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IMPACT ON AIR TRANSPORTATION OPERATIONS AND MAINTENANCE RESEARCH FROM LOSS OF CAB DATA VIA DEREGULATION

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There is growing concern in the aviation research community regarding the potential impact of the loss of the data collected by the Civil Aeronautics Board from the airlines when the CAB terminates under the provisions of the Airline Deregulation Act of 1978 (P.L. 95-504, October 24, 1978). Heavy reliance is placed on these data by government agencies, aircraft manufacturers, airlines and others in the aviation community in planning the nation's airport and airspace systems, in the design and marketing of commercial aircraft, in fleet, route and schedule development, in financial analyses and in forecasting future markets and needs.

In view of the importance and widespread interest in these data, the Transportation Research Board (TRB) Committee on Air Transport Operations and Maintenance sponsored a one-day session at the 1980 Annual Meeting to address the various aspects of the problem. The participants in the conference session represented a wide spectrum of the users and suppliers of the data.

Session Moderator -	Mr. E. I. Pina Boeing Commercial Airplane Company
Civil Aeronautics Board -	Mr. Robin A. Caldwell
U.S. Department of Transportation -	Dr. Alexander Hoshovsky
International Civil Aviation Organization -	Mr. Roderick Heitmeyer
Aerospace Industries Association -	Mr. Allen H. Skaggs
Air Transport Association -	Dr. George James
Department of Justice -	Mr. Elliott M. Seiden New York

Financial Institutions - Mr. George E. Moyer, Jr.
Citibank

Academic Institutions - Professor John W. Drake
Purdue University

Data Suppliers - Mr. Duane S. Edmonds
Boeing Commercial
Airplane Company

TRB Aviation Demand
Forecasting Committee - Mr. Kenneth R. Velten
McDonnell Douglas
Corporation

Data Suppliers on Panel:

Mr. R. K. Klaas - American Airlines

Ms. Peggy Kueffer - I. P. Sharp

Mr. John Cox - The Computer Company

The primary objectives of the conference session were:

1. To define the problems which might arise for the different users from a discontinuation of the data.
2. To identify the problems that the CAB, as provider of the data, is currently experiencing and to learn about current planning for continuation of those data which are judged to be required in the future.
3. To understand the airline views on the requirements for data in a deregulated environment.
4. To develop a set of recommendations that might be a catalyst for the development of a responsible government, airline and industry plan for selecting the vital data, eliminating unnecessary data, and identifying the most cost effective way to continue to make the required data available to the industry.

Each participant presented the views (see abstracts) of their segment of the industry. The following general views were expressed:

Non-Government Users - Stated that the data have proven to be extremely useful for research activities, aircraft and engine design decisions, financial analyses, and marketing studies. Data have contributed significantly to the development of the U.S. as the world leader in the aviation industry. Anticipated severe problems if the data are no longer available. Suggested that the data have become a public necessity.

Government Agencies - Future government responsibilities and functions will require a substantial amount of data. Considerable consolidation of the data to reduce the reporting burden is anticipated. Agencies have formed committees to address essential data requirements to support future activities. Urged non-government users to develop their essential data requirements. Suggested that congressional action would be required to keep the data reporting as a requirement and to provide adequate funding. Acknowledges the U.S. commitment to continue reporting data to the International Civil Aviation Organization (ICAO).

Air Transport Association - Stated that the airlines should not provide data unless required by law. If the industry is truly deregulated, data reporting requirements should be no greater than for other non-regulated industries. A committee has been formed to develop essential data requirements for users within the airline industry.

Department of Justice - Stated that if the airlines are going to collect and share, they will probably need to make the data available to the public if they are to avoid antitrust implications.

International Civil Aviation Organization - Stated that U.S. carrier data must be reported by treaty. If the U.S. were not to report their data to ICAO, there would be serious consequential effects on the reporting by other member countries.

A panel consisting of the presentors and representatives from the three major data suppliers addressed questions from the audience. The consensus of the panel and audience was that the data users, within the industry, need to establish a task group to work with the government agencies and the Air Transport Association for the purpose of developing essential data requirements.

The TRB Committee on Air Transport Operations and Maintenance suggests that an intra-industry committee could be useful in working toward achieving these objectives if it could:

1. Determine the aviation industry's requirements for data.
2. Work with the Civil Aeronautics Board and the Department of Transportation to define government requirements.
3. Identify cost effective ways to provide the required data.
4. Develop a plan for ensuring the continued availability of essential data including budgetary and legislative requirements.

A summary of the views expressed by each of the participants in the conference follows.

Summaries of Individual Presentations

CIVIL AERONAUTICS BOARD (CAB) Robin A. Caldwell
Chief, Data Systems
Management Division
Office of
Comptroller

The CAB is vigorously pursuing the mandates of the deregulation legislation. However, this pursuit does not include destruction or dismemberment of essential air transportation data systems or the forced loss of necessary information. There appears to be sufficient lead time to identify the true data needs of future federal air transportation programs and the needs of outside users and to develop alternatives to ensure that necessary and essential air transportation data are available for bona fide uses.

In each instance where a regulatory program (or function) transfers, the CAB envisions that the regulatory resources, necessary to continue these programs will also transfer. A regulatory information and user services task force has been formed to plan for the transitioning of CAB information programs.

Most of the findings of the CAB staff are to continue existing data systems with appropriate adjustments, based on CAB program requirements, and with a view toward outside users. After 1983 and in the future, the CAB sees the DOT (and perhaps Department of Justice) needs and the CAB programs to be transferred at sunset as the major arguments for the continuation of many of the data systems beyond 1984.

The CAB foresees an increased involvement of the private sector in the processing of data. The data costs to the users would most probably be higher but the timeliness and quality of the data could be maintained.

The CAB feels they are in an excellent position to plan for the future of necessary air transportation data systems. They are developing time phased plans for regulatory program needs and are coordinating with DOT.

The CAB is committed to a continuation of the collection of financial and statistical data needed to fulfill the U.S. reporting obligation to the International Civil Aviation Organization (ICAO).

DEPARTMENT OF
TRANSPORTATION (DOT)

Dr. Alexander Hoshovsky
Acting Director
Office of Resources
Management

The DOT needs data to conduct reliable and timely analysis of the air transportation industry; support development of public policy; understanding current and future trends relative to airline economic, finance, technological, social and institutional factors; and recommend DOT actions on both national and international airline regulatory and public issues. The DOT uses most of the CAB data base as well as Immigration and Naturalization Service, airline schedule, and IATA North Atlantic traffic data.

The DOT has initiated the following actions to ensure continuity, timely availability, and accuracy of required airline data:

1. Requirements study initiated to establish needs on a mission basis.
2. DOT Aviation Data Working Group formed under DOT Statistical Policy Coordinating Group to provide for communications, coordination and transition planning with the CAB.
3. CAB/DOT umbrella agreement being established under which specific work agreements and detailed transition plans can be developed.
4. DOT preliminary position on data needs has been communicated to CAB transition planning group. This position is limited to satisfying DOT needs and provides no direct consideration for the public needs.

INTERNATIONAL CIVIL
AVIATION ORGANIZATION
(ICAO) -

Mr. Roderick Heitmeyer
Chief, Economics Section

ICAO, a specialized agency of the United Nations, maintains a comprehensive data base of aviation statistics to serve its 145 contracting states and other users. Each contracting state is obligated to provide ICAO with statistics in accordance with the 1944 Chicago Convention. The following are the main data submitted to ICAO by the CAB for the international and domestic air carriers:

1. Monthly traffic statistics for cargo and passenger services.
2. International on-flight origin and destination data for passengers and cargo for the months of March, June, September and December.
3. Traffic and capacity by flight stage data for scheduled international operations for the months of March, June, September, and December.
4. Aircraft fleet, fleet utilization, personnel data annually.

5. Profit and loss data at detailed level, and a balance sheet and statement of retained earnings.

The ICAO program represents the only worldwide and comprehensive collection of civil aviation statistics. The U.S. carrier data is an important part of the ICAO data base since these carriers represent 38 percent of world scheduled traffic, 17 percent of international scheduled traffic, and 39 percent of world scheduled airline revenues (excluding U.S.S.R. domestic operations). The value of the ICAO program would therefore be severely reduced if U.S. carrier data were not available. Many users, including ICAO, would find it impossible to carry out many functions without it.

Moreover, if the U.S. were to fail to meet its reporting requirements, there would be consequential effects on the reporting by other states. ICAO cannot specify how the data will be reported but can specify what data is to be reported.

AIR TRANSPORT ASSOCIATION - Dr. George W. James
Senior Vice President
Economics and Finance

At this time the ATA is not firm in its position as to what should or should not be reported under deregulation. The financial officers felt they need only about 20 percent of the Form 41 data. The ATA is working closely with the CAB and are encouraged by the work Mr. Caldwell's task force is doing.

Two types of data are being submitted to the CAB, financial on a quarterly basis and statistical on both a monthly and quarterly basis. These data are collectively known as the Uniform System of Accounts and Records.

The data were initially collected for the purpose of awarding new routes, fare level changes, and the allocation of subsidy. In essence the data were collected to protect the public. If the airlines are truly deregulated, in terms of routes and fares, the data collected for those regulatory functions should no longer be required.

The economics and financial people within the airlines do not want to report all data but the users within the airlines see a continuing need. A special task force of suppliers and users has been established to develop the airlines' needs for data.

The airlines do not believe that data should any longer be supplied to the government just because:

1. It is nice to have.
2. You might need it someday.
3. It has always been provided.
4. There is some future expected regulation.
5. It is redundant to the needs of some other agency such as the EPA or consumer protection agencies.

The ATA recognizes that the data are needed to support the reports to Congress required by the deregulation act, for international regulatory functions, essential air service decisions which go on for ten years, and for the FAA airport and airways planning functions.

DEPARTMENT OF JUSTICE (DOJ) - Mr. Elliott M. Seiden
Chief, Transportation
Section
Antitrust Division

The Department of Justice does not have any needs for CAB data beyond sunset except for the purpose of pre-merger notification.

Mr. Seiden addressed the antitrust implications regarding the collection of marketing and economic data. Many industries collect data through their associations and share the data. The Antitrust Division does not render advisory opinions, and Mr. Seiden stated that his remarks were certainly not intended to be, nor should they be interpreted as an endorsement of any particular data dissemination program. He further stated that legal counsel should be involved in the formulation of an information exchange program to assure that antitrust risks associated with the program are avoided. The Antitrust Division, through its Business Review Procedure, does provide an avenue for the review of actual proposed business transactions.

Two general antitrust questions must be raised relative to data collection and dissemination programs, namely:

1. Whether the purpose or effect of disseminating the data is to restrain competition unreasonably.
2. Whether restrictions placed on access to the data unreasonably foreclose competition or confer an unfair competitive advantage.

The Sherman Act is the starting point for antitrust analysis. Agreements which fix prices or agreements among competitors allocating geographic markets or customers have been found to be illegal. There are certain types of statistical information that can be exchanged without violation of antitrust such as, data which pertains to the condition of the industry.

One question addressed by Mr. Seiden was: "Can restrictions be placed on access to the data collected and disseminated by the airline industry?" The answer was: Where information has competitive significance, it should be made available to all competitors and other interested persons since to collectively withhold such advantageous information may raise questions of unfair competitive advantage or improper use. As a general matter the wide distribution of data may help dispel any suspicion that the information is to be used for illegal purposes.

One aspect of information disclosure relates to international data. The Civil Aeronautics Board has placed restrictions on access to international data contained in reports submitted by U.S. carriers to the Board. In reading over the general CAB materials on this subject, it appears that the main concern is to avoid placing United States' aviation interests in jeopardy by disclosing to foreign governments and airlines important information concerning U.S. markets when similar information concerning foreign markets is not provided to the United States on a reciprocal basis. Indeed, CAB rules provide that when such reciprocity does exist, the data may be disclosed to foreign governments and carriers. Thus, the Board has properly determined that international data should be disclosed only to U.S. carriers participating in the international data survey, to other persons upon a showing that the release of the data will serve specifically identified needs of U.S. users which are consistent with U.S. interests, to agencies of the U.S. government, and to foreign governments and foreign users as provided in formal reciprocal arrangements between the foreign and U.S. governments for the exchange of comparable data.

Based on the foregoing, it is clear that the restrictions on dissemination of these data presently imposed by the CAB are in furtherance of United States national policy in conducting aviation

relations with foreign countries, and are obviously not designed to restrict competition among particular airlines. If the Department of Transportation does not assume responsibility for the collection and dissemination of these data after the Civil Aeronautics Board sunsets, and the airlines wish to continue collecting these data themselves, it would appear that the imposition by the airlines of restrictions similar to those now imposed by the CAB need not raise an inference that the restrictions were imposed for anticompetitive purposes.

In making this observation, however, two important caveats must be noted: (1) presently, the CAB permits access to the data by any foreign air carrier whose home government makes data available to the United States on a reciprocal basis. Thus, when it is said that future imposition by the airlines of the restrictions now imposed by the CAB need not raise any inference of an antitrust violation, this pertains particularly to the continuation of this reciprocity aspect of the present system; and (2) this observation is necessarily based upon future conduct, the exact nature of which is now unknown and unknowable. Under the ICAO treaty there is a requirement for international data beyond the CAB sunset.

AEROSPACE INDUSTRIES
ASSOCIATION -

Mr. Allen H. Skaggs
Director, Aerospace
Research Center

Mr. Skaggs represented the views of the U.S. airframe and engine manufacturers. The types of data and the uses of the data within the manufacturing industry were identified. Most of the CAB Form 41 data schedules and traffic data (service segment, and origin and destination) are used extensively for design and market analyses. If the data were no longer available from a public source there would be an impact on the manufacturers' ability to support analyses with data which is recognized by the aviation industry as being consistent and of high quality. Alternative sources for the data would be the airlines, the ATA or private data suppliers. The data would most probably not be easy to obtain from some airlines and the costs to the end user would certainly be higher. The manufacturing industry would like to continue to have access to essential data. Essential data needs have not been defined by the industry but there is a requirement to do so. Some of the data currently being reported is not used and other data could be consolidated.

In summary, the U.S. aircraft and engine manufacturers' ability to maintain current high standards of product timeliness and excellence - hence, market leadership - would suffer if the data were no longer available from a public source such as the CAB.

FINANCIAL INSTITUTIONS -

Mr. George E. Moyer, Jr.
Vice President, Citibank

The financial community finds the CAB data invaluable since it provides the primary basis for analysis of the airline industry and its participants. While not all lenders access the CAB data directly, nearly all rely on the data. The unavailability of this information would effectively increase uncertainty, possibly shrinking the amount of capital available to the industry and make financing on an appropriate basis a more difficult task.

While much of the financial information on air carriers is available from public sources other

than the CAB, such as interim and annual reports, and SEC reports, an in-depth understanding of an airline or the industry cannot be obtained without the detailed CAB data.

It is important to the analyst to understand the airline's competitive position, its key market strengths, its market weaknesses and vulnerabilities, and perhaps more important, the likelihood of the carrier being able to achieve stated objectives. Essential to developing this analysis are the calculation of market size, market share, the identification of major competitors, and whether given markets are likely to attract new competition or conversely, if barriers exist to market entry.

Lenders also analyze airline efficiency, adequacy of cash generation, sufficiency of asset protection, degree of leverage and composition of the capital structure. The financial community uses the Form 41 T-1, T-2, T-3A, T-7, P-1 through P-5, P-12 and B-1 schedules in addition to service segment data.

Other non-regulated industries have little or no public data accessible to lenders, except for perhaps trade association reports. Yet, substantial financial resources are available to these borrowers. However, there are reasons why the airline industry differs from other industries. Most obvious is the industry's capital requirements, which are massive. Studies, based largely on CAB data, suggest that the world airline demand for new aircraft equipment during the 1980's will exceed 90 billion dollars. Another factor is the need for longer term financing. The longer the term, the greater the uncertainty and risk. The fact that the CAB data base is both mandatory and uniform has led to its high value for investment analyses. The data will need to be available in the future. If the government does not make it available, the industry will have to provide it.

ACADEMIC INSTITUTIONS - Professor John W. Drake
Professor of Air
Transportation
Purdue University

Academic research relative to air transportation goes on in virtually every discipline including economics, finance, labor relations, psychology, engineering of all kinds, social science, geography, and business. The academic institutions use industry data as a basis for their research since you cannot set up a laboratory situation as a means of analyzing such an industry. The universities publish a large number of research papers which are used by every segment of the industry.

The academic institutions see only two alternatives to the government for future data collection:

1. Cooperative data compilation by an independent body such as the ATA, one of the data suppliers, or universities.
2. Collection of data using survey techniques.

The cost of data would be higher under each of these alternatives and the value of the data would be less since it would not be as consistent or complete.

DATA SUPPLIERS -

Mr. Duane S. Edmonds
Data Base Systems Manager
Boeing Commercial Airplane
Company

There are three major suppliers of the CAB data: American Airlines; I. P. Sharp; and The Computer Company. The data suppliers have 180 company subscriptions for CAB data services. These companies spend approximately \$300,000 per month to access and manipulate CAB data. The services currently offer most of the Form 41, service segment data, and origin and destination data through their time-sharing software systems.

The demand for data is steadily increasing and new customers are being added each month. These services also provide access to schedule, Immigration and Naturalization Service, econometric, and international traffic data. The data from these vendors is very timely since most files are available in 2-3 days after they are received from the CAB.

The vendors believe that the best alternative for future availability of the data would be to have a government agency involved. If a government agency is not responsible for the data collection function it is likely that the data bases will not be as complete or consistent as they have been in the past.

The data vendors have developed extensive software capabilities for the editing and creation of the data bases. For this reason, they are in a good position to assume some of the processing burden that is currently being performed by the CAB. There are indications that the government is interested in contracting with private industry for some of the data processing that is currently being performed by the CAB.

AVIATION DEMAND FORECASTING COMMITTEE OF TRB - Mr. Kenneth Velten
Manager, Commercial
Market Research
McDonnell Douglas
Corporation

The Aviation Demand Forecasting Committee is within the Transportation Research Board. This committee has been working with their members to develop data needs and to evaluate the potential future availability of such data. The committee had a meeting with the CAB in mid-1979 to discuss the transition planning that was being performed to ensure the continued availability of CAB data. Meetings were also held with personnel from the FAA, DOT and the General Accounting Office.

As a result of these meetings, the CAB formed an Information Planning Project Team, headed by Robin Caldwell, to review current and future (prior to sunset) data needs and to develop a transition plan to move information systems to other government agencies. The data needs identified by the project team include all government agencies and industry users.

The committee will continue to keep informed concerning the activities of the CAB and other government agencies with regard to aviation data as functions are terminated or transferred according to the Airline Deregulation Act.

The TRB Committee on Air Transport Operations and Maintenance will continue to work on the issue of data and encourages other parties interested in this subject to contact either the coordinator for data issues

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