

# **Applying Behavioral Economics Concepts in Designing Usage-Based Car Insurance Products**

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## **ABSTRACT**

Behavioral economics, a discipline combining economics and psychology to explain consumer decision making, offers insights on how best to institute transportation pricing in a manner that is acceptable to drivers and also meets public policy objectives. As an example of how to use this relatively new discipline to enhance the acceptance and benefits of transportation pricing, its application to designing usage-based or pay-as-you-drive-and-you-save (PAYDAYS) insurance products is explored.

Specifically, this research would apply lessons from behavioral economics to the marketing and designing of PAYDAYS insurance products to maximize profitability, consumer acceptance, and public benefits. By converting fixed insurance costs to per-mile or per-minute-of-driving charges, PAYDAYS insurance encourages voluntary reductions in driving and related decreases in congestion, air pollution, and crashes, and for these reasons has garnered substantial interest among government entities, environmental and other non-profit organizations, insurance companies, and consumers. General behavioral economics research findings strongly suggest substantial but rarely acknowledged differences in vehicle-miles traveled would result depending upon which PAYDAYS insurance product features, from a large variety of possibilities, are chosen.

Behavioral economics demonstrates that how economic choices are framed for consumers affects the choices they make. The pricing levels and structure of different usage-based pricing plans affect initial purchasing decisions, customer retention, and usage. After summarizing the PAYDAYS insurance pricing schemes being tested in the U.S. marketplace, this paper examines the broadest array of existing and potential PAYDAYS insurance pricing attributes and their effects, at least directionally, on attracting and retaining customers and discouraging driving. Summary tables at the end identify target markets, product structure, and pricing and related attributes that would maximize participation and mileage reductions among participants. A pilot experiment design is proposed to increase understanding about the application of behavioral economics to PAYDAYS insurance. Public policy options to encourage PAYDAYS insurance generally, and the product attributes that lead to the best outcomes specifically (e.g., the greatest congestion and crash reductions), are discussed.

## **INTRODUCTION**

Under PAYDAYS insurance, premiums are charged on a per-mile (or per-minute-of-driving) basis, so drivers save money by driving less. Traditional rating factors (e.g., residential location, gender, age, and driving record) become subordinate and are incorporated in usage-based rates, which also take into account the specific coverages an individual driver chooses. Through PAYDAYS insurance, companies are likely to more accurately charge their customers based on crash risk and provide policyholders a financial incentive to reduce their driving. By contrast, traditional insurance rates vary quite little based on mileage, even though only a small percentage of insurance claims are made (such as for theft) when a vehicle is not being driven.

Companies offering PAYDAYS insurance might require motorists to pay in advance for a pre-determined number of miles and then at the end of the premium term either pay more or receive a rebate depending on how much was driven. Another approach would be to bill motorists based on their monthly or bi-monthly vehicle mileage, similar to how utility usage is billed. This would require more frequent communication of mileage data.

Consumers have little opportunity today to save money by driving fewer miles despite the fact that insurance claims are directly related to miles driven. In exchange for reducing fixed insurance costs, many drivers—especially lower income ones—would readily accept new mileage premiums that they control by the amount of driving they choose to do. Driving would be reduced voluntarily through trip consolidation, carpooling, alternative transportation use, and forfeiting of low-value trips. Motorists, of course, will only reduce their driving when the savings offered by PAYDAYS insurance pricing exceeds the value of a particular drive-alone trip to them.

By converting fixed insurance costs to per-mile or per-minute-of-driving charges, PAYDAYS insurance encourages voluntary reductions in driving and related decreases in congestion, air pollution, and crashes, and for these reasons has garnered some interest among government entities, environmental and other non-profit organizations, insurance companies, and consumers. The benefits to the public of allowing drivers, through PAYDAYS premiums, to share in the savings from reduced insurance claims resulting from their driving less have been well documented. Studies estimate between an 8 and 20% reduction in VMT would result if all fixed automotive insurance costs were converted to usage-based, with the more recent estimates tending to be on the lower side of this range (Litman, 2004; Barrett, 1999; Parry, 2005; Bordoff and Noel, 2008). Further, crash reductions, and likely claims' reductions, would be about 1.4 times the reduced VMT accounting for multiple-vehicle crashes that would not have occurred had one of the vehicles involved been off the road (Greenberg, 2002).

(While PAYDAYS insurance would reduce crashes, it is worth noting that insurance itself has the perverse effect of increasing crashes by reducing the costs of crashing to drivers. This is especially the case with no-fault insurance. In fact, the introduction of such insurance in Quebec in 1978 was linked to increases in crash-caused property damage (11%), personal injury (26%), and fatalities (7%). Premium discounts for accident-free driving or increased costs for crashes such as through higher deductibles could partially offset these effects (Wilde, 2001).)

The public benefits of the driving reductions resulting from PAYDAYS insurance would be quite substantial. Federal Highway Administration models estimate typical infrastructure improvements savings of 3 to 5¢ for every mile not driven (Greenberg, 2002). The Brookings Institution has calculated that between \$50 and \$60 billion in net social benefits from reduced driving related externalities would result in the U.S. if PAYDAYS premiums became the standard insurance product offering (Bordoff and Noel, 2008). Government incentives to promote PAYDAYS insurance have been projected to be very cost competitive in terms of reducing air pollution and saving lives

with other government transportation-related expenditures aimed at achieving these objectives (Greenberg, 2002).

For reducing greenhouse gas emissions from gasoline consumption, PAYDAYS insurance has been shown to be a better strategy, in terms of providing net public benefits, than even gasoline taxes (Parry, 2005). The report, "Moving Cooler: An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions," a joint effort on the part of multiple Federal agencies, environmental organizations, and Shell Oil, shows the importance of implementing various packages of policy measures aimed at reducing VMT and related greenhouse gas emissions in order to meet emissions reduction targets. Significantly, when PAYDAYS insurance was added to a bundle of land use/transit/non-motorized transportation measures (one of a number of policy bundles evaluated), it led to a 44% increase in the reduction of greenhouse gas emissions through 2050 than without the inclusion of such insurance (Cambridge Systematics, Inc., 2009).

By providing an affordable insurance option to low-income motorists who are willing to limit their mileage, PAYDAYS insurance would be expected to reduce the number of uninsured motorists (Litman, 2004). Indeed, it has been projected that 63.5% of households would save an average of 28% on their total premiums (including the portion of premiums providing comprehensive coverage, which was assumed not to vary by mileage), or about \$496 annually for the households that do save (Bordoff and Noel, 2008). (By making insurance more affordable, the total projected driving reductions noted above would incorporate small increases in driving from some law abiding individuals who, because they could not afford to purchase traditional insurance policies, chose not to drive, but who could afford PAYDAYS premiums for high priority trips.)

Most major car insurance companies in the U.S. are experimenting with technologies that would facilitate their offering PAYDAYS insurance if they someday choose to and a subset of these companies is seriously contemplating offering it in the near term, at least on a pilot basis. Those outside of the insurance industry that are interested in promoting PAYDAYS insurance often lack an appreciation for the challenges that companies face in offering it. These include costs to install in-vehicle technologies, burdensome state regulatory filing requirements, hard to appraise policy-loss and premium-revenue risks, and substantial work to retool their internal billing and customer communications systems. Despite these challenges, companies have competitive reasons to offer PAYDAYS insurance products, such as appealing to low-mileage and lower-risk teenage drivers who could enjoy substantial premium savings, and also to defend market share if other companies offer such products.

Two insurance companies in the U.S., GMAC Insurance and Progressive Insurance, are using mileage data that is transferred electronically to them for setting insurance premiums, although in both cases the link between mileage and premiums is not as strong as the reduced claims' risk associated with lower mileage likely warrants. GMAC Insurance, using OnStar vehicle services to transmit mileage data to the insurance company, offers a program in 35 states that provides low-mileage discounts to motorists,

with savings as high as 54% off of premiums for those driving fewer than 2,500 miles per year and progressively lesser discounts as mileage rises up to 15,000 miles per year (GMAC Insurance, 2009). Progressive Insurance's MyRate program, which a June 2008 press release said would offer usage-based premium discounts based upon observed driving (including mileage and other factors, such as trip time and hard braking) of as much as 60% and surcharges of up to 9%, is now available in 16 states. Currently, the renewal discounts only go up to 25% of premium costs in each of these states, with the possibility of renewal surcharges related to observed driving as high as 9% in nine of these 16 states, plus a \$30 "technology expense" per six-month policy period in ten of the 16 states (Progressive Insurance, 2008; Progressive Insurance, 2009).

A third U.S. firm, MileMeter Insurance Company, began offering "insurance buy the mile" throughout the State of Texas in 2008. Instead of purchasing insurance for six months or a year, a Texas motorist may instead purchase between 1,000 and 6,000 miles of coverage and make additional purchases as needed. MileMeter does not monitor mileage at all, and only needs to confirm mileage when a claim is filed to determine if the vehicle is insured at the time (e.g., if 2,000 miles of coverage between 86,567 and 88,567 miles had been purchased, a claim will be honored so long as vehicle mileage falls within that range) (MileMeter Insurance Company, 2009).

Issues that companies need to consider when selecting amongst the many possible options of PAYDAYS insurance products include costs, ease of implementation, consumer acceptance and market share potential, actuarial accuracy, and impacts on claims. For public relations purposes, companies may also want to consider privacy issues, the relative environmental benefits of different product approaches, and equity issues, such as impacts on low-income drivers. Tradeoffs among these concerns are inevitable—for example, it is likely that the more that is tracked, the better the actuarial accuracy, the higher the cost, the larger the concern about privacy, and the greater the safety and environmental benefits will be, assuming drivers accept the product.

The field of behavioral economics offers many insights to help assess these sorts of tradeoffs associated with product designs. Specifically, the field shows that human rationality is bounded by cognitive limitations and the way that consumers choose to frame their own economic choices or, in part, how marketers or product designers frame such choices for them. The structure of PAYDAYS insurance pricing could vary substantially, and research strongly suggests that this structural variation would affect consumer response.

For the foreseeable future after PAYDAYS insurance pricing becomes available in the marketplace, consumers will have the option to continue to purchase a traditional time-based (e.g., annual or semiannual) policy. This means that only consumers who see a personal benefit in a PAYDAYS insurance product offering are likely to accept such insurance. "First acceptors" are likely to drive fewer miles than average among their neighbors, have a greater willingness or ability to reduce their mileage, or a combination of the two. In the longer term, the biggest challenge will be inspiring (or coercing) sufficient consumer participation to achieve public policy objectives. To meet this

challenge, behavioral economics research results can help guide the selection of product design features that would enhance the attractiveness of PAYDAYS insurance to consumers.

## **LEARNING FROM BEHAVIORAL ECONOMICS**

There are many general findings from behavioral economics that might be of interest in the PAYDAYS insurance context. These findings can be divided, as they are in the subsections below, into the following categories: general consumer decision making; consumer responses to financial “gains” and “losses;” the immediacy of financial consequences and the conscious awareness of any cost; perspectives on price bundling; and “bonus” strategies.

### General Consumer Decision Making

Consumers often try to avoid making decisions they view as complex, use simple “common sense” approaches entailing minimal mental effort to make decisions that cannot be avoided, and minimize reconsidering past decisions that continue to influence their current actions and circumstances. Consumers typically formulate very rough mental budgets that cover short periods of time, concern themselves with savings’ opportunities only where potential savings appears to be reasonably significant relative to price, look for deals that make sense to them and appear fair on their face, and are strongly biased toward accepting a default option even if better non-default options are readily available to them.

While, as noted above, consumers often avoid making decisions, there are times that they do make them. A commuter who could either drive or take transit to work might drive everyday without consideration of alternatives if his employer provides free parking, but take transit everyday if he is given a free or subsidized transit pass and must pay for daily parking. Only if his employer changes the parking or transit benefit might the employee reconsider his commute choice.

In the case of insurance, consumers are most likely to shop when premiums rise or when there are changes in household composition or vehicle fleet. If PAYDAYS insurance becomes available, consumers may be willing to sign up for it at other times, especially if their employers begin offering them subsidized transit passes. Also, if people lose their jobs or are otherwise pressed financially, they may take aggressive actions to reduce their household costs, including on insurance. For example, quotes for coverage on the Web site Insurance.com dropped \$100 from Oct. 2008 to March 2009, corresponding to the sharp decline in the economy and consumers choosing to save money by reducing coverage (25% of surveyed shoppers) and increasing deductibles (31% of surveyed shoppers) (Kuykendall, 2009).

Consumers readily categorize spending decisions into different “budgets” and value financial trade-offs partially based on what remains in an individual (in this case auto insurance) budget (Thaler, 1999). Put another way, consumers may view spending

related to driving within the broader context of their predetermined insurance and travel budgets. This suggests that advocates of PAYDAYS insurance seeking reductions in driving should try to persuade product customers to reduce their insurance “budget” from what it was under traditional insurance. A possible pitch to consumers who have chosen PAYDAYS pricing would be: “You switched to PAYDAYS insurance as part of a promise to yourself to save money. Here are some ideas to help make sure you do...”

Low-income households maintain tighter and more explicit budgets covering a shorter duration than wealthier households. The wealthier a household, the less likely that it will track relatively small purchases like lunch out or PAYDAYS insurance charges for all but the longest of trips (Thaler, 1999). Suggesting a preference for short-duration budgets that primarily address cash-flow needs, consumers in general have been shown to be much more sensitive to monthly payment amounts than the total number of monthly payments when making vehicle leasing and purchasing decisions (Gourville, 2002). This consumer bias toward smaller, and thus by necessity with PAYDAYS insurance, more frequent payments is advantageous from the standpoint of reminding PAYDAYS policy customers that they incur insurance costs every time they drive.

As noted above, consumers concern themselves with savings’ opportunities only where potential savings appears to be reasonably significant relative to price. If PAYDAYS insurance could only be purchased in “use-or-lose” buckets of 2,500 miles, for example, consumers would be unlikely to consider insurance costs for trips that are substantially shorter than this, but might consider such costs for longer-term decisions such as whether to join a carpool, purchase a commuter rail pass, or negotiate with their employer to telecommute for one or two days per week. Even something as basic as the financial value of saving time related to purchases varies based on purchase cost. Consumers are willing to pay a substantially higher price premium to avoid an out-of-the-way trip of a specified duration for an expensive purchase than for an inexpensive one. In the context of savings on PAYDAYS insurance, going out of one’s way to find a lift for a single trip, instead of driving alone, might be considered worth it to someone paying for two weeks’ worth of insurance at a time, but not if that same person pays only every six months for insurance, which has a much higher purchase cost than for two weeks’ of insurance. The effect is certainly compounded by the time delay between driving and payment typical with infrequent payment plans.

Acceptance of PAYDAYS insurance could be increased by marketing such insurance as providing a fairer and better deal to consumers. In fact, consumers have been shown to be very cognizant of how good a deal they are getting, which is known as “transaction utility,” and are much more willing to spend on a perceived good deal, whatever the purely economic value they place on the product or service itself acquired through such deal. In one classic experiment, someone offers to purchase and bring back (but not pay for) beer for his friend who is lying on the beach and mentions that he will be making his purchase at a nearby establishment that is either a fancy resort hotel or a small run-down grocery store. When asked by his friend before he leaves how much he would be willing to pay for the beer, the answer is invariably substantially more when the first type of establishment is mentioned than the second (Thaler, 1999). For traditional

insurance, the data inputs that determine rates seem arbitrary to many consumers. Indeed, the various statewide battles related to whether credit scores should be usable for rate-setting have at their essence a public perception that this seemingly arbitrary factor has no bearing on crash risk and thus should not affect premium. While actuarial data show otherwise, a number of states have responded to this public perception by banning the use of credit scores. Participants in consumer focus groups in the late 1990's about the Progressive Autograph PAYDAYS insurance product were at the time reported as positively assessing this product because of the intuitive relationship between driving and claims' risk, its appearance of being fair on its face, and it enabling them to control their own premium costs.

Consumers can be lazy when it comes to purchasing decisions and are much more likely to pick the default option than an alternative, even if choosing the alternative involves no more effort than checking a box on a form. This might help explain why decades after telephone service deregulation, AT&T retains a 60% market share, half not even enrolled in any savings' plan (Schwartz, 2004). The selection of the default option has been shown in many contexts, especially related to employer enrollment in retirement plans. The highly acclaimed book, *Nudge*, cites a variety of studies related to retirement plan participation among employees, showing, in one study, for example, that new employees opt into a plan only about 20% of the time when they begin their employment, while 90% participated at the time they began employment when they had to opt out not to. Even among 25 retirement plans in the United Kingdom where employees were not required to pay anything to participate, but did have to opt in, only 51% did (Thaler and Sunstein, 2008).

The concept of default options has even been studied for auto insurance where more than half of Pennsylvania drivers, but fewer than one in twelve New Jersey drivers, sign up for full-tort insurance solely because this is the default option in Pennsylvania but not in New Jersey (Leonhardt, 2005). This suggests that a company interested in moving its current insureds to PAYDAYS pricing should make this the default option at renewal, while still allowing customers to instead renew their time-based policies without hassle.

#### Consumer Responses to Financial "Gains" and "Losses"

Putting aside the Las Vegas gambling economy, people generally value keeping their current assets much more highly than potential gains or winnings. The perceived seriousness of the source of a windfall (e.g., gambling winnings versus a tax or insurance refund) might also have some effect on the value ascribed to it, where the more "serious" the source, the less careless one is likely to be in spending it (Thaler, 1999). Consumers would drive fewer miles if they have to pay for them directly rather than if they are offered a per-mile rebate (e.g., windfall) for driving fewer than a specified number of miles, even if the effective price per mile is the same. Similarly, consumers would be more likely to pay for gasoline with cash if a credit card surcharge were applied than if a cash discount were offered, even though these are really the same thing (Schwartz, 2004). A research project that summarized and drew insights from 76 papers and reports that were thought to be of use in understanding consumer responses to road pricing similarly

concluded, “Although public acceptance of a scheme might be increased if it were portrayed as a means by which drivers can save money...and...portrayed as...discounts..., the effect on usage patterns might be compromised” (Bonsall, 2004). The magnitude of this difference in the value placed on avoiding losses and achieving gains is quite large and has been estimated to be 2.25 (Thaler, 1999). One must apply this multiplier carefully, however, since most costs are not necessarily considered by consumers as a pure loss (although insurance costs might come close since, unlike with some other purchases, consumers are unlikely to derive direct enjoyment or satisfaction from this one).

In any event, perceptions of losses and gains are heavily influenced by presentation. For example, consumers picking options for a new car from scratch have been found to select fewer options than when offered identical savings to delete options from a bundle. If starting in one’s mind with a fully equipped car, deleted options may be thought of as lost features, but when starting with a mental image of a stripped down car, added features might be thought of as less-valued gains. This might also be an illustration of the “endowment effect,” where consumers place a greater value on that which they perceive they have, even if they really do not (e.g., the car with all the options), over that which they may wish to obtain. Similarly, consumers are much more likely to hold onto a stock when it is below their purchase price than when it is above it, regardless of what may be happening in the stock market more generally, because selling a stock at below the cost of purchase would represent a loss (Schwartz, 2004).

This finding about the relative mental weights of losses and gains is especially interesting given that virtually all of the U.S. pilot projects testing consumer responses to mileage pricing of various sorts—including in Oregon, Washington State, Minnesota, and Georgia—established participant “bank accounts” which were incrementally depleted for each mile driven and cashed out for participants after pilot completion. Unless consumers view the money in such accounts as really theirs, as opposed to merely a tracking mechanism providing a bonus or windfall in the end, they are likely to change their behavior much less in a pilot situation than with real PAYDAYS pricing. Of course, “real pricing” could be structured as a rebate, as Progressive Insurance sort of is doing with its current MyRate product, where mileage and driving patterns have some effect on participant renewal premiums, which some participants might consider as a “good behavior” rebate upon renewal.

#### The Immediacy of Financial Consequences and the Conscious Awareness of Any Cost

Most people, in addition to avoiding making complex decisions, also avoid giving much advanced thought to economic decisions they will face in the future, except when the decisions are considered major or the consequences are very transparent or almost immediate. If, as provided in an earlier example, PAYDAYS insurance could only be purchased in “use-or-lose” buckets of 2,500 miles, consumers would only think about the financial consequences of their shorter trips near the time that more miles of insurance need to be purchased, when delaying the purchase would be financially advantageous. In another example pertaining to automobile use, behavioral economics shows that whether

or not someone is still making payments on a car is the most important factor in deciding to use that car or rent another one for a long trip over bumpy roads. That is, greater care is taken of an asset still being paid for than one that is not (Gourville, 2004).

The more someone paid for something and the more recently it was paid for, the more likely it will be used. This conclusion is derived from studies of theatre and sporting event ticket purchases, where tickets purchased in bundles, and especially if well in advance of the event date, are used less often than other tickets (Thaler, 1999). Payment frequency has also been shown to substantially affect consumer behavior, if for no other reason than that the more frequently a payment is made, the more likely it is to be made close to a time when product usage is being considered. While interesting, the idea of using more of products just paid for probably does not apply in the context of traditional insurance premiums, which may be equated to paying a license or registration fee that makes driving legal but is incidental to the driving experience (e.g., people rarely consider “getting their money’s worth” from their drivers license and vehicle registration fees), rather than to paying for a new car, which is fundamental to the driving experience (new cars are driven substantially more than the cars they replace, except in limited circumstances such as in the example above of the drive over bumpy roads). While, as stated earlier, many would likely curtail driving before a PAYDAYS insurance payment is due, immediately after paying, some may continue to curtail driving because of the salience of its costs while others might take advantage of their temporary “free and clear” status—as they might also after filling their tank with gasoline—and not consider mileage again until near the time a new insurance (or fuel) purchase is required.

Payment means and its related transparency also affect decision making. If people did not spend more using credit cards than cash, merchants would refuse to accept them and to pay the fee charged. Consumers remember their purchase amounts much more frequently when paying by cash than by credit card. When credit card bills arrive, individual charges, while listed, are somewhat masked by the size of the overall bill (Thaler, 1999). One study showed people bidding twice as much for Boston Celtics tickets if they paid by credit card, even if ample time was provided for them to retrieve cash if they needed it (Thaler and Sunstein, 2008).

### Perspectives on Price Bundling

Consumers may prefer all-inclusive pricing instead of per-use pricing for a variety of reasons. Research has shown sometimes irrational exuberance for things that are “free,” even if requiring the purchase of something else that may be far from a good deal (Anderson, 2009). Nevertheless, unbundling or pay-per-use pricing has been shown to be an effective strategy in the marketplace if deployed with particular attention to consumer concerns and desires.

Consumers have shown some preference for purchasing products in bundles in part so they need not worry about usage and having to pay again. Reasons for this that could apply to PAYDAYS insurance purchase decisions include: 1) inability to estimate usage costs; 2) laziness regarding tracking expenses; and 3) excessive concern about the

potential downside of heavy driving that might occasionally be necessary while undervaluing the upside of savings when driving less. “Telecom industry research suggests that the majority of phone-callers do not know the cost of each call that they make. When asked how much a particular call is likely to cost overestimations by a factor of three are apparently not uncommon.” This might partially explain the fact that “most people are risk averse and, other things being equal, will choose an option with a known price over one with an uncertain price.” (Bonsall, 2004) It would seem, given this research, that the design of Progressive’s MyRate product, where consumers are not informed about the precise relationship between their behaviors and their renewal premiums, might discourage some consumers from signing up.

While many urban car owners would benefit from selling their cars and occasionally taking taxi rides or using carsharing vehicles (which are rented in neighborhoods by the hour), thereby changing over from mostly fixed to completely variable transportation costs, doing this would create the impression of increased grocery and movie costs, which is resisted (Thaler, 1999). The idea of avoiding car use, both in the selection of housing location and in day-to-day travel decisions, is beginning to resonate with the public, especially among the young. Pollster John Zogby, among others, has shown that Americans believe that global warming is at least partially a result of their own behaviors and that 78% agreed that mass transit is either a very or somewhat important way to help resolve energy problems. About 40% said mass transit was important to them personally rising to about 50% among 18 to 29 year olds. Further, 38% said that transit is important in their selection of where to live, rising to 47% of 18 to 29 year olds. Finally, while a May 2007 survey showed only 1% had carsharing memberships (the numbers continue to grow at a hefty pace), an additional 5% said they were very likely to join in the future and 12% said they were somewhat likely to do so (Zogby, 2009). This is an interesting case—there are others—where people’s values, in this instance to protect the environment, are at least partially responsible for their desire or at least willingness to reconsider “bundled” car ownership and insurance.

Carsharing is a great way to convert the fixed costs of car ownership to variable, usage-based charges and the survey results cited above would suggest, especially among the young, a genuine willingness to accept usage-based car pricing as a substitute for car ownership. But even car sharing has experimented with bundling. For example, one company, Flexcar, which was taken over by its competitor, Zipcar, used to feature a few multi-hour bundled monthly pricing plans perhaps in part to avoid this negative cost perception surrounding taking some individual car trips and thus to improve the experience of carsharing. Today, Zipcar offers discounted hourly rates for moderate and heavy users, but because of its diverse vehicle fleet with hourly prices varying by vehicle type, it would be difficult to offer a bundled product.

Not all purchasing in bundles is done to avoid negative consequences. Such a purchasing preference has been shown to be especially prevalent with health club memberships, where consumers overestimate their discipline in getting sufficient use out of their memberships (DellaVigna and Malmendier, 2004). In the PAYDAYS insurance context, however, overestimating personal discipline would mean that PAYDAYS

pricing would appear to offer even greater savings than is on average ultimately realized. Thus, if consumers view constraining their driving as a virtue (perhaps because they may be persuaded that it is helpful to the environment, as discussed above) and are optimistic about their ability to do so, PAYDAYS insurance might seem very attractive.

It is likely a good strategy to play off consumers' optimism about their own future behavior in designing and marketing PAYDAYS insurance products as a substitute for traditional "bundled" insurance. It has been noted that 90% of drivers view themselves as "above average" (Thaler and Sunstein, 2009), meaning that many would be amenable to products that base their rates partially on "how" they drive—e.g., avoiding hard braking and swerving—when compared to others. In fact, in surveys conducted as part of a pilot that involved the North Central Texas Council of Governments and Progressive Insurance where participants were paid for reducing their driving, as if they had PAYDAYS insurance, some said that they would like having the quality of their driving monitored as part of determining their discounts because they believed they were better drivers than others even if they were not sure that they could reduce their mileage ("PAYD Insurance Pilot Program," 2008).

If a substitute product to driving, such as transit, is offered as a bundled service where no per-trip charges are incurred, this could work very well in tandem with PAYDAYS insurance where individual driving trips would incur insurance costs. Consumers who sign up for PAYDAYS insurance and purchase a bundled, all-you-can-ride transit pass (which ideally is discounted) with the hope to drive less, may not necessarily live up to their own expectations, but even if they do not, the fact that they pay something for the transit pass that allows them to then ride for free, but are required to pay for insurance for each trip, means that they are likely to take transit more and drive less.

If a company can find a way to lure customers to accept a new pricing plan on a trial basis, the views of the customers who try it may change. Participants in a Minnesota PAYDAYS leasing simulation pilot—entailing a reduced fixed monthly vehicle charge in combination with a variable per-mile charge—who were assigned the pricing treatment were substantially more likely than control group participants to be interested in securing a similar leasing arrangement and PAYDAYS insurance after pilot completion ("Pay-As-You-Drive Experiment Findings," 2005).

The consumer preference for purchasing some products in bundles is not boundless and a maximum monthly charge could be very useful in encouraging acceptance of pay-per-use plans. Indeed, six separate focus groups in Minnesota about PAYDAYS car leases were personally observed by this author on April 1-3, 2003, and participants showed substantially more acceptance of the concept if their maximum lease payment in a particular month was capped (with mileage charges in excess of caps rolled into subsequent bills). Progressive Insurance applied such a cap with its "Autograph" pilot discussed earlier. Of course, capping rates may be thought to eliminate the price incentive to drive less once the cap has been reached, but if the cap covers only individual billing periods—and charges in excess of a billing period's cap are not

forgiven but rather rolled into subsequent bills until paid off—customers would probably remain aware of the pricing and respond accordingly.

Surveys associated with the Minnesota leasing pilot showed that interest in leasing tripled (from 6% to 18%) as the top choice of respondents for acquiring their next vehicle when new leasing plans were presented that combined a reduced fixed monthly charge and a variable mileage charge. When two variants of this new type of lease were presented, two-thirds preferred the option with the higher per-mile price and lower fixed-monthly price, than the reverse (“Market Assessment Survey Results,” 2004). But introducing too many pricing schemes at once could be risky by creating confusion and discouraging consumers from trying something new. Indeed, on balance, it has been called a bad idea (Bonsall, 2004). It has been shown, for example, that offering too many mutual fund choices reduces 401(k) plan participation, and the same might also be expected if too many variants of PAYDAYS insurance (e.g., more than two or three) were offered (Schwartz, 2004).

The cellular telephone market is more developed than the insurance market in terms of the range of pricing plans available, and examination of the former may portend future product offerings in the latter. That market is dominated by bundled plans, but not exclusively. Sprint’s well advertised Fair and Flexible Plan provides for inexpensive overage buckets, where customers are automatically charged a modest fee for a modest bundle of additional minutes if needed. Rollover minutes from month to month is an option available in the marketplace. There are also a number of prepaid pay-as-you-go plans (Pogue, 2005). What is clear from the cellular telephone market is that there is room for a variety of pricing products to suit diverse consumer preferences. The same is true for transportation related products, such as tires, where “Bridgestone Firestone Mileage Sales” are being offered as an alternative to traditional tire purchases for the mass transit sector (“Why buy a tire,” 2009). Just because the PAYDAYS insurance market is not yet nearly as developed as the cellular telephone market does not mean that it cannot or will not be.

A survey in Minnesota found that 32% of respondents prefer PAYDAYS insurance pricing over having to pay traditional insurance premiums (“Pay-As-You-Drive Experiment Findings,” 2005). Progressive Insurance representatives have said that with TripSense, the predecessor program to its newly-launched MyRate, 34% of its customers who signed up for insurance by telephone and the Internet (but not by an agent) chose TripSense over Progressive’s standard product in the three states where TripSense was offered. Progressive also reported interest among over half its customers for PAYDAYS policies, so long as they could save money (Hutchinson, 2008).

Usage data related to telecommunications pricing may also be partially instructive for what might be expected with PAYDAYS pricing. Usage has been found to more than double with unlimited calling plans, although self-selection may have a role in this (Thomson, 2003).

“Bonus” Behavioral Economics Strategies

The term “bonus strategies” under this subtitle is a reference to new research in the field of behavioral economics that could help guide supplemental incentives to maximize behavior change among PAYDAYS insurance customers. The strategies covered here would either be very unconventional to use as part of an insurance product (and thus they would be offered “beyond” the risk-based pricing of the PAYDAYS insurance product) or, depending upon the regulatory environment in a particular state, may not be allowed because they are not closely tied directly to claims costs, which is a typical requirement. Nevertheless, these strategies have proven very successful and cost effective at motivating behavior change, including related to transportation, and are worthy of consideration in the states in which they may be allowed.

Recent research related to improving health outcomes shows some behavioral incentive strategies to be particularly successful. One strategy is called a regret lottery, where if a participant exhibits either a behavior that is directly desired (e.g., remembering to take medication) or does whatever is necessary to achieve a result (e.g., to meet a weight loss target), that participant becomes eligible to win a desirable lottery award with a decent probability of winning. The names of those failing at the task may also be drawn in the lottery and announced, but unlike the successful participants, the unsuccessful ones will not receive a prize if their names are drawn (hence the regret or “loss” that is experienced).

One study that tested the aforementioned strategy for the purpose of persuading participants to remember to take their anticoagulation medication warfarin (monitored by a high-tech pill box that recorded when the slot for each pill was opened) showed this strategy to be very effective. Participants who properly took their medication were entered into a daily lottery with an expected payout value of either \$3 (i.e., a 10% chance of winning \$10, plus a 1% chance of winning \$100) or \$5 (i.e., a 20% chance of winning \$10, plus a 1% chance of winning \$100). Mean non-adherence dropped to 1.6% and 2.3%, versus an historical 22% (Volpp, 2008a).

A second study tested both the regret lottery strategy and deposit contracts for overweight participants looking to lose weight. Deposit contracts required participants to invest some of their own money (an amount of their own choosing between \$0.01 and \$3 per day), which was matched one-for-one plus \$3 by the study. Participants got all of this money back if they achieved their goals (losing one pound per week for 16 weeks), but otherwise got nothing. The regret-lottery group lost 13.1 pounds on average, deposit contractors lost 14 pounds, and the control group lost only 3.9 pounds (Volpp, 2008b).

The idea of a regret lottery for PAYDAYS insurance participants has been suggested, where eligibility is based on meeting specific driving-reduction goals. Such goals might increase from one month to the next to encourage participants to continuously seek ways to further reduce their driving. Unpublished research shows a regret lottery as vastly more cost effective than a standard lottery at achieving behavior change (Loewenstein, 2009). (Other research shows that consumers respond more

favorably to low-value traditional lottery awards than to cash payments equal to the expected value of the lottery awards.)

Another somewhat complex lottery scheme has been tested in Bangalore, India, to encourage commuters to take company buses to work at less popular time. This scheme rewarded participants with points that were used to establish a status level, with higher status corresponding to both better probabilities of winning and more substantial payouts. The strategy was found to be very effective at shifting demand and even employees who were temporarily “gifted” with high status became especially aggressive at shifting their schedules to maintain their status (Merugu, 2009).

A Dutch scheme rewarded commuters who avoided driving during peak times, with a 3 euro payment, a 7 euro payment, a variable payment level with the highest payment provided for avoiding peak-of-the-peak period driving, or—at the discretion of the participant—the opportunity to earn points towards a new, desirable Yeti smart phone. Most of the congestion-relief benefits of providing the 7 euro payment were also realized with an award level of only 3 euros, suggesting that modest awards can yield substantial benefits. Those choosing to pursue the smart phone instead of cash (a minority) reduced their driving proportionately the most, suggesting that allowing participants to pick their own reward for succeeding could be a more effective strategy than just offering cash (Knockaert, 2009). (This particular result, however, might be somewhat skewed because smart phone users were required to access pre-trip traffic reports from the phone, which no doubt encouraged additional shifts away from peak-period driving beyond those caused by the pricing incentives.) Other research showed over one-third of women actually selecting a voucher for an \$80 massage or facial over \$85 in cash, even when reminded that the cash could be used at the spa with change to spare (Tierney, 2009). The logic of prize-seeking seems to be understood by the carpooling incentive firm, NuRide, which allows the employees of each of its clients to redeem award points earned through ridesharing by selecting among many gift certificates and other rewards.

It would be very unusual for a portion of someone’s insurance premium to be determined by any of the strategies included in this subsection. Nevertheless, research shows these strategies to be particularly effective at causing behavior change and thus worthy of consideration. In some states, it may be possible to deploy these strategies by an entity other than an insurance company, but with the cooperation of the insurance company at least in conveying the driving data necessary to determine award eligibility (with participant approval, of course). If the awards are offered separately from the insurance premium, and are provided by a third party (e.g., a government partner), it may be possible that they need not be included as part of insurance rate filings and thus would not risk being prohibited.

### **ADDITIONAL ECONOMICS LESSONS FOR PAYDAYS INSURANCE**

Not all important consumer response lessons that would apply to PAYDAYS insurance pricing are rooted in behavioral economics. Travel demand modeling, for example, relies

on a host of economic and non-economic factors to project consumer responses to various transportation choices. A key consideration in such models is the cost and availability of alternative transportation modes which in turn rely, in part, on trip origin and destination characteristics.

From 1998 through 2001, Progressive Insurance's Autograph pilot resulted in urban residents paying only 63% of their previous fixed-rate premiums versus 73% over the entire group of participants. This result is not surprising given that urban residents typically have access to the best transit services that facilitate reductions in their driving; thus, they have the highest potential for savings with PAYDAYS premiums. Suburban and rural drivers were also shown to benefit with average resulting premiums of 75% and 70%, respectively, of their previous fixed-rate premiums.

Income elasticity, or the effect of income on the demand for travel and other products and services, is well established. It is intuitive that the less money someone has, the more discipline he must exercise in spending it, and thus he will respond accordingly to price changes and opportunities presented for savings. PAYDAYS insurance provides a unique opportunity for savings to which many low-income households would enthusiastically respond. Similarly, those who pay the highest premiums relative to the miles they drive, including high-risk drivers eligible only to purchase non-standard insurance, would also be among the most likely to reduce driving when offered proportional per-mile savings.

All products have both a short- and long-term price elasticity, but transportation price elasticity is more skewed toward the long term than that for other products because of the time and effort required on the part of individuals to learn about new mobility options and to change entrenched travel patterns. Progressive's Autograph pilot did not include mileage tracking before it began and thus its total effects on driving cannot be known. Nevertheless, usage (minutes of driving) did decline by 13% over the seven months tracked, suggesting that participants continued over time to discover ways to reduce their driving after PAYDAYS premium charges began (Dennison, 2001).

## **OPTIMAL CUSTOMER PROFILE AND PAYDAYS INSURANCE PRODUCT**

Tables included at the end of this document provide a profile of the most receptive potential customers for PAYDAYS insurance (Table 1), identify marketing features to appeal to such customers (Table 2), and specify product attributes to achieve the highest possible mileage reductions among customers (Table 3). Proposed customer targets include individuals with the following traits who would be expected to benefit most from PAYDAYS insurance pricing: low mileage; high premiums; low income; urban; environmentalists; current transit, vanpool, carpool and non-motorized commuters; vehicle lessees; and owners of multiple vehicles driven infrequently, including car collectors and do-it-yourself mechanics.

While not included in the table, a great marketing idea would be to offer 100 free miles of insurance per month (or, for non-car owners, \$10 worth of carsharing or bicycle

supplies/repairs per month) with a transit pass. This potentially could lead to a lot of participants canceling their traditional insurance premiums and simply purchasing more miles of insurance when needed.

Regarding the product itself, PAYDAYS pricing should, as reflected in Table 2, be the default option unless the customer explicitly chooses standard pricing; and pricing should be well-explained and simple (Bonsall, 2004), at least initially, with a cap placed on the maximum premium billed (many consumers would not choose such a product without at least some cap). Personal savings, control over premium amount and payment terms, and environmental and other societal benefits should be highlighted. To maximize mileage reductions, as outlined in Table 3, per-mile or per-minute-of-driving charges should be direct and transparent, billing should be frequent with interim pricing reminders through e-mail and even in-vehicle taxi-like meters (which have been deployed in the Washington State mileage-pricing pilot that tested pricing alternatives to the fuel tax), and transportation alternatives should be made more appealing through negotiated price discounts for unlimited ride transit passes and by providing individualized assistance in identifying appropriate options.

All tables provide guidance on dealing with conflicting strategies and objectives. For example, Table 1 provides advice about handling the inherent conflict of focusing marketing on low-mileage drivers and current transit users who would experience immediate financial benefits versus targeting higher-mileage drivers who might reduce their driving more but for whom PAYDAYS insurance would initially be less appealing (see “Boasting Mileage Where Feasible” column). Tables 2 and 3 together offer a strategy of focusing marketing efforts on savings’ potential in order to encourage product acceptance, then shifting communications to emphasize cost after the product has been selected in order to discourage driving, and finally refocusing back on savings as consumers near a decision point on renewal. Clearly, appropriately timed customer communications are essential to meeting multiple insurance company and societal objectives.

One product design issue to consider is whether the charges (and related vehicle monitoring) are to be based only on miles or minutes of driving, or if they also should include other usage-based factors related to how the vehicle is operated (e.g., when the vehicle is driven, whether or not the driver brakes hard and swerves a lot, and the types of roads on which the driving takes place). Research shows that the more that is tracked and used in pricing, the better the actuarial accuracy will be. Rewarding calmer and safer driving would further enhance safety and reduce fuel consumption, assuming that consumers will not be turned off to the product (which is a possibility because of the potential equipment costs for and privacy concerns of monitoring many vehicle parameters). This could be resolved by having a variety of PAYDAYS insurance products available in the marketplace, where drivers who want to be monitored in exchange for steeper premium discounts could have that option, while others who would object to such monitoring could sign up for a simpler and less intrusive pay-per-mile or pay-per-minute product (Greenberg, 2007).

While beyond the scope of this research, there are a host of complementary measures not directly related to behavioral economics that could lead to further reductions in driving from PAYDAYS insurance. Such strategies include providing information about the success of people's neighbors in achieving low mileage, offering performance comparisons with similarly-situated households, creating contests to maximize performance that reward participants with status that is communicated to their neighbors or peers, and providing feedback on performance that is frequent, graphic, and compelling.

### **DESIGNING PAYDAYS INSURANCE PILOT PROJECTS TO LEARN MORE**

While behavioral economics provides important lessons for how any pricing scheme should, depending upon objectives, be designed, all products are perceived differently by consumers. Thus projections about future consumer behavior related to the pricing of any product, even if the product is similar to other products with pricing features to which consumer response has been evaluated, will ideally be tested in the marketplace.

As discussed earlier, Federally supported mileage pricing pilots in four U.S. states all started participants out with a virtual bank account, from which incremental deductions for driving were made following pre-set rules clearly communicated to participants, and participants were allowed to keep any remaining cash left in their accounts after the pilots were completed. Because such cash would likely be seen as a windfall to the consumers, much like gambling wins are perceived, behavioral economics has shown that participants are likely to exercise significantly less discretion in spending down such accounts than if they had to draw down a bank account into which they had previously put their own money. A better pilot design, assuming the "real" product cannot initially be offered in a test environment where before-after data may be collected, would entail providing a participant stipend upfront conditioned on signing a contract to complete the pilot which entails direct per-mile pricing. Behavioral economics has shown that people often "close accounts" soon after opening them, and with an appropriately modest gap in time between the provision of the stipend and the beginning of the pilot, most participants would discount the importance of their initial stipend and consider money spent related to the pilot to be their own. Of course, this might lead some to try to abscond with the stipend without paying all of their incurred per-mile charges, but this gamble would be worth it in order to maximize what is learned from the pilot. Deposit contracts, discussed earlier, would also be a good alternative.

The pilot should include sufficiently large numbers of urban, suburban, and rural households so that conclusions about responsiveness can be drawn from each. Households with a range of incomes and insurance premiums should also be included, as should others with limited-mileage leased vehicles. Comprehensive participant surveys should be administered in order to, among other things, garner views about the environment and assess experiences, disposition, and habits related to driving and alternative transportation options.

Participants should be asked whether they would prefer PAYDAYS pricing or traditional time-based pricing to determine the effects of this preference on their response to PAYDAYS pricing. (In the case of a pilot, some, in exchange for a generous participation stipend, may acquiesce to being randomly assigned to either a PAYDAYS pricing group or a control group but nevertheless prefer a traditional time-based insurance plan.) Multiple billing protocols should be tested, perhaps including weekly, monthly, quarterly, and semi-annual billing, as should pricing reminder protocols including regular e-mails and in-vehicle taxi-like meters. Testing the effects of transit pass subsidies co-marketing with PAYDAYS insurance should also be considered. For projects designed to assess product demand, transit passes with some number of free miles of insurance, and the opportunity to buy more miles of insurance, should also be tested. Finally, some participants should be offered extensive hand holding in mapping out and determining their travel options to see how such information, in concert with the pricing signals, influences their mileage. (This strategy has been the subject of much research and has been shown, even absent pricing incentives, to be quite effective.)

There is an inherent challenge in marketing any new product, since customers overvalue the features that they anticipate losing and undervalue those that they anticipate gaining (Schwartz, 2004). This was certainly expressed in the Minnesota PAYDAYS lease focus groups where fear of the occasionally high variable lease payment—which participants had not previously experienced—overcame any peace of mind from eliminating the risk of a potentially sizable repair cost—which participants were used to accepting—that was to be newly covered by the proposed “all in one” lease. With PAYDAYS insurance, too, there is the psychological barrier that in some cases may not fall, with some customers of traditional insurance plans simply refusing to accept a product where mileage has to be considered. In the end, all that can be done is to try to address the concerns of those willing to consider this product and then to hope for the best. Given the interest in PAYDAYS insurance on the parts of insurance companies, governments, advocacy groups, and consumers, along with the marketplace successes of other PAYDAYS pricing products such as carsharing, the chances for PAYDAYS insurance succeeding appear to be very good.

## CONCLUSIONS

PAYDAYS insurance uses a pricing strategy that provides a plethora of benefits to individuals, insurance companies, and the public at large. Its potential benefits, especially related to the driving reductions it would cause, are universally acknowledged, but rarely acknowledged is that the product can be offered and priced in many different ways, and that some ways may be much better than others in enhancing market penetration and encouraging driving reductions.

The vastly expanding field of behavioral economics, which combines the disciplines of economics and psychology to understand, explain, and project consumer responses to matters of personal economic consequence, including product pricing, provides significant instructions as to how to market and price PAYDAYS insurance to meet various objectives. Tables 1, 2, and 3 at the end apply the lessons learned from

behavioral economics and other economics research to design an optimal PAYDAYS insurance pricing scheme. A discussion is provided that identifies design features of a PAYDAYS insurance pricing pilot to learn even more about the application of behavioral economics to PAYDAYS insurance.

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**TABLE 1.** Targeting the Most Receptive Potential PAYDAYS Insurance Customers

<b>Customer Attribute</b>	<b>Effect of Attribute on Mileage Reductions</b>	<b>Boosting Mileage Reductions Where Feasible</b>
Low mileage	Would yield smaller mileage reductions than with higher-mileage drivers.	“Skimming” of profitable low-mileage drivers would in time force traditional time-based policy rates to rise and thereby expand the PAYDAYS insurance market beyond low-mileage drivers.
High premiums	Large reductions would result because of high per-mile savings.	
Low income	Because low-income drivers are the most price sensitive, large driving reductions would result.	
Urban	The relatively higher number of transportation and home-delivery options would suggest large driving reductions.	Consider subsidizing customer transit passes to encourage transit use.
Environmentalists	Large driving reductions would be expected.	Reinforce environmental benefits of reduced driving in communications.
Current transit, vanpool, carpool, and non-motorized commuters	Potential peak-period mileage reductions would be much lower than for current drive-alone commuters.	Work with Transportation Management Associations and service providers to co-market PAYDAYS insurance to both existing and potential alternative transportation customers.
Vehicle lessees	Positive effect on reductions was found in Minnesota, most likely since vehicle lessees are more accustomed than others to managing their mileage (Gourville, 2004).	Work with vehicle leasing entities to allow customer rebates, reflective of increased residual value, for vehicles returned from lease with lower than allowable mileage.
Owners of multiple vehicles driven infrequently, including car collectors and do-it-yourself mechanics	Pricing of low-mileage vehicles would result in less per-vehicle mileage reductions than pricing of higher mileage vehicles. Nevertheless, households with many vehicles tend to drive more than other households, even if mileage on individual vehicles may be low.	

**TABLE 2.** Marketing PAYDAYS Insurance

<b>Product or Marketing Attribute</b>	<b>Effect of Attribute on Mileage Reductions</b>	<b>Boosting Mileage Reductions Where Feasible</b>
Default option (but with traditional time-based policy readily available)	Has the potential to boost participation substantially if company already has a large customer-base.	
Simple pricing (but algorithm to determine a policyholder's price need not be)	Unknown.	
Savings	Customers who continue to focus on overall premium savings after switching to PAYDAYS insurance would be less motivated to reduce mileage than those focusing on per-mile or per-minute costs.	After customers switch to PAYDAYS insurance, immediately refocus communications to emphasize cost per mile or minute. When marketing policy renewal, focus back onto total savings.
Control over total premiums	There should be some positive effect.	
Low premium payments with some timing discretion	Unknown.	
Cap maximum premium billed	While this may be critical to some to accept PAYDAYS insurance, it reduces disincentives for high mileage.	Charges in excess of cap need not generally be forgiven but rather rolled over into subsequent bills until paid off.
Promise to compare after-the-fact costs with traditional premium	Unknown, but consumers are willing to take greater financial risks (e.g., accepting a new insurance product) if they know they will see a later cost comparison with the alternative not chosen (Gourville, 2002).	
Societal benefits (model after hybrid car marketing)	Some additional reductions among environmentalists and other socially conscious customers may occur.	

**TABLE 3.** Maximizing Mileage Reductions Across Customers

<b>Strategy</b>	<b>Effect on Customer Acceptance</b>	<b>Improving Customer Acceptance Where Feasible</b>
Direct and transparent per-mile charges (no rebates or requirements to purchase miles in large use-or-lose bundles)	Customers would sometimes like to forget about their per-mile costs and might be reluctant to accept a PAYDAYS insurance product with these price-related attributes.	Avoid focusing on per-mile or per-minute charges until after customer has chosen PAYDAYS insurance. Refocus to total savings and away from per-mile pricing when seeking policy renewal.
Frequent billing emphasizing tangible (check or even cash) as opposed to less tangible (credit card) payment forms		
Reinforce pricing through e-mail reminders and taxi-like in-vehicle meters.		
Negotiate transit pass discounts and matching funds to buy down prices of alternative transportation modes.	Would be very popular, especially in urban and other areas with good transit options.	Engage in joint marketing campaigns with transit providers (e.g., “Wouldn’t it be great if your insurance company helped pay for your transit trips? Now it might!”)
Provide individualized assistance to customers to reduce driving by identifying alternative transportation, trip consolidation, and trip elimination (e.g., through Internet shopping) options.	Would be positively construed generally and potentially very useful to some.	