

NORTHWESTERN UNIVERSITY
Department of Economics

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Economics 355

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DESCRIPTIVE STATISTICS OF UNITED STATES TRANSPORTATION
Part 1 - Freight Mode Split

Table 1.1: Domestic Inter-City Mode Split (%) – 2004

	By Ton-Miles ¹	By Expenditure ²
Railroad	37	15
Truck	28	68
Pipeline	21	10
Water	14	3
Air	0.4	4

Expenditures equivalent to 2.8% of Gross Domestic Product

¹ One ton-mile is a ton of freight moved for one mile, so one ton moved 100 miles is 100 ton-miles

² Excludes local and private trucking and warehousing

Source: *Transportation in America*, Eno Transportation Foundation, Washington, D.C.

Table 1.2: Historical Domestic Mode Split (%) by Ton-miles

	1950	2004
Railroad	47	37
Water	29	14
Truck	14	28
Pipeline	10	21
Air	0	0.4
<i>Index of Ton-miles</i>	<i>100</i>	<i>356</i>

Source: *Transportation in America*, Eno Transportation Foundation, Washington, D.C.

Table 1.3: Mode Split (%) By Ton-Miles - International Comparisons - 2007

	Truck	Railroad	Water	Pipeline
Great Britain	85	10	0	5
Spain/Portugal	81	4	13	2
France	75	15	3	7
Italy	70	9	17	4
Hungary	70	20	4	6
Poland	66	24	0	10
Belgium/Lux./Netherlands	65	8	26	1
Germany	64	21	12	3
Japan	60	4	36	0
Scandinavia	57	20	18	5
United States	30	43	14	14
Russia	6	59	3	32

Sources: *Transport Statistics Great Britain*, UK Department of Transport, London; *OECD in Figures*, Organization of Economic Co-operation and Development, Paris

Part 2 - Passenger Mode Split

Table 2.1: Domestic Passenger Mode Split (%) – 2004¹

	By Passenger-Miles	By Trips	By Expenditure
	Inter-city journeys	Journey to Work	Excluding Subsidies
Automobile	72.3	86.2	89.7
Air	24.8	0.0	8.2
Inter-City Bus	2.7	0.0	0.2
Urban Transit	–	5.9	0.9
Walk	–	2.8	–
Railroad	0.3	–	0.1
Bicycle/Motorcycle	–	0.7	–
Taxi	–	0.1	0.8
Water	0.0	0.0	0.1
Work at Home	–	4.1	–

Expenditures equivalent to 9.6% Gross Domestic Product

¹ Excludes school and charter buses

Sources: Expenditure, Inter-city passenger-miles: *Transportation in America*, Eno Transportation Foundation, Washington, D.C.; Journey to work: *American Community Survey*, US Census Bureau (2008 data)

Table 2.2: Historical Domestic Inter-City Mode Split (%) by Passenger-Miles

	1950	2004
Automobile	88	72
Air	2	25
Inter-City Bus	5	2.7
Railroad	5	0.3
<i>Index of Passenger-miles</i>	<i>100</i>	<i>455</i>

Source: *Transportation in America*, Eno Transportation Foundation, Washington, D.C.

Table 2.3: Mode Split (%) By Passenger-Miles¹ - International Comparisons - 2007

	Auto/Taxi	Bus	Rail	Air
Great Britain	86	6	6	1
United States	86	3	0	10
Germany	85	6	8	1
France	85	6	8	1
Poland	84	10	7	0
Belgium/Lux./Netherlands	82	10	8	0
Scandinavia	82	8	7	2
Italy	82	12	6	1
Spain/Portugal	77	13	5	5
Hungary	61	26	13	0
Japan	57	7	31	5

¹ Both inter-city and urban trips. One passenger-mile is a person traveling for one mile, so one person traveling 100 miles is 100 passenger-miles

Source: *Transport Statistics Great Britain*, UK Department of Transport, London

Part 3 - Railroads

Table 3.1: Freight Traffic Components (%) – 2011

	By Tons	By Revenue
Coal	43	25
Food & Farm Products	14	16
Chemicals & Oil / Oil Products	13	17
Minerals & Ores	13	7
Manufactured Goods & Equipment	13	28
Forest Products	3	5

Source: *Railroad Facts*, Association of American Railroads, Washington D.C.

Table 3.2: Market Share, Traffic Density, Traffic Value and Profit Margin – 2011

	Market Share of Ton-Miles ¹ (%)	Traffic Density ² (millions)	Revenue per Ton-Mile (¢)	Operating Profit Margin (%)
BNSF	33	20.1	3.0	36
Union Pacific	28	17.1	3.6	39
CSX Transportation	12	10.9	5.1	34
Norfolk Southern	10	9.5	5.8	36
Canadian National	10	9.4	4.9	58
Canadian Pacific	7	8.8	4.1	23
Kansas City Southern	2	9.9	3.8	34

¹ Market share is of combined United States and Canada market for large (class 1) railroads

² Traffic Density is calculated by dividing ton-miles by route-miles. It indicates the average amount of usage the tracks of a railroad receive in a year

Source: *Railroad Facts*, Association of American Railroads, Washington D.C.

Part 4 - Water Transportation

Table 4.1: Geographic Share (%) - 2010

	By Tonnage	By Expenditure (2004)
International: Imports	39	56
International: Exports	25	31
Domestic: Rivers & Canals	25	8
Domestic: Coastal	7	5
Domestic: Great Lakes	4	1

Sources: Tonnage: Waterborne Commerce of the United States, US Army Corps of Engineers; Expenditures: Transportation in America, Eno Transportation Foundation, Washington, D.C.

Table 4.2: Major American Ports - 2010

	Market Share % by Tonnage	Proportion of Traffic Foreign Trade (%)
Galveston / Houston, TX	12.8	70
South Louisiana Offshore Oil Port	10.1	49
New York, NY/NJ	6.0	60
Los Angeles / Long Beach, CA	5.9	86
Baton Rouge, LA	4.8	36
Port Arthur / Beaumont, TX	4.6	66
Philadelphia, PA/NJ	3.6	61
Corpus Christi Bay, TX	3.2	74
New Orleans, LA	3.1	47
Norfolk / Newport News, VA	2.8	82
Huntington, WV/KY/OH	2.7	0
Duluth & North Shore, WI/MN	2.4	18
Mobile, AL	2.4	37
Lake Charles, LA	2.3	60
Columbia River Estuary, OR/WA	2.3	78
Puget Sound, WA	2.2	78
Port of Chicago, IL/IN	2.1	9
San Francisco Bay, CA	1.9	69
Pascagoula, MS	1.8	67

Source: Waterborne Commerce of the United States, US Army Corps of Engineers

Table 4.3: Traffic Split by Commodity (%) By Tonnage - 2010

	Foreign	Domestic
Crude Oil & Products	49	37
Coal	7	25
Minerals & Ores	10	17
Food & Farm Products	15	9
Chemicals	8	7
Manufactured Goods	5	3
Manufactured Equipment	6	2

Source: Waterborne Commerce of the United States, US Army Corps of Engineers

Part 5 - Airlines (US Flag Carriers Only)

Table 5.1: Index of Domestic Airline Traffic with 1950 =100 (and % Change in Decade)

	Passenger-miles		Cargo (Ton-miles)	
1950	100		100	
1960	341	241%	297	197%
1970	1177	245%	1100	270%
1980	2198	87%	1613	47%
1990	3719	69%	3473	115%
2000	5550	49%	5270	52%
2010	5975	11%	4180	-21%

Source: *Transportation in America*, Eno Transportation Foundation, Washington, D.C.; Bureau of Transportation Statistics, US Department of Transportation, Washington D.C. (US DOT Form 41 data)

Table 5.2: Market Share, Cost, and Operating Profit Margin - 2012

	Market Share of Passenger-miles ¹ (%)	Cost per Available Seat-Mile ² (¢)	Operating Profit Margin (%)
Proposed merged American Airlines	21	16.8	+ 2
<i>Original American</i>	13	16.2	0
<i>US Airways</i>	8	17.9	+ 6
Southwest / AirTran	18	12.3	+ 8
United Airlines	17	17.2	0
Delta Air Lines	16	17.1	+ 7
JetBlue Airways	5	11.5	+ 8
Alaska Airlines	4	14.5	+14
Hawaiian Airlines	2	12.5	+ 7
Frontier Airlines	2	11.8	+ 2
Other Airlines	16	(mainly regional and commuter airlines)	

¹ Market share based on domestic operations

² An available seat-mile is one seat on an aircraft flown one mile irrespective of whether the seat is occupied or not. Therefore flying a 100-seat aircraft for 100 miles produces 10,000 available seat miles
Source: Bureau of Transportation Statistics, US Department of Transportation, Washington D.C.

Table 5.3: Ten Largest Airports for Passengers and Freight - 2012

	Passenger (Million Enplanements)		Freight (Million Tons Aircraft Weight)	
1	Atlanta	45.8	Memphis	10.3 (FedEx)
2	Chicago O'Hare	32.2	Anchorage	8.3
3	Los Angeles	31.3	Louisville	5.5 (UPS)
4	Dallas-Fort Worth	28.0	Miami	3.6
5	Denver	25.8	Indianapolis	2.5 (FedEx)
6	New York JFK	24.5	Chicago O'Hare	2.3
7	San Francisco	21.3	Los Angeles	2.1
8	Charlotte	20.0	New York JFK	1.8
9	Las Vegas	19.9	Cincinnati	1.6 (DHL)
10	Phoenix	19.6	Dallas-Fort Worth	1.5

Source: Bureau of Transportation Statistics, US Department of Transportation, Washington D.C.

Part 6 - Highway Freight

Table 6.1: Firm Type and Commodities Hauled (%) By Ton-Miles - 2007

	For-Hire Trucking ¹	Private Trucking ¹	Total
Manufactured Goods & Equipment	25.4	6.4	31.8
Food & Farm Products	19.5	4.5	24.0
Chemicals	11.5	2.0	13.5
Coal, Minerals & Ores, Scrap, Waste	9.1	4.0	13.1
Forest Products	9.9	1.8	11.8
Oil & Oil Products	3.3	2.5	5.9

¹ For-hire trucking are commercial trucking firms offering trucking service to whoever wants to purchase the service. Private trucking are vehicles owned by agricultural, mining, manufacturing, and retail companies to move their own products

Source: *Commodity Flow Survey 2007*, US Census Bureau / Bureau of Transportation Statistics, US Department of Transportation, Washington, D.C.

Table 6.2: Largest For-Hire Trucking Firms - 2012

	Revenue (\$ Million)	Operating Profit Margin (%)	Market Segment ²
<i>Package Companies</i>			
United Parcel Service	54,127	+ 3	Package
FedEx Express	27,171	+ 2	Package
FedEx Ground	10,578	+20	Package
<i>Freight Companies</i>			
Con-Way Transportation	5,580	+ 4	LTL General Freight
FedEx Freight	5,401	+ 4	LTL General Freight
J.B. Hunt Transport	5,055	+12	TL General Freight
Yellow Roadway Corp	4,850	- 3	LTL General Freight
Schneider National Carriers	3,500	NA ¹	TL General Freight
Swift Transportation	3,494	+10	TL General Freight
TransForce	3,139	+ 8	LTL General Freight
CEVA Logistics	2,880	+10	TL General Freight
Landstar System	2,793	+ 8	TL General Freight
Ryder Supply Chain Solutions	2,281	+ 5	TL General Freight
Old Dominion Freight Line	2,110	+ 9	LTL General Freight
ABF Freight System	2,066	- 1	LTL General Freight
Werner Enterprises	2,036	+ 5	TL General Freight
SIRVA (Allied, North American Van Lines)	1,973	NA ¹	Household Goods
Estes Express Lines	1,865	NA ¹	LTL General Freight
USXpress Enterprises	1,756	NA ¹	TL General Freight
UniGroup (United Van Lines)	1,613	NA ¹	Household Goods

¹ Privately held company ² TL=Truckload, LTL=Less-than-truckload

Source: *Commercial Carrier Journal*, August 2012, individual company *Annual Reports*

Part 7 - Automobiles

Table 7.1: Growth in Licensed Drivers and Auto Ownership

Year	Percent of US Population with Drivers License	Vehicles per Licensed Driver
1969	52	0.70
1977	60	0.94
1983	64	0.98
1990	68	1.01
1995	68	0.99
2001	68	1.06
2009	66	1.09

Source: *National Household Travel Survey, Federal Highway Administration*

Table 7.2: Household Automobile Availability - 2009

Household Size	Percentage of Households with			
	No Auto	One Auto	Two Autos	3+ Autos
1 adult	21	63	12	4
2 adults	4	17	53	36
3+ adults	4	11	22	63

Source: *National Household Travel Survey, Federal Highway Administration*

Table 7.3: Distribution of Vehicles Miles of Travel by Trip Purpose (%) - 2009

To and from Work & Work Related	37.0
Social and Recreational	30.0
Other Social & Recreational	22.7
Dining Out	7.4
Family and Personal Business	28.6
Shopping/Errands	20.3
Other Family & Personal Business	5.5
Doctor/Dentist	2.8
School & Church	4.4

Source: *National Household Travel Survey, Federal Highway Administration*