

eVS | 27

The 27th INTERNATIONAL  
ELECTRIC VEHICLE  
SYMPOSIUM & EXHIBITION

BARCELONA  
17th-20th November 2013

# Effective public policies for EV-dissemination

drs. ing. M.P. van Kerkhof  
senior advisor e-mobility  
APPM Management Consultants (NL)



• appm management consultants

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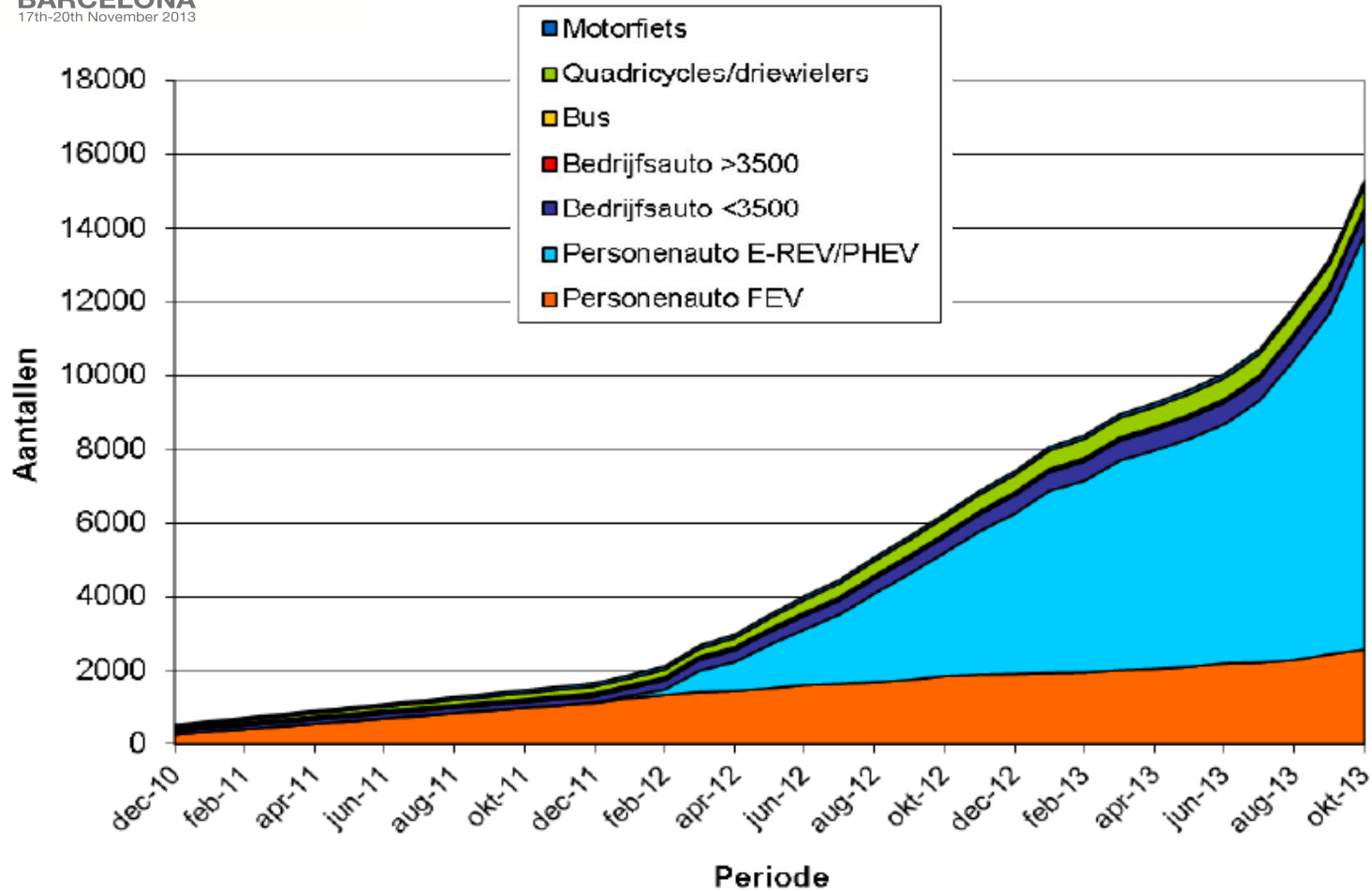
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## Why e-mobility on a local scale?

- Positive impact on innercity air-quality
- reduces the CO2 impact and the oil-dependency, both locally and regionally
- Positive impact on noise reduction on local level
- Positive impact on local economies, innovations sustainable development

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- Objective of the research:  
*To evaluate the effectiveness of the policies of Dutch local governments to stimulate the growth of electric vehicles*
- The relative number of EV's on the road in a certain municipality was matched with the instruments the local government had applied

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## Research method; the dependent variable

- Regression-equations: a quantitative connection is made between a dependent variable and an independent variable
- Dependent variable: the total number of cars and the percentage electric cars of 415 municipalities (data Vehicle Licencing Agency)
  - The effect of the number of FEV
  - The effect of the number of FEV plus REV

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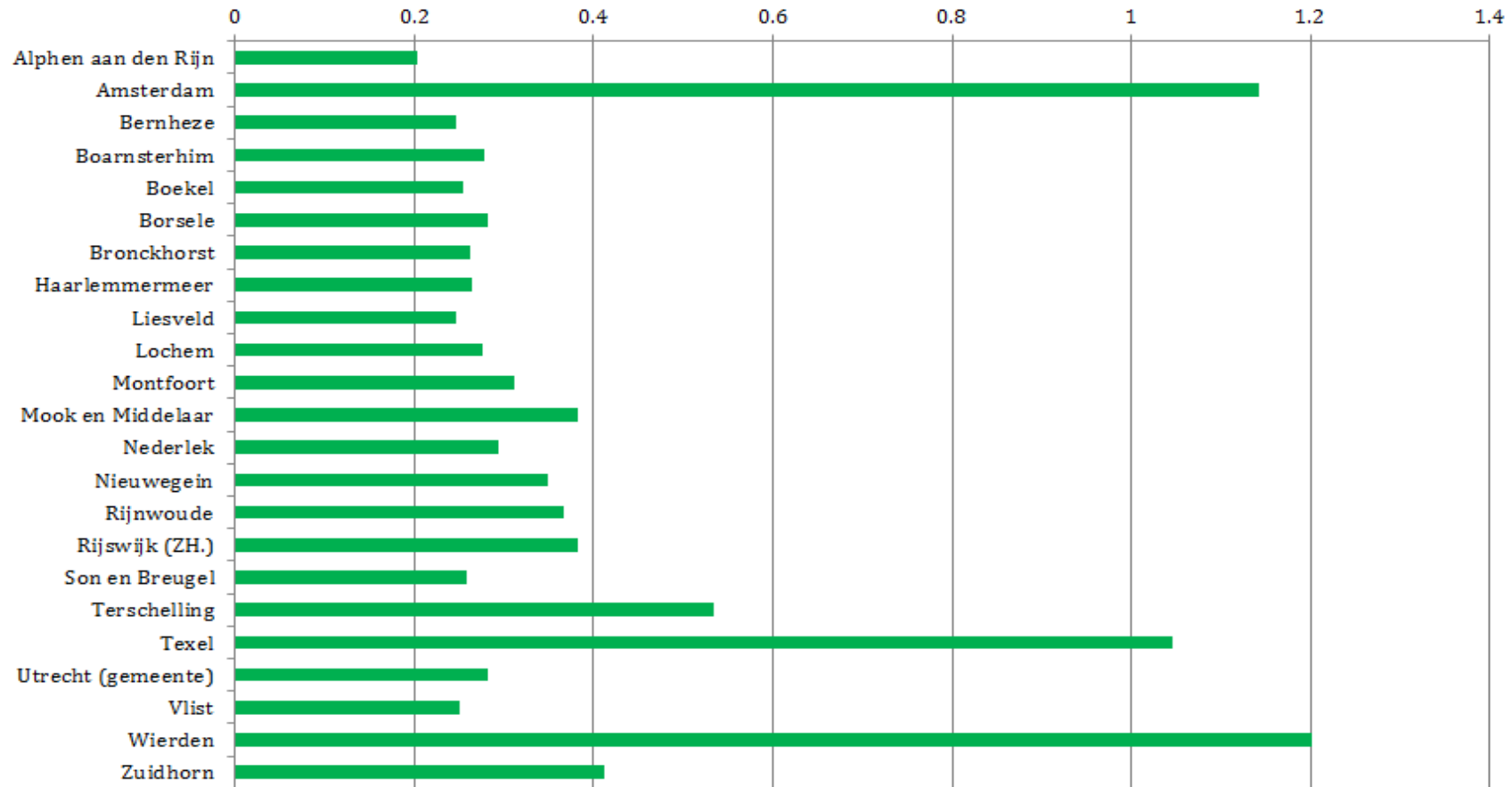


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## Percentage of FEV per council in the Netherlands



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## Research method; the independent variable

- Independent variable: variable sources, about 74 municipalities were selected
- Three categories of independent variables:
  - A. Characteristics of the municipality
  - B. Other factors
  - C. Policy instruments
- 'C' is the objective of the study, 'A' and 'B' are verification variables

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## “Characteristics of the municipality” and “other factors”

### *Characteristics of the municipality*

- Average income
- Number of inhabitants
- Density of houses

### *Other factors*

- Wadden Island
- Percentage of hybrid cars
- Presence of a car-lease company
- Pilot project

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- Charging infrastructure
- Launching customer
- Investment subsidy
- Charging infrastructure subsidy
- Parking benefits
- Information and marketing

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Variabelen	FEV	FEV & E-REV
Inkomen	2.76e-07 (2.68e-06)	9.51e-07 (4.76e-06)
Inwoneraantal	-9.80e-07*** (3.59e-07)	-1.29e-06* (6.96e-07)
OAD	1.60e-05 (1.06e-05)	2.22e-05 (1.82e-05)
Waddeneiland	0.175 (0.122)	0.370 (0.250)
Hybride	0.00555 (0.0218)	0.0409* (0.0209)
Leasemaatschappij	0.254* (0.152)	0.328** (0.145)
Proeftuin	0.445** (0.200)	0.775* (0.432)
Laadpunten	0.00331*** (0.000517)	0.00326*** (0.000749)
Launching customer	0.0792** (0.0395)	0.116** (0.0557)
Laadpalensubsidie	-0.0347 (0.107)	-0.122 (0.209)
Aanschafsubsidie	0.0850* (0.0477)	0.111* (0.0588)
Parkeervoordelen	-0.134 (0.108)	-0.205 (0.199)
Informatievoorziening en marketing	0.0134 (0.0262)	0.0251 (0.0343)
Constant	0.0402 (0.0417)	0.0791 (0.0717)
Observaties	415	415
R <sup>2</sup>	0.434	0.407
Robuste standaard errors tussen haakjes		
*** p<0.01, ** p<0.05, * p<0.1		

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Policy instrument	FEV	FEV + REV
Charging infrastructure	0,00331	0,00326
Launching customer	0,0792	0,116
Investment subsidy	0,0850	0,111

- Each charger causes 0,00331 FEV
- A municipality as launching customer causes 0,0792 FEV
- A investement subsidy causes 0,0850 FEV

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## Non effective policy instruments

- Charging infrastructure subsidy
- Parking benefits
- Information and marketing

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- The visibility of EV's and charging infrastructure is necessary for a higher amount of EV's on street
- Direct financial instrument causes a higher percentage of EV's
- Non direct financial instruments do not causes a higher percentage of EV's
- Idem for information and marketing

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- Due to the growing number of EV's new research is recommendable
- The growing number of EV's causes more attention of municipalities and the need of making policy, new research recommendable
- Additional research: the cost benefit of policy instruments
- International comparative research?

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