



European Commission
Taxation and Customs Union

EU study on company car taxation: presentation of the main results

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The study

- The study was carried out for the Commission by Copenhagen Economics in 2009, the final report is published as a Taxation Paper of DG TAXUD:

http://ec.europa.eu/taxation_customs/common/publications/services_papers/working_papers/index_en.htm

The purposes to carry out the study were the following:

- Collect information on the tax treatment of company cars in the EU Member States
- Examine the extent to which the MSs subsidise the use of company cars through their tax systems
- Analyse potential fiscal, welfare and environmental implications of such favourable tax treatment
- Generally to increase information and raise awareness in the Member States on a potentially important tax policy issues, but not to prepare any policy initiative at the EU level



Scope

- The study deals mainly with the taxation of fringe benefits related to the use company cars at the employee level, and not with the taxation at company level (depreciation rules, VAT)
It covers a large part of the EU Member States (18) and calculates subsidy levels for those 18 EU MSs → main contribution
- In assessing the behavioural effects of tax treatment it applies the same methodology as two Dutch studies (Puigarnau – van Ommeren 2007, 2009) and generalizes it to the EU level
- These results are based on 'heroic assumptions' should be taken as indicative only

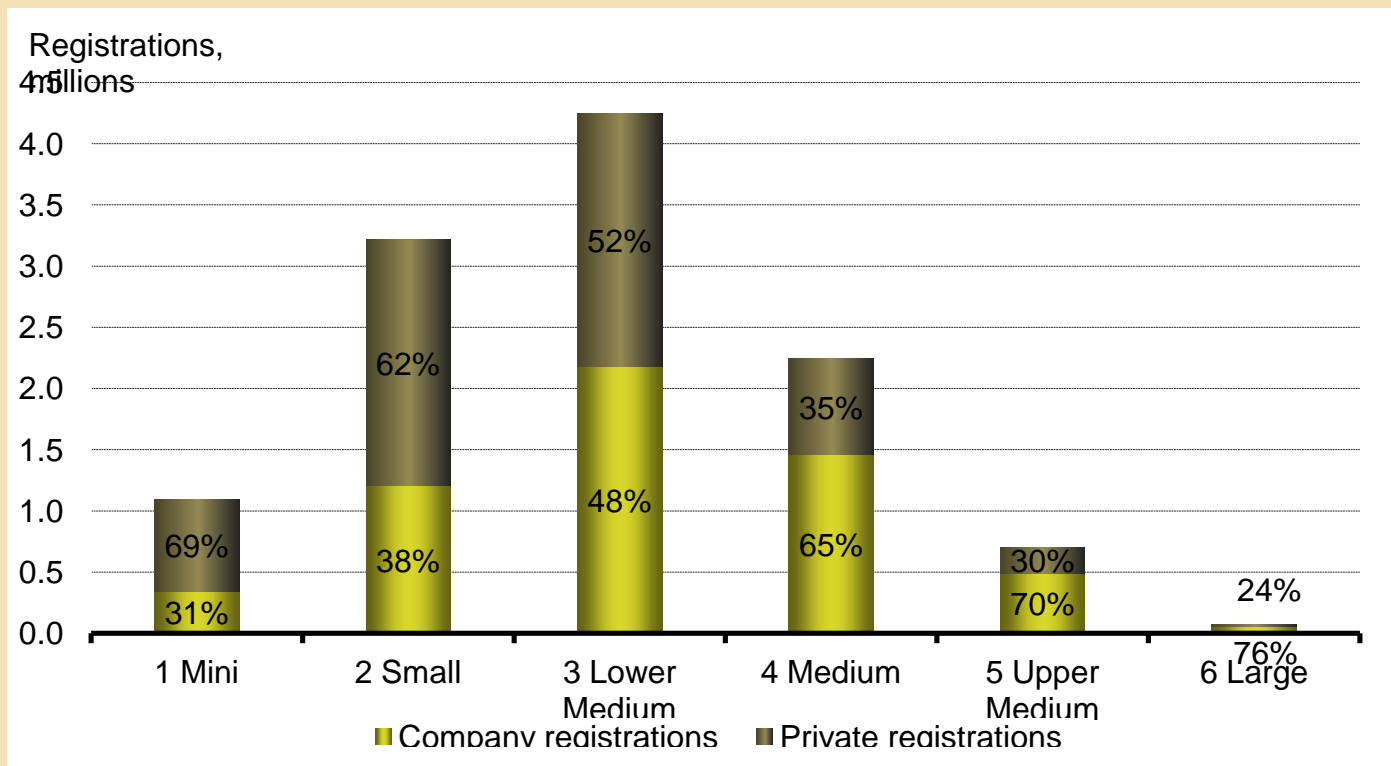


Share of company cars

- Company cars represent a very important share of the car stock in the EU: in EU 18 countries out of total cars sales in 2008 close to 50% are company registrations (5.7 million out of 11.6 million registrations)
- The relative size of company cars rise with the size of the car segment: in the lowest segment (mini) the share is 31% while in the upper medium segment 70% (shares are shown in the graph of the next slide)
- The highest shares are in Germany and Sweden (60%), the lowest in Greece (24%) in 2008 out of 19 EU MSs



- Structure of registrations by segment in 18 EU countries, 2008, millions of cars registered (volume)





Calculation of subsidy levels

- Subsidy rate = % difference between the tax-neutral tax base and the actual imputed tax base (taxable income) divided by the average annual cost for the firm
- **Actual imputed tax base** is in most countries a fixed share of the value of the car (based either on the list price or acquisition price), these imputation rates vary from 6% to 30%, in some cases the rate may depend on the mileage or the level of private use
- In 6 countries other ways
- **The neutral tax base** would be the one that either corresponds to:
 - A) actual costs incurred by the employer, including for ex. financing cost, depreciation, maintenance, insurance, fuel costs → **firm cost principle**
 - B) The cost the employee would incur if he/she personally owned the car → **opportunity cost principle**
 - The results of the study are mostly based on the firm cost principle
 - Some sensitivity analysis using the opportunity cost principle → subsidy levels 0 – 3% higher (since opportunity costs are larger than firm costs due to the purchasing advantages of the firms)
 - Subsidy levels may also be underestimated, because fringe benefits are taxed at lower rates than gross wage income, which is also subject to employers social security contributions



Subsidy levels

- The average weighted subsidy level in 18 EU member States is 23% for low private mileage and 29% for high private mileage
- In all but one country (Poland) the average subsidy rates exceed 10%
- The highest subsidy rates are found in Greece (47% for high private mileage) and the lowest in Poland (-4% for high private mileage)
- The level of subsidy tend to decline with the price of the car; higher car segments tend to have lower subsidy rates (maybe because company-provided fuel constitutes a larger share of the fringe benefit for smaller car segments)
- There is no apparent cross-country correlation between the company car share and the subsidy level (!)



Subsidies to private use of company cars measured as percentage gap in imputed tax base (high mileage)

	Segment Small	Segment Medium	Segment Large
Group A: Subsidy up to 10%	Finland, Poland	Poland	United Kingdom
Group B: Subsidy 11%-20%	Denmark, Sweden	Denmark, Finland, France, Netherlands, Sweden, United Kingdom	Denmark, Finland, France, Netherlands, Poland, Sweden
Group C: Subsidy 21%-30%	France, Luxembourg, Netherlands, Spain	Austria, Luxembourg, Slovenia, Spain	Czech R., Germany, Italy, Luxembourg, Slovenia, Spain
Group D: Subsidy more than 30%	Austria, Belgium, Czech R., Germany, Greece, Hungary, Italy, Portugal, Slovakia, Slovenia, United Kingdom	Belgium, Czech Republic, Germany, Greece, Hungary, Italy, Portugal, Slovakia	Austria, Belgium, Greece, Hungary, Portugal, Slovakia,



Effects of company car subsidies

- Favourable tax treatment has in principle three kinds of behavioural effect:
 - 1) Increases the total number of cars
 - 2) Increases the use of bigger, more emitting cars
 - 3) Induces more driving because of free fuel
(also possibly increase the speed of driving)
- The size of these effects are estimated by extrapolating the results of the two Dutch studies to the EU level, should be taken as only indicative:
 - 1) Total car stock up by 8 – 21 million cars
 - 2) Average value of cars sold increased by €4000 to €8000
 - 3) Increase of fuel consumption by 4 to 8 % due to the above three effects
- Upper value is based on the elasticities of Dutch studies taken at face value, the lower value represents more conventional and prudent estimates
- Upper values may be justified on the ground that subsidy levels may be underestimated for following kinds of reasons: they exclude the effect of social security contributions (since SSCs are paid on gross wages but not on fringe benefits), ignore the effect of low fuels costs on the choice of residence



Fiscal losses

- Foregone tax revenue is calculated for each country and car segment using information on the subsidy level, marginal tax rates and the share of company cars
- Estimates are static, no behavioural changes or interaction effects (e.g. on labour market) are taken into account
- The total revenue loss is €54 billion or 0.5% of GDP for EU - 18
- The highest revenue losses in terms of GDP are found in Belgium (1,2%), Germany (0,9%), Hungary (0,8%) and Austria, Luxembourg, Slovenia (0,6%), the smallest in Poland (0%)



Welfare effects

- Welfare effects are due to the distorting effect of tax subsidies on consumer choice: because the subsidy lowers the price consumers use more car services than would be socially optimal
- In this case welfare loss is related to the three behavioural effects discussed above: more cars, more expensive cars, more mileage
- The size of welfare loss stemming from the three effects is calculated by following the same approach as in Puigarnau – van Ommeren (2007, 2009)
- The total amount of welfare loss would be in the order of €15 to 35 billion (0,1 – 0,3 % of GDP) for EU-18 according to these calculations
- In addition one should take into account the welfare loss resulting from the loss of tax revenues: the conventional estimate for the latter would be 20 cents for every € 1 raised in taxes required to finance the subsidy (without taking into account behavioural changes)



Environmental effects

- Harmful environmental effect of company car subsidies are a direct consequence of the three above mentioned behavioural effects (more cars, more expensive cars, more mileage), which increase fuel consumption approximately by 4- 8% and hence also CO2 emissions by the same amount
- The other environmentally harmful effects consist of the increase of noise, congestion and the emissions of local air pollutants

Indicative estimates of these effects for the EU as a whole are presented in the following table:



	High estimate	Low estimate
Consumer loss from distortions	€ 15 billion	€ 35 billion
CO ₂ (carbon dioxide)	43 Mt	21 Mt
Particulate emissions	1.9 kt	1.0 kt
NOx (oxides of nitrogen)	50,6 kt	25,0 kt
HCs (hydrocarbons)	13,7 kt	6,8 kt



Conclusions

- Under-taxation of fringe benefits related to company cars is wide-spread in the EU
- Such under-taxation entails significant fiscal losses to the EU member States, and have adverse environmental consequences
- In this sense under-taxation can be considered a form of an environmental harmful subsidy (in accordance with the OECD definition)
- Unlike many other EHSs it cannot be justified on distributional or social grounds, but is likely to benefit more high-income earners (although distributional issues were not examined in the study)



Thanks for your attention!



Policy options

- To reduce under-taxation of company car benefits by increasing imputation rates
- To increase considerably the taxation of free fuel provided by the employer and thus remove the incentive for intensive car use
- To make the taxation of fringe benefit dependent on the energy efficiency of the car to encourage the choice of more environmental friendly cars (UK model)
- To make car-related taxes (registration tax, annual circulation tax, road charges) in general more environmental-friendly e.g. by making tax rates dependent on the CO2 emissions of the car
→ up to the EU MSs to choose