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ROUNDTABLE ON COMPETITION IN ROAD FUEL

-- Note by Norway --

This note is submitted by Norway to the Competition Committee FOR DISCUSSION under Item IX at its forthcoming meeting to be held on 19-20 June 2013.

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ROUNDTABLE ON COMPETITION IN ROAD FUEL

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1. Introduction

1. The Norwegian fuel retail market is characterized by few actors, a high percentage of manned petrol stations and a relatively large number of petrol stations located in rural areas. In the Norwegian market there are five retail chains: Statoil, Shell, Uno-X, Esso, and St1. Best, an association of independent retailers, has a supply agreement with Statoil.[1]

2. It has been argued that fuel prices in Norway are considerably higher than in other comparable countries. In addition to the negative impact on the final fuel prices which the consumers face, higher fuel prices also induce higher transportation costs and thus a general increase in prices that affects the Norwegian economy as a whole.

3. Consequently, the Norwegian Competition Authority (NCA) monitors the fuel retail market closely and has conducted several sector inquires in this marked. The first larger sector inquiry was completed in 2010.[2] In 2012, the NCA started a new sector inquiry which is still ongoing. The purpose of the project is threefold:

- Comparing the gross margins of the Norwegian fuel retail market with gross margins in other countries.
- Conducting an ex post evaluation of a large merger in the Norwegian fuel retail market.
- Assess the level of local and regional competition in the Norwegian fuel retail market.

4. In this note the NCA present the main results from these subprojects. The note is structured as follows. We start out with a brief description of the data that is used in the major parts of the project (subproject 2 and 3). Thereafter we briefly present each part of the project. The results from the last subproject are somewhat preliminary, and should therefore be interpreted with caution. Finally, we present some plans for further analysis.

2. The data used in the project

5. The NCA has conducted two extensive data collections in the Norwegian fuel retail market. The first was conducted in 2008 and covered the period 2004-2008. The second was conducted in early 2012.

[1] In 2012, the volume of sales in the fuel retail market was about 3 000 million liters; the correspondent value of sales was almost 42 000 million NOK (approximately 5 600 million EUR. The yearly exchange rate for 2012 is estimated by the Central Bank of Norway as 1 EUR = 7,4744 NOK. Please, see http://www.norges-bank.no/en/price-stability/exchange-rates/

[2] The results are documented in the report «Det norske drifstoffmarkedet» (The Norwegian fuel market)

The dataset used in the project reported here is covering the period 2004 to 2011 and contain pump (retail) prices and sales volumes for petrol and diesel, for all petrol stations in Norway.

6. Furthermore, the NCA has obtained extensive information about each filling station. This data includes information about location, date of entry / exit, if the station is manned or unmanned, ownership and operation conditions, etc. Any changes in these factors are recorded in the data set.

7. In addition, data from Statistics Norway (SSB) and Svenska Petroleum & Biodrivmedel Institutet (SPBI) has been used in the first subproject.

2.1 A comparison of gross margins in the Norwegian and Swedish fuel retail markets.

- Purpose: The scope of this subproject was to investigate whether prices, and hence gross margins, in the Norwegian road fuel market are higher than in other comparable countries. Due to difficulties in finding comparable retail price data, the NCA decided to focus the analysis on the comparison of Norwegian and Swedish gross margins.

- Data: Information on Norwegian pump prices is provided by the Statistics Norway (SSB). The data cover the period between January 1990 and December 2012. SSB obtains pump prices from a representative sample (around 100) of Norwegian retailers on the 15th of each month. SSB provided geometric averages of the monthly price observations. Pump prices are inclusive of taxes, value added tax (VAT) and discounts. The Norwegian gross margin is calculated as the average pump price minus all taxes and crude oil prices.

- Price data from the Swedish fuel retail market is provided by Svenska Petroleum & Biodrivmedel Institutet (SPBI). The data covers the period 2001 to 2012. Pump prices are collected for manned filling stations only, and including taxes and VAT, but are net of any discounts. The Swedish gross margin is calculated as the average pump price minus taxes, discounts and crude oil prices. In order to compare margins between Norway and Sweden, the Swedish gross margins are converted to Norwegian kroner using exchange rates obtained from Norges Bank (the Central Bank of Norway).

- Method: Descriptive statistics presented in figures and tables.

- Results: Due to some differences between the Norwegian and Swedish price data, it is difficult to determine the exact difference in gross margins. However, the data indicate that the gross margins were relatively similar in Norway and Sweden until around 2006. The Swedish gross margin was relatively stable over the period analyzed (2001 – 2012). For comparison, the Norwegian gross margin has increased by almost 30 percent from 2006 to 2012. A resent inquiry by OFT [3] showed that gross margins in the UK fuel sector were relatively stable for the same period.

- Conclusion: The gross margins in the Norwegian fuel retail market have increased sharply from 2006 to 2012, and the increase is significantly higher than compared to Sweden and UK.

2.2 An ex-post evaluation of a merger decision in the fuel retail market.

- Purpose: In 2008, the NCA approved a merger in the road fuels sector involving the transfer of about 90 filling stations from Uno-X to Shell. Except for two stations, the NCA concluded that

[3] UK petrol and diesel sector – An OFT Call for Information, January 2013

the merger would not lead to a substantial lessening of competition (SLC). The purpose of this project is to evaluate the decision taken by the NCA.. A SLC occurs when a merger has a significant effect on rivalry in the affected market(s) over time, leading to a reduction in the competitive pressure and thereby to increased prices and/or decreased quality and variety. As no information on quality or variety is available, the focus of the analysis has been on the price effect of the merger. In other words, the analysis aimed at evaluating whether the merger led to higher prices in the affected markets (filling stations directly involved in the merger and filling stations located close to them).

- Data: The project use data on the stations' weekly average pump prices for the period 2006 – 2011. Since the merger took place between May and December 2008, the data cover a period 2.5 to 3 years before the merger and 3.5 to 4 years after the merger. Using a distance matrix, we have calculated various measures of market concentration for each filling station used in the analysis.

- Method: The most adopted method when evaluating the effects of merger decisions is the difference-in-differences (DiD) analysis. Given the availability of data before and after the merger for the relevant filling stations, this method is seen as the most appropriate. The DiD method compares two groups of observations: the treatment group (affected by the treatment) and the control group (not affected by the treatment). The effect of the treatment is measured comparing the difference in the average outcome for the treatment group, before and after the treatment, with the corresponding difference for the control group.

- In the analysis, the treatment group consists of the petrol stations that were acquired by Shell from YX (or stations belonging to the same local markets). Different control groups have been used, but common to them all is that they consist of petrol stations that do not belong to the local markets defined by the YX stations acquired by Shell. The main assumption in the DID-analysis is that the trend in the treatment and control group are the same before the intervention, the merger in the present case (common trend). The common trend assumption has been tested in two different ways - by graphically assessing the development in prices and by a regression analysis. The conclusion is that the treatment and the control group exhibit a common trend before the merger. In the DID-regression analysis, we control for market concentration and include a fixed effect for (localization of) filling stations and time (dummy variables per week).

- Results: Somewhat surprisingly, we find that the merger led to lower prices. For the petrol stations object of the merger, we find an average price decrease of about 0,05 NOK. For the other petrol stations located within markets defined by the merged stations, we find the following effects: Shell: - 0,004 NOK, Statoil: -0,009 NOK *** Esso: -0,034 NOK *** and YX: -0,036 NOK ***.[4] A possible explanation for these results is that Shell generally has lower prices than YX; moreover, Shell is adopting a strategy of national pricing to some extent. This explanation is consistent with the findings of another part of the project (Subproject 3: An evaluation of local and regional price differences in the Norwegian fuel retail market). Here we find that, after controlling for market concentration, time trends and station-specific effects, Shell has an average price between 0.03 and 0.06 NOK lower than YX per litre.

- Conclusion: The evaluation shows that the NCA took the appropriate decision in this case.

[4] *** denote significant on 1 percent

2.3 An evaluation of local and regional price differences in the Norwegian fuel retail market.

- Purpose: Identify local and regional price differences and evaluate the degree of local price competition.

- Data: Average price per week for all Norwegian petrol retailers for the period between 2006 and 2011. Detailed information about each station (location, ownership, manned/unmanned, etc.). Using a distance matrix, the NCA have calculated various measures of market concentration for each station used in the analysis.

- Method: Variation in pump prices and gross margins is analyzed using regression analysis. We use simple panel data methods (random and fixed effect) where we control for time trends (dummy variables for weeks) and station-specific effects (location of the petrol station). Local competition is measured by the following variables: number of stations in a local market, the station is manned / unmanned, the nearest station is manned / unmanned and the nearest station is belonging to the same chain. Several other variables, e.g. number of chains, were included in the analyses, but had an insignificant effect on prices and gross margins and were dropped from the final specification

- Results: There are large differences in average pump prices between geographical areas. As an example, the average price (over the period between 2006 and 2011) in the county with the lowest prices (Oslo) is 12.06 NOK per litre, while the average price in the most expensive county (Finnmark) is 12.65 per litre.

- The NCA finds that the number of filling stations in a local market affects prices and gross margins. The effect is negative, but non-linear (decreasing in number of stations). However, this variable is probably endogenous (due to simultaneity and because it is negatively correlated with transport costs) and the results should therefore be interpreted with some caution. Focusing on the other competition measures, we find that unmanned filling stations have an average gross margin 10 percent lower than manned filling stations. Further, if the nearest filling station is unmanned, the gross margins decreases by approximately 2 percent, and if the nearest filling station belongs to the same chain, the gross margin increases by approximately 1 percent. As expected, these effects decrease with distance.

- We do not find that the degree of local competition has changed over time. Thus, it is possible to exclude that the increased gross margins in the Norwegian fuel retail market, found in subproject 1, could be explained by changes in local competition.

- Conclusion: We find that local and regional price differences to some extent can be explained by different degrees of competition. However, the effects of local competition seem to be relatively modest[5].

[5] The results from subproject 3 are somewhat preliminary, and should therefore be interpreted with caution.

2.4 Summary and further plans

8. The NCA have conducted a market inquiry in the Norwegian fuel retail market. The main results are:

- Subproject 1: The gross margins in the Norwegian fuel market have increased significantly in the period 2006 to 2012 as compared to Sweden.

- Subproject 2: An analysis of a transfer of 90 petrol stations from XY to Shell in 2008 shows that the merger did not lead to a substantial lessening of competition.

- Subproject 3: Local and regional price differences can to some extent be explained by different degrees of competition. However, the effect seem to be relatively modest.

9. The NCA aims at implementing further studies and analyses able to identify possible explanations for the observed increased margins in the Norwegian fuel retail market.

10. The Norwegian fuel retail market has clearly defined weekly price cycles, where prices sharply increase on Mondays (and sometimes also on Thursdays) and then gradually decline until the next price increase. The NCA plans to identify price cycles geographically and over time, and examine whether there have been changes in price cycles which may explain the increase in gross margins in the Norwegian fuel market.

11. Moreover, the NCA plans to examine how the retail price changes with the purchase price. The main focus will be on whether pump prices are adjusted up faster than down ("rocket and feather" pricing patterns).