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## **TAXATION ON PASSENGER CARS IN THE NORDIC COUNTRIES – BEHAVIORAL IMPACT OF CAR TAXATION AND THE PROMOTION OF ELECTRICAL CARS THROUGH TAX POLICY IN DENMARK**

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### **INTRODUCTION/OVERVIEW**

In 2008 The Danish Ecological Council, Naturskyddsföreningen and Naturverförbundet - together with organizations from Iceland and Finland- published a comparative study on the use of economic incitements as instruments to limit the emission from cars within the Nordic countries. The study indicates that economic measures are really important tools in directing consumption. But can it even be said to guide consumption into more environmentally wise consumption and promote the sale of more energy efficient cars?

The first part of our presentation will deal with the behavioral impact of car taxation on passenger cars in Denmark, Norway, Sweden and Finland while the second part will describe how car taxation (and the exemption of taxes) are currently actively used to kick start a market for electrical cars in Denmark. The survey on traffic taxes, referred to in the following, can be downloaded from: <http://www.norden.org/pub/sk/showpub.asp?pubnr=2008:587>

### **TAXES AND BEHAVIOR GOES HAND IN HAND**

Taxes and behavior goes hand in hand. This is, at least how it seems, when one looks into the different traffic related taxes on passenger cars within the Nordic countries. The objective of our presentation lies with identifying the impact of the most relevant traffic related taxes within the Nordic countries – i.e. 1) Taxes related to registration of the passenger car 2) Taxes related to owning the car 3) Fuel related taxes.

### **DIFFERENTIATED REGISTRATION TAX**

A comparative study of the different Nordic countries will show why and to what extent other factors than the geographic size of the country matter when it comes to accounting for the extent of traffic and the pollution related to passenger traffic.

Taxes, wealth and market conditions matter. While Denmark, Norway and Finland have differentiated their traffic tax according to fuel consumption or CO2 emission, Sweden has not. The paper will discuss whether the introduction of a differentiated registration tax (as introduced in e.g. Denmark) has a behavioral impact and eventually promotes the sale of more energy efficient cars? Has it had an impact which can be traced in the average CO2 emission of newly registered cars within the Nordic countries?

### **ACTIVE TAXES – RELATED TO THE PURCHASE OF A CAR**

The presentation will show why taxes related to the purchase of a car are most efficient to influence behavior and why the registration tax apparently has influenced the number of cars, and – if it is differentiated in the right manner – also has the potential to influence the fuel economy of the personal passenger cars.

## **TAXES TO WHAT DEGREE?**

By looking at some specific Nordic cases, the paper will discuss whether this behavioral pattern actually requires taxes of a certain size. How high or differentiated should the taxes be in order to have the greatest behavioral effect – and eventually the most positive effect on the environment and decrease in the traffic related emission of CO<sub>2</sub>? Are there big differences – as to the effect of the annual green owner tax, the differentiated registration tax etc. Does it appear to have an effect on the choice of an energy efficient car model and the time for disposal of the car?

## **CONCLUSIONS**

The paper will roughly outline and compare the taxes and duties related to traffic within the four Nordic countries. The Nordic countries chosen have quite different tax policies. This is among other things reflected in the number of cars. In a number of years, the countries have tried to further more fuel efficient cars by differentiating the taxes related to owning a car. The experiences launched in the study, however, indicates that most is gained for the environment by differentiating taxes on the actual purchase of a car – or the actual action of buying a car.