Abstract

PUBLIC AND PRIVATE SAFETY ENFORCEMENT IN THE AIR TRANSPORTATION INDUSTRY

By

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This dissertation contains three chapters. Chapter One, “Patterns of FAA Enforcement,” highlights problems with the Federal Aviation Administration’s (FAA) implementation of its safety oversight system for passenger-service airlines. The chapter contains information on the safety oversight system for context. A number of problems have been identified by the Government Accountability Office (GAO). Specifically, the GAO shows that the FAA reduced the number of enforcement actions from fiscal year 1993 to 1996, and has a pattern of reducing penalties levied against airlines in the FAA’s civil penalty program. These penalties are examined in detail using a sample of civil penalties from January 1990 to July 2006. The majority of civil penalties are under $10,000, which is likely to be too low to act as a serious deterrent. This raises the question of how to reconcile critiques of the FAA by the GAO and low civil penalty amounts with the scarcity of accidents in the industry. The GAO has not assessed whether failures by the FAA are tied to actual lapses in safety as this dissertation attempts to do.

Chapter Two, “Why Be Safe? Public and private safety enforcement in the air transportation industry,” explores the simultaneous use of public and private enforcement to determine their effectiveness in promoting safety. The chapter builds on a model established
from work on the economics of safety provision in the aviation industry, by including two main
instruments of enforcement—public enforcement in the form of FAA enforcement penalties and
private enforcement in the form of civil lawsuits. The chapter includes data from the Bureau of
Transportation Statistics, the National Transportation Safety Board, the FAA, and the U.S.
Courts. I show in the chapter that public enforcement has a negligible effect on the safety record
of major U.S. airlines. On the other hand, private enforcement is associated with reductions in
future injuries. For an average airline, an increase of 10 lawsuits filed in a quarter is associated
with a reduction of between 0.5 and 1 injuries. In this chapter, it is also confirmed that financial
distress at an airline increases negative safety outcomes. This may indicate that the influence of
lawsuits and civil penalties is underestimated if they coincide with periods of financial
vulnerability.

Chapter Three, “Does the Market Pay Attention to the FAA?,” uses an event study to
determine whether FAA enforcement penalties are large enough to affect the market value of an
airline. Using data from FAA press releases and daily stock prices, I show that there is no
significant change in an airline’s stock price following the announcement of a penalty, even
when penalties are over $1 million. However, when looking at the industry as a whole, there
does appear to be a small reduction in stock prices following the announcement of a penalty. On
average, airlines’ stock prices are reduced by an estimated 0.06% to 0.09%, consistent across all
penalty amounts. Thus, the public announcement of civil penalties does appear to have a
deterrent effect for the industry as a whole, although not for the individual airline.