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ROUNDTABLE ON FIDELITY REBATES

Note by Norway

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THE REINTRODUCTION OF FREQUENT FLYER PROGRAMS (FFPS) IN NORWAY

1. The introduction

1. Frequent Flyer Programs (FFPs) are very common in the airline industry. Although FFPs can be seen as loyalty enhancing programs that might dampening price competition, there are very few examples of any interventions against these programs by antitrust authorities. One of the exceptions are Norway. FFP was banned in the domestic airline industry in Norway from 2002 until 2013.

2. In what follows, FFPs are explained and related to the discussion of a fidelity rebate (Section 2). Then a general discussion of the effects of FFPs is provided (Section 3). Finally, a description of an investigation by the Norwegian Competition Authority (NCA) on the effects of the reintroduction of FFPs in Norway is given (Section 4).

2. FFP – a fidelity rebate?

3. American Airlines introduced a frequent flyer program in May 1981. Soon this became a common business practice among airlines all over the world. A main idea was to create loyalty by rewarding it.¹ A passenger could earn points per mile, and redeem them for a free flight. Two clever moves were important for the success of FFPs. First, each airline had black out dates that restricted the free travel. This made it possible to try to fill seats that else would have been empty. Second, the points were made personal. This prevented resale. More importantly, often the employer paid the ticket while the passenger received the points for personal use.

4. When an airline gives points to a member of its FFP that books a ticket, it then offers a better price to this customer than to a rivals' customer that is not a member of its FFP. When a company offers higher prices to the rivals' than its own customers, this may dampen the price competition between the rival firms.

5. In addition, this loyalty scheme is combined with an accumulated, progressive discount. Most FFPs have a system with annual threshold levels for earned points. For example, SAS has basic, silver, gold and diamond members. If you pass a threshold level, for example becomes a gold member, you will have certain additional benefits. Examples are free access to a lounge even if you travel on a restricted ticket, and high priority concerning rebooking.

6. Finally, FFPs may lead to a principal agent problem. An employee (the agent) will often order the ticket and receives the points while its employer (the principal) will often pay the ticket. This implies that the employer and the employee's incentives are not aligned, since the employee may not fully take into account the cost of the ticket paid by the employer.

¹ The presentation follows closely the discussion in a text book in business strategy, where it was explained how FFPs could dampening competition and lead to higher profits for the firms. See Brandenburger and Nalebuff (1996). For theoretical studies of the anti-competitive effects of FFPs, see for example Cairns and Galbraith (1990), Klemperer (1987, 1995), Banerjee and Summers (1987) and Kim *et al.* (2001).

7. A main element of FFPs is the accumulated, progressive discount. This might lead to a suction effect. Customers have incentives to pass a threshold level, because they then can earn the additional benefits. Such a system rewards loyalty, since those travelling each year with the same airline will have a larger chance to pass the threshold level.

8. This shares some similarities with a retroactive rebate. In both cases, passengers receive a reward when passing a threshold level. With a retroactive rebate, they receive a rebate on all units they have bought. Thus, there is an incentive to pass this threshold level, even if the customer plans no further purchases. With FFPs, the rewards are additional benefits for the next flights. As long as they fly regularly, the additional benefits will kick in after the threshold level is passed. In that respect, there will be suction effects both with a retroactive rebate and an FFP. In both cases, the customer close to a threshold level has incentives to behave such that the threshold level is reached.

9. From an antitrust perspective, FFPs have two potential anticompetitive effects. First, it may dampening price competition between rival airlines. Each airline may have more loyal customers, for example as a result of the suction effect described above. More importantly, an airline will benefit from other airlines having FFPs. The reason is that the rival firms will then concentrate on own loyal customers, rather than fighting for new customers. More loyalty among own customers then implies that each firm is less willing to cut prices for the rival firms' customers. The reason is that such a price cut can also lead to lower revenues from its loyal customers.

10. Although FFPs may dampening price competition, it cannot be seen as a collusive device. Each airline set prices today to maximize own profits today. Then it is not a collusive outcome, since this would be true only if the airlines set prices above those that maximize the profits in the present period. This is rather an example of non-coordinated effects, where each airline has taken measures to dampening price competition in the present period.

11. Given that FFPs lead to non-coordinated effects among oligopoly firms, it is difficult to intervene against such an anticompetitive behaviour. Article 101 TFEU is only possible if observe coordinated effects are observed and contact between the firms. Article 102 TFEU will require a dominant firm that abuses its position. In this case, an anticompetitive effect due to the measures taken individually among oligopoly firms may be observed.

12. Second, FFPs can lead to foreclosure. This can be the case if there is an asymmetry between airlines concerning their FFPs. If one airline has a strong FFP, for example because it belongs to a large international alliance, a customer might have preferences for this FFP instead of the FFP of a smaller airline not belonging to an international alliance. Given such an asymmetry, the airline with a strong FFP might capture some of the passengers that else would have travelled with the other airline. If this asymmetry is strong enough, the airline with the inferior FFP might decide to exit the market (or not enter at all). Alternatively, it might exit some of the smaller routes. If so, the existence of FFPs has reduced the number of airlines on some smaller routes. Such a foreclosure is expected to lead to higher prices on those routes.

13. This second potential anticompetitive effect of an FFP might be easier to intervene against. Given that the airline with a strong FFP is a dominant firm, it might be treated as an abuse of a dominant position.

14. So far, only the anticompetitive effects of FFPs have been explained. In the theoretical literature, there are also studies that find that FFPs are pro-competitive.² The driving mechanism is that firms

² See, for example, Caminal and Matutes (1990) and Caminal and Claiici (2007).

compete to capture customers that they can lock-in into a loyalty program such as FFP. This indicates that it is an empirical question whether there is an anti-competitive effect and how strong it might be.

15. Finally, there is an efficiency defense for FFPs. FFP will make it easier for the airline to target their most valuable passengers, for example when they have a campaign with sale of tickets. This can be beneficial for the passengers. Furthermore, FFP leads to higher product quality for the passengers such as priority check-in, access to airport lounges, upgrade and free flights. However, many of these benefits can be attained even without FFP. For example, when purchasing a flexible (and expensive) ticket the passenger will receive many of these benefits.

3. What is known about the effects of FFPs?

16. Although FFP is a very common business model in the airline industry, there are few empirical studies of the effects of such a measure. An exception is the investigations done by Mara Lederman. She exploits a natural experiment in the US airline market. An airline alliance was extended, adding more airlines, and she investigates how it affected the airlines' behaviour.

17. In Lederman (2007, 2008) it is found that the extension of the airline alliance had a significant effect on the airlines' pricing. The prices went up, in particular in the business segment and at hubs where the airline had a strong position. Although these are the only two detailed econometric studies of the effects of FFPs, Lederman refers to other analogous studies and in particular studies of the 'hub' premium that are consistent with her findings.

18. There are several studies of stated preferences for FFPs. Surveys are used to indicate whether FFPs make the passengers more loyal to an airline. These studies do indicate that FFPs make the passengers more loyal.³ If this is correct, it lends supports to the hypothesis that FFPs can be anticompetitive. Note, however, that these studies do not check whether the airlines do respond to more loyalty by raising prices.

19. To the NCA's knowledge, no empirical studies of the suction effect from FFPs. Some descriptive data from SAS' frequent flyer program EuroBonus in Denmark can be illustrative for the potential for the suction effect. In Figure 1, the distribution of bonus points for the Danish members of the EuroBonus program in 2009 is shown. On the horizontal axes each one thousand bonus points is shown, while on the vertical axes the number of members in each one thousand bonus point category is shown.

³ See, for example, Dolnicar *et al.* (2011). They refer to several studies which they claim find 'a significant effect from frequent flyer programs', see Espino *et al.* (2008), Hess *et al.* (2007), Nako (1992) and Suzuki (2007).

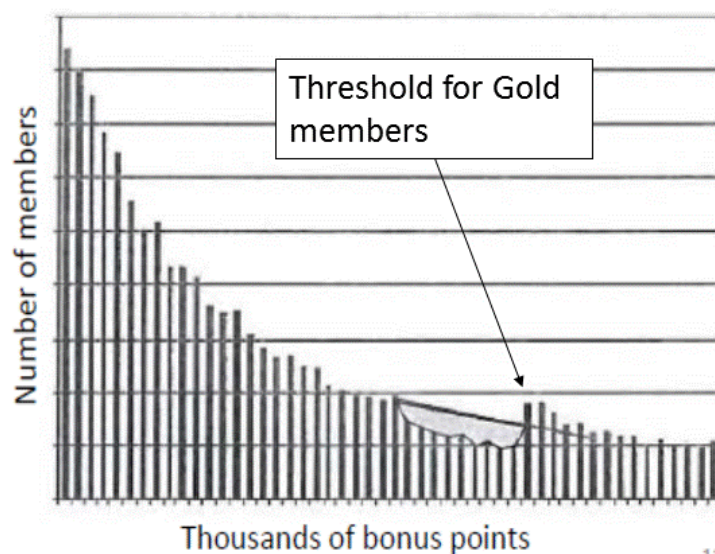


Figure 1: The Eurobonus members in Denmark in 2009

Source: Copenhagen Economics (2011), Figure 3, referred in Steen and Sørsgard (2012)

20. The figure shows that the number of members in each category is decreasing in the number of points earned. However, close to the threshold level for becoming a Gold member, there is no longer such a relationship. For example, there are less members with bonus points between 59.000 and 59.999 than between 60.000 and 60.999 points. Note that 60.000 points annually is the threshold level for Gold membership. The relationship in Figure 1 can indicate that there is a suction effect. To illustrate the effect, a straight line is drawn that can indicate how the relationship could have been if no suction effect close to the threshold level for becoming a gold member.

21. The interpretation of the Figure is that some members close to the threshold level make an effort to pass the threshold level. They can do this by either travelling more, or purchasing more expensive tickets. This indicates that there is a suction effect close to the threshold level. Some passengers are more loyal to SAS than they would have been without FFP.

22. Figure 1 indicates that the number of passengers that are changing their behavior are quite limited compared to the total number of FFP members. Steen and Sørsgard (2012) has tested whether there is a significant suction effect. In addition to Denmark, they have data for Sweden, Finland, Norway, US, AsiaPacific and Europe (except Scandinavia). They find that the suction effect is significant in statistical terms, although the number of passengers that are affected is limited.

23. More importantly, it is likely that the suction effect illustrated in Figure 1 is underestimating the effects of FFPs. If no FFP, when booking a flight a passenger will be more flexible when choosing an airline. For example, they might go for the one with the lowest price. In Steen and Sørsgard (2012) it is referred to a simple numerical example, showing that a ban on FFP would not only affect the behaviour close to the threshold level, but would affect all passengers. Then the entire distribution shown in Figure 1 would change, not only the part of the distribution close to the threshold level for a gold membership. The curve will be steeper with no FFP. This indicates that the effect shown in Figure 1 is only a tip of an iceberg, and that it will substantially underestimate the lock-in effect of FFPs.

4. The Norwegian experience

4.1 *Historical background*

24. The Norwegian Competition Authority (NCA) banned FFPs on domestic flights in Norway in 2002. First, SAS' FFP (EuroBonus) was banned. The decision was formally based on section 3-10 of the former Competition Act of 1993, which enabled the authority to intervene by decision or regulations against terms of business, agreements and actions that could limit the competition contrary to the purpose of the law. Thus, from July 2002 and onwards SAS could no longer offer frequent flyer points on domestic flights. In 2007, the ban was extended to all FFPs by all airlines on domestic flights.

25. At the time the ban was passed, SAS had a monopoly position in Norway. In September 2002, Norwegian entered on four domestic routes. From 2002 to 2011, Norwegian increased its market share dramatically in the domestic market. In 2011, the number of domestic routes Norwegian operated side by side with SAS had increased to 23, and SAS and Norwegian had equal market shares in terms of number of passengers. Also, the price of domestic flight tickets decreased in the period.

26. In 2009, the ESTA Surveillance Authority (ESA) raised the question to the Norwegian government whether the ban on FFPs could be considered a violation of the EEA Agreement by restricting the freedom to provide services. The reason was that the ban could make it more difficult for foreign airlines to enter the Norwegian domestic market because of the need to adjust their business model regarding FFPs. The Ministry⁴ did not agree that the ban could be considered a violation, and argued that the increased competition due to the ban caused more efficient routes out of Norway. In addition, they argued that the cost of foreign airlines to adjust their FFPs would be limited.

27. In 2011-2012, the NCA undertook an assessment of the economic effects of the ban on FFPs. The purpose was to investigate the need to for a continued ban. The NCA performed an extensive survey of the current domestic market situation and a comprehensive review and assessment of the economic effects of FFPs in the given market situation. Based on the assessment, the NCA concluded that there was a risk that the competitive environment would worsen considerable if the ban was repealed.

28. The 16th of May 2013, regardless, the Ministry did repeal the ban. ESA had then decided to open a case against Norway. The Ministry stated that the ban had been important to support a **new** entrant (Norwegian) and ensure competition in the domestic market. However, in 2013, there were two large players (SAS and Norwegian) and the Ministry did not see the need for a continuation of the ban. The Ministry was clear that it did not share ESA's legal assessment that the ban on FFPs was in breach of the EEA Agreement.

29. In June 2013, the Ministry asked the NCA to monitor the domestic airline market and report findings that suggest the need for remedies. This monitoring is ongoing, hence the analyses and results presented below are preliminary. Note also that the results contain sensitive information and thus cannot be presented in detail.

4.2 *The NCA's assessment of the economic effects of FFPs in 2011-2012*

30. The purpose of the NCA's assessment in 2011-2012 was to investigate the basis for a continued ban on FFPs on domestic flights in Norway.

⁴ The former Norwegian Ministry of Government Administration, Reform and Church Affairs.

31. As part of the assessment, the NCA conducted a survey to identify employers purchasing patterns for flight tickets. SAS had argued that the principal agent problem was no longer relevant due to more employers being conscious keeping travel costs low. In order to consider SAS' claim, the NCA contacted a range of Norwegian companies to map out their purchasing procedures for flight tickets. The survey showed that the employees mainly purchased tickets individually with the opportunity to earn points for private use. However, the employees freedom of action had been somewhat reduced in recent years through the implementation of guidelines.

32. The NCA also found that the value of a bonus travel increased with the airline's route network. Although Norwegian had grown rapidly and offered a FFP on international flights at the time, the NCA considered SAS' FFP (EuroBonus) to be more attractive than the one offered by Norwegian for several reasons. SAS is a network company as well as a member of Star Alliance. EuroBonus is a FFP where members can accumulate points on flights, hotel stays, car rentals and certain purchases. These points can be redeemed at either SAS or partner airlines. Furthermore, EuroBonus rewards passengers for passing different threshold levels (silver-, gold-, and diamond membership). As a member of Norwegian's FFP, on the other hand, you earn *cashpoints* on all flights with Norwegian. As soon as cashpoints are earned, they can be redeemed at any time on a flight, check-in luggage, seat reservations, cancellation insurance or ticket changes on Norwegian flights only. There are no membership thresholds, and one cashpoint equals one NOK.

33. In addition to the survey, the NCA conducted its own analyses to quantify the effects of FFPs in Norway. To carry out the analyses, the NCA obtained information on domestic routes in Norway and Sweden in addition to a range of international routes out of the three capitals of Scandinavia.

34. The NCA primarily wanted to estimate price and quantity (number of passengers) effects of the ban on FFP directly. However, this was not possible for several reasons, one being that the implementation of the ban coincided with the establishment of Norwegian. The NCA therefore had to look for indirect ways of estimating the effects of the ban on FFP.

35. One strategy the NCA pursued to estimate the (indirect) effects of the ban on FFPs in Norway was to exploit a "natural experiment" in Sweden where FFPs were removed and then reintroduced. In Sweden, from October 2001 to February 2009, it was not possible to use points (buy flight tickets) on routes with competition. Earning points, however, was allowed on all routes. The analysis showed that earning points and especially earning points to reach different threshold levels for membership, was likely to be the most important incentive in the FFPs. Thus, the Swedish regulation was not as effective as intended, and less comparable to the Norwegian ban. For these reasons, the study had little external validity and was less informative in regard to the effects of the Norwegian ban.

36. Another strategy was to analyze the effects of bonus shares (the proportion of passengers with FFP membership) for relevant routes and groups of passengers on outcomes like price and quantity. The idea was that bonus shares on domestic flights in Norway, although passengers with FFP membership could not earn points on those flights, would be informative with regard to the effects of FFPs. It turned out, however, to be challenging to find robust econometric models that could be implemented.

37. To the extent that the NCA could draw conclusions, the analyses indicated that FFPs increased the number of passengers in the business segment. The effect, however, was rather small compared to the total number of passengers.

38. In sum, the NCA found that the loyalty-building effect of the FFPs was still significant. The FFPs continued to incentivize passengers to collect all purchases from one airline. This effect was reinforced by elements such as the principal agent problem.

39. The NCA was therefore concerned that competition could be weakened if FFPs were reintroduced. Furthermore, the NCA found it reasonable to assume that a reintroduction of FFPs would cause business travelers to choose the airline with the most attractive FFP. As business travelers constitute the majority of passengers paying full price tickets, this could have significant consequences for the airline with the least attractive FFP. This could in turn cause the airline with the least attractive FFP to reduce capacity and exit particular routes.

4.3 The NCA's ongoing assessment of the reintroduction of FFPs in Norway in 2013

40. The two main purposes of the NCA's ongoing assessment of the reintroduction of FFPs in Norway are to firstly to analyze potential economic effects of the reintroduction, and secondly to monitor the domestic airline market as demanded by the Ministry.

41. The NCA's concerns in regard to the reintroduction of FFPs on domestic flights are twofold. First, the NCA is concerned that less competition (due to lock-in) may increase prices of domestic flight tickets offered by both SAS and Norwegian. Due to the suction effect, it is likely that passengers approaching a given threshold level are more likely to buy expensive flexible tickets that reward the passenger more points than cheaper non-flexible tickets. Thus, the NCA is concerned that the reintroduction of FFP could increase prices in general, and especially the prices of flexible tickets.

42. Second, given that SAS has a FFP that is considered superior to that of Norwegian, the NCA is concerned that Norwegian could lose passengers to SAS due to the reintroduction of FFP, especially passengers that buy flexible tickets (primarily business passengers). In the longer run, if Norwegian is not capable of launching an equivalent FFP to that of SAS, Norwegian may need to reduce capacity and may experience a drop in passenger income. This could in turn cause Norwegian to exit particular domestic routes and competition on those routes would be eliminated.

43. The reintroduction of FFPs on domestic routes in Norway constitutes a "natural experiment". Thus, the NCA can estimate the effects of FFPs directly by comparing outcomes of interest, like price and quantity, before and after the reintroduction. This is a great improvement compared to the NCA's assessment in 2011-2012.

44. Simple descriptive statistics, like graphs of the relevant outcomes against time, give valuable information of changes in the domestic market at the time of the reintroduction that may be attributed to FFPs. To attain estimates of the effects of the FFPs, a first step is to perform simple before and after analyses.

45. To perform the analyses, the NCA collected data from SAS and Norwegian for 13 domestic routes. The data are monthly and include information on a number of route specific variables like revenues and costs, number of passengers (PAX), available seat kilometers (ASK), sold seat kilometers (RPK), and type of flight tickets sold (flexible and non-flexible).

46. With such data, outcomes like *number of passengers* (PAX), *capacity* (available seat kilometers ASK), *capacity utilization* (available seat kilometers (ASK)/sold seat kilometers (RPK)) *share of passengers with flexible tickets* and *prices* (net passenger income/number of passengers (PAX)) can be studied.

47. The data collected are from January 2011 to the present. Thus, the period covers both a pre-FFP period (January 2011 to May 16th 2013) and a post-FFP period (May 16th to the present).

48. The preliminary results show that there are no economically significant changes in the *number of passengers*, *capacity* or *capacity utilization* for either SAS or Norwegian that may be attributed to the

reintroduction of FFPs. The *share of passengers with flexible tickets* has increased over the period. There is, however, multiple explanations for this finding. Among others, the NCA is aware that there has been changes to the ticket categories during the period of investigation. The *prices* of domestic flight tickets have changed somewhat over the period and across flexible and non-flexible tickets.

49. The NCA's preliminary conclusion is that the reintroduction of FFPs seems to have had little impact on the competition in the domestic market in the short run. This may indicate that a ban on FFPs is no longer important to ensure competition in the Norwegian domestic airline market.

4.4 *Limitations and further assessment*

50. The "natural experiment" framework that the reintroduction of FFPs represent has certain drawbacks. Within this framework, it is difficult to capture long run effects. The further away from the time of reintroduction, the less certain it is that observed changes in market trends can be attributed to the FFPs. The most certain estimates of the effects of FFPs are obtained by comparing outcomes of interest right before and right after reintroduction. Thus, even if the preliminary results show that the FFPs had little impact on the competition in the domestic market in the short run, there might be important long run effects that are not captured.

51. The NCA will continue to monitor the domestic airline market and pay close attention to trends – also in the longer run – that may lead to a dampening of competition.

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