

# SUBSIDIZING CONGESTION

THE MULTIBILLION-DOLLAR  
TAX SUBSIDY THAT'S MAKING  
YOUR COMMUTE WORSE



TransitCenter

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# Executive Summary

The federal government provides subsidies through the tax code for employer-provided and employer-paid automobile parking, transit passes, and some other commuter expenses, but it does so in ways that run counter to the nation's overall transportation goals.

Ultimately, the effect of the tax benefit for commuter parking is to **subsidize traffic congestion** by putting roughly 820,000 more cars on America's most congested roads in its most congested cities at the most congested times of day. It **delivers the greatest benefits to those who need them least**, typically upper-income Americans, and **costs \$7.3 billion in reduced tax revenue** that must be made up through cuts in government programs, a higher deficit, or increases in taxes on other Americans.

The tax benefit for commuter transit only weakly counteracts the negative impact of the parking tax benefit. The transit tax benefit reaches too few people, and the drop in its value compared to that of the parking tax benefit at the beginning of 2014 limits its potential to get cars off the road.

We estimate that the parking and transit tax benefits together account for an estimated \$8.6 billion total in forgone federal and state income tax and payroll tax revenue each year. The high cost and significant transportation impact of commuter tax benefits demand that the federal government undertake a detailed evaluation of the benefits and initiate reforms to ensure that they support, rather than hinder, achievement of the nation's transportation policy goals and fiscal priorities.

## Commuter Tax Benefits

Currently, employers may offer their employees several commuting benefits that are excluded from the calculation of an employee's taxable income:

- Employer-provided or employer-paid parking at or near the workplace valued at up to \$250 per month
- Employer-paid transit passes or vanpool benefits valued at up to \$130 per month
- Employer-paid bicycle commuting expenses of up to \$20 per month

These tax-advantaged parking and transit benefits reduce the taxes paid by participating employers and employees. The parking and transit benefits may be provided either as a supplement to an employee's pay or in place of salary or wages. Workers may claim both the parking and transit benefits in the same month, but may not combine the bicycle commuting benefit with any other benefits.

on the road at the times and places of maximum congestion.

- The parking tax benefit represents a \$7.3 billion subsidy to a subset of automobile commuters in the form of avoided federal income and payroll tax payments and state income taxes. The federal income tax revenue avoided from the parking tax exemption alone would have been enough to offset nearly two-thirds of the \$6.1 billion in federal general tax revenue infused into the Highway Trust Fund in 2012.
- As a result of the method the Internal Revenue Service uses to calculate the market value of parking, only about a third of American workers receive any tax savings at all from the parking tax benefit. Those beneficiaries tend to work in areas where parking is most expensive (such as downtown business districts), with those in higher-income tax brackets receiving the greatest benefits.
- Most automobile commuters receive no savings from the parking tax benefit, as they work in areas where free parking is abundant and has no market value. These commuters are net losers under the nation's current parking tax benefit policy, as they must endure higher taxes or reduced government services to subsidize parking for a minority of commuters in other areas and often must endure increased congestion as a result.

## Findings

### The parking tax benefit subsidizes traffic congestion and is costly.

- The parking tax benefit adds approximately 820,000 automobile commuters to the roads, traveling more than 4.6 billion additional miles per year. Because the parking tax benefit delivers the biggest savings to those working in dense employment centers such as downtowns, and because commuting tends to disproportionately occur during the most congested times of day, the parking tax benefit has the effect of increasing the number of cars

### The transit benefit reduces congestion—delivering a return on investment to society—but reaches too few people to counteract the negative impact of the parking tax subsidy.

- The transit tax benefit is used by an estimated 2.7 million commuters, or about 2 percent of U.S. workers. Transit benefits are only available through employer-based transit benefits programs, which most employers—particularly smaller firms—do not offer.
- The transit benefit removes only about a tenth as many vehicles from the road as are added by the parking benefit.

- Like the parking tax benefit, the transit tax benefit disproportionately aids those with higher incomes who work for large employers in dense downtown districts. Lower-income workers are less than one-fifth as likely to have access to subsidized transit benefits through the workplace as higher-income workers. The transit benefit is also worth less to lower-income workers than higher-income workers because the value of the tax benefit increases along with a worker's marginal income tax rate.
- The expiration of “parity” between the tax benefits available to transit commuters and car commuters in early 2014—the two benefits were previously capped at equal amounts for several years before the transit subsidy was cut by nearly half—has reduced the value of the transit benefit as a tool for encouraging commuters to leave their cars at home. In areas such as those surrounding New York, Washington, D.C., and San Francisco, where the cost of many monthly commuter rail passes well exceeds the current \$130/month cap on tax-free transit benefits, the reduction in transit benefits significantly reduces the incentive for commuters to take transit, further exacerbating congestion.

**The tax benefits for commuter parking and transit have not been subject to regular and detailed evaluation for their effects on transportation policy.**

- Congress never articulated a clear transportation policy purpose for the commuter parking tax benefit. However, the commuter parking benefit clearly works contrary to important national transportation policy priorities, such as curbing congestion and reducing pollution.
- Like many tax expenditures, commuter tax benefits are not subject to regular and detailed evaluation, as they do not require annual authorization by Congress (though the provision creating parity between the parking and transit benefits was temporary and subject to periodic renewal).

## Recommendations

**Given the findings above, the current structure of commuter benefits is due for an update. Specifically, the government should:**

# Eliminate the parking tax subsidy.

Eliminating the parking tax subsidy would stop encouraging workers to drive to work in single-occupancy cars during rush hour in our most congested cities—a practice that contradicts the nation's transportation policy objectives. Eliminating the parking tax subsidy would only affect a small segment of the American workforce. The revenue gained by eliminating the parking subsidy could also be used to help close the gap in the Highway Trust Fund, invest in transportation infrastructure, or achieve other public policy goals.

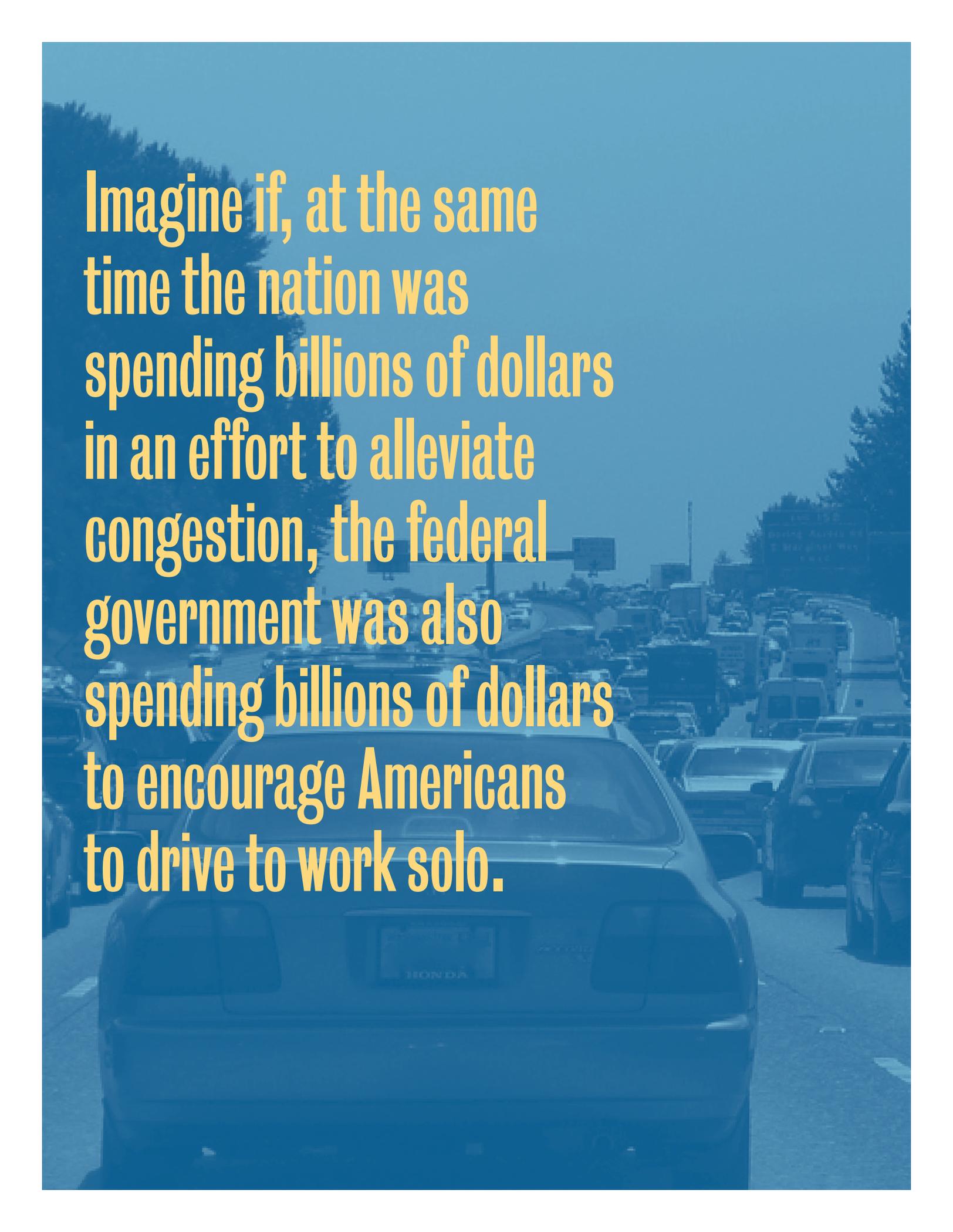
## Make federal support for transit more effective.

Many transit users currently receive no transit tax benefit, either because their employers do not have a workplace transit benefits program or because they use transit for purposes other than getting to and from work. In addition, the current transit benefits program provides greater rewards for higher-income transit commuters than for middle-income or working-class users. To resolve these problems, the federal government should explore possible replacements for the current transit tax benefit—such as refundable tax credits for household transit expenditures—that deliver financial support to a broader range of transit-system users while making the system more equitable. The federal government should also examine the costs and benefits of shifting the amount of money currently expended on transit commuter tax benefits to other programs designed to expand transit ridership.

## Improve and expand the current transit tax benefit.

Should Congress choose to maintain the current framework of commuter tax benefits, it is essential that the transit benefit be expanded and improved in order to provide an effective counterweight to the parking benefit. Specifically, the government should:

- Increase the maximum value of the transit tax benefit. *At minimum*, parity should be restored between the transit and parking tax benefits—one congressional proposal would reestablish parity at \$220 per month, a level that is between the current parking and transit benefit caps.
- Require employers that offer tax-free parking to their employees to also offer transit benefits or empower their workers to “cash out” the value of the subsidized parking they receive from their employers by converting it to cash income.
- Expand the scope of commuter tax benefits to include benefits for bikesharing and carsharing and to provide parallel benefits for workers who carpool. The federal government should also retool the program to recognize the increasing number of multimodal commutes by allowing workers to combine benefits within certain limits.



Imagine if, at the same time the nation was spending billions of dollars in an effort to alleviate congestion, the federal government was also spending billions of dollars to encourage Americans to drive to work solo.

# Introduction

The United States spends more than \$200 billion each year to build, maintain, and ensure the smooth operation of our road network.<sup>1</sup>

Much of that money is spent with the explicit goal of minimizing traffic congestion. New highways are built and old ones are expanded, engineers reconfigure interchanges and retime traffic signals, instant message boards are installed to help drivers avoid bottlenecks—all in an effort to shave a few minutes off drivers' morning and evening commutes. Even investments in public transportation are often justified by the need to get drivers off the road at the most congested times of day.

Imagine, however, if at the same time the nation was spending billions of dollars in an effort to alleviate congestion, the federal government was *also* spending billions of dollars to encourage Americans to drive to work solo. Further, what if, among all of the commuters in the system, the biggest subsidies went to people traveling into the most congested areas of America's most congested cities at the most congested times of day?

Incredibly, this may be the situation that results from a provision of the tax code that excludes the value of employer-provided and employer-paid parking from income taxes. In this report, we undertake a broad examination of the parking tax benefit and the parallel benefit for commuter use of transit, reviewing their cost, the impact they have on transportation decision-making by commuters, and their effectiveness as public policy tools.

Tax expenditures such as commuter tax benefits for parking and transit have important public policy implications but rarely receive detailed scrutiny. At a time when the federal Highway Trust Fund regularly flirts with insolvency and the nation faces a variety of pressing transportation investment needs, it is critical that all aspects of public policy work in concert to support the nation's transportation policy goals, including safety, efficiency, and social equity. Through our analysis, we find that the tax subsidy for commuter parking produces results that run counter to those goals.

# Commuter Tax Benefits: A Primer

The federal government subsidizes commuter parking, transit passes, and other commuter expenses paid for by employers through the tax code. The family of tax provisions known as “commuter tax benefits” originated in the historical exclusion of the value of employer-provided parking from the calculation of an individual’s taxable income and has since expanded to include tax incentives for the use of non-driving modes of travel.

## Origin of Commuter Tax Benefits

Automobile commuters have received employer-provided parking as a tax-free benefit since the invention of the car. In the mid-1970s, however, employer-provided parking, as well as other valuable fringe benefits, came under scrutiny by the Internal Revenue Service amid concern that an increasing share of the compensation paid to American workers was escaping taxation.

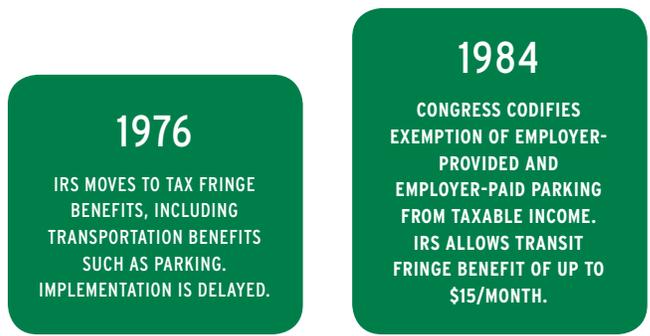
To many Americans, the idea that workplace parking is a “valuable fringe benefit” seems strange. Driving to work is a necessity or near-necessity for many Americans, and parking at work sites is rarely priced. Further, in much of the United States,

the supply of available parking so vastly outstrips demand as to leave it with little to no market value (see page 10). In these localities, free workplace parking (at least in the eyes of the Internal Revenue Service) is not a valuable fringe benefit at all.

In other parts of the country, however, such as the downtown areas of major cities, parking is a scarce and valuable commodity. When employers reimburse their workers for their parking expenses, or when they give their employees parking that would otherwise come at a cost, they are conveying a benefit of value to their employees. They are providing a form of compensation.<sup>2</sup>

Beginning in 1984, Congress acted to address a growing atmosphere of uncertainty

TABLE 1:  
CAPSULE HISTORY OF  
PARKING AND TRANSIT  
TAX BENEFITS



regarding taxation of fringe benefits by formalizing the tax treatment of employer-provided and employer-paid parking in statute. (A more detailed history of commuter tax benefits can be found in Appendix B.) The IRS interpreted the statute as allowing for a small commuter benefit for transit users as well. In 1992, the Energy Policy Act<sup>3</sup> revised the taxation of commuting expenses by creating a class of benefits called “qualified transportation fringe benefits.” The act capped the value of parking excluded from taxable income at \$150 per month and raised the transit exclusion to \$60 per month starting January 1, 1993,<sup>4</sup> “to encourage mass commuting, which would in turn reduce traffic congestion and pollution.”<sup>5</sup> Both exclusions were to adjust with inflation.<sup>6</sup>

In the years since 1992, Congress has made additional revisions to the program, perhaps the most consequential of which was the decision in 2009 to increase the maximum amount of tax-free transit benefits to the same level as the maximum benefit allowed for parking. That temporary provision, known as “parity,” expired at the beginning of 2014. (See Table 1 for a summary of important changes in commuter tax benefits over time.)

## Current Status of Commuter Tax Benefits

Currently, federal law allows the following benefits to be excluded from the calculation of employees’ taxable income:

- Employer-provided parking for employees, up to a market value of \$250 per month.
- Employer-reimbursed paid parking at facilities near the worksite or at a location from which a commuter travels via transit, again up to \$250 per month.
- Employer-provided transit and vanpool benefits, such as employer-provided transit passes, up to \$130 per month.
- Transit and vanpool services paid for through a pre-tax salary deferral program, again up to \$130 per month.
- Reimbursement of qualified bicycle commuting expenses, up to \$20 per month.<sup>7</sup>

For the sake of simplicity, we will refer to the first two benefits in this report as the “parking tax benefit” and the next two as the “transit tax benefit.” The bicycle commuting benefit, while worthy of study, is relatively new and operates in a manner different from the other benefits and is therefore not addressed in this report.<sup>8</sup>

1992

TAX-FREE VALUE OF EMPLOYER-PROVIDED OR EMPLOYER-PAID PARKING CAPPED, INITIALLY AT \$150/MONTH, SUBSEQUENTLY ADJUSTED FOR INFLATION. TRANSIT BENEFIT ESTABLISHED WITH TAX-FREE VALUE OF EMPLOYER-PROVIDED TRANSIT BENEFITS CAPPED AT \$60/MONTH, SUBSEQUENTLY ADJUSTED FOR INFLATION.

1997-98

PREVIOUS BENEFITS CONTINUE; EMPLOYEES PERMITTED TO SET ASIDE PRE-TAX INCOME FOR PARKING AND TRANSIT.

2009

PARKING BENEFIT CAP INCREASES TO \$230/MONTH. CAP ON EXCLUDABLE TRANSIT EXPENDITURES RAISED TO SAME LEVEL AS THE CAP ON PARKING EXPENDITURES.

2014

PARKING BENEFIT CAP INCREASES TO \$250/MONTH. TRANSIT BENEFIT CAP FALLS TO \$130/MONTH AS PARITY BETWEEN TRANSIT AND PARKING BENEFITS EXPIRES.

# The Parking Tax Benefit Subsidizes Traffic Congestion and Costs Billions

In this section, we review the impact of the parking tax benefit on commuting behavior by examining the scope and monetary value of the subsidy it provides to automobile commuters and using data from economics literature to estimate the number of cars those subsidies put on the road.

## Most Workers Gain No Tax Savings from the Commuter Parking Benefit

Free or subsidized parking is a common feature of the American workplace. A 2013 survey by the Society for Human Resource Management found that 87 percent of employers provide free on-site parking, while 11 percent provide monetary parking subsidies.<sup>9</sup>

Providing that parking can be costly to employers. The cost of building a parking garage can range from \$2,000 to \$45,000 per space, while the cost of constructing a surface parking lot can range from \$1,000 to \$15,000 per space.<sup>10</sup> Employers may bear these costs directly, if they build and operate their own facilities, or they may pay for them indirectly in lease payments.

But while workplace parking may be expensive to provide, little of it has market value. In much of the United States, parking at work sites, shopping centers, and other facilities is abundant, often as a result of minimum parking requirements imposed on developers by local governments, and it is usually unpriced. For the purpose of federal income taxes, what matters is not the cost of providing parking to employees but rather

its *fair market value*, which is defined by the IRS as “the amount an employee would have to pay a third party in an arm’s-length transaction to buy or lease the benefit.”<sup>11</sup> Any commuter who works in an area where parking is abundant and unpriced, therefore, can be understood to receive *no* tax savings as a result of the commuter parking tax benefit, since the parking has no market value as defined by the IRS. In short, most U.S. drivers do not receive the parking tax benefit.

How many workers *do* benefit from the tax subsidy for commuter parking? The lack of data and rigorous evaluation of these tax benefits by the federal government (see page 29) makes it difficult to ascertain the share of American workplace parking that has a market value, but several studies provide important clues.

- A 1996 Association for Commuter Transportation (ACT) study conducted for the U.S. Environmental Protection Agency and U.S. Department of Transportation included a survey of employer parking practices and an estimate of the value of employer-provided parking. The data suggest that approximately 37 percent of the parking spaces used by employees had a non-zero tax value.<sup>12</sup> Applying this figure to the 86 percent of U.S. workers who commute by car—

alone or in a carpool—and the approximately 94 percent of workers who receive either unpriced or subsidized parking from their employers suggests that **about 30 percent of American workers, or approximately 42 million, receive at least some minimal benefit from the income tax exclusion for commuter parking.**<sup>13</sup>

- The workers who benefit most from the parking tax exclusion are those in areas where parking costs are highest—often the traditional central business districts of major American cities.<sup>14</sup> A 2010 Census Bureau analysis estimated that approximately half of the 31 million Americans working in “employment clusters” in 2000 (or about 12

percent of all workers) worked in traditional central business districts, with the other half working in outlying job clusters such as “edge cities.” A subsequent analysis has found that about 14.4 percent of American workers are employed in downtowns or major employment hubs of the nation’s 150 largest cities.<sup>15</sup> **About 12 to 14 percent of workers, therefore, worked in areas where the parking tax benefit was likely to provide significant tax savings.**

TABLE 2:  
WHO BENEFITS FROM THE  
PARKING TAX SUBSIDY?<sup>16</sup>

	Workers at companies that offer no parking benefits or who do not drive to work	Workers in areas with abundant free parking	Workers in areas with low parking costs	Workers in dense business districts
<b>Tax Benefit</b>	NO TAX BENEFIT	NO TAX BENEFIT	LIMITED TAX BENEFIT	TAX BENEFIT APPROACHING MAXIMUM (~\$1,000/YR. FOR TYPICAL EARNER)
<b>Share of U.S. Workers Affected</b>	ABOUT 14% OF WORKERS DO NOT DRIVE TO WORK. ABOUT 6% WORK FOR EMPLOYERS THAT OFFER NO PARKING BENEFITS.	ABOUT HALF	ABOUT 16-18%	ABOUT 12-14%

Even small changes in commuting modes can greatly affect congestion.

## By Subsidizing Some Auto Commuters, Parking Benefits Encourage Them to Drive

The tax benefit for commuter parking serves as a financial incentive that induces more Americans to drive their cars to work. The degree to which tax incentives encourage changes in commuting behaviors is dependent on several factors:

- The magnitude and distribution of the subsidies.
- The degree to which individuals are willing or able to change their behavior in response to the subsidies, including the availability of alternative modes of commuting and possibly the form in which the subsidy is delivered.
- The degree to which the subsidies alter employers' offerings of transportation benefits to their employees.

These factors vary across metropolitan areas, across regions within a metropolitan area, and from worker to worker. The use of generic estimates of elasticity of demand (the degree to which demand for a service changes with regard to a change in its price, availability, or quality) can provide a window into the degree to which the parking tax benefit increases automobile commuting.<sup>17</sup>

The effects of the commuter benefit for parking can be estimated by treating the savings from the commuter tax benefit as a discount against the putative cost of parking had the employee been required to pay for it. In other words, if the tax value of a monthly parking space is \$100 and the individual faces a marginal tax rate (federal income + payroll + state income) of 32.7 percent, the monthly value of the subsidy to the employee would be \$32.70, representing a 24.6 percent reduction in the total cost of parking plus taxes (a \$32.70 reduction in cost of parking + taxes, or \$132.70).

Commuting travel is relatively “inelastic” with respect to price—that is, commuters tend not to change their behavior in response to price signals to the same degree that travelers making more discretionary trips do.<sup>18</sup> Using a conservative, generalized estimate of the elasticity of commuting trips with regard to parking price,<sup>19</sup> it is reasonable to conclude that the parking tax subsidy increases automobile commuting trips among those who benefit from the subsidy by approximately 2 percent.

Applying that figure to the universe of workers believed to be affected by the subsidy (a maximum of 42 million) yields the conclusion that the parking tax subsidy adds roughly 820,000 automobile commuters to the roads, while removing roughly 32,000 would-be transit commuters. If these additional commuters drove distances typical of the average American, they would travel approximately 4.6 billion additional miles each year—representing about 0.15 percent of total U.S. vehicle travel.<sup>20</sup> (Alternative assumptions regarding the elasticity of demand for commuter parking with respect to price yield different estimates of the response by drivers. See Appendix A for an alternative scenario assuming a more elastic response to the tax benefit.)

While the parking benefit has only a modest effect on overall U.S. vehicle travel, it likely has a greater effect on traffic congestion. The parking tax benefit is worth the most in major metropolitan areas that typically suffer from the worst traffic congestion, and it affects a type of travel—commuting—that tends disproportionately to occur at peak travel periods. As a result, workplace parking policy changes are often looked to as potent tools for reducing congestion. A 1996 evaluation of transportation pricing options produced for the California Air Resources Board, for example, estimated that establishing a \$3-per-day minimum price for employee

parking in the Bay Area would reduce regional vehicle-miles traveled by 2.3 percent, but would reduce the number of hours spent in traffic delays by 7 percent.<sup>21</sup> Research conducted in the wake of transit strikes shows that even small changes in commuting modes can greatly affect congestion.<sup>22</sup>

This estimate of the effects of the parking tax benefit accounts only for the potential employee response to changes in the tax treatment of subsidized workplace parking, not changes in employers’ willingness to provide free or subsidized parking to their workers. In most areas, municipal zoning codes require developers to provide parking; in those locations, employers are likely to supply free parking regardless of tax policy. However, in areas where parking supply is less than demand, the parking tax benefit may motivate employers to offer some sort of parking subsidy, because the tax exclusion allows employers to offer their workers more total compensation than would otherwise be the case. For example, an employee with a 33 percent marginal tax rate would need to earn \$1,330 in cash income to pay \$1,000 annually for parking if the value of employer-provided parking were subject to income tax. Employers also benefit from reduced payroll tax liability.

Some employers, therefore, might respond to changes in the parking tax benefit by charging their employees for parking they currently offer for free, or by ending programs that reimburse employees for parking expenses at nearby garages. For those workers, the elimination of the parking tax benefit would result not in the loss of a 32.7 percent discount on parking—as assumed here—but in their being required to bear costs of up to 100 percent of the market value of workplace parking.

Unsurprisingly, studies that examine the effects of charging commuters the full price of workplace parking, or allowing employees to exercise the option of “cashing out” free parking, show a far greater impact on commuting behaviors than is estimated here.<sup>23</sup> For example, a study of eight firms in the Los Angeles area that adopted parking cash-out payments found that the share of commuters driving alone to work fell by an average of 13 percentage points and the number of vehicle trips to work fell by 11 percent.<sup>24</sup>

It is unclear whether a change to the income tax treatment of employer-provided parking would lead employers to change their parking policies, but in the short term it would seem unlikely. Most employers who offer free parking to their employees have limited flexibility when it comes to increasing or decreasing the supply of parking in response to tax incentives. A 1994 study found that 47 percent of firms own the parking they provide to their employees, compared with 31 percent that lease parking, 2 percent that both own and lease parking, and 24 percent that neither lease nor own parking.<sup>25</sup> Because many of the decisions employers make regarding parking are made when the employer builds or leases a new facility (and because, as mentioned previously, all facilities in the same area may face the same government-mandated minimum parking requirements), it is unlikely that many firms would respond to a change in the tax treatment of commuter parking by shedding their employer-provided parking or charging employees for on-site parking, at least in the short run.

## The Parking Tax Benefit Costs More than \$7 Billion per Year

The commuter parking tax benefit is a form of government action called a *tax expenditure*. Tax expenditures (often known as “special tax breaks” or “targeted tax expenditures”) are typically designed to achieve a specific public policy purpose. In some cases, the government creates tax expenditures to encourage societally beneficial behavior—for example, the federal government allows individuals to deduct payments to charitable organizations from their taxable income as a tool to encourage such giving. In other cases, the government may use the tax code to spur the creation of a market for promising new technologies, such as renewable energy.

Commuter tax benefits reduce the amount of revenue received by federal and state governments, representing a de facto expenditure of public resources. The congressional Joint Committee on Taxation (JCT) and the Treasury Department produce annual forecasts of the cost of various tax expenditures to the federal budget. In 2012, the JCT estimated the cost of commuter tax benefits (parking and transit) at \$4.4 billion.<sup>26</sup> The Treasury Department estimated the combined cost of the parking and transit benefits to be approximately \$3.3 billion in 2013, and the cost of the parking benefit alone at \$2.6 billion.<sup>27</sup>

Neither agency’s estimates, however, represent a complete accounting of the costs to taxpayers. Neither the Treasury nor the JCT includes the value of unpriced parking provided on the employer’s premises in their estimates. In addition, neither agency accounts for lost payroll taxes or for the impact of commuter tax benefits on state income tax revenues.

Estimating the cost of the income tax exclusion for employer-provided parking requires a two-step process. First, the tax value of the free or subsidized parking provided to employees must be estimated. Second, that untaxed “income” must be translated into avoided tax payments.

The 1996 ACT study referenced above (page 10), while dated, represents perhaps the most thorough attempt to put a value on employer-provided parking. Researchers surveyed businesses in a variety of metropolitan areas, asking businesses to report the amount of parking provided to employees, the amount that employees were charged for use of the lots (if anything), and the rates of nearby commercial parking lots.<sup>28</sup> The results of the survey were then weighted to create a nationally representative view of workplace parking in the United States. The study concluded that the value of employer-provided parking (in 1996 dollars) was \$48 billion, of which \$35.8 billion was absorbed by employers, with employees paying the balance of the cost. The study further estimated that \$31.5 billion of the value of employer-provided parking was excluded from income taxation.<sup>29</sup>

The ACT study, however, veered from the IRS’s definition of “fair market value” in calculating the value of employer-paid parking. Parking spaces that had no fair market value for tax purposes were assigned a value by the researchers based on the employer’s cost of providing the parking. After removing the value of these spaces from the ACT study totals and adjusting for both inflation and the growth of the U.S. workforce since 1996, the estimated fair market value of tax-free parking falls to \$18.4 billion (in 2012 dollars). Assuming that those benefits would have been taxed at the average marginal federal income tax rate, the loss of federal income tax revenue resulting from both employer-paid parking

and employer-provided free parking would be approximately \$3.9 billion per year.<sup>30</sup>

The parking tax benefit’s impact on federal income tax revenue, however, is but the tip of the iceberg when it comes to its effects on the public purse. By excluding the value of parking from taxable compensation, employers and employees also avoid payment of Social Security and Medicare taxes on that income, and employees avoid payment of state income taxes. The amount of tax revenue lost due to the exclusion of parking from the calculation of income for these taxes is nearly as great as the loss in federal income tax revenue. All told, taxpayers subsidize commuter parking to the tune of approximately \$7.3 billion per year. (See Table 3 below.)

## COST OF PARKING AND TRANSIT BENEFITS (BILLIONS)

COST OF TAX EXPENDITURE	PARKING BENEFIT	TRANSIT BENEFIT	TOTAL
FEDERAL INCOME TAX	<b>\$3.9</b>	<b>\$0.7</b>	<b>\$4.7</b>
STATE INCOME TAX	<b>\$0.8</b>	<b>\$0.1</b>	<b>\$1.0</b>
PAYROLL TAXES (EMPLOYER)	<b>\$1.2</b>	<b>\$0.2</b>	<b>\$1.5</b>
PAYROLL TAXES (EMPLOYEE)	<b>\$1.2</b>	<b>\$0.2</b>	<b>\$1.5</b>
<b>TOTAL</b>	<b>\$7.3</b>	<b>\$1.3</b>	<b>\$8.6</b>

Note: Figures may not sum due to rounding.

TABLE 3

The parking tax benefit represents a significant expenditure of public resources on transportation. Tax expenditures such as the parking tax benefit drain the public purse by diverting revenue that could be spent on other priorities or used to reduce the deficit, or else they shift the tax burden for sustaining current programs to other taxpayers. The \$7.3 billion tax expenditure for commuter parking, for example, is equivalent to roughly 3.3 percent of the funds spent on highways by all levels of government in 2012. The federal income tax revenue lost as a result of the parking tax exclusion alone would have been enough to offset nearly two-thirds of the \$6.1 billion in federal general tax revenue infused into Highway Trust Fund in 2012.<sup>31</sup> Ending the income tax exclusion for commuter parking, in other words, would generate enough additional tax revenue from highway users to close most of the gap between Highway Trust Fund revenues and expenditures—without having to increase the tax burden on the broad mass of American taxpayers.

The amount spent on the parking tax benefit is also large in comparison with other transportation budget items:

- The parking tax benefit costs nearly three times as much in avoided federal income tax revenue (\$3.9 billion) as the federal government spends on annual subsidies to Amtrak (\$1.4 billion in fiscal year 2014).<sup>32</sup>
- It also costs nearly five times as much as the federal government spends to promote and assure highway safety through the National Highway Traffic Safety Administration (\$828 million in fiscal year 2014).<sup>33</sup>

As will be discussed below (see page 29), while the parking tax benefit represents a major investment of public funds in transportation, the impact of that expenditure has never been rigorously evaluated. More

devastatingly, the tax subsidy likely has the effect of undermining the nation's ability to achieve other important transportation policy goals, such as reducing congestion and pollution.

## Parking Tax Benefits Go Largely to Those Who Need Them the Least

Among workers likely to benefit from the tax exclusion for commuter parking, the size of the tax savings varies by workplace location and by income level. Parking costs vary dramatically across the nation's cities, with the median monthly cost of parking in central business districts ranging from \$55 per month in Phoenix and Bakersfield to \$313 per month in Philadelphia and \$562 per month in Midtown Manhattan.<sup>34</sup> In addition, because higher-income individuals face a higher marginal income tax rate, the tax savings resulting from excluding an additional dollar of their income from taxation is greater than it would be for a lower-income individual. Some low-income workers without federal income tax liability receive no benefit at all.

The following table illustrates the degree to which the value of the commuter parking tax benefit can vary dramatically by income and parking costs. Using the previously mentioned estimates of parking costs in Philadelphia and Phoenix and marginal tax rates for married couples filing jointly, a worker in a high-income (\$300,000 per year) household commuting to Center City Philadelphia will gain 10 times the tax benefit from an employer-paid parking space as a worker in a middle-income household (\$50,000 per year) commuting to downtown Phoenix. Conversely, a hypothetical worker in a low-income household in Philadelphia achieves a greater benefit from a downtown parking subsidy than

a high-income worker in Phoenix (even though he or she will still spend more on parking overall). (See Table 4.)

Many commuters in dense downtown areas also tend to be workers in higher-income professional fields. A 2014 report by the International Downtown Association states that jobs in central business districts and other employment hubs are frequently in fields such as business, financial services, real estate, energy, technology, education, research, and health care, as well as tourism and hospitality.<sup>36</sup>

## Conclusion

The income tax exclusion for commuter parking costs federal and state taxpayers more than \$7 billion, fuels traffic congestion by encouraging drive-alone commuting at

precisely the times and places that are liable to suffer most from congestion, and benefits only a small share of American workers, primarily those with high incomes who work in the downtown areas of major American cities.

Drivers may perceive the commuter parking tax benefit as a boon, but for most Americans who drive to work it is the opposite. Automobile commuters in areas with abundant unpriced parking endure higher taxes or reduced government services in order to subsidize parking in high-priced areas and are net *losers* under the current policy, as are many drivers in major metropolitan areas who must endure traffic congestion made worse by the commuter tax benefit.<sup>37</sup>

		Monthly Parking Cost	Tax-Free Amount	Marginal Federal Income Tax Rate	Annual Value of Benefit
<b>PHOENIX</b>	High household income (\$300K)	\$55	\$55	33%	\$218
	Middle household income (\$50K)	\$55	\$55	15%	\$99
	Low household income (\$17.5K)	\$55	\$55	10%	\$66
<b>PHILADELPHIA</b>	High household income (\$300K)	\$313	\$250	33%	\$990
	Middle household income (\$50K)	\$313	\$250	15%	\$450
	Low household income (\$17.5K)	\$313	\$250	10%	\$300

TABLE 4:  
VARIATION IN VALUE OF  
COMMUTER TAX BENEFIT  
FOR PARKING BY CITY AND  
HOUSEHOLD INCOME<sup>35</sup>

# The Transit Tax Benefit Only Partly Addresses the Problems Caused by the Parking Subsidy

Congress created the commuter tax benefit for transit in order to reduce congestion and pollution, as well as to address the inequity created by the subsidization of commuter parking through the tax code. During a 1998 debate over a provision that would allow federal employees to “cash out” their employer-provided free parking and use the money elsewhere, for example, Senator Daniel Patrick Moynihan of New York noted the existence of a “hidden pro-parking bias” in the tax code that he believed had likely resulted in “far too many employees choosing to drive to work over riding transit and other modes.”<sup>38</sup> This section examines the impact of the transit tax benefit relative to the parking benefit to determine whether it achieves its intended policy goals.

## The Transit Tax Subsidy Has a Limited Number of Beneficiaries

Just as the tax benefit for commuter parking reaches only a small share of those Americans who drive to work, so too does the transit benefit reach only a small share of transit users. Published estimates suggest that 2.7 million people receive the transit tax benefit, or about 2 percent of U.S. workers.<sup>39</sup> These commuters likely represent only a small fraction of the more than 29 million total transit trips taken on the average day across the United States.<sup>40</sup>

Individuals who take transit can access the tax savings only if their employers offer a transit benefit or pre-tax salary deferral

program. In New York, the city with America’s most extensive transit network, an estimated 1 million people who live and work within the city do not have access to transit benefits through their employers.<sup>41</sup> In addition, workers who do have access to transit benefits must be made aware of the benefits and take advantage of them. Self-employed individuals and independent contractors are not eligible for the full transit benefit at all.

The transit tax benefit is available to relatively few Americans and taken advantage of by even fewer. Approximately 12 percent of employers nationwide reported offering transit benefits to their employees in 2013, while only 6 percent of workers reported having access to subsidized transit benefits through the workplace in 2010.<sup>42</sup>

## Transit Subsidies Tend to Flow to Higher-Income People

Public transportation often provides an essential form of mobility to lower-income people. Nationwide, the annual median household income of transit users is 12 percent lower than the national median.<sup>44</sup> The greatest monetary savings from transit commuter benefits, however, likely flow to upper-income people, due to the structure of the tax benefit, the types of firms that tend to offer it to their

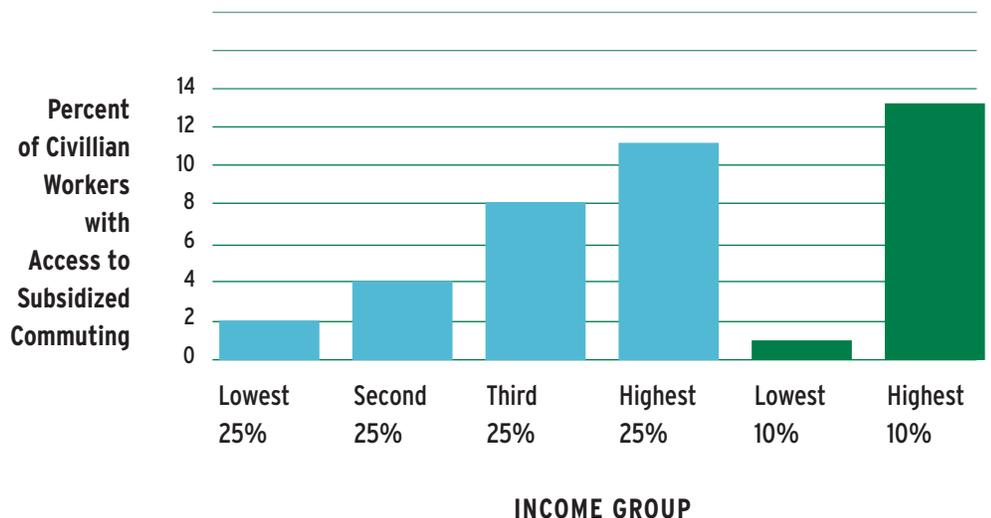
employees, and the types of transit services used by those workers.

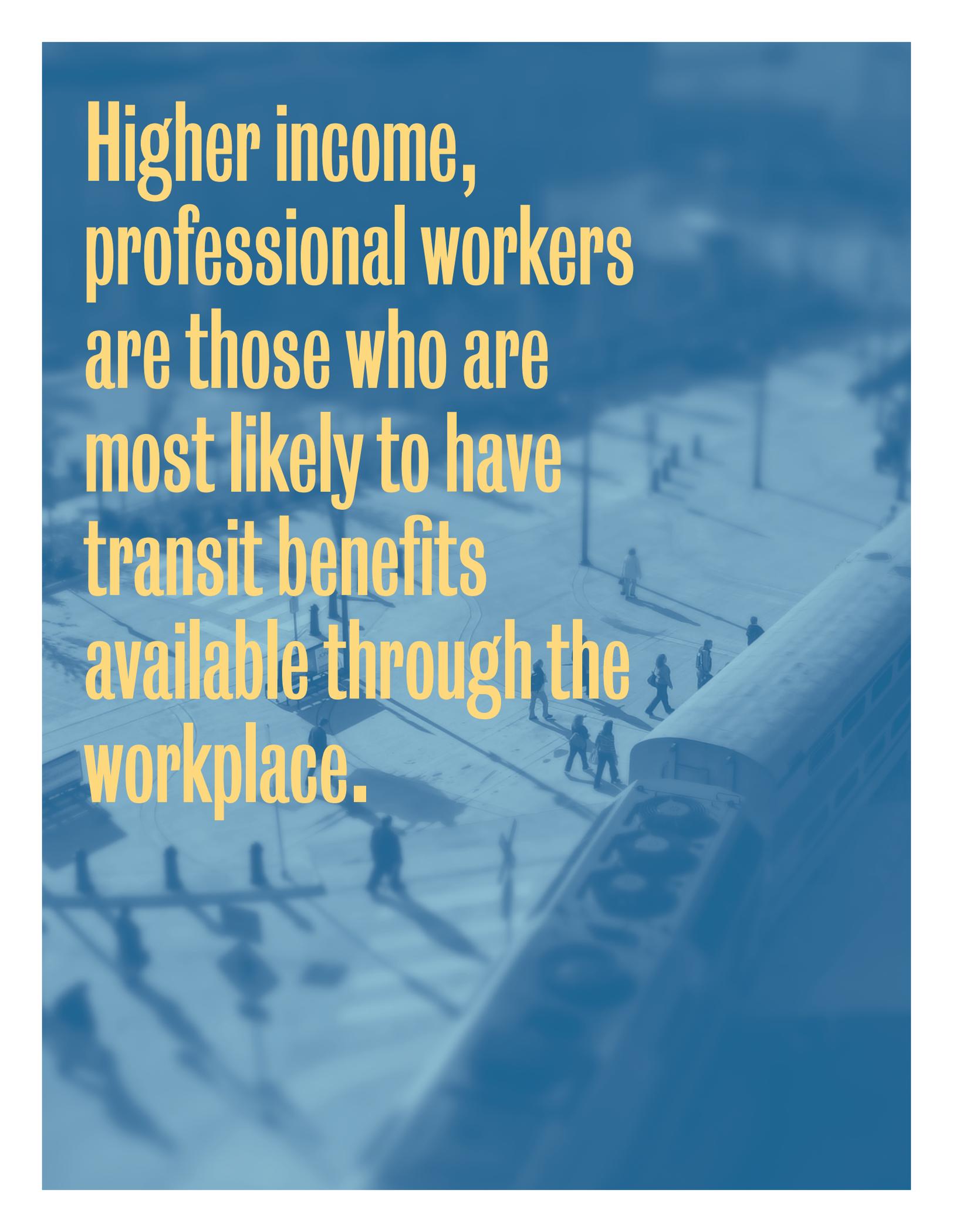
Higher income, professional workers are those who are most likely to have transit benefits available through the workplace, according to the Bureau of Labor Statistics.<sup>45</sup> Of workers in the top 10 percent of earners nationwide, 13 percent report having access to employer-subsidized transit benefits in the workplace, compared with just 1 percent of those in the bottom 10 percent of earners. (See Figure 1.)

TABLE 5:  
WHO BENEFITS  
FROM THE TRANSIT  
TAX SUBSIDY?<sup>43</sup>

	Workers whose employers do not offer the benefit	Workers who take the benefit and have low transit costs	Workers who take the benefit and have high transit costs
Tax benefit	No tax benefit	Limited tax benefit	Tax benefit approaching maximum (~\$520/yr. for typical earner)
How many affected	~90%	~2% of workers of workers	

FIGURE 1:  
PERCENT OF WORKERS  
WITH ACCESS  
TO SUBSIDIZED  
COMMUTING (TRANSIT  
BENEFITS) BY INCOME  
LEVEL (AVERAGE WAGE  
RANGE), MARCH 2010<sup>46</sup>



The background of the image is a blue-tinted aerial photograph of a city street. A train is visible on the right side, moving towards the bottom right. Several pedestrians are walking on the sidewalks. The overall scene is a busy urban environment.

**Higher income,  
professional workers  
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most likely to have  
transit benefits  
available through the  
workplace.**

TABLE 6:  
**WORKER TYPES WITH HIGHEST  
 LIKELIHOOD OF TRANSIT SUBSIDY  
 AVAILABILITY, MARCH 2010<sup>47</sup>**

Broken down by type of work, the top civilian sector with access to subsidized transit benefits is public administration, with 17 percent of workers having access. This may be attributable to the federal government, which provides pre-tax or subsidized transit benefits to all employees. Public administration is followed by workers at junior colleges, colleges, and universities; hospitals; and management, business, and financial workers. (See Table 6.)

Workers at very large businesses also are more likely to have access to subsidized transit benefits: 13 percent of workers at employers with 500 or more employees have access to transit benefits compared with only 2 percent of workers at small businesses (those with fewer than 50 employees).

At the regional level, workers in the Pacific region were most likely to have access to subsidized transit benefits through the workplace, with 12 percent having access. New England and the Mountain states were the next most likely to offer transit benefits. By contrast, only 2 percent of workers in the East South Central region (consisting of Kentucky, Tennessee, Alabama, and Mississippi) had access to transit benefits, along with only 3 percent in the West South Central region of Texas, Oklahoma, Louisiana, and Arkansas.<sup>48</sup>

Transit benefits are offered far more frequently in a few large, transit-oriented metropolitan areas. A 2010 TransitCenter survey of employers in San Francisco, Chicago, and New York found that 21 percent of companies offered a tax-free transit benefit.<sup>49</sup> Large and medium-sized employers were far more likely to offer transit benefits than small businesses, while those located within the cities' central business districts offered commuter benefits at nearly twice the rate of companies located outside downtown.

WORKER TYPE	PERCENTAGE OF WORKERS WITH TRANSIT BENEFITS
<b>PUBLIC ADMINISTRATION</b>	17%
<b>JUNIOR COLLEGE, COLLEGE, UNIVERSITY</b>	16%
<b>HOSPITALS</b>	14%
<b>MANAGEMENT, BUSINESS, FINANCIAL</b>	14%

Not only are higher-income individuals more likely to receive transit benefits through the workplace, but they also receive greater monetary savings from the subsidies than lower-income workers with identical commutes. As with the parking benefit (see page 16), two workers making identical commutes and paying identical costs for transit will receive different tax subsidies based on each worker's marginal tax rate, which is determined by his or her taxable income. A worker in the 15 percent federal marginal income tax bracket who pays for his or her transit with pre-tax income will receive a 13 percent savings on those costs, while a higher-income worker in the 35 percent bracket will receive a 26 percent discount.

Finally, those workers who have more expensive transit commutes (up to the limit of \$130/month) will gain more from the subsidy than those with less expensive commutes. Commuter rail, for example, tends to have higher fares than subway, light rail, or bus services, and serves distant (and often financially well-off) suburban areas. More than one-third of all commuter rail users nationally come from households with incomes over \$150,000.<sup>50</sup>

TABLE 7:  
**HYPOTHETICAL COMMUTES  
 IN FIVE CITIES<sup>53</sup>**

Metro Area	Rail System	Average Trip Distance (miles)	Initial Station	Terminus	Monthly Pass Cost	Monthly Downtown Parking Cost
New York City	NJ Transit	29	Edison, NJ	Penn Station, NYC	\$349	\$562
San Francisco	Caltrain	29	Menlo Park	San Francisco	\$179	\$375
Miami	Tri-Rail	29	Fort Lauderdale	Miami Central Station	\$100	\$125
Seattle	Souder	22	Kent	King Street Station, Seattle	\$126	\$285
Washington, D.C.	Virginia Railway Express	32	Manassas, VA	Union Station, D.C.	\$251	\$270

TABLE 8:  
**IMPACT OF PARKING AND TRANSIT TAX  
 BENEFITS ON FIVE HYPOTHETICAL COMMUTES  
 (CURRENT SUBSIDY LEVEL)**

Commute (Metro Area)	Change in Transit Commute Trips		Change in Vehicle Commute Trips	
	Transit benefit	Parking benefit	Parking benefit	Transit benefit
Edison, NJ, to Penn Station (New York City)	2.1%	-0.2%	0.9%	-0.5%
Menlo Park to San Francisco (San Francisco)	4.0%	-0.4%	1.3%	-0.9%
Ft. Lauderdale to Miami Central Station (Miami)	5.7%	-0.5%	2.0%	-1.3%
Kent to King Street Station (Seattle)	5.7%	-0.5%	1.7%	-1.3%
Manassas, VA, to Union Station (Washington, D.C.)	2.9%	-0.3%	1.8%	-0.6%

TABLE 9:  
**IMPACT OF PARKING AND TRANSIT TAX BENEFITS  
 ON FIVE HYPOTHETICAL COMMUTES (PARKING AND  
 TRANSIT BENEFITS CAPPED AT \$250/MONTH)**

Commute (Metro Area)	Change in Transit Commute Trips		Change in Vehicle Commute Trips	
	Transit benefit	Parking benefit	Parking benefit	Transit benefit
Edison, NJ, to Penn Station (New York City)	4.0%	-0.2%	0.9%	-0.9%
Menlo Park to San Francisco (San Francisco)	5.5%	-0.4%	1.3%	-1.2%
Ft. Lauderdale to Miami Central Station (Miami)	5.7%	-0.5%	2.0%	-1.3%
Kent to King Street Station (Seattle)	5.7%	-0.5%	1.7%	-1.3%
Manassas, VA, to Union Station (Washington, D.C.)	5.5%	-0.3%	1.8%	-1.2%

## Limited Benefit from Combined Transit and Parking Subsidies

A program that directs a smaller amount of subsidies to a smaller pool of recipients can logically be expected to have a more limited impact than a better-funded program that reaches more people. The impact of the combined transit and parking benefits is especially limited.

Assuming that the tax expenditure for the transit subsidy is approximately \$1.1 billion (a figure that does not include employer payroll tax savings) and that 2.7 million transit commuters benefit from the subsidy, the average annual benefit per recipient would be approximately \$400 per year, or \$33 per month. Using the same assumptions from the previous example, along with generic estimates of the elasticity of transit ridership with regard to price,<sup>51</sup> the transit tax benefit can be estimated to increase commuting via transit by 6 percent at workplaces that offer the benefit, adding approximately 142,000 transit commuters nationwide to buses and trains while removing about 82,000 car commuters from the highways.

The parking tax benefit, therefore, encourages more individuals to drive to work than the transit tax benefit discourages from doing so. In total, more than ten times as many Americans are touched in some way by the parking tax benefit than the transit benefit, and the total value of the tax exclusion for parking is more than five times as great.

To illustrate the choices facing commuters eligible to receive both benefits, we developed scenarios evaluating the effect of the subsidies on hypothetical commuter rail riders in five metropolitan areas: New York, San Francisco, Miami, Seattle, and Washington, D.C. For each city, we identified an example commute that

reflects the average distance traveled on the region's commuter rail system and retrieved information on the cost of a monthly pass for that trip. We also retrieved the average monthly cost of an unreserved parking space in the central business district of each city.<sup>52</sup> Parking costs at transit stations, which can also be paid for using tax-free benefits, were not factored into the analysis. (See Table 7.)

Using the same methods as for the general analysis on pages 12–13, we then estimated the current parking benefit's impact on commuting via car and the current transit benefit's impact on commuting via transit.<sup>54</sup>

The combination of the two policies—particularly at the current, reduced level of the transit subsidy—results in a significant boost in transit ridership, but also, in many cases, an increase in automobile commuting, particularly in cities such as Washington, D.C., with high transit costs and parking costs roughly equivalent to the maximum parking benefit. (See “Do Parking and Transit Tax Benefits Take Commuters from Other Modes?” on page 24.)

Reestablishing parity between the maximum benefits for parking and transit would change the dynamic for commuters in areas where transit costs are high. Current tax subsidies, for example, provide a slight incentive for a commuter from suburban New Jersey to drive to work in Manhattan, but the restoration of parity between the transit and parking benefits would nearly eliminate that incentive. For two of the hypothetical commutes – those in Seattle and Miami – reestablishing parity between the transit and parking benefit would have no effect because the cost of a commuter rail pass falls below the current cap of \$130/month. (See Table 9.)

## Do Transit and Parking Tax Benefits Take Commuters from Other Modes?

Driving and transit are not the only modes of travel that can be used to get to work. It is possible that, in addition to largely canceling one another out in certain large cities, parking and transit tax benefits may also reduce the use of other modes of travel, particularly carpooling.

Several of the major U.S. cities where transit benefits are most valuable have seen a significant drop in carpool usage in recent years. Between 2000 and 2011—a period during which the federal government moved to provide transit subsidies to all D.C.-area federal workers and the value of those subsidies increased with the arrival of parity with the parking benefit—the percentage of federal employees in the Washington, D.C., area carpooling to work declined from 18 percent to 10 percent, while the percentage using transit increased from 19 percent to 28 percent.<sup>55</sup> Drops in carpool use and increases in transit commuting were also noted for commuters working in San Francisco, Chicago, and New York City. (See Figure 2.)

Transit and parking subsidies could affect other modes as well. A 2010 TransitCenter survey found that 27 percent to 43 percent of businesses said that their employees might choose to telecommute more frequently if parity between the transit and parking benefits were allowed to expire and the value of the transit benefit were to fall.<sup>57</sup> Research suggests that employees who must pay to park at work and those with less access to transit work from home more frequently, suggesting that changes in the financial incentives and options available to workers can have an impact on telecommuting behavior.<sup>58</sup>

There are many other factors, including the increasing complexity of commutes, that have contributed to the long-term decline in carpooling in the United States. It is also worth noting that carpoolers derive at least a small benefit from the parking subsidy and that many employers have programs that encourage carpooling and telecommuting. Still, it is possible that the combined parking and transit subsidy has contributed to the decline in carpooling and has restrained the otherwise rapid growth of telecommuting in the United States.



Among downtown commuters able to receive both transit and parking benefits, therefore, these benefits largely cancel each other out, as they offer either a slight encouragement or discouragement to drive depending on the costs of parking and transit in a particular city and the maximum level of the transit benefit.

A study based on travel survey data from the Washington, D.C., area validates the finding that free parking and transit benefits, when provided simultaneously, tend to cancel each other out at best. The study found that providing benefits for transit, biking, or walking increased the use of those modes, but only in the absence of free parking. Workers with access to both free parking and transit/walk/bike benefits are *less likely* to take public transportation than those receiving no benefits at all. The authors concluded that “[t]his suggests that benefit combinations that include free car parking either overwhelm or render insignificant the positive effects of benefits for public transportation, walking, and cycling.”<sup>59</sup>

As with the earlier analysis of the parking tax benefit, these figures only reflect the worker response to the transit tax benefit (that is, the “discount” on transit passes provided directly through the tax subsidy), not employer programs that fully defray the cost of transit for their employees. Studies of the effects of employer-provided transit subsidies often show greater changes in commute mode share. A 2005 meta-analysis of workplace transit benefit programs, spanning 22 cities and data ranging from 1991 to 2004, shows that where employers offer transit benefits, “transit ridership generally increases 10 percent or more.”<sup>60</sup> The study also noted that ridership increases are greater when employers subsidize transit passes as opposed to having employees pay for them through a pre-tax salary deferral.

The context and exact shape of transit benefit programs have a significant impact on their success in encouraging would-be automobile commuters to use transit instead. Work sites in central business districts with strong transit services, employer-paid transit benefits, limited parking, and other workplace policies that support transit use tend to experience the greatest impact in terms of commuters’ transit choices, while those in remote suburbs with little transit and free parking experience little benefit from such programs. (See Figure 3.)

An equally important factor in assessing the impact of the transit tax benefit is its impact on employers’ willingness to offer transit subsidies through the workplace. A 2010 TransitCenter survey found that 17 to 31 percent of employers in Chicago, New York, and San Francisco might reconsider their decision to offer transit benefits if the cap on the amount of transit benefits excludable from taxable income were to decline to its pre-parity level (as actually occurred at the beginning of 2014).<sup>62</sup>

Studies of the tax treatment of other fringe benefits suggest that tax policy greatly affects whether employers offer certain benefits as well as the generosity of the benefits they offer, with offerings by small employers and to blue-collar workers particularly sensitive to changes in tax policy.<sup>63</sup> This research suggests that lowering the cap on tax-free transit benefits could reduce the degree to which these benefits are offered, affecting offerings to blue-collar workers and by small employers the most.

In short, broader, contextual factors—such as the form in which transit benefits are offered, the availability of quality public transportation and free parking nearby, and the degree to which employers respond to changes in tax policy by altering the generosity of the transit benefits they offer to their

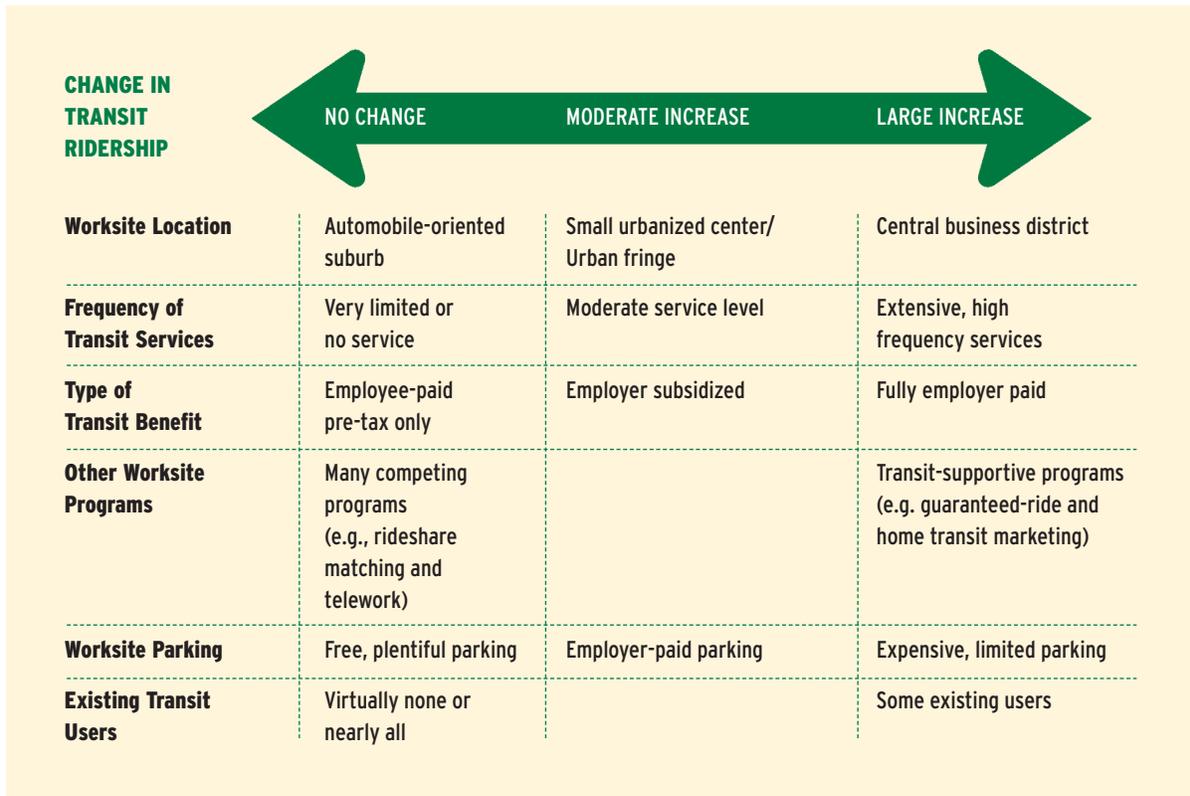


FIGURE 3: FACTORS OF SUCCESS FOR TRANSIT BENEFIT PROGRAMS<sup>61</sup>

employees—can all have a significant impact on the degree to which the transit benefit succeeds in encouraging commuters to leave their cars at home. By and large, however, the effect of the transit and parking benefits among commuters with access to both is largely for the benefits to cancel each other out.

By subsidizing both commuter parking and transit, the federal government spends billions of dollars for conflicting purposes. One tax expenditure subsidizes the use of privately owned vehicles for travel to and from work, while the other discourages the use of privately owned vehicles and instead encourages transit use.

## How Cost-Effective Is the Transit Benefit?

The transit tax benefit clearly helps many workers who would otherwise drive make the decision to take transit instead. The total cost of the transit benefit to the public treasury—including avoided federal income tax, payroll tax, and state income tax payments—is about one-fifth the amount spent on the parking benefit, approximately \$1.3 billion per year. But how much “bang” in the form of increased transit usage does the public receive for each “buck” invested in the form of transit tax benefits?

Tax expenditures such as commuting tax benefits are often inefficient tools for promoting changes in behavior. Because income tax exclusions are available to all taxpayers who undertake a particular activity—and are not targeted toward those most likely to change their behavior—they often wind up subsidizing behavior that would have occurred anyway.<sup>64</sup> In addition, many tax expenditures deliver greater benefits to higher-income individuals who face higher marginal tax rates. Lower-income individuals who do not make enough to have a federal income tax liability, on the other hand, gain no benefit from these provisions.<sup>65</sup> The behavior of higher-income individuals tends to be less sensitive to changes in price, meaning that greater incentives may be needed in order to bring about changes in behavior.<sup>66</sup>

There is strong evidence to suggest that much of the money spent on transit tax benefits flows to individuals who would have taken transit anyway without subsidy. A 2008 TransitCenter study found that 18 percent of participants in transit benefit programs converted from solo car commuting after joining the program.<sup>67</sup> Another TransitCenter study found that 41 percent of benefit recipients increased their use of transit on weekdays and 46 percent used transit more frequently on weekends.<sup>68</sup> While these data

indicate that the programs have a beneficial impact, they also suggest that most recipients of the benefits did *not* change their behavior upon entering the program. These pre-existing transit riders receive a subsidy—a fair outcome in the context of the historical and ongoing subsidization of automobile commuters—but not one that results in further changes in behavior.

The transit tax benefit may be a relatively inefficient way to encourage people to ride transit, but that does not mean it is a waste of money. Indeed, public transportation is an effective congestion-fighting tool in American cities. Research suggests that every percentage point reduction in vehicle travel produces twice as great a reduction in congestion.<sup>69</sup> A 2013 analysis of conditions in the Los Angeles metropolitan area estimated that the “congestion relief externality of a peak-hour transit passenger mile ranges from \$1.20 to \$4.10.”<sup>70</sup> Because many transit trips cover several miles, the congestion reduction benefits of a single new transit trip in Los Angeles or other similarly congested cities likely exceeds the cost of encouraging that trip through the transit tax benefit.

The transit tax benefit has the greatest potential impact on precisely these high-value trips: peak-period commute trips to densely packed centers of employment in cities that tend to experience crushing traffic congestion.<sup>71</sup> The paradoxical result is that the transit tax benefit—like most tax subsidies—may be a relatively inefficient tool for motivating changes in transportation behavior but still delivers a significant net positive value to society.

Free parking  
and transit benefits,  
when provided  
simultaneously,  
tend to cancel each  
other out.

## Conclusion

The transit tax benefit encourages many Americans to leave their cars at home and take transit to work—but not nearly as many as are encouraged to drive by the tax subsidy for commuter parking. Most Americans who take transit receive no tax savings from the transit tax benefit, either because their employers do not offer transit benefits programs, they do not know how to take advantage of those programs, or they use transit for purposes other than traveling to and from work. Those who receive the greatest tax savings from the transit benefit are not the low-income and working Americans who depend on transit the most, but rather higher-income Americans whose employers are more likely to offer transit benefits, who spend more on their transit commutes, and who save a greater share of every dollar spent on transit benefits due to their higher marginal income tax rates.

Among those Americans who are able to receive both subsidies, the effect of the parking and transit benefits is largely to cancel each other out, though the total effect of the two benefits can be either to encourage or discourage solo commuting depending on the specific costs of parking and transit in a particular city and for a particular commute. The expiration of parity between the parking and transit benefits in early 2014, however, has tilted the balance further toward encouragement of automobile commuting.

# The Federal Government Has Not Done Enough to Evaluate the Effects of Commuter Benefits

Commuter tax benefits for parking and transit cost taxpayers billions of dollars each year, yet the federal government has never conducted a thorough, comprehensive study of their impact on the transportation system.

Commuter tax benefits are not the only such tax breaks to avoid rigorous evaluation. Tax expenditures are often popular with policy makers because they are seen as a way to support popular causes without increasing direct government spending—in fact, political leaders can present the effort as a tax cut. Yet, because they are usually not subject to annual appropriations cycles, tax expenditures often escape serious scrutiny.

Tax expenditures are not always the most effective tools for achieving public policy goals. Only rigorous and regular evaluation and clear definition of the purposes of tax expenditures can assure that the billions of dollars of public funds spent on these tax breaks serve the public interest.

## Tax Expenditures Require Regular Evaluation

Tax expenditures often receive less thorough evaluation than programs resulting from the direct expenditure of public funds. Unlike direct expenditures, which must be reauthorized by lawmakers during each budget cycle, tax expenditures are often written to be permanent features of the tax code, with the potential to continue on for years or decades after they have outlived their usefulness.

Because tax expenditures often do not require reauthorization, government agencies rarely feel the need to justify their continued existence. Worse, agencies often fail to evaluate the degree to which a given tax expenditure helps or hinders their ability to achieve broader public-interest goals. Agencies that routinely subject budgeted government programs to rigorous evaluation often fail to undertake *any* formal evaluation of tax expenditures that are designed to achieve similar goals.<sup>72</sup>

## Best Practices for Tax Expenditures

The U.S. Government Accountability Office (GAO), other government agencies, and nonprofit organizations have proposed a series of best practices for tax expenditures.<sup>73</sup> Among those practices are the following:

### ESTABLISH PURPOSE

It is impossible to know whether a given tax expenditure is achieving its goals without a clear idea of what those goals are. When lawmakers enact a tax expenditure, they typically explain or discuss why they are taking that action. Often, a summary of the purpose can be found in the text of the law, with additional information to be found in

the records and journals of legislative proceedings.

As will be discussed below, there is little evidence from the *Congressional Record* or legislative language that the commuter parking benefit was enacted for any transportation policy purpose whatsoever. Instead, it appears that Congress acted primarily to avoid an increase in taxes for a particular class of people—automobile commuters benefiting from tax-free parking—who may have been perceived (erroneously, as discussed on page 16) to represent a broad cross-section of Americans.

### CALCULATE COST

Governments need to be able to establish the cost of a tax expenditure in order to ascertain whether the benefits of the policy are being realized in a cost-effective way. As the GAO has noted, estimating the cost of a tax expenditure can be difficult. The Joint Committee on Taxation, for example, notes that “[d]etermining fair market values for fringe benefits such as free or reduced price parking may be difficult in some places.”<sup>74</sup> Federal estimates of the cost of the current parking and transit tax benefits leave out important costs to the public (such as reduced payroll tax revenue and taxes avoided through the provision of unpriced parking by employers), and existing sources of data make it difficult to estimate the total cost with certainty. It is therefore imperative that government agencies collect the data necessary to track the costs of tax expenditures or support research that enables those costs to be estimated.

## DETERMINE BENEFITS

Assessing the public benefits achieved by a tax expenditure is necessary to determine whether the costs of a given provision are worth the forgone tax revenue. Governments should ideally enumerate specific, quantifiable targets for tax expenditures and evaluate the extent to which those targets are met, just as they should do for direct expenditures. In addition, agencies should identify secondary costs and benefits of the policy in order to capture its full effect on society and ensure that the benefits of the policy are not outweighed by unintended costs.

The effects of tax expenditures should be measured relative to the goals they were intended to achieve. Governments sometimes create tax expenditures that are intended to catalyze long-term changes in markets—for example, by accelerating the development of markets for solar energy or electric vehicles. Evaluating these tax expenditures based only on their short-term costs and benefits would fail to tell the story of whether those incentives are likely to achieve their intended purpose. Context-specific measures of effectiveness, therefore, are more appropriate than “one size fits all” measures of costs and benefits.

In addition to quantifying the benefits of tax expenditures, governments should determine *who* benefits. If the purpose of a tax expenditure is to encourage people to make societally beneficial decisions, it is critical to know whether the benefits are reaching the intended recipients in ways that encourage the desired change. Understanding the beneficiaries of tax expenditures can also shed light on the degree to which those provisions of the tax code support or undermine societal equity. This is especially important given the potential for certain tax expenditures to exclude those who do not itemize their taxes or face little to no income tax burden.

## CONSIDER ALTERNATIVES

Governments have many tools at their disposal to achieve public policy objectives. In assessing tax expenditures, it is not enough to determine that it delivers a net benefit to society. Governments should also determine whether other public policy initiatives might achieve greater results with a similar or smaller investment of resources.

Some tax expenditures may undercut the effectiveness of other programs in achieving important public policy goals. The tax benefits for commuter parking and transit use are a prime example of how tax expenditures can work at cross purposes, with government providing tax subsidies that simultaneously encourage and discourage driving to work. Simultaneously subsidizing two opposing behaviors is unlikely to be a cost-effective approach.

## OTHER CONSIDERATIONS

There are other possible aspects of tax expenditures to evaluate. For example, the GAO recommends considering how easy tax breaks are to administer, their simplicity and transparency, and other factors.<sup>75</sup>

The federal government has not done enough to evaluate the impact of commuter benefits. But with regard to the parking benefit, there is a fundamental problem that prevents good evaluation: the fact that Congress never articulated a purpose for the tax benefit to begin with.

## The Parking Tax Subsidy Has No Clear Transportation Policy Purpose

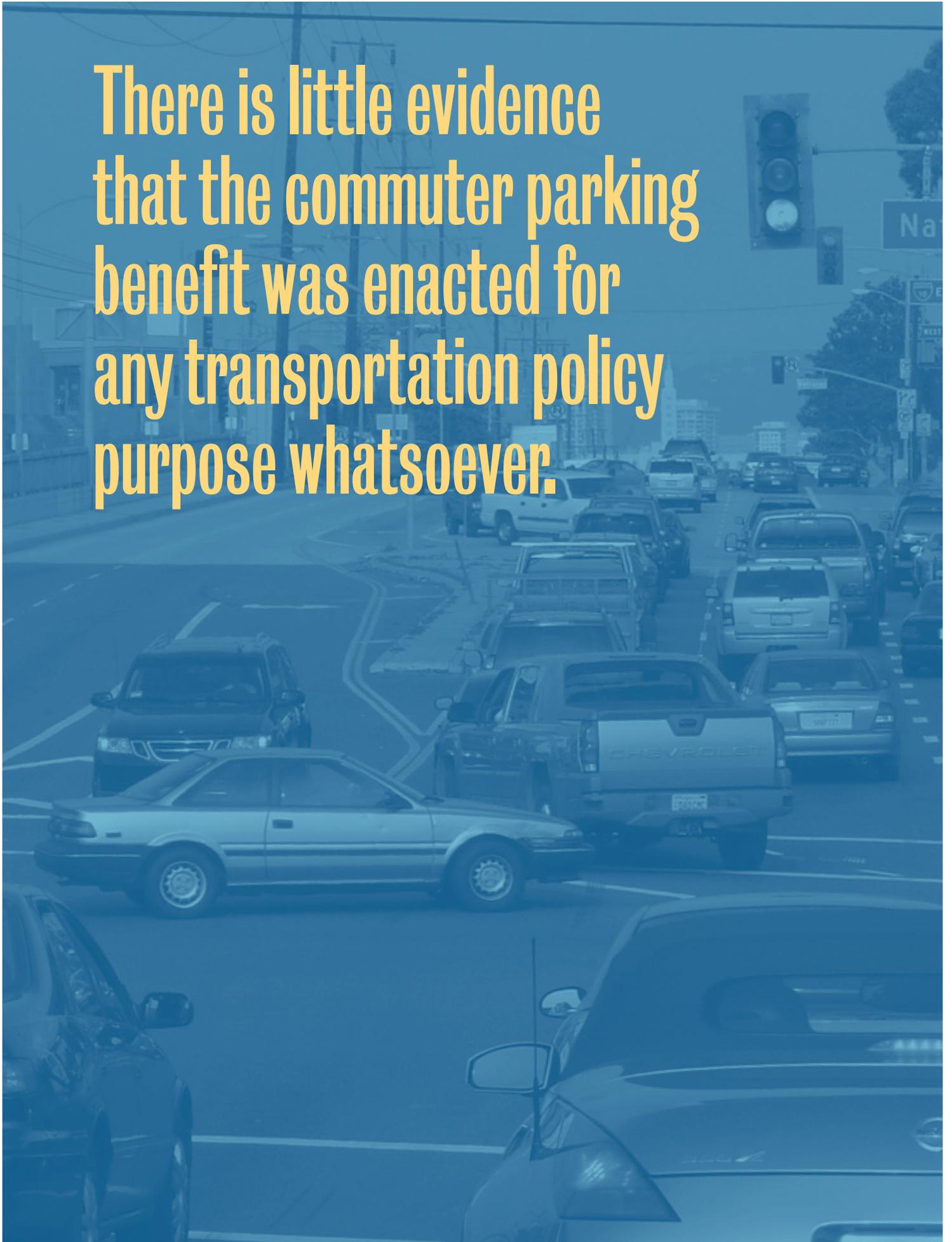
Congress has never articulated a clear transportation policy purpose for the commuter parking tax benefit. To the extent that members of Congress explained or justified the policy, it was based either on continuing historical practices, curtailing perceived Internal Revenue Service overreach, or the belief that continuing the tax-free treatment of employer-provided parking would avoid a tax increase on working Americans. (See Appendix B for more on the historical context behind commuter tax benefits.)

By contrast, members of Congress did indicate in debate over the transit benefit the value of using public transportation to reduce pollution and congestion. More recent policy statements have reinforced those goals. The U.S. Department of Transportation's 2012–2016 strategic plan, for example, includes several goals related to reducing the congestion and environmental impacts of driving in general and commuting in particular. For example, the agency set a goal to “increase the transit ‘market share’ among commuters to work in at least 10 of the top 50 urbanized areas by population, as compared to 2010 market share levels.”<sup>76</sup> The Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) law also requires the federal and state governments to set goals for congestion reduction and to measure progress toward those goals.<sup>77</sup>

America's continued, expensive subsidization of commuter parking not only serves no articulated transportation policy purpose, but it also actively undermines the often-articulated transportation policy goals of reducing congestion and pollution. While the transit tax benefit reduces some of the damage done by the parking benefit, it does not eliminate it, and the transit benefit itself suffers from many of the same policy design problems and lack of evaluation as does the parking tax benefit.

With the nation's Highway Trust Fund running on empty and America's highways continuing to suffer from congestion at peak commuting periods, the nation urgently needs to evaluate the impact of the parking and transit tax benefits and reform those tax incentives to create a system that encourages smart transportation decisions on the part of commuters while maximizing the efficiency with which public money is used.

There is little evidence  
that the commuter parking  
benefit was enacted for  
any transportation policy  
purpose whatsoever.



# Conclusions and Recommendations

The tax exclusions for commuter parking and transit are costly and work at cross purposes. The net effect of the two exclusions is to encourage commuting by automobile—an outcome contrary to the transportation policy goals of the federal government and many cities, states, and regions. They also reduce general tax revenues at a time when the federal Highway Trust Fund, which supports both highway and transit projects nationwide, struggles to remain solvent.

The transit tax benefit plays an important role in reducing the number of cars on the nation’s most congested roads in its most congested cities at the busiest times of day. Because small reductions in vehicle travel can result in large reductions in congestion, the transit tax benefit likely delivers benefits that justify its cost.

The transit tax benefit is not perfect, though. Tax breaks are often inefficient tools for changing behavior. The transit tax benefit is available only to a small share of transit commuters who work for employers—typically larger employers—that choose to offer transit benefit programs. Like the parking tax exclusion, the transit tax benefit likely offers the greatest monetary savings to higher-income people, raising equity concerns.

The nation’s commuter tax benefits also fail to reward travel choices such as carpooling, carsharing, and bikesharing that reduce vehicle commutes and/or improve the efficiency of the transportation system.

To address these deficiencies, policy makers should consider changes to the nation’s commuter tax policies.

## Making Free Parking Taxable

Several countries have taken steps to treat employer-provided parking at work as a form of compensation subject to taxation. The experiences of these countries provide ideas for how the United States can incorporate parking into taxable income while minimizing administrative burdens on employers, employees, and government.

### AUSTRALIA

Employer-provided parking is subject to a fringe benefits tax—levied on employers, not workers—if an employee parks his or her car for more than four hours at a lot owned or leased by the employer and if a nearby (within 0.6 mile) commercial parking lot exists that charges a daily rate exceeding a threshold currently set at approximately \$7.23 USD.<sup>78</sup> The value of the parking is determined based on the lowest fee available for commercial parking within the 0.6-mile radius, and the fringe benefit tax is incurred based on employees' daily usage of parking. Small businesses and certain nonprofit and educational institutions are exempt.<sup>79</sup>

### AUSTRIA

Employees who receive free parking from their employers have approximately \$20 per month added to their wages for tax purposes.<sup>80</sup> The requirement only applies in zones where on-street parking is restricted (“blue zones”), typically the central business districts of cities.<sup>81</sup>

### SWEDEN

Employers are required to report the value of free parking provided to employees on income tax forms as taxable income.<sup>82</sup> As of the late 2000s, compliance with the requirement was reported to be low.<sup>83</sup>

### CANADA

Employer-provided parking is considered taxable income in Canada, with some exceptions (for example, spaces provided for workers who must use their cars to conduct business during the work day). Valuation is based on the fair market value of the parking minus any employee contribution. Parking in locations that are shared by customers and workers, and “scramble parking,” in which the supply of free parking is lower than demand, are considered to have a tax value of zero.<sup>84</sup> Employers are also exempt from including the value of parking in taxable income if they cannot determine the value of the parking.<sup>85</sup> Enforcement of the law by Canadian tax authorities has historically been infrequent, but several large enforcement actions have taken place in recent years.<sup>86</sup>

# Policy Recommendations



## Eliminate the parking tax subsidy.

The federal government should consider eliminating the income tax exclusion for employer-provided and employer-paid parking—a policy that clearly works counter to the nation’s transportation policy goals, costs federal and state governments \$7.3 billion per year, contributes to congestion and air pollution, and is inequitably distributed.

To reduce the administrative burden for employers and workers, the United States could adopt clear rules on the valuation of free parking, akin to those in place in Austria and Australia (see “Making Free Parking Taxable: The International Experience”), making compliance straightforward and eliminating compliance burdens entirely for those employers in areas where parking has minimal market value. The Australian valuation approach, which assesses the value of parking by the day rather than the month, has particular value in that it provides a daily financial incentive for commuters to leave their cars at home as opposed to forcing workers to decide whether to drive to work a month at a time.

# 2.

## Improve the effectiveness of support for transit.

Many transit users currently receive no transit tax benefit, either because their employers do not have a workplace transit benefits program, they do not know about the program, or they use transit for purposes other than getting to and from work. Many workers employed by small businesses, which rarely offer the benefit, as well as independent contractors and the self-employed, who are unable to claim the full commuter tax benefit under IRS rules, are effectively excluded from the current program.<sup>87</sup> The changing nature of the workplace—in which workers are more mobile among companies, telecommuting is increasingly common, and offices are being downsized and redesigned along new lines—dictates that programs designed to encourage responsible commuting must evolve as well.

In addition, the current transit benefit program provides greater rewards for higher-income transit commuters than for middle-income or working-class users, a targeting of resources that is both inequitable and likely to be inefficient in terms of motivating changes in behavior.

To resolve these problems, the federal government should explore possible replacements for the current transit tax benefit—such as refundable tax credits for transit expenditures—that deliver financial support to a broader range of transit system users while making the system more equitable. Enabling taxpayers to claim a refundable tax credit for commuter transit expenses would

expand tax-savings access to workers at organizations that do not offer a transit benefit program and ensure that all taxpayers are eligible for a financial benefit of similar size, rather than providing higher subsidies for upper-income taxpayers.

The federal government could go even farther and follow the example of Canada, as well as the Commonwealth of Massachusetts, in enabling residents to claim a tax deduction or credit for the purchase of *all* transit passes, regardless of whether they are used for commuting. In 2006, Canada created the Public Transit Tax Credit, which enabled those purchasing transit passes to claim a nonrefundable tax credit that was (in that year) equivalent to 15 percent of the cost of the passes. An analysis of the early years of the tax credit found that:

- The credit was claimed by approximately 1.5 million tax filers each year, representing about 4.4 percent of all Canadians. By contrast, less than 1 percent of all Americans are estimated to receive transit tax benefits.<sup>88</sup>
- More than 57 percent of those claiming the credit were in the lowest income tax bracket. These taxpayers filed nearly half of all claims by dollar value.
- Middle-income tax filers were more likely to file claims under the provision than either lower- or higher-income filers.
- The cost of the program to the Canadian treasury in 2011 was projected to be approximately \$140 million (USD).<sup>89</sup>

# 3.

Switching to a Canadian-style tax credit would alleviate many (though not all) of the equity concerns raised by the current commuter tax benefit, since the size of the benefit would not be tied to a taxpayer's marginal tax rate. It would also allow self-employed people, independent contractors, and those who do not use transit for work purposes to receive tax benefits for transit use, and would eliminate the administrative burden of the current benefits program by replacing it with simple verification through the taxation agency. A Canadian-style tax credit—particularly if not made refundable—could still exclude many low-income households, since many low-income individuals do not itemize their taxes and many do not face a federal tax burden. Policy makers should explore the full implications of any shifts in the tax treatment of commuter transit expenses before enacting such changes and consider other options that would allow as many transit commuters as possible to take advantage of those benefits.

Policy makers should also consider other options for redirecting the funds currently spent on commuter transit benefits in ways that might deliver greater benefits, such as strategic reinvestment of the funds in improved transit operations or facilities.

## Improve and expand the current transit tax benefit.

Should Congress maintain the current framework of commuter tax benefits, it is essential that the transit benefit be expanded and improved in order to provide an effective counterweight to the parking benefit. Specifically, the government should:

- Increase the maximum value of the transit tax benefit. *At minimum*, parity should be restored between the transit and parking tax benefits—one congressional proposal would reestablish parity at \$220 per month, a level that is between the current parking and transit benefit caps. Ideally, the transit tax benefit should carry a higher maximum value than the parking benefit in order to make it a more effective incentive for transit use.
- Require employers that offer tax-free parking to their employees to also offer transit benefits or empower their workers to “cash out” the value of the subsidized parking they receive from their employers. In the absence of federal action, state and local governments can require, as the city of San Francisco has, that employers provide transit benefits to their employees, or provide tax credits or other incentives to employers that provide transit benefits at the workplace.
- Expand the scope of commuter tax benefits to include benefits for bikesharing and carsharing and to provide parallel benefits for workers who carpool. In recent years, there has been an explosion of new options

for shared mobility, including various models of carsharing and bikesharing. While classic “round-trip” carsharing of the type popularized in much of the country by Zipcar is rarely used as a commuting mode, newer “one-way” or “free-floating” carsharing systems can be used for commuting, as a car can be left in a designated or public parking spot different from that at which the vehicle was acquired. Similarly, the growing number of bikesharing networks in American cities allow for one-way commuting travel, both on their own and as a “first mile/last mile” connection to transit stations. Neither one-way carsharing nor bikesharing typically requires the use of parking located at the workplace, meaning that workers using those modes typically do not gain from the parking tax benefit. Nor can workers using bikesharing gain from the transit or bicycle commuting benefits, according to a 2013 IRS ruling that excluded bikeshare expenses from both programs.<sup>90</sup> The federal government should consider providing tax benefits for employer-provided carsharing and bikesharing equivalent to those provided for parking and transit.

Similarly, commuters who carpool to work may save money due to the parking benefit, but to a lesser degree on a per-person basis than those who drive to work alone. To even the playing field, the federal government could lift the cap on tax-free parking expenditures for those who can document regular participation in a carpool or allow for the exclusion from taxable income of expenses incurred in carpooling.

Finally, the federal government should revise the transit benefit program to allow for the unlimited combination of benefits within certain monetary limits. Currently, commuters can claim both the full parking benefit and the full transit benefit each month if they receive both benefits from their employer. The only exception is the bicycle commuting expense benefit, which cannot be used in combination with any other benefit. Commuting behaviors in many American cities are changing to incorporate more multimodal travel (e.g., a bikeshare ride to a transit station) and more situations in which commuters take different modes to work on different days. The federal government should allow for unlimited combinations of commuter benefits across modes, though for equity reasons the federal government may need to establish a per-person limit on the total amount of commuting expenses that can be paid from tax-free income. Transitioning to a multimodal benefit would enable an individual who uses bikesharing two days a week and transit three days a week to receive the same level of financial support for his or her commute as someone who drives to work five days a week.

# 4.

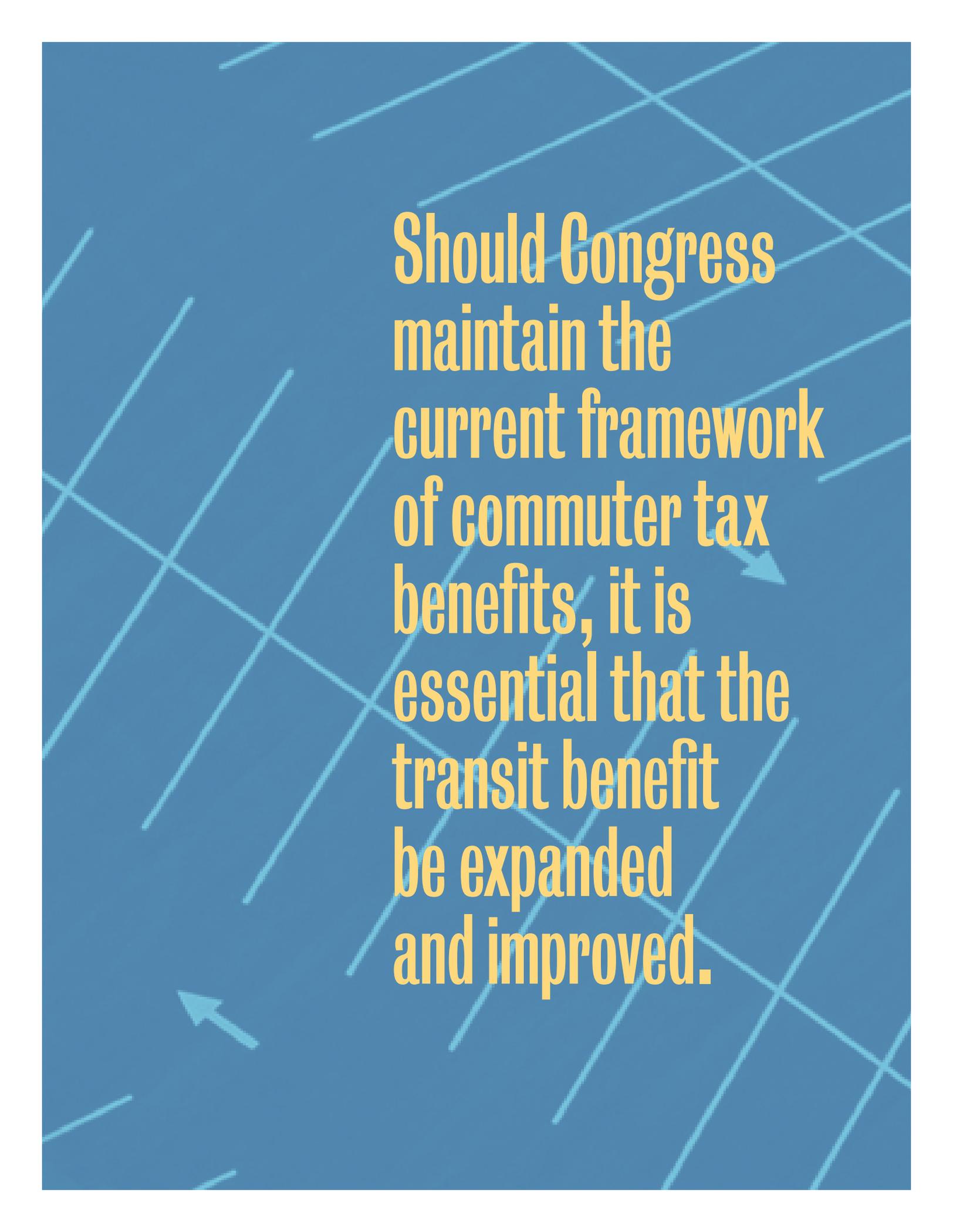
## Study and evaluate the impact of commuter tax incentives.

Commuter tax incentives are not the only tax expenditures that are difficult to evaluate for their effectiveness and impact. Federal and state governments have created countless tax incentives with no systems for collection of data about their costs or impact, no requirement for regular evaluation, and no need for periodic renewal. Given the importance of commuter tax benefits and particularly the negative effects of the parking tax benefit with regard to the nation's overall transportation goals, the federal government should fund efforts to collect and analyze data on the prevalence of free and subsidized parking, the effects of the parking and transit benefits on behavior, and the benefits or costs they impose on society. Employers who provide tax-free parking or transit benefits to their employees should be required to report that information so that the scope, cost, and impact of the benefits can be better understood.

# 5.

## Employ more appropriate and effective policy tools to reduce automobile commuting.

The tax code is not the only—nor necessarily the best—tool for encouraging the use of commuting options that reduce traffic congestion, conserve energy, and protect the environment. Workplace transportation-demand management programs use a variety of tools to help employers and their workers reduce the number of solo commutes to workplaces. In a few jurisdictions, most notably Washington State, employers of a certain size are required to implement programs to reduce automobile commuting, often benefiting from technical support provided by state and local agencies.<sup>91</sup> Similarly, transportation investment and policy decisions that put a greater share of jobs and residences within reach of transit can also serve the goal of reducing automobile commutes. Commuter tax benefits need to be considered as part of a broader suite of policies that shape individuals' and employers' decisions.



**Should Congress  
maintain the  
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# Methodology

## Estimating the Number of Beneficiaries of the Commuter Tax Benefits

A survey was conducted in the mid-1990s by Elrick & Lavidge for the Barents Group of KPMG Peat Marwick as a subcontractor to the Association for Commuter Transportation (ACT), which was working on a project for the U.S. Department of Transportation and the U.S. Environmental Protection Agency. The results of that survey (which we will henceforth call the “ACT Study”) have been used ever since by transportation researchers and analysts to estimate the value of employer-provided parking.<sup>92</sup>

To estimate the number of beneficiaries of the parking benefit, we used Table C of the Appendix to the study and divided the annual value of parking under the “reported tax value,” “amount charged,” and “nearby commercial rates” categories by the average annual cost of parking in each category to arrive at an estimate of the number of employee parking spaces with a non-zero value. The number of employee parking spaces with a market value of zero was estimated by dividing the annual value of parking in the “cost (zero value reported)” category by the annual cost of parking imputed by ACT for these spaces. The number of spaces with a non-zero value was divided by the total of zero-value and non-zero value spaces to arrive at the 37 percent estimate of the number of spaces with a non-zero value. Parking spaces for which ACT imputed a value due to a lack of response to the survey were excluded from this calculation. We assumed that the 37 percent figure was also representative of the share of automobile commuters (solo and in carpools) who had access to parking spaces of non-zero value at work and, therefore, multiplied the 37 percent figure by the number of U.S. workers who drive to work (from the U.S. Census Bureau’s 2012 American Community Survey, 1-year data) to arrive at the estimated number of workers who park at spaces with a market value.

To arrive at the total number of beneficiaries, we multiplied this figure by 94 percent, which is the share of workers assumed to receive parking benefits from their employers (as opposed to paying

for unreimbursed parking themselves). This figure was arrived at by multiplying the percentage of employers of various sizes offering parking benefits (from the ACT study) by the number of workers in firms of those size categories in 2011 (a number from the U.S. Census Bureau, *Statistics of U.S. Businesses: U.S. & states, totals*, an Excel file downloaded from [www.census.gov/econ/subs/](http://www.census.gov/econ/subs/) on June 25, 2014). The percentage of employers in the “5-25 employees” category in the ACT study was applied to the “5-20 employees” category in the Census Bureau data.

The number of recipients of transit tax credits was assumed to be 2.7 million, per *Commuter Benefits Work for Us* (2011), an online report prepared by Commuter Benefits Work for Us, a coalition of transit advocates.

## Estimating the Cost of the Commuter Tax Benefits

The \$73 billion cost of the parking tax benefit was estimated as follows:

### PARKING

The ACT Study concluded that the value of employer-provided parking (in 1996 dollars) was \$48 billion, of which \$35.8 billion was absorbed by employers, with employees paying the balance of the cost. The study further estimated that \$31.5 billion of the value of employer-provided parking was excluded from income taxation. Of the total value of employer-provided parking, however, \$16.6 billion represented the value of parking for which a zero tax value had been reported (but to which the researchers assigned a cost-based valuation), while an additional \$9.9 billion in value was imputed to firms that did not respond to the survey.

To align the value of tax-free parking in the ACT Study with the IRS definition of the market value of parking, we subtracted \$20.3 billion from the value of tax-free parking reported in the study, representing the \$16.6 billion of zero-tax-value parking plus a proportional share of the \$9.9 billion in imputed value believed to represent parking that had zero tax value. These calculations resulted in

an estimate of \$11.2 billion (in 1996 dollars) of tax-free employer-provided parking. We then applied adjustment factors for inflation (based on the Bureau of Labor Statistics's Consumer Price Index Calculator) and growth in civilian employment between 1996 and 2012 (again from the Bureau of Labor Statistics) to arrive at a 2012 estimate of \$18.4 billion in employer-provided, tax-free parking.

To estimate the cost of the parking tax benefit in forgone federal income tax revenue, we multiplied this figure by the average marginal federal income tax rate for wage income of 21.43 percent in 2012 (from the National Bureau of Economic Research, *Average Marginal US Tax Rates by Income Type*, accessed at [users.nber.org/~taxsim/marginal-tax-rates/](http://users.nber.org/~taxsim/marginal-tax-rates/) on May 20, 2014). Forgone state income tax revenue was calculated based on the average marginal state income tax rate for wage income from the same source. The estimated state income tax revenue impact is based on the assumptions that a) all states define taxable income for these purposes in the same way as does the federal government and b) that the benefits are evenly distributed across the states such that the national average marginal tax rate is representative of the rate faced by those benefiting from the parking tax exclusion. To the extent that states where parking benefits are most valuable have higher state income tax rates, this method may undercount the state income tax impact. Avoided federal payroll taxes were assumed to be 7.65 percent for both employers and employees based on Federal Insurance Contributions Act (FICA) rates for 2013. We assumed that 86 percent of income is subject to the Social Security portion of FICA, per the Social Security Administration (*The Evolution of Social Security's Taxable Maximum*, accessed at [www.ssa.gov/policy/docs/policybriefs/pb2011-02.html](http://www.ssa.gov/policy/docs/policybriefs/pb2011-02.html) on June 16, 2014).

## TRANSIT

The federal income tax savings created by the transit benefit was assumed to be \$710 million per U.S. Treasury Department data in the U.S. Office of Management and Budget's *Analytical Perspectives, Budget of the U.S. Government, Fiscal Year 2015* (March 4, 2014). These savings were divided by the

average marginal federal income tax rate (from the National Bureau of Economic Research) to arrive at an estimated value of tax-free transit benefits. This figure was then multiplied by the average marginal state income tax rate and the payroll tax rates, as described above, to arrive at a total cost of the transit benefit.

## Estimating the Effects of Commuter Tax Benefits on Transportation

In evaluating the impact of the parking benefit on automobile commuting and transit use, the number of workers who benefit from the parking benefit was estimated to be approximately 42 million, derived as previously described. We assumed that all U.S. transit commuters (7 million, based on the U.S. Census Bureau's American Community Survey 2012, 5-year data) travel to workplaces where parking would have a non-zero value and that 94 percent work in facilities that offer parking benefits. This assumption is based on the notion that transit is generally available only in areas with sufficient residential and commercial density to support it and that these locations also tend to be those where parking has a market value.

The number of workers receiving the transit benefit was estimated to be 2.7 million, using the sources previously described. The number of workers by Census division (from the 2009 National Household Travel Survey) was multiplied by the percentage of workers by Census division who reported having access to subsidized transit benefits (in the U.S. Bureau of Labor Statistics's 2010 National Compensation Survey) to arrive at the total number of commuters at workplaces where transit benefits are available. This figure was estimated to be 9.8 million. To determine the number of driving commuters at workplaces where transit benefits are used, we subtracted 2.7 million from 9.8 million and then multiplied the remaining value by 92.4 percent, which is the share of workers who either drive alone or carpool and live and work within the same metropolitan area as reported by the U.S. Census Bureau in *Commuting in the United States: 2009* (September 2011).

We applied generic estimates of elasticity of demand with respect to price to these estimates of the number of people receiving or eligible for each subsidy. For both the transit and parking benefits, we assumed that the combined tax benefit (federal + state + the employee share of payroll) would be represented as a discount to the putative cost of the parking or transit service, plus taxes. In other words, if the combined marginal tax rate was 32.7 percent, we assumed that the benefit would be translated into a 24.6 percent reduction in the cost of parking or transit (based on avoided taxes of 32.7 percent of the cost of parking or transit divided by the sum of the avoided taxes plus the cost of parking or transit -  $0.327 / (1 + 0.327) = 0.246$ ). In a few cities and for some transit commutes, the percentage “discount” represented by the tax subsidy will be lower than is assumed here, due to the fact that parking or transit costs exceed the maximum amount of the tax exclusion. The lack of available data about the distribution of commuter benefits across metropolitan areas, however, makes it impossible to determine the number of commuters whose employer-provided parking or transit benefits have values exceeding the statutory limit, and as a result, this factor could not be reflected in our analysis.

For the parking benefit, we used an estimate of the elasticity of commuter car trips with respect to parking price of -0.08 from Hague Consulting Group’s *TRACE Final Report* (June 30, 1999, Table 32) and a cross-elasticity of demand for public transportation trips with respect to parking price of +0.02 from the same source. Other models assume somewhat greater elasticity; the Trip Reduction Impacts of Mobility Management Strategies (TRIMMS) model developed by the Center for Urban Transportation Research at the University of South Florida estimates the elasticity of solo commuting trips with respect to parking price to be -0.158, which would result in roughly double the response to parking pricing changes compared with the value used in this report. (See Center for Urban Transportation Research, *TRIMMS User Manual v. 3.0*, undated.)

For the transit benefit, we used a value of -0.225 for the elasticity of transit ridership with regard

to transit fares for rush-hour commuters, which is in the mid-range of the short-term elasticity values presented by Todd Litman in the Victoria Transport Policy Institute’s *Transit Price Elasticities and Cross-Elasticities* (Table 15, April 3, 2014). The cross-elasticity of solo travel by automobile relative to transit fares is assumed to be +0.05, based on the Center for Urban Transportation Research’s *TRIMMS User Manual v. 3.0* (Table 3, undated, citing Litman). Both represent short-term elasticity values and should be considered very conservative.

For both the parking and transit benefit, the 24.6 percent “discount” was multiplied by the appropriate elasticity values to estimate the portion of current transit or automobile commuting trips that could be attributed to the tax benefits. This was done according to the formula:  $x = y - (y / (1 + z))$ , where  $x$  is the number of commuters using that mode due to the subsidy,  $y$  is the total number of commuters currently using the mode, and  $z$  is the percentage increase or decrease in use of the mode caused by the subsidy, derived as previously described.

# Appendix A

## Effects of Parking and Transit Benefits under Alternative Elasticity Assumptions

The estimated changes in commuter behavior resulting from the commuter tax benefits that are presented in this report are based on conservative assumptions about the degree to which changes in the price of parking and transit affect commuter mode choice. These conservative values were chosen for two reasons. First, commuting is relatively “inelastic” with respect to price, particularly in the short run—in other words, commuters tend to be “locked in” to their method of commuting to work and are not able to adjust their behavior quickly in response to changes in price. Second, the type of price change being evaluated in this report—a change in income tax liability resulting from the classification of certain commuting expenses as pre-tax income—is indirect and often barely perceptible to the recipient. It is safe to surmise that many Americans who receive valuable pre-tax parking from their employers for free are unaware that they are receiving a tax benefit at all. As a result, commuters may not be aware of how changes in their commuting behavior affect the tax savings they receive and, therefore, may be unable or unwilling to adjust their behavior in order to reap those savings.

As described earlier in the report (see pages 14 and 25), there have, however, been many cases in which changes in parking pricing and transit benefits have yielded shifts in commuter behavior well in excess of the changes estimated in this report. What would the results look like if we supposed that drivers and transit users were more sensitive to changes in price than the elasticity values used in this report assume?

To answer this question, we ran a sensitivity analysis using alternative elasticity values from transportation literature.

In evaluating the parking benefit, we used an elasticity value of  $-0.158$ , obtained from the TRIMMS model developed by the Center for Urban Transportation Research at the University of South Florida. This value reflects a near-doubling of the response to price changes compared with the value used elsewhere in this analysis ( $-0.08$ ). For the transit benefit, we used an elasticity value of  $-0.45$ , which is the mid-point of suggested values for short-term elasticity of transit use with respect to price for suburban commuters from Todd Litman of the Victoria Transport Policy Institute in *Transit Price Elasticities and Cross-Elasticities* (April 3, 2014). This is approximately double the response assumed in this report, which is based on the midpoint of values for peak-period travel presented in this same source.

Litman’s *Transit Price Elasticities and Cross-Elasticities* also suggests possible alternative values for cross-elasticities. For the purposes of this sensitivity analysis, we use a cross-elasticity value for transit use with respect to automobile operating costs of  $+0.1$  (compared with the  $+0.02$  value used in the main analysis) and a cross-elasticity estimate for automobile travel with respect to transit costs of  $+0.065$  (compared with the value of  $+0.05$  used in the main analysis).

The figures presented in Table A-1, as with those presented in the body of the report, represent only the response of employees to changes in the tax treatment of parking and transit use; they do

not reflect changes that employers might make to expand or contract access to parking or transit benefits following a change in the tax treatment of commuter expenses.

Elasticity of demand with respect to price varies depending on the specific circumstances at play. The lack of rigorous analysis of commuter tax benefits and accurate, up-to-date data about the number of workers who benefit renders any attempt to quantify the impact of the subsidies a rough estimate.

The results of this sensitivity analysis suggest that, under any plausible assumptions of elasticity, the current parking tax benefit puts many more cars on the road than the current transit benefit removes. Further, it shows that the contribution that the parking tax benefit makes to congestion in major American cities may be even greater than is estimated in this report. Table A-1 below compares the results of the sensitivity case with the main analysis.

	Parking Benefit Main Analysis	Sensitivity Case	Transit Benefit Main Analysis	Sensitivity Case
Change in automobile commute trips (thousand)	820	1,494	-82	-107
Change in transit commute trips (thousand)	-32	-165	142	270
Change in automobile VMT (million)	4,600	8,383	-459	-599
Percentage increase in auto commutes	2.0%	3.9%		
Percentage increase in transit commutes			5.5%	11.1%

TABLE A-1:  
EFFECT OF TRANSIT AND  
PARKING UNDER ALTERNATIVE  
ESTIMATES OF RESPONSE TO  
CHANGES IN PRICE

# Appendix B

## A Brief History of Commuter Tax Benefits

### THE IRS MOVES TO TAX FRINGE BENEFITS AND CONGRESS REACTS

Until the mid-1970s, employer-provided parking located at a workplace had not been considered taxable compensation.<sup>93</sup> On November 22, 1976, however, the Internal Revenue Service (IRS) issued Revenue Ruling 76-453, which drew on precedent established in a series of United States Tax Court rulings to propose the taxation of employer-provided transportation benefits of all types.<sup>94</sup> The IRS's move was a reaction to the rapid expansion in the number and value of employer-provided fringe benefits in the decades following World War II.<sup>95</sup> The IRS and, later, Congress grew concerned that, according to the Congressional Research Service, "without clear boundaries on the use of these fringe benefits, new approaches could emerge that would further erode the tax base and increase inequities among employees in different businesses and industries."<sup>96</sup>

Transportation benefits were a key element of the IRS ruling. "Where a taxpayer incurs transportation expenses in going between the taxpayer's residence and place of work," ruled the IRS, "such expenses are nondeductible commuting expenses, regardless of the nature of the work engaged in, the distance traveled, the mode of transportation used, or the degree of necessity."<sup>97</sup> One hypothetical example described the treatment of Employee E, who "drives to only one place of work and then returns home." In that situation, the IRS noted, "no deduction is allowable for the cost of such transportation, *including any parking costs incurred*" (emphasis added).

The IRS ruling for the first time raised the possibility that the value of employer-provided parking as a "fringe benefit," or job perk not delivered in the form of cash wages, would become subject to IRS taxation as employee income.

The ruling was originally to take effect December 31, 1976, but its effective date was postponed, and on September 23, 1977, its implementation suspended indefinitely.<sup>98</sup> In 1978, 1979, and 1981, Congress passed a series of

moratoriums effectively stalling the enforcement of the IRS's new interpretation of U.S. tax law.<sup>99</sup>

During congressional debates over the various moratorium bills, members of Congress expressed outrage over perceived IRS overreach, an urgent desire for congressional action to formalize treatment of fringe benefits, and concerns about the fairness of the tax system.

Senator Bob Dole of Kansas observed in 1978 that "there is a lack of uniform treatment of taxpayers who receive different types of benefits, even though the benefits may have approximately the same economic value"<sup>100</sup> Representative Robert Boland of Massachusetts concurred, stating that "[i]f we are to include fringe benefits in taxable income, let us at least adopt a uniform policy."<sup>101</sup>

Establishing a level playing field for all taxpayers was also a concern. Representative Garry Brown of Michigan noted that workers with negotiated contracts often received fringe benefits such as medical and legal services "without having them be treated as income, whereas the non-negotiated contract person, who has the same expenses, is unable to take them as deductions . . . I think there are gross inequities in this area."<sup>102</sup>

With regard to the exclusion for employer-provided parking, some members of Congress worried that including such commuter benefits in the definition of income would place a disproportionate burden on working Americans. "In my own area," said Representative William Cotter of Connecticut during debate on the 1978 moratorium, "every major company provides parking facilities for its workers and under the IRS proposal these individuals would have increased tax liability for this benefit which has never been taxed in the past."<sup>103</sup>

"[T]his practice on the part of the IRS," said Representative Barber Conable of New York, "is potentially a way of raising substantial additional taxes, not at the expense of the wealthy, but at the expense of the working class American."<sup>104</sup> "Consider the value of an employer-furnished parking space," he continued. "Percentage wise it

does not add much to a high-paid administrator's wage. It may add 10 percent to the wage of a janitor. . . . The effect of what the IRS has been trying to do is to increase by greater measure the taxable income of working Americans rather than that of the very wealthy."<sup>105</sup>

Not all members of Congress agreed that the IRS's efforts to limit tax-free fringe benefits disproportionately affected working Americans. "Too often," argued Representative Glenn Anderson of California, "special interests are the beneficiaries of special privileges in our tax codes . . . I would doubt that too many people trying to get by on \$4 an hour benefit from extraordinary fringe benefit packages."<sup>106</sup>

There was little to no discussion in these congressional debates about the relevance of the tax treatment of employer-provided commuter benefits to the transportation system.

## CONGRESS ESTABLISHES THE RULES, GIVES PARKING SPECIAL TREATMENT

In 1984, Congress adopted the Deficit Reduction Act, which codified and preserved the tax exemption for employer-provided parking.<sup>107</sup> Under the act, Congress excluded the value of employer-provided parking from the calculation of taxable income. In the wake of that act,<sup>108</sup> the IRS ruled that employers could provide tax-free transit benefits not exceeding \$15 per month.<sup>109</sup> The transit exclusion was justified as a *de minimis*—that is, too small to be counted—fringe benefit.<sup>110</sup>

In debate over the bill, transportation policy concerns again took a distant backseat to concerns about maintaining existing practices while establishing simplicity and fairness in the tax code. "The inequities, confusion, and administrative difficulties for businesses, employees, and the IRS resulting from this situation," warned the House Ways and Means Committee report on the bill, "have increased substantially in recent years."<sup>111</sup>

While the congressional rhetoric surrounding the 1984 Act centered on consistency, employer-provided parking was singled out for special treatment.

First, employer-provided parking was specially categorized as a "working condition fringe benefit." Generally, to be classified as a working condition fringe benefit, an employer-provided benefit would have to have qualified as a deductible business expense *had the employee purchased the item or service him- or herself*. Employer-provided and employer-paid parking would not have met this condition, as employees must generally pay taxes on income used to pay the costs of getting to and from work, including parking. However, the 1984 Act specifically identified employer-provided parking as a working condition fringe benefit, enabling those expenses to be excluded from the calculation of taxable income.<sup>112</sup>

Second, as a working condition fringe benefit, parking was not subject to the nondiscrimination principle that typically applies to fringe benefits. Under nondiscrimination rules, tax-exempt fringe benefits cannot be given exclusively to a certain set of highly-paid employees and still remain tax exempt. “Most fringe benefits,” explained the Ways and Means Committee, “may be made available tax-free to officers, owners, or highly compensated employees *only if* the benefits are also provided on substantially equal terms to other employees” (emphasis added). This rule does not apply, however, to working condition fringe benefits.<sup>113</sup> In other words, employers may opt to provide free or reimbursed parking or transit benefits *only* to certain classes of employees, such as executives, and still have that compensation remain exempt from taxation.<sup>114</sup>

## REVISIONS SWEETEN THE POT FOR TRANSIT COMMUTERS

Since that initial Act, there have been a few modifications to the commuter tax benefits. Several of these changes have increased benefits for transit users in order to create parity between the benefits provided to employees who drive to work and those who use other means of travel.

In July 1991, IRS regulations increased the income tax exclusion for transit benefits to \$21 a month.<sup>115</sup> The Energy Policy Act of 1992<sup>116</sup> created a class of benefits called “qualified transportation fringe benefits.” The act capped the value of parking excluded from taxable income at \$150 per month and raised the transit exclusion to \$60 per month starting January 1, 1993,<sup>117</sup> “to encourage mass commuting, which would in turn reduce traffic congestion and pollution.”<sup>118</sup> Both exclusions were to adjust with inflation.<sup>119</sup>

The Emergency Economic Stabilization Act of 2008<sup>120</sup> added an exclusion for a monthly bicycle commuting reimbursement of \$20 tax-free; this is not adjusted for inflation. An employee who elects this benefit for a given month is not eligible for parking or transit benefits in that month.

The American Recovery and Reinvestment Act of 2009<sup>121</sup> raised the limit on excludable transit benefits to parity with the parking benefit limit, which was at that time \$230 per month, for a period designated to last from March 2009 to January 1, 2011.<sup>122</sup>

The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010<sup>123</sup> extended transit-parking parity for an additional year.

The American Taxpayer Relief Act of 2012<sup>124</sup> extended the parity for another two years, starting on December 31, 2011.<sup>125</sup> Parity expired December 31, 2013,<sup>126</sup> causing the transit benefit cap to drop back to \$130 per month, while the parking benefit cap increased to \$250 as a result of a scheduled adjustment for inflation.<sup>127</sup>

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**RESERVED**



# Notes

1. U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2012*, Table HF-10, March 2014.
2. In areas where parking has a market value, it is important to treat “free” workplace parking as a form of compensation in order to ensure that all forms of employer-provided parking subsidies are treated equally. This is important both as a matter of basic fairness and to prevent the creation of perverse incentives within the tax system. There is little practical difference, for example, between an employer who leases parking spaces at a nearby lot and provides them to employees for free and one who reimburses employees for the cost of parking at the same lot. In order for employees in both situations to be treated equitably, either both forms of parking must be treated as compensation or neither. Currently, the tax exclusion for employer-paid and employer-provided parking ensures that neither is treated as compensation (within certain limits).
3. U.S. Public Law 102-486.
4. U.S. Government Accountability Office, *Mass Transit: Federal Participation in Transit Benefit Programs*, GAO/RCED-93-163, September 1993, 3.
5. Congressional Research Service, *Tax Expenditures: Compendium of Background Material on Individual Provisions*, S. Prt. 111-58, prepared for the Committee on the Budget, U.S. Senate, December 2010, 555.
6. See note 3.
7. Internal Revenue Service, *Employer’s Tax Guide to Fringe Benefits for Use in 2014*, Publication 15-B, December 4, 2013.
8. Employers are permitted to offer up to \$20 per month in tax-free benefits to defray legitimate costs of bicycle commuting. The bicycle commuting benefit is more limited than the other commuter benefits in that the benefit must be paid for by the employer; employees are not permitted to set aside pre-tax income for the purpose. In addition, unlike the parking and transit benefits, the bicycle commuting benefit cannot be combined with any other commuter benefit in the same month. Source: The League of American Bicyclists, “Bicycle Commuter Benefit,” [bikeleague.org/content/bicycle-commuter-benefit](http://bikeleague.org/content/bicycle-commuter-benefit) (accessed June 25, 2014).
9. These categories are not mutually exclusive. Society for Human Resource Management, *2013 Employee Benefits: An Overview of Employee Benefits Offerings in the U.S.*, June 2013.
10. National Parking Association, *Parking in America: The National Parking Association’s First Annual Review of Parking Rates in the United States and Canada, 2008*.
11. Internal Revenue Service, *Employer’s Tax Guide to Fringe Benefits for Use in 2014*, Publication 15-B, December 4, 2013.
12. Association for Commuter Transportation, for U.S. Department of Transportation and U.S. Environmental Protection Agency, *Commuter Choice Initiative*, June 1996. This estimate was derived using data presented in Table C of the Appendix to the report and was obtained by dividing the annual value of parking valued under the “reported tax value,” “amount charged,” and “nearby commercial rates” categories by the average annual cost of parking in each category to arrive at an estimate of the number of employee parking spaces with a non-zero value. The number of employee parking spaces with a market value of zero was estimated by dividing the annual value of parking in the “cost (zero value reported)” category by the annual cost of parking imputed by ACT for these spaces. The number of spaces with a non-zero value was divided by the total of zero-value and non-zero value spaces to arrive at the 37 percent estimate of the number of spaces with a non-zero value. Parking spaces for which ACT imputed a value due to a lack of response to the survey were excluded from this calculation.
13. 94 percent is based on multiplying the percentage of employers of various sizes offering parking benefits (from the ACT study) by the number of workers in firms of those size categories in 2011 from the U.S. Census Bureau’s “Statistics of U.S. Businesses: U.S. & States, Totals,” [www.census.gov/econ/sub/](http://www.census.gov/econ/sub/) (accessed June 25, 2014). The percentage of employers in the “5-25 employees” category in the ACT study was applied to the “5-20 employees” category in the Census Bureau data. Note that some commuters are able to receive tax-free parking at locations *other than* the workplace—specifically, at park-and-ride lots used to access transit. Indeed, many of these commuters would show up as *transit* commuters in Census data, as they use transit for the majority of the length of their trip. The number of workers who claim pre-tax parking benefit for transit park-and-ride use is unknown, but, to the extent that the number is significant, excluding these commuters will reduce the number of beneficiaries of the parking benefit described here.
14. According to Shoup and Breinholt, analyzing data from the 1990 National Personal Transportation Survey, the proportion of upper-income Americans who report parking for free at work was lower than that of other income groups, though still high (89 percent). The authors hypothesized that this may have been the result of upper-income workers being more likely to work in central cities where employers charge for parking or being more willing to drive to work, regardless of parking costs. Donald Shoup and Mary Jane Breinholt, University of California Transportation Center, *Employer-Paid Parking: A Nationwide Survey of Employers’ Parking Subsidy Policies*, 1997.
15. Paul R. Levy and Lauren M. Gilchrist, Center City District, *Downtown Rebirth: Documenting the Live-Work Dynamic in 21<sup>st</sup> Century American Cities*, prepared for the International Downtown Association, 2013.
16. “Typical earner” = worker paying marginal tax rate of 32.7% (federal income + payroll + state income tax). See Methodology.
17. Generic estimates of transportation elasticities are useful for evaluation of transportation-policy options but are often developed using research conducted under conditions that differ from the specific policy case being studied. Moreover, the way in which changes in price are experienced by consumers

(e.g., as an up-front fee that must be paid in cash versus as a difficult-to-discern increase in a commuter's tax bill resulting from an increase in reported taxable income) can affect the degree to which consumers respond to those price changes with changes in behavior.

18. Todd Litman, Victoria Transport Policy Institute, *Understanding Transport Demand and Elasticities: How Prices and Other Behaviors Affect Travel Behavior*, March 12, 2013.

19. In this report, we use an estimate of the elasticity of commuter car trips with respect to parking price of -0.08 from Hague Consulting Group's *TRACE Final Report* (June 30, 1999, Table 32) and a cross-elasticity of demand for public transportation trips with respect to parking price of +0.02 from the same source. Other models assume somewhat greater elasticity; the TRIMMS model developed by the Center for Urban Transportation Research at the University of South Florida assumes the elasticity of solo commuting trips with respect to parking price of -0.158, which would result in roughly twice the response to parking pricing changes as the value used in this report (see Center for Urban Transportation Research, *TRIMMS User Manual v. 3.0*, undated). See Methodology for more details and discussion and Appendix A for a sensitivity case based on alternative assumptions of transportation elasticities.

20. Total vehicle miles traveled (VMT): U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2012*, Table VM-2, March 2014. A previous study from the mid-1990s estimated that regional VMT in four California urban regions would decline by 0.8 to 2.7 percent—and weekday vehicle trips by 1 to 3 percent—as a result of workplace parking charges of \$1 to \$3 per day. Source: Elizabeth Deakin and Greig Harvey, *Transportation Pricing Strategies for California: An Assessment of Congestion, Emissions, Energy and Equity Impacts*, prepared for the California Air Resources Board, November 1996.

21. Elizabeth Deakin and Greig Harvey, *Transportation Pricing Strategies for California: An Assessment of Congestion, Emissions, Energy and Equity Impacts*, prepared for the California Air Resources Board, November 1996.

22. See, for example, Shih-Che Lo and Randolph W. Hall, "Effects of the Los Angeles Transit Strike on Highway Congestion," *Transportation Research A*, 40(10): 903–917, December 2006; Michael L. Anderson, "Subways, Strikes, and Slowdowns: The Impacts of Public Transit on Traffic Congestion," Working Paper No. 18757 (National Bureau of Economic Research, 2013).

23. See, for example, Donald Shoup, *Parking Cash Out*, APA Planning Advisory Service, 2005.

24. Ibid.

25. Donald Shoup and Mary Jane Breinholt, University of California Transportation Center, *Employer-Paid Parking: A Nationwide Survey of Employers' Parking Subsidy Policies*, 1997.

26. Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2012–2017*, JCS 1–13, February 1, 2013, 13 and 18.

27. U.S. Office of Management and Budget, *Analytical Perspectives, Budget of the U.S. Government, Fiscal Year 2015*, March 4, 2014.

28. Association for Commuter Transportation, for U.S. Department of Transportation and U.S. Environmental Protection Agency, *Commuter Choice Initiative*, June 1996.

29. See Methodology.

30. Note that the exclusion of employer-paid commuter parking from the definition of taxable income likely results in a small number of taxpayers falling to a lower marginal income tax bracket than they otherwise would. Given the small size of the parking tax benefit, there are likely few taxpayers who would be so affected, meaning that the use of the average marginal tax rate remains appropriate.

31. The \$3.9 billion figure used in this calculation excludes payroll tax revenue losses and lost state income tax revenue. U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2012*, Table HF-10, March 2014. In recent years, the federal Highway Trust Fund—which supports both highway and public transportation projects across the United States—has been under increasingly severe strain as inflation, improved vehicle fuel economy, and reductions in driving have reduced the value of proceeds from the federal gas tax, which is its main source of funding. Congress has repeatedly relied on transfers from the general fund to keep the Highway Trust Fund afloat.

32. Amtrak budget figure from National Railroad Passenger Corporation (Amtrak), *FY 2014 Budget and Business Plan, FY 2015 Budget Request Justification and FY 2014–2018 Five Year Financial Plan*, April 2014.

33. National Highway Traffic Safety Administration, *Fiscal Year 2014 Budget Overview*, undated.

34. James Cook and Jeff Simonson, Colliers International, *North America Central Business District 2012 Parking Rate Survey*, 2012.

35. Parking costs: Ibid. Marginal tax rates and brackets for 2014 from Tax Foundation, *The 2014 Tax Brackets*, taxfoundation.org/article/2014-tax-brackets (accessed May 21, 2014). Benefits include only the federal income tax benefit.

36. Paul R. Levy and Lauren M. Gilchrist, Center City District, *Downtown Rebirth: Documenting the Live-Work Dynamic in 21<sup>st</sup> Century American Cities*, prepared for the International Downtown Association, 2013.

37. This is not to say that these commuters do not benefit from other policies or subsidies that shift the cost of parking from employees to employers or the public at large.

38. Senator Daniel Patrick Moynihan (NY), "S. 2575," *Congressional Record* 144:17 (October 7, 1998) p. 23986.

39. Commuter Benefits Work for Us, *2011 Commuter Benefits Work for Us*, 2011; total number of U.S. workers from U.S. Census Bureau, American Community Survey, 1-year data for 2012, Table B08301: Means of Transportation to Work, www.census.gov (accessed on September 11, 2014).

40. American Public Transportation Association, *Public Transportation Ridership Report: Fourth Quarter 2013*, February 26, 2014. The 29 million figure represents an annual ridership of 10.7 billion trips divided by 365 days.
41. Benjamin Lowe, Riders Alliance, *Affordable Transit, Affordable New York: Guaranteeing the Transit Tax Break for Employees and Businesses*, April 27, 2014.
42. Society for Human Resources Management, *2013 Employee Benefits: An Overview of Employee Benefits Offerings in the U.S.*, 2013.
43. “Typical earner” = worker paying marginal tax rate of 32.7% (federal income + payroll + state income tax). See Methodology.
44. American Public Transportation Association, *A Profile of Public Transportation Passenger Demographics and Travel Characteristics Reported in On-Board Surveys*, May 2007.
45. U.S. Bureau of Labor Statistics, *National Compensation Survey*, March 2010, Table 38. Note: the BLS survey uses the term “subsidized commuting.” The instructions for conducting the survey define subsidized commuting as essentially equivalent to the transit benefit: “Subsidized commuting provides full or partial payment for the cost of an employee’s commute to work via public transportation, company sponsored van pool, discount subway fares, or bus tokens. Use of a company car does not qualify as subsidized commuting.” (Definition provided by the BLS, personal communication, February 26, 2014.)
46. Ibid.
47. Ibid.
48. Ibid.
49. TransitCenter, *2010 Commuter Benefit Impact Survey*, 2011.
50. American Association of State Highway and Transportation Officials, *Commuting in America 2013: The National Report on Commuting Patterns and Trends, Brief 10, Commuting Mode Choice*, October 2013.
51. We used a value of -0.225 for the elasticity of transit ridership with regard to transit fares for peak commuters in the mid-range of the short-term elasticity values in Todd Litman, Victoria Transport Policy Institute, *Transit Price Elasticities and Cross-Elasticities*, Table 15, April 3, 2014. The cross-elasticity of solo travel by automobile relative to transit fares is assumed to be +0.05, based on Center for Urban Transportation Research, *TRIMMS User Manual v. 3.0*, Table 3, undated, citing Litman. Both represent short-term elasticity values and should be considered very conservative. Litman, for example, suggests a value for short-term elasticity of transit ridership for suburban commutes with regard to transit price of -0.3 to -0.6.
52. Average commute length estimated by dividing commuter rail passenger miles by number of passengers for each rail system from U.S. Department of Transportation, Federal Transit Authority, National Transit Database, Transit Profiles for each agency for reporting year 2012, [www.ntdprogram.gov/ntdprogram/profiles.htm](http://www.ntdprogram.gov/ntdprogram/profiles.htm) (accessed April 2014). Example commuter rail trips were identified by consulting agency web sites for route information and calculating the distance of the trip using Google maps and other sources. Fares for each trip were obtained from agency web sites. Monthly parking costs were obtained from James Cook and Jeff Simonson, Colliers International, *North America Central Business District 2012 Parking Rate Survey*, 2012.
53. Ibid.
54. See Methodology for elasticity values used in this paper.
55. Michael Neibauer, “Four Reasons Why We’re Carpooling Less,” *Washington Business Journal*, May 16, 2013.
56. U.S. Census Bureau, American Community Survey, 1-year data for 2005 and 2012, [www.census.gov](http://www.census.gov) (accessed May 20, 2014).
57. See note 49.
58. Margaret Walls, Elena Safirova and Yi Jiang, Resources for the Future, *What Drives Telecommuting? The Relative Impact of Worker Demographics, Employer Characteristics, and Job Types*, October 2006.
59. Andrea Hamre and Ralph Buehler, “Commuter Mode Choice and Free Car Parking, Public Transportation Benefits, Showers/Lockers, and Bike Parking at Work: Evidence from the Washington, DC Region,” *Journal of Public Transportation* 17, vol. 2 (2014): 6–91.
60. ICF Consulting and Center for Urban Transportation Research, *Transit Cooperative Research Program Report 107, Analyzing the Effectiveness of Commuter Benefits Programs*, prepared for Transportation Research Board, 2005.
61. Ibid. Used with permission.
62. TransitCenter, *2010 Commuter Benefit Impact Survey*, 2011.
63. See Jean M. Abraham, Roger Feldman, and Peter Graven, *New Evidence on Employer Price-Sensitivity of Offering Health Insurance*, January 2014; William M. Gentry and Eric Peress, “Taxes and Fringe Benefits Offered by Employers,” Working Paper No. 4764 (National Bureau of Economic Research, 1994); Elizabeth Hansen, *Taxes and Fringe Benefits Offered by Employers*, May 11, 2010.
64. Paul Posner, Steven Redburn, and Jonathan Breul, Brookings Institution, *Hidden in Plain Sight: The Mysterious Case of Tax Expenditures*, February 6, 2014.
65. Lily L. Batchelder, Fred T. Goldberg, Jr., and Peter R. Orszag, Brookings Institution, *Reforming Tax Incentives into Uniform Refundable Tax Credits*, Policy Brief #156, August 2006.
66. Todd Litman, Victoria Transport Policy Institute, *Transportation Elasticities: How Prices and Other Factors Affect Travel Behavior*, [www.vtppi.org/tdm/tdm11.htm](http://www.vtppi.org/tdm/tdm11.htm) (accessed May 14, 2014).
67. Commuter Benefits Work for Us, *2011 Commuter Benefits Work for Us*, 2011, [www.commuterbenefitsworkforus.com/COMMUTER-BENEFITS-WORK-FOR-US-White-Paper.pdf](http://www.commuterbenefitsworkforus.com/COMMUTER-BENEFITS-WORK-FOR-US-White-Paper.pdf) (accessed October 15, 2014).

68. TransitCenter, *The Case to Maintain the Commuter Benefit Cap*, September 2010.
69. Elizabeth Deakin and Greig Harvey, "The STEP Analysis Package: Description and Application Examples," Appendix B in USEPA, *Technical Methods for Analyzing Pricing Measures to Reduce Transportation Emissions*, 1998, in *TDM Encyclopedia: Congestion Reduction Strategies*, Todd Litman, Victoria Transport Policy Institute, [www.vtpi.org/tdm/tdm96.htm](http://www.vtpi.org/tdm/tdm96.htm) (accessed June 16, 2014).
70. Michael L. Anderson, "Subways, Strikes, and Slowdowns: The Impacts of Public Transit on Traffic Congestion," Working Paper No. 18757 (National Bureau of Economic Research, 2013).
71. It is worth noting that some cities experience congestion on their transit systems during rush hours as well.
72. U.S. Government Accountability Office, *Tax Expenditures: IRS Data Available for Evaluations Are Limited*, GAO-13-479, April 30, 2013.
73. U.S. Government Accountability Office, *Tax Expenditures: Background and Evaluation Criteria and Questions*, GAO 13-167 SP, November 2012; U.S. Government Accountability Office, *Designing Evaluations, 2012 Revisions*, GAO 12-208G, January 2012; Justin Tyson, International Monetary Fund, *Reforming Tax Expenditures in Italy: What, Why, and How?*, January 2014, 5-6; Citizens for Tax Justice, *Judging Tax Expenditures*, November 2009; James H. White, U.S. Government Accountability Office, *Tax Policy: Factors for Evaluating Expiring Tax Provisions*, GAO 12-760T, testimony before the U.S. House of Representatives Subcommittee on Select Revenue Measures, Committee on Ways and Means, June 8, 2012; U.S. Joint Committee on Taxation, *Background Information on Tax Expenditure Analysis and Historical Survey of Tax Expenditure Estimates*, JCX-15-11, February 28, 2011; Pew Center on the States, *Evidence Counts: Evaluating State Tax Incentives for Jobs and Growth*, April 2012; Eric J. Toder, Joseph Rosenberg, and Amanda Eng, Tax Policy Center, "Evaluating Broad-based Approaches for Limiting Tax Expenditures," *National Tax Journal*, December 2013, 807-832; U.S. Office of Management and Budget, *Analytical Perspectives, Budget of the U.S. Government, Fiscal Year 2015*, 203; Thomas S. Neubig and David Joulfaian, U.S. Treasury, *The Tax Expenditure Budget Before and After the Tax Reform Act of 1986*, OTA Paper 60, October 1988.
74. Congressional Research Service, *Tax Expenditures: Compendium of Background Material on Individual Provisions*, S. Prt. 111-58, prepared for the Committee on the Budget, U.S. Senate, December 2010.
75. U.S. Government Accountability Office, *Tax Expenditures: Background and Evaluation Criteria and Questions*, GAO 13-167 SP, November 2012, 1.
76. U.S. Department of Transportation, *Transportation for a New Generation, Strategic Plan: Fiscal Years 2012-2016*, undated.
77. U.S. Department of Transportation, Federal Highway Administration, *MAP-21: Moving Ahead for Progress in the 21<sup>st</sup> Century, Performance Management*, [www.fhwa.dot.gov/map21/factsheets/pm.cfm](http://www.fhwa.dot.gov/map21/factsheets/pm.cfm), (accessed on July 29, 2014).
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79. Full policy is available from the Australian Taxation Office at [law.ato.gov.au/atolaw/view.htm?docid=TXR/TR9626/NAT/ATO/00001](http://law.ato.gov.au/atolaw/view.htm?docid=TXR/TR9626/NAT/ATO/00001).
80. 14.53 Euro, converted to U.S. currency using Google currency converter on June 12, 2014.
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82. For an example of reporting, see Income Swedish Tax Agency, *Income Statement from Employers*, form KU10, <http://www.skatteverket.se/64a656d113f4c75970144c/1371630325348/230112.pdf> (accessed June 16, 2014).
83. Cambridge Systematics, *Congestion Mitigation Commission Technical Analysis: Increase Cost of Parking in the Manhattan Central Business District (CBD)*, prepared for New York City Economic Development Corporation and New York City Department of Transportation, December 10, 2007.
84. Canada Revenue Agency, *Parking*, [www.cra-arc.gc.ca/tx/bsnss/tpcs/pyrll/bnfts/tmbl/prkng-eng.html](http://www.cra-arc.gc.ca/tx/bsnss/tpcs/pyrll/bnfts/tmbl/prkng-eng.html) (accessed June 17, 2014).
85. Todd Litman, Victoria Transport Policy Institute, *Parking Taxes: Evaluating Options and Impacts*, August 2, 2013.
86. See, for example, Natalie Alcoba, "Parking Costs City Workers Back Taxes," *National Post* (Canada), May 13, 2010.
87. See U.S. Department of the Treasury, Internal Revenue Service, *Qualified Transportation Fringe Benefits*, TD 8933, [www.irs.gov/pub/irs-regs/td8933.pdf](http://www.irs.gov/pub/irs-regs/td8933.pdf) (accessed December 29, 2000). Note that independent contractors and self-employed persons are eligible to exclude from taxable income a *de minimis* fringe benefit, which, in the case of transit passes, cannot exceed \$21 per month, per 26 CFR 1.132-6.
88. Department of Finance (Canada), *Tax Expenditures and Evaluations 2011, 2012*. Note that the 1.5 million figure is based on the number of tax filers, not the number of transit users. Since a tax filer can claim the credit for more than one member of a family, it is likely that the number of Canadians receiving a tax benefit for transit-pass purchases under the program is even higher.
89. Conversion using Google currency translator at current rate. Original figure was \$150 million Canadian in 2011 dollars.
90. Internal Revenue Service, letter from Lynne Camillo to unknown recipients regarding eligibility of bike-sharing expenses for commuter benefits, July 26, 2013, [www.irs.gov/pub/irs-wd/13-0032.pdf](http://www.irs.gov/pub/irs-wd/13-0032.pdf) (accessed June 17, 2014).
91. For description and benefits of Washington's Commute

Trip Reduction program, see Washington State Commute Trip Reduction Board, *CTR Report to the Washington State Legislature 2011*, January 2012.

92. See note 28.

93. See note 74. The extent to which tax-exempt employer-provided transit assistance existed prior to formal recognition of the tax-exempt nature of such programs is unclear. Some employers began providing assistance to transit commuters through the use of discounted transit-pass sales as early as the 1970s, and it is not out of the question that at least a few employers may have offered tax-free assistance with transit costs before then. Source: Stuart M. Baker, David Judd, and Richard L. Oram, "Tax-Free Transit Benefits at 30: Evolution of a Free Parking Offset," *Journal of Public Transportation* 13, no. 2 (2010): 93-114.

94. U.S. Internal Revenue Service, Revenue Ruling 76-453.

95. Robert Turner, "Fringe Benefits," in *Encyclopedia of Taxation and Tax Policy*, ed. Joseph Cordes, Robert D. Ebel, and Jane G. Gravelle, 2nd ed., (Washington, D.C.: Urban Institute Press, 2005).

96. See note 74.

97. See note 94.

98. U.S. Senate Committee on Finance, "Fringe Benefit Regulations," Report 96-433, November 29, 1979, 5.

99. U.S. Public Law 95-427; U.S. Public Law 96-167; U.S. Public Law 97-34.

100. Senator Robert Dole (KS), "Regulations on Taxation of Fringe Benefits," *Congressional Record* 124:18-19 (August 2, 1978) p. 23883. Available from: Archive.org (accessed April 2, 2014).

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102. Representative Garry Brown (MI), "Taxation of Fringe Benefits," *Congressional Record* 124:15 (June 28, 1978) p. 19367. Available from: Archive.org (accessed April 2, 2014).

103. Representative Cotter (CT), "Taxation of Fringe Benefits." *Congressional Record* 124:15 (June 28, 1978) p. 19365. Available from: Archive.org (accessed April 2, 2014).

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105. *Ibid.* Concerns about the impact of taxing fringe benefits were not limited to Congress. In 1983, an unnamed Reagan administration official told the *New York Times* that the administration planned to "shuffle and waffle" in regard to a congressional plan to tax many fringe benefits. "The people who get these fringe benefits," the official continued, "are our constituents, the middle class." Jonathan Fuerbringer, "President Said to Back Away from Tax on Fringe Benefits," *New York Times*, August 9, 1983.

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107. U.S. Public Law 98-369.

108. Representative Daniel Rostenkowski (IL), *Conference Report to Accompany H.R. 4170*, Report 98-861, June 23, 1984, in *Internal Revenue Cumulative Bulletin 1984-3*, Internal Revenue Service, vol. 2, 416.

109. U.S. Government Accountability Office, *Mass Transit: Federal Participation in Transit Benefit Programs*, GAO/RCED-93-163, September 1993, 3.

110. U.S. General Accounting Office, *Mass Transit: Effects of Tax Changes on Commuter Behavior*, September 1992.

111. U.S. House of Representatives, Committee on Ways and Means, 98<sup>th</sup> Congress, Second Session, *Tax Reform Act of 1984: Supplemental Report on H.R. 4170 [Including Cost Estimate of the Congressional Budget Office]*, Report 98-432, March 5, 1984.

112. U.S. Joint Committee on Taxation, *General Explanation of the Revenue Provisions of the Deficit Reduction Act of 1984*, JCS-41-84, December 31, 1984, 857.

113. See note 111.

114. Interestingly, employee parking appears to have been singled out in the original Ways and Means Committee report as the only working condition fringe to which nondiscrimination rules *did* apply. The final bill, however, appears to have once again exempted parking from the nondiscrimination rule, suggesting that this provision was altered after leaving committee.

115. See note 109.

116. U.S. Public Law 102-486.

117. See note 109.

118. See note 74.

119. See note 116.

120. U.S. Public Law 110-343.

121. U.S. Public Law 111-5.

122. See note 74.

123. U.S. Public Law 111-312.

124. U.S. Public Law 112-240.

125. See note 26.

126. See note 27.

127. Internal Revenue Service, *Employer's Tax Guide to Fringe Benefits for use in 2014*, Publication 15-B (2014), 19.

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