

The complementary use of qualitative and quantitative methods in the assessment of public policies: France's environmental bonus/malus program

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Agenda

- The bonus-malus programme
- Evaluations that have been made :
quantitative/qualitative
- Blending quantitative and qualitative
approaches
- Conclusion



The bonus-malus programme

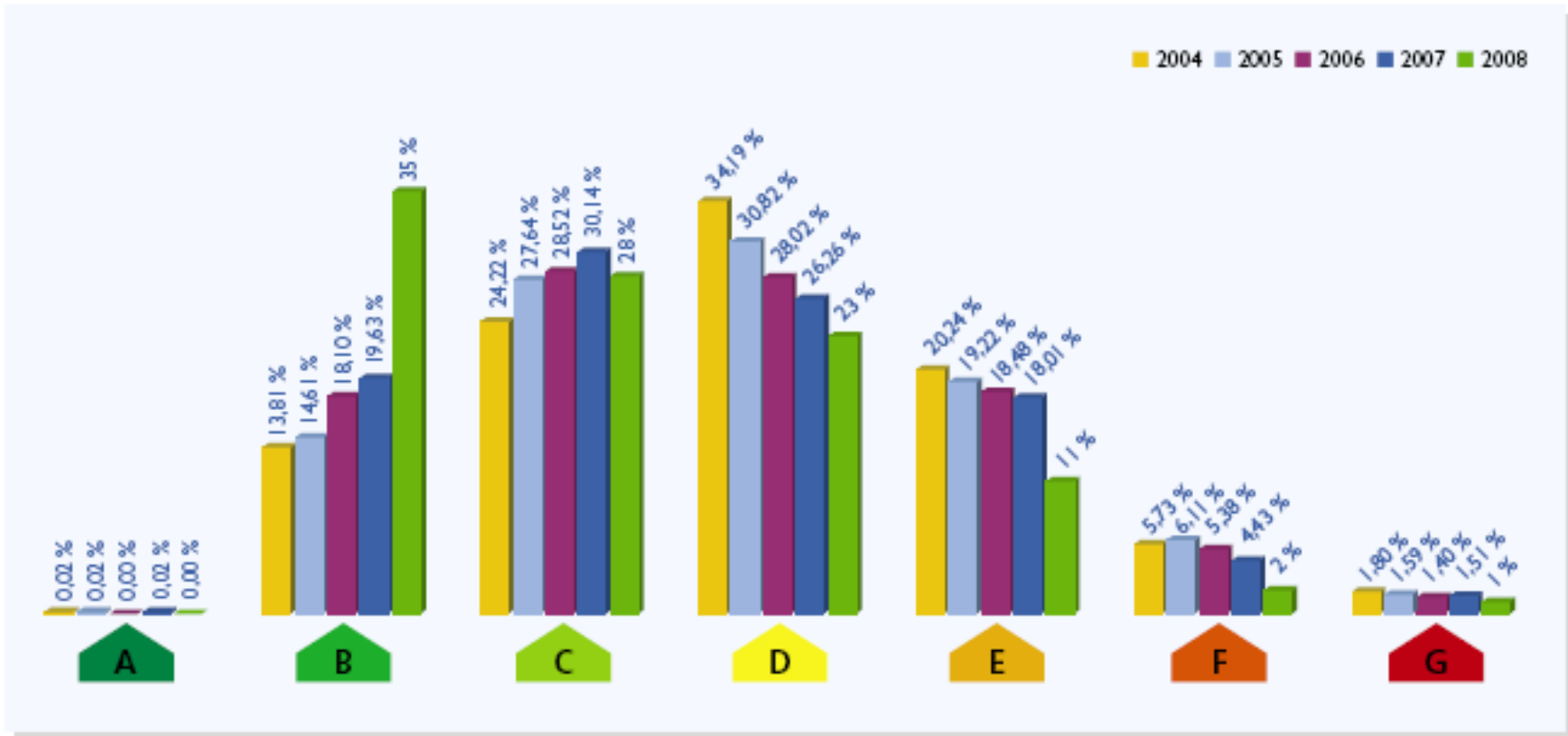
The bonus-malus programme

- Implemented in January 2008
- Aim: improving the energy efficiency of new passenger cars
- Low-emission vehicles get a bonus, high-emission vehicles get a malus, with a progressive rate
- Should be revenue-neutral for the government
- In fact: deficit €235 million in 2008, €300 million 1st semester 2009
- Modified in January 2010

The bonus-malus programme

Energy class	Emissions bracket (gCO ₂ /km)	2008 bonus/malus	2010 bonus/malus	2008 Market share
A	Emissions rate ≤ 60	-5000	-5000	5.4%
A	60 < emissions rate ≤ 95	-1000	-1000	
A	95 < emissions rate ≤ 100	-1000	-500	
B	100 < emissions rate ≤ 105	-700	-500	43.1%
B	105 < emissions rate ≤ 115	-700	-500	
B	115 < emissions rate ≤ 120	-700	-100	
C	120 < emissions rate ≤ 125	-200	-100	24.2%
C	125 < emissions rate ≤ 130	-200	0	
D	130 < emissions rate ≤ 155	0	0	
D	155 < emissions rate ≤ 160	0	200	7.4%
E	160 < emissions rate ≤ 165	200	750	
E	165 < emissions rate ≤ 195	750	750	
E	195 < emissions rate ≤ 200	750	1600	1.4%
F	200 < emissions rate ≤ 245	1600	1600	
F	245 < emissions rate ≤ 250	1600	2600	0.2%
G	250 < emissions rate	2600	2600	

The bonus-malus programme





Evaluations that have been made

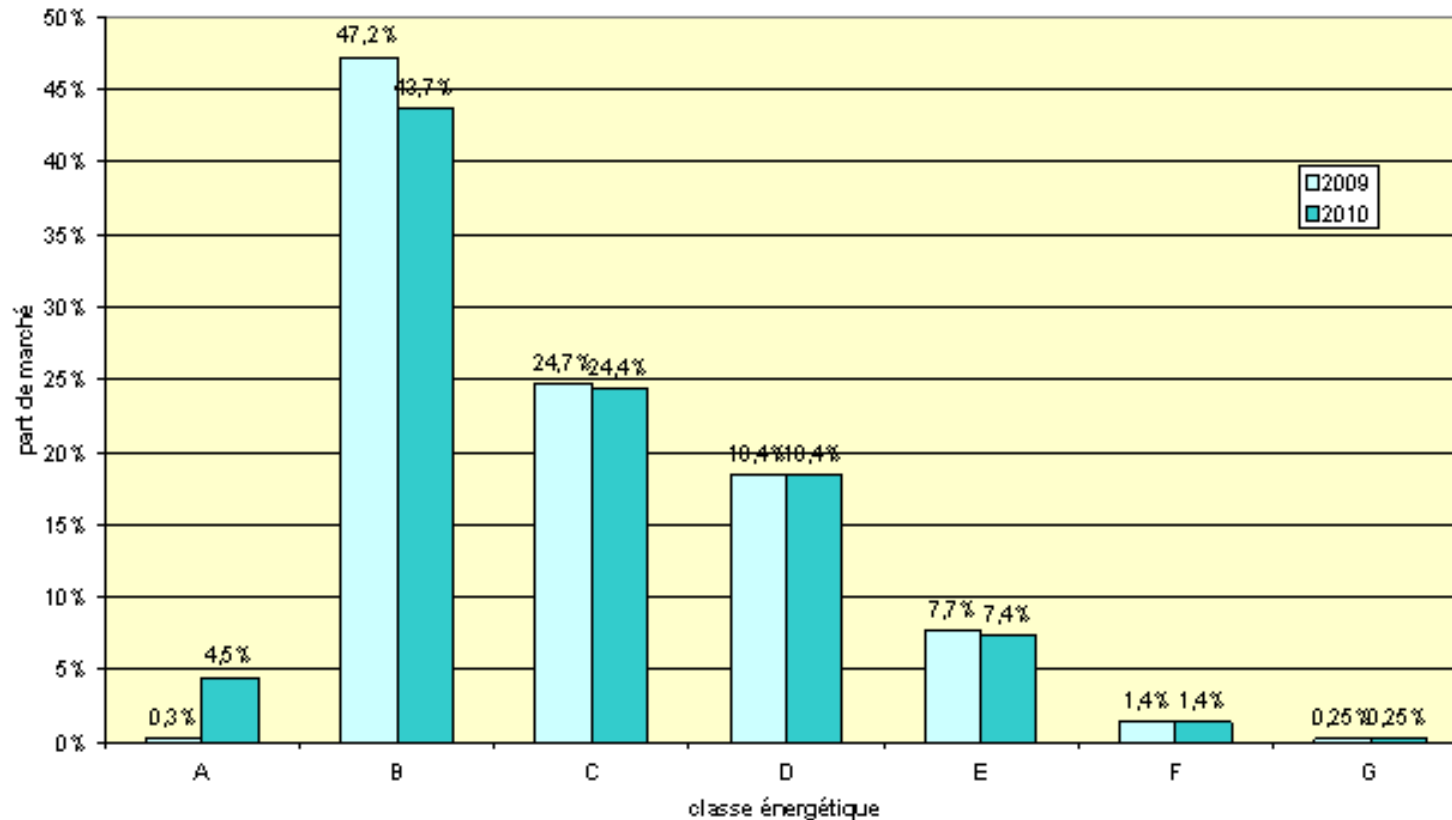


Evaluations that have been made

- Ex ante:
 - Economic model (Callonnec & Sannié 2009)
- Ex post:
 - Quantitative evaluation (MEEDDM/SEEIDD 2009)
 - Qualitative evaluation (ADEME 2009)

The ex-ante evaluation

- Interclass switch model: total cost, substitution elasticity btw classes
- New calibration in 2009 for the new 2010 rates



Quantitative ex-post evaluation

- Average CO₂ emission decreased by 9.3 gCO₂/km in 2008, among which 50% attributable to the bonus-malus scheme
- Deficit of the programme: -€235 million in 2008
- => Avoiding the programme's deficit is a crucial point: otherwise a global net subsidy for new cars!

Quantitative ex-post evaluation

- Global socio-economic impact (utility loss, opportunity cost, local pollution, oil consumption, CO₂ emissions) w/o rebound effect: +€140 milln
- Cost of the rebound effect: -€157 million?
- => Getting a positive global socio-economic impact also implies the internalization of the marginal costs of traffic (carbon tax)!

Qualitative ex-post evaluation

- Semi-structured interviews
- 20 recent car buyers, 10 car sellers
- Beginning with a broad topic, then focusing step by step on environmental criteria and bonus/malus programme
- Horizontal analysis of the discrete thematic elements

Qualitative ex-post evaluation

- The measure's environmental component is not a factor at the time of purchase, but it does enter people's mind nonetheless
 - No spontaneous suggestion that environmental considerations entered into the purchase of a car as decisive criteria, the main criterion is the price (more and more including operating cost)
 - However, a growing level of concern about the environmental issue and CO₂
 - Risk: people often think that if they buy a vehicle that comes with a subsidy, they won't be polluting at all!

Qualitative ex-post evaluation

- For dealers, the credit is a financial selling point that helps them close the sale of a small car
 - The credit is a benefit that is incorporated into the sales pitch
 - The main criterion for the final choice remains the price
 - Whereas the tax is attributed to the government or shunted aside until it's time to register the vehicle
- The sales breakdown is changing and these changes are not winning unanimous support within the industry



Blending quantitative and qualitative approaches



A better perception of the program from a multi-dimensional perspective

- Seen as nothing more than a financial benefit/loss at the time of purchasing
- Although subsequently raising a relative awareness of environmental impacts of vehicle traffic

Proposing recommendations to improve the program and its impact

- Rehabilitate the environmental content of the measure: informational booklet?
- Improving energy efficiency of new vehicles is not sufficient
 - Rebound effect...
- Making new vehicles more energy-efficient is only one part of the problem
- ... Need to introduce a more comprehensive package of measures regarding ecomobility, if possible using the popularity of the bonus-malus scheme:
 - Financial measures: mileage tax, congestion charges... or carbon tax!
 - Non-financial ones: buyer information, training in ecodriving...

Mutually enhancing quantitative and qualitative analyses

- Confirmation that fuel consumption is becoming an essential decision-making factor: the total cost is the good approach
- The importance of price as the main criterion in the purchase of a car



Conclusion

Conclusion

- The value of combining quantitative and qualitative methodologies in public policy assessments
- A clearer perspective on the social and economic impact of this policy tool
- The need to place the programme within a broader context of government intervention, including financial and non-financial tools

Thank you for your attention!