

CONFERENCE ON THE ECONOMICS OF AIRPORTS AND AIR NAVIGATION SERVICES

(Montreal, 19 - 28 June 2000)

Agenda Item 5.2: Elements for consideration with regard to ICAO policy

AIR NAVIGATION SERVICES (ANS) AND ECONOMIC PRICING

(Presented by the United States of America)

SUMMARY

The traditional approach to cost recovery of air navigation services has been to derive a unit charge on the basis of average costs (dividing total cost by total units of service). By adopting an economic approach to setting charges, some ANS providers may seek to generate efficiency benefits both for the service provider and the service user. The use of economic principles in designing and implementing charges may generally be consistent with Statements by the Council. Currently, several member States may have already begun using these principles in the setting of charges. However, this approach should be used with great caution. There are a number of implementation challenges that must be addressed prior to establishing charges.

The Conference is invited to review the conclusions of the Secretariat that the use of economic principles in deriving and implementing charges is consistent with Statements by the Council as written. Given the outcome of this review, the Conference is also invited to take a number of actions to ensure that ICAO guidance reflects this conclusion and that general ICAO charging principles are respected given an increase desire to use economics in the establishment of ANS charges.

1. Introduction

1.1 ICAO provides broad guidance on how to determine the cost basis for ANS charges, how these costs should be allocated, as well as some examples of acceptable cost recovery methods.

1.2 The traditional approach to cost recovery has been to derive a unit charge on the basis of average costs (dividing total cost by total units of service). While the traditional approach allows for full cost recovery, it does not necessarily recover costs in a manner that maximizes the economic benefits of ANS. An economic approach to setting charges has the potential to result in a better allocation of current and future ANS resources. The primary rationale for adopting economic principles in setting charges is that users of ANS respond to changes in ANS charges just as they do to other changes in the cost of operation. By adopting an economic approach to cost recovery, some ANS providers seek to set charges so that changes in user behavior are optimized and that the users will obtain the maximum benefit from the service they receive. Consequently, in some situations, both the users and providers of ANS could, in principle, be made better off if an economic approach to setting charges is adopted.

2. Discussion

2.1 The working paper Study on the Application of Economic Principles Including Marginal Pricing in Setting Airport and Air Navigation Services Charges presented by the Secretariat to the Council concluded that using economic principles to determine charges appears generally consistent with Statements by the Council. This document emphasizes the need for ANS providers to recover costs in such a way 1) that the charges reflect the cost of service provided, and 2) that cost recovery is equitable. While the formulas used to recover costs vary among service providers, the use of distance and weight in determining the charge is quite common. The distance parameter reflects the amount of service provided while the weight parameter reflects the value of the service received. The Manual on Air Navigation Services Economics (ANS Manual) notes that both parameters play a significant role in cost recovery, but that the weight or “willingness-to-pay” parameter should be taken into account, less than proportionately. This is typically accomplished by using the square root of weight in the charging formula. However, the ANS Manual recommends against using weight in the allocation of costs among user groups.

2.2 Inclusion of a value of service parameter such as weight, despite its secondary role, appears to integrate the cost recovery guidance promulgated by ICAO with general economic principles of setting charges. Deriving charges based on economics appears to be a variation on the principles discussed in the ANS Manual. Several member States may have already begun to adopt an economic approach to setting charges.

2.3 Implementing an economic approach to cost recovery presents challenges both with regard to data and methods. Using economic principles to derive charges should be approached with great caution. Cost accounting systems rarely distinguish rigorously between the treatment and allocation to users of variable and fixed costs. In contrast, the treatment of fixed costs and their allocation is a central concern when setting charges based on economic principles. Furthermore, determining marginal costs is typically a statistical exercise that may or may not be possible given the availability of cost accounting data and the nature of the service provided. The identification of fixed, variable, and marginal costs is a prerequisite for the sound use of economic principles in establishing charges. Consequently, some ANS providers may be in a better position than others to develop a charging structure based on economic principles.

2.4 If ANS providers are permitted under ICAO guidance to use economic principles in setting charges, transparency in establishing costs and the resulting fees should be a top priority and greater consultation with their users will likely be necessary.

2.5 Furthermore, the ANS Manual (Chapter 5) should be supplemented with additional guidance to limit any potential monopoly abuse, especially if economic pricing is used to manage capacity (e.g., peak-period pricing). In particular, it should be reiterated that an ANS provider should not recover more than the

cost of service provided (plus a reasonable rate of return on invested capital). Also, service providers should expand capacity where user price responses are sufficient to fund additions.

2.6 The question of whether ANS services are provided on a non-discriminatory basis and does not result in cross-subsidization has generally been examined in terms of average costs. This approach may no longer be appropriate if charges are determined based on economic principles. Setting charges to manage capacity or to generate economic efficiency by appropriately reflecting differences in the cost imposed by different categories of users can require different charges for different users. This raises issues regarding how to appropriately define user categories and measure discrimination and cross-subsidization within an economic charging regime.

3. Actions by the Conference

3.1 The Conference is invited to:

- a) review conclusions of the Study on the Application of Economic Principles including Marginal Pricing in Setting Airport and Air Navigation Services Charges to determine whether the use of economic principles in designing and implementing charges systems for ANS is consistent with Statements by the Council as written;
- b) as appropriate based on the review proposed in item (a) above, recommend that the Council supplement the discussion of cost recovery found in the ANS Manual to ensure that the use of economic pricing for capacity management does not result in over-recovery (revenue derived from such a charging system should be used to expand constrained capacity or invest in infrastructure as needed and where appropriate);
- c) urge those providers that adopt economic pricing principles to report both the level and allocation of fixed and variable costs so as to ensure a high level of transparency. These providers should also be encouraged to consult with users regarding how marginal cost was estimated and how it was applied to establish the charging structure; and
- d) request the Council to examine whether the traditional approach to measuring discrimination and cross-subsidization needs to be revised to assure that these principles are respected given an increased desire to use economic principles in establishing charges.

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