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Growth figures for Schiphol

In response to the request of the Lower House of the States General of 9 June 1998, the Netherlands Court of Audit investigated the growth figures used in drawing up the key planning decision on Schiphol and environs and the way in which they were employed. The audit was prompted by the sharp growth in air traffic and the debate in the Lower House on whether the information used was up to date.

The key planning decision (PKB) of December 1995 had a dual objective: to strengthen Schiphol Airport's mainport function and to improve the quality of the environment in its vicinity. Schiphol was given permission to expand up to 2015 to a maximum capacity of 44 million passengers, on condition that, from 2003 (when the fifth runway comes into operation), no more than 10,000 dwellings will suffer a noise level of 35 cost units.

The actual growth rate in the period from 1990 to the end of 1997 was much higher than the average growth rate up to 2015 envisaged in the PKB. On the basis of current trends, it is unlikely that the environmental targets for 2015 contained in the PKB will be met.

The PKB on Schiphol and environs was drawn up on the responsibility of the Minister of Transport, Public Works & Water Management, the Minister of Housing, Spatial Planning & the Environment, and the Minister of Economic Affairs. The growth forecasts on which the environmental calculations were based were drawn up on the responsibility of the Minister of Economic Affairs.

The Netherlands Court of Audit's investigation looked at the input data for the growth models and their translation into forecasts, decision-making in the Schiphol mainport and environment (PMMS) steering committee and the ministries, the realism of the development strategy and its agreement with the mainport and environmental objectives. The audit questions formulated by the Lower House and the replies by the Netherlands Court of Audit are included in their entirety in appendix 1 to the report.

Input data for the growth models

The audit showed that relevant factors, such as KLM's market strategy, were not included in the growth model. Indications by KLM that its market strategy could have major consequences for Schiphol were ignored. The model also proved unable to incorporate interim developments that occurred after the 1990 reference year. This meant that the forecasts took no account of important changes in supply at Schiphol. The growth models therefore covered a smaller portion of the actual situation than they implied. It was not known to what extent neglected factors would affect the final figures on passenger numbers, freight volume and flight movements in 2015. In view of this uncertainty, due caution should have been exercised when using the relevant figures as input data for environmental calculations.

Forecasts

The translation of input data into forecasts generally proceeded in an orderly and auditable manner, but the considerations underlying a number of assumptions are not recorded in any documents. This meant that the Netherlands Court of Audit was unable to assess whether they were all realistic.

The effect of one factor - changes in flight frequency - on the forecasts was not dealt with consistently. Model results in which this factor had a downward effect on the forecasts were taken into account whereas those in which it had an upward effect were not. The Netherlands Court of Audit could find no explanation for this.

The working group on the inventory of economic effects (IEE) compared the results of the forecasts with actual growth in the 1980-1991 period. The comparison was intended to show a continuation of a historical trend. However, the difference between the historical growth rate of 5% and the projected growth rate of 3.5% calculated by the IEE in the European Renaissance/European Liberalisation (ER/ELi) scenario showed that the forecasts will not prove correct unless there is a change in current trends. This is also suggested by a comparison with the average annual growth rate of 7.9% during the previous 25 years.

The rapid growth that had taken place up to 1995 continued in 1996, and resulted in a much larger volume of traffic than the IEE had made allowance for. The Netherlands Court of Audit therefore believes that the forecasts and the underlying input data were no longer up to date at the time of the adoption of the PKB (1995) and the instruction on Schiphol Airport (1996).

Some of the input data were already obsolete at the time they were entered. The calculations of external safety up to 2015 were based on an average take-off weight of 80 tonnes, whereas the available Schiphol statistics showed that the average take-off weight in 1990 was already 88 tonnes. The calculations on external safety and odour nuisance should have been treated with caution since they had been drawn up with the help of models that were still clearly deficient.

Decision-making in the steering committee and ministries

The decision-making process for the drawing up of the PKB was aimed at the dual objective agreed earlier in a covenant with various parties (the action plan for Schiphol and environs, 1991). The agreements it contained restricted policy freedom in respect of the PKB procedure. Moreover, the time available to adopt the PKB was very limited.

On the basis of the IEE forecasts, the PMMS steering committee decided in April 1993 to focus only on the ER/ELi scenario because only in that scenario could both the mainport and environmental objectives be achieved. The possibility that other scenarios might prove correct was disregarded. The steering committee disregarded the fact that the scenarios did not represent different options from which a choice had to be made, but were of equal value and merely indicated what would happen

under different circumstances. The development strategy should have taken account of all three scenarios.

The steering committee's decision on the transport forecasts was inconsistent since it assumed a *fall* in air fares, whereas the calculations for substitution by the high-speed train assumed an *increase*. This inconsistency is also reflected in the PKB, which is based on the same assumptions.

In its report, the IEE advisory committee issued a warning about the results of the forecasts. However, this was after the steering committee had already taken its decision. The steering committee's minutes give no indication that the advisory report was discussed, and it therefore had no real influence on the decision. The report was appended to the IEE report and the ministers and the States General therefore took cognisance of it.

Agreement of development strategy with dual objective

The mainport threshold was formulated as a strict criterion for operationalising the dual objective. It specifies the minimum number of passengers and volume of freight that Schiphol must transport in order to operate as a mainport. It was made dependent on Schiphol's home carrier's demand for capacity. Despite its awareness of KLM's long-term demand for capacity, the IEE adopted the lowest value for this factor. The steering group and the government were thereby given the impression that in the ER/ELi scenario the mainport objective could be achieved with this low value. The IEE knew that KLM's demand for capacity was higher. On the basis of the ER/ELi scenario, this means that achievement of the mainport objective may be jeopardised.

The PKB makes a whole series of assumptions, with a view to achieving the dual objective, thereby reducing the room for manoeuvre in implementing the policy successfully. This means that the PKB entails a number of risks. It was not entirely supported by the results of the environmental impact statements. Even within the scenario on which the development strategy was based, the feasibility of the environmental objective depended heavily on the implementability of various related policy measures, such as substitution by rail. The PKB also relied heavily on

the enforcement of noise zones and monitoring. However, the effect of these factors was still very uncertain.

Higher growth than forecast in the ER/ELi scenario would jeopardise the environmental objective. By working on the basis solely of the ER/ELi scenario, there was little room for manoeuvre if growth turned out to be higher than expected. The meteorological margin, which was intended for coping with the effects of changing weather conditions, was later used for extra aircraft movements, which increased the risk of exceeding the noise zone targets.

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Most realistic or most desirable scenario?

The Netherlands Court of Audit concludes that it was decided to base decision-making on the ER/ELi scenario not because it was the most realistic scenario but because it was regarded as the most desirable, in view of political attitudes. The forecast was: 'it might rain or the sun might shine'. It was decided to opt for fine weather, to ignore the raindrops that were already falling, and to set off without an umbrella.

Information on unrealistic development strategy

Since early 1994, the environment ministry possessed information which gave rise to doubts within the ministry as to whether the development strategy then in use was still realistic. This information was also available to the environment minister. The steering committee's minutes give no indication that the environment ministry raised the question of this information in the committee.

Through the PMMS steering committee, the transport ministry, environment ministry and economic affairs ministry had the Schiphol Airport forecasts at their disposal in 1994. They predicted higher growth than the IEE forecasts. However, the forecasts did not prompt the ministries to adjust the PKB figures. The transport minister stated during consultations with the Lower House that neither the PMMS steering committee nor the ministries concerned had any other information. The minutes of the PMMS steering committee show that the Schiphol Airport forecasts were not discussed. This is in accordance with what the minister later told the Lower House.

The PMMS steering committee discussed the actual rapid growth of Schiphol airport during the preparation of the PKB only very occasionally and in passing. When the government position on the PKB was published (February 1995), the Lower House was informed of the rapid growth in the number of aircraft movements at Schiphol. The actual annual growth rate in the years 1990-1994 (7.9%) was not mentioned, but only the lower average annual growth rate in the years 1980-1994 (4.7%). For the 1990-2015 period, the PKB assumed an average annual growth rate of 3.1%.

Recommendations

To improve the quality of policy information, one of the Netherlands Court of Audit's recommendations is that factors that have been disregarded in the calculations should be presented as accurately as possible for decision-making purposes. This is extremely important for the interpretation of the results. The Netherlands Court of Audit would also point out that, in cases where environmental, commercial and social interests are at stake simultaneously, ministers should have sufficient information on the relevant strategies. In the Netherlands Court of Audit's opinion, the decision-making process will benefit if, before long-term objectives are drawn up, the risk of their not being achieved and the attendant consequences are first analysed. Such risks should be taken into account when formulating feasible objectives. This is particularly important in a dynamic sector such as aviation.

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Reaction of the ministers

The transport, environment, and economic affairs ministers replied to the report jointly on 16 October 1998. They referred, inter alia, to the complexity of the process and the context in which policy was formulated. They stated that greater account should be taken of this context in further decisions on the future of aviation. The ministers are of the opinion that the Netherlands Court of Audit has made useful recommendations in this regard.

As regards the fact that the growth-generating effects of factors involving KLM were not taken into account in the calculations, the ministers pointed out that at the time the IEE was set up, KLM did not have a clear market strategy.

The ministers endorsed the Netherlands Court of Audit's conclusion that the policy measures in the PKB would prove inadequate if growth turned out higher than expected.

The ministers also commented on the Netherlands Court of Audit's conclusion that other forecasts were available in 1994, whereas the transport minister, during consultations with the Lower House, stated that no other information was available. According to the ministers, Schiphol Airport itself did not attach any conclusions to the forecasts, partly because it had stated in a press release that it adhered to the noise limits. The ministers referred to the statement made by the transport minister during consultations in the Lower House: 'As far as I am aware, there is no really relevant, new information.' In the Netherlands Court of Audit's opinion, the Schiphol Airport forecasts were definitely relevant to decision-making.

The ministers did not comment on the Netherlands Court of Audit's conclusion that since early 1994 the environment ministry had possessed information which had given rise to doubts in the ministry as to whether the development strategy then in use was still realistic. Nor did they comment on the statement that there was hardly any discussion in the PMMS steering committee on the rapid growth of air traffic at Schiphol and Schiphol Airport's alternative forecasts during the preparation of the PKB.

The ministers generally endorsed the recommendations and agreed with the Netherlands Court of Audit that different scenarios should be taken into account when developing policy. The ministers pointed out that not all scenarios could be accommodated at the present location, due to the strict limits that had been laid down. That is why the government launched the project on the future of Dutch aviation infrastructure (TNLI) in September 1995. In reply, the Netherlands Court of Audit would point out that TNLI focuses on the period after 2015. The current problems show that the government should have taken greater account of different scenarios in the PKB - which focuses on the period up to 2015. The Netherlands Court of Audit also believes that in view of the rapid growth in air traffic and the risks in the PKB that have been identified, it is perhaps too late to try and avoid serious problems at Schiphol by means of the TNLI project. The Netherlands Court of Audit would like to highlight this danger.