Lecture 12b: Tax Evasion

Reading

- **Essential reading**
  - Hindriks, J and G.D. Myles *Intermediate Public Economics.* (Cambridge: MIT Press, 2005) Chapter 16.
- **Further reading**
  - Allingham M. and A. Sandmo (1972) 'Income tax evasion: a theoretical analysis', *Journal of Public Economics*, 1, 323—338.
  - A. Sandmo (2005) "The Theory of Tax Evasion:A Retrospective View '' *National Tax Journal,* Vol. LVIII, No. 4
  - Becker, G. (1968) 'Crime and punishment: an economic approach', *Journal of Political Economy*, 76, 169—217.
  - Cowell, F.A. *Cheating the Government* (Cambridge: MIT Press, 1990).
  - J. Slemrod (2007), "Cheating Ourselves: The Economics of Tax Evasion », *Journal of Economic Perspectives—Volume 21, Number1.*

Reading

- Glaeser, E.L., B. Sacerdote and J.A. Scheinkman (1996) 'Crime and social interaction', *Quarterly Journal of Economics*, 111, 506—548.
- Schneider F. and D.H. Enste D.H. (2000) 'Shadow economies: Size, causes, and consequences', *Journal of Economic Literature*, 38, 77—114.
- F. Schneider, A. Buehn, C. E. Montenegro (2010) "New Estimates for the Shadow Economies all over the World", *International Economic Journal,* Vol. 24, No. 4, 443–461.
- Mork, K.A. (1975) 'Income tax evasion: some empirical evidence', *Public Finance*, 30, 70—76.
- Spicer, M.W. and S.B. Lundstedt (1976) 'Understanding tax evasion', *Public Finance*, 31, 295—305

- **Challenging reading**
  - Bordignon, M. (1993) 'A fairness approach to income tax evasion', *Journal of Public Economics*, 52, 345—362.
  - Cowell, F.A. and J.P.F. Gordon (1988) 'Unwillingness to pay', *Journal of Public Economics*, 36, 305—321.

Reading

- McManus, J. and N. Warren (2006), “The Case of Measuring Tax Gap”, *eJournal of Tax Research*, vol. 4, no1, pp 61- 79.
- Hindriks, J., M. Keen and A. Muthoo (1999) ‘Corruption, extortion and evasion’, *Journal of Public Economics*, 74, 395—430.
- Andreoni, J. ,B. Erard and J. Feinstein. (1998), ‘‘Tax Compliance’’, *Journal of Economic Literature* Vol. XXXVI, pp. 818–860.
- J. Alm (2011), “Measuring, explaining, and controlling tax evasion: lessons from theory, experiments, and field studies”, *International Taxation and Public Finance,* forthcoming.
- Scotchmer, S. (1987) Audit classes and tax enforcement policy, *American Economic Review*, 77, 229—233.
- Torgler, B. and F. Schneider (2007b), “The Impact of Tax Morale and Institutional Quality on the Shadow Economy”, CREMA Working Paper Series, 2007-01, Center for Research in Economics, Management and the Arts (CREMA).

Readings for Greece

- Παυλόπουλος, Π. (2002), *Η παραοικονομία στην Ελλάδα: επανεξέταση*, Ινστιτούτο Τουριστικών Ερενών και Προβλέψεων.
- Παυλόπουλος, Π. (1987), *Η παραοικονομία στην Ελλάδα*, ΙΟΒΕ.
- Κανελλόπουλος, Κ., Κουσουλάκος, Γ., Ράπανος, Β. (1995), *Παραοικονομία και φοροδιαφυγή: Μετρήσεις και Οικονομικές Επιπτώσεις*, ΚΕΠΕ.
- Τάτσος Ν. (2001), *Παραοικονομία και Φοροδιαφυγή στην Ελλάδα*, ΙΟΒΕ.
- Βαβούρας, Ι. και Μανωλάς, Γ. (2004), *Η Παραοικονομία στην Ελλάδα και τον κόσμο*, εκδόσεις Παπαζήση.
- Βαβούρας, Ι.Σ. (επιμ.), (1990), *Παραοικονομία,* Εκδόσεις Κριτική.
- Matsaganis, M. and M. Flevotomou (2010) *Distributional implications of tax evasion in Greece,* Hellenic Observatory Papers on Greece and Southeast Europe, GreeSE Paper No. 31. The Hellenic Observatory, LSE

Readings for Greece

- Georgia Kaplanoglou & Vassilis T. Rapanos (2012): “Tax and Trust: The Fiscal Crisis in Greece”, *South European Society and Politics*, pp. 1–22, DOI:10.1080/13608746.2012.723327
- Georgia Kaplanoglou & Vassilis T. Rapanos (2015), “Why do people evade taxes? New experimental evidence from Greece”, *Journal of Behavioral and Experimental Economics, 56, pp. 21–32* http://dx.doi.org/10.1016/j.socec. 2015.02.005
- Βασίλης Θ. Ράπανος &Γεωργία Καπλάνογλου (2014), “Φορολογία και οικονομική ανάπτυξη: Η περίπτωση της Ελλάδας”, στον τόμο Μ. Μασουράκης και Χ. Γκόρτσος (επιμέλεια): Ανταγωνιστικότητα και Ανάπτυξη, έκδοση της Ελληνικής Ένωσης Τραπεζών.
- Georgia Kaplanoglou, Vassilis T. Rapanos & Nikolaos Daskalakis (2016)”Tax compliance behaviour during the crisis: the case of Greek SMEs”, European Journal of Law and Economics, vol. 42, pp. 405–444, DOI 10.1007/s10657-016-9547-y

Tax Evasion

- Tax evasion is the illegal failure to pay tax
- Tax avoidance is the reorganization of economic activity to lower tax payment
  - tax avoidance is legal, tax evasion is not
  - the borderline is unclear
- Estimates show evasion to be a significant fraction of measured economic activity
- It is an important consideration for tax policy

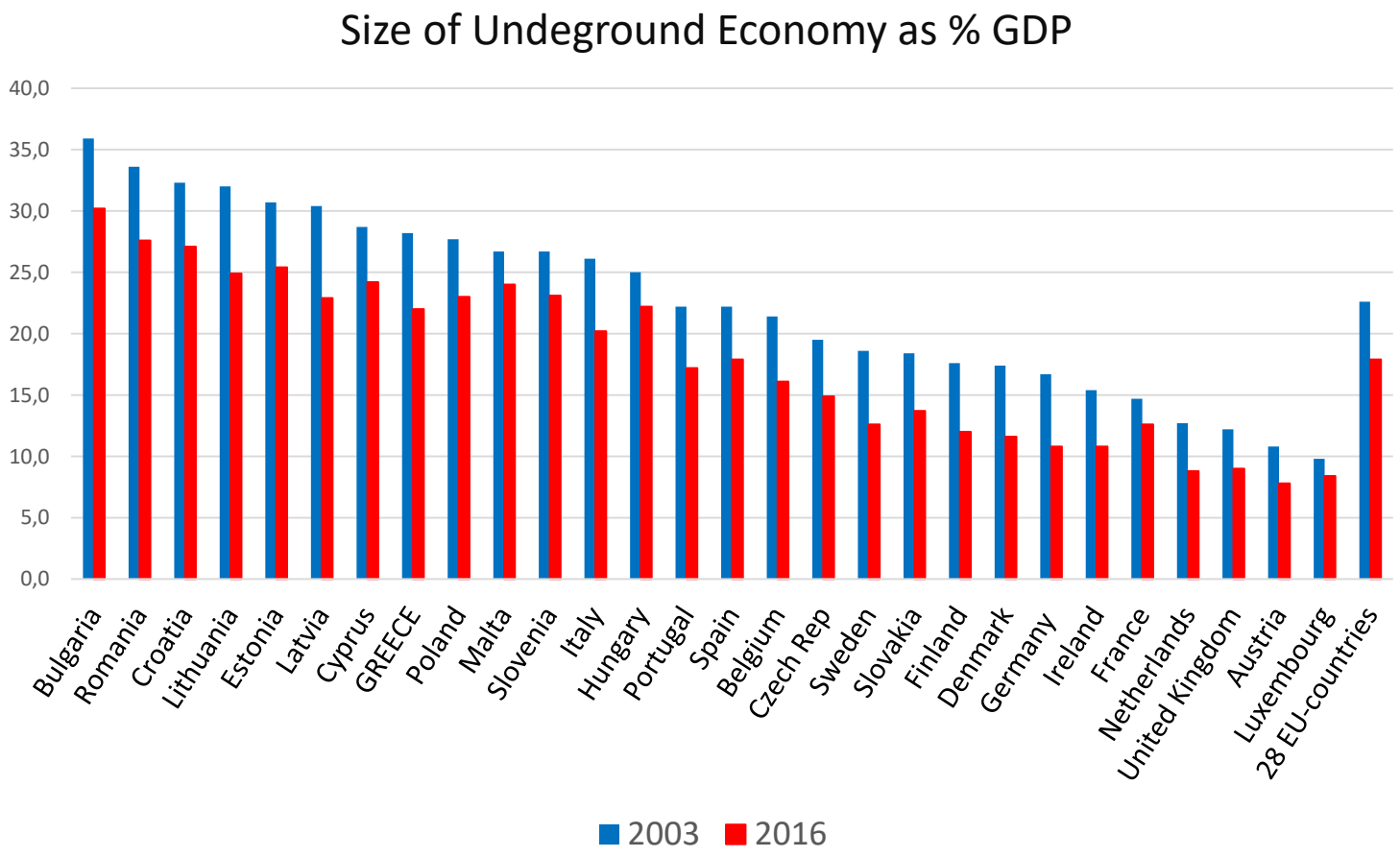
Extent of Evasion

- The black, shadow or hidden economy are all economic activities for which payment is received but is not ***officially*** declared.
  - illegal activities
  - unmeasured legal activity such as output of smallholders
  - legal but undeclared activity
  - The **unmeasured economy** would be the *shadow economy* ***plus*** activities such as do-it-yourself jobs that are economically valuable but do not involve economic transaction.

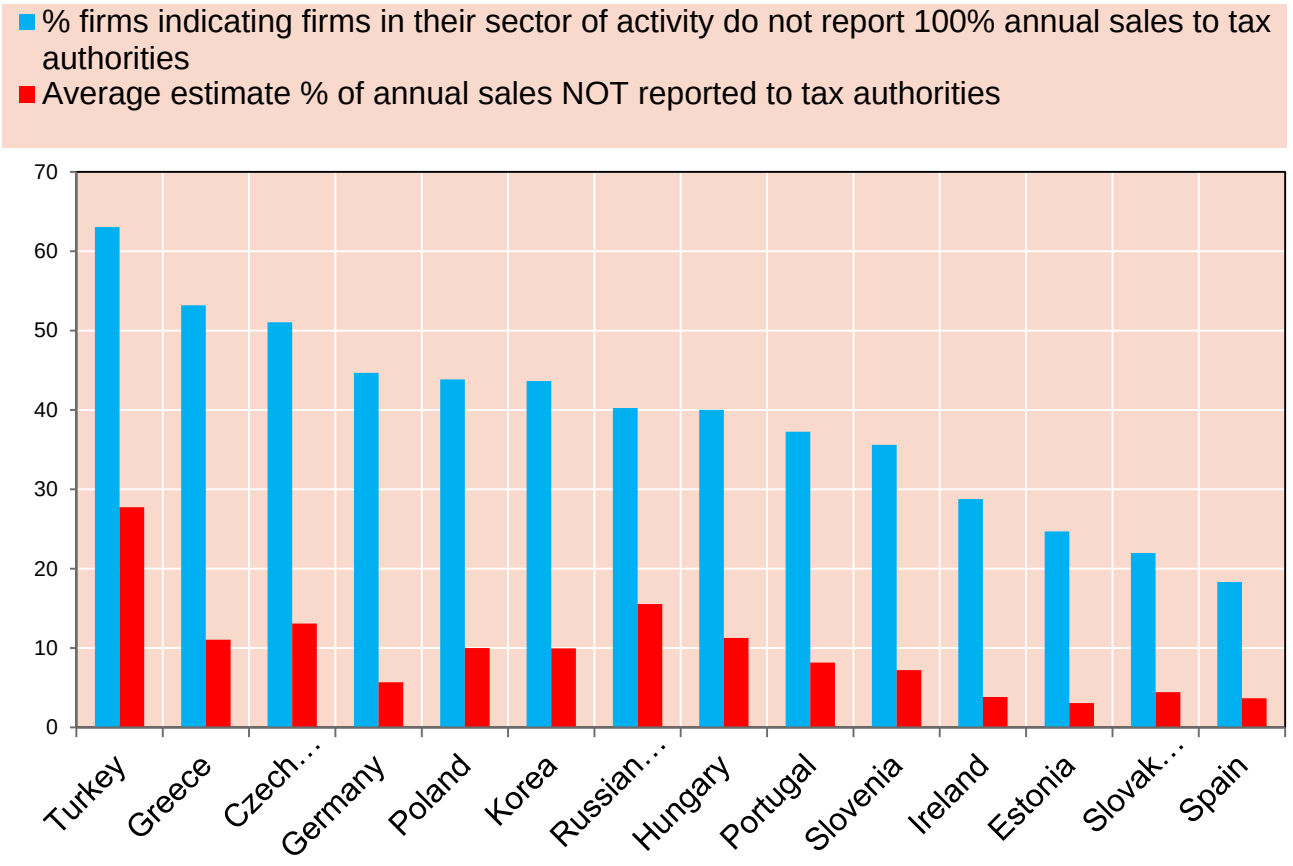
Extent of Evasion

- There are many methods for measuring the hidden economy including:
  - the difference between the income and expenditure measures of national income
  - the use of survey evidence, either directly or indirectly as an input into an estimation procedure
  - the demand for cash, on the basis that transactions in the hidden economy are financed by cash rather than checks or credit (monetary approach)
  - the use of the quantity of a basic input that is measured to estimate true output (input approach)
- Table below presents estimates of the size of the hidden economy estimates are subject to error
  - there is a degree of consistency running through them
  - undeclared economic activity is substantial

Shadow economies in the EU



Tax evasion



Source: OECD calculations based on EBRD-World Bank BEEPS Survey (1999, 2002, 2004, 2005).

Evasion Decision

- The simplest model of the evasion decision considers it to be a gamble.
- If a taxpayer declares less than their true income (or overstates deductions)
  - they may do so without being detected
  - there is also a chance that they may be caught
  - when they are caught a punishment is inflicted
  - usually a fine but sometimes imprisonment
- A taxpayer has to weigh-up these gains and losses taking account of the chance of being caught and the level of the punishment

Evasion Decision

- The taxpayer has an income level Y
  - known to the taxpayer
  - not known to the tax collector
- The income declared is $X \leq Y$
  - taxed at a constant rate t
- Amount of unreported income is $Y - X \geq 0$
- The unpaid tax is $t[Y - X]$

Evasion Decision

- If the taxpayer evades without being caught, their income is given by

$$Y^{nc} = Y - tX$$

- When the taxpayer is caught evading all income is taxed and a fine at rate F is levied on the tax that has been evaded.
- The income level when caught is

$$Y^{c} = [1 - t]Y - Ft[Y - X]$$

- If income is understated the probability of being caught is p

Evasion Decision

- Assume that the taxpayer derives utility $U(Y)$ from an income Y
- After making declaration X
  - income level Y^c occurs with probability p
  - income level Y^{nc} occurs with probability $1 - p$
- The taxpayer chooses X to maximize expected utility
- The declaration X solves

$$\max_{\{X\}} E[U(X)] = [1 - p]U(Y^{nc}) + pU(Y^c)$$

Evasion Decision

- This choice problem can be displayed graphically
- Observe that there are two states of the world.
  - in one state of the world the taxpayer is not caught evading and income is Y^{nc}
  - in the other state of the world they are caught and income is Y^{c}
- The expected utility function describes preferences over income levels in these two states
- The choice of *X* determines an income level in each state
- Varying *X* trades-off income between the two states
  - a high value of *X* provides relatively more income in the state in which the taxpayer is caught evading
  - a low value of *X* provides relatively more when they are not caught.

Evasion Decision

- When $X = Y$ the taxpayer's income is $[1 - t]Y$ in both states
- When $X = 0$ income will be
  - $[1 - t(1 + F)]Y$ if caught
  - Y if not caught
- The options available to the taxpayer lie on the line joining the points for $X = 0$ and $X = Y$
  - this is the opportunity set of achievable allocations of income between the two states
- The utility function provides a set of indifference curves
  - an indifference curve describes income levels in the two states which give the same level of expected utility

Evasion Decision

- The choice problem is shown in Figure 16.1
- The optimal declaration achieves the highest indifference curve
- The taxpayer chooses to locate at the point with declaration X^*
- This is an interior point with $0 < X^* < Y$
- Some tax is evaded but some income is declared

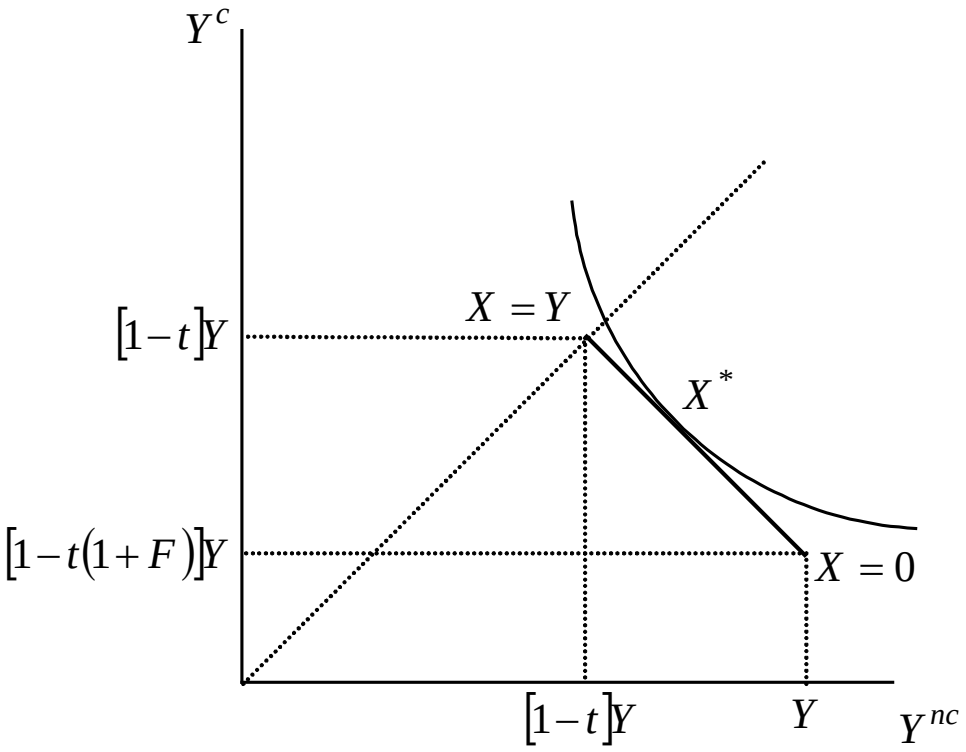


Figure 16.1: Interior choice

Evasion Decision

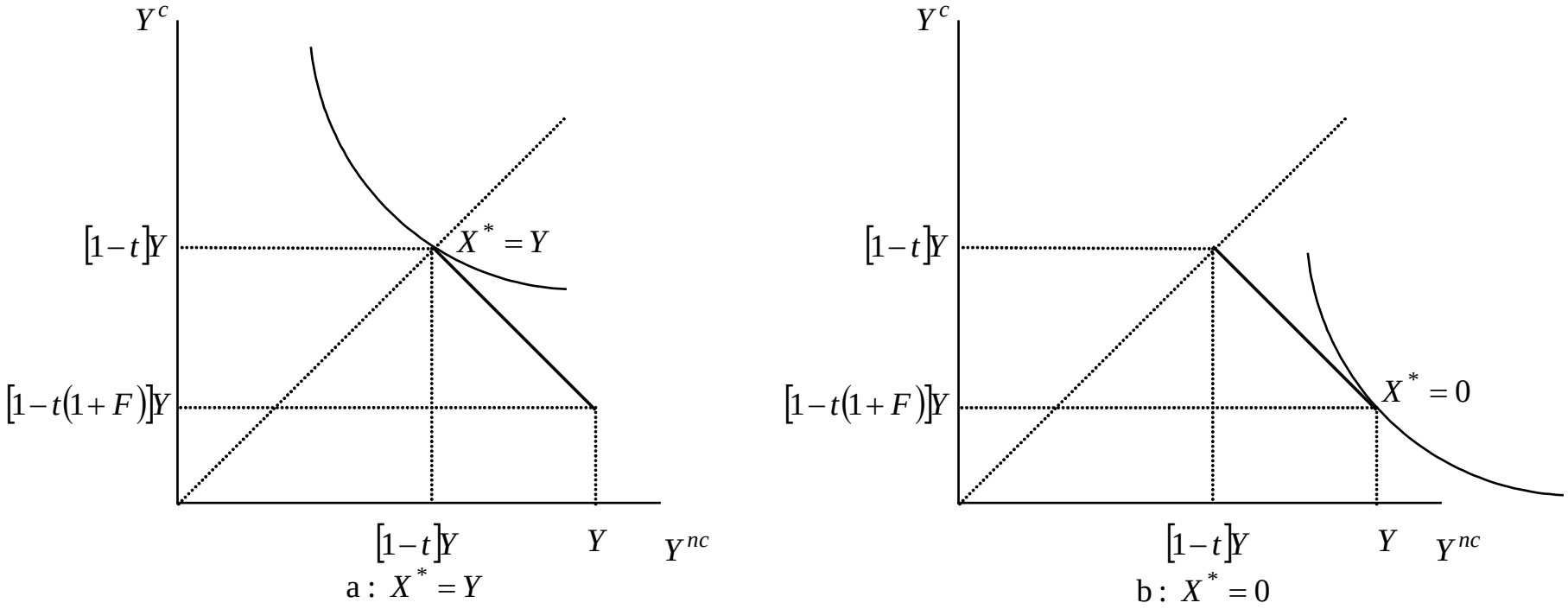


Figure 16.2: Corner solutions

- It is also possible for corner solutions to arise
- The taxpayer in Figure 16.2a chooses to declare their entire income so $X^* = Y$
- The taxpayer in Figure 16.2b declares no income so $X^* = 0$

Evasion Decision

- An interesting question is what guarantees that evasion will occur
- Evasion occurs if the indifference curve is steeper than the budget constraint on the 45^o line
- Totally differentiating expected utility the indifference curve has slope

$$dY^c/dY^{nc} = -[1 - p]U'(Y^{nc})/pU'(Y^c)$$

- On the 45^o line $Y^c = Y^{nc}$ so $U'(Y^{nc}) = U'(Y^c)$ implying

$$dY^c/dY^{nc} = -[1 - p]/p$$

- The slope of the budget constraint is given by $-F$
- The indifference curve is steeper than the budget constraint on the 45^o line if

$$[1 - p]/p > F \text{ or } \boldsymbol{p < 1/[1 + F]}$$

Evasion Decision

- Evade if the probability of detection is too small relative to the fine rate
- This is a trigger condition
  - it says nothing about the extent of evasion
- The condition applies to all taxpayers regardless of preferences
  - if one evades, all should evade.
- Typical punishments suggest F is between 0.5 and 1 so

  $$1/(1 + F) \geq 1/2.$$
- Information on p hard to obtain: 1 in a 100 or 1 in a 1000?
- The model predicts all taxpayers should be evading.
- In the US
  - the proportion of individual tax returns audited was 1.7 per cent in 1997
  - the Taxpayer Compliance Measurement Program revealed that 40 per cent of US taxpayers underpaid their taxes#
  - this is large but less than predicted

Evasion Decision

- A change in the probability of detection is shown in Figure 16.3
- An increase in *p* reduces the gradient of the indifference curves where they cross the 45° line
- The optimal choice moves closer to *X* = *Y*
- Amount of income declared rises, so an increase in the probability of detection reduces the level of evasion

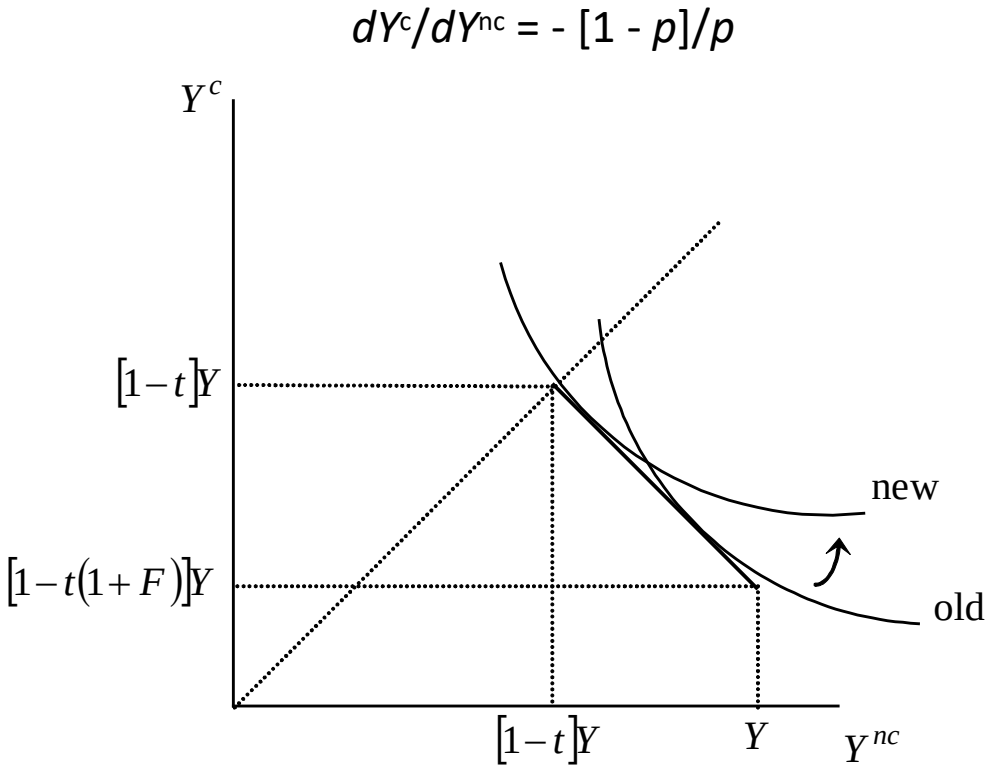


Figure 16.3: Probability of detection

Evasion Decision

- A change in the fine rate affects income when caught evading
- An increase in *F* pivots the budget constraint round the honest report point
- The optimal choice moves closer to the honest declaration point
- This is shown in Figure 16.4 by the move from X^{old} to X^{new}
- An increase in the fine rate leads to a reduction in evasion

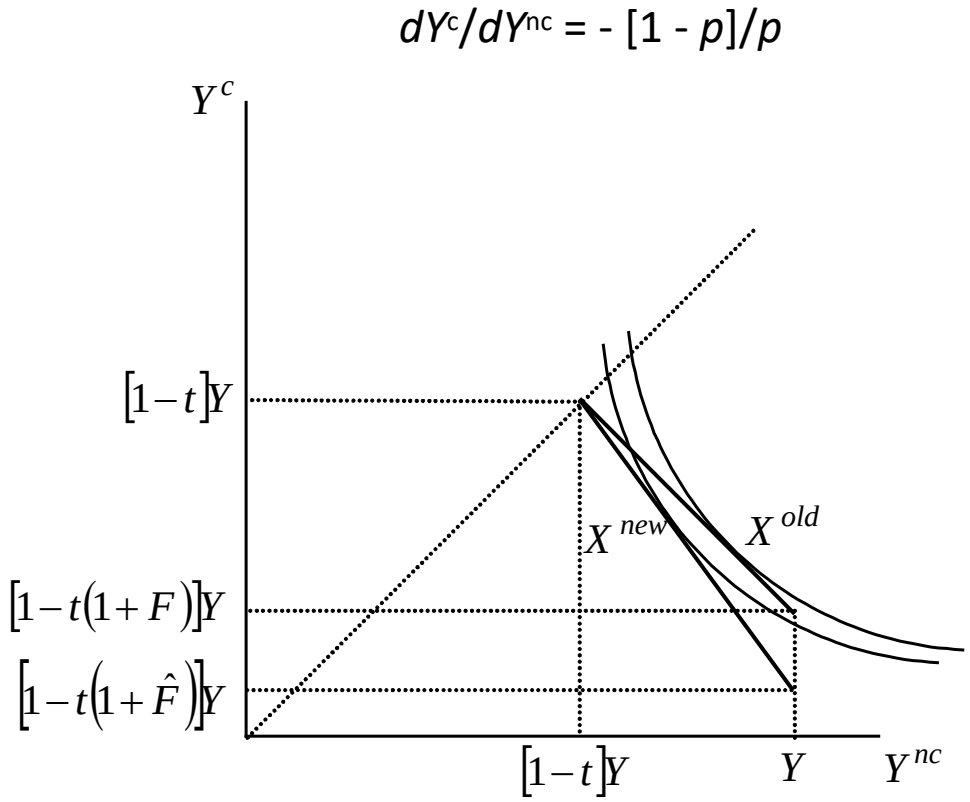


Figure 16.4: Fine rate

Evasion Decision

- An income increase moves the budget constraint outward
- The optimal choice then moves from X^{old} to X^{new} in Figure 16.5
- The effect on evasion depends on the degree of absolute risk aversion, $R_A(Y) = - U''(Y)/U'(Y)$
- If $R_A(Y)$ is constant the optimal choices are on a locus parallel to the 45° line
- Evidence shows $R_A(Y)$ decreases as income increases so undeclared income rises as income increases

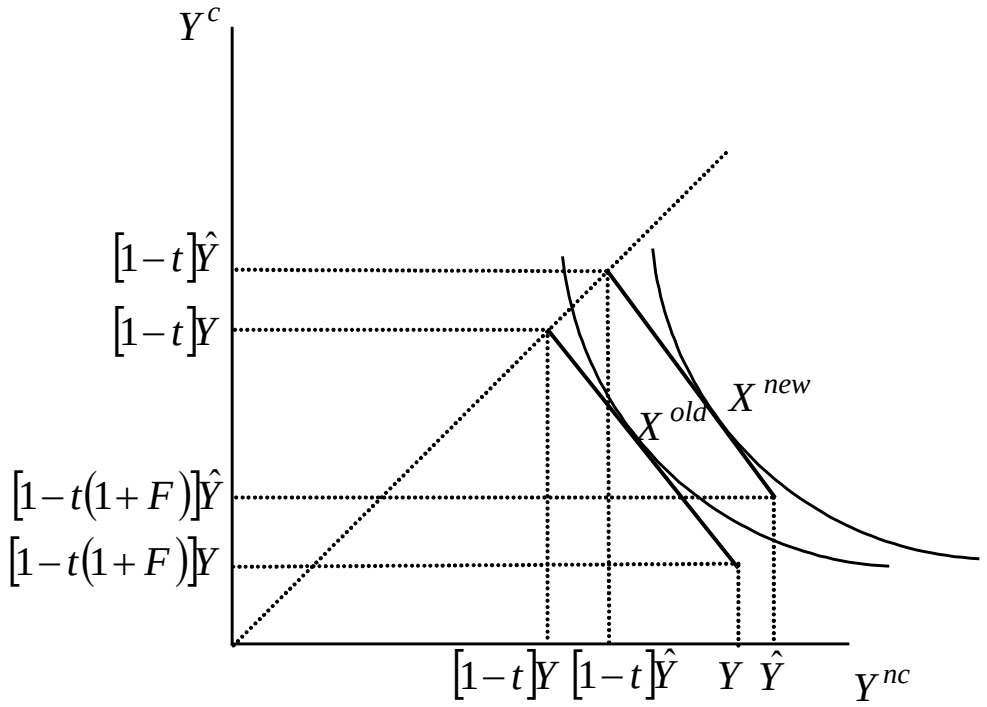


Figure 16.5: Increase in income

Evasion Decision

- An increase in the tax rate moves the budget constraint inwards
- Figure 16.6 shows the outcome is not clear-cut
- If $R_A(Y)$ is decreasing a tax increase reduces tax evasion
- This is counter to what seems reasonable
- The result holds because the fine is determined by Ft so an increase in the tax rate raises the penalty
- This takes income away from the taxpayer in the state in which they have least income

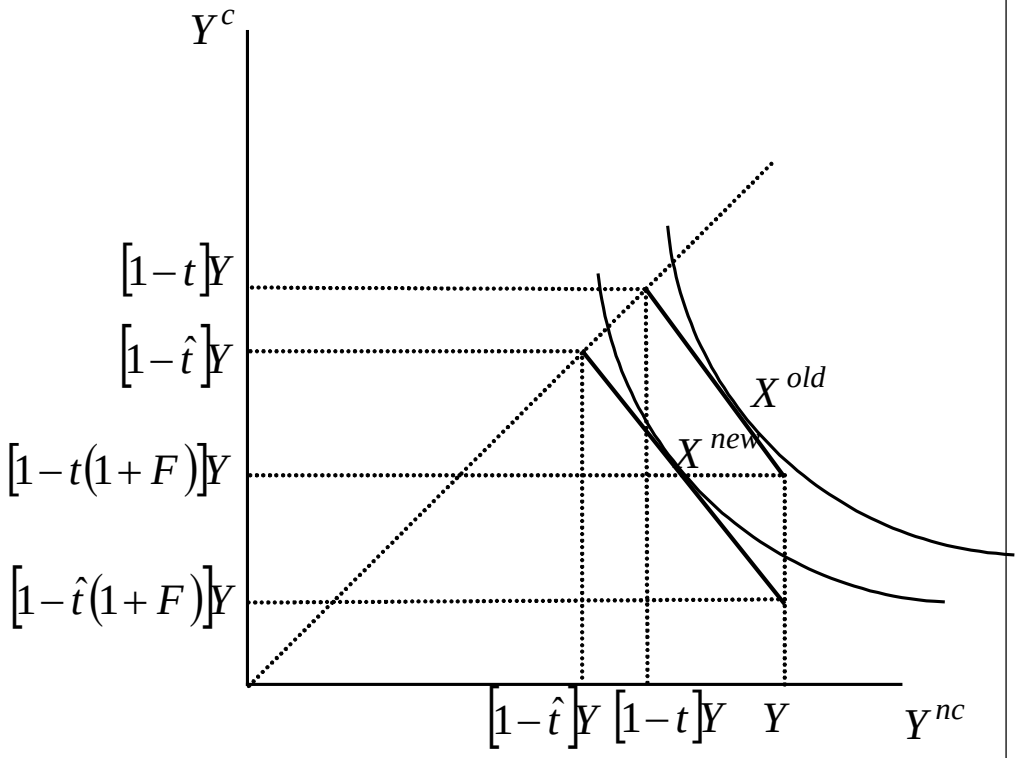


Figure 16.6: Increase in tax rate

Auditing and Punishment

- The analysis of the evasion decision assumed that the *p* and *F* were fixed
- This is satisfactory from the perspective of the individual taxpayer
- From the government's perspective these are choice variables that can be chosen
  - the probability of detection can be raised by the employment of additional tax inspectors
  - the fine can be legislated or set by the courts.
- The issues involved in the government's decision can be analyzed

Auditing and Punishment

- An increase in either *p* or *F* will reduce the amount of undeclared income
- Assume the government wishes to maximize revenue
- Revenue is defined as taxes paid plus the money received from fines
- From a taxpayer with income *Y* the expected value of the revenue collected is

$$R = tX + p(1+F)t[Y - X]$$

Auditing and Punishment

- Differentiating with respect to *p*

$$\frac{\partial R}{\partial p} = (1+F)t[Y-X]+t[1-p-pF]\frac{\partial X}{\partial p} > 0$$

- Differentiating with respect to *F*

$$\frac{\partial R}{\partial F} = pt[Y-X]+t[1-p-pF]\frac{\partial X}{\partial F} > 0$$

- If **pF <1 - p** an increase in *p* or *F* will increase the revenue the government receives
- *p* is costly, *F* is free
- Optimal policy is low *p* very high *F*

Auditing and Punishment

- This policy maximizes revenue not welfare
- The government may be constrained by political factors
- The government may not be a single entity that chooses all policy instruments
  - the tax rate set by central government
  - the probability of detection controlled by a revenue service
  - the punishment set by the judiciary.
- The economics of crime would view tax evasion as just another crime with a punishment that should fit with the general scheme of punishments
  - levels of punishment should provide incentives that lessen the overall level of crime
  - lower punishments for less harmful rather crimes

Evidence on Evasion

- There have been two approaches taken in studying tax evasion.
- The first was to collect survey or interview data and use econometric analysis to provide a quantitative determination of the relationships.
- The second was to use experiments to provide an opportunity for designing the environment to permit the investigation of particular hypotheses.

Evidence on Evasion

Income interval	17-20	20-25	25-30	30-35	35-40
Midpoint	18.5	22.5	27.5	32.5	37.5
Assessed income	17.5	20.6	24.2	28.7	31.7
Percentage	94.6	91.5	88.0	88.3	84.5

Source: Mork (1975)

Table 16.2: Declaration and Income

- Compares income level from interviews to income on tax return
- Interviewees placed in income intervals based on interview
- The percentage found by dividing the assessed income by the midpoint of the income interval
- Declared income declines as a proportion of reported income occurs as income rises

Evidence on Evasion

the importance of attitudes and social norms in the evasion decision

- Propensity to evade taxation
  - reduced by an increase in probability of detection, age, income
  - increased by an increase in the perceived inequity and of the number of tax evaders known
- Extent of tax evasion increased by
  - attitude and social variables
  - experience of previous tax audits.
- Social variables are clearly important

Variable	Propensity to evade	Extent of evasion
Inequity	0.34	0.24
Number of evaders known	0.16	0.18
Probability of detection	-0.17	
Age	-0.29	
Experience of audits	0.22	0.29
Income level	-0.27	
Income from wages and salaries	0.20	

Source: Spicer and Lundstedt (1976)
Table 16.3: Explanatory Factors

Evidence on Evasion

- Effect of the tax rate is concerned
  - data from the US Internal Revenue Services Taxpayer Compliance Measurement Program survey of 1969 show that tax evasion increases as the marginal tax rates increases but decreases when wages are a significant proportion of income
  - supported by employing the difference between income and expenditure figures in National Accounts as a measure of evasion
  - a study of Belgian data found precisely the converse conclusion with tax increases leading to lower evasion
- The ambiguity about the relation between marginal tax rates and tax evasion is not resolved

Evidence on Evasion

experimental studies

- Tax evasion games have shown
  - evasion increases with the tax rate
  - evasion falls as the fine is increased or the detection probability increases
  - women evade more often than men but evade lower amounts
  - that purchasers of lottery tickets were no more likely to evade than non-purchasers but evaded greater amounts when they did evade
- The nature of the tax evasion decision has been tested by running two parallel experiments
  - one framed as a tax evasion decision and the other as a simple gamble with the same risks and payoffs
  - for the tax evasion experiment some taxpayers chose not to evade even when they would under the same conditions with the gambling experiment
  - this suggests that tax evasion is not just a gamble

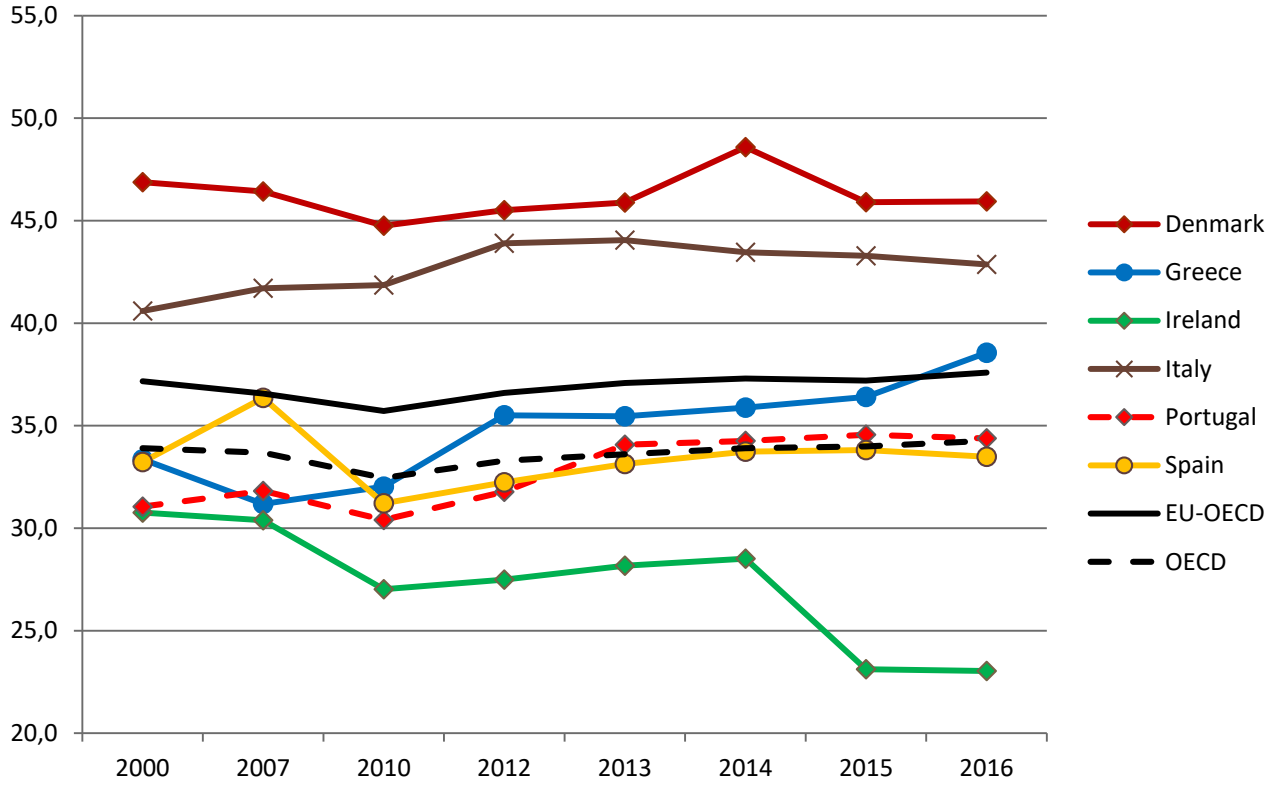
Evidence on Evasion

- There are two important lessons to be drawn
  - the theoretical predictions are generally supported except for the effect of the tax rate
  - tax evasion is more than the simple gamble portrayed in the basic model
- There are attitudinal and social aspects to the evasion decision in addition to the basic element of risk

SOME FACTS ABOUT GREECE

- Structure of the Greek tax system
- Efficiency of the tax system
- Tax administration
- Societal Factors

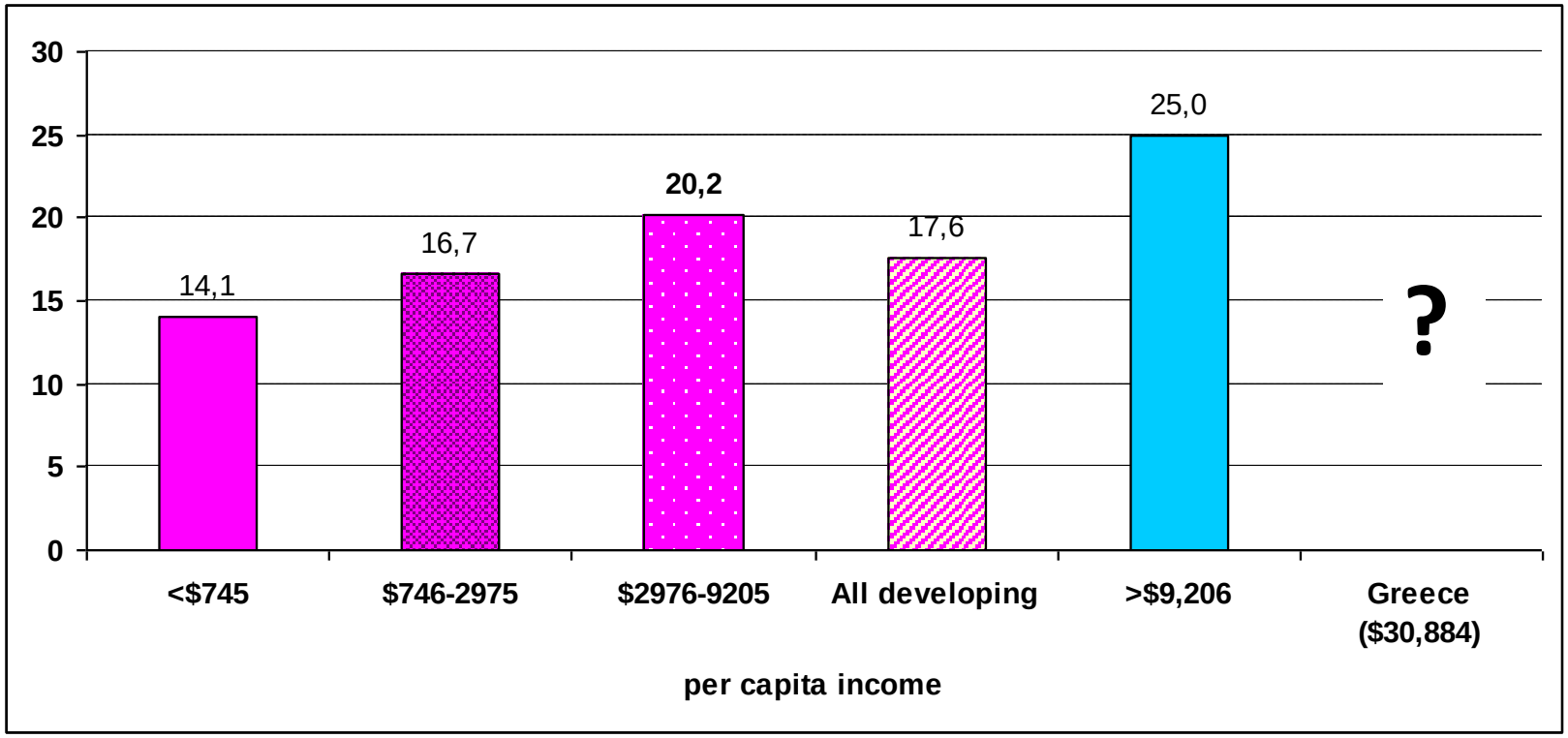
Tax revenue (% GDP)



Source: OECD (2017), OECD Revenue Statistics, Paris.

Tax revenue/GDP

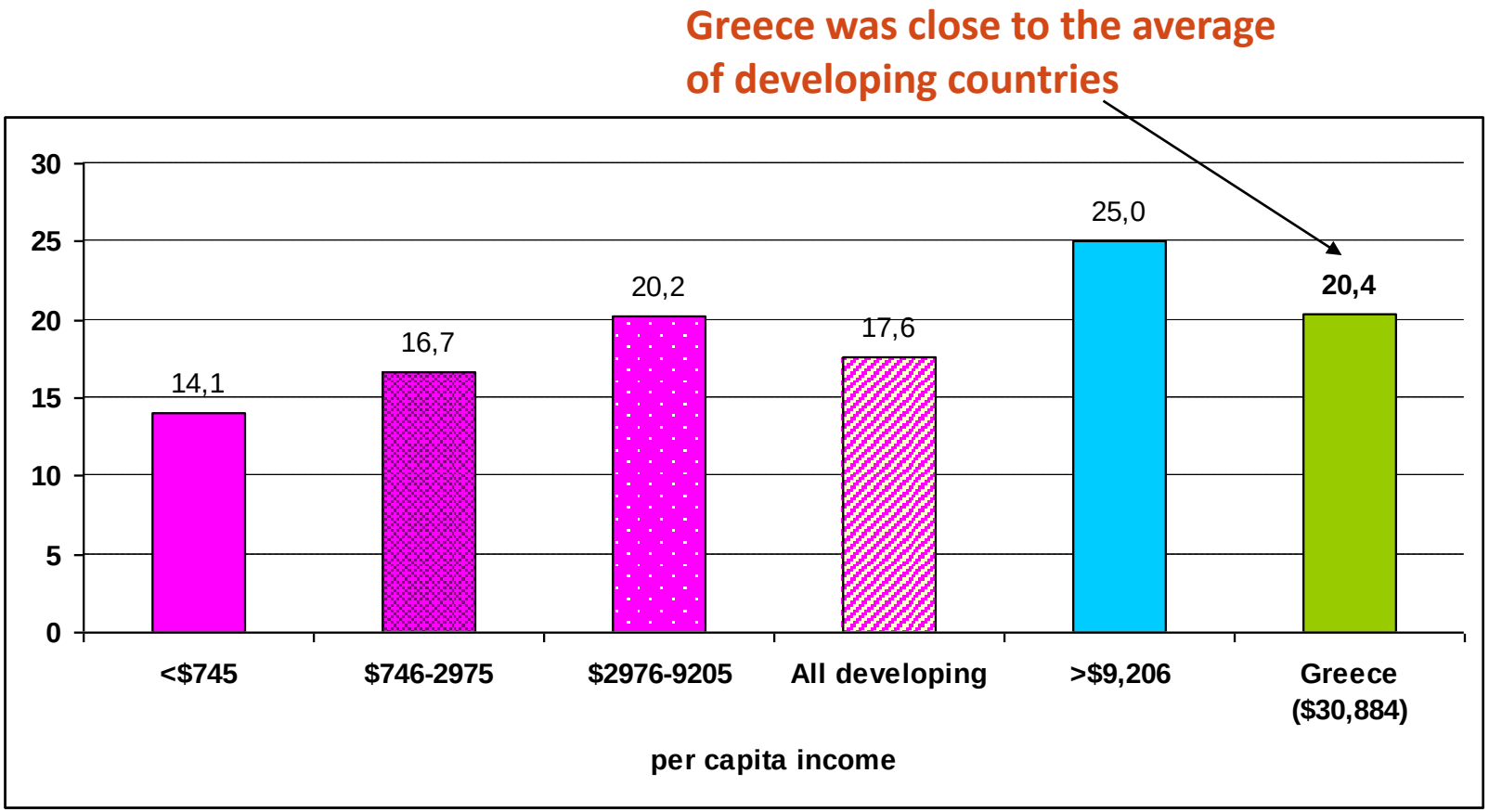
Countries with different levels of per capita GDP



Sources: Gordon and Li (2009), World Development Indicators (World Bank, 2011), Government Finance Statistics (IMF, 2011)

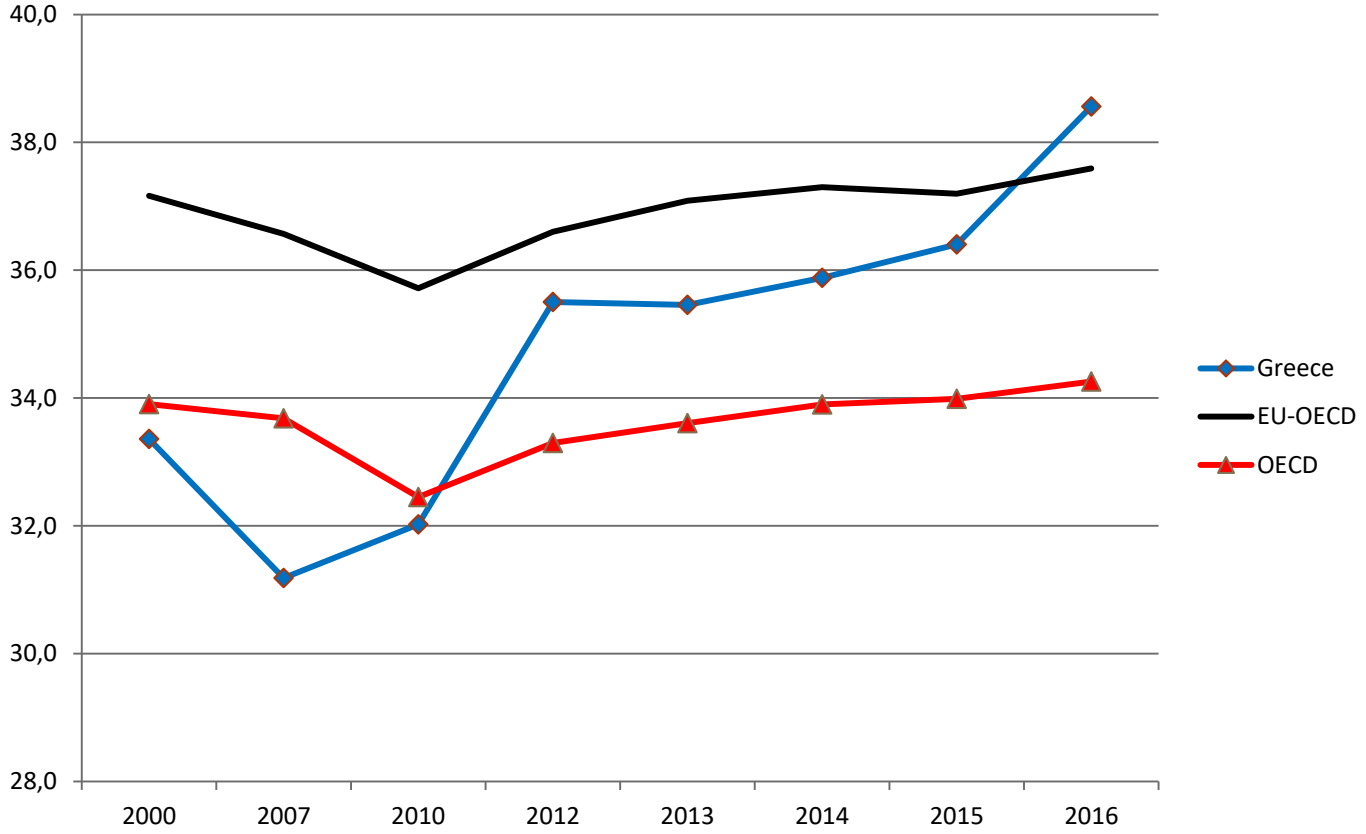
Tax revenue/GDP

Countries with different levels of per capita GDP



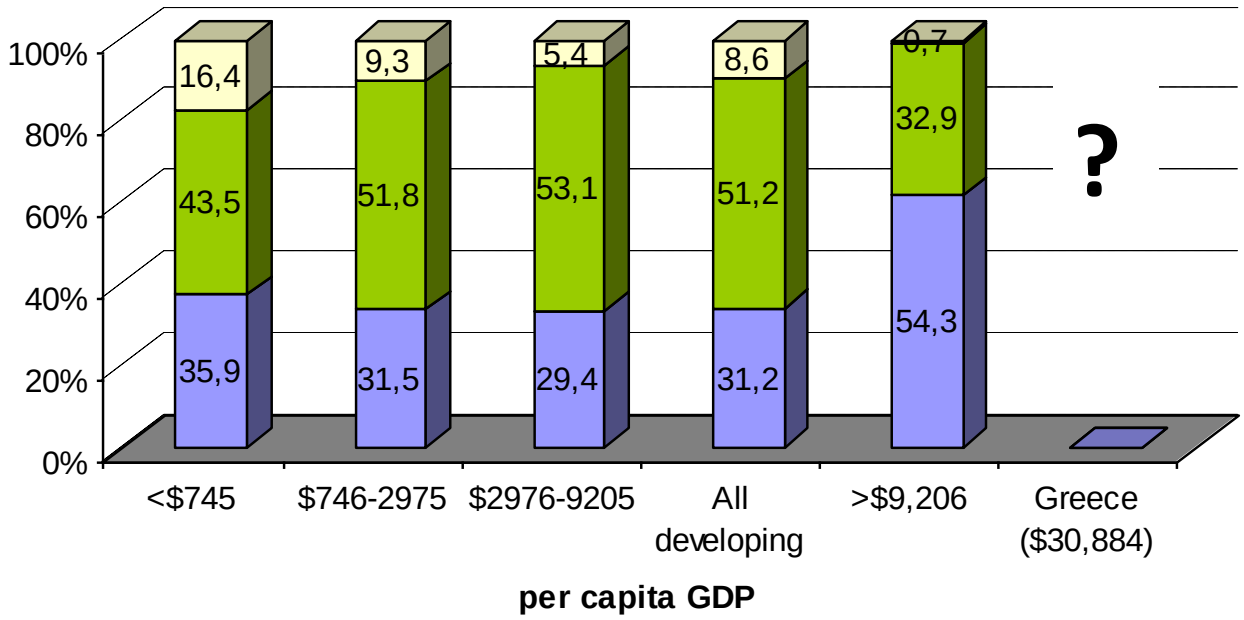
Sources: Gordon and Li (2009), World Development Indicators (World Bank, 2011), Government Finance Statistics (IMF, 2011)

Convergence in revenues with EU & OECD



Structure of government revenues

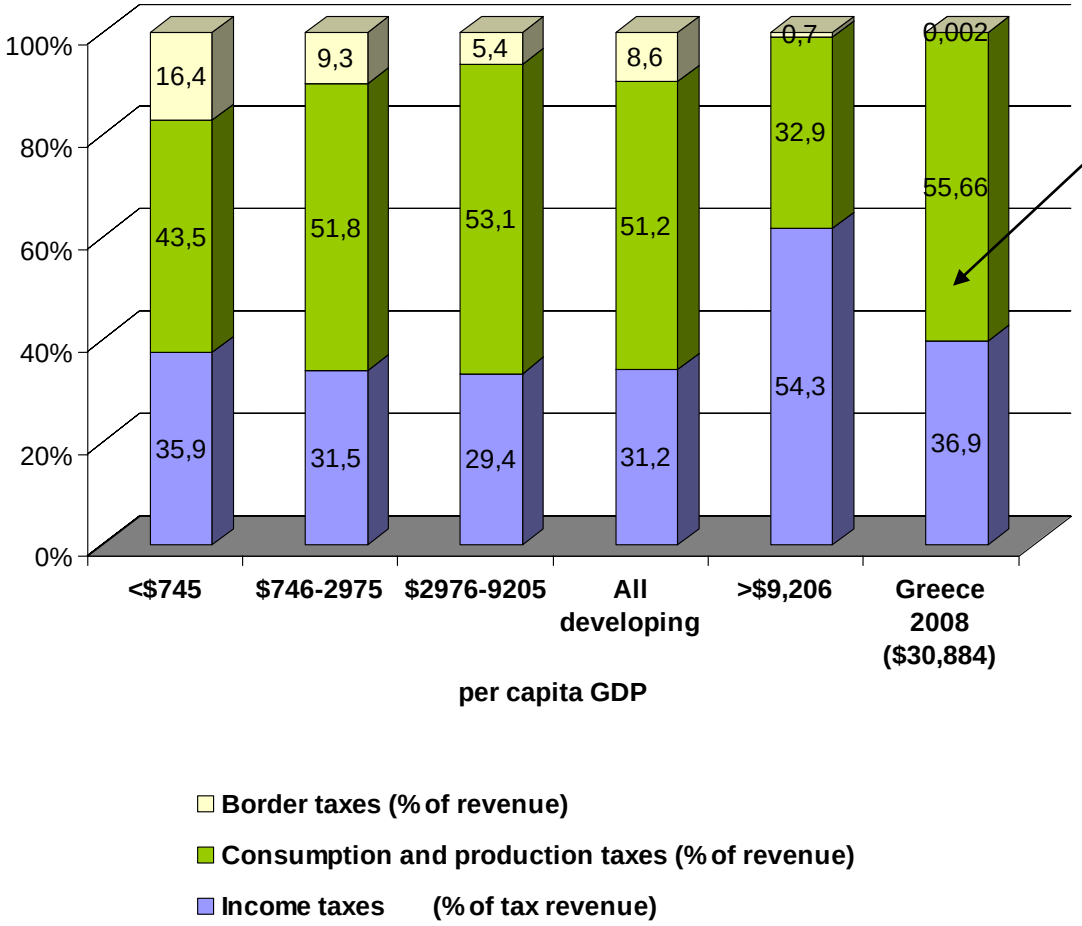
Income taxes were the main source of revenues in developed countries.



41

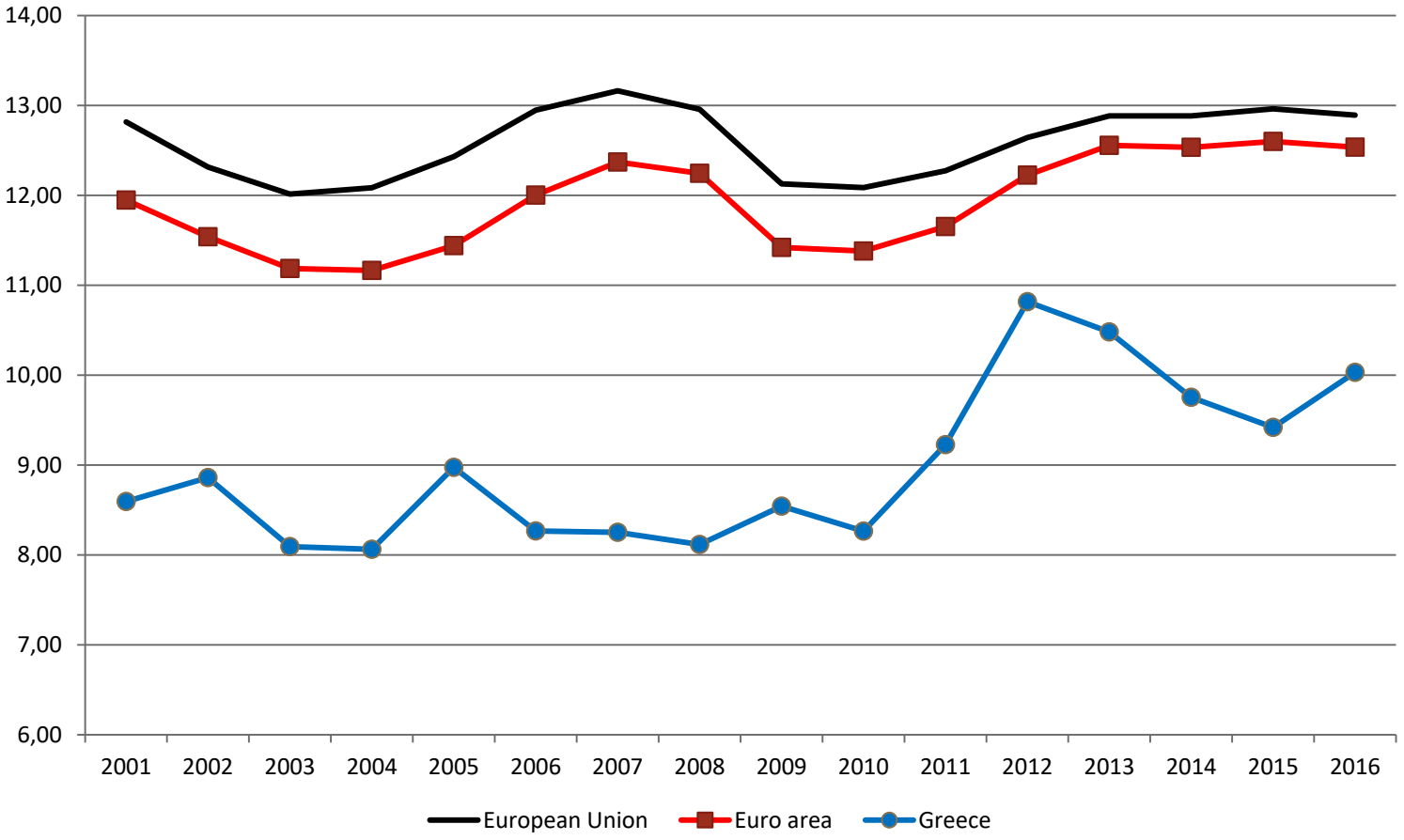
Sources: Gordon and Li (2009), World Development Indicators (World Bank, 2011), Government Finance Statistics (IMF, 2011)

Structure of government revenues

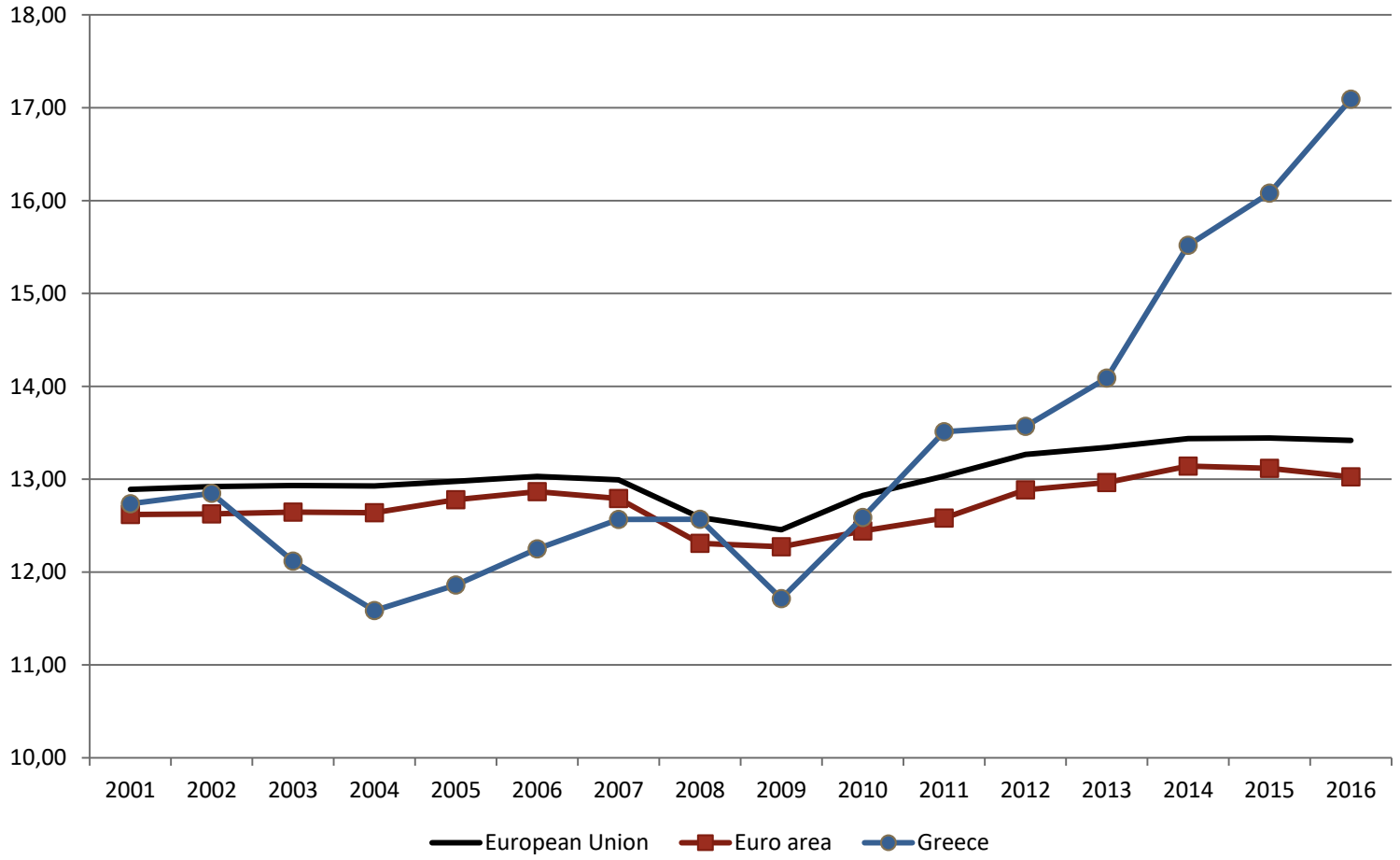


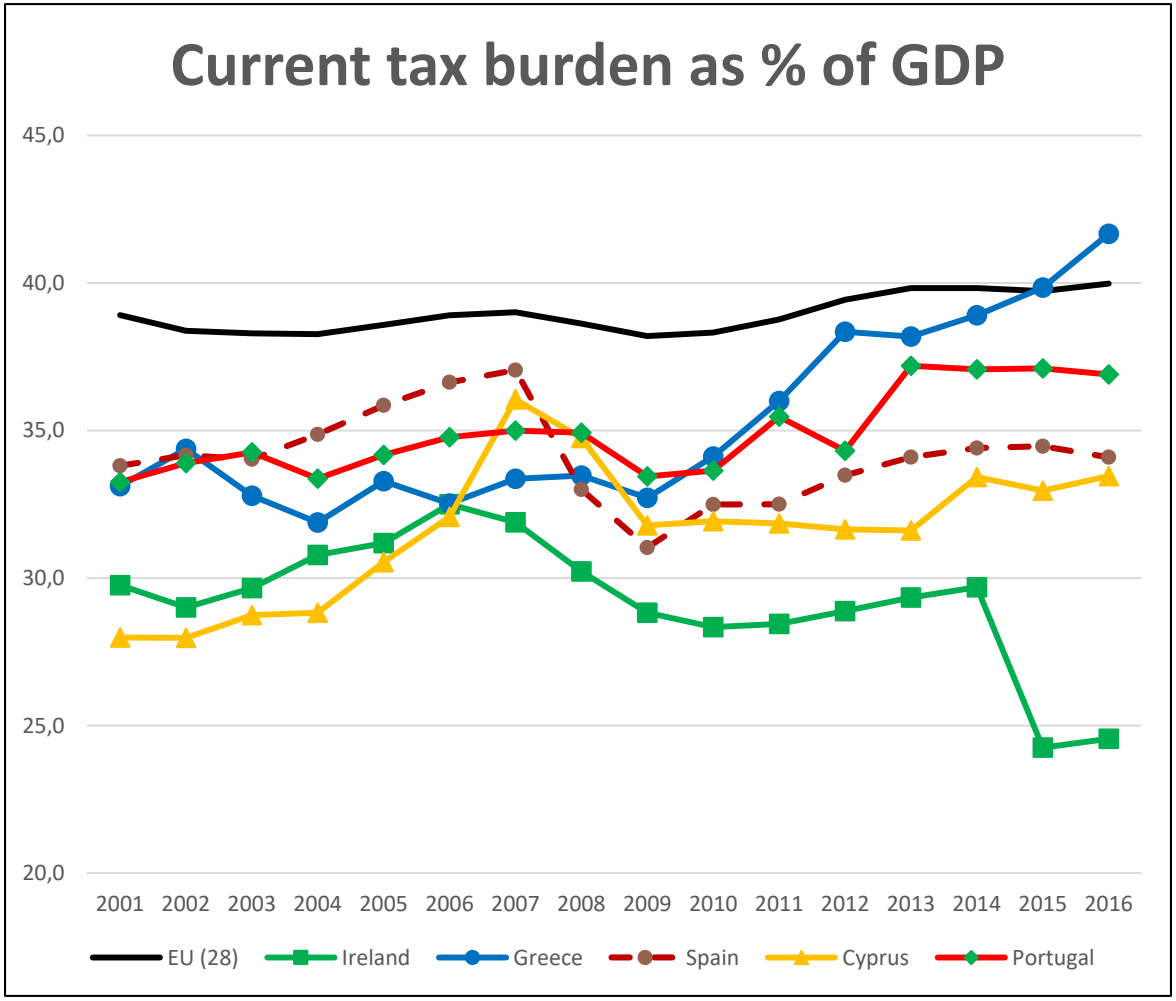
In Greece the main source of tax revenues was consumption, in contrast to the developed economies

Revenues from Direct Taxes (% GDP)



Revenues from Indirect Taxes (% GDP)





The current tax burden of total economy is the sum of Indirect taxes, Direct taxes, and Social security contributions

Tax Burden

- From the above data it is clear that the tax burden in Greece has increased significantly during the crisis.
- Yet, it seems that, the higher tax revenue, comes from higher tax rates and much less from combatting tax evasion.
- This is quite clear from the data that measure the “TAX GAP” for the value added tax (VAT), for which we have comparable data for all EU countries.

VAT GAP

- The VAT Gap is defined as the difference between the amount of VAT actually collected and the VAT Total Tax Liability (VTTL).
- The VTTL is the theoretical tax liability according to tax law.
- The VAT Gap, however, refers to more than just fraud and evasion. It also covers the VAT lost due to, for example, insolvencies, bankruptcies, administrative errors, and legal tax optimisation.

- For details see: http://europa.eu/rapid/press-release_IP-16-2936_en.htm

VAT Revenues (EUR million)					
	2013	***2014***	***2015***	***2016***	***2017***
Belgium	27250	27518	27594	28750	29763
Bulgaria	3898	3810	4059	4417	4664
Czechia	11694	11602	12382	13091	14721
Denmark	24320	24950	25672	26735	27931
Germany	197005	203081	211616	218779	226582
Estonia	1558	1711	1873	1974	2148
Ireland	10372	11521	11955	12826	13278
Greece	***12593***	***12676***	***12885***	***14333***	***14642***
Spain	60951	63643	68601	70705	74107
France	144490	148454	151680	154490	161932
Croatia		5455	5690	6016	6485
Italy	93921	97071	100692	102378	107901
Cyprus			1517	1664	1851
Latvia	1690	1787	1876	2032	2164
Lithuania	2611	2764	2888	3026	3310
Luxembourg	3438	3762	3435	3436	3469
Hungary	9073	9754	10669	10587	11725
Malta	582	642	673	712	810
Netherlands	42408	42951	44746	47849	49900
Austria	24895	25386	26247	27301	28304
Poland	27780	29317	30075	30838	36330
Portugal	13710	14682	15368	15767	16809
Romania	11710	11496	12939	10968	11650
Slovenia	3046	3155	3218	3316	3479
Slovakia	4696	5021	5420	5420	5917
Finland	18888	18948	18974	19694	20404
Sweden	39048	38846	40501	42770	44115
United Kingdom	139220	154085	178176	163344	161509
EU	930847	974088	1031422	1043219	1085899

VAT Gap (EUR million)					
	2013	***2014***	***2015***	***2016***	***2017***
Belgium	3962	2755	3722	3865	3996
Bulgaria	761	1086	992	603	625
Czechia	2796	2345	2665	2264	2082
Denmark	3367	3006	2938	2378	2235
Germany	26013	26543	24225	23662	25016
Estonia	256	200	113	126	122
Ireland	1296	946	1464	1941	1938
Greece	***6214***	***4611***	***5660***	***6436***	***7399***
Spain	8149	5900	3209	2024	1806
France	16140	17066	15841	15294	12030
Croatia		504	639	503	459
Italy	40424	39033	36167	37044	33629
Cyprus			132	87	11
Latvia	530	456	467	310	385
Lithuania	1095	1115	987	1027	1119
Luxembourg	107	129	107	119	23
Hungary	2424	2215	2067	1813	1893
Malta	226	264	51	71	13
Netherlands	4726	4248	5010	2906	2744
Austria	2849	2572	2486	2384	2444
Poland	10071	9485	9555	7761	5764
Portugal	2511	2300	2264	2301	1929
Romania	7192	7818	6890	6201	6413
Slovenia	183	335	272	239	128
Slovakia	2147	2111	2209	1874	1791
Finland	1120	1177	1223	1599	1622
Sweden	1384	1291	1189	714	654
United Kingdom	18043	20147	20680	19880	19199
EU-	163986	159658	153227	145428	137470

VAT Gap Estimates, 2017 (EUR million)				
	2017			
	Revenues	VTTL	VAT Gap	VAT Gap %
Belgium	29,763	33,759	3,996	11.80%
Bulgaria	4,664	5,289	625	11.80%
Czechia	14,721	16,803	2,082	12.40%
Denmark	27,931	30,166	2,235	7.40%
Germany	226,582	251,598	25,016	9.90%
Estonia	2,148	2,270	122	5.40%
Ireland	13,278	15,215	1,938	12.70%
Greece	***14,642***	***22,041***	***7,399***	***33.60%***
Spain	74,107	75,913	1,806	2.40%
France	161,932	173,962	12,030	6.90%
Croatia	6,485	6,944	459	6.60%
Italy	107,901	141,530	33,629	23.80%
Cyprus	1,851	1,862	11	0.60%
Latvia	2,164	2,549	385	15.10%
Lithuania	3,310	4,429	1,119	25.30%
Luxembourg	3,469	3,492	23	0.70%
Hungary	11,725	13,617	1,893	13.90%
Malta	810	823	13	1.60%
Netherlands	49,900	52,644	2,744	5.20%
Austria	28,304	30,748	2,444	7.90%
Poland	36,330	42,094	5,764	13.70%
Portugal	16,809	18,738	1,929	10.30%
Romania	11,650	18,063	6,413	35.50%
Slovenia	3,479	3,606	128	3.50%
Slovakia	5,917	7,708	1,791	23.20%
Finland	20,404	22,026	1,622	7.40%
Sweden	44,115	44,769	654	1.50%
United Kingdom	161,509	180,708	19,199	10.60%
EU-	1,085,899	1,223,369	137,470	11.20%

Table B7. VAT Gap (percent of VTTL)					
	2013	***2014***	***2015***	***2016***	***2017***
Belgium	13%	9%	12%	12%	12%
Bulgaria	16%	22%	20%	12%	12%
Czechia	19%	17%	18%	15%	12%
Denmark	12%	11%	10%	8%	7%
Germany	12%	12%	10%	10%	10%
Estonia	14%	10%	6%	6%	5%
Ireland	11%	8%	11%	13%	13%
Greece	***33%***	***27%***	***31%***	***31%***	***34%***
Spain	12%	8%	4%	3%	2%
France	10%	10%	9%	9%	7%
Croatia		8%	10%	8%	7%
Italy	30%	29%	26%	27%	24%
Cyprus			8%	5%	1%
Latvia	24%	20%	20%	13%	15%
Lithuania	30%	29%	25%	25%	25%
Luxembourg	3%	3%	3%	3%	1%
Hungary	21%	19%	16%	15%	14%
Malta	28%	29%	7%	9%	2%
Netherlands	10%	9%	10%	6%	5%
Austria	10%	9%	9%	8%	8%
Poland	27%	24%	24%	20%	14%
Portugal	15%	14%	13%	13%	10%
Romania	38%	40%	35%	36%	36%
Slovenia	6%	10%	8%	7%	4%
Slovakia	31%	30%	29%	26%	23%
Finland	6%	6%	6%	8%	7%
Sweden	3%	3%	3%	2%	1%
United Kingdom	11%	12%	10%	11%	11%
EU-	15%	14%	13%	12%	11%

Tax rates

- The tax revenue in Greece has increased significantly.
  - Is it the result of higher tax rates
  - Or
  - The result of broadening the tax base, and/or
  - The result of enhanced effort in tax collection and reduction in tax evasion?
- This is difficult to answer.
- Let us see first the evolution of tax rates in Greece and the rest of EU in the last few years.

VAT rates in the Member States, 2000-2017. (%) Standard

	2000	2008	2013	2016	2017
Belgium	21	21	21	21	21
Bulgaria	20	20	20	20	20
Czech Republic	22	19	21	21	21
Denmark	25	25	25	25	25
Germany	16	19	19	19	19
Estonia	18	18	20	20	20
Ireland	21	21	23	23	23
Greece	***18***	***19***	***23***	***23***	***24***
Spain	16	16	21	21	21
France	19.6	19.6	19.6	20.0	20.0
Croatia	22	22	25	25	25
Italy	20	20	21	22	22
Cyprus	10	15	18	19	19
Netherlands	17.5	19	21	21	21
Austria	20	20	20	20	20
Poland	22	22	23	23	23
Portugal	17	20	23	23	23
Romania	19	19	24	20	19
Slovenia	19	20	22	22	22
Slovakia	23	19	20	20	20
Finland	22	22	24	24	24
Sweden	25	25	25	25	25
EU-28 Average	19.3	19.5	21.5	21.5	21.5
EA-19 Average	18.1	18.8	20.6	20.8	20.8

Top statutory personal income tax rates

(including surcharges), 1995-2017 (%)

	1995	2002	2008	2010	2014	2015	2016	2017
Sweden	61.3	55.5	56.4	56.6	56.9	57.0	57.1	57.1
Portugal	40.0	40.0	42.0	45.9	56.5	56.5	56.5	56.2
Denmark	65.7	62.3	62.3	55.4	55.6	55.8	55.8	55.8
Greece	***45.0***	***40.0***	***40.0***	***49.0***	***46.0***	***48.0***	***48.0***	***55.0***
Belgium	60.6	56.4	53.7	53.7	53.8	53.7	53.2	53.2
Netherlands	60.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
Finland	62.2	52.5	50.1	49.0	51.5	51.6	51.6	51.4
France	59.1	57.8	45.4	45.4	50.3	50.2	50.2	50.2
Austria	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Slovenia	50.0	50.0	41.0	41.0	50.0	50.0	50.0	50.0
Ireland	48.0	42.0	41.0	47.0	48.0	48.0	48.0	48.0
Germany	57.0	51.2	47.5	47.5	47.5	47.5	47.5	47.5
Italy	51.0	46.1	44.9	45.2	47.8	48.8	48.8	47.2
United Kingdom	40.0	40.0	40.0	50.0	45.0	45.0	45.0	45.0
Spain	56.0	48.0	43.0	43.0	52.0	45.0	45.0	43.5
Croatia	42.9	41.3	53.1	50.2	47.2	47.2	47.2	42.4
Cyprus	*40.0*	*40.0*	*30.0*	*30.0*	*35.0*	*35.0*	*35.0*	*35.0*
Poland	45.0	40.0	40.0	32.0	32.0	32.0	32.0	32.0
Slovakia	42.0	38.0	*19.0*	*19.0*	25.0	25.0	25.0	25.0
Estonia	*26.0*	*26.0*	*21.0*	*21.0*	*21.0*	*20.0*	*20.0*	*20.0*
Romania	40.0	40.0	*16.0*	*16.0*	*16.0*	*16.0*	*16.0*	*16.0*
Czech Republic	43.0	32.0	*15.0*	*15.0*	*15.0*	*15.0*	*15.0*	*15.0*
Bulgaria	50.0	29.0	*10.0*	*10.0*	*10.0*	*10.0*	*10.0*	*10.0*
EU-28	47.2	42.9	38.4	38.5	39.2	39.0	38.9	39.0
EA-19	46.9	43.3	39.1	39.7	42.3	42.0	42.0	42.3

Top statutory corporate income tax rates

(including surcharges), 1995-2017

	1995	2007	2008	2010	2011	2013	2017
Bulgaria	40.0	10.0	10.0	10.0	10.0	10.0	10.0
Ireland	40.0	12.5	12.5	12.5	12.5	12.5	12.5
Cyprus	25.0	10.0	10.0	10.0	10.0	12.5	12.5
Romania	38.0	16.0	16.0	16.0	16.0	16.0	16.0
Croatia	25.0	20.0	20.0	20.0	20.0	20.0	18.0
Czech Republic	41.0	24.0	21.0	19.0	19.0	19.0	19.0
Poland	40.0	19.0	19.0	19.0	19.0	19.0	19.0
Slovenia	25.0	23.0	22.0	20.0	20.0	17.0	19.0
United Kingdom	33.0	30.0	28.0	28.0	26.0	23.0	19.0
Estonia	26.0	22.0	21.0	21.0	21.0	21.0	20.0
Finland	25.0	26.0	26.0	26.0	26.0	24.5	20.0
Slovakia	40.0	19.0	19.0	19.0	19.0	23.0	21.0
Denmark	34.0	25.0	25.0	25.0	25.0	25.0	22.0
Sweden	28.0	28.0	28.0	26.3	26.3	22.0	22.0
Spain	35.0	32.5	30.0	30.0	30.0	30.0	25.0
Netherlands	35.0	25.5	25.5	25.5	25.0	25.0	25.0
Austria	34.0	25.0	25.0	25.0	25.0	25.0	25.0
Italy	52.2	37.3	31.4	31.4	31.4	31.3	27.8
Greece	***40.0***	***25.0***	***35.0***	***24.0***	***20.0***	***26.0***	***29.0***
Portugal	39.6	26.5	26.5	29.0	29.0	31.5	29.5
Germany	56.8	38.7	30.2	30.2	30.2	30.2	30.2
Belgium	40.2	34.0	34.0	34.0	34.0	34.0	34.0
France	36.7	34.4	34.4	34.4	36.1	38.0	34.4
EU-28	35.0	24.4	23.8	23.2	23.0	23.2	21.9
EA-19	35.8	25.7	25.1	24.5	24.4	25.0	24.1

Overall statutory tax rates on dividend income

	CIT rate on distributed profit		Overall PIT + CIT rate	
Country	2008	2017	2008	2017
Estonia	21.00	20.00	21.00	20.00
Hungary	20.00	9.00	48.00	22.65
Latvia	15.00	15.00	15.00	23.50
Slovak Republic	19.00	21.00	19.00	26.53
Czech Republic	21.00	19.00	32.85	31.15
Poland	19.00	19.00	34.39	34.39
Slovenia	22.00	19.00	37.60	39.25
Greece	***25.00***	***29.00***	***25.00***	***39.65***
Spain	30.00	25.00	42.60	42.25
Luxembourg	29.63	27.08	43.95	42.39
Finland	26.00	20.00	40.50	43.12
Netherlands	25.50	25.00	44.13	43.75
Italy	27.50	24.00	36.56	43.76
Sweden	28.00	22.00	49.60	45.40
Austria	25.00	25.00	43.75	45.63
Germany	29.41	29.83	48.02	48.33
Portugal	26.50	29.50	41.20	49.24
United Kingdom	28.00	19.00	46.00	49.86
Belgium	33.99	33.99	43.89	53.79
Denmark	25.00	22.00	58.75	54.76
Ireland	12.50	12.50	48.38	57.13
France	34.43	46.10	53.45	69.82

Αδυναμίες επίσημου θεσμικού πλαισίου

- Όμως ο κύριος λόγος για τη μειωμένη απόδοση εσόδων του ελληνικού φορολογικού συστήματος είναι οι αδυναμίες του επίσημου θεσμικού πλαισίου εφαρμογής της νομοθεσίας, δηλαδή αναποτελεσματική φορολογική διοίκηση, αδυναμία επιβολής των φορολογικών κανόνων, ανεπάρκεια των μηχανισμών επίλυσης διαφορών, κλπ.

Φόρος εισοδήματος φυσικών προσώπων

- Οι ενδείξεις υποδεικνύουν ότι υπάρχει μεγάλη φοροδιαφυγή, π.χ.
  - Με βάση τα στοιχεία της ΓΓΠΣ για τα εισοδήματα του 2009, το 60% των φορολογουμένων δηλώνει εισοδήματα κάτω από το αφορολόγητο όριο και δεν πληρώνει φόρο εισοδήματος.
  - 30% των φορολογουμένων πληρώνει το 95% του συνολικού ΦΕΦΠ
  - 42% των μισθωτών/συνταξιούχων και 83% των άλλων επαγγελματικών ομάδων δηλώνει εισοδήματα κάτω από 10,000 ευρώ.

Εισοδήματα και κατανάλωση διαφόρων επαγγελματικών ομάδων

Table 2 Reported income and consumption expenditure of occupational groups

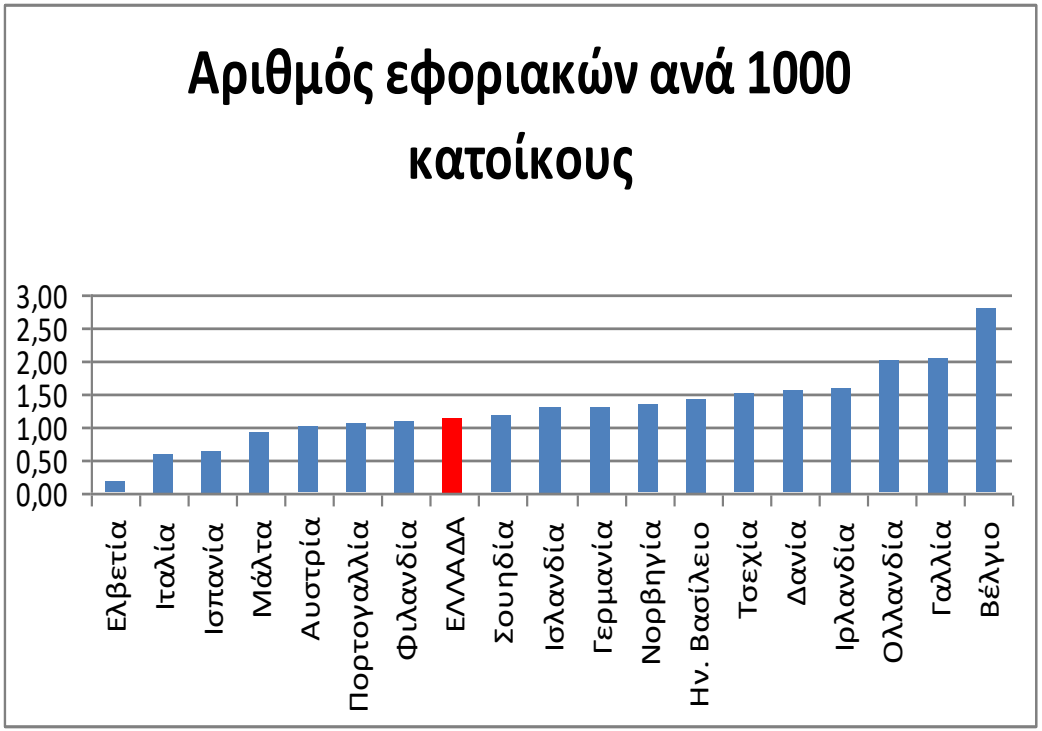
Occupational group	Taxpayers (as a % of total) (1)	Average income tax burden (% of total taxable income) (2)	Income as a % of population average (3)	Expenditure as a % of population average (4)	Non-durable expenditure as a % of population average (5)
Traders, liberal professionals, rentiers	29.3%	12.1%	103.0%	125.7%	123.0%
Farmers	6.9%	6.5%	66.3%	81.1%	80.7%
Wage-earners	35.9%	8.6%	110.8%	106.3%	104.9%
Pensioners	28.0%	7.4%	91.3%	84.9%	87.5%

Sources: Own calculations from Ministry of Finance (2011) – columns (1)-(3), own calculations from 2008 Household Expenditure Survey conducted by the Hellenic Statistical Authority.

Άλλες ενδείξεις της αναποτελεσματικότητας των μηχανισμών συλλογής φόρων

- Στο τέλος του 2010, οι ανείσπρακτοι φόροι (tax arrears) ανέρχονταν σε 14,5 % του ΑΕΠ.
- Περίπου 150.000 φορολογικές υποθέσεις εκκρεμούν στα δικαστήρια.
- Κάθε 3-5 χρόνια το Υπουργείο καταφεύγει σε «περαιώσεις», πρακτική που επιβραβεύει τους φοροφυγάδες.
- Η δομή της ελληνικής οικονομίας περαιτέρω δυσχεραίνει το έργο της φορολογικής διοίκησης (μεγάλο ποσοστό ελεύθερων επαγγελματιών και πολύ μικρών επιχειρήσεων).
- Η πολυπλοκότητα και οι συνεχείς αλλαγές του φορολογικού πλαισίου περιπλέκουν το έργο των εφοριακών, αλλά και των φορολογουμένων.

Εφοριακοί και φορολογικοί έλεγχοι

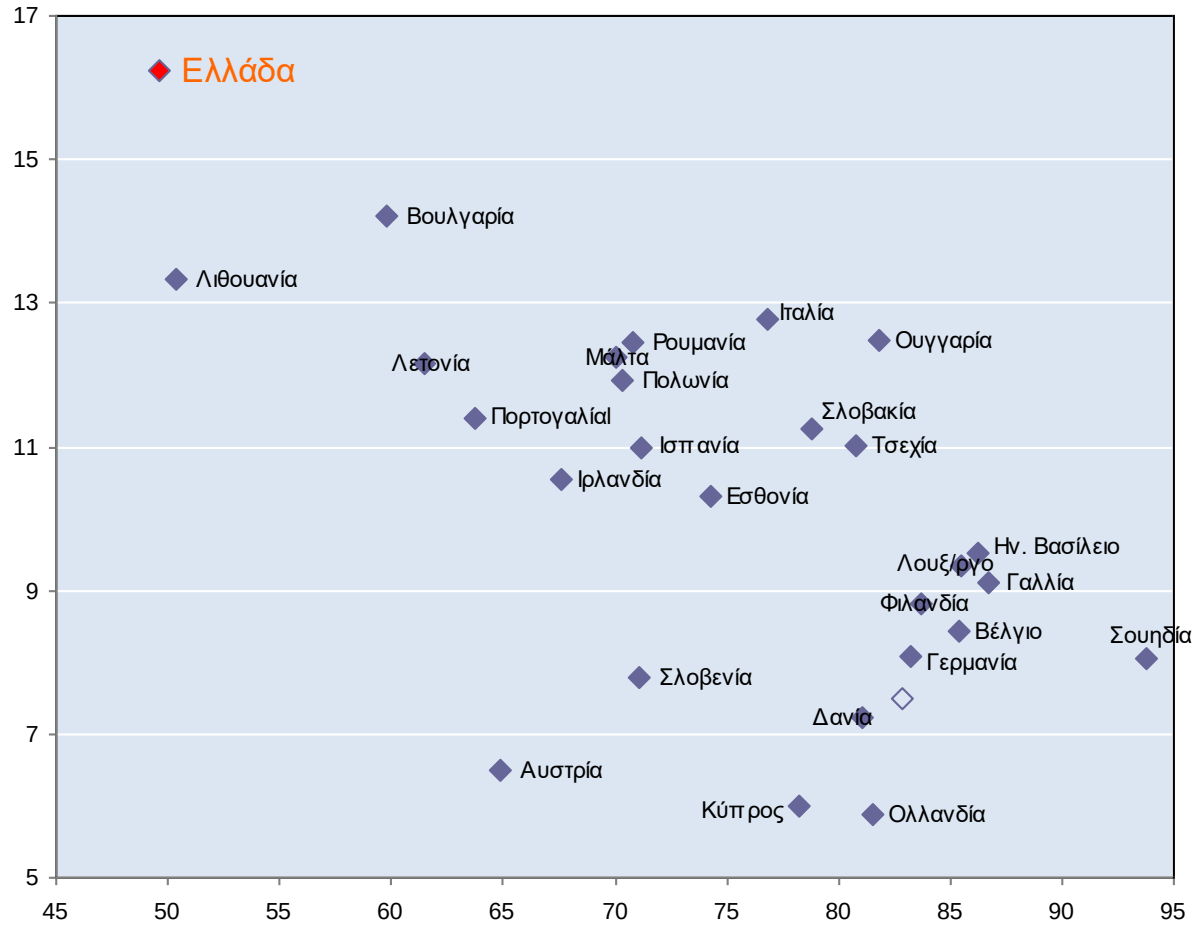


Ο σχετικός αριθμός των εφοριακών δεν είναι ιδιαίτερα χαμηλός, όμως το ποσοστό των εφοριακών που απασχολείται με ελέγχους (21,5%) είναι σημαντικά χαμηλότερο από το μ.ο. των χωρών του ΟΟΣΑ (35%).

Source: USAID's Fiscal Reform and Economic Governance Project, *Collecting taxes 2009-2010*.

Η αναποτελεσματικότητα της φορολογικής διοίκησης είναι αντιληπτή από τους φορολογούμενους

Ώρες αδήλωτης εργασίας

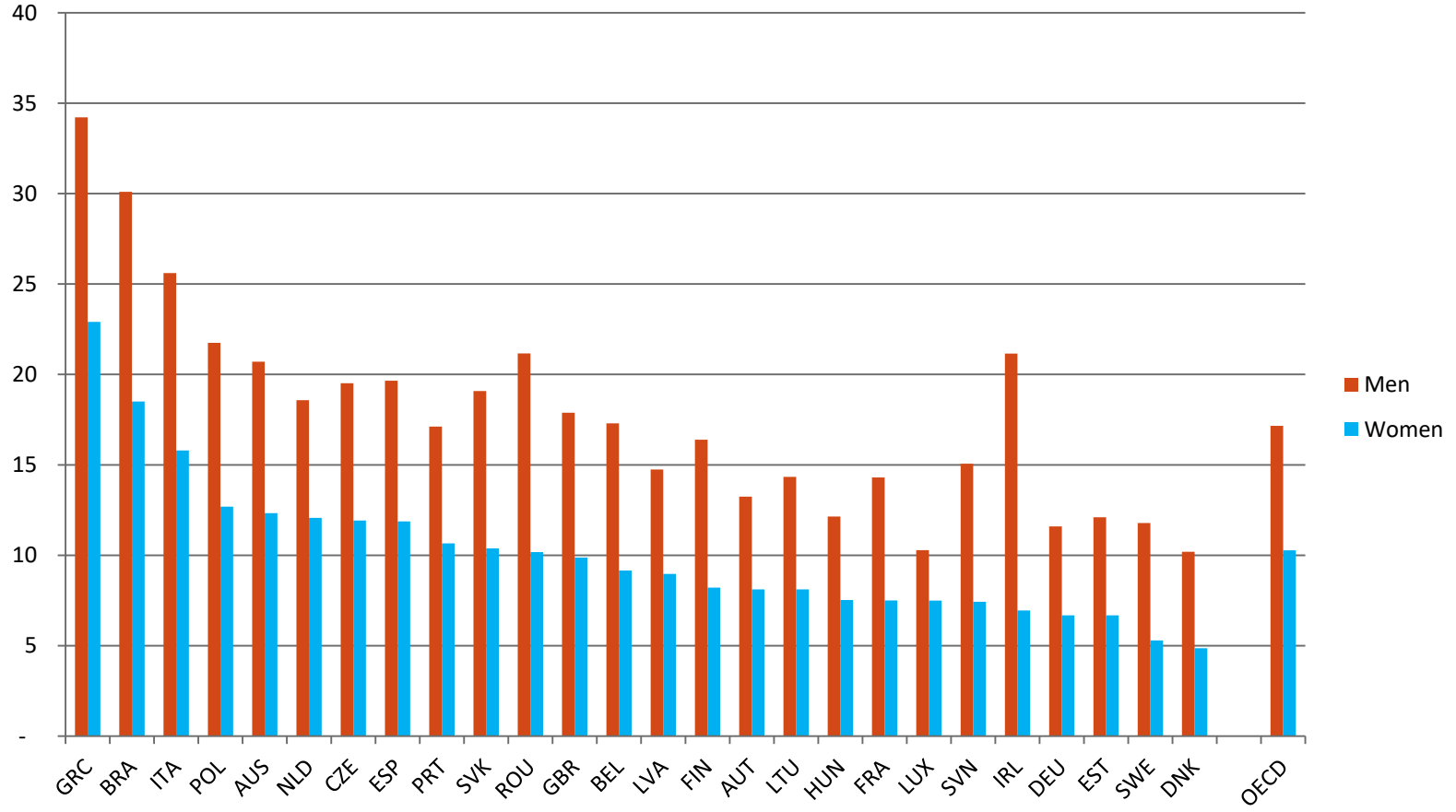


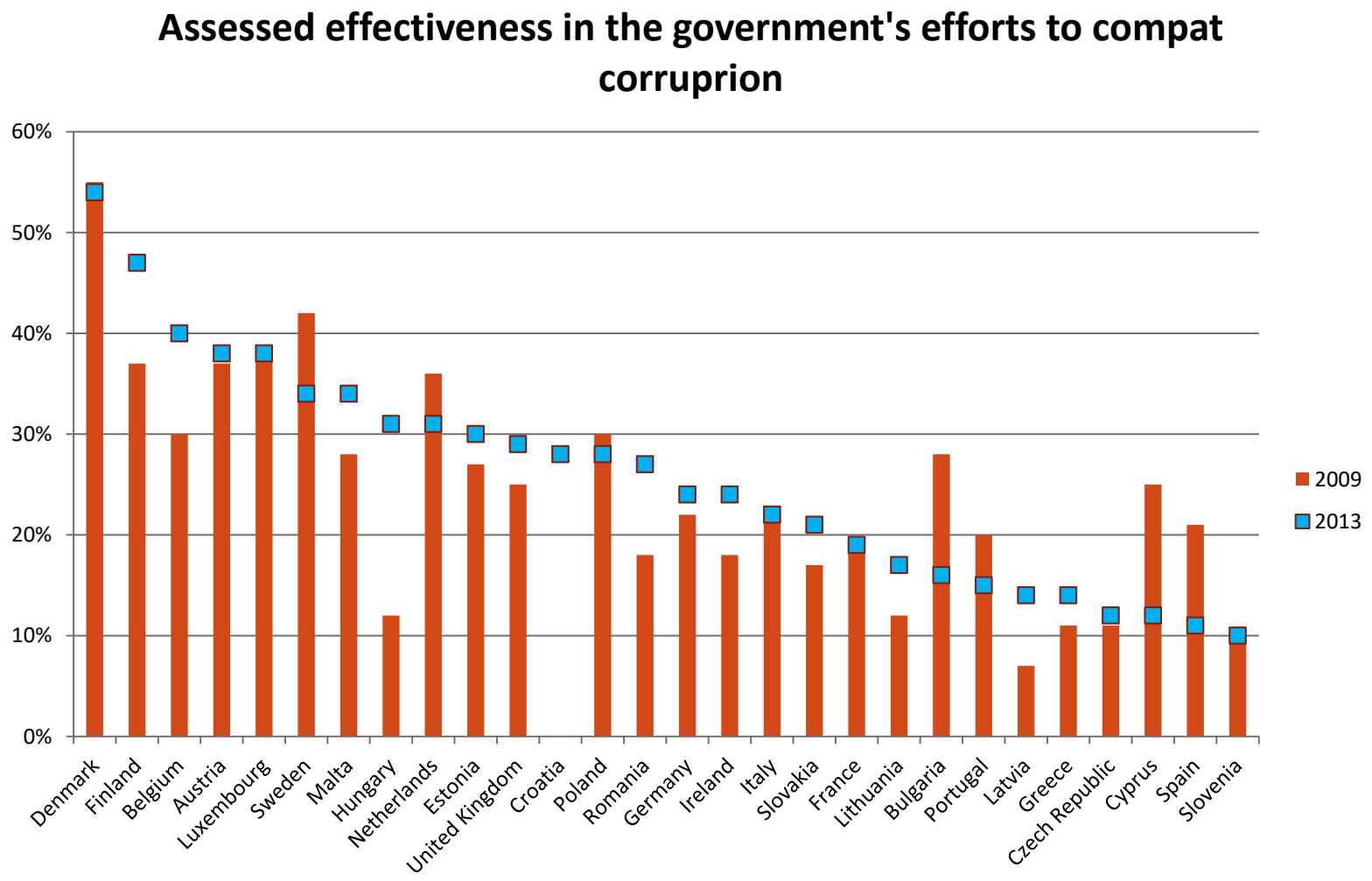
Προσδοκία για ποινη να είναι πρόστιμο ή φυλάκιση, %

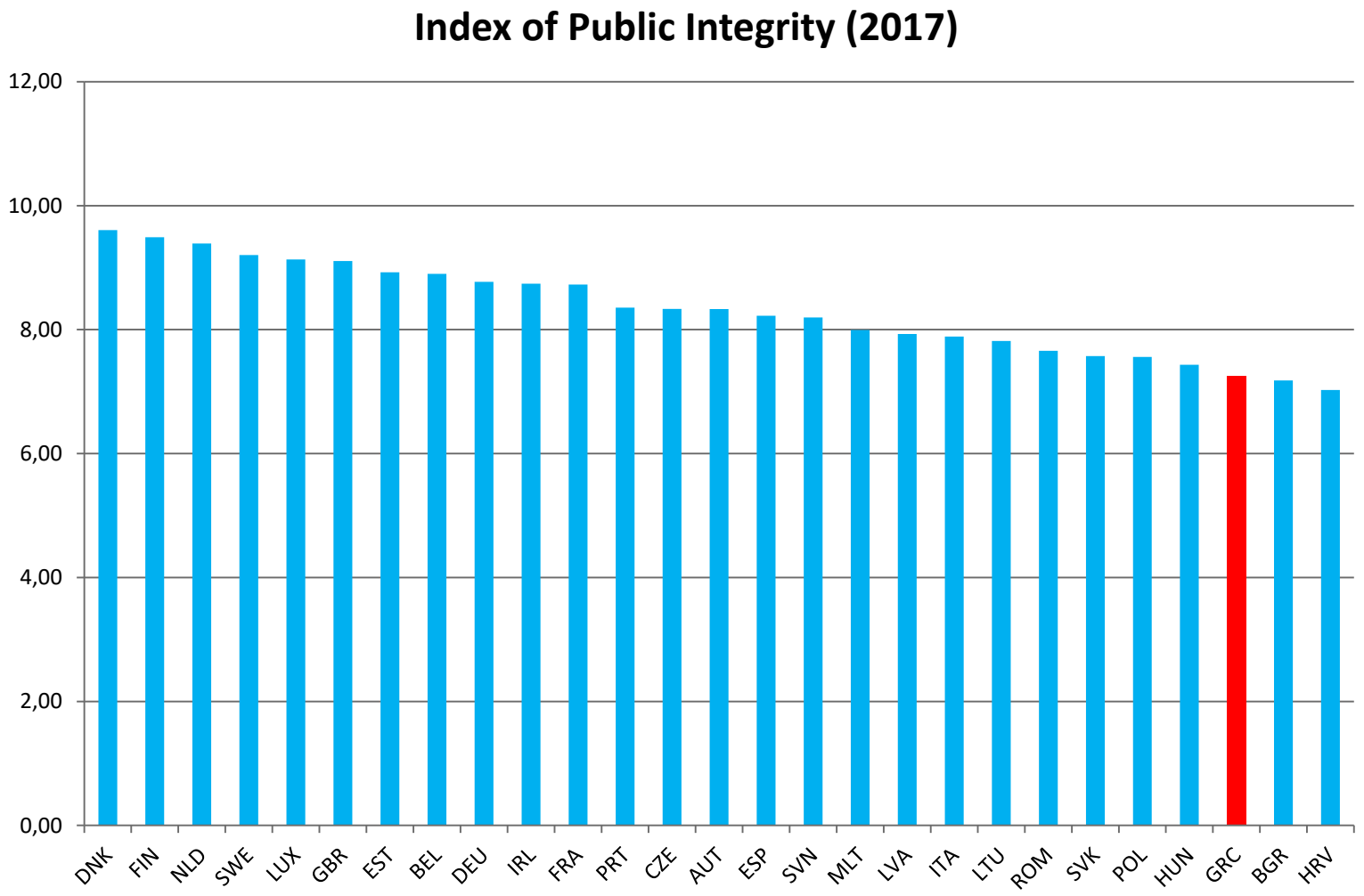
Πηγή: Eurobarometer (2007)

Share of self-employed

% of total employment, 2016 or latest available year




Assessed effectiveness in the government's efforts to compat corruprion
60%
50%
40%
30%
20%
10%
0%
2009
2013
Denmark
Finland
Belgium
Austria
Luxembourg
Sweden
Malta
Hungary
Netherlands
Estonia
United Kingdom
Croatia
Poland
Romania
Germany
Ireland
Italy
Slovakia
France
Lithuania
Bulgaria
Portugal
Latvia
Greece
Czech Republic
Cyprus
Spain
Slovenia


Index of Public Integrity (2017)
12,00
10,00
8,00
6,00
4,00
2,00
0,00
DNK
FIN
NLD
SWE
LUX
GBR
EST
BEL
DEU
IRL
FRA
PRT
CZE
AUT
ESP
SVN
MLT
LVA
ITA
LTU
ROM
SVK
POL
HUN
GRC
BGR
HRV

- Μήπως υπάρχουν πρόσθετοι λόγοι που εξηγούν τις αποτυχίες της φορολογικής διοίκησης και την εκτεταμένη φοροδιαφυγή στην οποία επιδίδονται οι φορολογούμενοι και ανέχονται οι φορολογικές αρχές;

Παραδοσιακά υποδείγματα φοροδιαφυγής

- Τα παραδοσιακά υποδείγματα προσδιορισμού του επιπέδου της φοροδιαφυγής (π.χ. Allingham and Sandmo, 1971) αντιμετωπίζουν τους φορολογούμενους ως ορθολογικά σκεπτόμενα άτομα, τα οποία αποφασίζουν με βάση έναν υπολογισμό κόστους-οφέλους.
- Εμπειρικές μελέτες δείχνουν ότι αυτά τα υποδείγματα αποτυγχάνουν να εξηγήσουν τα υψηλά ποσοστά όχι της φοροδιαφυγής, αλλά της εθελοντικής συμμόρφωσης!

Παραδοσιακά υποδείγματα φοροδιαφυγής

- Για παράδειγμα στις ΗΠΑ, το ποσοστό των ατομικών δηλώσεων φόρου εισοδήματος που ελέγχονται είναι περίπου 0,8%.

- Προφανώς υπάρχουν στοιχεία που επηρεάζουν το βαθμό συμμόρφωσης των φορολογουμένων που δεν έχουν σχέση με οικονομικά κίνητρα

Εναλλακτικές θεωρίες για τη συμπεριφορά των φορολογουμένων

- Τα άτομα αντιλαμβάνονται τη σχέση ανάμεσα στους φόρους που πληρώνουν και την αποτελεσματικότητα των κρατικών δαπανών.
- Η εθελοντική συμμόρφωση ενός ατόμου με το φορολογικό σύστημα εξαρτάται από το πώς το άτομο αντιλαμβάνεται τη συμπεριφορά των άλλων φορολογουμένων. (η πληρωμή φόρων είναι «κοινωνικό φαινόμενο»)

Εναλλακτικές θεωρίες για τη συμπεριφορά των φορολογουμένων

- Πρέπει να λάβουμε υπόψη ψυχολογικούς και κοινωνικούς παράγοντες, όπως
  - Προσωπικές και κοινωνικές αξίες (norms)
  - Εμπιστοσύνη στους κρατικούς θεσμούς και στους άλλους φορολογούμενους

Προσωπικές αξίες

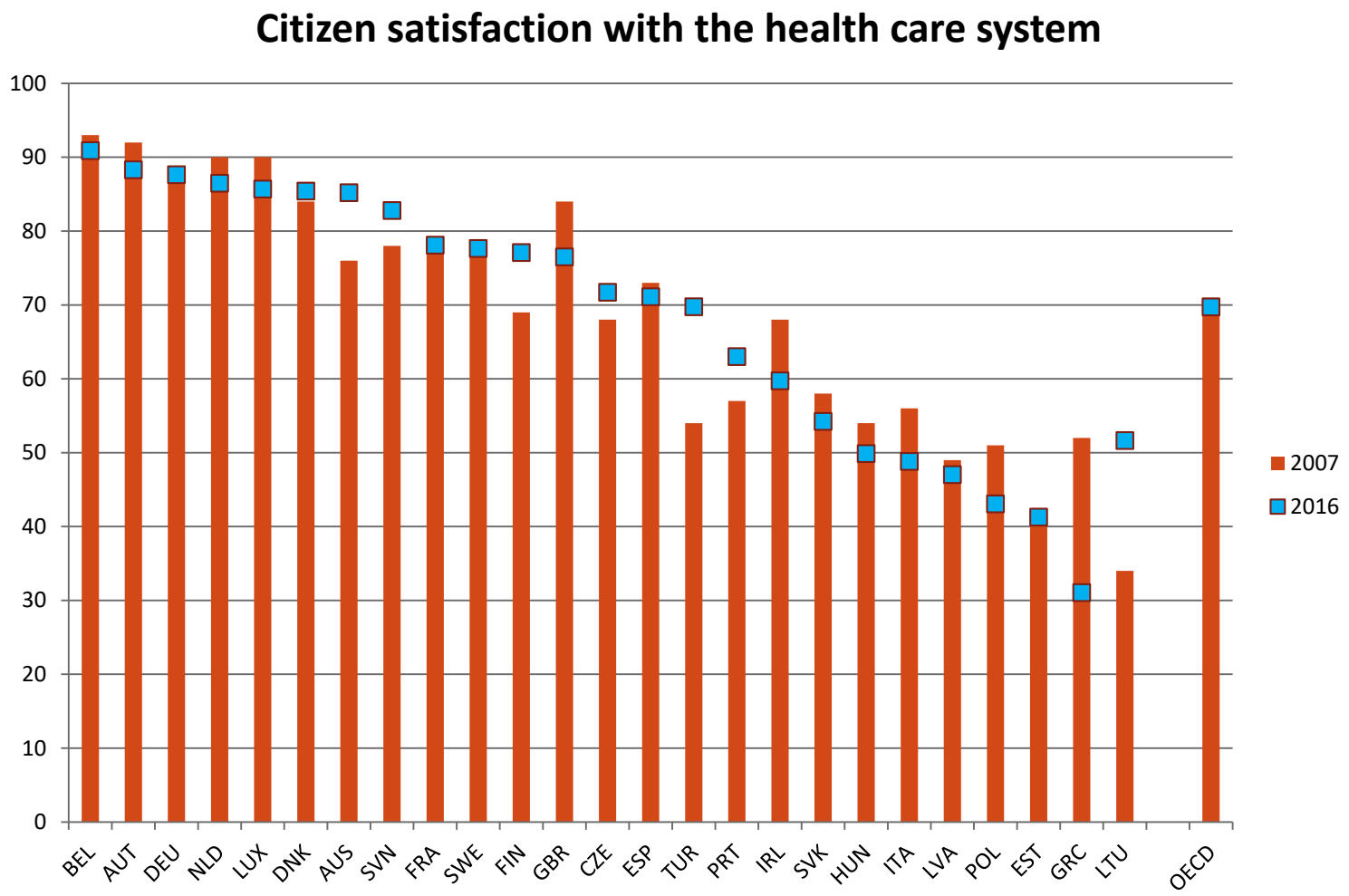
- Η συμπεριφορά του φορολογούμενου επηρεάζεται από τις προσωπικές του αξίες (τι θεωρεί ηθικά σωστή συμπεριφορά) (Kirchler, 2007), π.χ. αν θεωρεί ότι είναι σημαντικό να είναι ειλικρινής, αν αισθάνεται τύψεις στην περίπτωση που φοροδιαφεύγει.
- Από τι εξαρτώνται οι προσωπικές αξίες;
  - Προφανώς είναι το αποτέλεσμα της μακροχρόνιας κοινωνικοποίησης του ατόμου
  - Αντίληψη για το κατά πόσο το φορολογικό σύστημα είναι δίκαιο
  - Αντίληψη για το τι κάνουν οι άλλοι, κλπ.

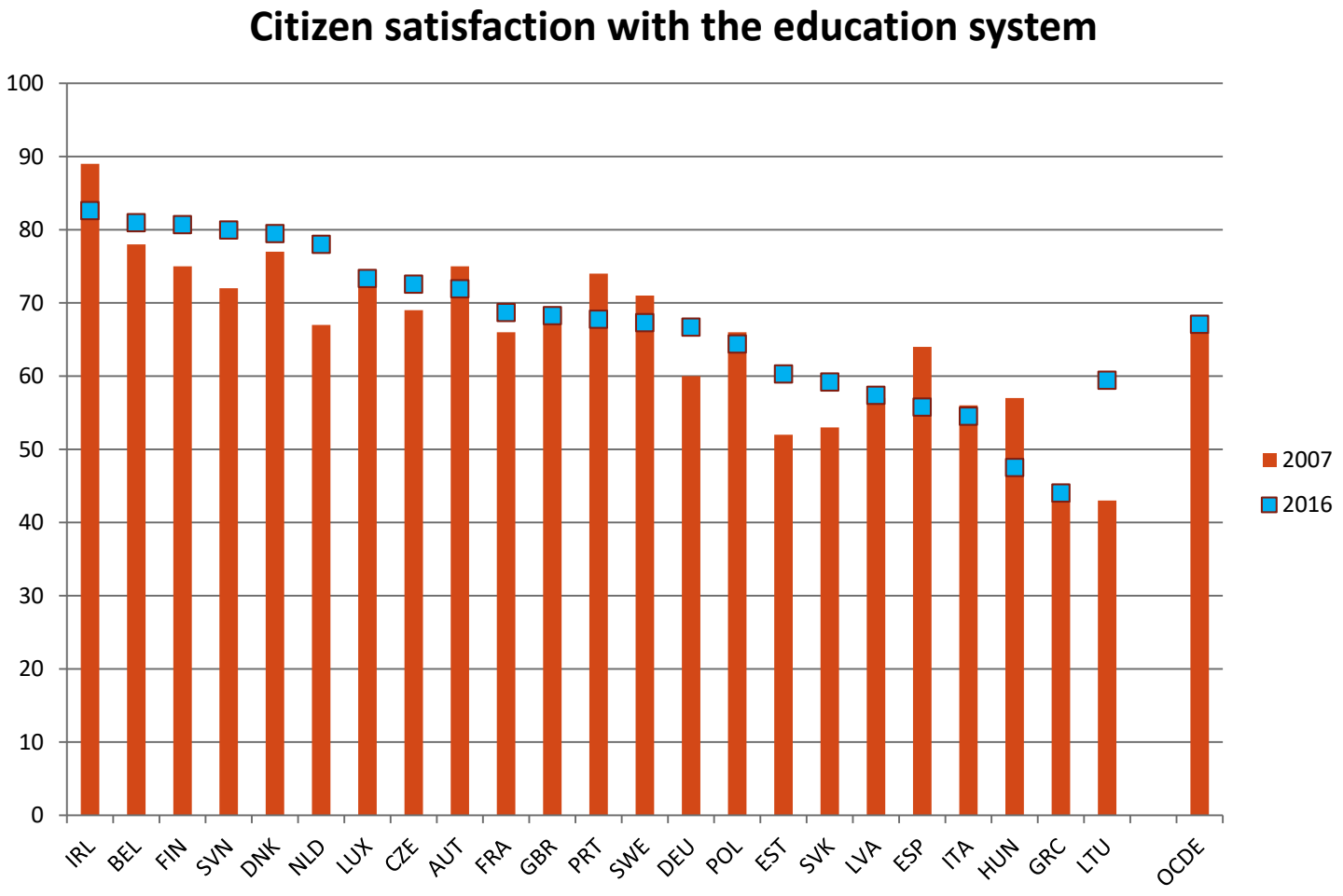
Κοινωνικές αξίες

- Οι μελέτες δείχνουν ότι η συμμόρφωση των ατόμων με το φορολογικό σύστημα εξαρτάται από το τι εκλαμβάνουν ως γενικά αποδεκτό στην κοινωνία.
- Διάφορες μελέτες δείχνουν ότι τα άτομα τείνουν να υιοθετούν τις συμπεριφορές που υιοθετούν και οι άλλοι.
- Αν τα άτομα πιστεύουν ότι όλοι πληρώνουν τους φόρους που τους αναλογούν, θα τείνουν και αυτά να κάνουν το ίδιο. Και το αντίστροφο (π.χ. Scholz and Lubell, 1998).

Εμπιστοσύνη

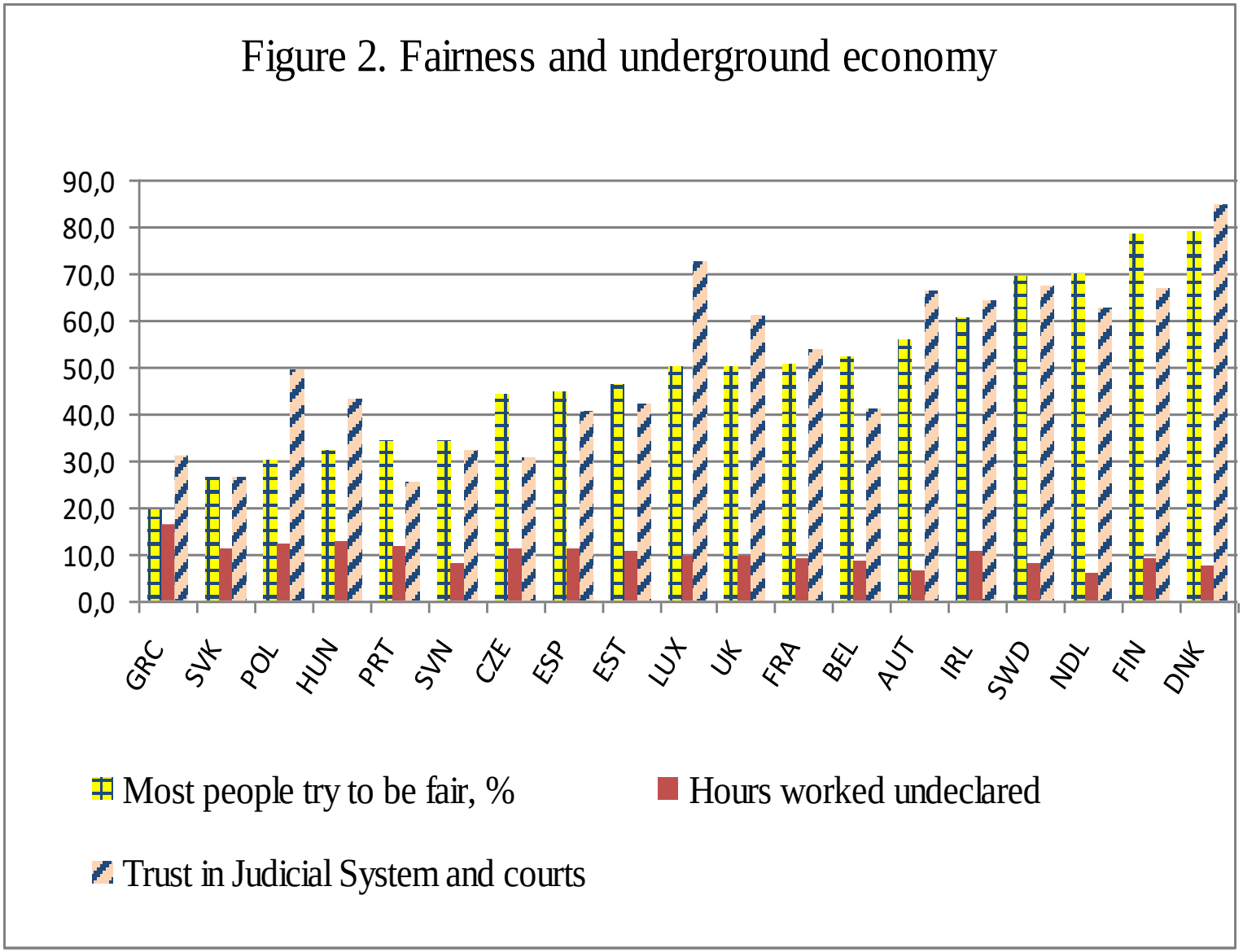
- Εμπιστοσύνη στους θεσμούς και στην κυβέρνηση συνδέεται με μεγαλύτερη φορολογική συνείδηση και υψηλότερα ποσοστά εθελοντικής συμμόρφωσης με το φορολογικό σύστημα (Torgler, 2003, 2005).
- Αν ο φορολογούμενος πιστεύει ότι η κυβέρνηση συλλέγει φόρους και κατανέμει τις δαπάνες με αποτελεσματικό και δίκαιο τρόπο, είναι πιο πρόθυμος να πληρώσει τους φόρους που του αναλογούν.


Citizen satisfaction with the health care system
100
90
80
70
60
50
40
30
20
10
0
BEL
AUT
DEU
NLD
LUX
DNK
AUS
SVN
FRA
SWE
FIN
GBR
CZE
ESP
TUR
PRT
IRL
SVK
HUN
ITA
LVA
POL
EST
GRC
LTU
OECD
2007
2016


Citizen satisfaction with the education system
100
90
80
70
60
50
40
30
20
10
0
IRL
BEL
FIN
SVN
DNK
NLD
LUX
CZE
AUT
FRA
GBR
PRT
SWE
DEU
POL
EST
SVK
LVA
ESP
ITA
HUN
GRC
LTU
OCDE
2007
2016

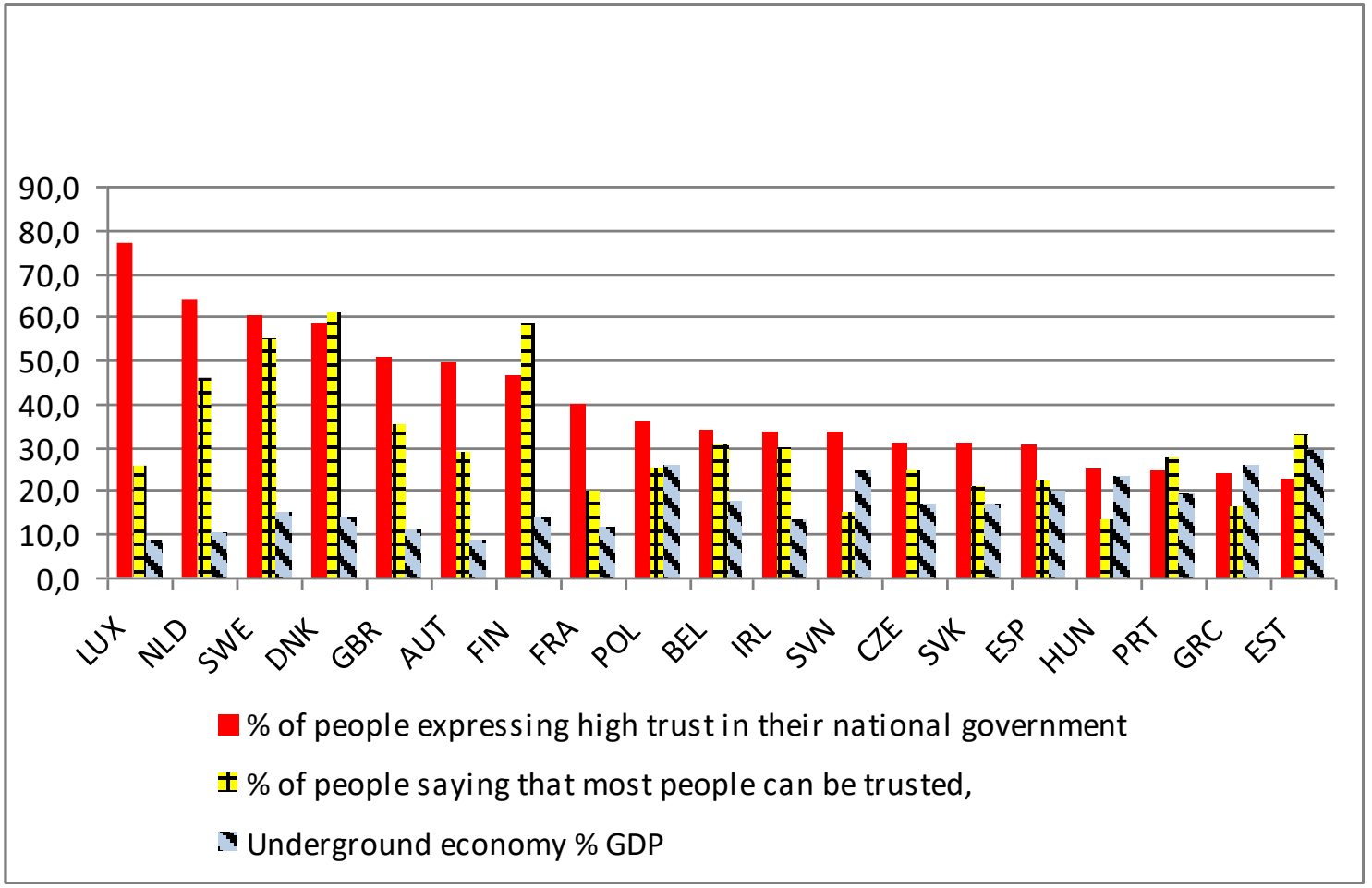
Ερώτημα

- Συνδέονται τέτοιοι παράγοντες με την χαμηλή απόδοση του φορολογικού συστήματος στην Ελλάδα;



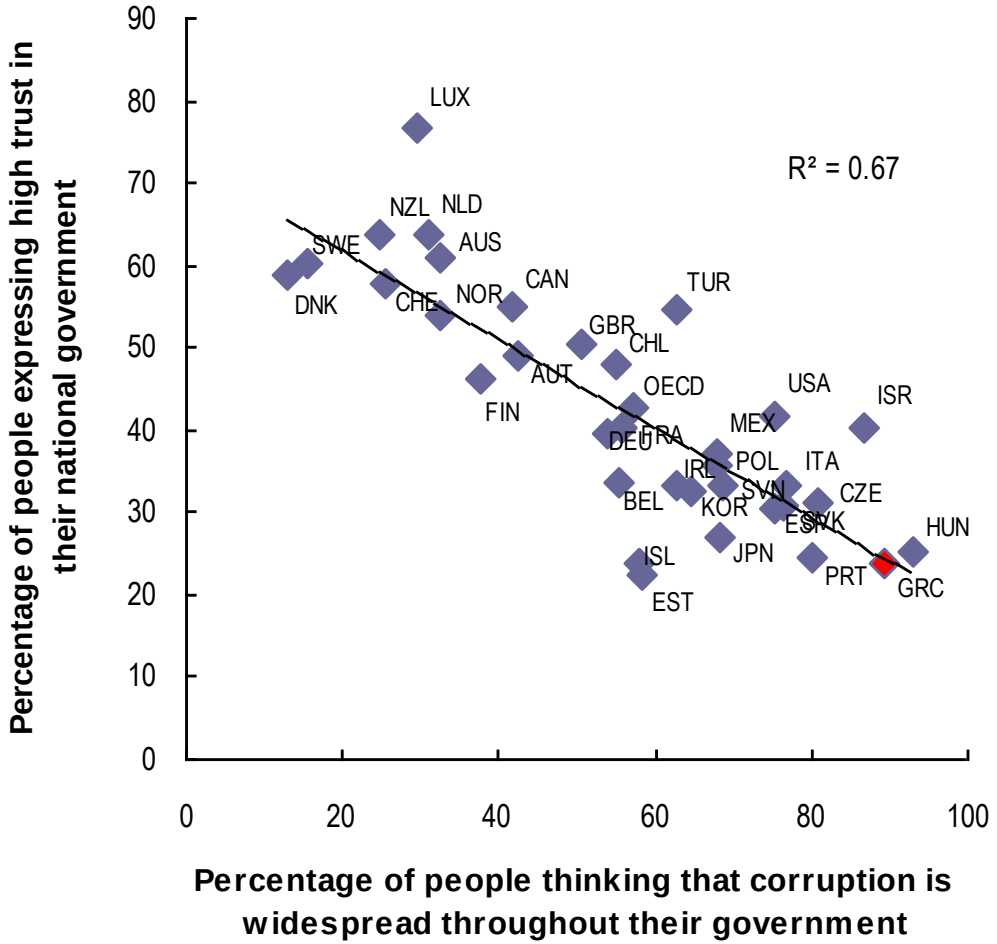
Sources: Euro Barometer 2007 Survey of undeclared work in the European Union, European Social Survey and OECD (2011) "How's life? Measuring well-being", Paris

Trust and shadow economy



Sources: OECD (2011) "How's life? Measuring well-being", Paris and Schneider et al (2010).

Trust in government and corruption



Source: OECD (2011) "How's life? Measuring well-being", Paris

Αποτυχίες ανεπίσημων θεσμών (informal institutions)

- Οι Έλληνες φορολογούμενοι είναι απρόθυμοι να πληρώσουν τους φόρους τους για τους πρόσθετους λόγους ότι:
  - Δεν εμπιστεύονται τους δημόσιους θεσμούς
  - Δεν εμπιστεύονται το κράτος και την κυβέρνηση
  - Δεν εμπιστεύονται τους συμπολίτες τους
  - Πιστεύουν ότι η διαφθορά είναι εκτεταμένη

Συμπεράσματα

- Το φορολογικό σύστημα είναι αναποτελεσματικό, τόσο ως προς τη συνολική του απόδοση, όσο και ως προς τη δομή του.
- Σε πρώτο επίπεδο, αιτίες είναι η αναποτελεσματικότητα των επίσημων θεσμών (δηλαδή της φορολογικής διοίκησης και των φοροεισπρακτικών μηχανισμών, των μηχανισμών επίλυσης διαφορών), η πολυπλοκότητα του συστήματος και η δομή της ελληνικής οικονομίας.

Συμπεράσματα

- Σε δεύτερο επίπεδο, οι αποτυχίες των επίσημων θεσμών έχουν τη ρίζα τους και ταυτόχρονα ενισχύουν τις αποτυχίες ανεπίσημων θεσμών (έλλειψη εμπιστοσύνης στο κράτος, τους θεσμούς, τη δικαστική εξουσία και τους συμπολίτες)
- Παράλληλα, οι δυσλειτουργίες του φορολογικού συστήματος εκλαμβάνονται ότι οδηγούν σε άνιση κατανομή των φορολογικών βαρών και άρα ότι αποτελούν πηγή ανισότητας.

Συμπεράσματα

- Η αντιμετώπιση των προβλημάτων του ελληνικού φορολογικού συστήματος είναι πολύπλοκη.
- Η αναδιοργάνωση των εφοριών, η εκλογίκευση των προστίμων, η απλοποίηση της φορολογικής δομής και των διαδικασιών είναι απαραίτητα βήματα, αλλά δεν επαρκούν.
- Οποιαδήποτε βελτίωση, για να έχει ουσία και διάρκεια, πρέπει να περιλαμβάνει τη δημιουργία φορολογικής συνείδησης, την αλλαγή της αντίληψης των Ελλήνων για τους δημόσιους θεσμούς και τη δημιουργία κοινωνικής συνείδησης και ευθύνης.
- Αυτός είναι πολύ πιο δύσκολος στόχος, εάν όμως επιτευχθεί τα οφέλη θα είναι πολλαπλά και πολύ περισσότερα από ένα εύρυθμο φορολογικό σύστημα.