

Expenses per Mile for the Motor Carrier Industry: 1990 through 2000 and Forecasts through 2005 *

Shippers and consumers of products transported by trucks have seen virtually no change in actual prices charged for this transportation service over the last decade and should continue to see truck freight rate stability into the foreseeable future. Average expenses per mile for all types of for-hire truck transportation - embracing truckload, LTL (less-than-truckload) and a wide range of specialized carriage - were \$1.78 in 2000, compared to \$1.76 in 1990, and in the intervening years, were in the mid-\$1.60 range. The latest increase in expenses per mile, rising from \$1.70 in 1999 to \$1.78 in 2000, was mainly due to steep diesel fuel price increases.

Motor carrier rates in constant dollar terms fell almost 11% during the last decade. Constant dollar expenses per mile are determined by deflating actual expenses per mile by the Producer Price Index. In constant dollars, average expenses fell from \$1.51 per mile in 1990 to \$1.34 per mile by 2000.

It is expected that motor carrier expenses per mile will rise modestly, but affordably, over the next five years, with most of the increase tied to economic growth occurring after 2002, plus higher input prices to operate a trucking company. By 2005, actual motor carrier expenses per mile should average 5 to 6 cents a mile higher than today. In real (price deflated) terms, motor carrier rates should continue to fall, down by 2 to 3 cents per mile by 2005. This assumes no substantial shock in motor carrier operating costs themselves, which mainly means relative stability in diesel fuel prices.

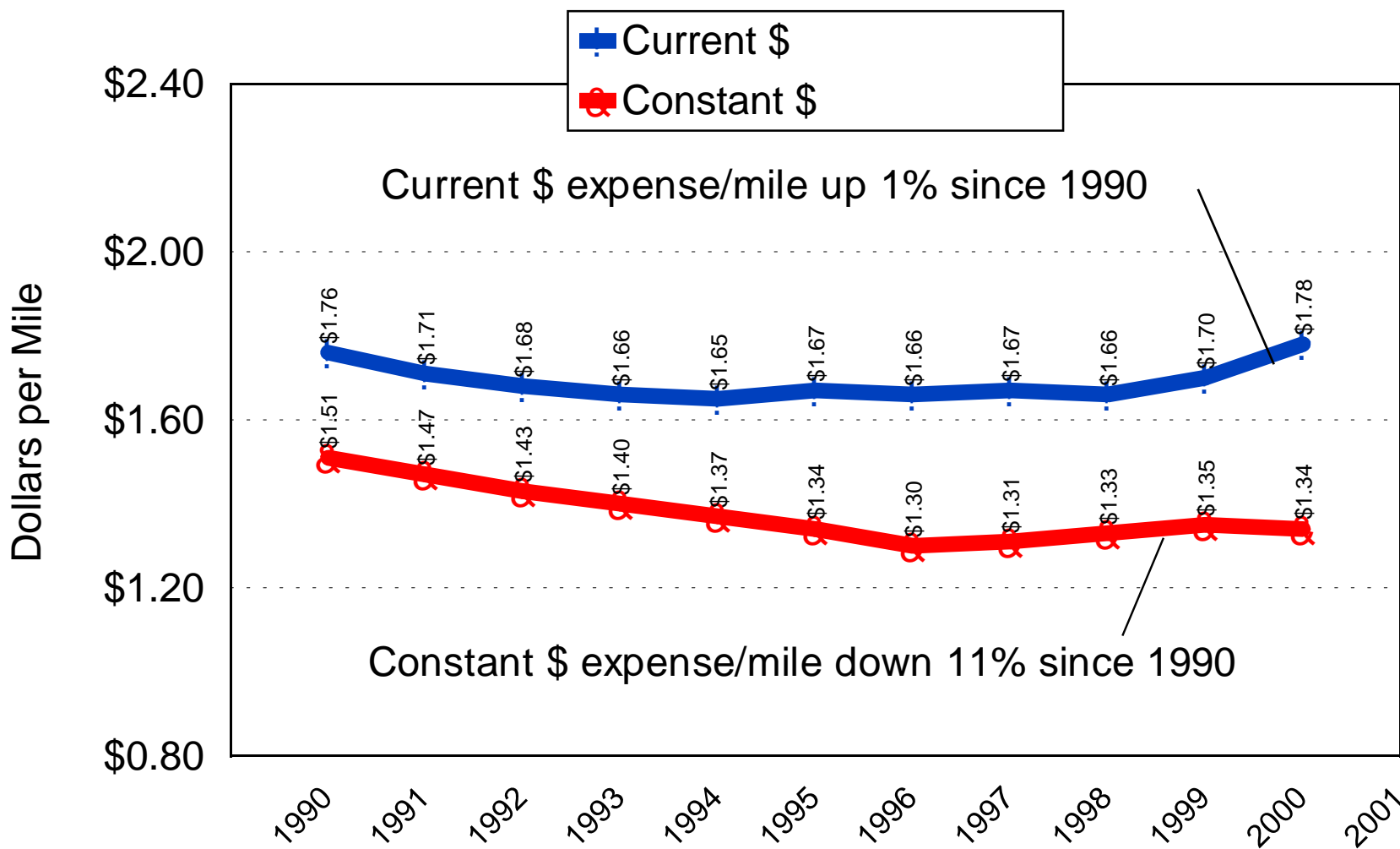
Diesel prices in 2001 have abated from last year's peak prices, but remain subject to generally unpredictable swings based on international politics, production quotas, refining capacity and demand for home heating oil. Diesel price fluctuations, more than any other single factor, trigger the immediacy of motor carrier rate swings. The actual 8-cent per mile increase in motor carrier expenses from 1999 to 2000 was principally the result of diesel fuel rising from \$1.20 a gallon to an average of \$1.50 per gallon in 2000.

Other than diesel price shocks, motor carrier rates should slowly rise to account for general changes in the costs of operating a trucking company. Deregulation's liposuction effect on excess trucking costs is behind us. Carriers now need to practically account for the inputs of running safe and financially sound transportation operations. Upward pressure will stem from reasonable labor cost increases - proportionally the carrier's major expense. Also, higher cost employee benefits - from medical to pensions - and escalating truck insurance premiums will press carrier expenses upward. The increases should be moderated by little if any pressure from equipment prices, tire costs, vehicle parts or operating taxes and licenses. Computer and information processing costs, as well as communication (phone and cellular) and tracking costs should continue to decline. Competition for freight and the strong bargaining position of shippers will remain barriers thwarting excessive rate increases.

* Response to DTFH61-01-P-00304 for the Federal Highway Administration, Office of Freight Management & Operation

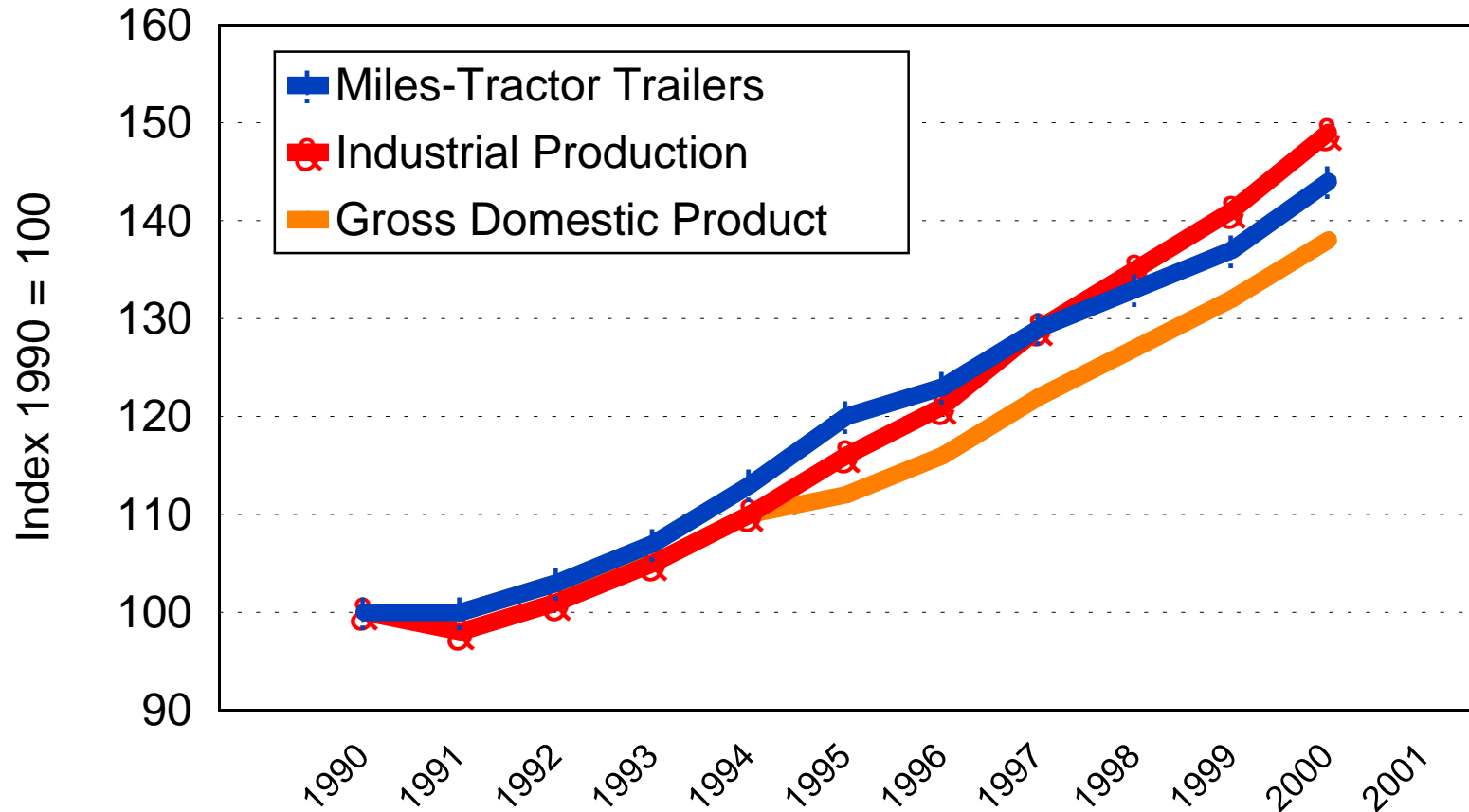
Expenses Per Mile

All Carriers - Amounts in **Current** and **Constant** \$



BTS study carriers

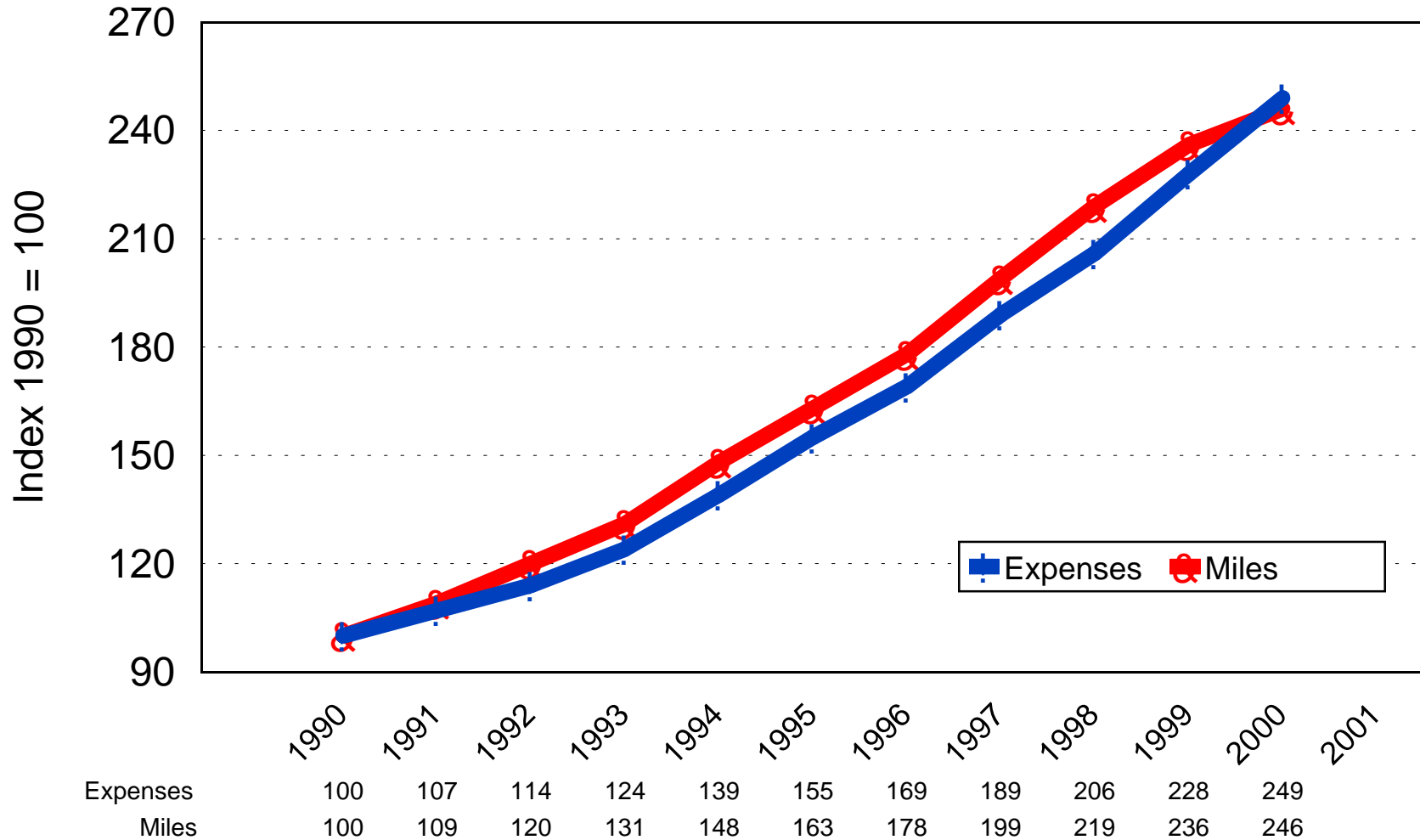
Truck Tractor Miles Vs. Economic Growth



| | | | | | | | | | | | |
|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Miles-Tractor Trailers | 100 | 100 | 103 | 107 | 113 | 120 | 123 | 129 | 133 | 137 | 144 |
| Industrial Production | 100 | 98 | 101 | 105 | 110 | 116 | 121 | 129 | 135 | 141 | 149 |
| Gross Domestic Product | 100 | 100 | 103 | 105 | 110 | 112 | 116 | 122 | 127 | 132 | 138 |

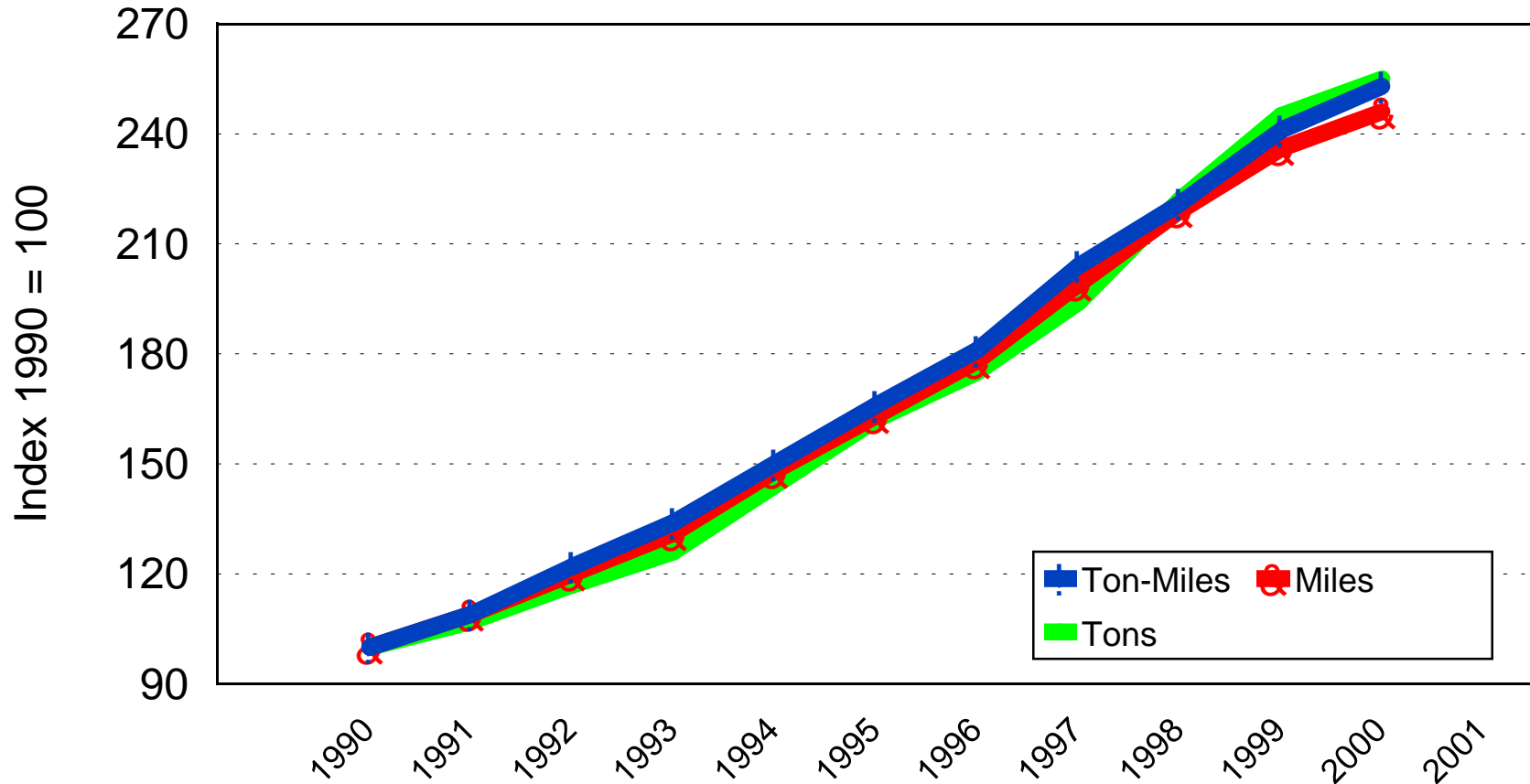
All data reindexed to 1990 = 100

Measures of Trucking Performance for BTS Study Carriers



All data reindexed to 1990 = 100

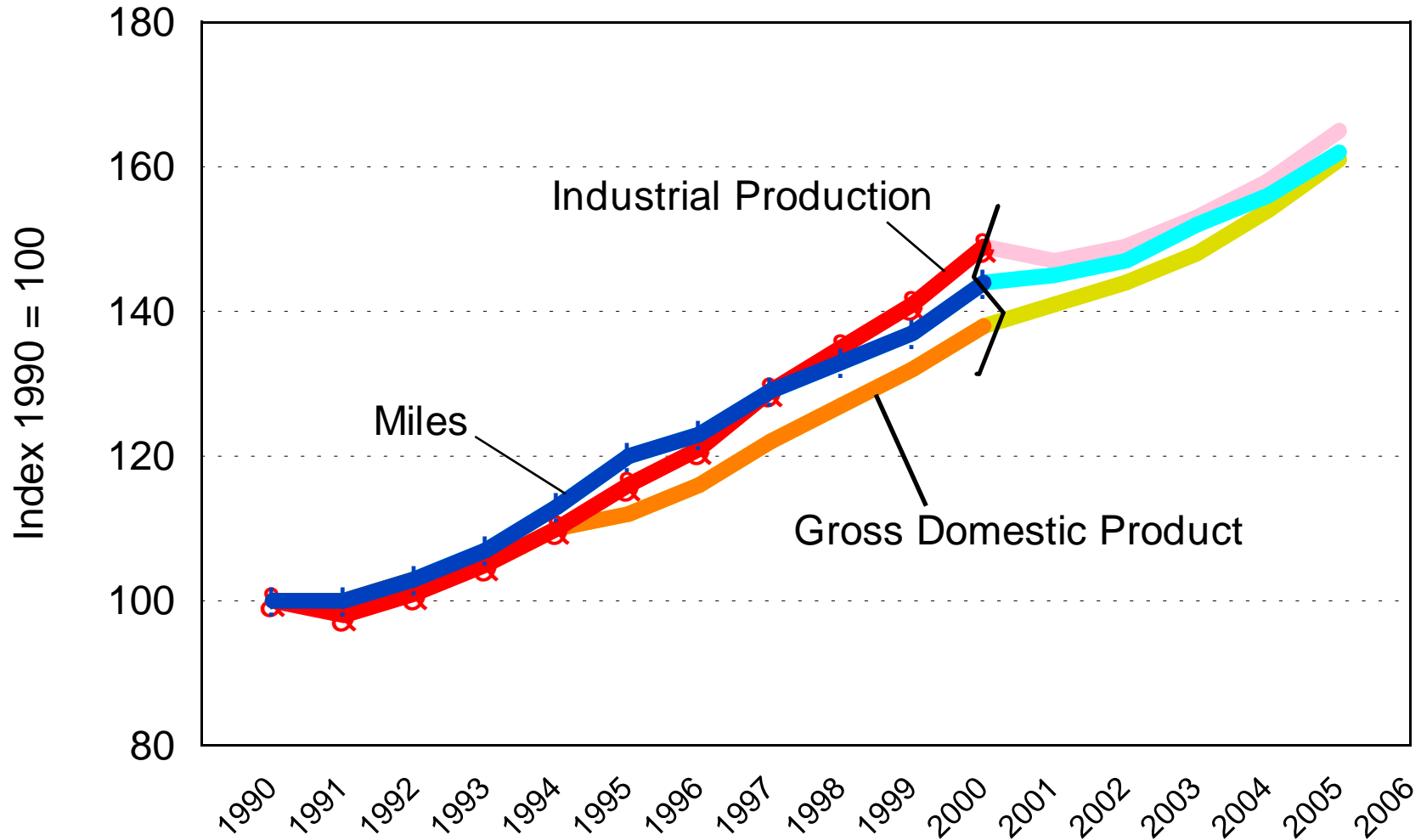
Measures of Trucking Performance for BTS Study Carriers



| | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ton-Miles | 100 | 109 | 122 | 134 | 150 | 166 | 181 | 204 | 221 | 241 | 253 |
| Miles | 100 | 109 | 120 | 131 | 148 | 163 | 178 | 199 | 219 | 236 | 246 |
| Tons | 100 | 107 | 117 | 126 | 144 | 162 | 175 | 194 | 222 | 245 | 255 |

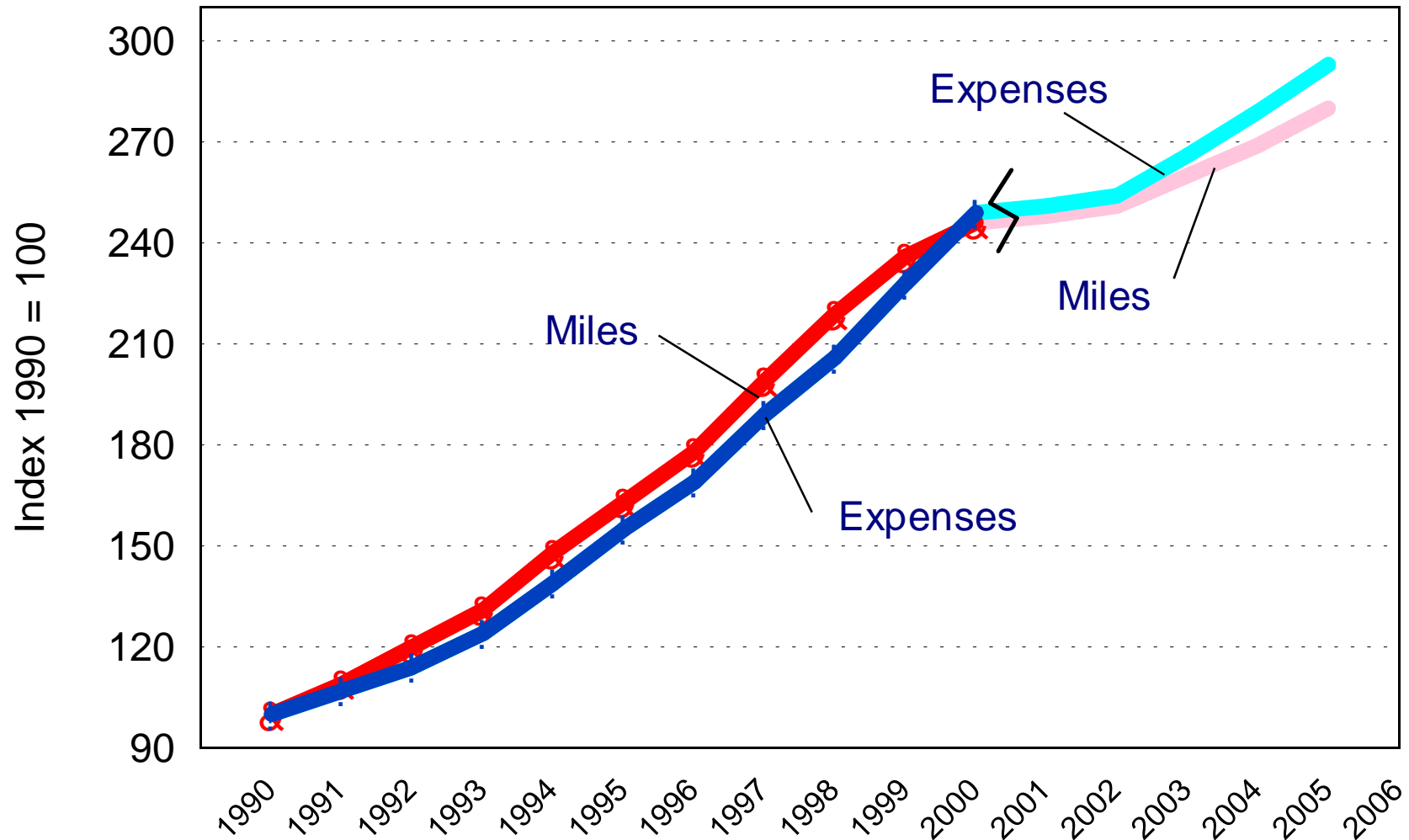
All data reindexed to 1990 = 100

Truck Tractor Miles Vs. Economic Growth



All data reindexed to 1990 = 100

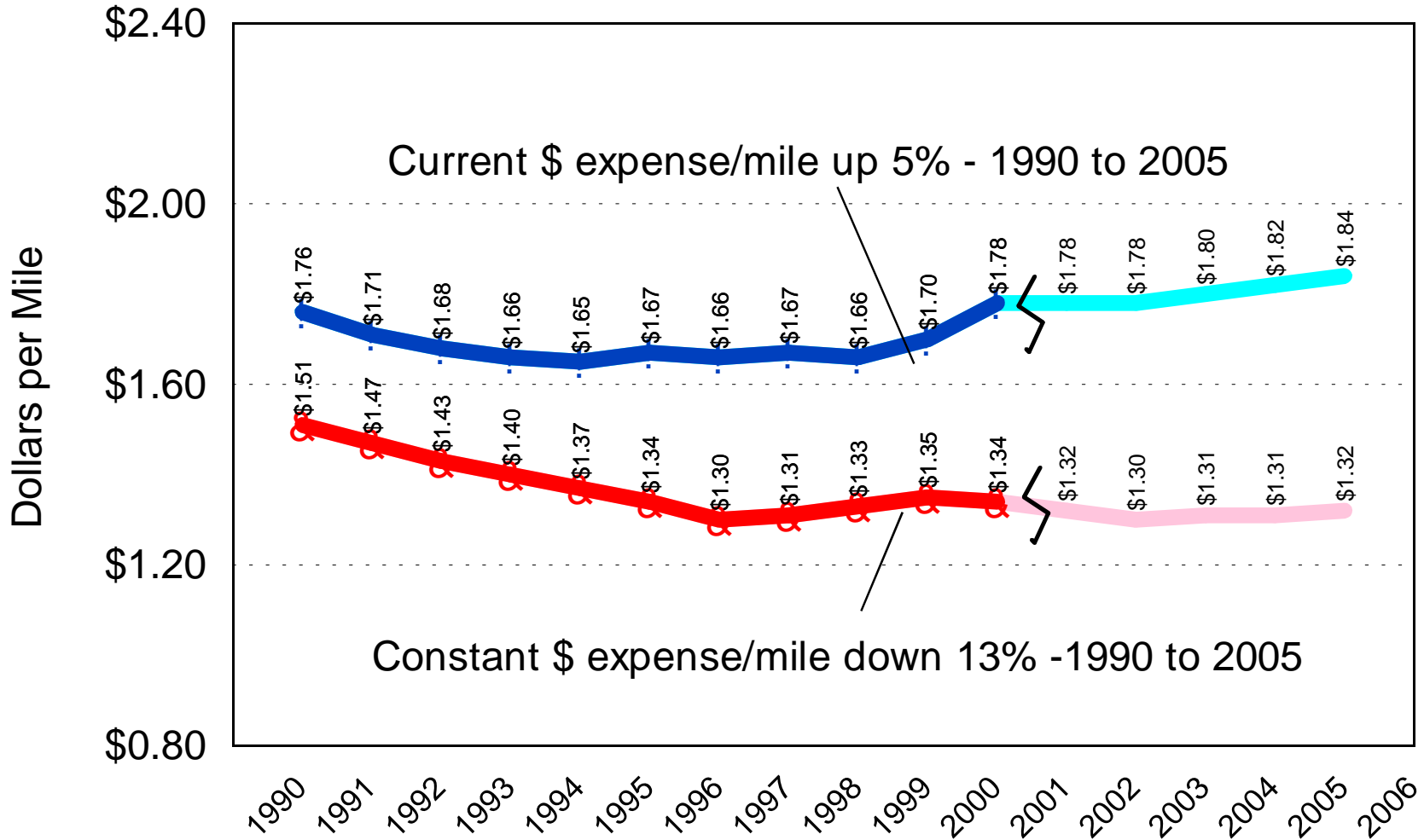
Measures of Trucking Performance for BTS Study Carriers



All data reindexed to 1990 = 100

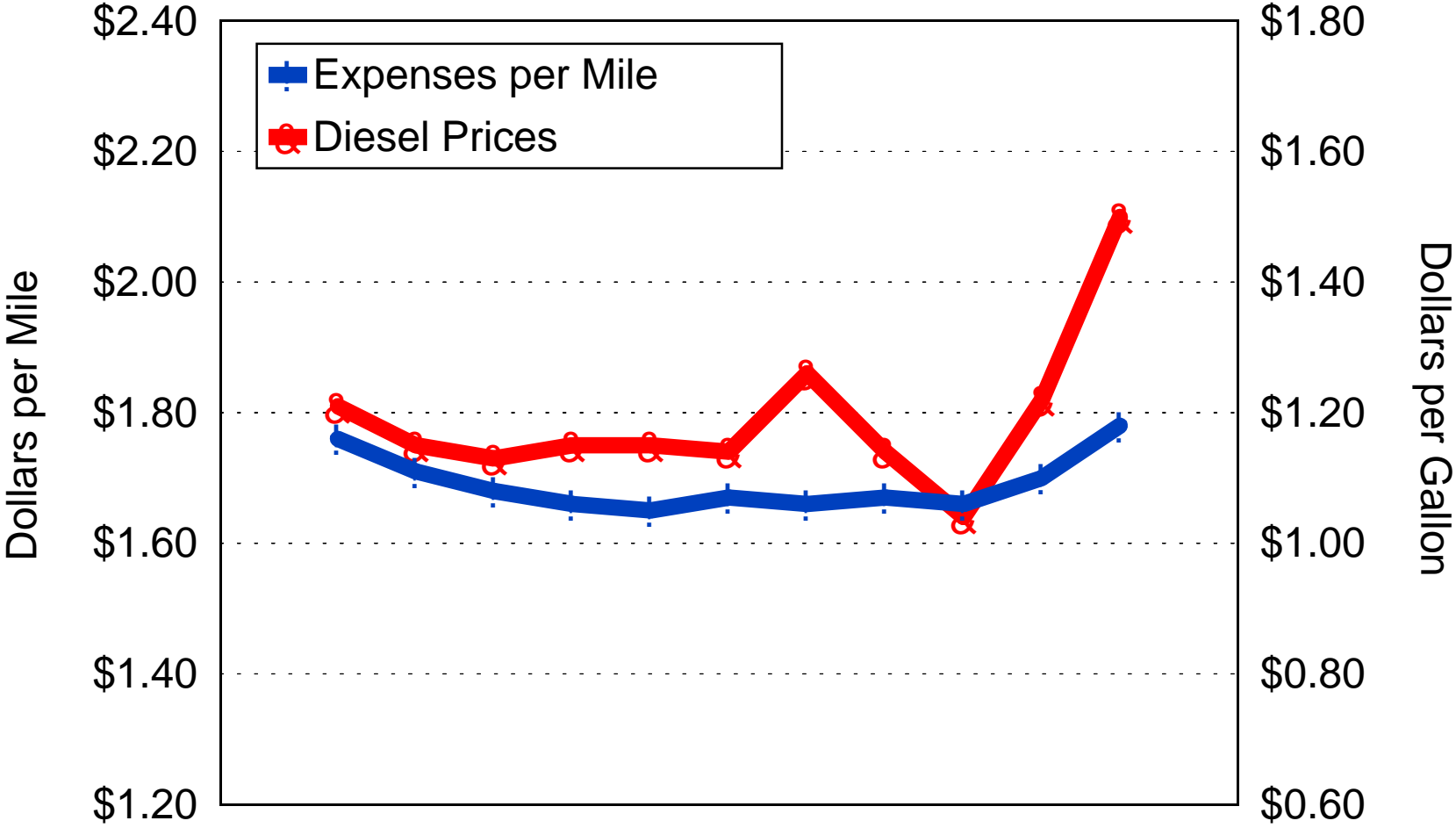
Expenses Per Mile

All Carriers - Amounts in **Current** and **Constant** \$



BTS study carriers

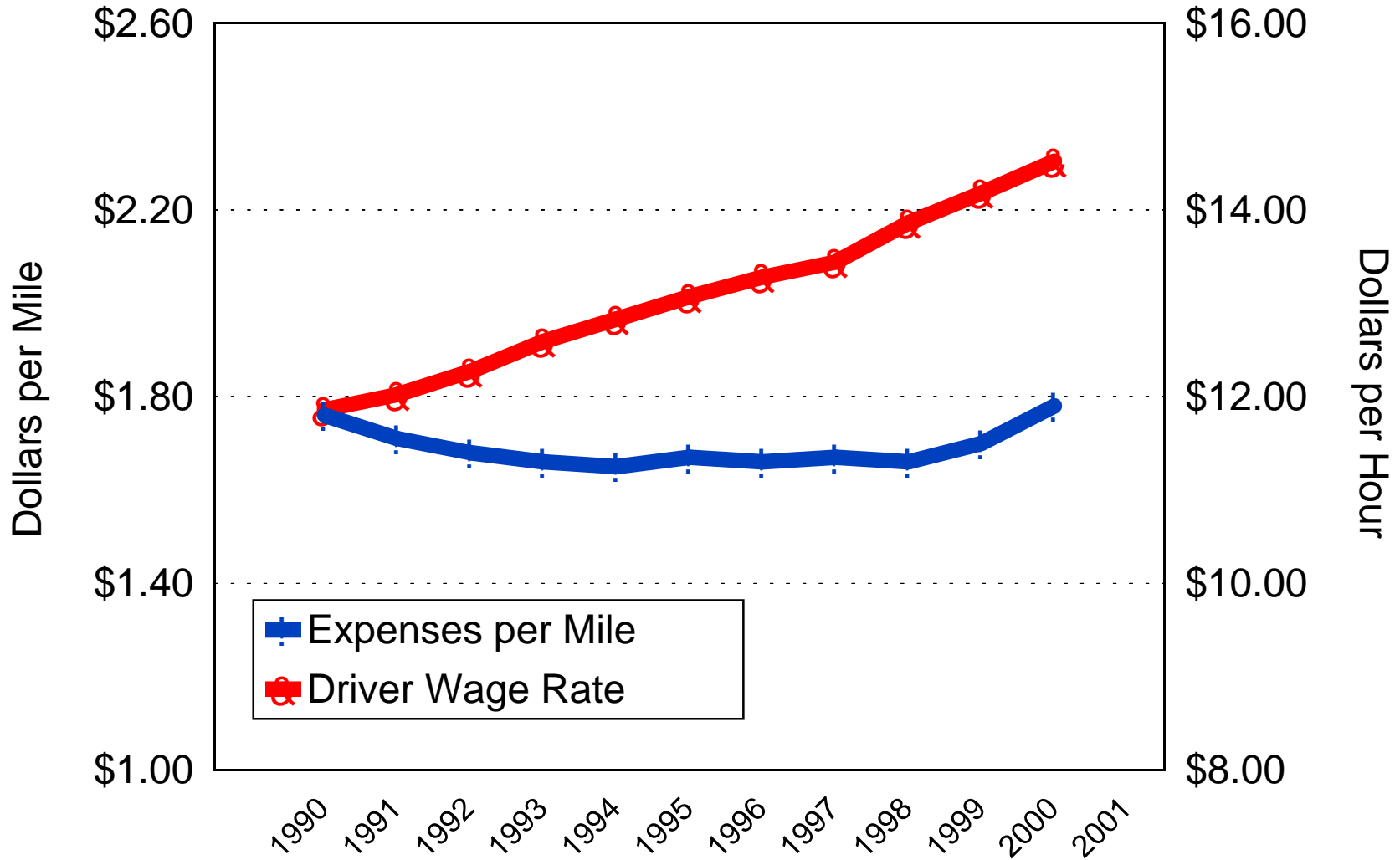
Expenses Per Mile vs. Diesel Prices



Expenses per Mile
Diesel Prices

\$1.76 \$1.71 \$1.68 \$1.66 \$1.65 \$1.67 \$1.66 \$1.67 \$1.66 \$1.70 \$1.78
 \$1.21 \$1.15 \$1.13 \$1.15 \$1.15 \$1.14 \$1.26 \$1.14 \$1.04 \$1.22 \$1.50

Expenses Per Mile vs. Driver Wages



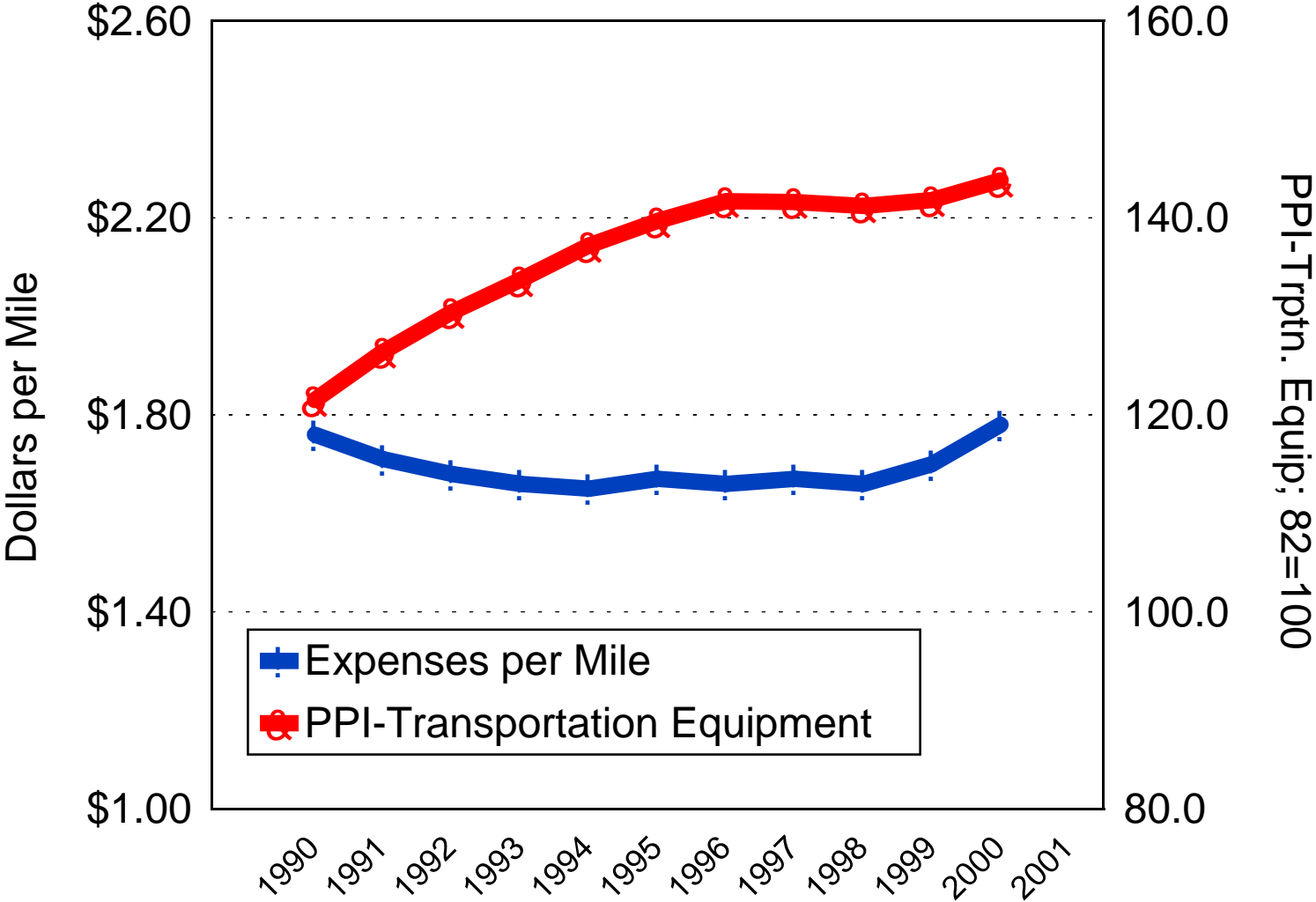
Expenses per Mile

\$1.76 \$1.71 \$1.68 \$1.66 \$1.65 \$1.67 \$1.66 \$1.67 \$1.66 \$1.70 \$1.78

Driver Wage Rate

\$11.86 \$12.02 \$12.27 \$12.59 \$12.83 \$13.07 \$13.28 \$13.44 \$13.86 \$14.18 \$14.52

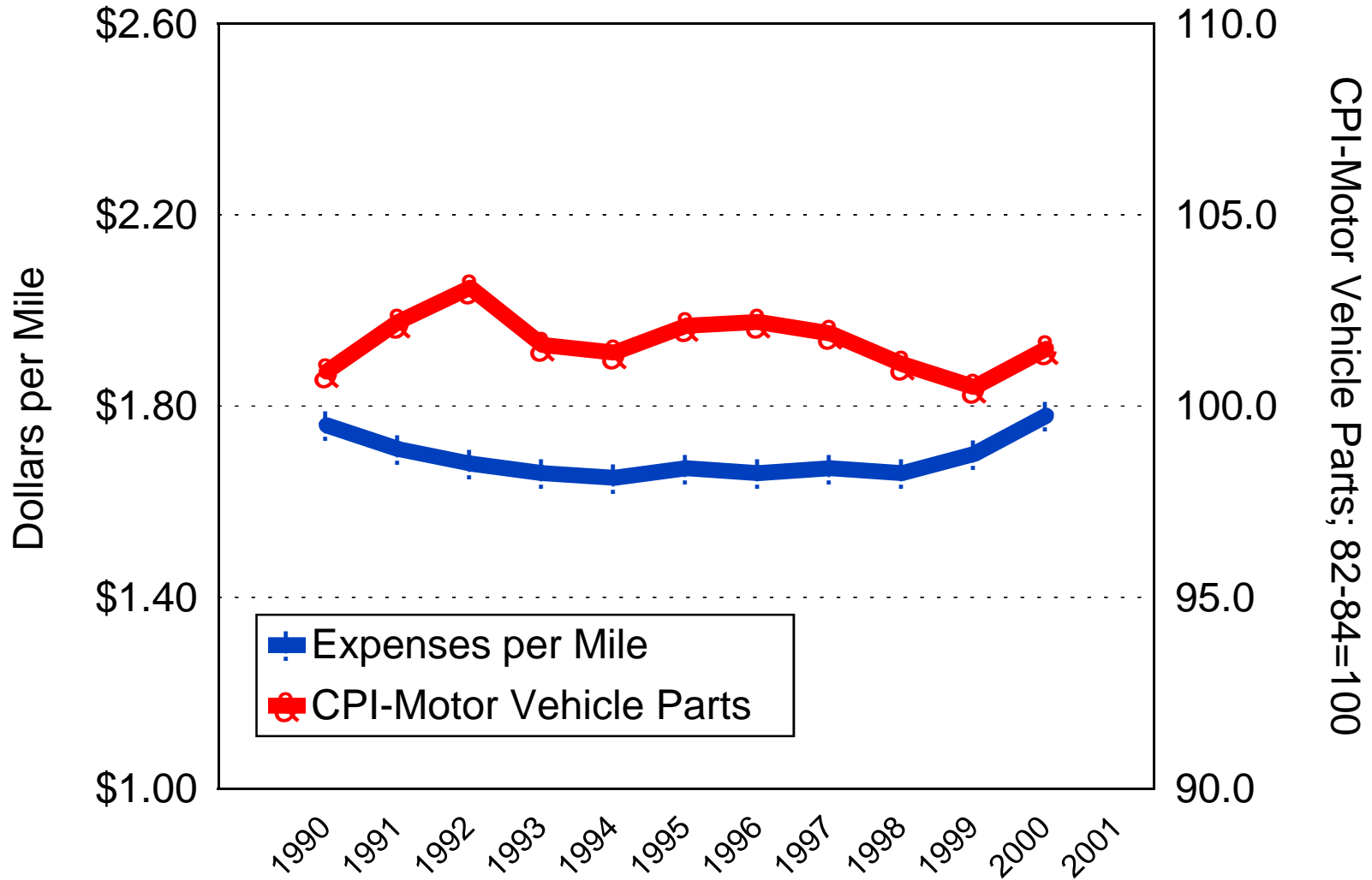
Expenses/Mile vs. Trptn. Equipment



Expenses per Mile
PPI-Transportation Equipment

\$1.76 \$1.71 \$1.68 \$1.66 \$1.65 \$1.67 \$1.66 \$1.67 \$1.66 \$1.70 \$1.78
121.5 126.4 130.4 133.7 137.2 139.7 141.7 141.6 141.2 141.8 143.8

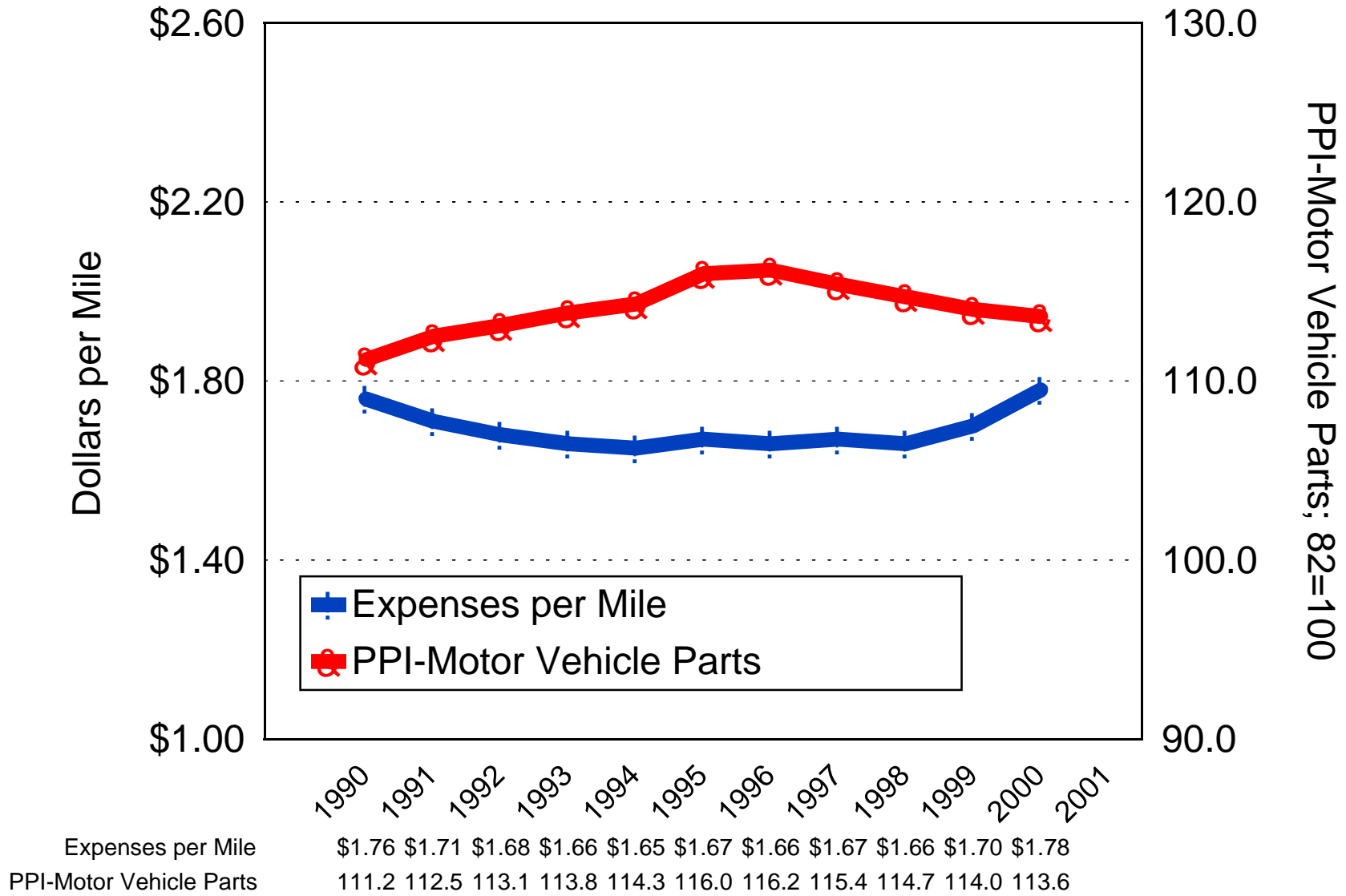
Expenses Per Mile vs. Vehicle Parts



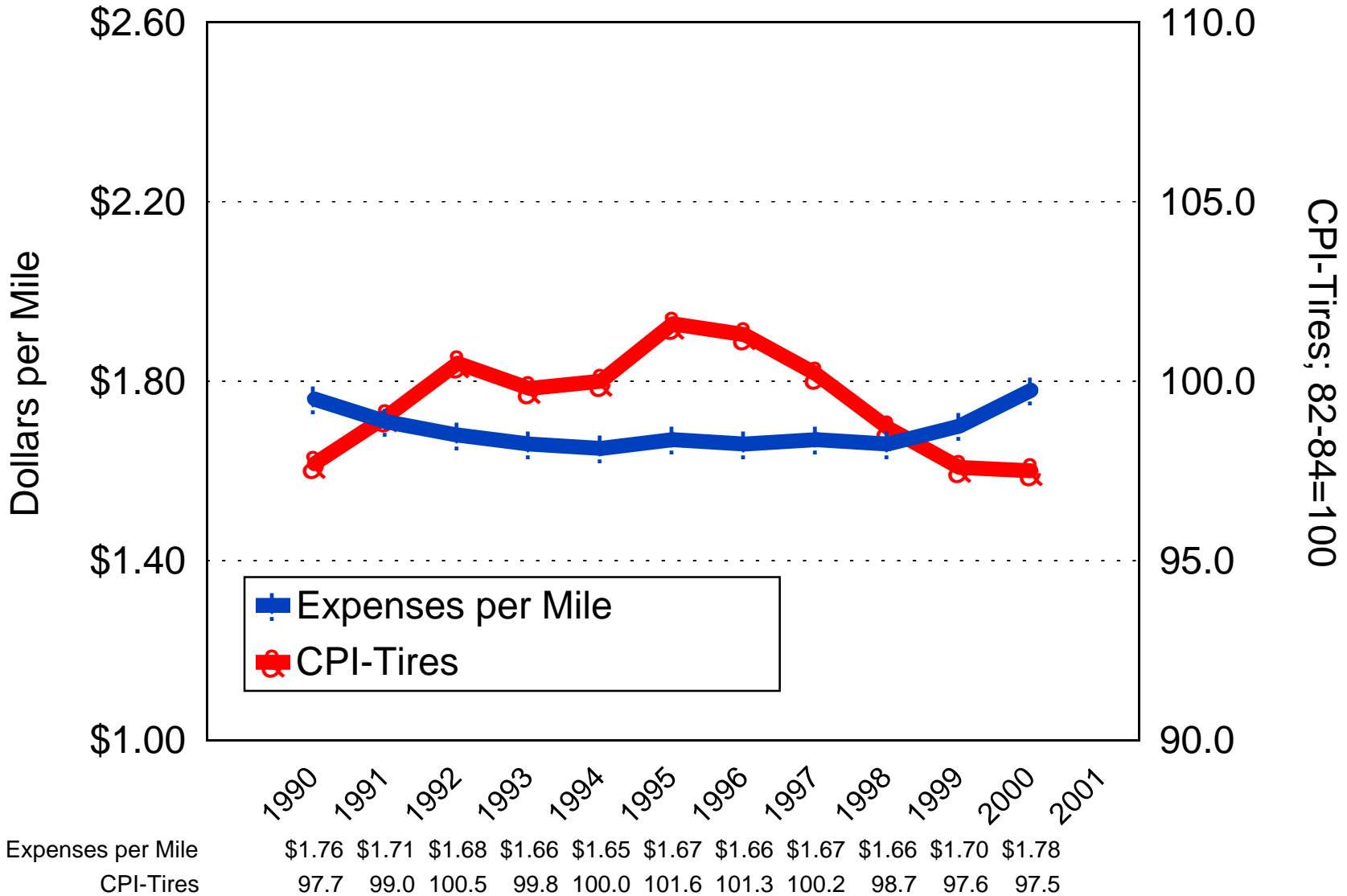
Expenses per Mile
CPI-Motor Vehicle Parts

\$1.76 \$1.71 \$1.68 \$1.66 \$1.65 \$1.67 \$1.66 \$1.67 \$1.66 \$1.70 \$1.78
100.9 102.2 103.1 101.6 101.4 102.1 102.2 101.9 101.1 100.5 101.5

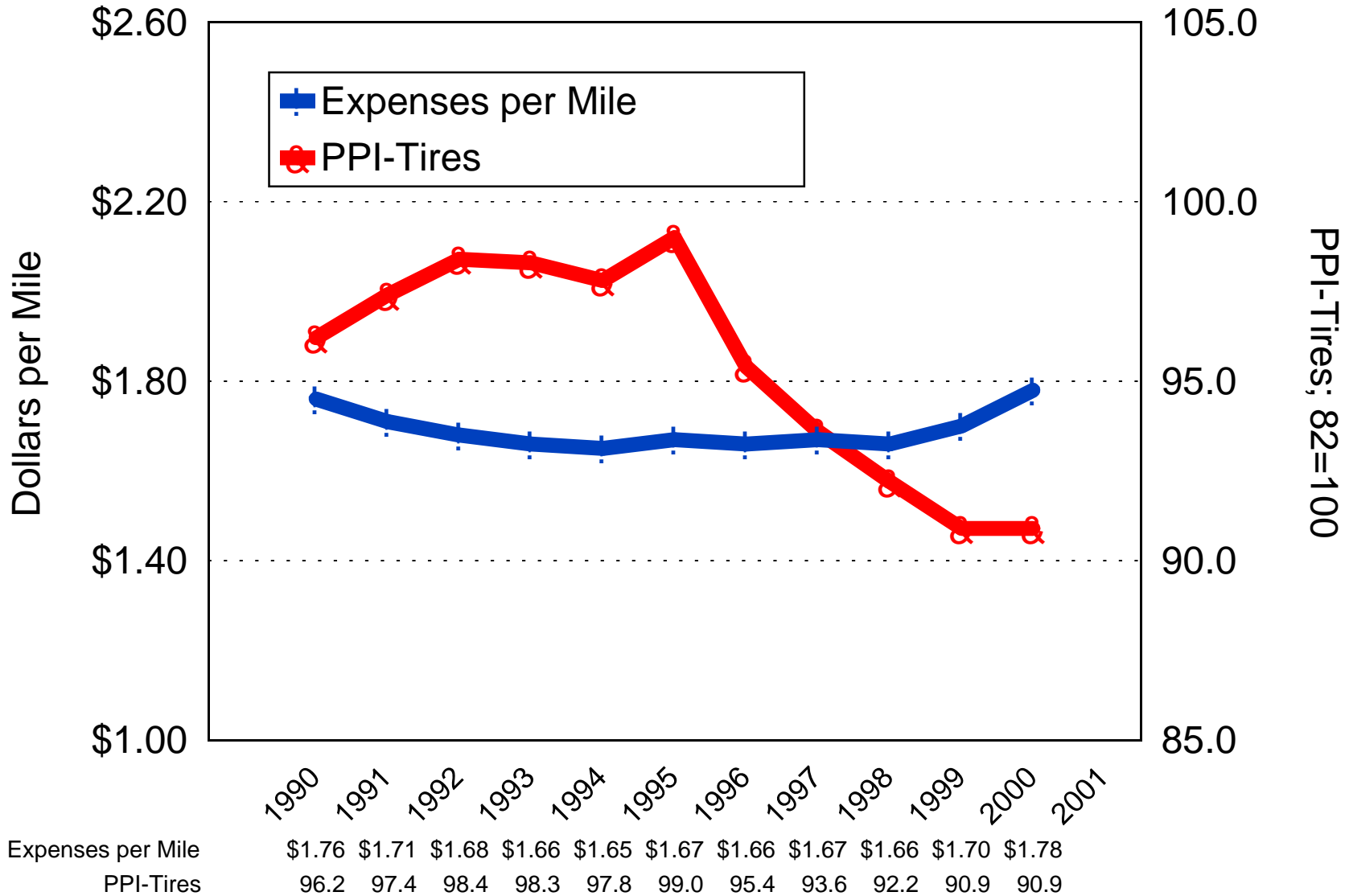
Expenses/Mile vs. Motor Vehicle Parts



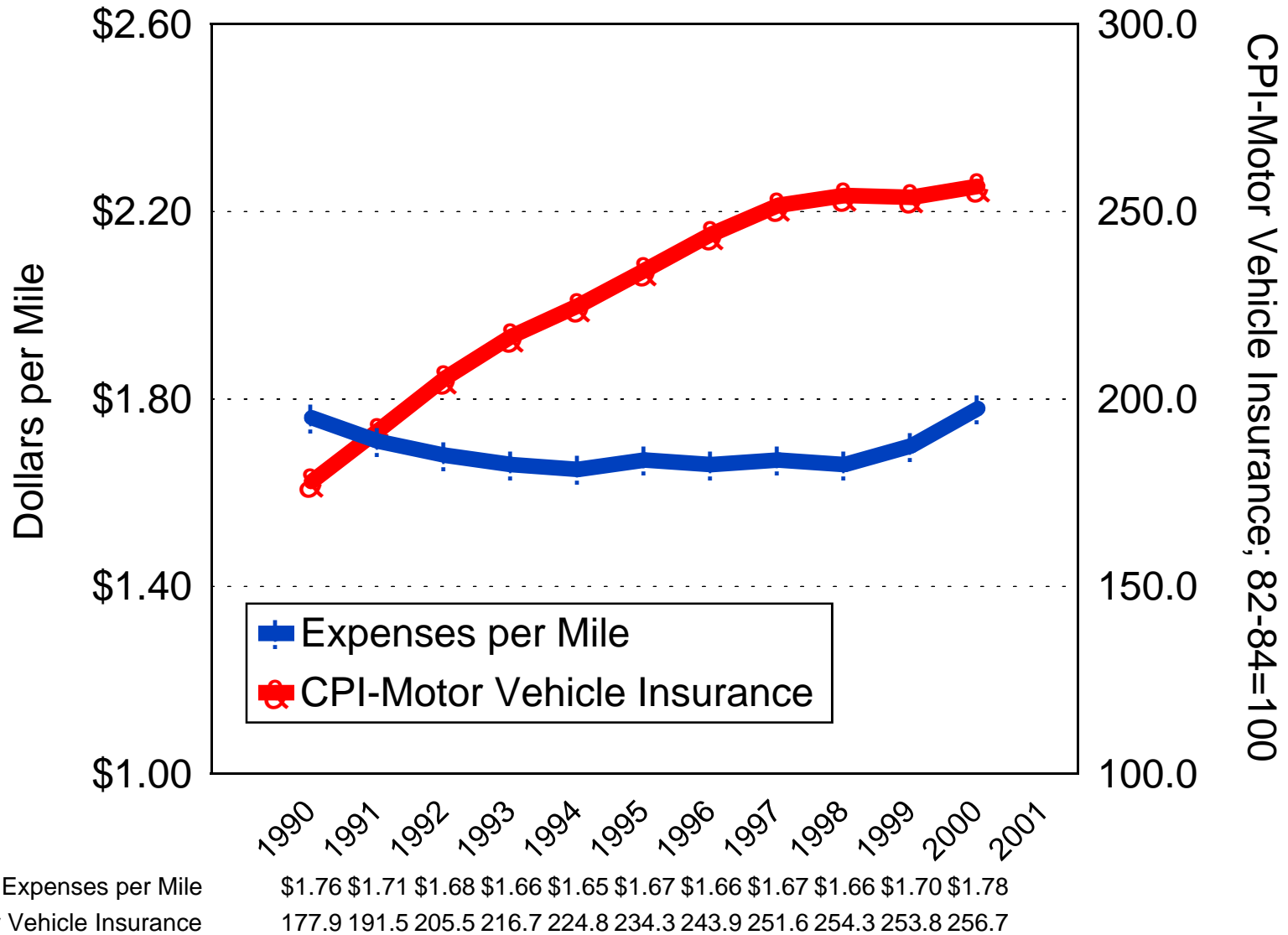
Expenses Per Mile vs. Tires



Expenses Per Mile vs. Tires

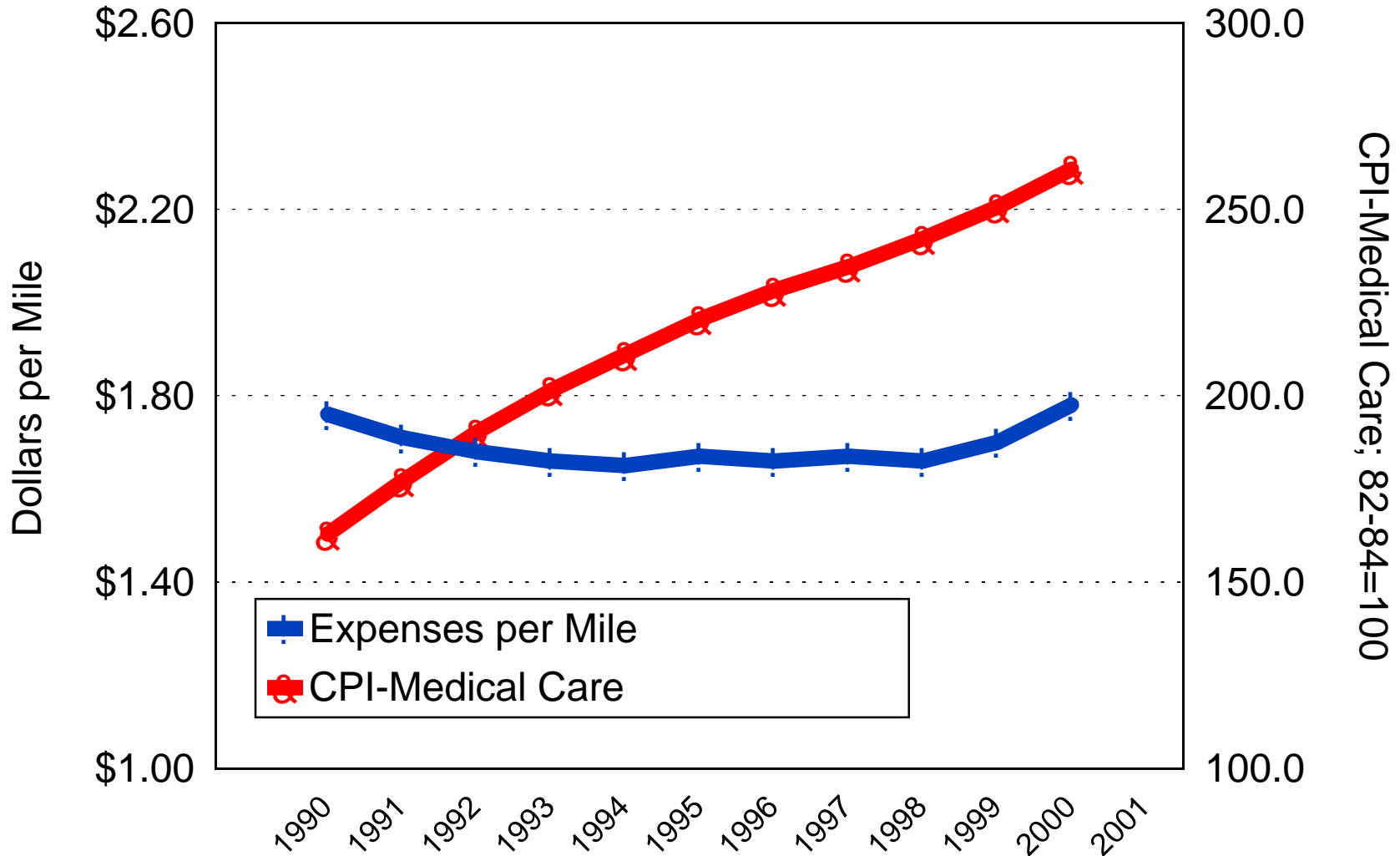


Expenses Per Mile vs. Insurance



Expenses per Mile
CPI-Motor Vehicle Insurance

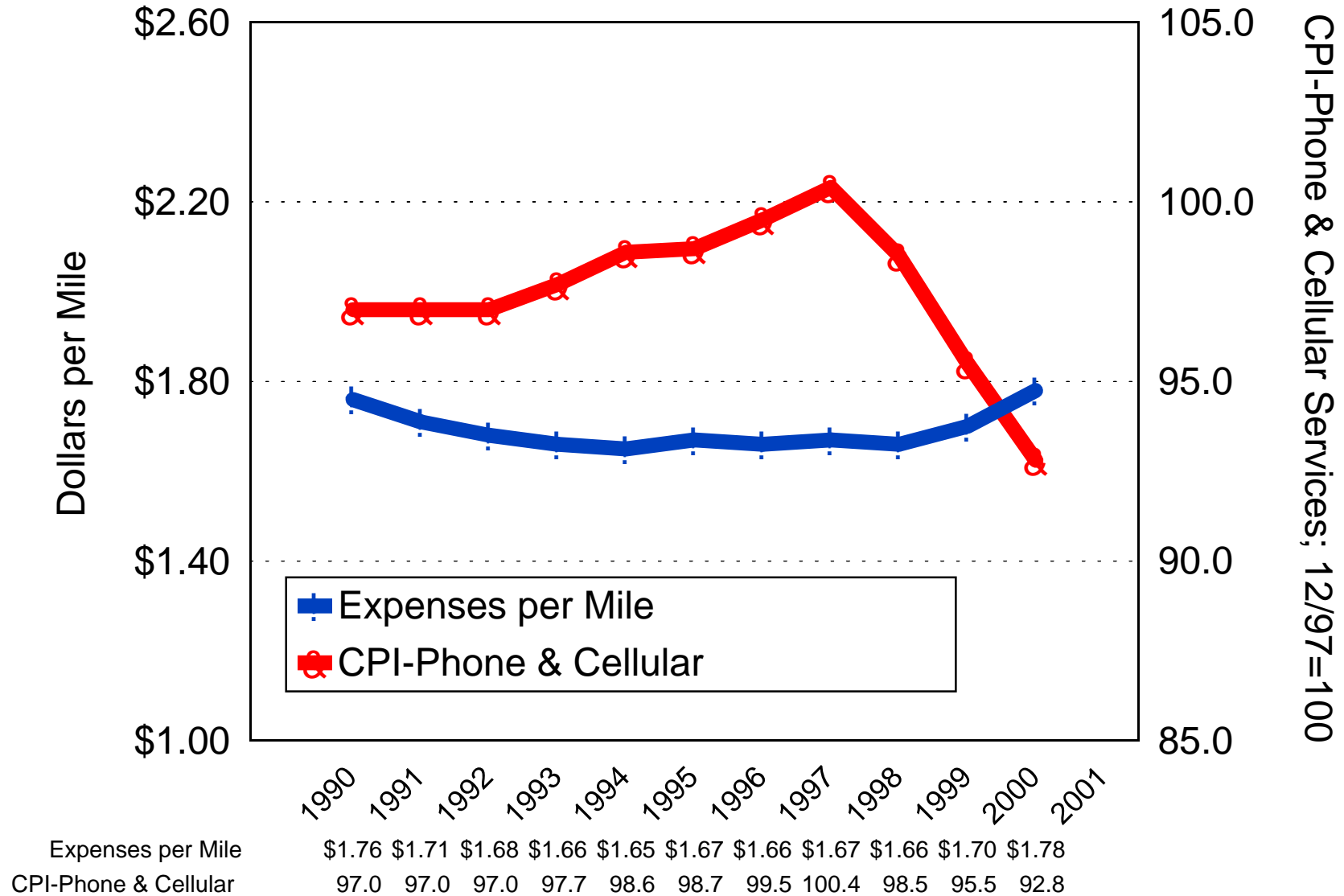
Expenses/Mile vs. Medical Care



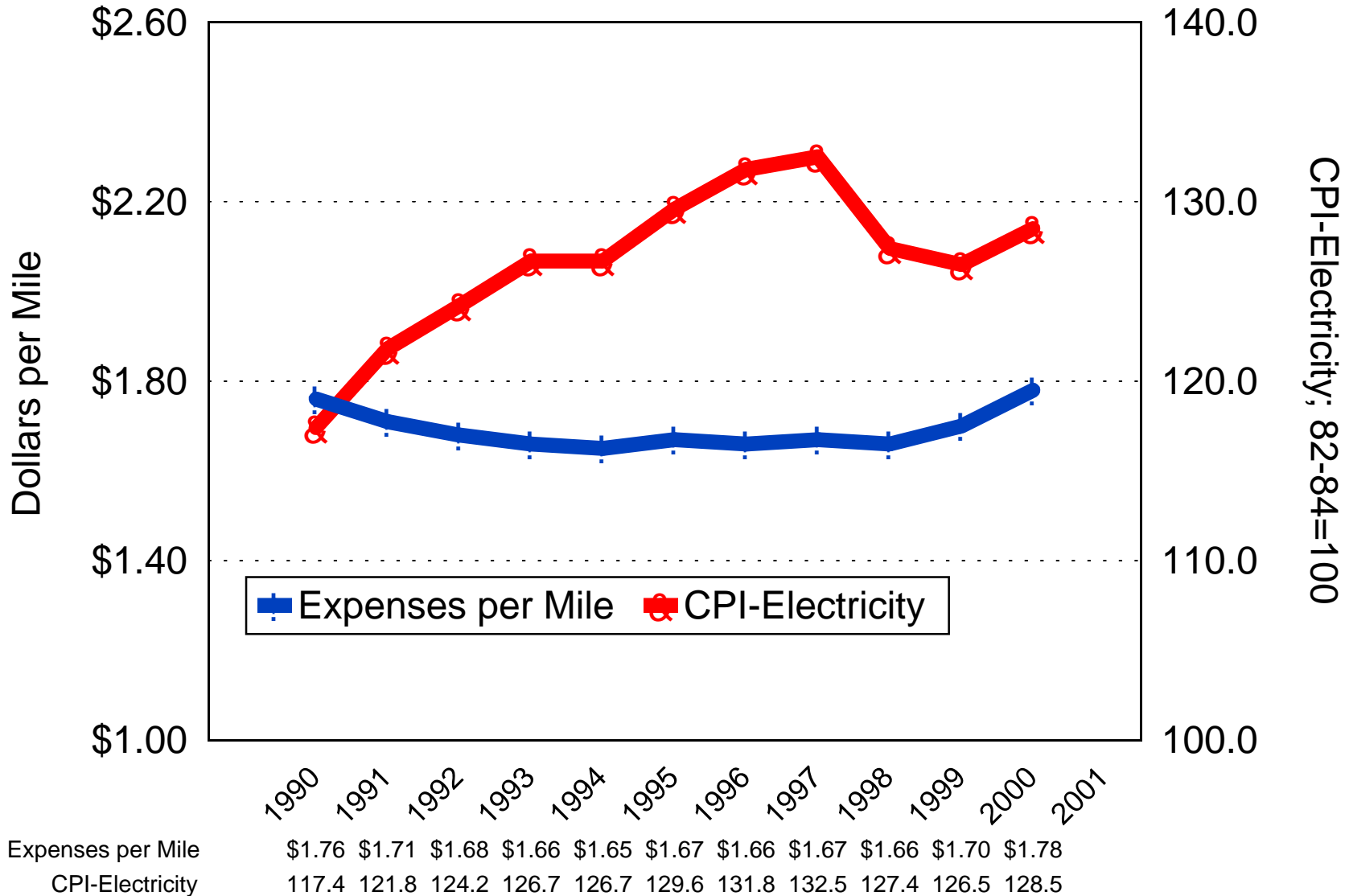
Expenses per Mile
CPI-Medical Care

\$1.76 \$1.71 \$1.68 \$1.66 \$1.65 \$1.67 \$1.66 \$1.67 \$1.66 \$1.70 \$1.78
162.8 177.0 190.1 201.4 211.0 220.5 228.2 234.6 242.1 250.6 260.8

Expenses Per Mile vs. Phone Services



Expenses Per Mile vs. Electricity



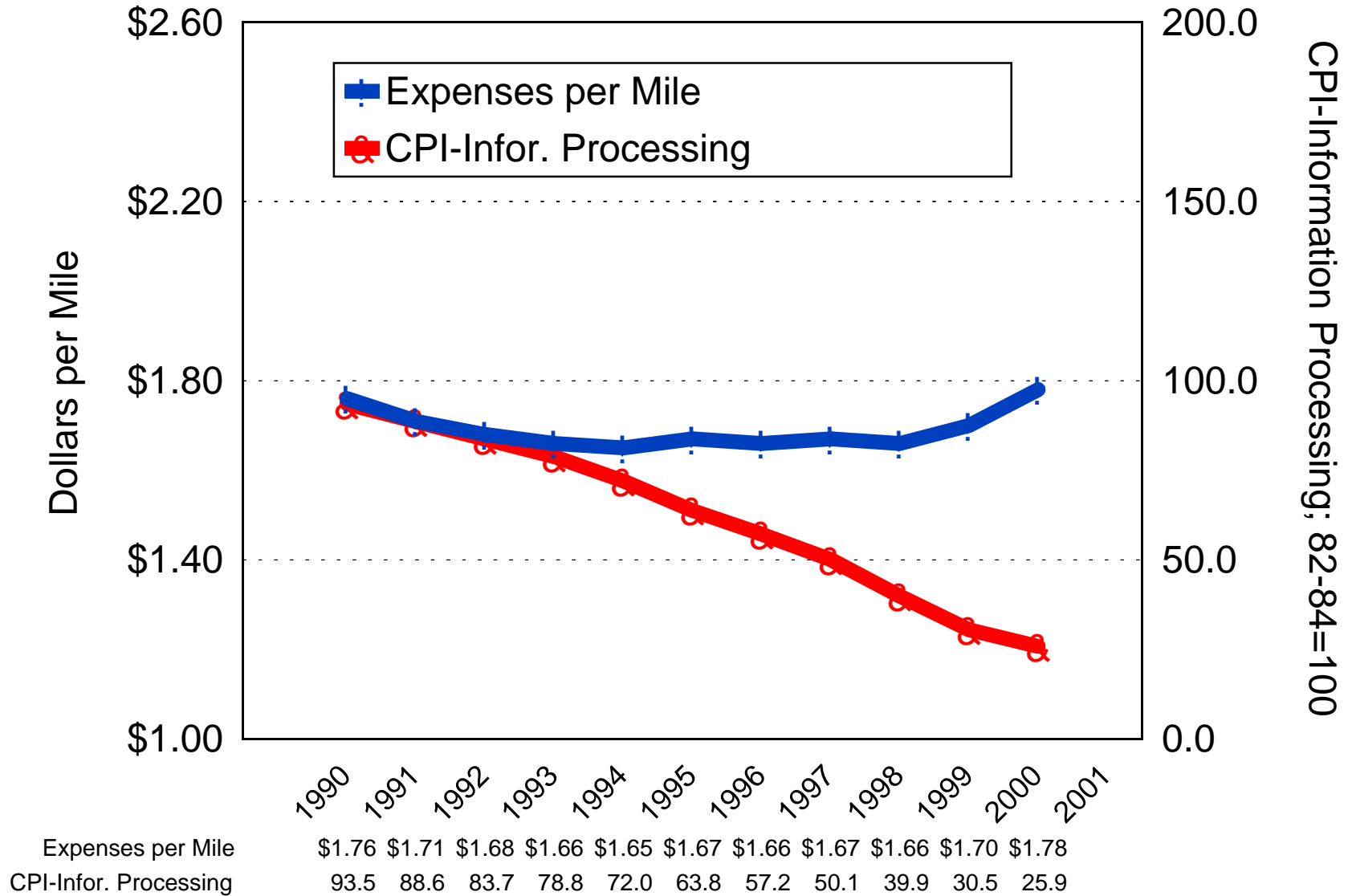
Expenses per Mile

CPI-Electricity

\$1.76 \$1.71 \$1.68 \$1.66 \$1.65 \$1.67 \$1.66 \$1.67 \$1.66 \$1.70 \$1.78

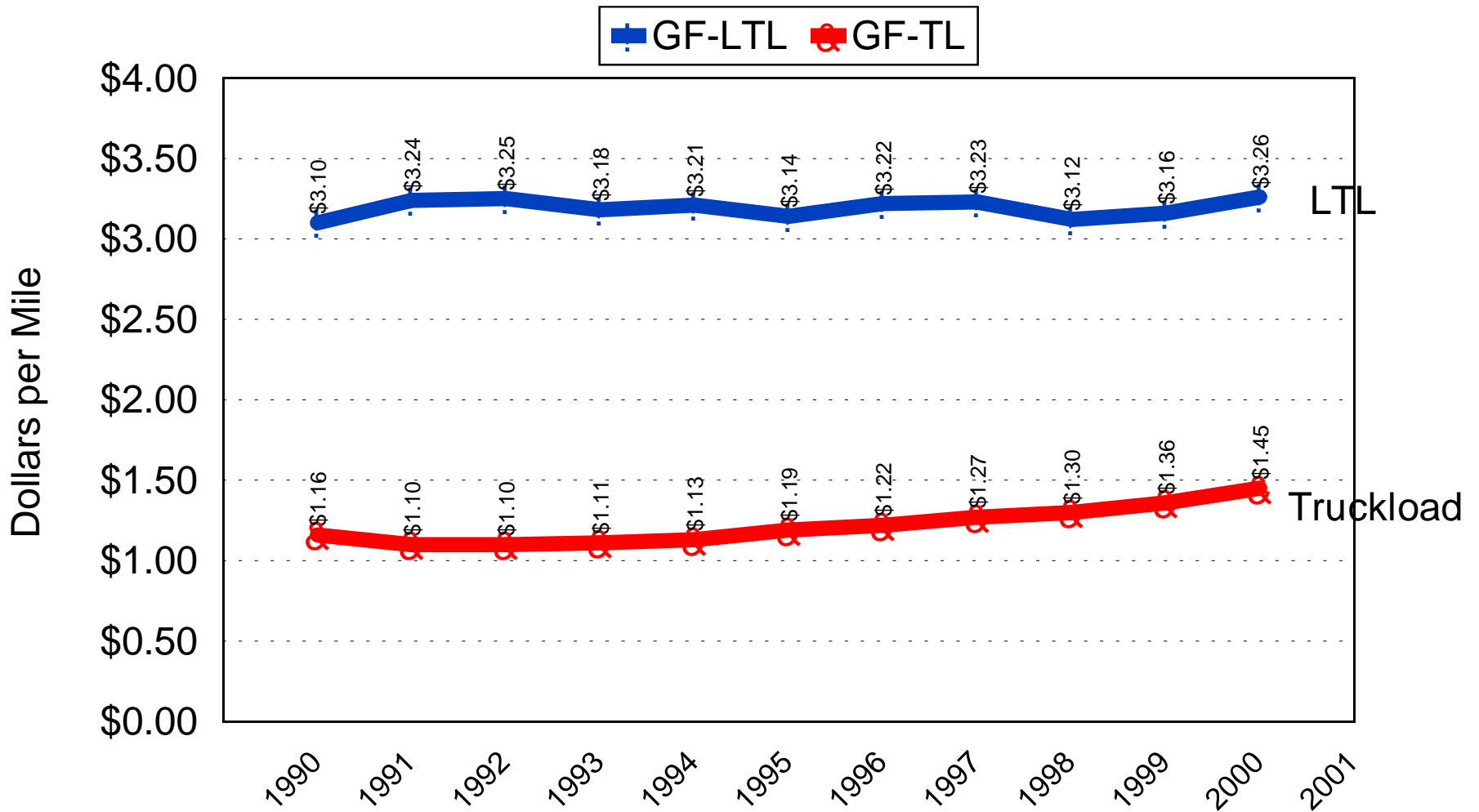
117.4 121.8 124.2 126.7 126.7 129.6 131.8 132.5 127.4 126.5 128.5

Expenses/Mile vs. Information Processing



Current \$ Expenses Per Mile

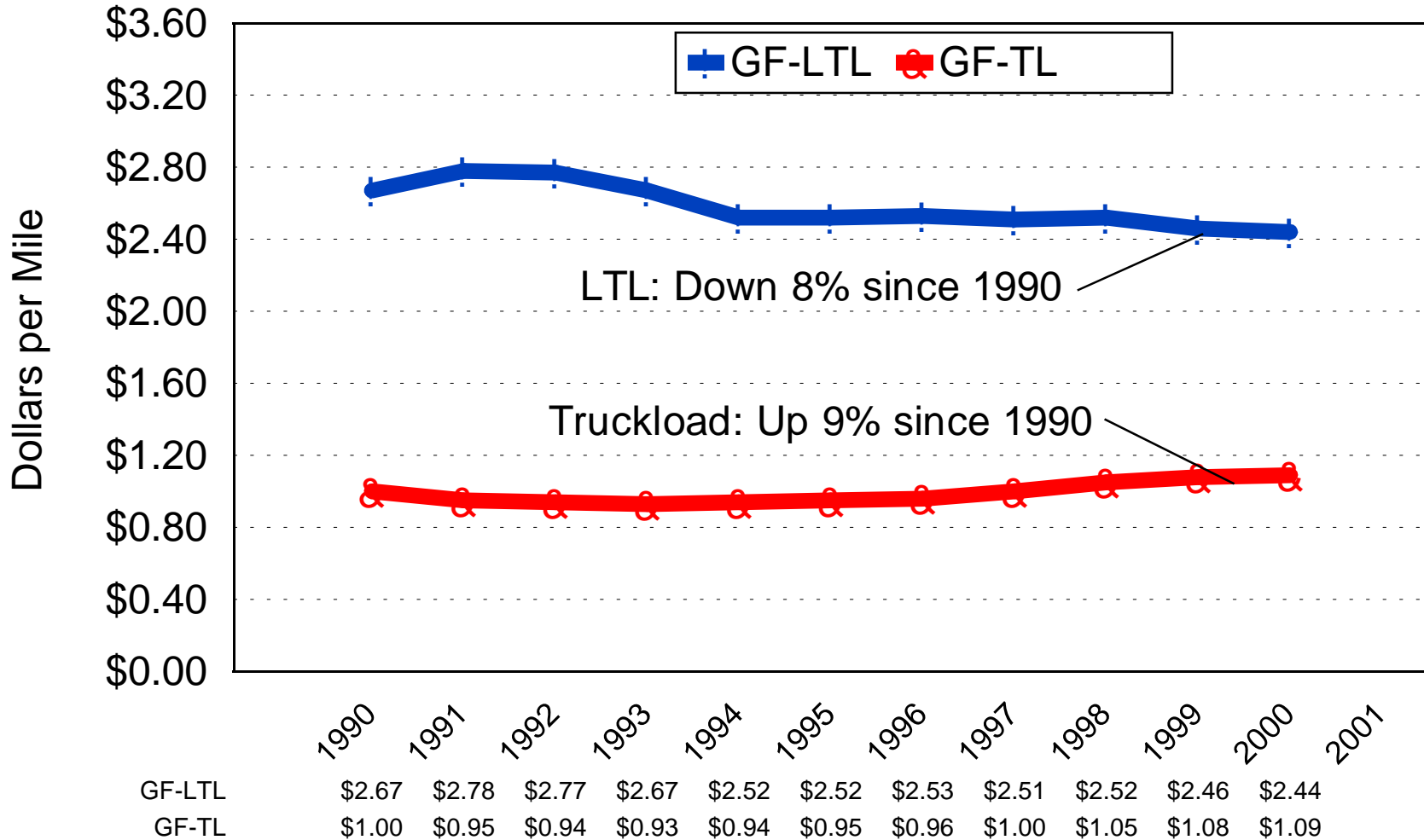
General Freight Carriers



BTS study carriers

Constant \$ Expenses Per Mile

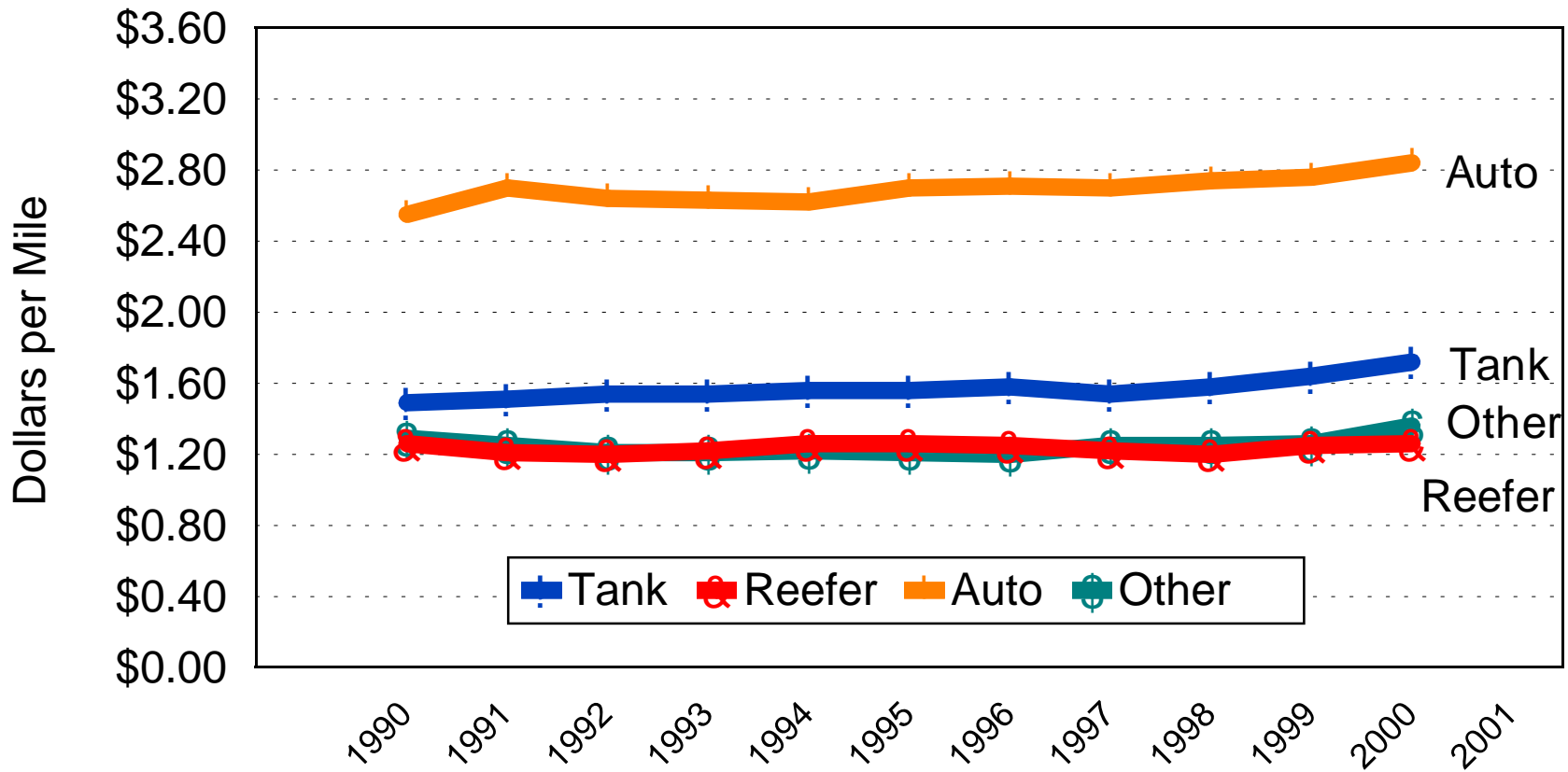
General Freight Carriers



Deflator is PPI All Commodities Index with 1982 = 100

Current \$ Expenses Per Mile

Specialized Carriers

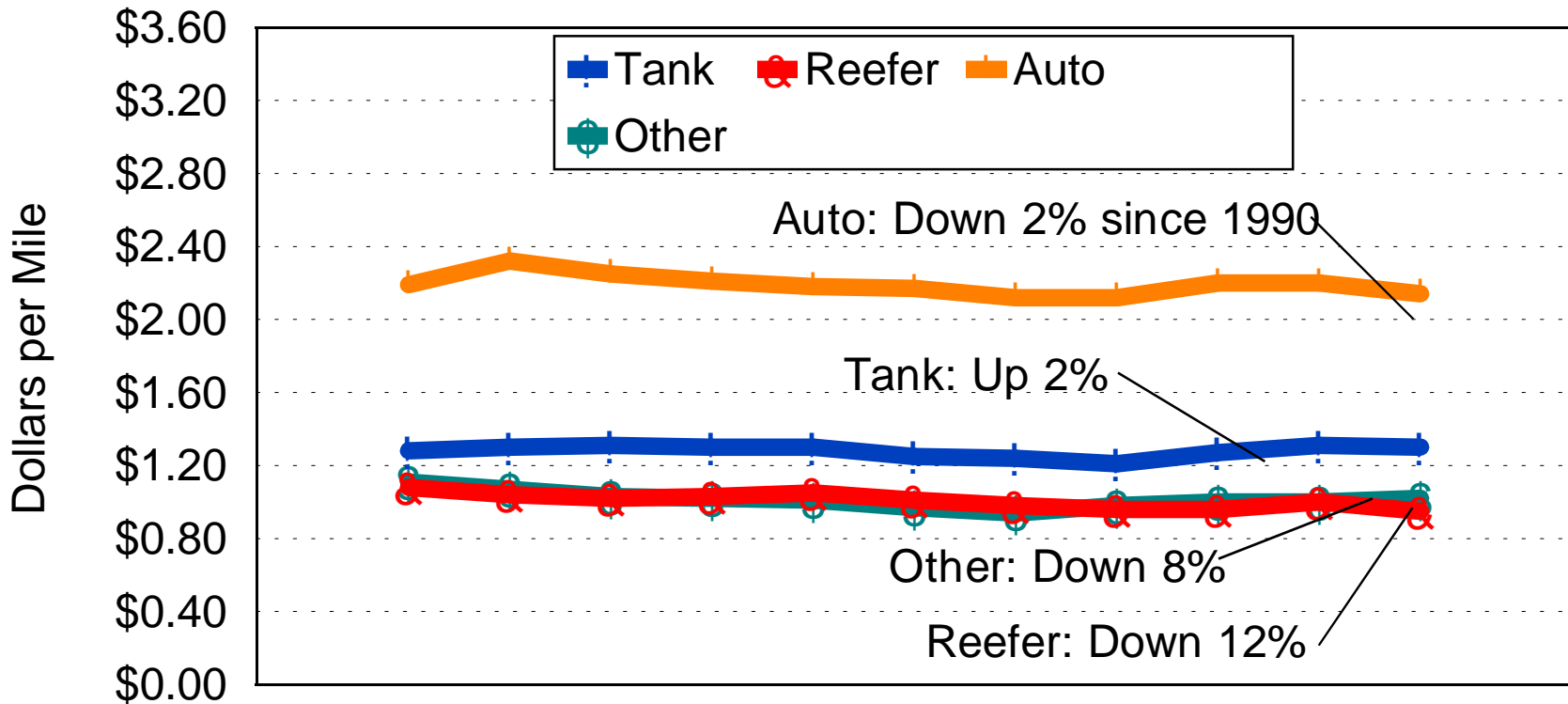


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|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Tank | \$1.49 | \$1.51 | \$1.54 | \$1.54 | \$1.56 | \$1.56 | \$1.58 | \$1.54 | \$1.58 | \$1.64 | \$1.72 |
| Reefer | \$1.26 | \$1.21 | \$1.20 | \$1.22 | \$1.26 | \$1.26 | \$1.25 | \$1.22 | \$1.20 | \$1.25 | \$1.26 |
| Auto | \$2.55 | \$2.70 | \$2.64 | \$2.63 | \$2.62 | \$2.70 | \$2.71 | \$2.70 | \$2.74 | \$2.76 | \$2.84 |
| Other | \$1.29 | \$1.25 | \$1.21 | \$1.21 | \$1.22 | \$1.21 | \$1.20 | \$1.25 | \$1.25 | \$1.26 | \$1.36 |

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Constant \$ Expenses Per Mile

Specialized Carriers

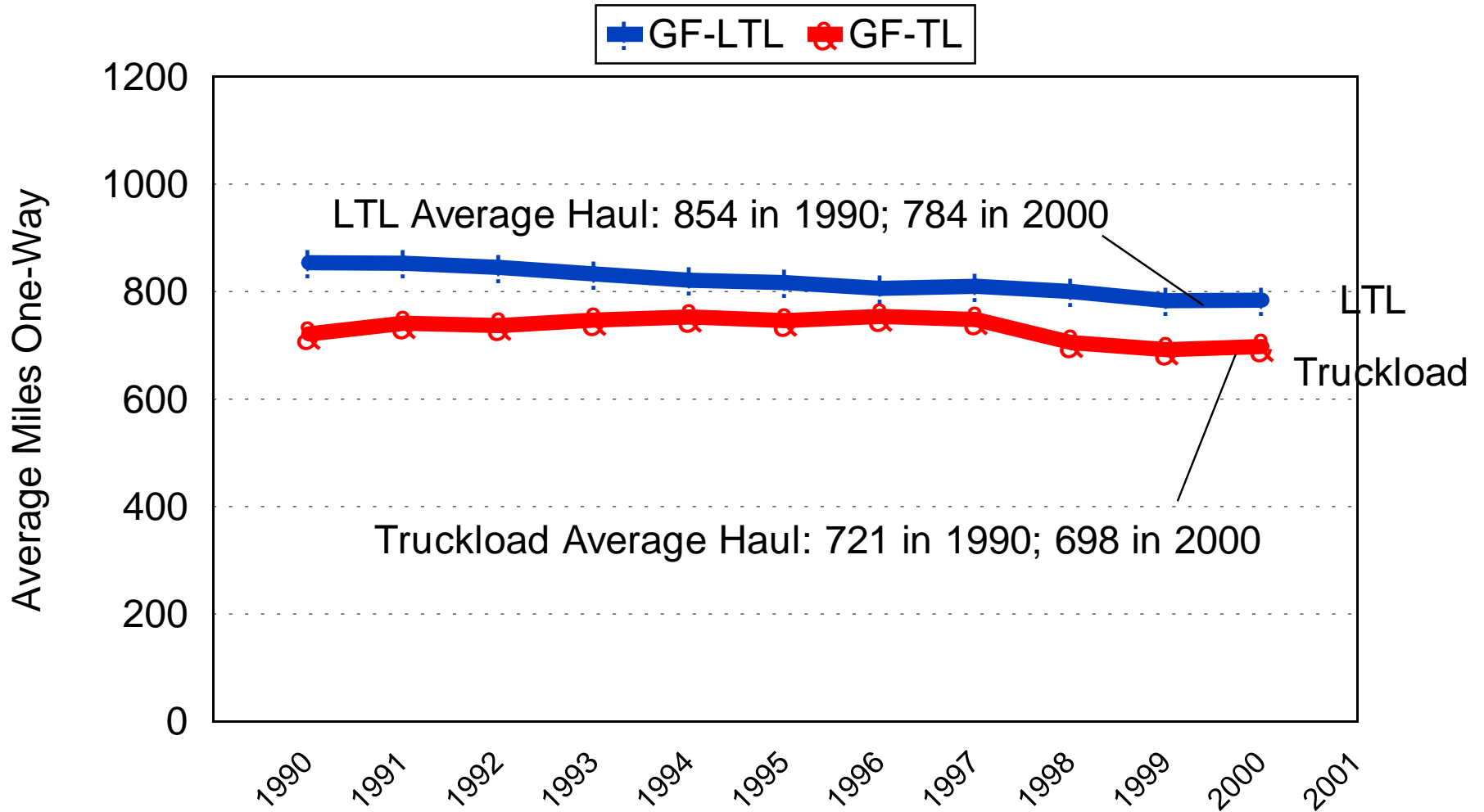


| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|
| Tank | \$1.28 | \$1.30 | \$1.31 | \$1.30 | \$1.30 | \$1.25 | \$1.24 | \$1.21 | \$1.27 | \$1.31 | \$1.30 | |
| Reefer | \$1.08 | \$1.04 | \$1.02 | \$1.03 | \$1.05 | \$1.01 | \$0.98 | \$0.96 | \$0.96 | \$1.00 | \$0.95 | |
| Auto | \$2.19 | \$2.32 | \$2.25 | \$2.21 | \$2.18 | \$2.17 | \$2.12 | \$2.12 | \$2.20 | \$2.20 | \$2.14 | |
| Other | \$1.11 | \$1.07 | \$1.03 | \$1.02 | \$1.01 | \$0.97 | \$0.94 | \$0.98 | \$1.00 | \$1.00 | \$1.02 | |

Deflator is PPI All Commodities Index with 1982 = 100

Average Length of Haul

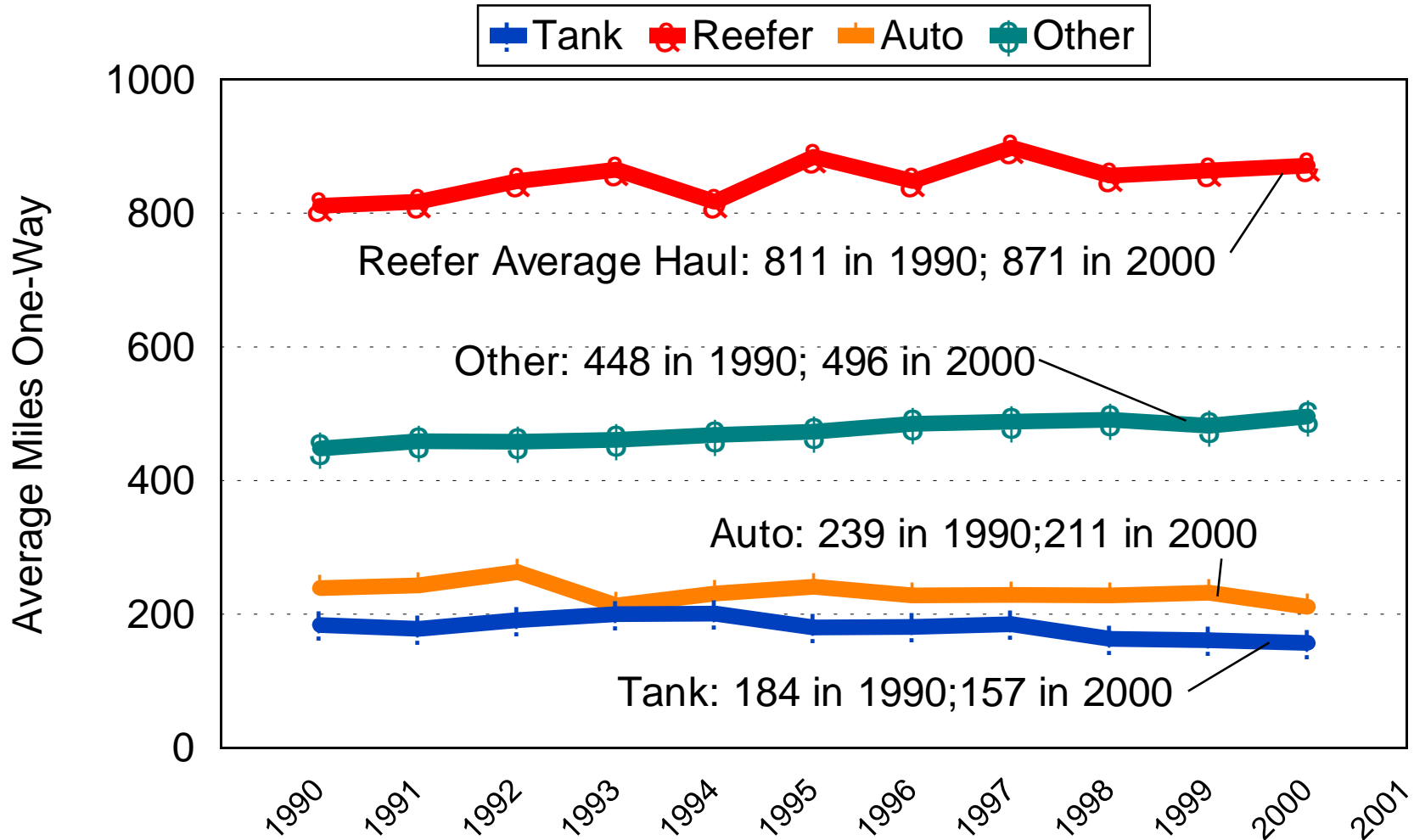
General Freight Carriers



BTS study carriers

Average Length of Haul

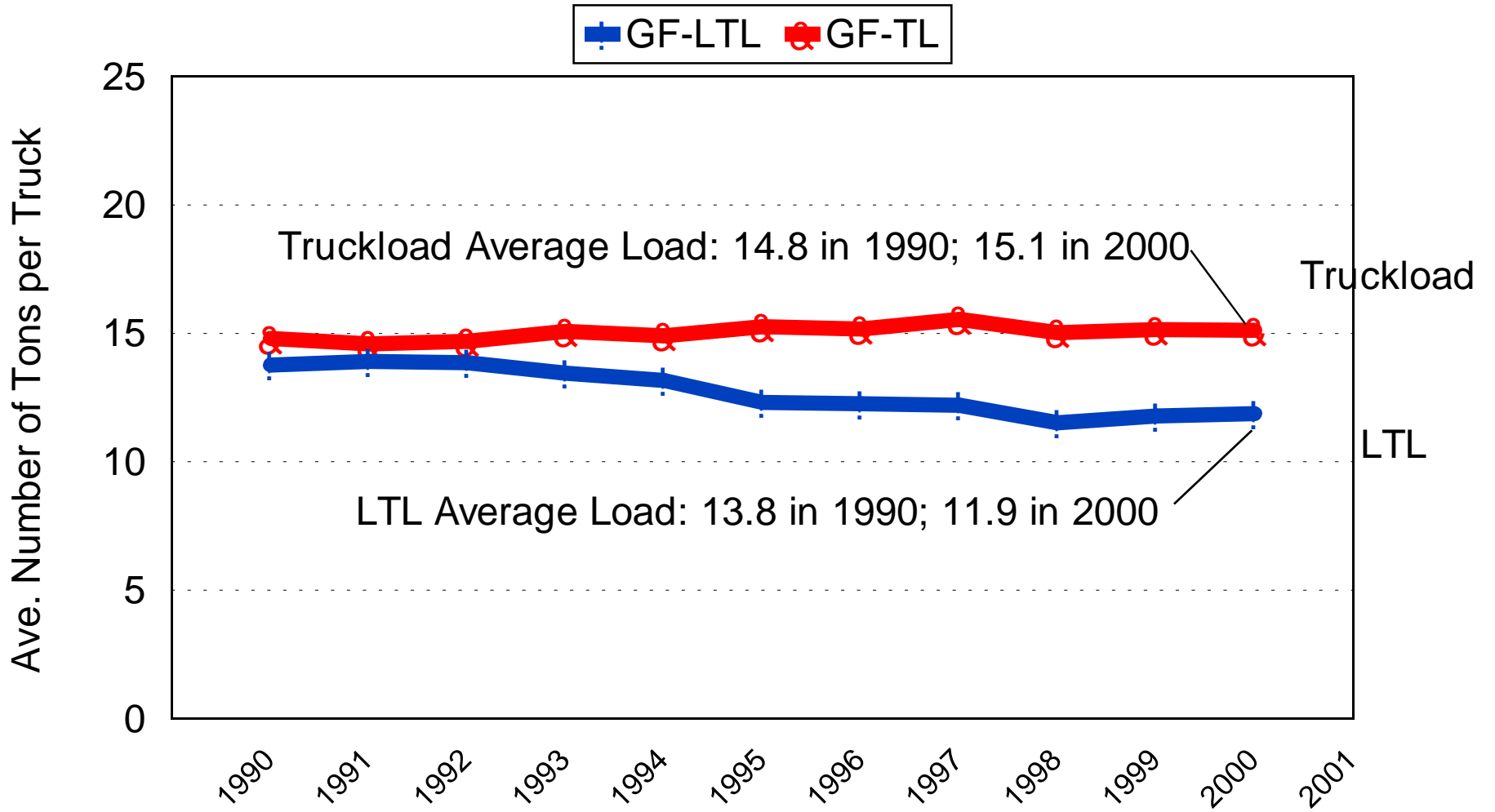
Specialized Carrier Segments



BTS study carriers

Average Load

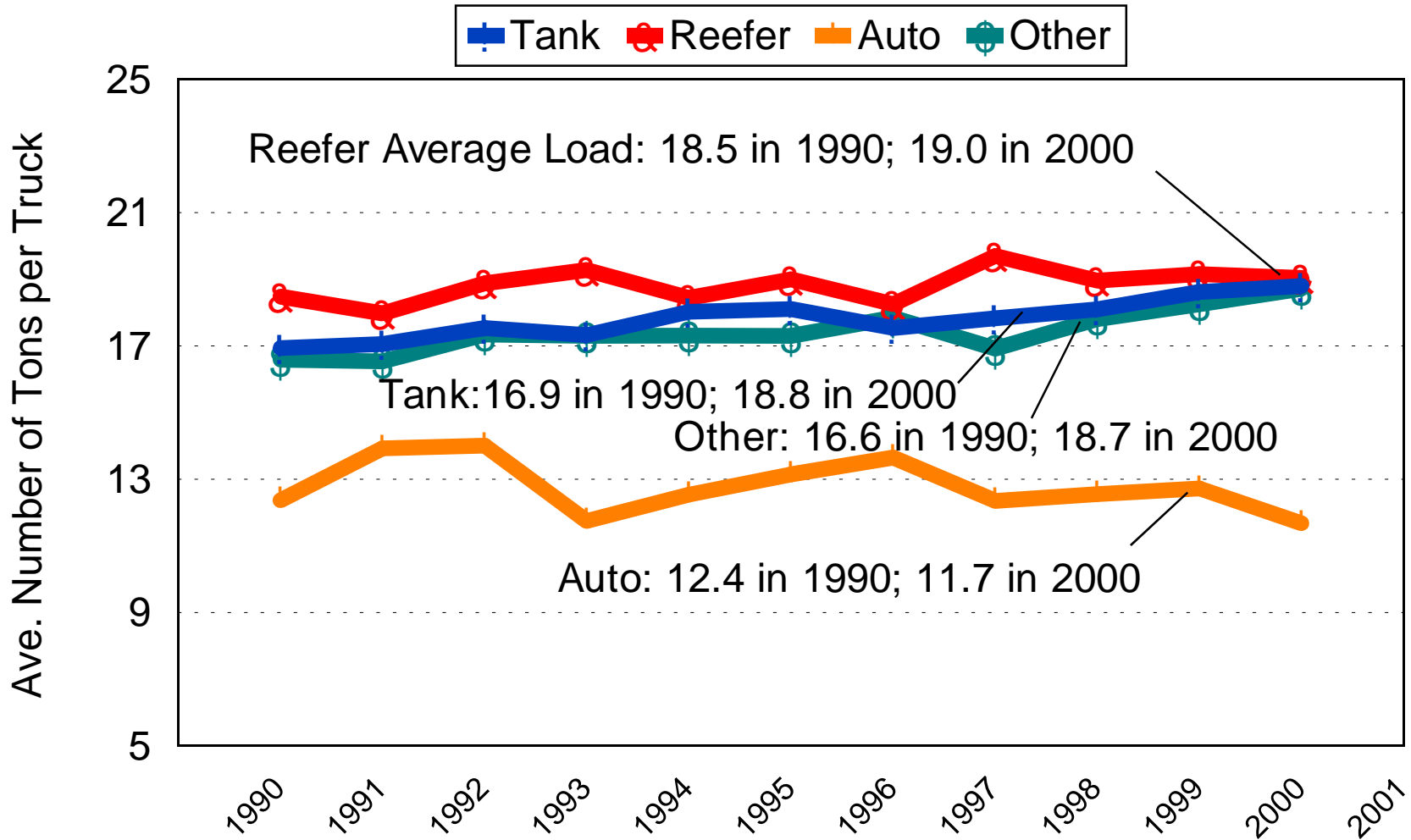
General Freight Carriers



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Average Load

Specialized Carrier Segments



BTS study carriers

