Policies to reduce VAT GAP

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Purposes

Tax gap measurement and analysis at macro level

- Tax gap estimates for operational uses
- Tax gap analysis for introducing tax policy instruments

The case of VAT
Outline

1) Overview of Vat gap estimation method;

2) Vat gap estimates by typologies;

3) Vat gap analysis: some policy instruments.
Vat gap estimates - method overview

Method: Top Down approach based on National Account data

As a result of the estimation procedure, we derive:

1. VAT base concealed to tax authority (Vat base gap, \( B^\text{IND} \));
2. VAT not remitted to tax authority (Vat gap, \( I^\text{AEV} \));
3. Tax rate on the hidden transactions (rate, \( A^\text{LBIND} \))

Known Data:

4. Declared Vat base (\( B^\text{ID} \));
5. Effective Vat accrual (\( I^\text{AEC} \));
6. Tax rate on declared transactions (\( A^\text{LBID} \))
Therefore:

7. **Theoretical Vat Base** \((\text{BIT} = \text{BID} + \text{BIND})\);

8. **Theoretical Vat**: tax that would be remitted in a perfect compliance regime with respect to current tax legislation \((\text{IVAT} = \text{IVAEC} + \text{IVAEV})\);

9. **Weighted average rate in the economic system**

\[
\text{AMP} = q_1 \text{ALBID} + q_2 \text{ALBIND}
\]

where \(q_1\) is \(\text{BID/BIT}\) and \(q_2\) is \(\text{BIND/BIT}\)
Vat gap estimates - method overview

Vat gap includes:

a) Missing revenue due to errors in filing Vat statement;

b) Unpaid Vat liability: declared in Vat statement but not paid (for instance because of liquidity crisis);

a) Tax deliberately concealed to tax authority (usually denoted Evasion).
VAT Gap: various types

With complicity(*) between seller and buyer (no invoice, usually cash payment) – *not collected*;

Without complicity(*) between seller and buyer (seller issues invoice and then does not declare it; while buyer declares it) – *not remitted*.

Two estimates are derived, since the distribution is unknown:

1. With complicity – Upper bound
2. Without complicity – Lower bound

(*) European Decision 98/527/CE
VAT Gap: various types

Propensity to VAT gap over 1980-2012.
With and without complicity hypotheses.
Vat gap: further typologies  (1/2)

Gap due to errors and unpaid Vat liability

Source: Outcomes from Automatic Audit*

* art. 54 bis del D.P.R. 633/72
Vat gap: further typologies (2/3)

VAT gap: by final Consumer

BIT can be break down with respect to final Consumers

By integrating different sources and by using VT part of VAT statement, tax and base can be split in:

1. Cf = Final consumption from Households

2. Pa = Intermediate consumption and Investment from PA

3. Al = Intermediate consumption and Investment from Market Enterprises
Economic accrued Vat by final consumer: 93.677 million euro

(Average 2007-2012)
Focus 1: Public Administration (PA) (1/3)

Theoretical Vat accrual on PA purchases = 14,074 mln euro in 2011

- Suppliers remit Vat paid by PA on its purchases

**Those who sell directly to PA contribute to Vat gap?**

Vat gap estimates are cross-checked with some Archives:

- *Spesometro* helps to identify sectors supplying PA;

- *IRAP gap* helps to identify the degree of risk by sector;

- *Automatic Assessments* are a signal of non compliant behavior (through unpaid Vat liability).
### Focus 1: Public Administration (PA) (2/3)

<table>
<thead>
<tr>
<th>Suppliers’ economic sectors</th>
<th>Nº suppliers to PA (sample)</th>
<th>Taxable transactions (mln)</th>
<th>BIND/BID Suppliers</th>
<th>Automatic Assessment (mln)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry, fishing</td>
<td>6,793</td>
<td>226</td>
<td>63.37%</td>
<td>4.2</td>
</tr>
<tr>
<td>Manufacture of food products</td>
<td>1,296</td>
<td>89</td>
<td>8.66%</td>
<td>0.8</td>
</tr>
<tr>
<td>Manufacture of pharmaceuticals</td>
<td>187</td>
<td>3,120</td>
<td>4.11%</td>
<td>0.1</td>
</tr>
<tr>
<td>Manufacture of computers etc.</td>
<td>675</td>
<td>393</td>
<td>1.62%</td>
<td>1.7</td>
</tr>
<tr>
<td>Mining and other manufacturing</td>
<td>21,544</td>
<td>2,482</td>
<td>5.73%</td>
<td>58.1</td>
</tr>
<tr>
<td>Electricity and water</td>
<td>3,182</td>
<td>4,846</td>
<td>0.75%</td>
<td>20.5</td>
</tr>
<tr>
<td>Construction</td>
<td>52,017</td>
<td>12,759</td>
<td>35.91%</td>
<td>119.7</td>
</tr>
<tr>
<td>Trade and repair of motor vehicles and motorcycles</td>
<td>6,154</td>
<td>127</td>
<td>61.97%</td>
<td>9.5</td>
</tr>
<tr>
<td>Wholesale of foods</td>
<td>1,108</td>
<td>115</td>
<td>18.21%</td>
<td>0.5</td>
</tr>
<tr>
<td>Other non-food wholesale</td>
<td>13,169</td>
<td>3,770</td>
<td>18.21%</td>
<td>32.6</td>
</tr>
<tr>
<td>Retail sale in non-specialized stores</td>
<td>1,969</td>
<td>24</td>
<td>16.31%</td>
<td>1.1</td>
</tr>
<tr>
<td>Retail sale of food in specialized stores</td>
<td>1,053</td>
<td>19</td>
<td>16.31%</td>
<td>0.3</td>
</tr>
<tr>
<td>Other retail sale in specialized stores</td>
<td>22,993</td>
<td>3,724</td>
<td>16.31%</td>
<td>13.9</td>
</tr>
<tr>
<td>Accommodation</td>
<td>2,125</td>
<td>123</td>
<td>59.34%</td>
<td>3.2</td>
</tr>
<tr>
<td>Restaurant and catering services</td>
<td>3,562</td>
<td>1,270</td>
<td>107.62%</td>
<td>3.0</td>
</tr>
<tr>
<td>Public administration</td>
<td>210</td>
<td>404</td>
<td>0.00%</td>
<td>0.2</td>
</tr>
<tr>
<td>Education</td>
<td>2,092</td>
<td>469</td>
<td>50.67%</td>
<td>1.3</td>
</tr>
<tr>
<td>Health and social work</td>
<td>32,215</td>
<td>13,814</td>
<td>37.69%</td>
<td>5.2</td>
</tr>
<tr>
<td>Other activities (includes cleaning services)</td>
<td>101,110</td>
<td>15,704</td>
<td>45.37%</td>
<td>205.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>273,454</strong></td>
<td><strong>63,479</strong></td>
<td></td>
<td><strong>481</strong></td>
</tr>
</tbody>
</table>

**Tax Evasion and Tax Compliance**
Focus 1: Public Administration (PA)

- Unpaid Vat liability is relevant.
- The concealment of sales invoices to PA is also relevant.

This Vat gap is estimated in a range:

- From 774 to 1.290 mln euro (2010)
- From 741 to 1.235 mln euro (2011).

On this evidence *split payment* for PA purchases was introduced in the budget law 2015.
Focus 2: Vat gap without complicity

This evasion leaves its mark traceable in the fiscal statements.

A systemic approach by using Spesometro.

General steps:

a) Data quality analysis in order to identify only relevant fiscal facts;

b) Taxpayers segmentation: small / large (different economic behaviors)

c) Building a Matrix to cross declared sales from sellers with declared purchases from buyers, by economic sector.
Focus 2: Vat gap without complicity

Example: Suppliers/Purchasers Matrix

<table>
<thead>
<tr>
<th>Amount of invoices recorded by Suppliers</th>
<th>Amount of invoices recorded by Purchasers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sector A</td>
</tr>
<tr>
<td>Sector A</td>
<td>$\leq 0$</td>
</tr>
<tr>
<td>Sector B</td>
<td>$\leq 0$</td>
</tr>
<tr>
<td>Sector C</td>
<td>$\leq 0$</td>
</tr>
<tr>
<td>Sector D</td>
<td>$\leq 0$</td>
</tr>
</tbody>
</table>

In each cell, the outcome is the difference between purchases and sales.

If one finds that cell is:

- Less than 0, we assume the under-declared sales or over-declared purchases prevail;
- Greater than 0, we assume the under-declared purchases prevail.
Focus 2: Vat gap without complicity

Advantages of Matrix approach

- Detailed map of occurrences by economic sector and dimensional classes;
- Allow to proceed with priority, due to the limited resources available.
- It helps to monitor time series quality of information.
Toward a new approach

- Any anomalies will occur from Purchasers/Suppliers Matrix will be made available to taxpayers
- Helping at the dialogue between Taxpayer and Tax Administration consistently with the new approach
Thank you for your attention
References


Back Slides
Focus 1: PA

Estimated VAT evaded by suppliers of the PA in million Euros – Year 2011

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAT taxable amount of the PA</td>
</tr>
<tr>
<td>VAT attributable to the PA</td>
</tr>
<tr>
<td>PA rate</td>
</tr>
<tr>
<td>Rate for the potential system</td>
</tr>
<tr>
<td>Rate for evaded transactions</td>
</tr>
<tr>
<td>Difference</td>
</tr>
<tr>
<td>Estimated PA rate on evaded VAT</td>
</tr>
<tr>
<td>Ratio evaded taxable amount to potential taxable amount, economic sector of supplies to PA</td>
</tr>
<tr>
<td>Loss rate of taxable amount (1/3 of the total – upper limit)</td>
</tr>
<tr>
<td>Loss rate of taxable amount (1/5 of the total – lower limit)</td>
</tr>
<tr>
<td>Estimated taxable amount evaded (upper limit)</td>
</tr>
<tr>
<td><strong>Estimated VAT evaded (upper limit)</strong></td>
</tr>
<tr>
<td>Estimated taxable amount evaded (lower limit)</td>
</tr>
<tr>
<td><strong>Estimated VAT evaded (lower limit)</strong></td>
</tr>
</tbody>
</table>