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Memorandum

To: Sara Teachout, Legislative Joint Fiscal Office
From: Tom Kavet and Nic Rockler
CC: Steve Klein, Legislative Joint Fiscal Office
Date: February 20, 2017
Re: Review of FAA Economic Impact Study

Per your request, I have reviewed the state-level FAA economic impact analysis you forwarded.¹

As is the case with many economic impact analyses of specific sectors performed to demonstrate their importance, this analysis uses expansive assumptions to generate comparably expansive impact estimates. While no one would argue that air transportation is not a critical component of a competitive economy in this day and age, state level impacts from a tax change in one component of aviation expenditures will not necessarily affect all or even a minute portion of the total economic activity purported to comprise this sector in the study.

As an example of an expansive assumption in the subject study, visitor expenditures made after airport arrival are assumed to be “civil aviation activity.” By this logic, all tourism expenditures made by those arriving in Vermont by car would be considered automotive sector economic activity – and taxation of motor vehicle parts would be a comparable policy issue that could presumably affect such visitation.

While the way tourists arrive in Vermont is not an insignificant consideration, it is not the definitive determinant of visitation. This is especially true at the state level, and even more relevant in a small state such as Vermont, with several nearby out-of-state regional airports (Manchester, Albany and Hartford, prominently) and excellent alternative transportation modes to and from nearby population centers. Indirect tourism visitation expenditures are the largest single component of economic activity identified in the FAA study and represent about two-thirds of all jobs attributed to the civil aviation sector in Vermont. While counting the value of direct air travel expenditures is valid in an economic impact study of this type, the inclusion of indirect tourism spending by those arriving by air exaggerates the likely size and importance of the sector.

¹ See: “The Economic Impact of Civil Aviation on the U.S. Economy – Economic Impact of Civil Aviation by State,” January 2015, U.S. Agency of Transportation, Federal Aviation Administration. This study uses the RIMSII model, a static input-output model, to estimate total economic impacts by U.S. state.

By contrast, the table on the following page illustrates the relative size of the components of the Vermont, New England, U.S. and New Hampshire economies, as measured by Gross Domestic Product. The total air transportation sector in Vermont (excluding manufacturing – which is almost entirely export oriented and largely unaffected by local markets) was about 0.08% of the State economy in 2014, the latest year for which complete data are available. “Other Support Activities for Air Transportation,” which includes aircraft parts and maintenance services, represents a smaller subset of this sector. While Vermont-specific data for GDP, employment, etc., in this sub-sector are not publicly available (due to disclosure issues), at the national level, this subsector represents about 14% of the total air transportation sector (excluding manufacturing) for payroll and employment. If the Vermont subsector share of GDP was comparable to the U.S payroll share, this sub-sector would be about 0.01% of the State economy.

Shares of Total 2014 Gross Domestic Product	Vermont	New England	U.S.	New Hampshire
All industry total	100.0%	100.0%	100.0%	100.0%
Private industries	85.0%	88.4%	87.5%	87.9%
Agriculture, forestry, fishing, and hunting	1.8%	0.3%	1.2%	0.3%
Farms	1.4%	0.1%	1.0%	0.1%
Forestry, fishing, and related activities	0.3%	0.2%	0.2%	0.2%
Mining	0.8%	0.1%	2.8%	0.1%
Oil and gas extraction	0.0%	0.0%	2.0%	0.0%
Mining, except oil and gas	0.8%	0.1%	0.4%	0.1%
Support activities for mining	0.0%	0.0%	0.4%	0.0%
Utilities	2.3%	1.5%	1.6%	1.4%
Construction	3.7%	3.4%	3.9%	3.1%
Manufacturing	9.3%	10.3%	12.2%	10.9%
Durable goods manufacturing	6.2%	6.9%	6.5%	8.2%
Wood products manufacturing	0.6%	0.1%	0.2%	0.2%
Nonmetallic mineral products manufacturing	0.5%	0.2%	0.3%	0.3%
Primary metals manufacturing	0.1%	0.1%	0.3%	0.3%
Fabricated metal products	0.8%	1.2%	0.8%	1.8%
Machinery manufacturing	0.9%	0.6%	0.9%	1.1%
Computer and electronic products manufacturing	1.7%	2.3%	1.5%	2.8%
Electrical equipment, appliance, and components manufacturing	0.5%	0.4%	0.3%	0.8%
Motor vehicles, bodies and trailers, and parts manufacturing	0.2%	0.1%	0.8%	0.2%
Other transportation equipment manufacturing	0.4%	1.0%	0.7%	0.2%
Furniture and related products manufacturing	0.2%	0.1%	0.2%	0.1%
Miscellaneous manufacturing	0.5%	0.8%	0.5%	0.6%
Nondurable goods manufacturing	3.1%	3.4%	5.6%	2.6%
Food and beverage and tobacco products manufacturing	1.6%	0.7%	1.4%	0.9%
Textile mills and textile product mills	0.0%	0.1%	0.1%	0.2%
Apparel and leather and allied products manufacturing	0.1%	0.1%	0.1%	0.1%
Paper products manufacturing	0.2%	0.3%	0.3%	0.1%
Printing and related support activities	0.2%	0.2%	0.2%	0.2%
Petroleum and coal products manufacturing	0.1%	0.1%	1.0%	0.2%
Chemical products manufacturing	0.5%	1.6%	2.1%	0.4%
Plastics and rubber products manufacturing	0.3%	0.3%	0.4%	0.5%
Wholesale trade	5.0%	5.7%	6.1%	6.5%
Retail trade	7.6%	5.3%	5.8%	7.6%
Transportation and warehousing	1.8%	1.7%	3.0%	1.5%
Air transportation	0.1%	0.2%	0.5%	0.1%
Truck transportation	0.7%	0.4%	0.8%	0.4%
Transit and ground passenger transportation	0.2%	0.3%	0.2%	0.2%
Pipeline transportation	ND	0.0%	0.1%	0.0%
Other transportation and support activities	0.4%	0.4%	0.6%	0.4%
Warehousing and storage	0.2%	0.2%	0.3%	0.3%
Information	2.7%	4.4%	4.6%	4.1%
Publishing industries, except Internet (includes software)	1.1%	1.9%	1.1%	2.1%
Motion picture and sound recording industries	0.1%	0.3%	0.6%	0.2%
Broadcasting and telecommunications	1.3%	1.7%	2.3%	1.4%
Data processing, internet publishing, and other information services	0.2%	0.5%	0.5%	0.4%
Finance, insurance, real estate, rental, and leasing	19.9%	24.1%	20.2%	23.1%
Finance and insurance	6.0%	9.6%	7.2%	8.7%
Federal Reserve banks, credit intermediation, and related services	1.5%	2.2%	2.8%	1.3%
Securities, commodity contracts, and investments	0.5%	2.7%	1.4%	1.8%
Insurance carriers and related activities	3.8%	4.4%	2.7%	5.6%
Funds, trusts, and other financial vehicles	0.2%	0.2%	0.4%	0.1%
Real estate and rental and leasing	13.9%	14.5%	13.0%	14.4%
Real estate	13.3%	13.7%	11.9%	13.5%
Rental and leasing services and lessors of intangible assets	0.6%	0.8%	1.1%	0.9%
Professional and business services	9.6%	14.0%	12.0%	11.8%
Professional, scientific, and technical services	6.0%	8.7%	7.0%	6.7%
Legal services	1.0%	1.3%	1.3%	1.0%
Computer systems design and related services	1.5%	2.0%	1.4%	1.8%
Miscellaneous professional, scientific, and technical services	3.6%	5.4%	4.2%	4.0%
Management of companies and enterprises	0.9%	2.4%	2.0%	1.7%
Administrative and waste management services	2.7%	2.8%	3.0%	3.4%
Administrative and support services	2.3%	2.6%	2.8%	3.1%
Waste management and remediation services	0.3%	0.3%	0.3%	0.3%
Educational services, health care, and social assistance	12.5%	11.7%	8.2%	10.8%
Educational services	2.3%	2.5%	1.1%	2.1%
Health care and social assistance	10.2%	9.2%	7.1%	8.8%
Ambulatory health care services	4.4%	3.8%	3.4%	4.3%
Hospitals and nursing and residential care facilities	4.6%	4.5%	3.0%	3.9%
Social assistance	1.3%	0.9%	0.6%	0.6%
Arts, entertainment, recreation, accommodation, and food services	5.6%	3.8%	3.8%	4.4%
Arts, entertainment, and recreation	1.0%	1.0%	1.0%	1.2%
Performing arts, spectator sports, museums, and related activities	0.5%	0.5%	0.5%	0.4%
Amusements, gambling, and recreation industries	0.5%	0.5%	0.5%	0.7%
Accommodation and food services	4.6%	2.7%	2.8%	3.2%
Accommodation	2.6%	0.8%	0.8%	1.2%
Food services and drinking places	2.0%	2.0%	2.0%	2.0%
Other services, except government	2.4%	2.0%	2.2%	2.4%
Government	15.0%	11.6%	12.5%	12.1%
Federal civilian	3.0%	1.8%	2.3%	1.8%
Federal military	0.7%	1.4%	1.2%	1.4%
State and local	11.3%	8.4%	9.0%	8.8%