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THE LIBERALIZATION OF U.S. INTERNATIONAL AIR POLICY: A DISCUSSION OF THE IMPACT ON U.S. MARKETS AND CARRIERS[1]

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Introduction

In international air transportation, bilateral air agreements determine the operating conditions for carriers. Among other things, the agreements specify the way carriers should determine prices and capacities. In 1978, the U.S. embarked on a policy of signing a new type of bilateral air transport agreement, known as a liberal agreement. The purpose of this paper is to examine evidence as to the effect of liberal agreements on passenger flows and on the market position of U.S. carriers. Significant increases in passenger traffic on liberal routes, compared to increases on non-liberal routes, would provide evidence that the agreements were beneficial to travellers. An examination of the market position of U.S. carriers on liberal routes, compared to their position on non-liberal routes, would provide evidence as to the effect of the agreements on the performance of U.S. carriers.

In order to address these questions, the paper has been structured as follows: Section II provides background information on the regulatory structure of international air transportation and summarizes the literature on the effect of liberal bilaterals on U.S. market share and passenger growth. Section III presents the methodology used for this study, describes the data, and presents the results of the analysis. Finally, Section IV reaches conclusions from the analysis.

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Background

In 1978, under the direction of Civil Aeronautics Board chairman Alfred Kahn, the U.S. instituted a new bilateral strategy. This approach emphasized the replacement of existing bilateral agreements with new liberal agreements. The liberal agreements differed from previous agreements both in terms of their capacity and their pricing clauses. Fifth freedom capacity restrictions contained in the previous agreements were deleted and wording was added that neither government may unilaterally limit the service of an airline of the other country. The pricing clauses in the old agreements requiring both governments to approve all prices were replaced by either country of origin or double disapproval clauses. With these pricing arrangements all fares are considered in force unless the country where a flight originates rejects the fare (country of origin clause) or both countries together reject a fare (double disapproval).

Beginning with the U.S.-Netherlands agreement of 1978, the U.S. signed over 20 liberal or partially liberal agreements. Most of the agreements were signed during the period 1978-1982. After this period the U.S. retreated from the goal of signing liberal agreements except where they were seen to directly benefit U.S. carriers (Feldman, 1984).

There have been a number of authors who have examined the effect of liberal bilateral regulation on passenger traffic or U.S. airline market share including: Adkins, et. al. (1982); Gomez-Ibanez and Morgan (1984); Boberg and Collison (1989); and Pustay (1989). The papers present conflicting results as to the effect of liberal agreements on carrier market share and passenger growth. There are a number of possible explanations for the conflicting results. Three of them are as follows: First, the years used for the analysis are important. Merely taking one year prior to the institution of the liberal agreements and a second year after the agreements have been signed may bias the results. Collecting a series of data both before and after liberal agreements have been concluded may yield more precise results. Second, the definition of what constitutes a liberal agreement can vary widely from paper to paper. It is important to define, as precisely as possible, which agreements may be counted as liberal. Finally, it is important to try to control for external variables which may affect changes in passenger share or market share. Factors such as changes in income or U.S. citizen share of passengers may be important predictors of passenger travel or market share on some routes.

Data Analysis

Sources of Data

In order to determine the impact of U.S. bilateral policy on passenger travel and carrier market share, it was necessary to gather data on passenger flows, U.S. bilateral agreements, and factors which could influence passenger flows and market share. These factors include national populations and incomes. Passenger and market share data were gathered primarily from the U.S. Department of Transportation (DOT) (1988a) report, "Air Passenger Travel Between the U.S. and Foreign Countries". The report contained data on passenger flows between the U.S. and 51 other countries for the years 1975 to 1989. Breakdowns were provided on the percent of passengers who were U.S. citizens and the percent of passengers carried by U.S. airlines. The passenger data were checked against data compiled by the International Civil Aviation Organization (ICAO) and were found to closely match ICAO's flight stage counts.

The countries included in the DOT report included almost all of the largest U.S. international travel markets in every region of the world. However, in some regions of the world, such as Africa and the Middle East, even the larger travel markets were very small. Since slight passenger changes in markets with a small passenger base can appear as large percentage changes and present a distorted picture of passenger or market share growth, countries with a 1989 market of less than 100,000 passengers were excluded from the analysis.

Population and gross national product figures were gathered from the International Monetary Fund publication, *International Financial Statistics Yearbook, 1990*. The publication provided annual estimates for each of the variables for each of the years in the study.

Data were collected on bilateral agreements from the agreements themselves, when published, and from Harbison (1982) and the Air Transport Association of America (1989). The agreements were deemed liberal if they contained both a liberal pricing and a liberal capacity clause. They were classified partially liberal if they contained either a liberal pricing or capacity clause, but not both. Non-liberal agreements contained neither liberal clauses. In the cases where the date an agreement was signed did not correspond to the date the agreement entered into force, the latter date was used for classification purposes.

The Effect of Liberal Agreements on Passenger Traffic

A comparison of the passenger growth rates between liberal and partially liberal U.S. international markets on one hand and non-liberal markets on the other revealed that the average annual growth rate for the liberal and partially liberal markets was 8.5 percent between 1975 and 1989 compared to 5.8 percent for the non-liberal markets. These figures largely agree with those calculated by Pustay (1989, p. 23) over a slightly different period (1976-1984). The difference, however, may be misleading since the liberal and partially liberal agreements were signed *within* the time period of the study not at the beginning of the period, and because other factors may have contributed to the difference in the growth rate.

A way to resolve both of these problems is to estimate a regression model. Two models were estimated. The level of passengers flying to a particular country in a given year was regressed on the type of bilateral agreement the U.S. had with that country (liberal, partially liberal or non-liberal), the population of the country, the gross national income of the country, and time and country indicator variables. Annual passenger growth was regressed on the type of bilateral agreement, the year over year changes in population and income of the country, and time and country indicator variables. The results of the passenger growth rate and passenger levels estimations reveal that the presence of a liberal agreement had a positive and significant effect on both the level of passengers in a market and on the rate of passenger growth in a market. Partially liberal agreements had no significant effect on either the level of passengers or on passenger growth rates.

The Effect of Liberal Agreements on U.S. Carrier Market Share

A comparison of the U.S. carrier market share in liberal and partially-liberal markets to U.S. market share in non-liberal markets for the years 1975 to 1989 shows that from 1978, the year the first liberal agreements were signed to 1989, U.S. carriers increased their share of liberal and partially liberal traffic from 39.3 percent to 47.3 percent. In comparison, the increase is only from 52.3 to 52.4 percent for the non-liberal markets. The large increase for the liberal and partially liberal markets, however, may be misleading since it is in large part a function of which countries signed liberal agreements with the U.S.

The percentage of passengers carried by U.S. airlines in the markets for which the U.S. signed liberal agreements increased by 7.1 percentage points, on average, after the signing of the liberal agreements. When a partially liberal bilateral was signed, U.S. market share increased by 2.7 percentage points. A statistical test, however, revealed that there was no significant difference between the average U.S. carrier market share before and after the signing of liberal or partially liberal agreements.

The major problem with these simple comparisons is that there may be several factors, other than the existence of a liberal or partially liberal agreement, influencing U.S. carrier market share. As was the case with passengers, it is possible to estimate U.S. carrier market share using linear regressions. Two models were estimated. The market share for U.S. carriers in a given year was regressed on the type of bilateral agreement in place, the U.S. citizen share in that market, and year and country indicator variables. The annual change in U.S. carrier market share was regressed on the type of agreement in place, the year over year change in U.S. citizen share, and year and country indicator variables. The results from the estimations showed that neither the coefficient for the existence of a liberal agreement nor the coefficient for the existence of a partially liberal agreement was significant at even the 10 percent error level in either of the two regressions

Conclusions and Policy Implications

This study estimated the effect of liberal and partially liberal agreements on the level of passengers, passenger growth, U.S. market share level and growth in U.S. market share using a data set for the years 1975 to 1989. The study found that the existence of a liberal agreement had a positive effect on the level of passengers and on passenger growth rates in a market. The existence of a partially liberal agreement did not significantly influence the level of passengers or passenger growth. Neither type of agreement had any influence, at all, on U.S. carrier market share or the growth in U.S. carrier market share.

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