One is the "country of destination" mechanism of taxation for cross-border trade in goods and services, which allows purchasers to buy VAT-free inputs although they charge VAT on subsequent sales and entitles exporters to claim back input VAT related to their sales. Another is the abolition of border formalities within the EU: controls on goods and services acquired from another Member State are based on traders' transaction records and are therefore subject to shortcomings inherent in the system of information exchange (e.g. the time between the transaction and the corresponding exchange of information). Finally, frauds have taken advantage of the inadequacy of national control systems, the lack of effective regulatory mechanisms and the absence of a common anti-fraud strategy.

Member States and the international community have long recognised the existence and magnitude of the phenomenon of VAT fraud and its sources. Over the years a wide-ranging debate

[11] OCCRP – Organized Crime and Corruption Reporting Project, "VAT Fraud costing Bulgaria Billions", 10 August 2011, www.reportingproject.net .

has developed on the roles played by EU and national authorities and on the best policies to undertake.

4.1 Member States' policies to combat VAT fraud

Most of Member States strengthened their anti-fraud strategy by developing early-warning systems for sectors and transactions at risk. Since missing traders need to enter the market before committing the fraud (i.e. to obtain a VAT identification number, unless they hijack another trader's VAT number), a sound system of preventive **risk analysis** is essential for effective anti-fraud action. Many EU Member States[12] use advanced software for risk analysis and electronic databases containing macro and micro data on traders, including the economic sector in which they operate, their financial situation and ownership, their payments, declarations and refunds of VAT.

Risk analysis and intelligence strategies are crucial aspects of the fight against fraud on imports too. Preventive controls by customs authorities are commonly based on IT technology for scanning and tracking goods and for identifying shipments at risk.

All these measures are flanked by **subsidiary interventions** aimed at increasing deterrence on buffer firms and other enterprises within the same supply chain. In respect of these enterprises tax authorities may disallow input VAT deduction, apply the "joint and several liability" rules for unpaid VAT, or deny the zero-rate regime for intra-EU supplies.

The European Court of Justice's decisions have exerted strong influence on the practical design of policies and on their effectiveness. Apart from the general principle of "tax neutrality"[13] – which precludes a generalised differentiation between lawful and unlawful transactions – the Court's decisions have concerned, in particular: *i)* the concept of "economic activity", which should, in principle, be unaffected by the fraudulent nature of other transactions in the chain;[14] *ii)* the amplitude of the right to VAT deduction, which should be subject to limitations only where the taxable person knew - or had reasonable grounds to suspect - that VAT would go unpaid on the supply to which it was a party or earlier in the supply chain;[15] *iii)* the zero-rate regime on intra-EU supplies, which may be denied only "if the supplier has concealed the identity of the true purchaser in order to enable this latter to evade VAT" (Case C-285/09).

In short, tax administrations cannot impose sanctions in the absence of specific evidence of a fraudulent intention; they need to prove that buffers and/or their suppliers/customers were deliberately involved in the fraud.

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[12] For example, the UK, the Netherlands, Belgium, Spain, France, Italy and Hungary.

[13] Judgements of 22 May 2008 in case C-162/07, 23 October 2003 in case C-109/02, 16 September 2004 in case C-382/02 and 18 October 2007 in case C-97/06.

[14] See for instance judgment of 12 January 2006 in joined cases C-354/03, C-355/03 and C-484/03.

[15] Judgement of 6 July 2006 in joined cases C-439/04 and C-440/04 and judgement of 11 May 2006 in case C-384/04.

The most radical strategy against VAT fraud is undoubtedly the **reverse charge** mechanism for domestic business-to-business transactions. This measure has the advantage of simplicity: it shifts the VAT liability from the supplier to the purchaser, depriving the missing trader of the right to debit VAT to its customers. Nonetheless, it may cause frauds to shift to other sectors, as happened in Belgium (Police judiciaire fédérale, Annual Report 2010, p. 46).

The mechanism is widely used in markets characterised by a considerable risk of fraud. In the EU it is widespread, for instance, for the construction sector. The UK applies it to transactions over £5,000 involving mobile phones and computer chips. For these markets, the European Council recently authorised Germany, Austria and Italy to adopt analogous measures[16] (a threshold of €5,000 is applicable in Germany and Austria). Moreover, the reverse charge has been adopted for the carbon market, to tackle CO_2 emission rights fraud.

In principle, an alternative to the reverse charge is the introduction of a VAT exemption for domestic transactions. The anti-fraud effect is analogous: the missing trader is deprived of its VAT liability. Nevertheless, this change to the VAT regime impacts negatively on VAT deduction (VAT on inputs becomes a cost for firms and is passed on to customers) and may have side-effects on the sector concerned (Borselli and Chiri, 2008).

VAT thresholds are often reported as a useful measure to reduce the impact of VAT frauds or, at least, to complement the anti-fraud strategy. On the basis of Articles 284–287 of the VAT Directive, these thresholds have been adopted by most of Member States and range from just few thousands euros (Belgium, Denmark and Greece) up to more than €80,000 (UK). Below the threshold, taxpayers are not required to register for VAT purposes and to charge and collect the tax (registration threshold) or simply to charge and collect VAT (collection threshold).

As to the impact on frauds, VAT thresholds help tax administrations to focus their investigations on big taxpayers. Choosing the optimal level of thresholds is crucial in view of its implicit distortions to competition and because of the trade-off between maximising the revenue (low thresholds) and reducing compliance costs or improving the effectiveness of investigations (high thresholds).

4.2 Evidence of national policies' results

Let us now look at some evidence regarding the completeness, efficiency and effectiveness of the strategies we have considered, using available data for specific countries, sectors and types of fraud.

For CO_2 emission rights fraud, the measures promptly undertaken have sharply cut down fraudulent transactions. For instance, in France, after the introduction of a VAT exemption, trades fell back to their “normal level” (M.C. Frunza et al., 2010). Other countries rapidly adopted a reverse charge mechanism for the same sector; they included the UK, which amended the former zero-rate VAT regime, the Netherlands, Belgium, Luxembourg, Spain and Denmark. This measure

[16] Council Decision of 22 November 2010, no. 2010/710/UE.

is regulated by EU legislation and may be applied by all Member States on an optional basis. Transactions fell in Spain after the introduction of the new mechanism.

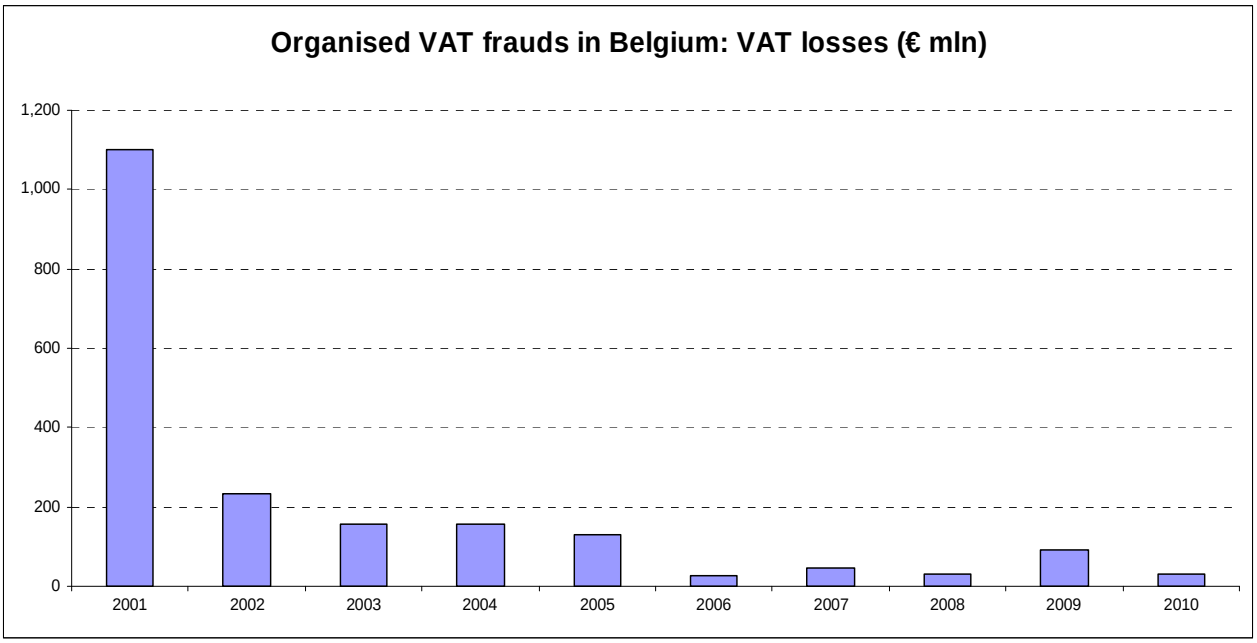
Authorities in Europe, including Europol, are increasingly focusing on CO_2 emission rights fraud and working together to track the perpetrators. In 2010, France, Germany, Spain, the United Kingdom and other countries took specific actions against the criminal networks involved. In Italy, in 2010 the Finance Police carried out raids on about 150 companies just few weeks after the Italian Power Exchange (G.M.E) halted all trading in carbon credits due to the high number of abnormal transactions; the estimated potential VAT loss reached €500 million euro.[17]

Concerning the effectiveness of "risk analysis" systems adopted in several Member States, we shall examine the cases of Spain, Belgium, the UK and Italy (the latter in Section 4.3).

In Spain, VAT frauds have decreased significantly in recent years according to Agencia Tributaria (2008). Since 2005, Spain has pursued a plan for the prevention of tax fraud, based on digitisation of tax returns, reallocation of internal resources, enhancement of preventive risk analysis and early warning mechanisms, and stronger cooperation at national and international level. Among its features, the plan provides for cooperation with businesses operating in sectors at risk, through agreements signed with trade associations. Refund claims made by traders acting in these sectors have fallen substantially. In addition, the tax authority has uncovered several fraud networks and schemes of money laundering and false invoicing.

In 2001 Belgium introduced a strategy to fight carousel-type frauds, based on coordinated enforcement action and the creation of a specialised unit (the "OCS TVA") that rapidly transmits the findings of its investigations to the local tax authorities and legislative authorities. Since the unit was established, the estimated loss of revenue due to organised VAT fraud has fallen from €1.1 billion to €29 million (see graph below).

[17] Europol press release "Further investigations into VAT fraud linked to the Carbon Emissions Trading System", The Hague, 28 December 2010.



Source: Police judiciaire fédérale, Annual Reports 2008, 2009 and 2010.

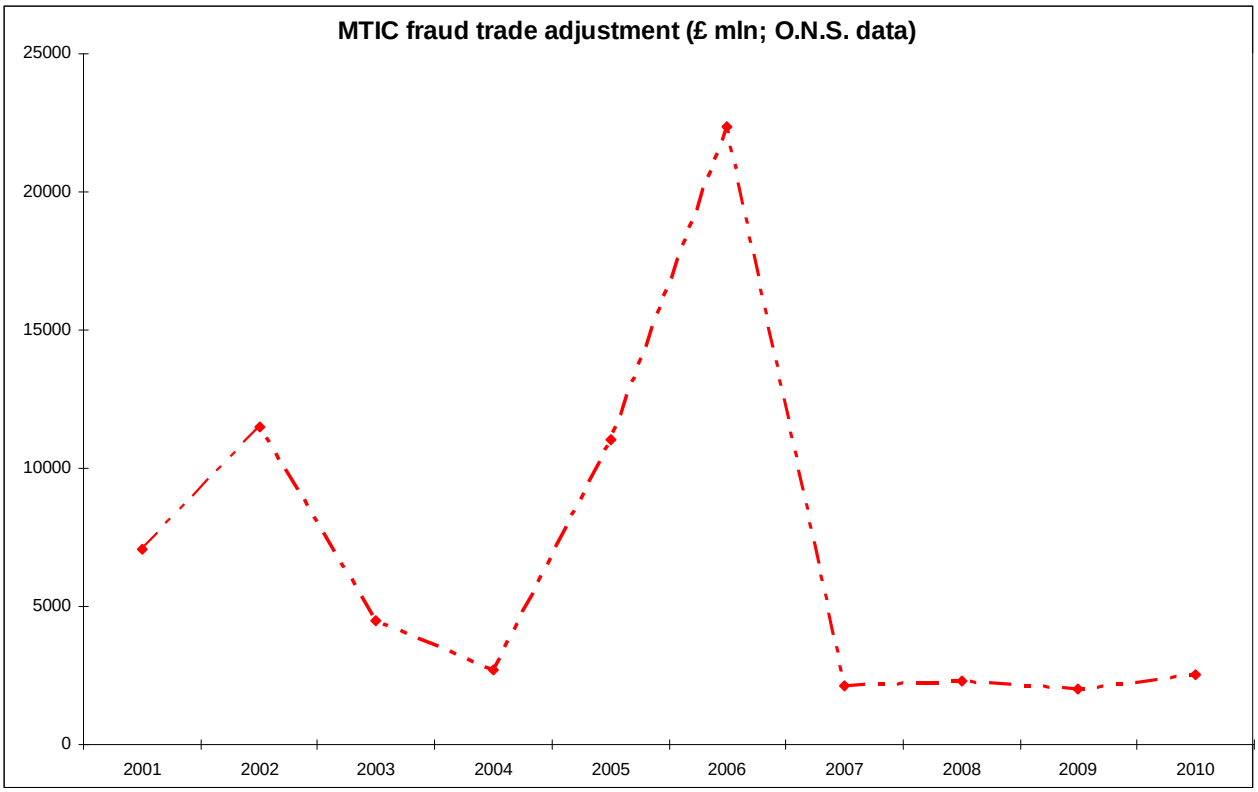
According to the Police judiciaire fédérale (2009-2011), the slight increase of frauds in 2009 was mainly due to the escalation of emission rights VAT frauds, which have been tackled since 2010 with the introduction of the reverse charge mechanism.

UK data published by HMRC (2011) have already been analysed in detail in Section 3.2. Plausibly, the decline in VAT frauds in recent years is due at least in part to the enhancement of HMRC controls. The national strategy in place for dealing with MTIC fraud involves investigative units and measures such as pre-registration checks to deny VAT registration to missing traders, in-depth verification of suspect VAT repayment claims, and joint and several liability for payment of unpaid VAT.

Extended verification is closely targeted to claims from businesses whose trade HMRC suspects to be connected to MTIC fraud. In over 95% of cases where traders have been subject to extended verification, the process has found evidence that they have been participating in trading linked to MTIC fraud or sufficient grounds to justify further investigation (HM Treasury, 2007).

HMRC statistics can be analysed in conjunction with data published by the Office for National Statistics (2011).[18] Statistics show a break in the volume of transactions linked to MTIC frauds, the result of an adjustment to import figures ranging from £2 billion to over £20 billion in the last decade (see graph below).

[18] Import figures for trade in goods published by the Office for National Statistics include adjustments to allow for the impact of VAT MTIC fraud.



The fall in fraud-related trading can be traced not only to the risk analysis strategy but also, since 2007, to the introduction of a reverse charge mechanism in some key sectors (mobile phones and computer chips). Trade flows were distorted in the 2005-06 by huge and exceptional carousel frauds, estimated at several billion euros and involving a large number of Member States (Eurojust, 2007). The surge in frauds in 2005-06 can also partly be attributed to the ECJ judgement[19] against the steps taken by the UK to deny VAT repayment claims to taxable persons involved in a carousel fraud (House of Lords, 2007, pp. 61 and 62).

All in all, although we cannot be entirely certain that the official data fully capture the volume of illegal schemes in the countries considered, there is no doubt that the measures taken have produced significant results, at least within the main risk areas known so far. Assessing the long-term effectiveness of the strategies requires further investigation of the potential displacement of fraudsters towards different schemes, sectors and countries.

4.3 An analysis of the Italian policy

As in most other Member States, Italian strategy focuses on refining risk analysis, to prevent fraud or VAT losses due to schemes already in place, rapid execution of controls and immediate adoption of protective measures, to recoup the VAT evaded. Specific attention is placed on areas that risk analysis and operational experience show may be affected by widespread frauds.

[19] Joined cases C-354/03, C-355/03 and C-484/03.

The Revenue Agency, Customs Agency and Finance Police identify areas for coordinated action and develop plans for targeted intervention through an ad hoc operational unit. VAT identification requests are carefully examined; other relevant data are found in the VIES system.

A distinctive feature of the recent Italian strategy is its prominent use of a wide range of electronic information (forwarded by taxpayers or by financial intermediaries) in support of controls.

First, the Italian tax administration makes intensive use of controls on bank accounts held by taxpayers subject to tax assessment. Since 2006 this procedure is fully computerised. Further, to facilitate investigations, banks and financial intermediaries periodically transmit to the tax administration data on persons that have accounts or have conducted financial transactions with them.

Decree Law 262/2006 tackled frauds on the cars bought in another Member State, requiring registration requests to be accompanied by a copy of the VAT payment form and data on the vehicle and on the subsequent national sale.

Decree Law 40/2010 made it obligatory for all VAT taxpayers to report any transaction (relating to both goods and services) with entities located in countries on the "blacklist".

Since 2010, pursuant to Decree Law 78/2009, the offsetting of a VAT credit with other taxes and contributions is considered valid only if the relevant tax payment form is filed electronically by means of official software; for VAT credits over €10,000 the offsetting is allowed only after the VAT return which shows the credit has been filed. To offset a VAT credit greater than €15,000, the VAT return also has to be signed by an authorised professional, who, after performing the checks required by law, certifies the consistency of the VAT return with the VAT books ("conformity permit").

The limitations on offsetting VAT credits have significantly deterred companies that had abused the rules. If we examine the trends in recent years, we find that the offsetting of VAT claims rose to an abnormal level (€27 billion in 2008, including VAT refund requests; Convenevole, 2009) and then fell drastically, to €6.6 billion, in 2010 (Agenzia delle Entrate et al., 2011).

Decree Law 78/2010 introduced two additional measures: *i)* taxpayers applying for a new VAT number must specify whether they intend to perform intra-Community transactions, with their consequent inclusion in a new specific register. The authorisation to perform these transactions can be refused or revoked at any time by the tax administration; *ii)* from 2011 onwards, all persons subject to VAT must report any transaction relevant for VAT purposes with a value higher than €3,000 to the tax authorities (for the first year a higher threshold is set). It should be remarked that this requirement is not directed specifically against VAT fraud but rather against tax evasion in general.

These measures allow the tax authorities to focus risk analysis on a small number of firms and to identify the chains of transactions and patterns potentially linked to VAT frauds.

Finally, the reverse charge mechanism was extended in 2011 to transactions in mobile phones and computer chips, pursuant to the EU Council's implementing Decision of 22 November 2010[20]. The reverse charge mechanism had already been introduced in other sectors characterised by a considerable risk of fraud (construction, waste materials, real estate transactions, etc.).

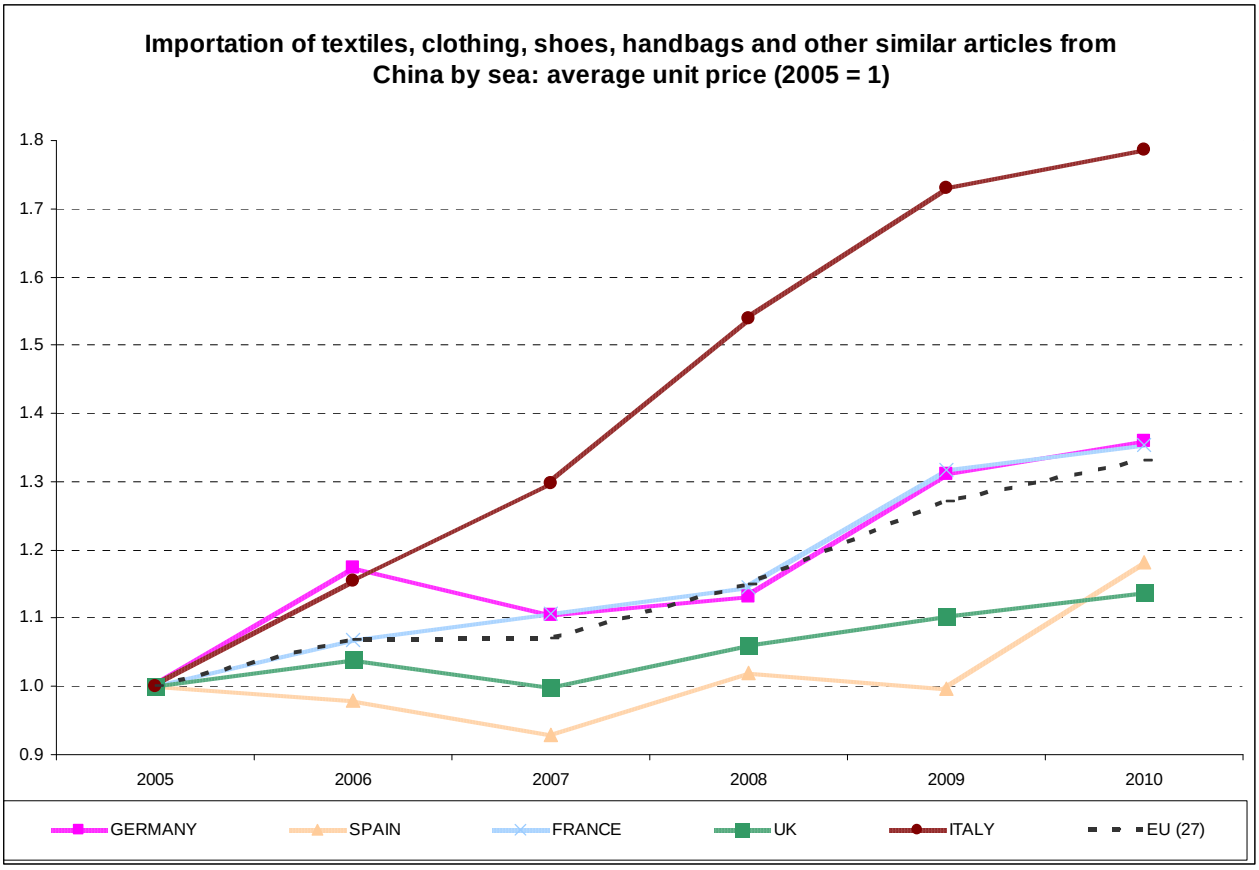
It is too early to assess the results of these measures as a whole. Clearly, Italy is trying to develop a wide and fast-access database and to exploit the synergical effect of complementary mechanisms, a pragmatic way to tackle some of the most dangerous types of fraud in the immediate future. Nevertheless, the requirements can be burdensome for legitimate enterprises and ineffective if the potentialities of this large volume of information are not fully exploited by the tax authorities.

A specific discussion of **cross-border under-invoicing fraud** is needed. As we have seen, under-invoicing on imports is a source of classic VAT frauds (Section 2.2). The Italian Customs Agency addresses this fraud at different levels, by improving risk analysis of the flows and systematically monitoring customs consignments with low declared values. Since 2006 a regulatory measure empowers the Agency to adjust the imports value on the basis of general information (market prices, transport costs, insurance and freight).[21] As a direct consequence, the final customs values of certain types of goods have increased significantly over the past years and hundreds of smuggling cases have been reported to the authorities.

The graph below shows the evolution of declared import prices (2005 = 1) in some of the main EU countries and the EU-27 average for imports of textiles, clothing, shoes, handbags and other similar goods from China.

[20] The reverse charge applies only to stages of wholesale trade, as for these goods there is lower risk of shifting the fraud to retail trade (mobile phones are generally supplied by large phone companies and integrated circuits concern a state of production prior to integration into end-user products).

[21] To this end, the Agency is allowed to acquire data and documents relating to each element of cost that forms the declared value of an importation. The request for information may concern all parties potentially involved in the fraud, including importers, exporters, airport service companies, shipping companies, and individuals who handle, deposit and transport the goods.



Source: Author's calculations on Eurostat data on external trade.

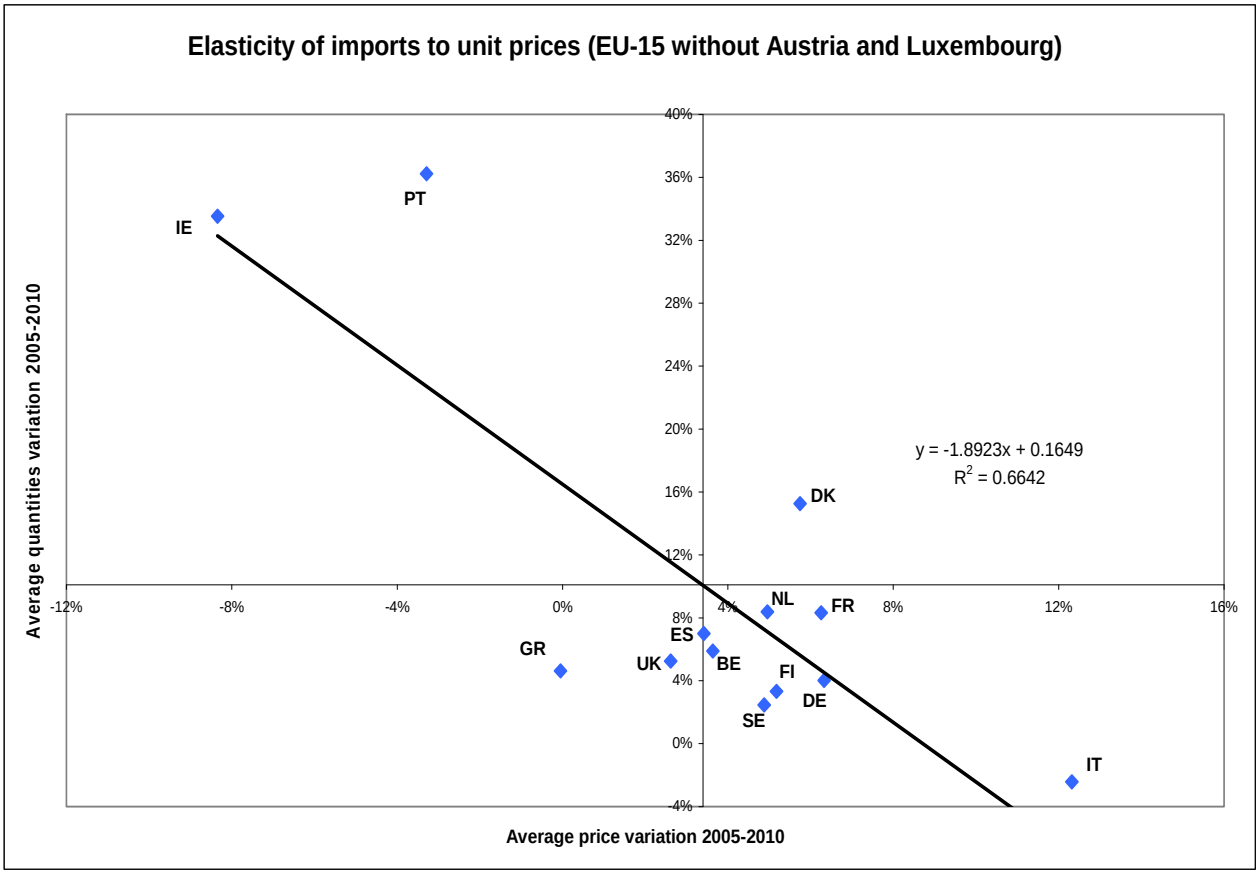
The average import price of imports of some major consumer goods from China to Italy almost doubled in the last 5 years, increasing at an average annual rate of about 12%, while the average annual growth rate for other countries is between 2.6% and 6.3%.

These differences in unit price growth rates are too wide to be explained only by normal factors linked to exchange rate variations, the composition of the imports considered and the quality of the various goods. A non-normal factor may be traced, as regards Italy, to the result of the strong enhancement of border operational activity and customs risk analysis, thanks in part to the ad hoc measures described above.

The statistics also reflect another non-normal element: the deliberate response of fraudsters to divergent approaches by the tax authorities. In fact, for the same set of goods, over the same period Italy also registered an average annual reduction of about 2.4% in import volumes, against an increase in most of the other countries.

The Customs Agency confirms that Italy's imports of clothes from China decreased during the period 2003-10 (Agenzia delle Dogane, 2011), while such imports doubled in the EU as a whole.

The inverse relationship between the increase of unit prices at border and the quantities actually imported is also shown by statistics from other countries, as shown in the next graph.



Source: Author's calculations on Eurostat data on external trade. The average variations for quantities and prices are the average compounded variations calculated on annual data over the period 2005-10.

These results seem to suggest that the trade flows from China do not simply follow the logic of proximity to markets, but are also correlated with average unit prices at borders. If we assume that average unit prices are partly the result of frauds, then prices are affected by a variable that has no systematic relationship with the qualitative composition of the supplies. An explanation is that, following the strengthening of customs controls in certain ports and areas, fraudsters decided to shift their traffics in other areas.

In the case above, we observe a negative elasticity of approximately 1.7, mainly due to countries at the extremes of the statistical range (IT and IE). It indicates that the reactivity of decisions about the ports of entry for goods is linked to pronounced price variations.

This phenomenon may have important economic consequences and could even put pressure on customs authorities to ease their supervision of goods under customs control, in order to avoid a reduction in imports and customs duties. It is also unequivocal proof of the importance of a coordinated approach at EU level.

4.4 EU initiatives

The protection of the financial interests of the Community has become a priority for the European institutions. It extends to various activities, such as detection and monitoring of customs

fraud, misappropriation of subsidies and tax evasion. The fight against evasion, avoidance and abuse is recognised and encouraged by the VAT Directive. Under the principle of subsidiarity set out in Article 5 of the Treaty, the EU adopts measures in so far as the objectives pursued cannot be sufficiently achieved by the Member States themselves.

Investigating "EU fraud" in general and "tax fraud" in particular falls within the competences of the European Commission's Anti-Fraud Office (OLAF). The Commission recently proposed amending the rules for OLAF's investigations, in order to make the Office's activity more independent and effective and to strengthen its cooperation with Europol, Eurojust and individual Member States (COM(2011)135 final).

The European Commission is responsible for ensuring a solid legal framework for a common VAT system in the EU internal market, improving administrative cooperation among Member States and helping to create organisations that permit such cooperation.

From the beginning, the Commission's anti-fraud strategy has been based on strengthening EU legislation and mutual assistance among Member States. The abolition of fiscal borders led the Member States to introduce new systems of administrative cooperation in the field of VAT, with Council Regulation No. 218/92. New rules were introduced in 2004. Regulation No. 1798/2003 repealed the previous text, accelerated and enhanced cross-border assistance among Member States and increased the efficiency of national controls through clearer procedures and direct links among local offices in different countries. The essence of the automatic exchange of information is still represented by VIES.[22]

In 2006 the Commission launched a deep-going debate on the subject of frauds (EU Commission, 2006b). The Anti Tax Fraud Strategy (ATFS) expert group, involving experts from all Member States, was created with a view to conducting technical discussions and identifying suitable conventional measures. Its deliberations provided significant inputs to improve the fight against VAT fraud (EU Commission, 2008b). In this context, the Commission underlined the need for a common approach "both in the legislative field but also on certain aspects of the operational management of the VAT system which until now have been left exclusively to the Member States" (p. 4).

The Commission set out a short-term action plan and timetable for legislative measures aimed at enhancing the capacity of tax administrations to prevent or detect VAT fraud and to recover taxes. It presented several proposals, which have largely been adopted by the Council. A first set of measures included the joint and several liability provisions for payment of VAT and the conditions for VAT exemption at importation (the latter adopted with Directive 2009/69/EC; see below). A second set of proposals was aimed in particular at recasting the EU Regulation in force.

[22] The VAT Information Exchange System (VIES) is a system of administrative cooperation among Member States based on the computerised exchange of VAT registration data and data collected from intra-Community transactions. It contains details of supplies of goods and (from 2010) services between taxpayers registered in different EU countries.

A third set of more far-reaching proposals concerned new rules for invoicing and for intra-EU taxation.

A strengthening of exchanges of information among countries is a cornerstone for a truly efficient legal framework. In this regard, it is worth recalling Directive 2008/117/EC, aimed at combating VAT frauds connected with intra-EU transactions. It reduced the time for collection and exchange of data: since January 2010 the Intrastat recapitulative statements (i.e. the lists of business-to-business transactions between firms resident in different Member States) are extended to supplies of services and must be submitted on a monthly basis.[23]

A crucial step in increasing the effectiveness and efficiency of the exchange of information has been the adoption of a new recasting regulation on administrative cooperation (Regulation No. 904/2010). It will generally apply from 2012, but with effect from 2011 it has created Eurofisc, which represents, in principle, a first-best solution to preventing VAT frauds.

Eurofisc is a network of national officials aimed at enabling targeted and swift actions against new and specific types of fraud. All Member States participate in it. The network provides for a multilateral early warning mechanism as well as coordination of data exchange and the work of liaison officials in acting upon warnings received. Through a shared electronic platform managed by the EU Commission, it allows real-time monitoring of information flows among different countries. Eurofisc, which lacks legal personality, is based on four principles: *i)* freedom of each Member State to participate in any of the network's tasks; *ii)* active participation of the Member States in the exchange of information; *iii)* confidentiality of the information exchanged; *iv)* no additional burden on businesses.

Further, Regulation No. 904/2010 specifies: the cases in which Member States have to exchange information spontaneously; the procedures for providing feedback on such information; the situations in which Member States must conduct multilateral controls and share electronic databases on taxpayers and risk analysis; the conditions under which the authorities assist in the protection of VAT revenue in all the Member States. It also prohibits a refusal to provide information on a taxable person on the grounds that the data are held by banks and financial institutions.

Initiatives of spontaneous exchange of information among Member States have been undertaken in last years: for example, the implementation of Eurocanet (European Carousel Network), sponsored by Belgium and supported by the Commission and OLAF and used to exchange information on traders suspected of being involved in carousel frauds.

In the field of mutual assistance, a significant role is played by the OECD. Article 26 of the OECD Model Tax Convention now allows for exchange of information on specific taxpayers

[23] These changes accompanied the new VAT territoriality rules introduced by Directive 2008/8/EC. Member States may authorise businesses with less than €50,000 (up to 31 December 2011, €100,000) quarterly turnover derived from intra-EU supplies of goods and all service providers to continue to submit recapitulative statements on a quarterly basis.

under bilateral treaties for indirect as well as direct taxes. Member countries have been encouraged to enter multilateral exchange of information agreements and to participate in the OECD Secure Exchange of Consumption Tax Information System (SECTIS), which permits exchange of information on tax frauds and avoidance schemes.

Besides administrative cooperation, the EU anti-fraud strategy is focused on harmonising the rules on billing, developing technologically advanced solutions and the widespread adoption of ad hoc legislative measures.

The Directive 2010/45 (applicable from 2013) simplifies the VAT invoicing requirements, in particular as regards electronic invoicing, and comprises useful measures to tackle VAT fraud (e.g. deadlines for the issuance of invoices, thus enabling speedier exchange of information on intra-EU supplies of goods and services). For an analysis of technological measures against VAT fraud, see Section 5.2.

As a consequence of EU Council directives and decisions, the reverse charge mechanism has been widely adopted in EU countries and applied to high-risk sectors. Directive 2010/23/EU allows Member States to temporarily extend (for a minimum of 2 years) the application of the reverse charge to transfer of rights to emit greenhouse gases. As highlighted above, following the escalation of frauds several EU countries are now applying the mechanism to emission rights trading.

Given the dynamics of illegal and fraudulent activities, the market in emissions allowances has been addressed with additional measures. The European Commission examines whether the market is sufficiently protected from insider dealing or market manipulation and brings forward proposals to ensure such protection.[24] A number of amendments have been made to the Registries Regulation,[25] to stop criminals from trying to enter the market under fake identities. In early 2011 the Commission identified a range of actions that Member States could take to improve the security of these markets and in May 2011 it proposed a new set of measures to enhance the integrity and security of the current system of registries and the future single Union Registry, which will become operational in 2012.

Reinforcement of customs control systems is an important issue. EU authorities are aware that technology and access to data at an early stage, i.e. before goods physically arrive at the border, can enable customs authorities to carry out efficient and targeted controls.

Concerning the transit rules, a New Computerised Transit System (NCTS) has been in place since 2006, to monitor the transit of goods under customs control. It replaced the previous paper-based procedures and provides for an electronic exchange of messages between customs offices

[24] Article 12(1a) of Directive 2003/87/EC, as amended by Directive 2009/29/EC.

[25] Commission Regulation No. 920/2010 of 7 October 2010 for a standardised and secured system of registries. These measures entered into force in October 2010. Among other provisions, they set stiffer requirements for opening an account in the electronic registry and empower national administrators to refuse to open a new account and to suspend or close accounts.

and between them and traders. The goal is enhanced efficiency of transit procedures and the prevention and detection of frauds based on forged documents. According to some estimates, the NCTS system would reduce fraud substantially and produce a benefit of between €5 billion and €10 billion over a five-year period (EU Parliament Resolution of 11.10.2007).

Council Directive 2009/69/EC reinforced the measures against frauds linked to imports. With effect from 2010, imports of goods to be supplied to an enterprise in another Member State may benefit from the "VAT exemption" (i.e. the suspension of VAT payment) only if the importer has provided the authorities certain data, such as the VAT number of the parties involved, and evidence that the goods are actually intended to be transported or dispatched to another Member State.

Consequent to an amendment to the Community Customs Code,[26] applicable from January 2011, all traders involved in customs transactions and international logistics must provide EU customs with security data through electronic declarations, before goods enter or leave the EU. The information requested varies according to the means of transport and the reliability of traders involved. In addition, a set of EU risk criteria will be applied by Member States for customs controls on goods entering or leaving the EU, supported by computerised systems. Finally, a common data base will be available and "reliable traders" will benefit from trade facilitation measures.

5. General remarks on the measures taken and possible new strategies

Awareness of the need to tackle VAT fraud effectively, systematically and rapidly has spread among EU institutions and Member States. More and more targeted measures have been taken in recent years by Member States to enhance preventive risk analysis and action and to root out frauds in certain sectors. At EU level, the authorities have helped to improve the legislative environment and promoted greater awareness, harmonisation and the adoption of new technologies. The new EU regulation for mutual cooperation, the enhancement of the VIES system and the introduction of Eurofisc and of NCTS represent fundamental steps forward for the anti-VAT frauds strategy. The European Court of Justice has also laid down some important principles.

The current action plan has already produced concrete results, although the final outcome depends strictly on actual implementation of rules in the Member States. In the past, the strengthening of the EU legal framework has not always elicited an appropriate response in all Member States (Court of Auditors, 2007). For example, the implementation of NCTS was unsatisfactory in several Member States, due to inadequacy of administrative structures and operational procedures, tardy and unsystematic use of sources available, delays in sharing information and differences at the technological level.

[26] European Commission, IP/10/1700, 13 December 2010, Brussels.

Furthermore, the policies put in place have some inherent shortcomings. The spread of national reverse charge mechanisms and other national derogations from the general EU provisions could cause fraudulent activities to shift to other sectors or countries. To be more effective, at least in the short-term, the reverse charge mechanism needs to be adopted uniformly and simultaneously by all EU countries in all high-risk sectors. We have seen, for instance, that immediate and widespread action against emissions allowances VAT fraud contained the problem.

The automatic exchange of information among EU Member States is largely ineffective against MTEC frauds. National measures on VAT refund claims and joint and several liability can be weakened if traders who are unaware of the fraud are involved. Reporting obligations, if focused on specific sectors and transactions, burden legitimate businesses and do not definitively solve the problem of non-compliant missing traders and buffer companies.

In short, the fight against VAT fraud is still far from being won. The strategies pursued need to be further adapted to changes in the economic and technological environment, given the vulnerability of the system to frauds.

Some short-term, targeted actions could be effective, since "conventional measures" strengthen the VAT system without altering its principles (EU Commission, 2007a). At a later stage, though, these should be combined with more ambitious measures, based on a multidisciplinary approach.

The overhauling of anti-fraud strategy needs to be seen in the context of the broader project to improve the VAT system as a whole. That system has reached a turning point, as Member States face the need to raise revenue and cope with higher debt burdens spawned by economic and financial crises (Charlet et al., 2010). It was introduced more than 40 years ago and no longer fits the needs of a "technology-based, modern economy". Despite modification over the years, it remains complex and not designed for a marketplace where services make up about 70% of all economic activity and new technologies play a central role. It appears to be more a hindrance than a help to businesses operating at an intra-EU level (Šemeta, 2011).

The European Commission's "Green Paper" (2010a) is a crucial step towards modernising the VAT system and making it more fraud-proof. The public consultation expressly deals with the choice between the taxation at origin or at destination, the latter in combination with a generalised reverse charge mechanism on B2Btransactions. The document recognises that frauds result in part from the "endemic weaknesses of the current provisions, which, in particular, allow VAT-free cross-border purchases of goods and services".

In the following sections we will examine whether the fundamentals of the VAT system actually need to be redesigned in order to tackle fraud or whether there are other effective measures that could be taken short of revamping the tax itself.

5.1 ”Far-reaching” measures

The coexistence of different VAT regimes within the EU has undeniably facilitated schemes such as MTIC frauds. Therefore, the adoption of the “origin principle” of VAT taxation, which the EU Commission has advocated since 1987 as the only way to ensure the creation of a true internal market, would provide a structural answer.

In effect, since under the origin principle missing traders would pay VAT on their purchases from another EU country, their potential profit would be nullified or at least drastically reduced. Moreover, taxation in the country of origin would simplify administrative burdens on legitimate traders. According to some authors (Convenevole, 2011), the current “destination system” also amplifies the size of the underground economy and, in the long term, could even transform VAT from a driver of EU integration into a factor of crisis.

Earlier attempts to adopt the origin based taxation were unsuccessful, and a number of sensitive issues still constitute hurdles. First, the origin system would have to be accompanied by a “clearing house system”, to adjust structural imbalances in revenues; otherwise countries with a trade surplus would gain a significant advantage at the expense of those with a trade deficit. The issue concerns the actual design of the clearing system and whether it should be based on microeconomic data or official trade statistics.

Second, greater uniformity of national VAT regimes would be required to avoid competitive distortions in favour of products from Member States with lower VAT rates. The goal is still distant: in July 2011 the standard rate ranged from 15% in Cyprus and Luxembourg to 25% in Denmark, Hungary and Sweden, averaging 20.7%. Nonetheless, the marked reduction in the coefficient of variation between the standard rates (from 0.20 to 0.12 in the period from 1993 to July 2011) reflects appreciable convergence.

The lack of harmonisation is exacerbated by the presence of different reduced rates. The VAT rules are also complicated by a multitude of derogations granted to Member States.

To overcome some difficulties, solutions combining characteristics of both the origin and the destination principles of taxation have been considered. The Commission proposed in 2008 a flat-rate origin system (EU Commission, 2008a) somewhat similar to a “cross-border VIVAT” scheme (Keen and Smith, 1996). It would minimise the requirements of harmonisation and potential distortions to competition and would have quite a small impact on businesses. Under this proposal: *i)* the zero rate for intra-EU supplies of goods would be replaced by taxation at the rate of 15% and the domestic VAT rates would continue to apply by assessing the recipient of the goods for the difference; *ii)* a microeconomic, bilateral “clearing system”, based on recapitulative statements, would be introduced. Depending on their relative trade balance position, Member States would have either to pay to or receive a sum of money from the other Member States. A major issue is whether the Member States would be prepared to see their VAT revenues become dependent on transfers from the other Member States.

The unanimity required for all common tax measures creates enormous inertia in dealing with coordination problems such as those linked to the adoption of the origin principle.

As far as our subject is concerned, a point to be emphasised is that the origin principle would provide an ultimate solution against most but not all common forms of international VAT fraud. It would be ineffective against frauds involving third countries (e.g. MTEC frauds and under-billing of imports), which now take the form of carousels and acquisition frauds and are likely to become the new frontier of illegality linked to international trade and VAT.

The long-term effects would thus be uncertain, also in light of the great adaptability of criminal organisations. This suggests that the adoption of the origin system with the view to tackling VAT fraud cannot be separated from a broad approach to the problem. The legal framework must exploit any possible synergy with complementary tools, like those discussed in Section 5.2.

The origin-based system of taxation has not drawn positive responses from the EU institutions and stakeholders in recent years. In the meantime, new legislative measures (Directive 2008/8/EC on the place of taxation of services) have clearly moved away from it.

The debate on the topic has also led to a proposal that is diametrically opposite to the origin principle: the adoption of a generalised reverse charge mechanism in respect of all B2B domestic and cross-border supplies within the EU (EU Commission, 2007b).

As already remarked, the reverse charge applied to specific sectors is generally considered an effective short-term solution, although it can eventually induce frauds to shift to other sectors or countries or to retail trade. The dynamics of fraud, then, create pressure to further extend the scope of the reverse charge mechanism, which, in the end, would convert VAT into a sort of retail sales tax (Keen and Smith, 2007).

While the generalisation of the reverse charge mechanism would drastically reduce frauds at the intermediate stages of distribution and eliminate the risk of their migrating among sectors, it might generate other types of consumption VAT frauds (e.g. false statements about VAT status and the hijacking of VAT identification numbers at the retail level), with a negative impact on tax revenues. The potential losses could be even higher than under the current system, since VAT would no longer be collected in a fractionated manner within the supply chain and any fraud at the stage of consumption would affect the taxation of the entire added value.

Moreover, currently a large proportion (80%) of the VAT collected by the Member States is remitted by fewer than 10% of the taxable persons (EU Commission, 2006a) and the tax authorities need to invest very little control effort in order to safeguard the bulk of their VAT revenue. A generalised reverse charge would instead weaken the control of the authorities in Member States with a fragmented distribution structure, since VAT would have to be collected from a greater number of taxpayers. Such a system would entail a lower risk of fraud only in sectors dominated by large businesses that guarantee the levy, e.g. large retailers.

Compared with sales taxes in the United States, the incentive to evade the tax would be greater in the EU because of higher VAT rates. Additional reporting obligations would be needed in order to keep fraud from shifting to the retail level.

In addition, the reverse charge system would have to be adopted by all the Member States; otherwise, frauds would easily move among countries. One can only agree with the EU Commission that "a general reverse charge system should either be introduced on a mandatory basis throughout the EU or be disregarded as a concept" (EU Commission, 2008a).

Similarly to the origin principle, a solution combining the characteristics of opposite systems of taxation has been proposed: a "hybrid reverse charge mechanism" – i.e. limited to supplies exceeding a certain threshold value – that would combine the advantages of a "cashless" and of a "classical" VAT system (Trumpel, 2007).

However, the hybrid reverse charge mechanism would increase both one-off and recurring costs for traders, since businesses would be required to satisfy additional reporting obligations (EU Commission, 2007b). According to some studies, the one-off costs for SMEs would not be negligible,[27] in particular for traders with wide distributive chains (PricewaterhouseCoopers, 2007). Such a mechanism would also give rise to a substantial increase of VAT refund claims.

With regard to the anti-VAT fraud effectiveness of the hybrid reverse charge, it is worth recalling that treating identical transactions differently for VAT purposes increases the complexity of the system and requires a tough control system.

All in all, although a drastic change of the VAT system could provide a robust defence against frauds by comparison with administrative solutions, it might harm the principles on which VAT is based. Moreover, it is essential to consider the political, economic and practical difficulties of implementing the above-mentioned systems of taxation, as well as their shortcomings.

We shall now focus on some policies that might have a significant impact on the volume of fraud and could be adopted without changing the current legislation.

5.2 A possible way forward without changing the VAT system

The current VAT system for cross-border supplies has some advantages: it guarantees Member States a degree of fiscal sovereignty in administering VAT and may also have some benefits for enterprises (e.g. VAT does not need to be pre-financed). However, the way VAT is collected has hardly changed since the tax was first introduced in the EU and still depends primarily on self-assessment by the taxpayer (EU Commission, 2010a).

[27] Study for the Vienna Chamber of Commerce by the Austrian Institute for SME Research, mentioned in EU Commission (2008a). These one-off costs would vary between € 12,750 and € 20,000, while the annual costs would range between € 6,000 and € 9,300.

Maintaining the basic features of the current VAT regime and, at the same time, tackling VAT frauds more effectively requires uniform controls and their calibration in all Member States, the exploitation of additional tools and improved efficiency of VAT collection.

An enhanced dialogue between tax authorities and other stakeholders is a prerequisite for all this. Regulation No. 904/2010 speeds up cooperation among national tax administrations and helps in identifying a common risk analysis at EU level. Pooling the individual countries' experiences and adopting best practices would be a strategic aspect. And customs authorities would need to strengthen their joint actions and coordinate anti-fraud programmes, as agreed during the High-Level Seminar on Customs Cooperation held in Budapest on 14-15 April 2011.

The re-examination of the VAT management and collection systems in the EU should also consider the steps already taken by modern VAT systems elsewhere in the world (Aujean, 2010). Exploiting the latest technology would make it easier for tax administrations to handle large amounts of data and to act rapidly.

A high degree of harmonisation of information would require support at EU level. According to EU Regulation No. 904/2010, electronic storage and transmission of certain data for VAT control purposes are "indispensable for the proper functioning of the VAT system. They allow for rapid information exchange and automated access to information, which strengthen the fight against fraud". The same Regulation establishes a set of rules for the storage, update, exchange and automatic access of information by all Member States.

Given the existing regulatory framework and the possibilities offered by technology, concrete results against VAT fraud can be achieved by increasing the availability of electronic data on taxable persons and transactions. The use of standardised flows of information, shared databases and refined risk parameters would produce a synergical effect.

According to PwC (2010), several alternative models may be considered for improving and simplifying the collection of VAT by means of modern technologies and/or financial intermediaries: *i)* tax collection made through instructions given by the purchasers to a bank, in order to split the payment into the taxable amount paid to supplier and the VAT transferred to the tax authority; *ii)* a central VAT monitoring database receiving all e-invoice data in real time. Tax authorities would obtain essential information quickly and a number of current VAT obligations might be abolished; *iii)* transactions data available in a secure VAT data warehouses managed by the taxpayer and accessible to the tax authority; *iv)* risk profiling using certification of taxable persons, in order to target audit efforts on sets of taxable persons that pose a higher risk. Ranking these models by costs and benefits is not easy and not fully rigorous, given their complementarity and differing scope. Nevertheless, the PwC study showed that all four models have a positive cost-benefit balance.

Technology-intensive solutions for fighting MTIC/MTEC frauds have been already adopted in several countries (Ainsworth, 2011) and are similar to the above models or a combination thereof: under the "VAT locator number" and the "real time VAT" systems a central government

computer tracks each transaction or payment (in the latter case, all B2B payments are withheld and channelled through intermediaries, while VAT is directly remitted to the State); the "certified tax software" (which achieves secure remittance of VAT through trusted third parties) does not provide for central tracking but it does ensure that each transaction is accurately reported, since the systems are guaranteed.

A system of validation of invoices has been introduced in Brazil (International VAT Association, 2007): a digital bar code granted at the inter-state border validates the invoices and the physical transit of the goods. This solution presents anti-VAT fraud advantages: it does not need to be broadly adopted; codes can be automatically attributed by the central government system after a risk-assessment analysis; input VAT deduction can be denied if related to an invoice with an invalid code; each transaction within the commercial chain can be monitored by the tax administration.

The certified tax softwares used in the retail sales taxes in the United States (Ainsworth, 2011) are able to determine the correct rate, calculate the VAT due, post it on the invoice, link each input or output to the VAT return and complete the return. Such systems are generally adopted on a voluntary basis, although in some cases (e.g. firms engaged in transactions in high-risk sectors) the software may become a mandatory condition for doing business.

Aujean (2010) shows that an obligation to exchange e-invoices at intra-EU level would lead to a continuous sharing of information among tax administrations and, by this means, to a proper application of VAT rules by the seller and the buyer. The use of an ad hoc account for the real-time remittance of the VAT would be a complementary measure.

All these systems are based on (or linked to) an extensive use of e-invoices. Nonetheless, the potential of this tool is still untapped in the EU, owing among other things to the lack of harmonisation of existing rules: the average market penetration of e-invoicing is estimated at around 5% for B2B transactions, although the cost of a single paper invoice is quite high (€1.1-€1.7 according to PwC, 2010).

The need to meet SMEs' needs and to improve the legal framework was underlined by the Expert Group on e-invoicing set up by the Commission (2009). E-invoicing is also part of the EU Commission's "A Digital Agenda for Europe" initiative (COM(2010) 245), which calls for the removal of existing regulatory and technical barriers that prevent its adoption.

Therefore, coordinated action is required at both national and European level to promote the use of e-invoicing. In this direction, from 2013 onwards Directive 2010/45/EC will simplify the VAT invoicing requirements and establish equal treatment between paper and e-invoices. Member States will no longer be allowed to add specific requirements. And Directive 2006/112/EC, as amended by Directive 2010/45, now contains a definition of e-invoice (Art. 217) and states the right of access to data by the competent authorities (Art. 249).

Shortcomings in the employment of technology-intensive solutions are generally associated with the initial set-up costs for the tax administration (establishment of e-procedures with high processing capacity that can also interact with other Member States) and enterprises (storage, retention and transmission of data and invoices). However, the recent diffusion of IT solutions would make these activities less costly. Technologies already available allow easy electronic management of transactions and cash flows, for SMEs as well as for large companies. They can be rapidly put in place at relatively low cost.

E-invoicing, by eliminating manual tasks, would improve efficiency, quality of controls and integrity. It would shorten payment delays, result in fewer errors, permit fully integrated processing and reduce the costs per invoice to €0.3-€0.5 (PwC, 2010). A "mass adoption" of electronic invoices would yield to economic benefits for companies estimated at €240 billion over six years (EU Commission, 2010b).

Moreover, as regards current anti-VAT fraud tools, a number of current VAT obligations could be abolished: for instance, the submission of intra-EU sales listings on a monthly basis would become redundant, with an estimated savings in administrative costs of up to €900 million per year (EU Commission, 2010c, p. 13). Further, for bona fide traders the risk of being unwittingly involved in frauds held jointly and severally liable for the payment of VAT would be reduced.

All in all, IT-based anti-fraud strategies appear to be an efficient and feasible response to new challenges should be explored in depth. Their benefits would go beyond the reduction of fraud, because they imply more effective management and supervision of the whole VAT system.

In principle, each model described above would eliminate or, at least, reduce MTIC and MTEC frauds. The actual choice depends on the goals pursued: relatively simple solutions can have short-term positive effects and entail lower initial investment. A "data warehouse" of all B2B business and B2C transactions would bring great benefits, since it would allow nearly real-time auditing (PwC, 2010).

A phased approach seems to be the most sensible and politically acceptable strategy in the coming years. Policy initiatives can be initially limited to companies operating cross-border and above a certain turnover threshold. A focused strategy of this kind would have a smaller impact on taxpayers and investments, amplifying the anti-fraud benefits. As an example, a "split payment model" for these enterprises could be implemented quite quickly, thereby creating a short-term impediment to existing fraud schemes.

Broader structural measures could be introduced afterwards, taking advantage of further IT developments and harmonisation of the EU legal framework. An approach based on a combination of tools would offer the greatest prospects of success, as a greater diversification of controls ensures more effective defence against the unpredictable mutation of fraud schemes. Extensive technological solutions would supplement the advantages offered by other far-reaching measures, such as compulsory e-invoicing of all B2B transactions in the EU.

6. Final remarks

The EU VAT system plays an important role for economic stability and growth, and it is of great importance to ensure that the system delivers its full potential. However, the VAT system has aged, is displaying weaknesses and vulnerabilities and is not in step with current needs of enterprises and administrations. It creates unnecessary costs and burdens for taxpayers and appears to be inadequate to a marketplace in which services and technology play a central role.

In particular, the system has become vulnerable to fraud. In recent years, organised VAT frauds have changed form and strategies and now constitute a fast, massive and "silent" attack on the tax system. They have affected services and imports from third countries. Under-billing at borders and the consequent strengthening of controls may have had major economic consequences in some areas and shifted trade in goods within the EU. Within the EU-27 the total volume of VAT fraud is estimated at between €20 billion and €35 billion per year, albeit with large differences from country to country.

The growth of fraud has demonstrated the partial inadequacy of national control systems, the lack of effective regulatory mechanisms and the absence of a common anti-fraud strategy.

More and more targeted measures have been adopted in recent years by EU countries in order to enhance preventive risk analysis and action and root out frauds in certain sectors. These measures have produced significant results, but assessment of their long-term effectiveness needs to consider the potential displacement of fraudsters to other areas.

In Italy, the introduction of new reporting obligations and other accompanying tools appears to be a pragmatic way to tackle frauds in the immediate future, although these requirements can be burdensome for legitimate enterprises and ineffective if the tax authority fails to exploit all the potential of large volumes of information.

The Commission has played an important role in improving the legislative environment and mutual assistance among Member States. It has set out an action plan that has already led to concrete results. Eurofisc should be a great aid in setting up a risk analysis system at EU level by pooling the experience of the individual countries' tax authorities.

A key element is also greater global awareness of fraud and of its links to other crimes. This involves the responsibility of financial institutions in identifying the actual nature of their customers' business activities.

A drastic change of the VAT system might provide a robust defence against fraud, but an overhaul could harm the principles on which the system is based and thus produce uncertain effects. Reform action requires a broad approach to the problem and to the functioning of the system as a whole.

Risk management, the exchange of good practices and the strengthening of joint action are essentials. However, technology-based solutions appear to be a pragmatic and feasible approach to new challenges, with the greatest prospects of success. Their set-up costs are a drawback, but the benefits would be greater.

Policy initiatives could be initially limited to certain sectors and companies, with wider structural measures implemented afterwards, taking advantage of further developments in IT and harmonisation of the EU legal framework. New types of fraud are technology-intensive: technology itself appears to offer some of the best answers.

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