



OVERVIEW

Pricing creates inefficiencies when it is divorced from consumption. This is the case with standard auto insurance policies, which cost about the same whether the car is driven a little or a lot. In this situation the market does not function to optimize consumption, which drives costs up for individuals, businesses, and government.

One solution is usage-based or pay-as-you-drive (PAYD) auto insurance. With accurate price signals, drivers will optimize travel by combining or eliminating trips or using other modes of transportation. Studies show that those paying insurance by the mile would reduce vehicle miles traveled by about 8 percent on average.¹

Today, however, some states explicitly bar PAYD insurance, and most have not reviewed their regulations to ensure they make such policies practical. States may consider promoting PAYD policies by offering modest financial incentives to early adopters.

BENEFITS

- Reduced emissions will help attain ozone standards and state and national greenhouse gas goals. The policy is one of the most effective low-cost, short-term climate policies available.²
- Most motorists will save money on insurance, fuel, and vehicle depreciation. Social costs for road maintenance, road expansion, congestion, air quality, and foreign oil dependence will also decline. One study estimates such benefits at \$257 per vehicle, or \$59 billion for the nation if all vehicles were covered with PAYD.³

5 Easy Pieces on Transportation

1. Pay-As-You-Drive Insurance
2. Fix it First
3. “Complete Street” Roadways
4. Locate State Office Buildings Downtown
5. Metropolitan Planning Organization Reform

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- PAYD benefits lower-income drivers the most. These drivers tend to drive less than those with higher incomes. Paying by the mile will reduce costs for lower-income drivers.⁴
- The reduction in driving will translate into a reduction in crashes, saving 5,000 U.S. lives a year and avoiding thousands of injuries and resulting medical and lost-work costs.⁵

COSTS

Auditing odometer readings may cost \$5-10 per year for each policy.⁶ Estimated state by state premium costs are outlined in Table 1. Mileage tracking by electronic device may cost more; Progressive Insurance, which offers mileage-based policies in some states, charges a \$5 per month “technology fee” for its device.⁷

If PAYD becomes popular, premiums would decrease for all but high-mileage drivers. It is important to note that because rural drivers are in a different risk class, they will not be disproportionately harmed by the policy.⁸

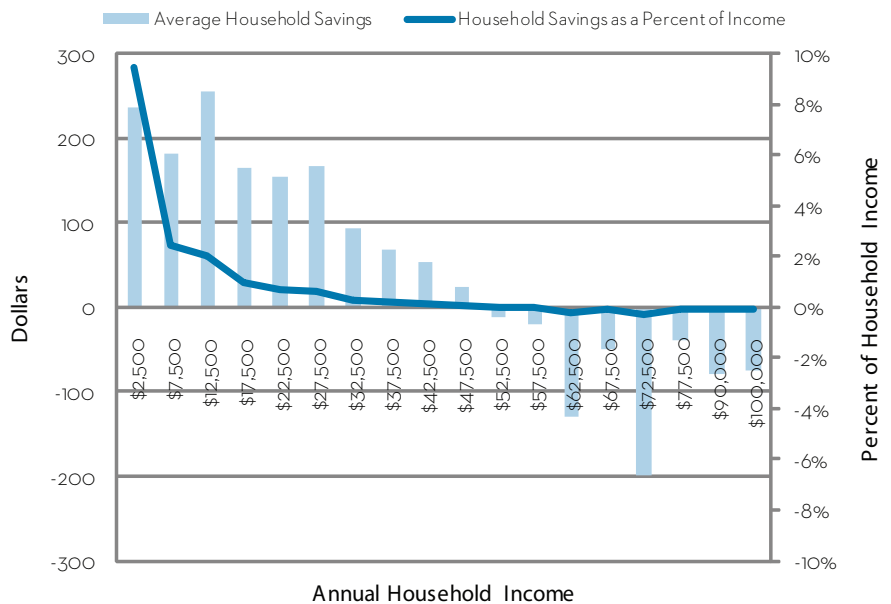
Pay-as-you-drive is generally an economically progressive policy. As Figure 1 shows below, drivers at higher incomes will tend to experience increased insurance costs, while lower income drivers will get a decrease in costs.

PUBLIC PERCEPTION

Interest in PAYD has grown in recent years as some insurance companies have launched pilot programs and as policy makers look for affordable solutions for climate change; Urban Land Institute’s “Moving Cooler” report is a recent example of the latter discussion.⁹ California’s rule-making (Cal. Code Regs. 2008-00020) on PAYD has generated generally positive media attention.¹⁰

Some critics have worried about privacy concerns installing electronic devices. Recording mileage is relatively uncontroversial, but there are concerns that the devices could go beyond that to “transmit back to the insurance companies all sorts of data about car motion (acceleration, braking, and so forth) as well as driver behavior (steering and seat-belt wearing).”¹¹ Odometer audits raise fewer such concerns.

Figure 1
SAVINGS FROM PAY-AS-YOU-DRIVE INSURANCE



Source: Pay-As-You-Drive Auto Insurance: A Simple Way to Reduce Driving-Related Harms and Increase Equity, Brookings Institution, 2008

Note: Savings in 2007 dollars but household income groups in 2001 dollars. Savings are deflated to 2001 dollars to calculate percentage of 2001 income levels.

Table 1

DRIVING REDUCTION AND ACCIDENT COST SAVINGS FROM PAY-AS-YOU-DRIVE INSURANCE

State or Division	Per-mile insurance premium (cents)	Driving reduction from PAYD (percent)	Initial traffic density (vehicles per lane year)	External accident cost per mile at initial traffic density (cents)	External accident cost savings (millions of dollars)	Individual accident cost savings net of lost driving benefits (millions of dollars)
Alabama	5.5	6.6	301,940	1	30	100
Alaska	9.6	10.8	165,755	-0.8	-4	24
Arizona	7	8.4	477,398	6.5	277	169
Arkansas	5.4	6.4	163,206	-0.8	-16	52
California	6.8	8	861,111	31.1	6,844	819
Colorado	8.1	9.4	265,905	0.3	6	172
Connecticut	8.1	9.9	700,527	18.7	482	117
Florida	8	10.2	760,883	23	3,889	764
Georgia	6.1	7.9	455,034	5.6	411	253
Hawaii	9.9	11.6	1,080,433	52.9	506	53
Illinois	6	7.2	366,883	2.6	161	213
Indiana	5.5	6.7	357,550	2.3	90	121
Iowa	5	5.9	133,405	-0.9	-15	42
Kansas	5	5.9	105,642	-0.9	-14	41
Kentucky	6	7.1	293,459	0.8	20	93
Louisiana	7.6	9.1	354,446	2.3	71	144
Maryland	6.6	8.2	824,781	28	1,086	140
Massachusetts	8.7	10.7	727,705	20.6	986	236
Michigan	6.4	7.4	406,986	3.9	243	228
Minnesota	5.9	7.2	207,987	-0.5	-19	109
Mississippi	5.5	6.4	268,104	0.4	6	67
Missouri	5.5	6.7	262,098	0.3	5	115
New Jersey	9.7	13.5	898,418	34.4	2,759	452
New York	9.2	11.5	587,108	11.8	1,511	689
North Carolina	5.3	6.3	465,909	6	323	154
Ohio	6.1	7.2	418,592	4.2	278	222
Oklahoma	5.6	6.6	207,857	-0.5	-15	84
Oregon	6.9	7.7	267,497	0.3	5	87
Pennsylvania	7.3	8.6	428,418	4.6	344	313
South Carolina	5.7	7.2	360,012	2.4	70	94
Tennessee	5.8	7	365,951	2.6	103	132
Texas	6.2	7.4	365,717	2.6	362	500
Utah	6.6	8.2	284,073	0.6	9	65
Virginia	5.6	7.3	516,930	8.2	403	152
Washington	7.5	8.3	324,775	1.5	53	162
Wisconsin	5	5.7	251,425	0.1	0	77
Division 1: New England						
New Hampshire						
Maine	5.9	7	366,308	2.6	66	86
Rhode Island						
Vermont						
Division 4: West North Central						
Nebraska	4.6	5	67,972	-0.7	-12	39
North Dakota						
South Dakota						
Division 5: South Atlantic						
Delaware	7	8.5	364,145	2.5	57	93
D.C.						
West Virginia						
Division 8: Mountain						
Idaho	7.2	8.3	164,244	-0.8	-52	231
Montana						
Nevada						
New Mexico						
Wyoming						
U.S. Total	6.6	8	357,946	2.4	21,306	7,703

Source: Pay-As-You-Drive Auto Insurance: A Simple Way to Reduce Driving-Related Harms and Increase Equity, Brookings Institution, 2008

EXAMPLES OF IMPLEMENTATION

- Several companies have experimented with mileage-based policies. In some states, Progressive¹² and GMAC¹³ offer policies with substantial discounts for low-mileage driving; both rely on electronic devices to monitor mileage. In Texas, MileMeter offers a truly by-the-mile policy based on odometer readings.¹⁴
- State regulations on PAYD vary, and the most recent available study, from 2002, showed that in many states such insurance would be difficult absent legislative or administrative changes.¹⁵ States are implementing these remedies, however. For example, in 2001, Texas amended the statutes to permit PAYD,¹⁶ and in 2009, California's insurance commissioner released new rules aimed at facilitating PAYD, to go into effect later in the year.¹⁷
- In 1988, California passed a proposition requiring the use of mileage as an insurance rating criterion, but the effect has been limited, and low-mileage drivers continue to overpay.¹⁸
- Oregon in 2003 passed a \$100 per policy tax credit for PAYD insurance.¹⁹

ENDNOTES

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