

Airline Operating Costs and Airline productivity

AirTran

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AirTran Airways – Corporate Info

- Fortune 1000 company , founded in 1993
- Low-fare airline, offers service with more than 700 daily flights to more than 60 destinations, the second largest carrier at Hartsfield-Jackson Atlanta International Airport.

“For the second year in a row, low-cost carrier AirTran Airways did the best job getting passengers to their destinations with the least hassle, private researchers who have analyzed federal data on airline performance said today.”

Associated Press Monday April 2, 2012

(Based on data airlines supply the Department of Transportation regarding lost bags, delayed flights, and bumpings from full planes, and consumer complaints made to the department.)

LCC – Characteristics

- Use of a single aircraft type or interchangeable family of aircraft
- Operation of “point-to-point” instead of connecting hub networks
- No labor unions and lower wage rates for employees
- Single cabin service, with no premium classes offered
- No seat assignments
- Reduced “frills” and seating space on board
- No frequent-flyer loyalty programs
- Avoid use of traditional distribution channels

	Southwest	JetBlue	AirTran	WestJet	easyJet	Ryanair
Single aircraft type or single family of aircraft	✓	X	X	✓	X	✓
Point-to-point ticketing, no connecting hubs	X	X	X	X	✓	✓
No labor unions, lower wage rates	X	✓	X	✓	X	✓
Single cabin service, no premium class	✓	✓	X	✓	✓	✓
No seat assignments	✓	X	X	X	✓	✓
Reduced frills for on-board service (vs. legacy)	X	X	X	X	✓	✓
No frequent-flyer loyalty program	X	X	X	X	✓	✓
Avoid global distribution systems (GDS)	?	X	X	X	✓	✓

AirTran is a low cost scheduled airlines in US in terms of departures and seats offered, but it has non of typical LCC characteristics. AirTran:

- Offers low-fare fares and cheap business class tickets
- Some of employees – unionized
- Hub – Atlanta, and secondary hubs in Baltimore, Milwaukee, and Orlando
- Maintains a fleet of about 140 Boeing aircraft (717s and 737s).
- Business class product with more seating space
- Enhanced on-board passenger service

Definitions:

RPM – Revenue Passenger Miles – the basic measure of airline passenger traffic. It reflects how many of an airline's available seats were actually sold

$$\text{RPM} = \sum_{i=1 \text{ to all flights}} (\text{Number of Passengers (Flight } i) * \text{Distance Flown (Flight } I))$$

ASM – Available Seat Miles is a measure of an airline flight's passenger carrying capacity. It is equal to the number of seats available multiplied by the number of miles or kilometers flown. An available seat mile is the fundamental unit of production for a passenger-carrying airline. A unit in this case is one seat, available for sale, flown one mile.

$$\text{ASM} = \sum_{i=1 \text{ to all flights}} (\text{Number of Seats (Flight } i) * \text{Distance Flown (Flight } I))$$

RASM – Revenue per Available Seat Mile is a commonly used measure of unit revenue for airlines, expressed in cents received for each available seat mile and determined by dividing various measures of operating revenue by Available Seat Miles. This number is frequently used to allow a comparison between different airlines or a comparison of the same airline across periods. In theory, the higher the RASM the more profitable the airline should be, assuming that the CASM remains constant.

Passenger RASM (or PRASM) is passenger (or scheduled ticket) revenue per ASM. It is calculated by dividing passenger revenue by available seat miles. This measure is equivalent to the product of load factor and yield.

Operating RASM or Total RASM is the airline's total operating revenue per ASM.

CASM – Cost per Available Seat Mile is a measure of unit cost in the airline industry. CASM is calculated by taking all of an airline's operating expenses and dividing it by the total number of available seat miles produced.

Yield – The average amount of revenue received per revenue passenger mile (RPM) or revenue ton mile (RTM), net of taxes.

Fuel Consumed – Total Fuel over Total Time equals Fuel consumed per hour. Total fuel is considered the total amount of fuel excluding any fuel reserves. Reserves can generally be considered 10% of the total amount of fuel capacity for the airplane

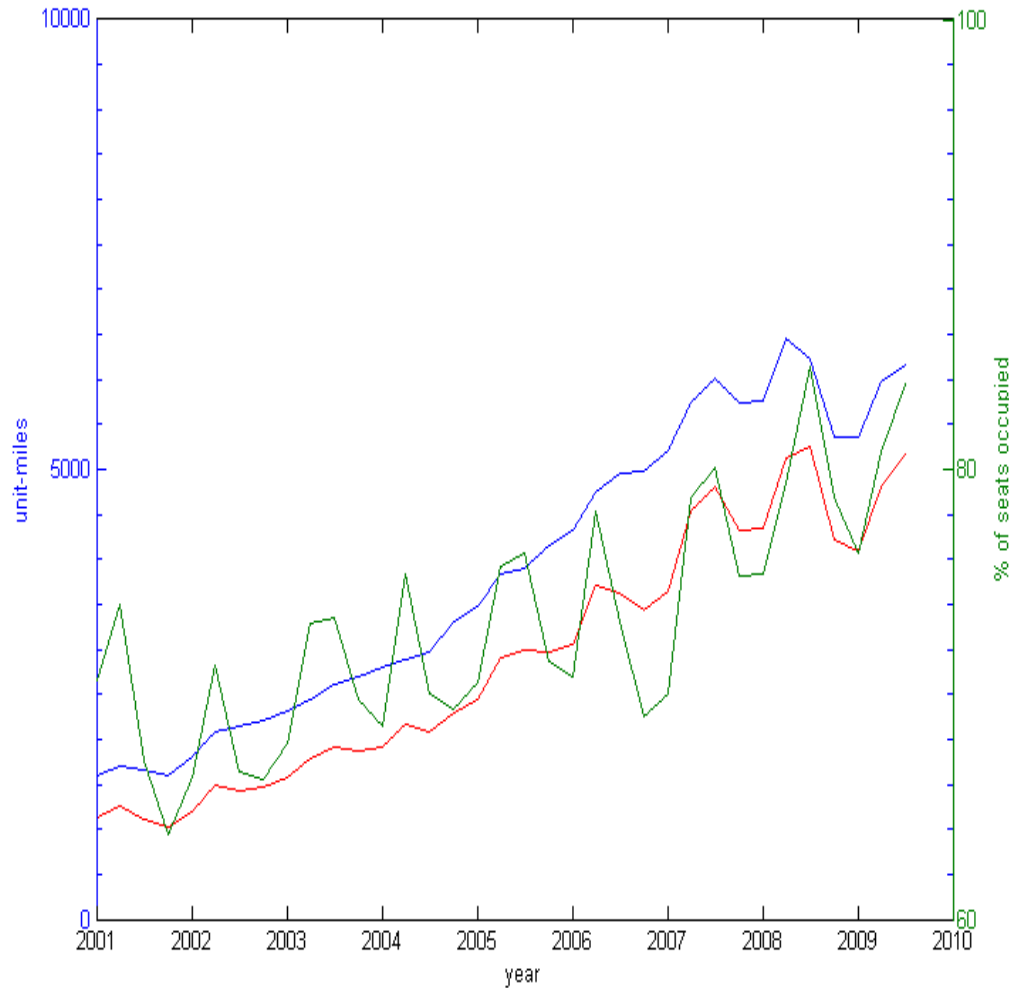
Fuel Expense per Available Seat Mile – shows fuel expenses per ASM, with lower Fuel Expense per ASM reflecting lower fuel expenses per gallon and/or more efficient aircraft. Increases in fuel expenses will be reflected in increases in ASMs and thus the metric would be relatively unchanged.

Non fuel CASM (or CASM excluding fuel) is a commonly used measure to compare the cost performance of airlines excluding the cost of fuel.

$$\text{CASM} = \text{Direct Operating Cost} / \text{Available Seat Mile}$$

$$\text{CASM ex-fuel} = (\text{Direct Operating Cost} - \text{Fuel Cost}) / \text{Available Seat Mile}$$

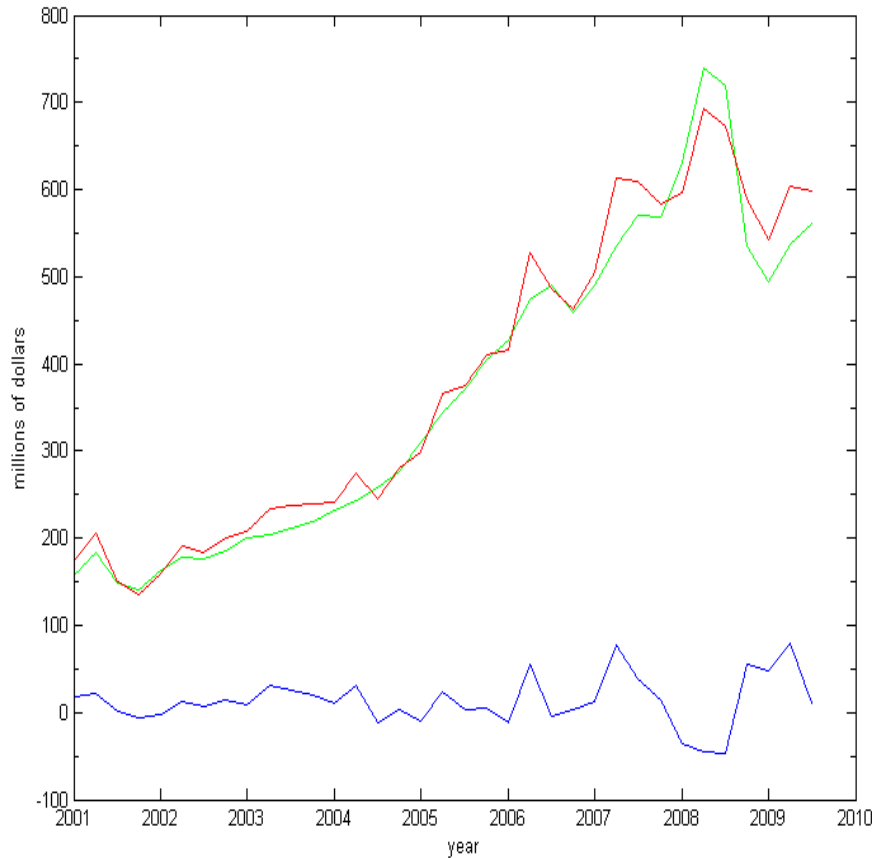
ASM, RPM and LF from 2001 to 2009



-ASM -RPM -LF

- ASM – continuous growth from 2001, spike in the 2008, oscillation during the year and growth in 2009
- RPM – similar to ASM, with bigger oscillation from 2006 to 2009
- Load Factor – oscillation, spike in the beginning 2001, than big drop in the fall. The second big drop in 2007, spike in 2008
- For June 2008, traffic grew by 15.5 percent to more than 1.8 billion RPMs based on a 13.0 percent increase in capacity. The company's load factor for the month was 84.7 percent. The airline enplaned more than 2.3 million passengers, a 4.2 percent increase from June 2007.

Income Before Taxes, Total Operating Expenses and Total Operating Revenue



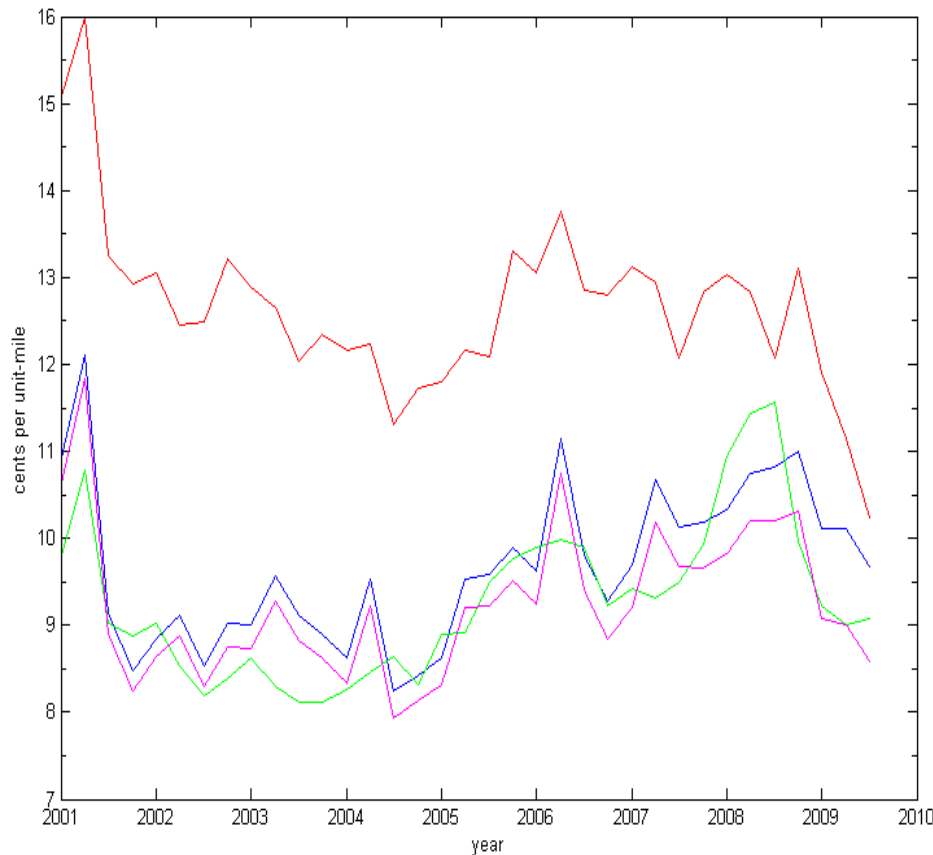
–Income Before Taxes

–Total Operating Expenses

–Total Operating Revenue

- Income before tax – big drop in 2008
- Total operating expenses and Total operating revenue – similar trends. One bigger drop in the beginning of 2009, after the spike in 2008
- Revenues for the second quarter 2008 grew 13.0 percent to \$693.4 million, an all-time quarterly record.
- Net loss of \$107.1 million for the third quarter 2008 (included: non-operating losses – \$41.5 million)

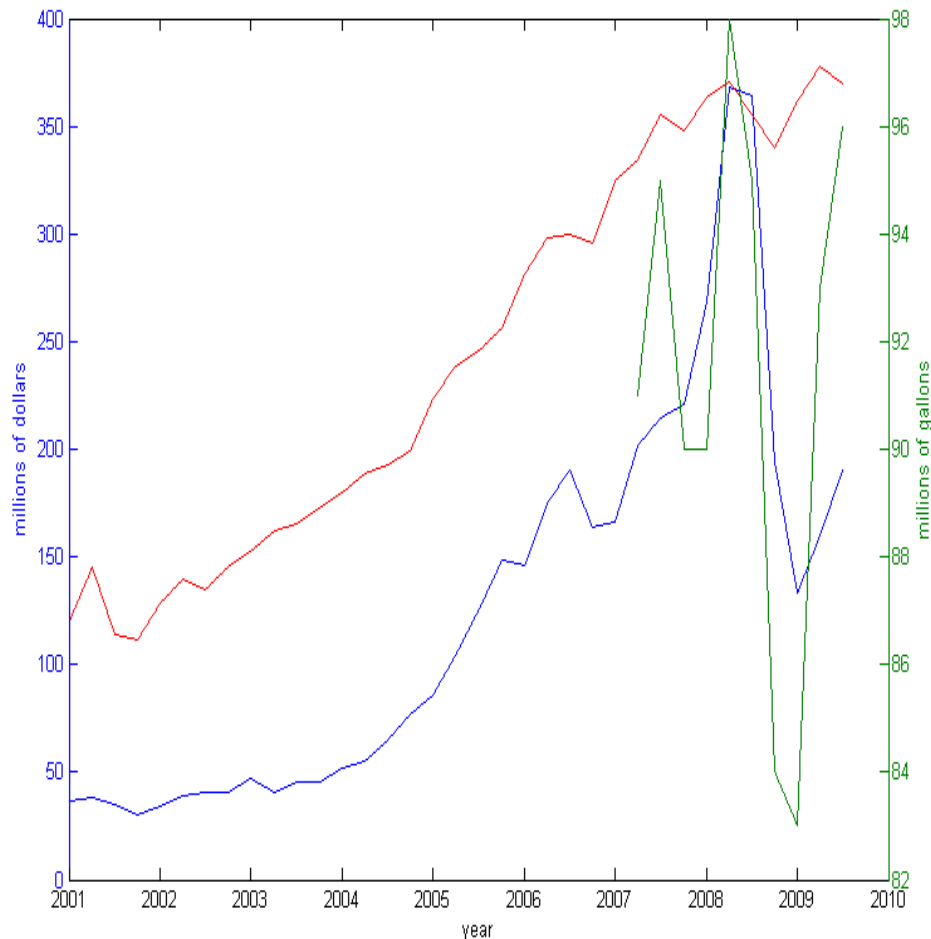
RASM, CASM, Yield per RPM, PRASM



– RASM –CASM
–Yield per RPM –PRASM

- Spike – in the beginning 2001, after that the big drop in the fall
- Drops in the middle of 2004 and 2006 (after the peak)
- 2009 – drop
- 2009 and 2008: Regional Affiliates' passenger revenues, which are based on industry standard proration agreements for flights connecting to American flights, decreased \$124 million, or 21.3 percent, to \$457 million as a result of a reduction in capacity, decreased passenger traffic and lower yield.

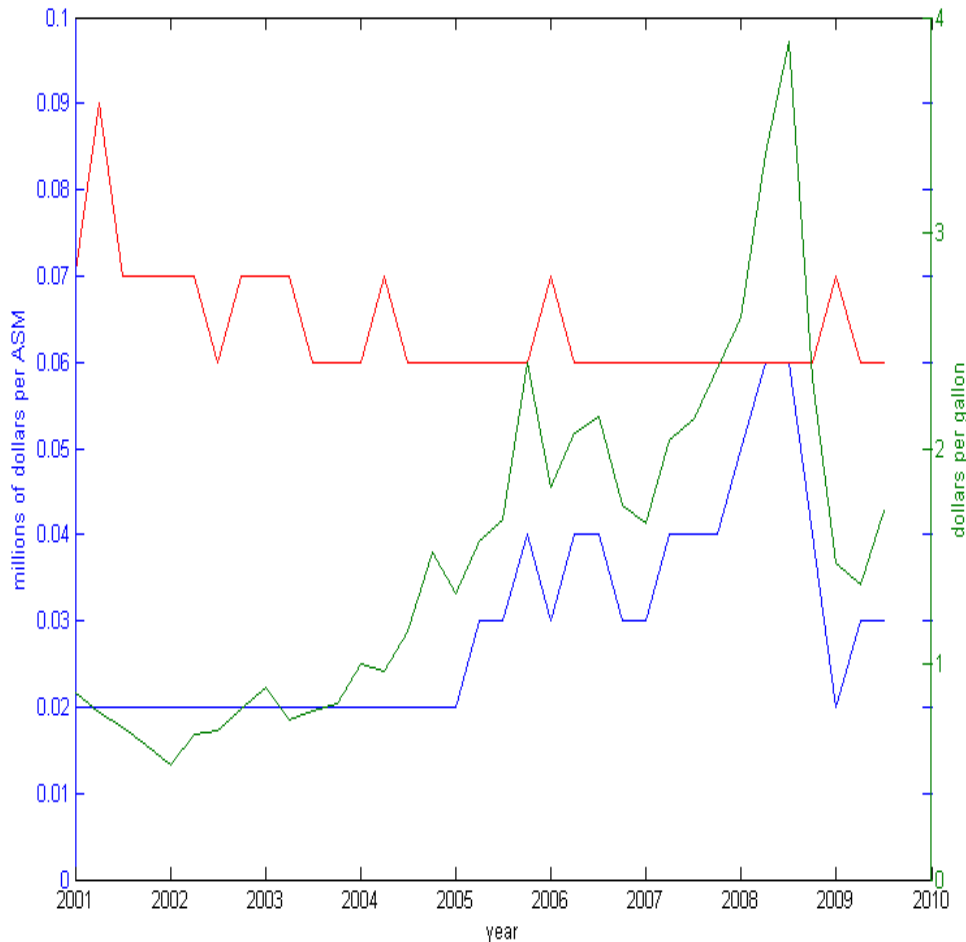
AC Fuel Operating Expenses, Non Fuel Operating Expenses, Fuel Consumed



- Uncompleted data for Fuel Consumed (from 2007) with the big drop in the beginning of 2009, then big growth during the year
- Fuel OE – continues growth, spike in 2008, then big drop
The third quarter of 2008: net income of \$10.6 million. Fuel costs (over 50% of expenses) for the quarter and rose to historically high levels – contributed significantly to loss. The average economic cost per gallon increased 63.1 percent to \$3.67 in 2008, as compared to \$2.25 in the third quarter of 2007
- Non Fuel OE – continues growth, without big oscillations

–AC Fuel Operating Expenses –Non Fuel Operating Expenses –Fuel Consumed

AC Fuel Operating Expenses per ASM, Non Fuel Operating Expenses per ASM, Jet Fuel Price



- Jet Fuel Price – spike in 2008
- Non Fuel OE per ASM without big oscillations in 2008
- AC Fuel OE per ASM follows Jet Fuel Price

–AC Fuel Operating Expenses per ASM
–Non Fuel Operating Expenses per ASM
–Jet Fuel Price

Expenses, Finance, AirTran Network Structure

2008
3th quarter, 3 and 6 months

2007

Total Op Revenues:

693,380,000	613,526,000	change: 13%
		for 6 months change: 15.4%

Op Expenses:

738,904,000	535,644,000	change: 37.9%
		for 6 months change: 33.5%

Op Income

45,524,000	77,862,000
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Income Before Taxes

16,232,000	67,276,000
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RPM

5,128 mil	4,527 mil	change: 3.3%
		for 6 months change: 7.4%

ASM

6,457mil	5,747 mil	change: 12.3%
		for 6 months change: 11.6 %

Operating cost per ASM

11.44 cents	9.32 cents	change: 22.7%
		for 6 months change: 19.6%

Non-fuel operating cost per ASM

5.74 cents	5.81 cents	change: 1.2%
		for 6 months change: 0.3%

- Fluctuating fuel costs effects have been devastating to industry over the last years. The single biggest operating cost since 2005 has been fuel. 2006 – in that year average fuel prices rising over 20% for the third year in a row.
- During the period of 15 months, the price of crude oil had gone from \$57 a barrel in March 2008 to more than \$147 in July 2008, and then back down to less than \$32 in December. Then in the beginning of 2009 – more than \$68 a barrel

Expenses

- The non fuel cost grows along with the fuel costs, so there is a correlation between the two, but it's not a perfect correlation, because when the fuel costs drop in the most recent years (2008) the non fuel costs do not drop as well.
- There is not obvious similarity between fuel costs and RASM, CASM, Yield per RPM, PRASM. All curves drop in the end, but that may be coincidence because they are not the same anywhere else.
- At the point where there is a sharp spike in the fuel expenses the jet fuel usage was fluctuating greatly so it may be sensitive to quick changes.
- 2006: reduced its unit operating costs by 5.6 percent in the fourth quarter primarily as a result of a 7.7 percent decline in fuel price
- 2008: Total fuel expense was \$268 million, up \$102 million from the prior year. During the first quarter – \$4.1 million of hedging gains which reduced fuel expense. The quarter also includes non-operating expense of \$5.2 million

Finance

- The income in the 2008 (when there is the spike in fuel costs) shows a temporary drop. Other wise income doesn't seems sensitive to fuel costs. Total Operating Expenses and Total Operating Revenue seems to follow the fuels costs.
- During the second quarter of 2006, AirTran Airways' unit revenue increased 16.8 percent year over year on a 2.4 percentage point increase in load factor and a 13.2 percent improvement in yield. Oil prices rose to record levels: non-fuel unit costs – a 1.6 percent increase. Profit for the whole year: \$15.5 mil. 2006 – very challenging year: avg fuel prices rising over 20%. For the full year, capacity increased by 23.7 percent and passenger revenues grew by 30 percent, which resulted in a 5.2 percent increase in unit revenue.
- 2008: Revenues for the first quarter grew 18.3 percent to \$596.4 million, an all-time quarterly record, and passenger unit revenue increased 6.9 percent. Record revenues and record high fuel costs

Network structure

- All, ASM,RPM and LF have a rising trend just like the fuel cost do, but they don't follow the spike shape of the fuel cost curve. In fact these curves, in particular load factor, have fluctuations of their own.
- During the second quarter of 2006, fuel prices increased 33% resulting in a 10.8 percent increase in operating costs per ASM.
- 2008: a record first quarter load factor of 75.3 percent, a 5.2 point increase over 2007.