SUMMARY

1) Problems exist with market failure in general aviation.

2) Cost-benefit analyses are weak, and are not a good way to get the answers, partly because they are difficult to do, and partly becauae the decision makers in the political arena do not necessarily use them in the decision making process.

3) General aviation at the local level is weak politically, and EIS must help out here. The beneficiaries of general aviation must be sought out and kept informed in terms they can understand and identify with.

ASSESSMENT OF THE ROLE OF GENERAL AVIATION IN THE NATION'S ECONOMY

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Introduction and Summary

Two aspects were addressed, based on a recent study undertaken by Gellman Research Associates, Inc. for the Federal Aviation Administration, namely:

1) Identification of direct contributions of general aviation (GA) to both gross national product (GNP) and gross national income (GNI) sectors of the national economy.

2) The effects upon the national economy should GA cease to exist, and in particular, productivity and consumption effects.

The results of the study were:

GNP + GNI contributions of the order . . . . . $3.7 billion

Consumer benefits . . . . . $1.0 billion

General Aviation Contribution to GNP and GNI

Inherent to the study were the following three characteristics:

a) The study was designed to be consistent with the national accounts kept by the Department of Commerce to facilitate comparison of general aviation's contribution to the entire GNP of the country.
b) Only direct contributions, and no multiplier effects were to be considered in the analysis. Argument in support of this notion is given later.
c) The objective of the study was to develop a consistent method of allocating general aviation's contribution to GNP and GNI.

The distinction between GNP and GNI was highlighted by citing the example of the fixed base operator (FBO) who buys one gallon of fuel for say $1.40 and then sells it for general aviation use for $1.50.

From a GNP perspective:

a) If he sells the one gallon to a family who uses the fuel for say recreational purposes, then in essence, that family constitutes a final demand sector, rendering the full $1.50 contribution to GNP allocated to the general aviation sector.
b) Alternatively, if he sells the one gallon to a farmer for his production of rice say, the final demand sector, i.e., consumer, gets the final product from the supermarket, and thus the contribution to GNP is allocated to the supermarket instead of the farmer of the FBO.

From a GNI perspective:

a) Regardless of whom the one gallon was sold to, GNI merely identifies the value added to the commodity each time it changes hands. In this instance the GNI contribution of 10 cents/gallon ($1.50-$1.40) is allocated to the FBO, and is the basis for his income tax liabilities.

Clearly then, GNI is the better estimate to reveal what is going on within the general aviation sector.

Given this allocation, GNP and GNI contribution do not match up. For FBO's, contributions to GNP are greater than to GNI. This is because FBO's, who are in essence retailers, generally buy 'finished products,' which they then mark-up in price and sell. Such mark-ups are usually small when compared to the current value of the product and hence do not add much to this value.

Extending this notion to encompass general aviation at large, our report shows that in 1977 total sales of general aviation amounted to about $9.0 billon. Comparing, for the same period, the GNI contributions by general aviation and the average manufacturing industry, it is evident that while the latter on average added approximately 35 percent to the value of the goods it sold, general aviation added approximately 42 percent to the value. Such measures could serve as useful indicators to help buttress discussions regarding the self-sufficiency of general aviation, or whether there are unique production enterprises involved in general aviation which cannot be purchased elsewhere.

The notion of considering direct contributions only in the study, as opposed to a multiplier analysis, is motivated by the fact that the latter is based upon marginal analysis, and hence is appropriate only to small perturbations in the general aviation industry. Small perturbations here would imply the impact resulting from small changes in the industry. The point in the second question though, is not about small changes in the general aviation industry, but indeed what if this entire industry ceased to exist. This would certianly not be a marginal impact. To further exemplify, if general aviation did not exist there would be at least some, all be it imperfect, substitute, and thus the overall impact on GNP would not be 2 or 3 times general aviation sales, but would be somewhat smaller than this. Thus, instead of using multiplier analysis, appropriate substitutes to general aviation are identified and considered in determining the effects on the national economy that would accompany the loss of general aviation.

What If General Aviation Ceased to Exist?

The effects here were segregated into two outputs, namely the effects on productivity and consumer benefits.

Productivity benefits basically address the question of how much income would producers of different goods and services in the country lose if general aviation ceased to exist? This is illustrated via a substitution model between two large cities. Automobile travel was considered to substitute for general aviation on short trips and commercial aviation for longer trips. Then using official airline guide data, the model analysis predicted some $850 million in productivity losses if general aviation did not exist.

Considering the size of the general aviation industry, the impact on GNP resulting from the model analysis, and deemed to be conservatively on the low side, is substantially large. This procedure was extended to include the effects of general aviation loss to other industries such as agriculture, off-shore oil recovery activities, and the like. In total, the impact on productivity amounted to about $1.3 billion. It follows that the impact of general aviation on the national economy, relative to its size is fairly dramatic.

The effects on consumer benefits were estimated via a 'consumer surplus analysis', which endeavored to estimate the benefits that consumers derive over and above the general aviation goods and services they pay for. This figure was estimated to be of the order of $1.0 billion.

This result is also considered indicative of the widespread recreational benefits that the community derives from general aviation.

Finally, as a sidelight to the study, the analysis applied to the business and executive side enabled the establishment of an aircraft profile: when each would and would not be profitable to use. These results depict economic returns to owners or users of general aviation aircraft as a function of flight distance.

One of the major objectives of the study was to serve as a source of information for aviation. Since the nature of these was not known at the time, this study provides a large volume of data which hopefully will be useful in further work.

OVERVIEW OF BENEFITS OF GENERAL AVIATION

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Summary

The first part of this paper discusses an earlier attempt, some ten years ago, by R. Dixon Speas, at determining the effects of general aviation on the national economy; the second part highlights the benefits of general aviation to individual organizations and the community at large.

The Speas study concluded that the direct economic impact of general aviation was about $3.0 billions per annum, and the indirect impact much higher. Moreover, the study outlined many intangible benefits, including the value of time saved, the emergency saving of human life and property, national defense, and general business and industry stimulated by general aviation travel, most of which cannot be specified in monetary terms. General aviation growth over the last decade supports the view that the general conclusion of the Speas study is equally valid today.

Impact of General Aviation

The following quotation, made by Mr. Drew Lewis, then Secretary Designate of the U.S. Department of Transportation, in his confirmation hearings before the Senate Committee on Commerce, Science and Transportation, provides an introductory perspective on general aviation today.

> "The industry in itself provides a great impact on our economy in general. The airlines deregulation in itself is going to bring about a greater need for general aviation. To the extent possible, I am supportive of general aviation. I think it is an extremely important mode of transportation."

To date, some of the attempts to quantify precisely the overall economic impact of general aviation, have been instructive, but not really conclusive. An extensive study done over ten years ago by R. Dixon Speas concluded that the direct exonomic impact of general aviation was about $3.0 billion per annum, and the indirect impact much higher. Therefore when Berardino cites a figure of $3.0 billion for 1977, it makes one wonder what is being counted.

The Speas report also concluded by stating:

> "Upon considerating the many intangable ways general aviation has an impact on the nation's economy, . . . that quantifying even a very few of the most important items, is reduced to judgment, because of the very diversity that maims the industry. . . . It would require a singular research effort of considerably greater proportion than the present one to accomplish the task. It is questionable whether further research is warranted, or even would be fruitful."

The Speas study outlined many ways that general aviation has a beneficial but intangible and immeasurable, impact upon the economy, e.g., the value of time saved, the emergency saving of human life and property, national defense, general business and industry stimulated by general aviation travel and the like. Speas concluded that in the final analysis most cannot be specified in monetary terms, notwithstanding the fact that many of the components stem from economic factors. In view of the considerable growth of the general aviation industry over the past ten years, the general conclusion of the Speas study appears equally valid today.

The following comments on the contribution of general aviation to the overall economy support the above notion:

1) The general aviation industry had a record year in 1980 delivering over $2.4 billion in new aircraft. This figure is expected to exceed $3.0 billion in 1981.

2) General aviation continues to be a consistent contributor to the U.S. balance of trade. Some 30 percent of the industry's production was exported in 1980, exclusive of the estimated millions of dollars that go overseas for engines to foreign manufacturers, avionics and other components where the U.S. industry has a leading world share.

3) A survey recently released by Airport Services Management magazine, showed that service and sales of aircraft by FBO's at U.S. airports reached $10.7 billion in 1980.