# Company cars and the congestion problem

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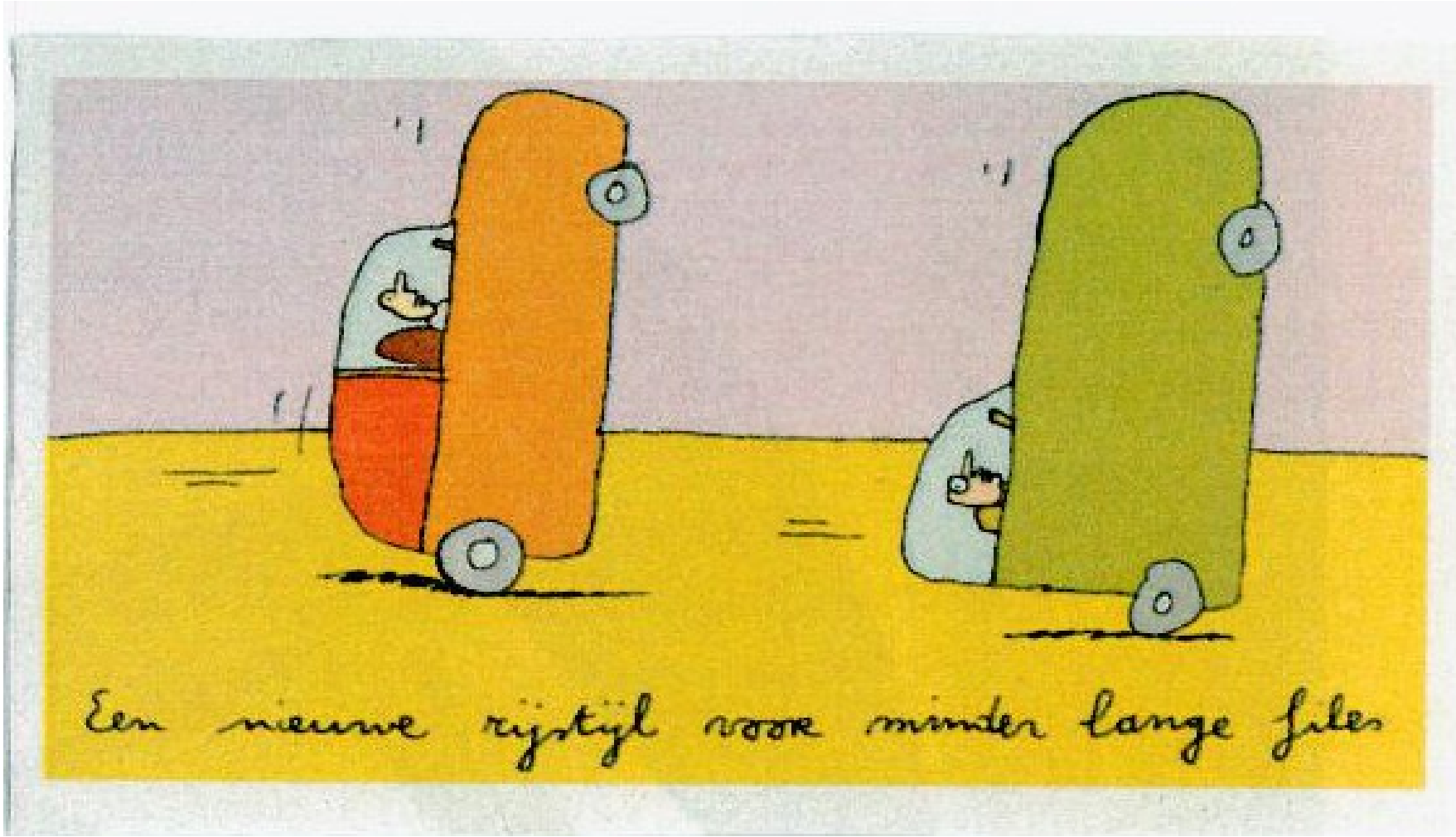
# Overview of the talk

- Introduction
- Subsidies to company cars, congestion and the environment
- Taxation of company cars in an integrated mobility policy
- Conclusions

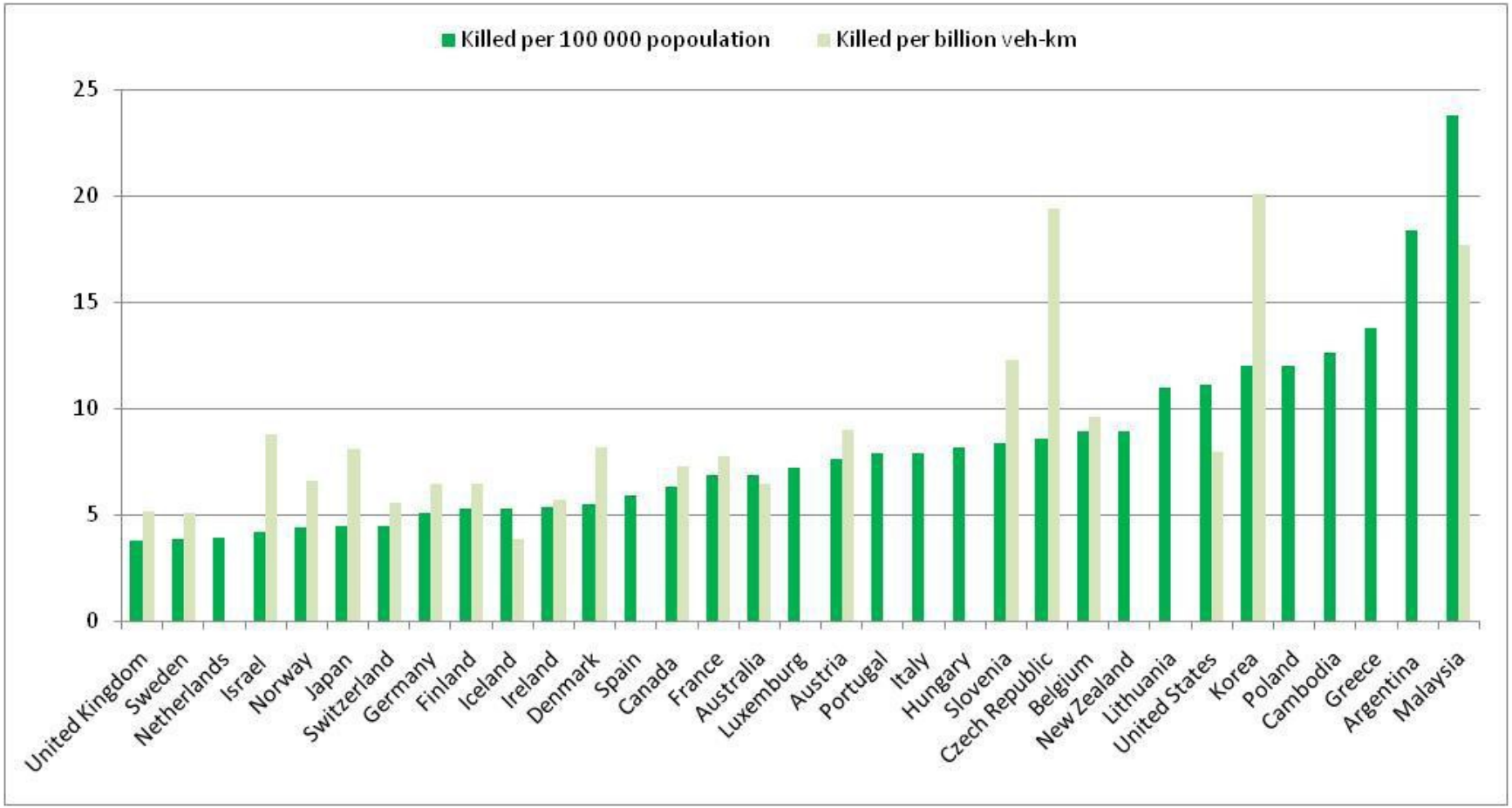
# 1. Introduction: the broader picture

- Transport and mobility have huge benefits to society
- However, they cause large negative side-effects (externalities)
  - Congestion
  - Accident risks
  - Pollution
  - Noise

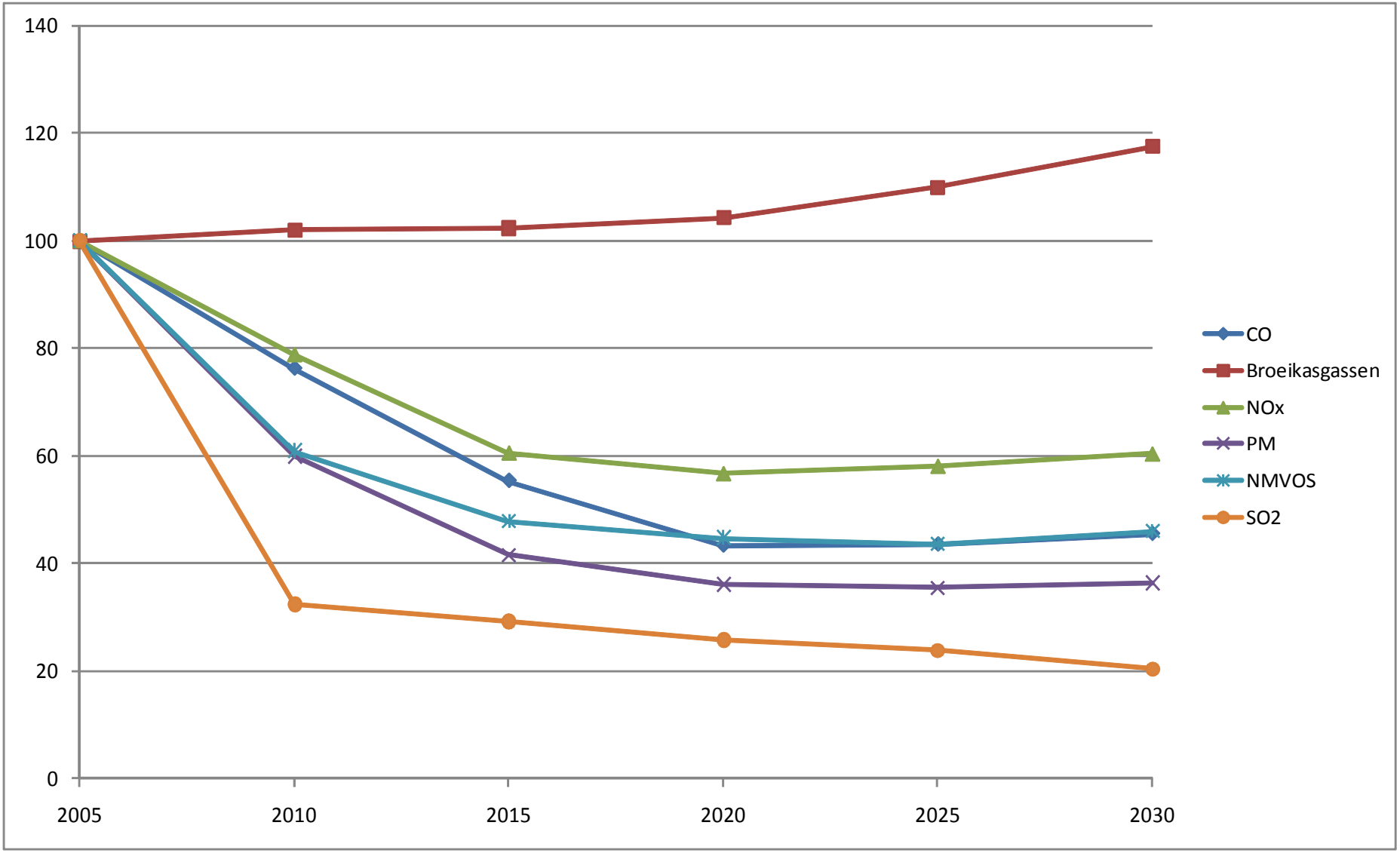
# Congestion (Source: Kamagurka)



# Traffic fatalities 2009 (Source ITF)



# Evolution of total emissions in reference scenario



# Dealing with transport externalities

- Negative externalities imply there is too much traffic in the most congested and polluted conditions (e.g., cities and major highways during peak periods)
- Requires drastic changes in the pricing of transport services, in regulatory measures, in investment policies

# Ingredients of an efficient, equitable and durable mobility policy: pricing measures

- Price differentiation in space and time
  - Road pricing, cordon charges, congestion pricing, etc.
  - Use the revenues of the system (i) to reduce fixed annual transport taxes, fuel taxes; (ii) to compensate losers; (iii) to gain public support and increase equity
- Revise the tax structure on different types of fuels (diesel versus gasoline)
- Revise the fare structure of public transport
- **Revise the fiscal treatment of company cars**

# Ingredients of an efficient, equitable and durable mobility policy: investment and regulation

- Investment in alternatives for car use: efficient public transport, biking paths, …
- Specific investments in the road network
- Emission regulation
- Safety regulation and investment

# 2 .Subsidies to company cars, congestion and the environment

- Company cars in Belgium
- Why do firms give company cars?
- Why do governments subsidize company cars?
- Transport implications of company car subsidies

# Company cars in Belgium

- Close to 50% of new car sales (2005-2009); 42% in 2010 (Copenhagen Economics (2010), KPMG (2011))
- Some 21% of all employees report to have a company car (Vacature, Wuyts (2009), De Borger and Wuyts (2011))
  - Based on more than 60 000 respondents
  - Information on wages, employer, commuting distance, type of company car, employment sector, hierarchy in the firm, etc.

# Commuting distance, position in the firm and % company cars

| Comm. Dist. | Top Mgmt | Middle Mgmt | Profes sional | Staff | Adm. Pers. |
|---|---|---|---|---|---|
| 0-10 | 42 | 28 | 18 | 5 | 2 |
| 10-20 | 52 | 34 | 20 | 8 | 3 |
| 20-30 | 58 | 41 | 27 | 9 | 3 |
| 30-40 | 61 | 42 | 29 | 13 | 4 |
| >40 | 69 | 51 | 35 | 22 | 5 |

# Mean wages and commuting distance

| Comm. Dist. | Top Mgmt | Middle Mgmt | Profes sional | Staff | Adm. Pers. |
|---|---|---|---|---|---|
| 0-10 | 4549 | 3324 | 2834 | 2218 | 2125 |
| 10-20 | 4769 | 3405 | 2813 | 2299 | 2153 |
| 20-30 | 4866 | 3515 | 2879 | 2344 | 2204 |
| 30-40 | 5101 | 3539 | 2933 | 2360 | 2175 |
| >40 | 5410 | 3705 | 3031 | 2460 | 2210 |

# Why do firms give company cars?

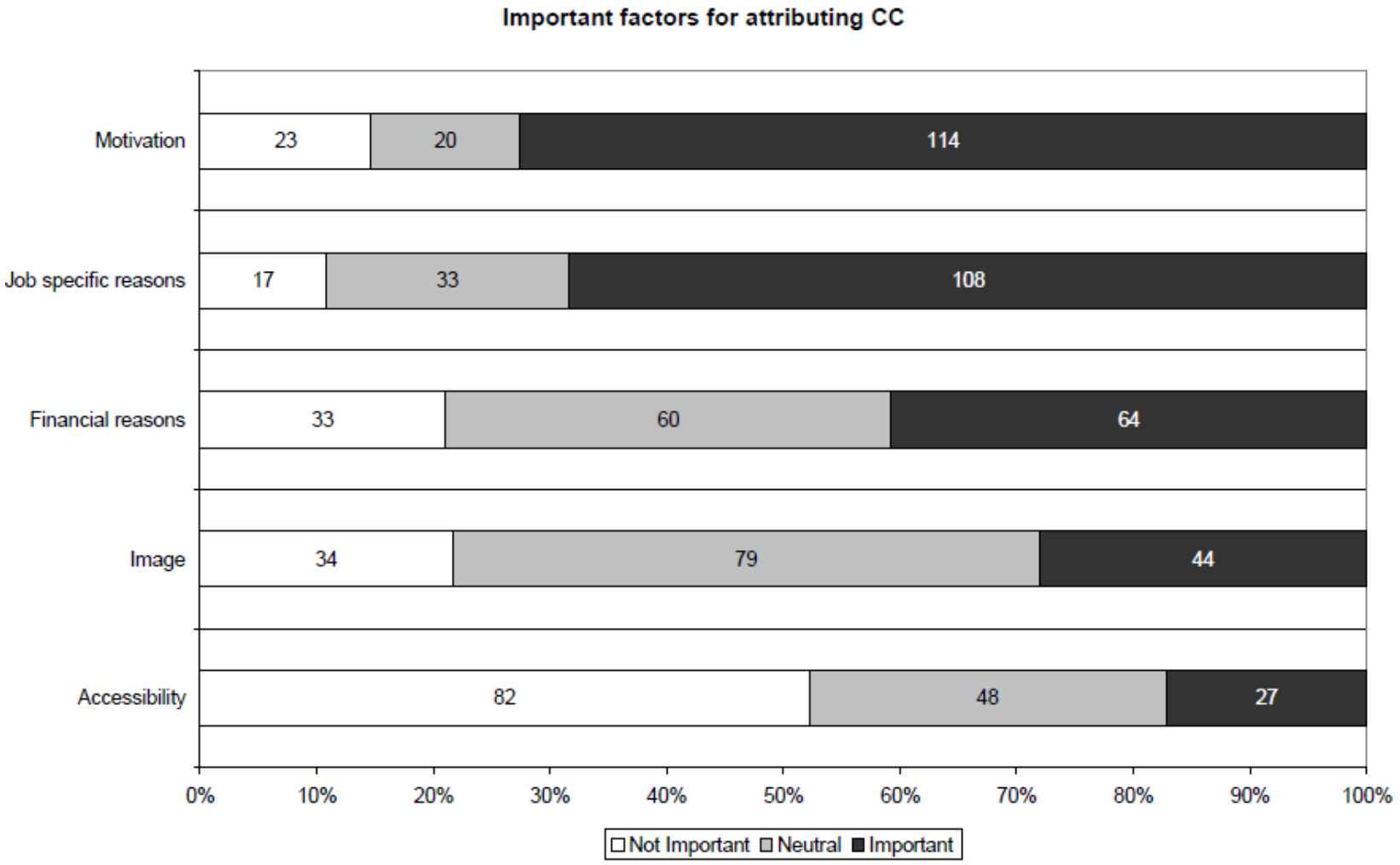
- Response to implied subsidies offered by the government (workers, firms)
- Car needed to raise worker productivity?
  - True for limited share of all company cars
  - Not true for the majority of company cars in Belgium
- Image building by firms: network effects across firms

# Use of company cars

- Source: Copenhagen Economics (2010)

| Country | Not business use | Business use |
|---|---|---|
| Belgium* | 67% | 33% |
| Netherlands** | 78% | 22% |

# Why do firms (say they) give company cars? (Promoco (2011))



# Why do governments subsidize company cars?

- Response to high and progressive labor taxes?
- Response to anti-inflationary policies?
- As an instrument to subsidize commuting?
- Response to lobbying by car industry?

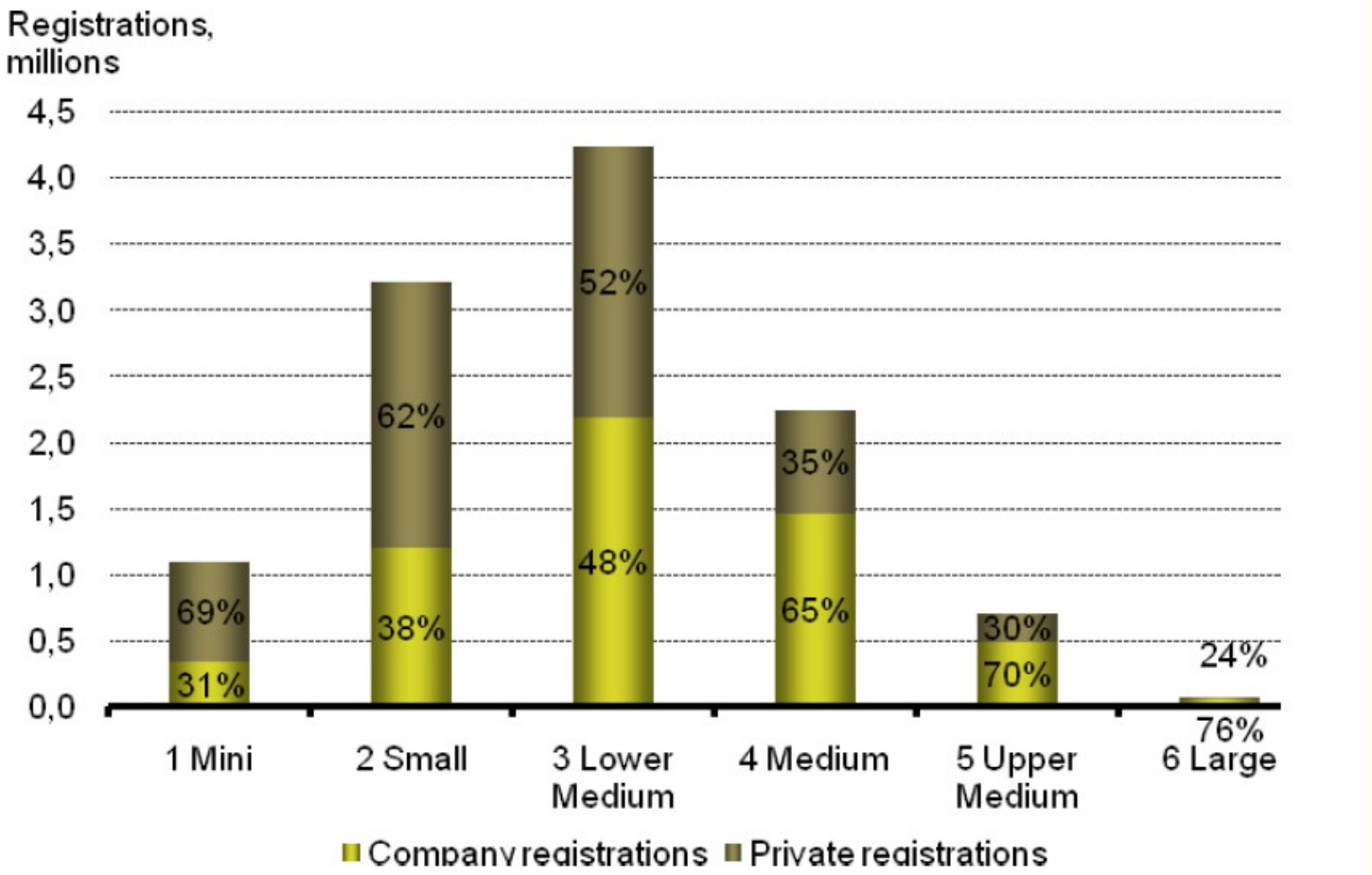
# Implicit subsidy to company cars (source Copenhagen Economics (2010))

| Country | Company car share | Subsidy (low) | Subsidy (high) | Company car share | Subsidy (low) | Subsidy (high) |
|---|---|---|---|---|---|---|
| | Simple averages | | | Weighted averages | | |
| Austria | 52% | 25% | 30% | 58% | 23% | 27% |
| Belgium | 48% | 33% | 38% | 54% | 33% | 38% |
| Czech Republic | 40% | 28% | 35% | 48% | 27% | 33% |
| Denmark | 38% | 12% | 15% | 46% | 12% | 15% |
| Finland | 44% | 9% | 13% | 47% | 8% | 13% |
| France | N.A. | 32% | 21% | N.A. | 31% | 20% |
| Germany | 60% | 27% | 33% | 64% | 27% | 32% |
| Greece | 24% | 42% | 47% | 26% | 42% | 47% |
| Hungary | 39% | 33% | 39% | 46% | 33% | 38% |
| Italy | 32% | 29% | 33% | 39% | 28% | 32% |
| Luxembourg | 45% | 23% | 27% | 50% | 22% | 26% |
| Netherlands | 54% | 13% | 18% | 61% | 12% | 17% |
| Poland | 47% | -10% | -4% | 53% | -12% | -5% |
| Portugal | 55% | 33% | 37% | 59% | 32% | 36% |
| Slovakia | 34% | 31% | 37% | 42% | 30% | 36% |
| Slovenia | 54% | 24% | 29% | 56% | 23% | 28% |
| Spain | 46% | 22% | 26% | 47% | 21% | 25% |
| Sweden | 60% | 16% | 14% | 64% | 17% | 16% |
| United Kingdom | 58% | 16% | 22% | 61% | 16% | 22% |
| Simple average | 67.15% | 22% | 26% | | | |
| Average weighted by value | | | | 55% | 24% | 27% |

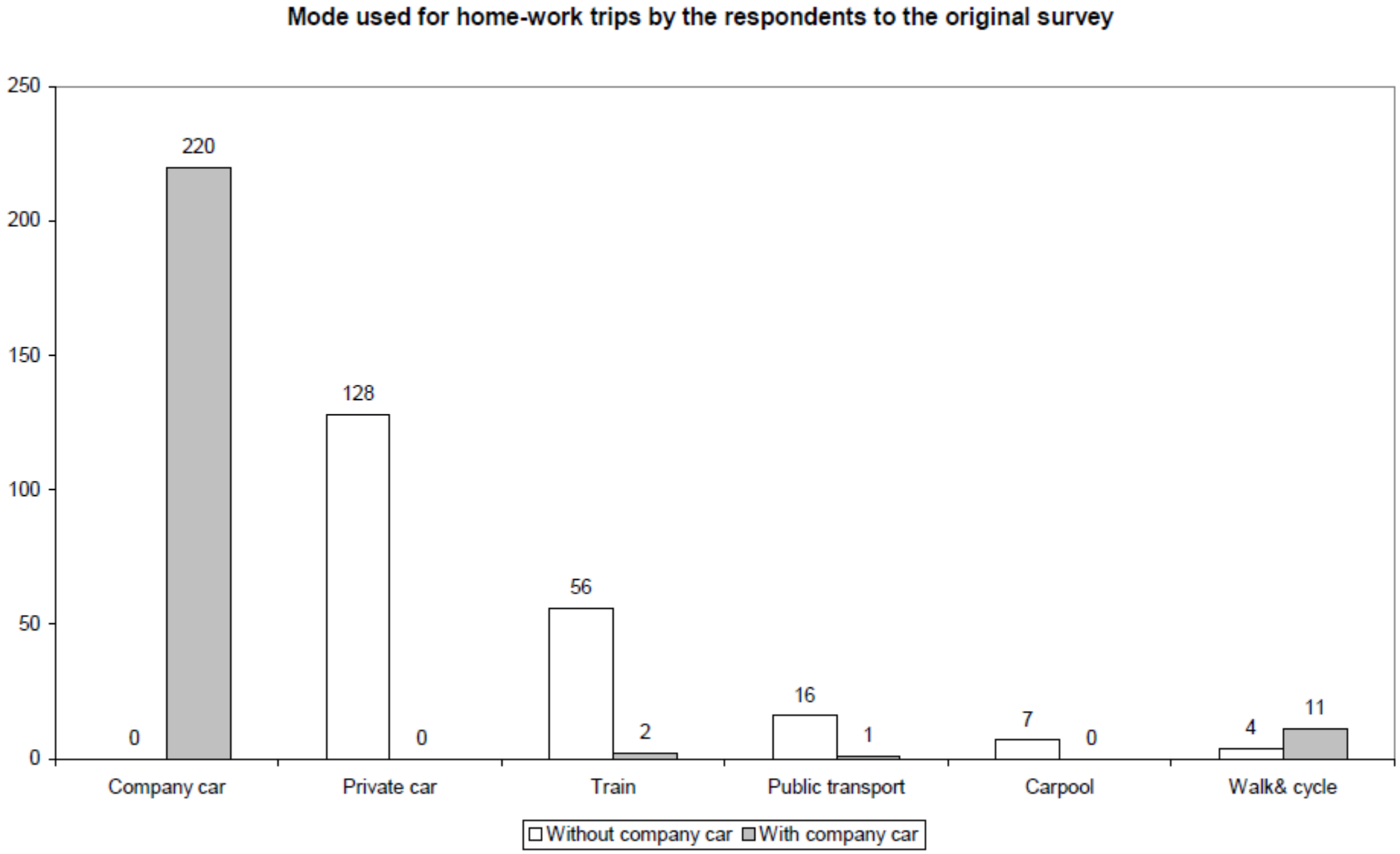
# Implications of providing company cars

- Transport implications
  - Effect on the size and composition of the car stock
  - Effect on overall car use and on congestion
  - Effect on other external costs of transport, such as pollution and accidents
- Budgetary cost to the government
- Long-run effect on household and firm location

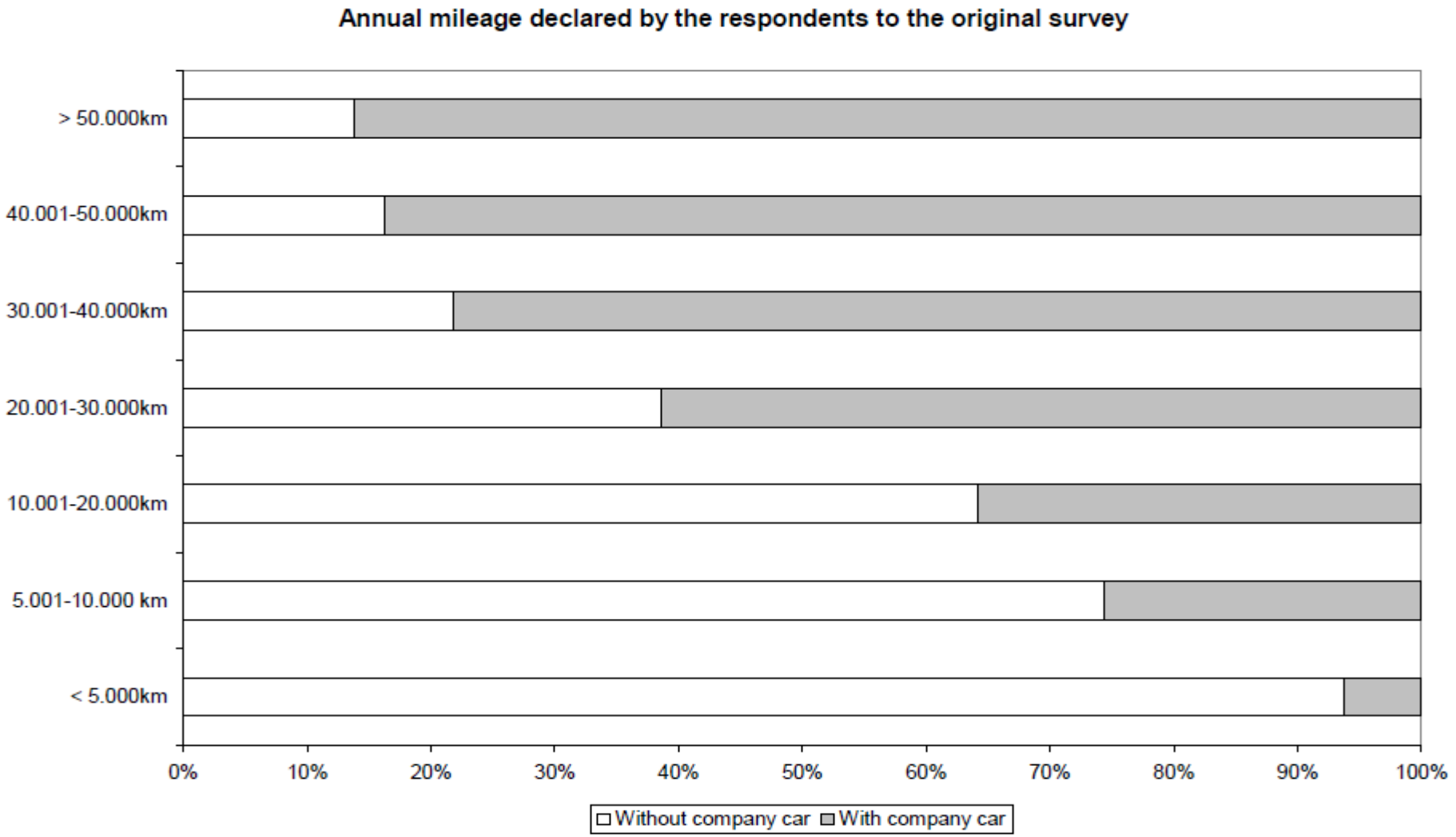
# Effect on the EU car stock: more and better cars (source Copenhagen Economics (2010))



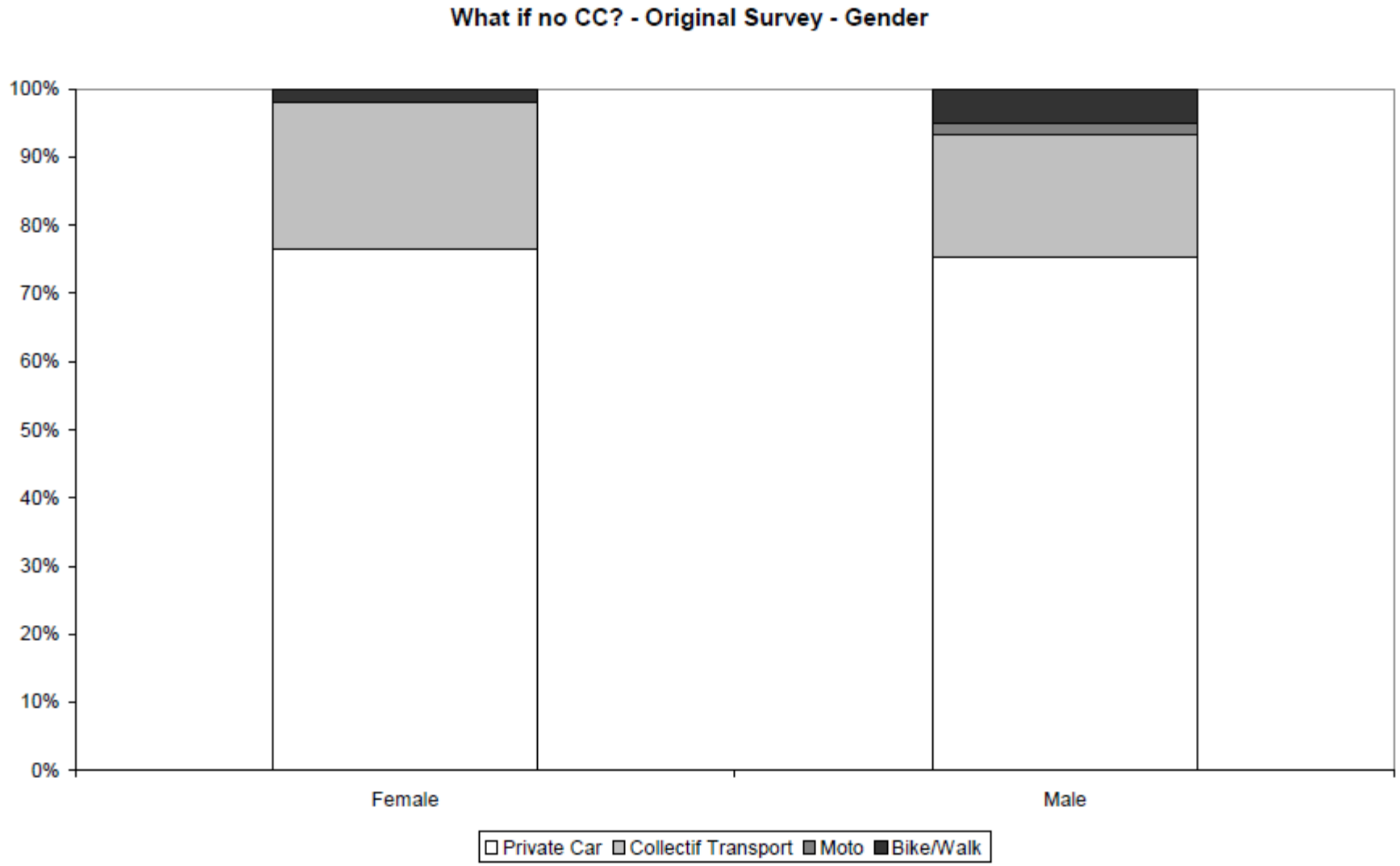
# Mode used for commuting (Promoco (2011))



# Mileage distribution (Promoco (2011))

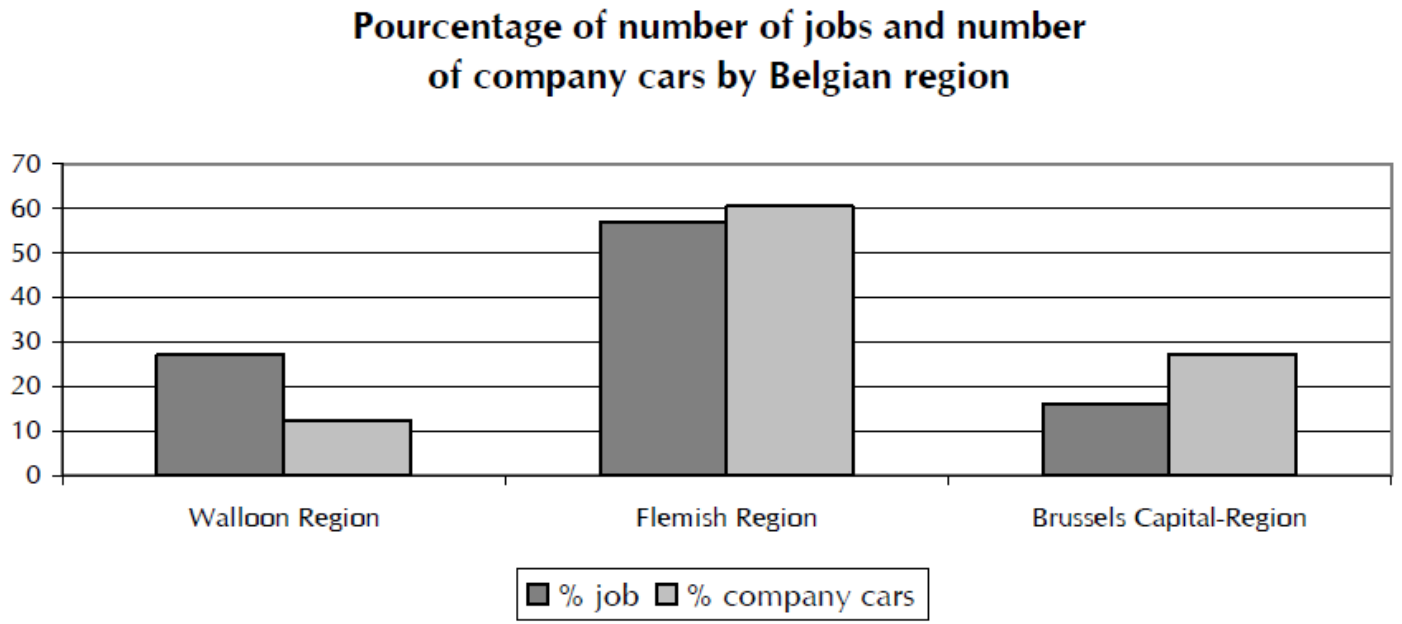


# Impact on modal choice (Prooco (2011))



# Relevance for Brussels

- Incidence of company cars largest in the Brussels region
- Company cars heavily used for commuting
- Estimates for Brussels during morning peak hour up to 50% company cars (SDWorx)



# Effects on fuel use and emissions (Copenhagen Economics (2010))

| Origin of effect | Current study | |
|---|---|---|
| | Direct application | Conservative estimate |
| More cars | 3% more fuel use, or 5.6 billion litres | 1% more fuel use, or 1.9 billion litres |
| More expensive cars | 4% more fuel use, or 7.4 billion litres | 2% more fuel use, or 3.7 billion litres |
| More kilometres driven | 1% more fuel use or extra 1.7 billion litres of fuel | |
| Total effect | 8% more fuel or extra 14.7 billion litres | 4% more fuel or extra 7.3 billion litres |

Total effects on emissions of $CO_2$ and particulates

| | Direct application | Conservative estimate |
|---|---|---|
| $CO_2$ (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 |

# Summary: Implications of subsidies to company cars

- Increase in the car stock; shift towards better 'quality' (size, engine power, extras, etc.)
- More intensive use than private cars
  - Increase in kilometres, increase in congestion
  - Accidents up
  - Pollution up, not down
- Large budgetary cost
  - Estimates suggest direct loss of tax revenues is around 4 billion euro per year (SD Worx 2010)
  - High cost of funds implies welfare cost even much higher

# Overall ‘welfare’ cost (EU)

- Welfare cost due to increased car stock, changes in composition of the stock and extra fuel use (ignoring congestion and the cost of funds)
  - Between 15 and 40 billion euro per year (average 0,3% GDP)
  - Between 800 and 2200 euro per company car per year
- Welfare cost due to increases congestion: no estimates available, but large

# 3. Taxation of company cars in an integrated mobility policy

- ‘Optimal’ taxation of fringe benefits, such as company cars
  - Give tax exemption for the productive component
  - Tax the non-productive component as wage
- Practical implications
  - Limit tax advantage to company cars workers need for executing their tasks (representatives, etc.)
  - Eliminate tax advantages for other company cars
  - Eliminate tax advantages for “luxury” cars

# Towards an integrated labour and transport policy (De Borger-Wuyts (2011))

- An ‘optimal’ tax policy consists of
  - Congestion charges
  - Optimal tax treatment of company cars
  - Reduction in labour taxes
- Main effects
  - Company cars disappear, except when they are productive
  - Congestion declines (average speed up by more than 30%)
  - Increase in the use of public transport
- The current implicit subsidies for company cars
  - Require very high congestion charges
  - Justify free public transport

# The recent policy reform in Belgium

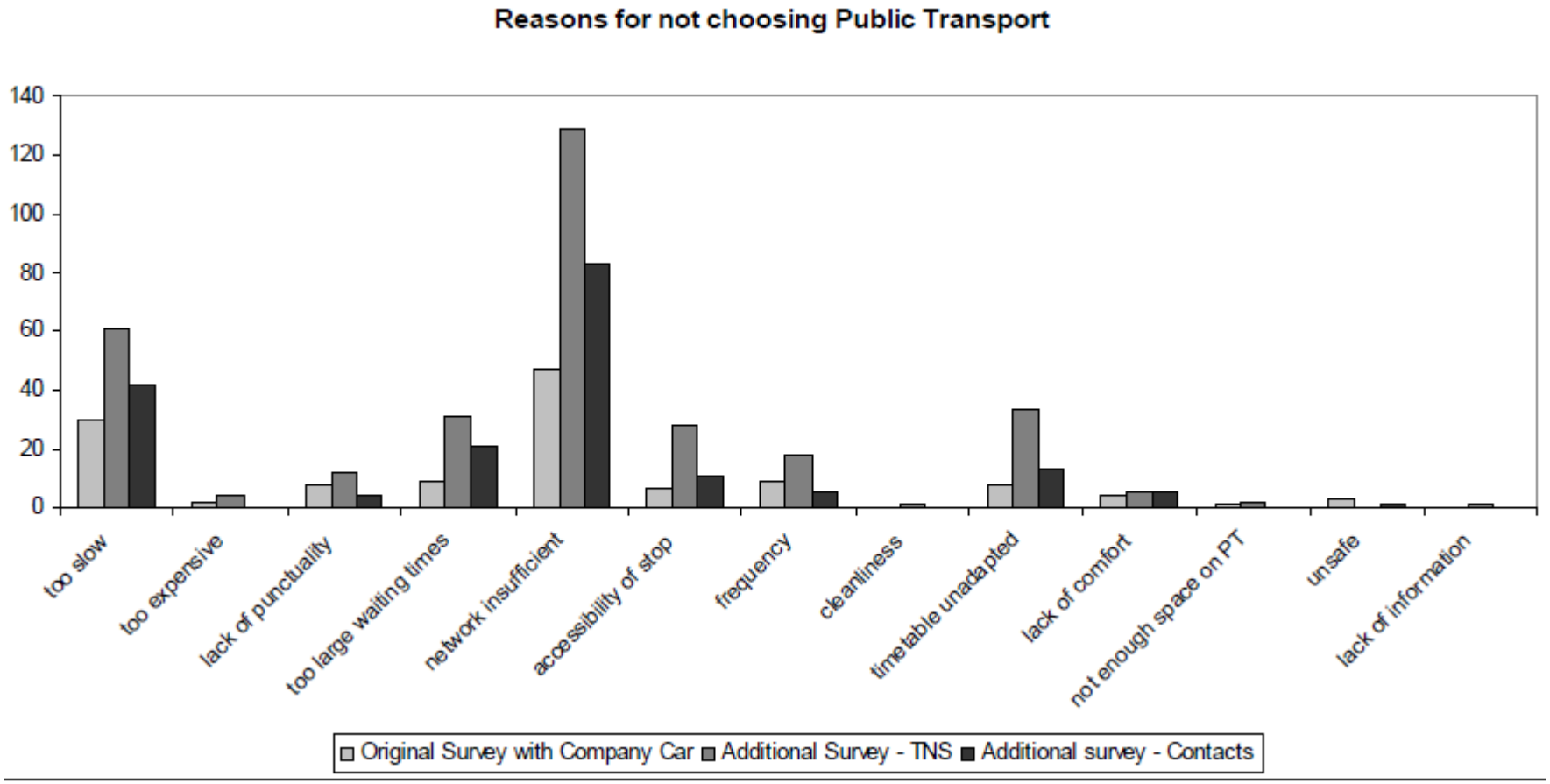
- Reform is a step in right direction
  - Tax advantage employee no longer based on commuting distance
  - Tax advantage employee based on CO2, value and age of the car
  - Extra tax on firms (17% on VAA)
- Further reform will be needed
  - Current reform too much inspired by budgetary needs, not by labour and transport policy

# Further reform needed

- Reduce the tax pressure on labor
- Further reduce implicit subsidies to company cars
- Introduce form of ‘road-’ or ‘congestion-’ pricing
- Offer sufficient alternatives to the car

– Slow process: people live where they live partly because of the current tax treatment
– More efficient public transport

# The importance of more efficient public transport



# 4. Conclusions

- The currect tax treatment of company cars has very unfavorable implications for congestion, the environment and the government budget
- First moves towards a better fiscal treatment have been made
- Better fiscal treatment of company cars alone does not solve the mobility problem: should be part of an integrated policy package incorporating ‘road pricing’