1 Introduction

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The increasing interdependence of firms and individuals throughout the world—popularly defined as globalization—has been greatly facilitated by air transportation. In 2005 the world's airlines carried roughly 2 billion passengers, more than one-third of whom were traveling for business or pleasure to another country. For the next several years, the world's air traffic is expected to grow about 6 percent annually.[1]

Globalization can enable a nation to develop and benefit from its comparative advantage in commodities and services including tourism, but a nation must have adequate infrastructure to realize its comparative advantage. For example, a country must have a network of airports that are capable of handling operations by large jets safely and efficiently as well as an air traffic control system that uses the latest technology to optimize routings and prevent accidents.

Accordingly, many countries have made substantial investments in aviation infrastructure. Currently some 49,000 airports are operating in the world, with 3,500 of them providing scheduled passenger service. The United States has 19,000, or 40 percent of the world's airports; of those, 663 provide scheduled passenger service. Radar-based air traffic control systems have been implemented to guide aircraft, especially in heavily used domestic and international air space, and some countries are planning to shift to satellite-based technology over the coming decades.

1. These figures and others presented below were obtained from the Air Transport Association, Washington.

Investments in aviation infrastructure have undoubtedly contributed to the long-run improvement in airline safety. During 2005 the world's scheduled airlines experienced only 0.02 passenger fatalities per 100 million passenger-kilometers. But if air travel safety is to continue to improve, aviation infrastructure must be able to accommodate the growing demand for air travel. In fact, this concern has motivated certain countries to begin development of a satellite-based air traffic control system, which is capable of safely handling more aircraft than radar-based systems can.

At the same time, the continuing failure of policymakers to implement efficient pricing of and investment in airports and air traffic control has generated significant costs in those parts of the world where air transportation is heavily used and means that travelers and carriers can expect to incur longer and more irritating delays to prevent safety from deteriorating. An additional concern is that the benefits of global liberalization of airline ownership and economic regulation will not be fully realized if airline entry at major airports is impeded by a lack of available gates and takeoff and landing times. For example, in its recent negotiations with the European Union to liberalize the trans-Atlantic airline market, the U.S. government raised concerns about capacity constraints at the EU's major hub airports.

The purpose of this book is to assess how different regions around the world make investments and operate airports and air traffic control systems to address congestion and delays, carrier competition, and air travel safety. The assessment amounts to a study in comparative political economy because countries have established different institutional arrangements—public versus private ownership, light versus heavy regulation—to tackle these issues. Hence, the study is able to provide an initial indication of how institutions affect aviation infrastructure performance.

Among the countries included here, the United States is generally thought to be a bastion of free markets and at the forefront of airline deregulation, but its airports and air traffic control system are publicly owned and operated. Airports and air traffic control systems in continental European countries (which excludes the United Kingdom) are, for the most part, also owned and operated by the public sector. In contrast, Australia, New Zealand, the United Kingdom, and Canada are experimenting with various ways of privatizing their airports and air traffic control systems. And even mainland China and some developing counties are allowing the private sector to participate in airport ownership.

Commercial users (airlines) and some economists have traditionally regarded privatization with skepticism because they believe airports and air traffic control have market power. But the initial findings from various countries'

efforts to privatize their airports and air traffic control systems give cause for optimism about the social desirability of private sector involvement in aviation infrastructure. The evidence also suggests that the performance of privatized (and quasi-privatized) airports, in particular, has been compromised by inappropriate government regulation. Broader and less restrictive experimentation with privatization may reveal substantial benefits from the policy, but such dramatic institutional change faces formidable political opposition.

The book is divided into three parts that group assessments of aviation infrastructure policy: countries that predominantly have publicly provided aviation infrastructure—the United States and continental Europe; countries that are experimenting with some form of privatization of their infrastructure—Australia, New Zealand, the United Kingdom, and Canada; and countries that are exploring a limited amount of private sector participation—China and some developing countries. The final chapter synthesizes the assessments and draws policy conclusions.

The material in this book is drawn from a series of papers that were presented at a conference sponsored by and held at the Rafael Del Pino Foundation in Madrid, Spain, in September 2006. The revised papers benefited from useful comments by Dorothy Robyn, David Starkie, and an anonymous reviewer and careful editing by Marty Gottron.