

Comparison of Transportation Finance Models

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Factors That Drive Highway & Transportation Decisions

- **Safety**
- **Congestion**
- **Capacity**
- Economic Development
- Structural or Functional deficiencies
- Global Economics
- Population & Population Density

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Safety

- 151,692 reported car crashes

Car crashes are the leading cause of death for teens

- 961 fatalities

59.74% of all fatalities were 15-45 years

- 78,842 crashes with an injury

Reported Crashes

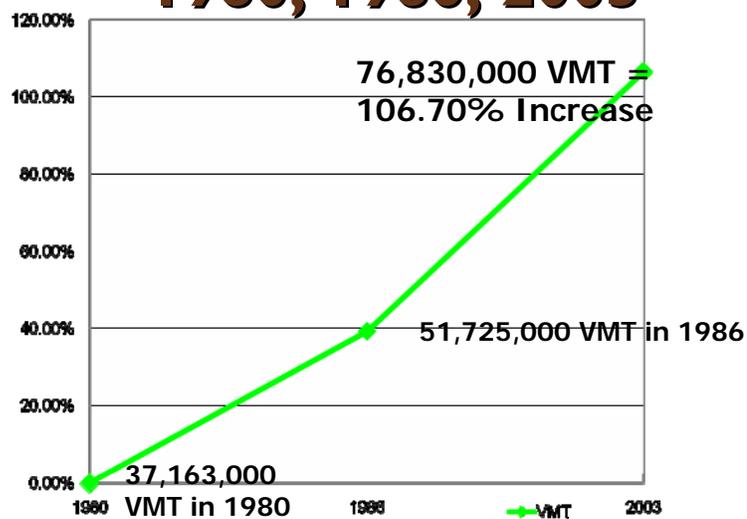
- According to a “naturalistic” driving study by the Virginia Tech Transportation Institute (VTTI), **unreported accidents are four times greater than reported accidents.** Of 85 known crashes in the study, 16 were reported

Congestion 2003

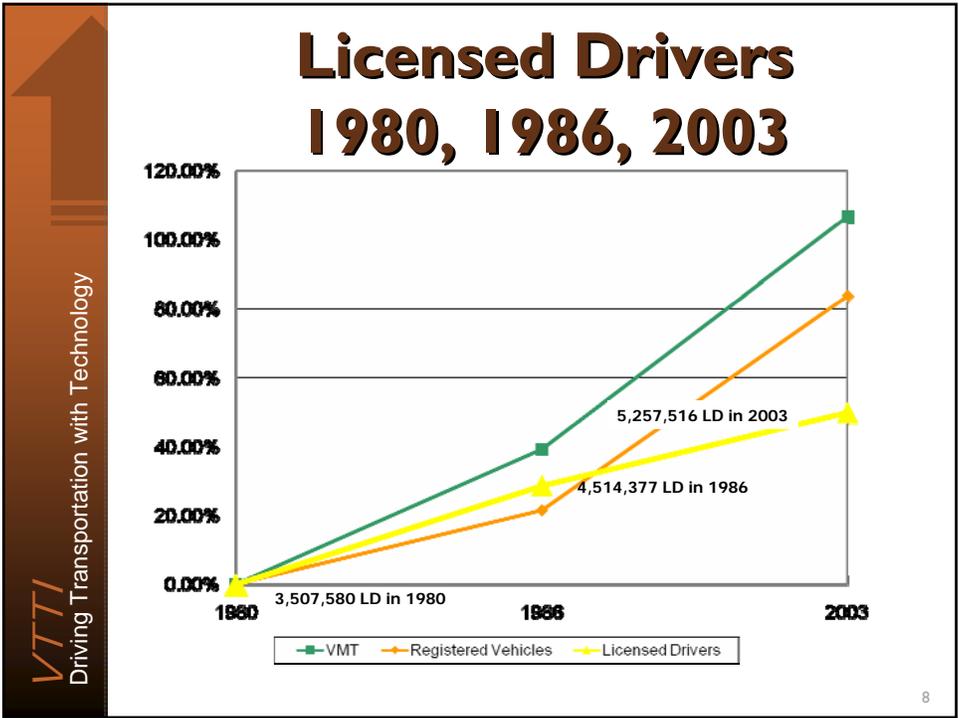
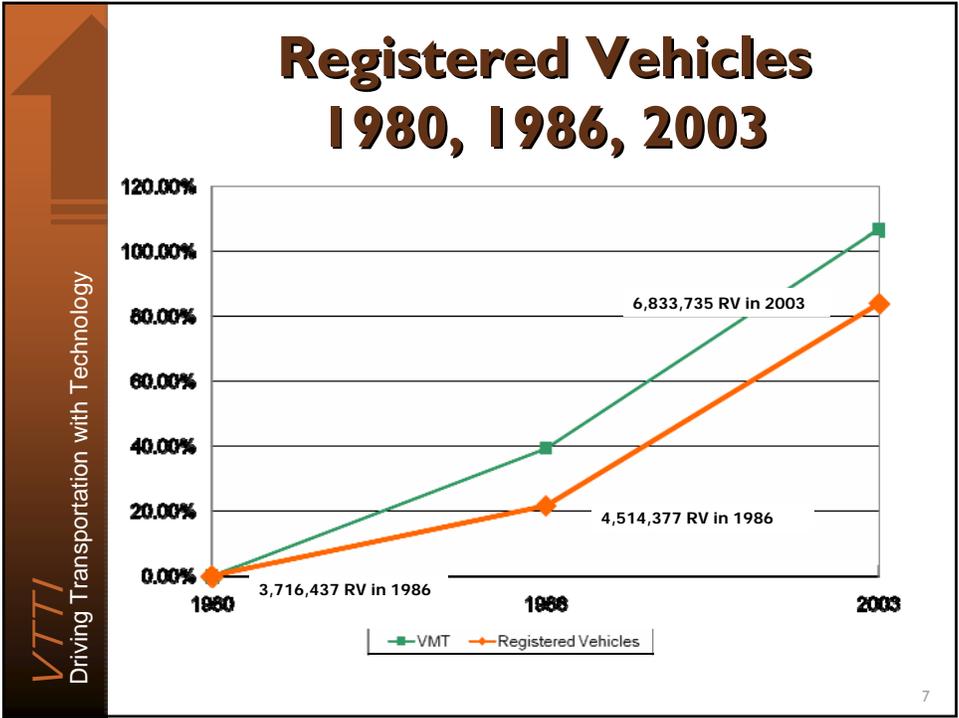
- Congestion cost \$86 million in lost productivity
- 2.5 million hours of vehicle delay

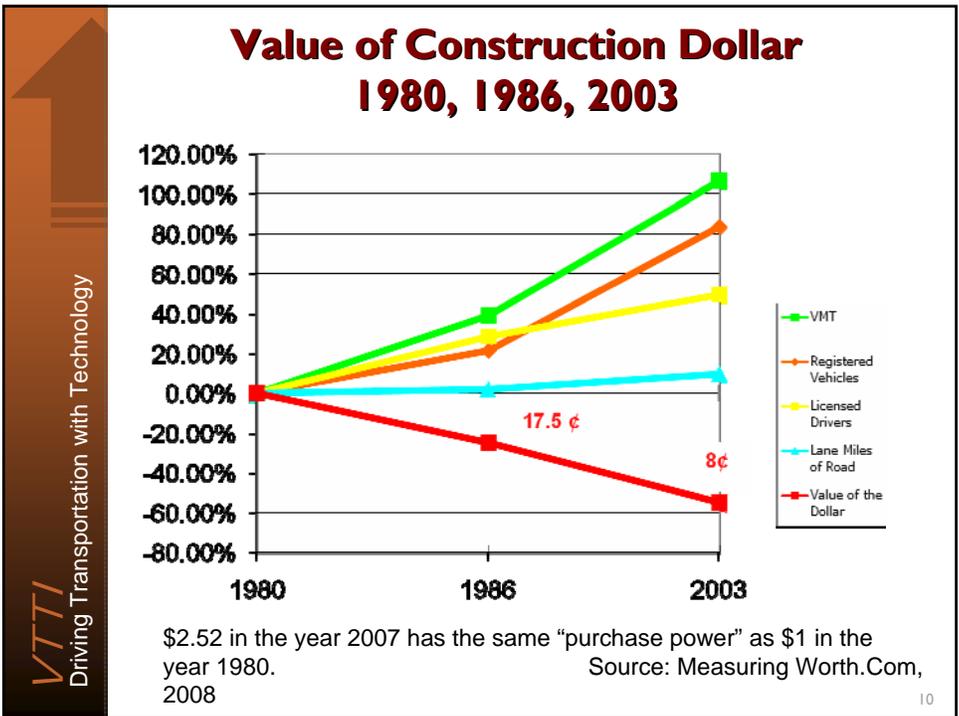
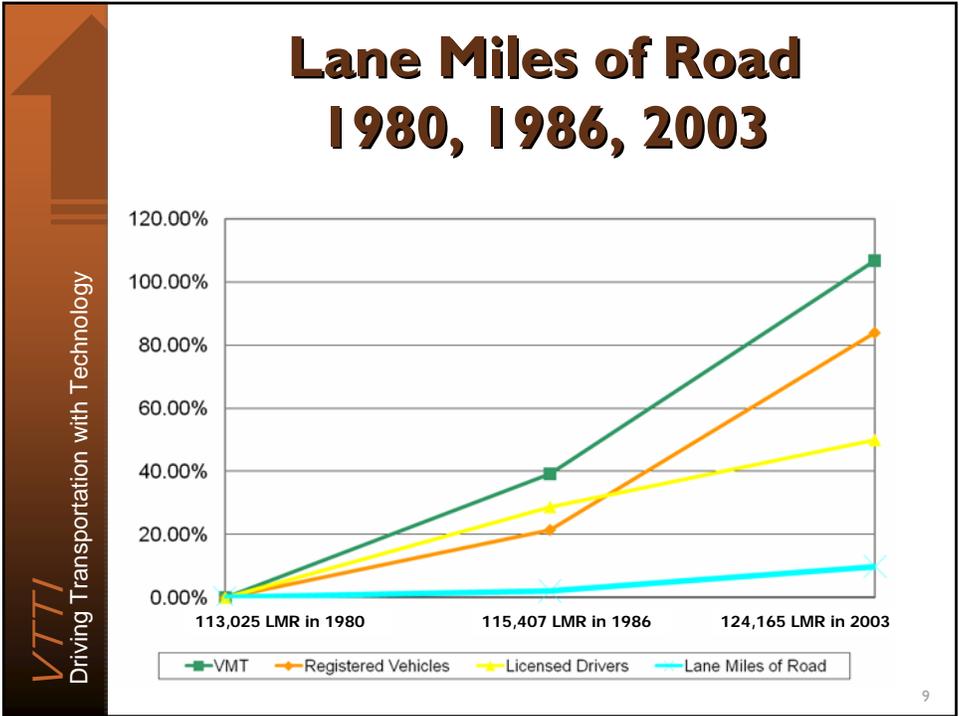
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Vehicle Miles Traveled 1980, 1986, 2003



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It takes 33¢ in
2007 to buy
what 17 ¢ in
1986 would
buy



Revenue

Gas Taxes

- Gas Tax CPG
- Gas Tax %
- Sales Tax on Gas

Other

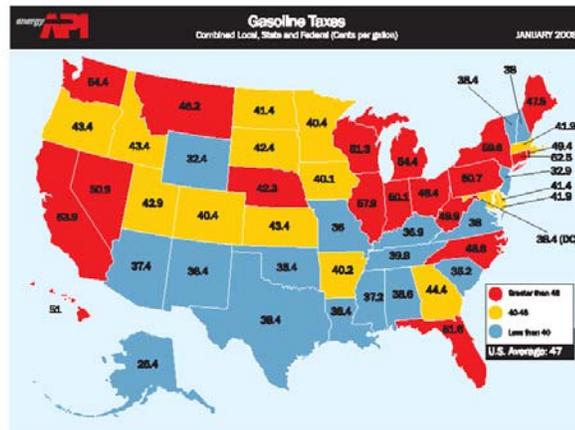
- Use of General Funds
- Non-Gas Taxes
- Registration Fees
- Tolls
- Bonding

Gas Tax

Alternatives

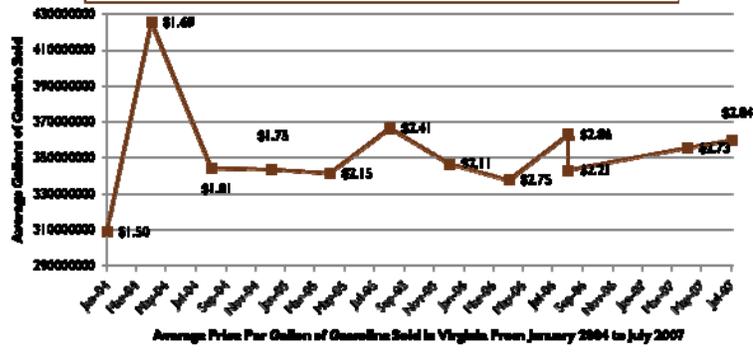
- **Cents/gallon—taxes volume,**
not robust, . \$01 cpg = \$44m
- **%/gallon—taxes value,**
• more robust, \$1% @ \$1.40 = \$53.1m
- **% gallon (Retail)—taxes purchase,**
most robust, 1% @ \$2.00 = \$83.5m

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Virginia Average Gas Sales and Costs 2004 to 2007

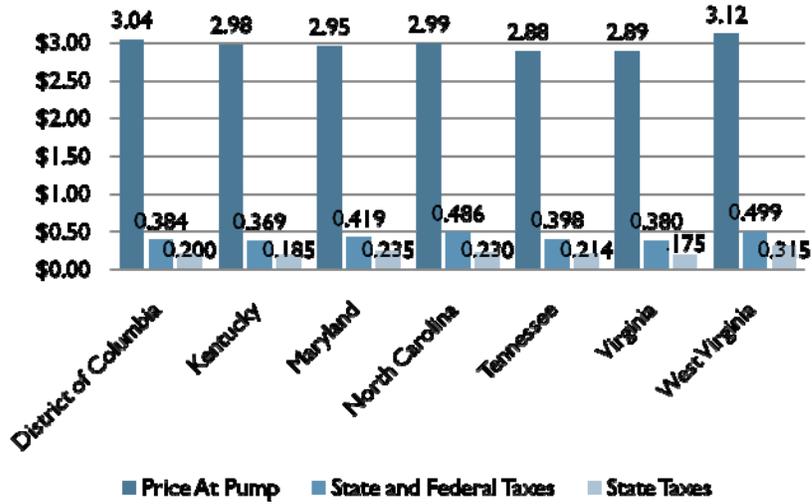


Source: Virginia Department of Motor Vehicles & the Virginia Tourism Monitor

Gas Taxes in Surrounding States

Adjacent States	Total Gasoline Taxes	Cents per Gallon	Variable Tax	Virginia (17.5)
District of Columbia	20	20		-2.5
Kentucky	18.5	7.1	10 cpg	-1
Maryland	23.5	23.5		-6
North Carolina	30	17.5	12.15 cpg whs	-12.5
Tennessee	21.4	20	1.4	-3.9
West Virginia	31.5	20.5	11 cpg	-14

Relationship Between Gas Price and Sales Tax



Types of Gasoline Taxes

Type of Tax	Number of States
CPG	44
Variable %	6
Surcharges	3
%	2
Combination CPG %	1
Other	41
County	6
Local	5
Sales	7

Bonding

- Leverages funds during the period of the bond. Needs a stable and reliable revenue source.
- Interest rates currently are:
 - AA 4.75-5.0%
 - AAA 15-20 basis points
- \$1m can be leveraged to \$15m

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Collecting Tolls

- Booths
 - Cash, Passes, Electronic Collection
- Open Road
 - Transponders, License Plate Recognition
- Violation Enforcement
 - License Plate Recognition

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Other

- Mileage Based Taxes
 - Self Reported
 - Using Technology
- Weight Based Taxes
 - Weight Miles Traveled
 - Graduated Registration Fees
- Non-transportation Taxes