PAY-AS-YOU-DRIVE AUTO INSURANCE

Cars.com

Cost:	●○○○○
Time:	**Short**
Impact:	**Region**
Who:	**Commuters/Private**
Hurdles:	**Public Perception**

Description

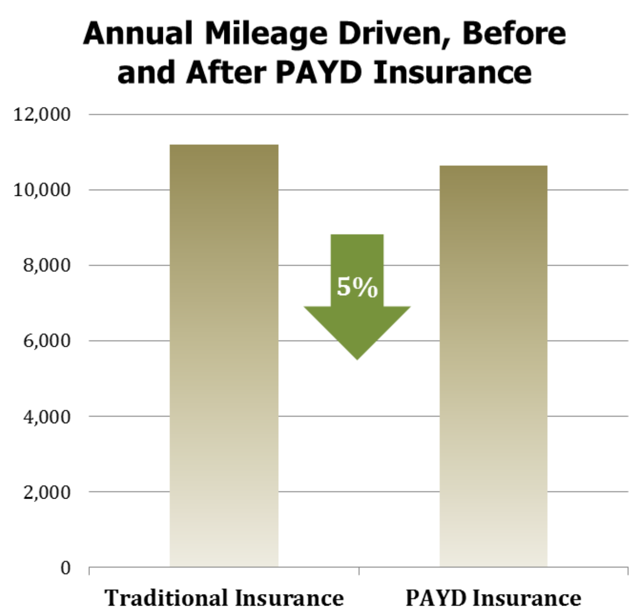
Pay-as-you-drive (PAYD) insurance replaces a regular annual automobile insurance payment with one based on mileage actually driven. Generally, crash rates tend to increase with miles driven and dangerous driving behavior. Early examples of PAYD relied only on charges for mileage driven by periodic odometer readings. Also called usage-based insurance (UBI), the current state of the practice uses tracking devices to monitor both mileage and driving habits.

From 2005 to 2007, the North Central Council of Governments (Dallas-Fort Worth region) partnered with Progressive County Mutual Insurance Company to evaluate the feasibility of implementing PAYD with a tracking device and whether the device would affect driving behavior.[1] Progressive's data analysis showed an average decrease in mileage of five percent or 560 miles per year. Commuting hours are usually less likely to be adjustable, but this study resulted in a 3.2 percent reduction in mileage during peak commute times. Researchers developed a more recent study including a model for Massachusetts drivers, finding that if all drivers switched to insurance paid by the mile, aggregate vehicle miles travelled would drop by 5.0 to 9.5 percent.[2] Using econometric modeling, another study concluded that if PAYD were fully implemented nationally, gasoline demand would fall by 11.4 billion gallons.[3]

Allowing people to pay for insurance according to their use appears to result in fewer miles driven and safety, environmental, and roadway system benefits.

Target Market

Commuters in congested metropolitan areas who adopt PAYD would likely have the most positive impacts for the state's most congested corridors. People who feel they have relatively short commutes or good driving behavior may expect to save the most on insurance premiums by switching to a PAYD structure. Very little research has been published on the marketing of PAYD, but technology-savvy commuters may have fewer privacy concerns with tracking devices.



For more information, please refer to: http://mobility.tamu.edu/mip/strategies.php.

How Will This Help?

- Reduce Driving—PAYD can be a significant benefit to congested roadways by encouraging drivers to plan trips more carefully to reduce overall mileage. Offering motorists a method to pay for insurance based on the miles driven, instead of a flat fee, will encourage trip chaining, or meeting more than one trip purpose along a given trip, such as shopping on the way home from work. These driving behavior changes add up, resulting in fewer total miles driven on the most congested corridors.
- Reduce Crashes—Since annual mileage is related to crash rates, fewer crashes will result from reduced driving under PAYD insurance. This means that the total cost of drivers' insurance will be reduced due to fewer claims.

The Brookings Institution Discussion Paper 2008-09: Pay-As–You-Drive Auto Insurance[4] includes estimation of statewide driving reduction in Texas to be 7.4 percent, and crash cost savings of $500 million.

> **"Just as an all-you-can-eat restaurant encourages more eating, all-you-can-drive insurance pricing encourages more driving."**
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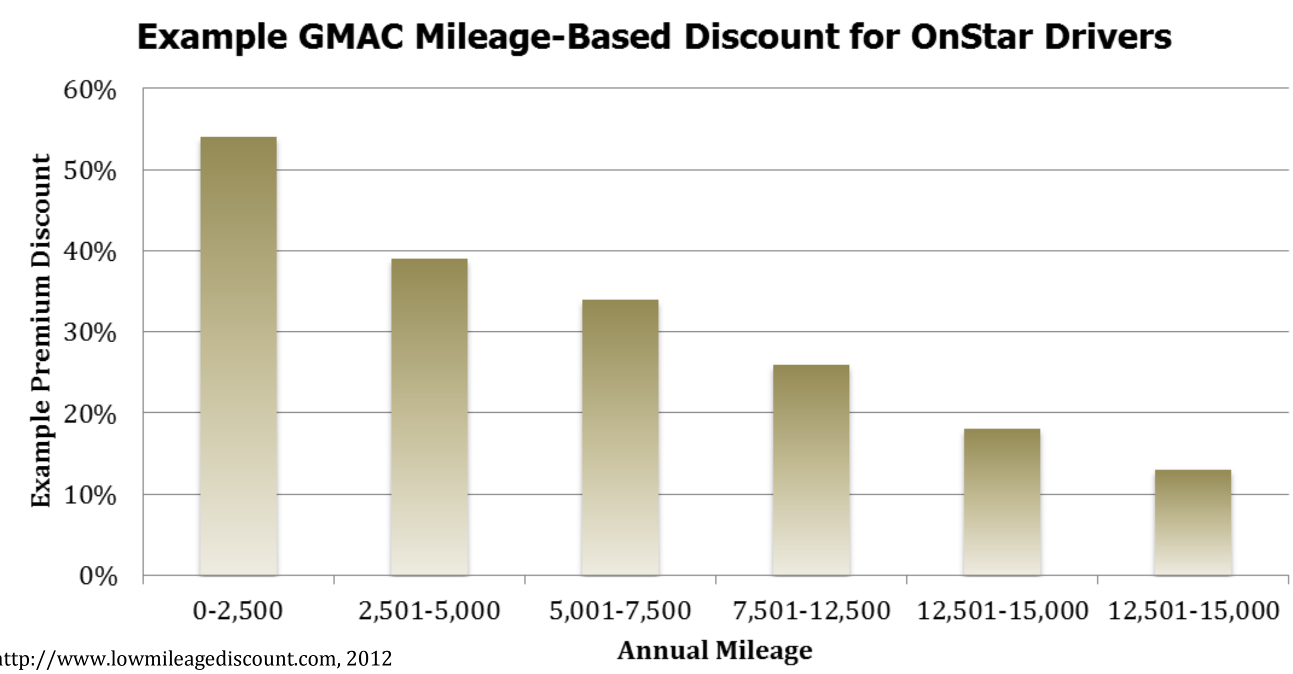
> –Brookings Institution Discussion Paper 2008-09: Pay-As-You-Drive Auto Insurance[4]

Implementation Examples

Personal Auto Insurance

GMAC offers a low-mileage discount to OnStar subscribers in 35 states[5] including Texas. Using OnStar vehicle mileage tracking, customers are given a discount scaled to their annual mileage below 15,000. Customers driving more than 15,000 miles receive an OnStar discount, but not one for low mileage.

Progressive launched Snapshot® usage-based auto insurance that is available in 30 states including Texas.[6] It uses a tracking device that is connected to the vehicle's diagnostics port. The device measures the number of miles driven, the time of day driven and how often sudden stops are made to calculate premium rates for each participant.



http://www.lowmileagediscount.com, 2012

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Commercial Vehicle Insurance

Liberty Mutual Insurance offers the Onboard Advisor service that expands the potential savings for commercial vehicles by adding monitoring features to improve fleet safety and efficiency. Subscribers benefit through insurance discounts based on Safety Score calculations using GPS data, when used with a Liberty Mutual insurance policy.

Application Techniques and Principles

Time of Day Tracking—Progressive's pilot with NCTCOG found that peak travel hours and between midnight and 4:00 a.m. are the most dangerous driving times. Since Progressive sets Snapshot® premium rates based, in part, on the amount driven at these times, PAYD encourages off-peak travel.

Privacy Features—Safety-significant variables such as speed, time-of-day, and deceleration can be tracked using vehicle diagnostics without GPS tracking. This allays some privacy concerns about a company or the government knowing where people drive; this could be important in widespread adoption.

Issues

Marketing—Regardless of privacy features, some users will resist new technology or be confused by insurance premium calculations. Widespread marketing of the products and adoption by peers will decrease resistance over time.

Unknown Impact—NCTCOG's pilot test with Progressive showed a significant five percent reduction of vehicle miles of travel (VMT), but this impact may be limited by changes in individual insurers' policies and rates. Adoption rates and impact of PAYD insurance are subject to both industry innovation and consumer adoption, and different locations and demographic factors may be related to different transportation impacts. Further research in this area will be needed.

> **"The concept of what safe driving is in someone's mind and [the facts] it is based on are two different things. Just because you haven't gotten into an accident in the last 10 years doesn't mean you are a safe driver; it means you haven't got in an accident."**
>
> –Nate Bryer, Usage-Based Insurance (UBI) General Manager at Allstate[7]

Who Is Responsible?

Private insurers and vehicle drivers determine the implementation of this market-based strategy.

Project Timeframe

PAYD insurance is already offered to the Texas market. Large-scale adoption will depend on corporate innovation, pricing, marketing, and individual acceptance.

Cost

No direct government investment is required. PAYD insurance is a private sector program.

Data Needs

Several companies are experimenting with this offering and collecting data from customers. The most common data needed are total mileage driven, but some companies are using accelerometers or global positioning systems (GPS) data to monitor driving habits, such as rapid decelerations.

Further research to evaluate impacts of PAYD is needed; private-sector partnerships requiring attention to corporate and personal data confidentiality appear to be the most appropriate way to accomplish this.

Pay-As-You-Drive Auto Insurance Best Practice

- Type of Location: Congested urban areas.
- Agency Practices: None needed, continue support of private sector.
- Frequency of Reanalysis: Annual compilation of information during market growth would help inform transportation officials about system impacts, and assist the private sector in identifying effective practices.
- Supporting Policies or Actions Needed: States should continue legislative support of mileage-based premiums. Bordoff and Noel[4] recommend the federal government should increase the funding available to PAYD pilot programs and should offer a tax credit for each new mileage-based policy that an insurance company writes, to be phased out once five million vehicles nationwide are covered by PAYD policies.
- Complementary Strategies: Ridesharing, trip reduction ordinances, parking management, and variable pricing.

For More Information

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2. Ferreira, J. and E. Minikel. Measuring per-mile risk for pay-as-you-drive automobile insurance. In *Transportation Research Board 2012 Annual Meeting Compendium of Papers DVD.* TRB Paper No. 12-2098. Washington, D.C.: Transportation Research Board of the National Academies.

3. Parry, I. Is Pay-as-You-Drive Insurance a Better Way to Reduce Gasoline than Gasoline Taxes? *The American Economic Review , Vol. 95, No. 2*, Papers and Proceedings of the One Hundred Seventeenth Annual Meeting of the American Economic Association, Philadelphia, PA, January 7-9, 2005 (May, 2005), pp. 288-293.

4. Bordoff, J. and P. Noel. Pay-As-You-Drive Auto Insurance: A Simple Way to Reduce Driving-Related Harms and Increase Equity, Discussion Paper 2008-09. Washington, D.C.: The Brookings Institution (July, 2008).

5. GMAC PAYD insurance website: http://www.lowmileagediscount.com.

6. Progressive Snapshot® PAYD insurance website: http://www.progressive.com/auto/snapshot.aspx.

7. Telematics Update. Telematics, UBI, and Driver Education. July 31, 2012. http://analysis.telematicsupdate.com/insurance-telematics/telematics-ubi-and-driver-education