

Dondena Centre for Research on Social Dynamics and Public Policy
International conference on "TAX EVASION AND TAX COMPLIANCE: THEORY AND POLICY"

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.

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, BIND);
2. VAT not remitted to tax authority (Vat gap, IVAEV);
3. Tax rate on the hidden transactions (rate, ALBIND)

Known Data:

4. Declared Vat base (BID);
5. Effective Vat accrual (IVAEC);
6. Tax rate on declared transactions (ALBID)

Therefore:

7. Theoretical Vat Base ($BIT = BID + BIND$);
8. Theoretical Vat: tax that would be remitted in a perfect compliance regime with respect to current tax legislation ($IVAT = IVAEC + IVAEV$);
9. Weighted average rate in the economic system

$$AMP = q_1 ALBID + q_2 ALBIND$$

where q_1 is BID/BIT and q_2 is $BIND/BIT$

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

(1/2)

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:

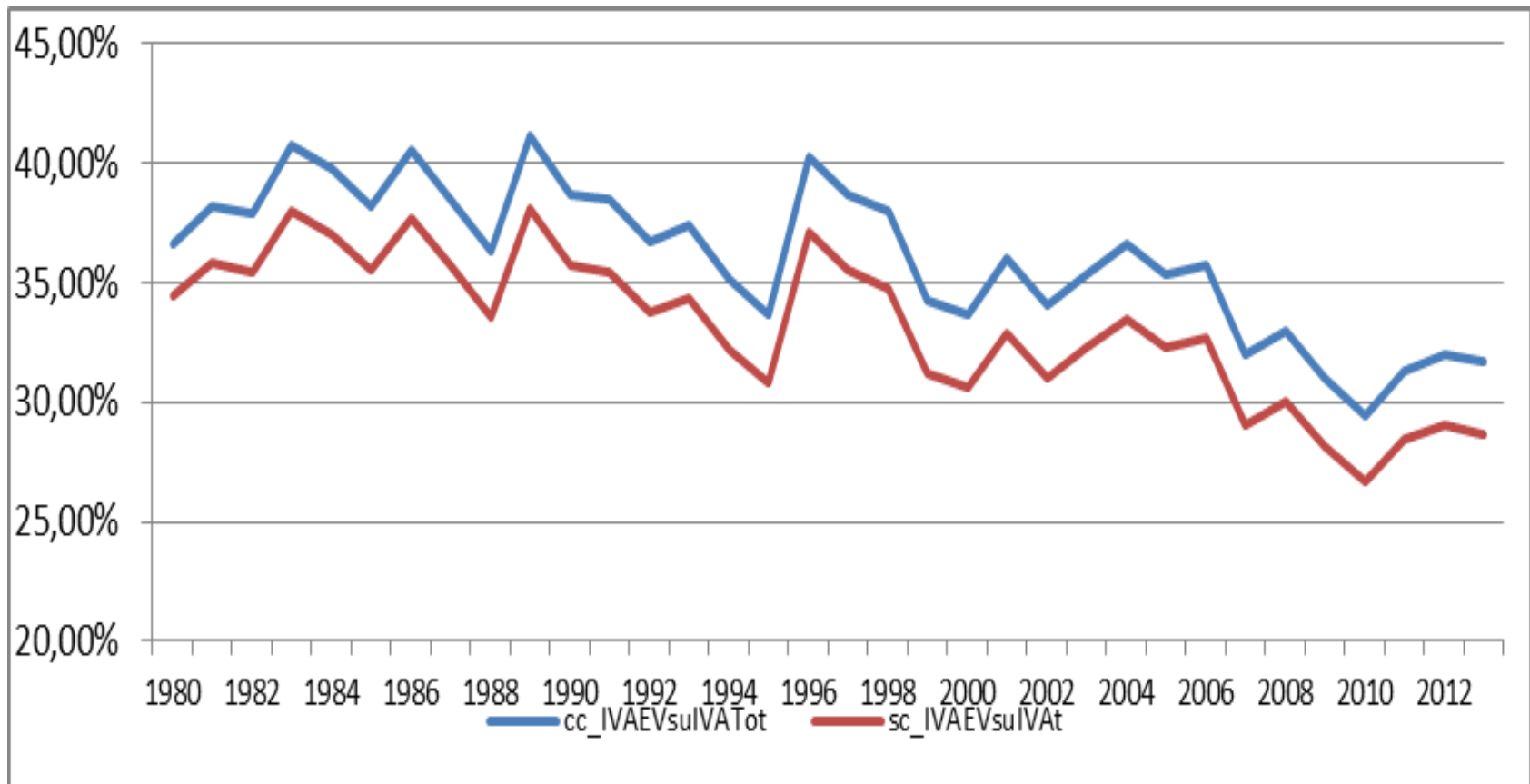
1. With complicity – Upper bound
2. Without complicity – Lower bound

(*) *European Decision* 98/527/CE

VAT Gap: various types

(2/2)

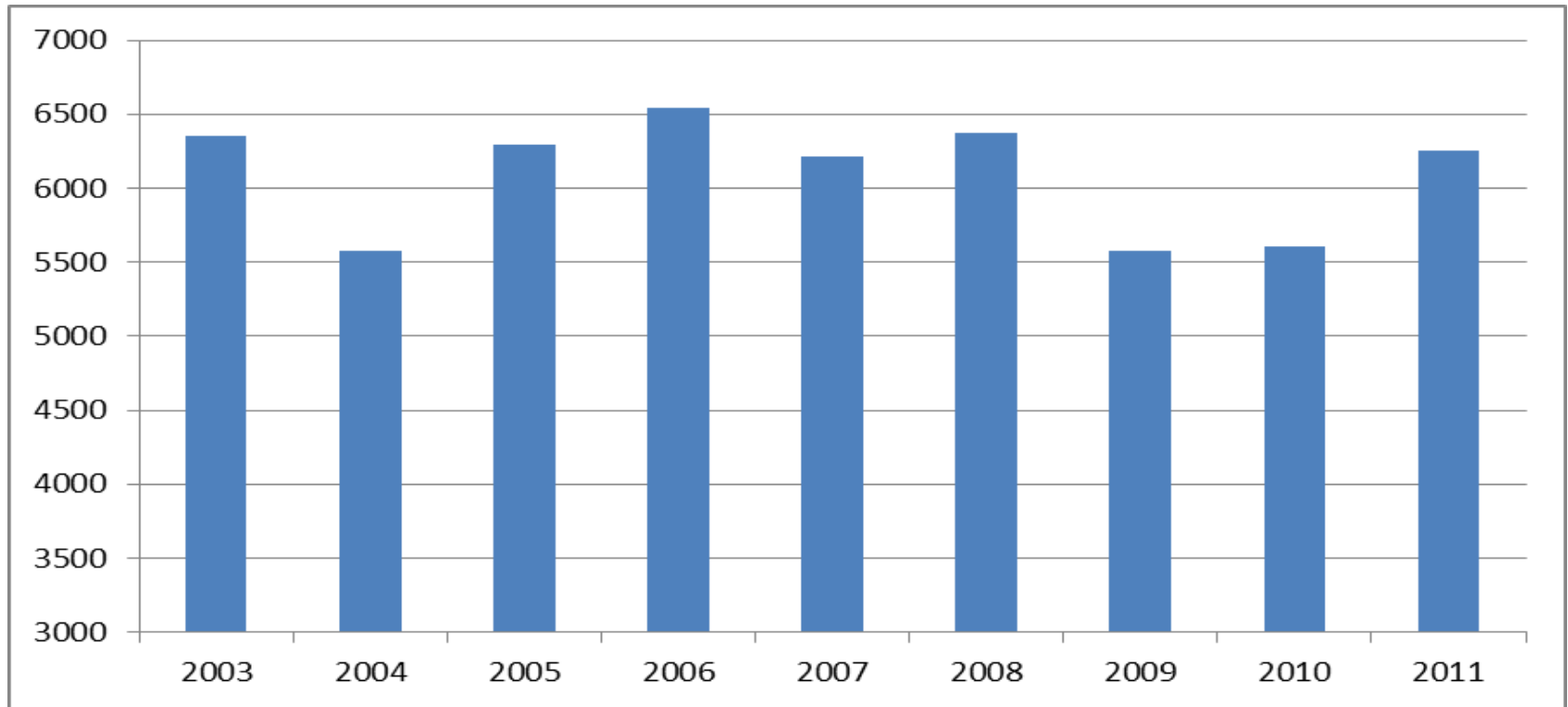
Propensity to VAT gap over 1980-2012.
With and without complicity hypotheses.



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

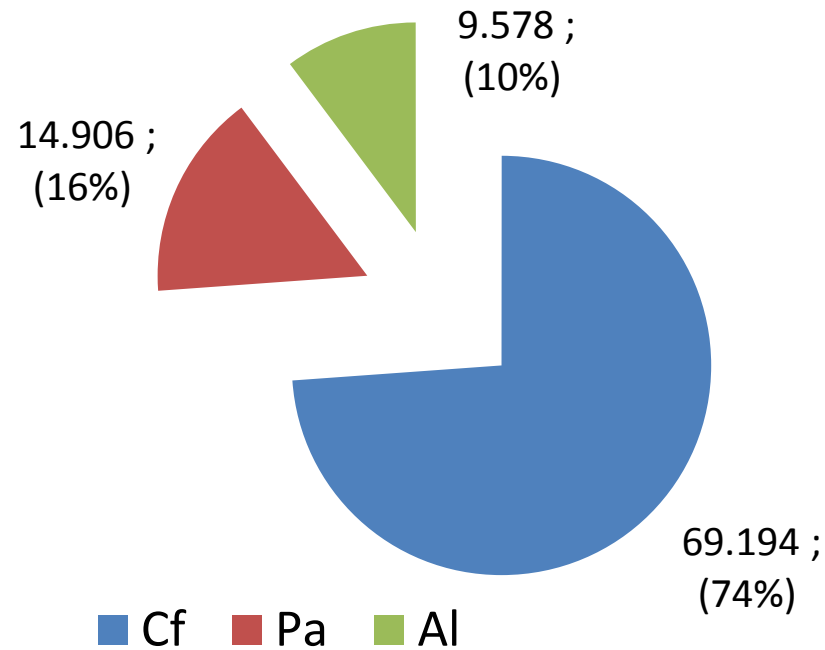
By integrating different sources and by using VT part of VAT statement, tax and base can be split in :

1. Cf = Final consumption from Households
2. Pa = Intermediate consumption and Investment from PA
3. Al = Intermediate consumption and Investment from Market Enterprises

Vat gap : further typologies (3/3)

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)

Suppliers' economic sectors	N° suppliers to PA (sample)	Taxable transactions (mln)	BIND/BID Suppliers	Automatic Assessment (mln)
Agriculture, forestry, fishing	6,793	226	63.37%	4.2
Manufacture of food products	1,296	89	8.66%	0.8
Manufacture of pharmaceuticals	187	3,120	4.11%	0.1
Manufacture of computers etc.	675	393	1.62%	1.7
Mining and other manufacturing	21,544	2,482	5.73%	58.1
Electricity and water	3,182	4,846	0.75%	20.5
Construction	52,017	12,759	35.91%	119.7
Trade and repair of motor vehicles and motorcycles	6,154	127	61.97%	9.5
Wholesale of foods	1,108	115	18.21%	0.5
Other non-food wholesale	13,169	3,770	18.21%	32.6
Retail sale in non-specialized stores	1,969	24	16.31%	1.1
Retail sale of food in specialized stores	1,053	19	16.31%	0.3
Other retail sale in specialized stores	22,993	3,724	16.31%	13.9
Accommodation	2,125	123	59.34%	3.2
Restaurant and catering services	3,562	1,270	107.62%	3.0
Public administration	210	404	0.00%	0.2
Education	2,092	469	50.67%	1.3
Health and social work	32,215	13,814	37.69%	5.2
Other activities (includes cleaning services)	101,110	15,704	45.37%	205.4
Total	273,454	63,479		481

- 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

(1/3)

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

(2/3)

Example: Suppliers/Purchasers Matrix

Amount of invoices recorded by Suppliers	Amount of invoices recorded by Purchasers			
	Sector A	Sector B	Sector C	Sector D
Sector A	$> < = 0$	$> < = 0$	$> < = 0$	$> < = 0$
Sector B	$> < = 0$	$> < = 0$	$> < = 0$	$> < = 0$
Sector C	$> < = 0$	$> < = 0$	$> < = 0$	$> < = 0$
Sector D	$> < = 0$	$> < = 0$	$> < = 0$	$> < = 0$

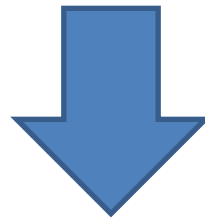
In each cell, the outcome is the difference between purchases and sales.

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 .

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

- D'Agosto E., Marigliani M., Pisani S., (2014), "Asymmetries in the territorial VAT gap", Argomenti di Discussione dell'Agenzia delle Entrate, n.02/2014.
 - http://www.agenziaentrate.gov.it/wps/file/Nsilib/Nsi/Documentazione/Rivista/Argomenti+di+discussione/Pubblicazioni/2014-02/2014_02.pdf
- D'Agosto E., Marigliani M., Pisani S., (2015), "A general framework for measuring VAT compliance in Italy", internal document.
- Pisani,S. (2014), "An approach to assess how the activity of the Italian Revenue Agency affects compliance", Argomenti di Discussione dell'Agenzia delle Entrate, n.01/2014.
 - http://www.agenziaentrate.gov.it/wps/file/Nsilib/Nsi/Documentazione/Rivista/Argomenti+di+discussione/Pubblicazioni/2014-01/2014_01.pdf

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Focus 1: PA

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

DESCRIPTION	2011
VAT taxable amount of the PA	87,804
VAT attributable to the PA	14,074
PA rate	16.0%
Rate for the potential system	14.9%
Rate for evaded transactions	16.1%
Difference	1.2%
Estimated PA rate on evaded VAT	17.2%
Ratio evaded taxable amount to potential taxable amount, economic sector of supplies to PA	24.5%
Loss rate of taxable amount (1/3 of the total – upper limit)	8.2%
Loss rate of taxable amount (1/5 of the total – lower limit)	4.9%
Estimated taxable amount evaded (upper limit)	7,185
Estimated VAT evaded (upper limit)	1,235
Estimated taxable amount evaded (lower limit)	4,311
Estimated VAT evaded (lower limit)	741