USING THE PERSONAL TAXATION REGIME TO ENCOURAGE MODAL SHIFT: AN INTERNATIONAL REVIEW

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Abstract

Correctly pricing transport behavior to take account of the ‘external’ costs such as congestion, emissions and congestion imposed on society by excessive car use has long been a tenet of effective Transportation Demand Management. But while policy makers have striven to increase public transport subsidies, raise petrol taxes, and introduce road user charging schemes to change the price of car travel, the wider influences of the personal tax regime has had relatively little attention.

This paper is a review of reforms to the personal tax regime to favor more environmentally benign forms of travel and, in particular, to encourage employers to take part in TDM-type programs. The results reported are based on work undertaken for the UK Department of Transport, Local Government and the Regions, and the Inland Revenue. In addition to reporting the British situation, it also outlines how this same process has been approached in the United States, Ireland, Germany, Netherlands, Switzerland and Norway, and at how successful they have been thus far with respect to TDM objectives. It then draws conclusions as to which direction policy makers could aim for the future.

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Tax and Transport Policy

In recent years there have been increasingly strong linkages between national fiscal systems and environmental/transport objectives. Within the European Union, European Commission (EC) policy has been outlined in documents such *as 'Towards Fair and Efficient Pricing' (1)*, and *'Fair Payment for Infrastructure Use' (2)*. In summary these advocate that transport infrastructure charges should normally reflect the marginal social costs at the point of use. These marginal social costs should include not only marginal wear and tear costs on infrastructure, but also 'external' costs imposed on society, the environment and the wider economy through accidents, pollution, emission of climate change gasses, congestion etc.. While regulatory and physical design mechanisms are also recognized as having an important role to play, it is tax and charging instruments that the EC sees as being most effective at encouraging efficient and sustainable transport systems in the longer term.

When moving to the practical application of taxation measures, it is important to target the measure to where it has impact. There are three major groups of transport taxation:

- Taxes on the purchase of vehicles
- Taxes on the ownership of vehicles
- Taxes on the use of vehicles – fuel and employer-provided transport benefits

In general there is concern that any single policy measure with a focus on one of these aspects can be ineffective. The effect of the taxation system upon modal choice requires a more comprehensive approach. This issue is discussed in detail in the European Council of Ministers of Transport report *'Internalising the Social Costs of Transport' (3)*, which advocates a synergistic mix of taxation and charging instruments, including a number of local targeted mechanisms, such as road pricing. Broadly the view is taken that a carefully designed mix of various economic instruments (see Table 1) and regulations is needed to achieve political acceptance and practicality.

TABLE 1 Vehicle, Fuel and Traffic Market-Based Incentives *(3)*

In adapting and developing taxation measures to address transport and environmental policy goals, there has been a strong emphasis on consumption taxes, such as those noted above. The personal taxation regime has not been viewed as particularly relevant, and yet the tax treatment of employer-provided transport benefits is the subject of a wide range of measures. The personal taxation regime can no longer be neglected in the move towards a more holistic and systems-based approach in using the taxation system to promote more sustainable transport modes. This paper looks at the relationship between changes to the personal tax regimes and transport behavior. It examines the treatment of commuting expenses and employer support for the journey to work in Germany, Netherlands, Switzerland, Norway, the United States, the UK and Ireland.

The use of the Personal Taxation System for Transport/Environmental Policy

A major area where the personal taxation regime is, or can be used as an instrument of transport and environmental policy is the tax treatment of commuting expenses and employer support for the work journey. This taxation regime has existed with no reference to transport objectives, but in recent years a number of countries have taken transport/environmental objectives into account in the reform of this part of the personal taxation system.

The tax treatment of commuting expenses and employer support for the work journey varies between countries, and a comprehensive review of this issue for EU member states features in a report to the European Commission *(4)*. In summary, the study highlights the contrast between countries who view commuting as a personal expense, (such as the UK, Austria, Greece, Ireland, Italy, Portugal and Spain), and others, including Belgium, Denmark, Finland, France, Germany, Luxembourg and The Netherlands, that view it as a tax deductible expense. With respect to transport and environmental policies, this report finds there are lessons to be learnt with both types of system. The report concludes that most taxation regimes provide contradictory signals regarding 'greener' forms of transport. However, a number of countries that have started from both standpoints have recently sought to use elements of their personal taxation system to encourage the use of more sustainable transport modes. Major examples of these are detailed below.

International experience of commuting as a tax-deductible expense

This section examines the examples of Germany, the Netherlands, Switzerland and Norway.

Germany

In Germany, tax relief on commuting costs is long established and Smith *(5)* noted that (at the 1990 rates) it costs the German Government (depending on the calculation method used) between DM1.8 billion and 4 billion ($800m - $1760m) per annum in lost revenue. Tax relief for commuting to work can be claimed in one of two ways. Individuals can claim either:

- A lump sum deduction, or
- A deduction based on the actual cost of public transport or a mileage rate for a car.

The latter is the more popular as people are able to claim a higher allowance. Until 1988, the car rate was DM 0.36 per kilometre (km) (~16 cents per km), which was higher than the marginal costs of running a car, but lower than total costs (including capital etc.). In 1990 this was increased to DM 0.50 per km (22 cents per km), but at the same time fuel taxes were raised which roughly counterbalanced the increase. The use of public transport for commuting could also be claimed, but most people declared they commuted by car because it was more tax advantageous to do so. From 1992, there has been a special tax exemption for employer-provided 'Job Tickets' for use on public transport in some areas of Germany.

As of 2001, a combined rate of DM 0.70 per km (31 cents per km) was introduced for both car and public transport, ostensibly to eliminate the difference between public and private transport, but in effect simply raising the tax allowance on commuting.

Smith notes an acceptance that, despite the special 'Work Ticket' provision, the German tax concession on commuting costs has encouraged long distance commuting and stimulates work journeys by car rather than public transport. This is partially due to car users perceiving the costs of driving as fuel costs alone. Thus they feel that they can 'make money' on the tax concessions over and above their expenditure if they drive to work, which they cannot do if they use public transport. The 2001 reform may reduce the public/private transport imbalance, but will not address the commute trip lengthening issue.

Overall, Germany appears to suffer the worst of both worlds; their Finance Ministry is making a major tax concession on commuting costs and the transport and environmental impacts of this fiscal measure are entirely negative.

Norway

Norway operates a similar regime to Germany, with a deduction for commuting expenses of 1.40 Norwegian Kronør (NOK) (15 cents) per km irrespective of means of transport. In addition, car users can claim ferry and road tolls; if air travel is used for weekly commuting the actual costs can be deducted. However, commuting costs are only deductible if they exceed 7,000 NOK ($770), which produces an incentive for employees to live further from work in order to qualify for a tax allowance. A journey to work distance of about 15 km is necessary before commuting becomes tax deductible.

Netherlands

The Netherlands has undergone a series of complex changes to the tax treatment of commuting. As in most modern western economies, the general principles of fiscal policy include:

- lowering taxation, whilst broadening and strengthening the tax base;
- greening taxes to promote sustainable economic growth;
- and simplifying the tax system.

Reforms to transport aspects of personal taxation have been closely related to *Travel Plans*. Travel Plans is the UK term for what is called *TDM* in the USA, and *Mobility Management* by the European Commission. It refers to measures introduced at the site level by employers to reduce single occupancy car commuting by their staff. How the tax system treats such employer-provided commuting benefits can crucially affect whether employers adopt Travel Plans with either enthusiasm or reluctance.

In the Netherlands various incremental changes were introduced over time to favor non-car modes, but this resulted in a very complicated system. In 2001 the Netherlands Ministry of Finance has announced a radical overhaul of the commuting benefits system, partly to simplify the system, and partly to further promote the use of alternative modes.

The taxation of commuting travel in the Netherlands is based on two crucial benefits. These are:

- the *reiskostenvergoeding* (reimbursement from the employer of an employee's commute costs, normally paid only to those who travel more than 10 km one way); and
- the *reiskostenforfait*, the allowance for travel costs paid by the employer to the employee which he/she can then offset against tax.

The degree to which the *reiskostenvergoeding* is taxable, and the size of the *reiskostenforfait*, both vary depending on the mode used. In addition, if no *reiskostenvergoeding* is paid (more common in public sector organizations), then the employee is able to write off a portion of their commuting costs against tax. The precise amount is, again, related to the mode used. In general, the tax regulations have been changed in order to favor the use of more sustainable modes as part of the Government's general aim of promoting the adoption of Travel Plans (TDM) amongst all Dutch employers with more than 50 employers. These arrangements are detailed in Table 2.

TABLE 2 Dutch Personal Tax Transport Allowances

As part of a national policy to lower the general level of taxation, the opportunity was taken to simplify these complex arrangements. Radical changes have now been made to the system of tax and commuting benefits in the Netherlands, which came into effect on January 1st 2001. In summary, these are:

- The benefits for public transport and carpool commuters will remain as now.
- For drivers, the *reiskostenforfait* and the right to write off commuting costs is completely abolished. It is estimated that this will net the Dutch Treasury some 500m NLG ($195m).
- For cyclists, the distance-related *reiskostenforfait* will be replaced by a flat sum of 750 NLG per year ($293) which they will be able to write off.
- The previous objection to the abolition of the *reiskostenforfait* for drivers is that it would seriously disadvantage those who receive it who live some distance from work, and that the increased costs would be demanded by Trades Unions in the form of higher *reiskostenvergoeding* from employers. However, the change to the system of commuting benefits is part of a wider reform to the tax system where personal tax allowances have been increased. This has cost the Treasury some 6 billion NLG ($2.34 billion) per year, but it is equitable, since all employees will enjoy it regardless of mode, and it has no direct influence on choice of mode of transport for the trip to work.
- It is estimated that the abolition of *reiskostenforfait* will lead to a short term reduction in carbon dioxide emissions of 0.10 Megatonnes per year in the long term (15-20 years) and 0.05 Megatonnes in the short term (0-10 years). This relatively small effect is because *reiskostenforfait* is worth only 29 NLG ($11) per month to those who receive it; furthermore cross-elasticities are

such that this is not enough to cause major modal shift, and also because commuting traffic makes up only 25% of the total traffic.

Overall, the taxation system in the Netherlands has started from a similar position to Germany, but the Dutch government has managed to introduce a series of reforms to its taxation system overall, which are specifically designed to favor ‘greener’ modes of travel. Thus Travel Plan measures introduced by employers are exempt from negative tax impacts, or are actually enhanced by the taxation system. Following an initial round of tax reforms, the Dutch government has realized that, rather than incremental changes to the taxation system to take into account transport and environmental considerations, they need to be a core criterion in a major reform of the whole tax system itself. This evolution in tax policy should be noted. By linking transport tax ‘sticks’ to both transport tax and general tax ‘carrots’, they have achieved a radical reform that has eluded most other countries.

Switzerland

Switzerland has a tax situation lying somewhere between those of Germany and the Netherlands. Commuting is a tax-deductible expense, but the tax rules are designed to provide an incentive for travel by public transport rather than car. For travel by public transport, the actual costs may be set against tax. While ‘standard deductions’ exist for car users, their use is restricted. The baseline position is that individuals, whether they use car or public transport, can only deduct the cost for the use of public transport. A case has to be made (e.g. the taxpayer lives too far from a station, their work requires them to travel at unsuitable times or they have a physical handicap) to claim a standard car deduction. According to Mr G. Steinmann, of the Office for Legislation Federal Direct Tax (unpublished data), the Swiss Government plans “to examine more deeply the tax treatment of commuting and business transport expenses, and in particular to focus on the deduction of costs for car commuting”. This will form part of a planned ecological tax reform, which may follow the Dutch model.

Summary

In the countries where commuting is a tax-deductible expense, there have been moves (some significant) to increase general benefits for more sustainable modes relative to less sustainable methods of travel. However, the use of such general concessions appears to have stimulated car commuting and trip lengthening. In most cases the environmental and transport impacts are entirely negative. The Dutch reforms, linking changes to the treatment of transport tax benefits to wider taxation reform, seems to be the only model that has produced significant progress, since it included a mechanism to clear the political hurdle of reducing tax concessions for car commuters.

International experience where commuting is not a tax-deductible expense

The following section looks at the tax treatment of commuting in the United States, the UK and Ireland, a group of countries that have started from a different position to the above cases, in that all commuting expenses were not tax deductible.

The USA

Under the USA taxation system the cost of travelling between home and work is not an allowable deduction for the purposes of assessing employees payroll tax. However, in recent years exemptions have been made. In contrast to the blanket tax concession of Germany and the wide range of generally pro-public transport and bicycle measures in the Netherlands, in the USA, tax concessions began as something specifically targeted to company TDM measures, but their scope has since widened. Indeed, since 1998 employees have been able to take pre-tax pay as a public transport benefit whether or not their employer has adopted TDM measures. Overall, ‘green’ commuting incentives are now seen as much as a benefits issue as a travel to work issue.

This process began during the mid-1980s with further enhancements and developments added over time to produce a raft of targeted exemptions. The following section draws extensively on the *Final Report to the Canadian National Climate Change Process in 1999 (6).*

Policy in the USA reflects the research conclusion that "direct financial incentives or subsidies are a key element of successful programs" to reduce single car occupancy travel to work. This conclusion is based upon the monitoring of the effectiveness of various measures *(7, 8)*. A summary of the history of Federal commuter benefits in the US is shown in Table 3.

TABLE 3 Evolution of Federal Commuter Benefits in the United States *(9)*

The provisions of the 1992 National Energy Policy Act forms part of the Internal Revenue Code. As of January 1993, an additional Section, 132(f) means employers can provide each employee commuting on transit a benefit up to an initial limit of $60 per month ($720 per year) which is tax deductible to the employer and tax free to the employee. The Energy Policy Act included adjusting the limits with inflation, rounded to multiples of $5.

The fact that employees and employers share the benefit is a key factor that has increased growth in the take-up of the benefit from 2% of commuters per month prior to 1998 to 10% per month now *(6)*. Employers do not *have* to contribute anything to the cost of their employees' public transport costs but employees still benefit; certain employers do limit their involvement in this way, whilst others make a (tax-free) contribution on behalf of their staff. The concession (up to the maximum limit) covers *(10)*:

- Transportation in a commuter highway vehicle if such transportation is in connection with travel between the employee's residence and place of employment.
- Any transit pass.
- Qualified parking.

A 'commuter highway vehicle' covers schemes involving private buspools, shuttles, subscription bus services and vanpool leasing. The 'qualified parking' is for the commuter highway vehicles only, up to a value of $155.

The Taxpayer Relief Act of 1997 and the 1998 Transportation Equity Act for the 21st Century have extended these measures to the cashing out of employer-provided parking up to the $65 a month ceiling. This Act also provided for increasing the nontaxable transit and vanpool benefit ceiling to $100 a month from January 1st 2002, with the resumption of increases indexed to inflation. In addition, parking 'cash out' payments are now tax exempt. This is part of the move in the USA away from regulations requiring employers to introduce Travel Plans, to an approach encouraging the voluntary take-up of Travel Plans (as is the policy in the UK). Targeted tax relief to the treatment of the most effective Travel Plan measures is a key part of this. The benefits are summarized in Table 4.

TABLE 4 Summary of Tax Benefits for Employer TDM Measures in the United States *(11)*

To facilitate the provision of transit benefits a new Travel Plan services industry has emerged. An example is the *TransitChek* scheme, used in New York and elsewhere in the USA. Employers purchase $15 and $30 vouchers from the New York TransitCenter, an alliance of transit operators that administers the program for the tri-state region. The vouchers can then be distributed to employees *(12)*.

Litman *(13)* noted that around 25% of the TransitChek recipients previously commuted by car alone. A small amount (about 4%) were previously car passengers and about 2% previously walked. In the USA context he saw this as a good result. Companies tended to market TransitCheks as staff benefits, not as part of a transport program. He suggested that a higher uptake by car drivers could be expected in places with a better public transport infrastructure and where companies linked TransitCheks to travel plans, although he cited no empirical evidence of this occurring

United Kingdom

As in the USA, in the UK the cost of travelling between home and work is not an allowable deduction for the purposes of assessing employees Income Tax or state pension (National Insurance) contributions. There are a few clearly defined exemptions to this. The main example is employer-provided car parking for commuters. Technically, until 1999 this exception related to *car* parking only, and free parking for bicycles, motorcycles or any other vehicles were taxable (although in practice these remained untaxed).

A general statutory exception, which does not just relate to employer-provided transport benefits, regards company loans to staff at a subsidised rate of interest. These can be used for any purpose, including, for example for the purchase of season tickets and bicycles, or for that matter, cars. There is a limit of a £5,000 ($7000) loan in a single tax year.

In 1999 a series of further reforms were introduced to tax treatment of Travel Plan benefits specifically to encourage their uptake. In detail these reforms were that no tax would be liable on the following benefits:

- Employer-provided buses of 12 or more seats used mainly to bring employees to and from work.
- General subsidies to public bus services provided that the employees pay the same fare as other members of the public.
- Cycling safety equipment.
- Workplace parking for bicycles and motorcycles.
- Alternative transport for car sharers to get home in exceptional circumstances.

In addition to these tax concessions, there were two other changes to the tax treatment of business travel:

- The tax free mileage rate for employees using their own bicycle was raised to 7.5p per km (10.5 cents per km), and if their employer provides no payment, employees can claim tax relief of 7.5p per km (10.5 cents per km). This was subsequently increased to 12.5p per km (17.5 cents per km) in 2001.
- Employees who use their own bicycle for business travel can claim capital allowances on a proportion of the cost of a bicycle.

Shortly afterwards, the government issued guidance encouraging employers to adopt Travel Plans *(14)*.

These concessions leave within the tax net a number of direct incentives and possible disincentives that feature in some Travel Plans. This particularly applies to the measures proven to be most effective, such as any subsidies to public transport tickets for staff, and to cash incentives to take part in a Travel Plan. While the British Government did consider altering the tax system to accommodate these issues prior to the 2001 Budget, it chose not to proceed beyond a few cosmetic changes *(15)*, while at the same time cutting motoring taxes by £1.5 billion ($2 billion).

Ireland

In Ireland, commuting is also not a tax-deductible expense, but from the tax year 1999/2000 a specific concession for employer-provided public transport support was granted. Under the 1999 Finance Act benefits in kind by way of a monthly or annual bus or train pass are tax exempt. This is subject to an annual limit of £I 696 (about $752). As in the USA, this tax concession has provided the opportunity for public transport operators to promote ticketing products. In the Dublin area publicity material under the title ‘Easi-Travel Plan’ is used to promoted to employers as a new ‘Tax efficient incentive for your staff’. In addition to the tax efficiency, there is a 12% discount for employer purchase of travel passes for their staff. The annual allowance is sufficient to cover all types of public transport tickets in the Dublin area - a combined bus/rail ticket for the entire area costs £I 525 ($567).

Summary

From the above cases, a different approach is evident in countries where commuting has not been a deductible expense. The concept of introducing a general tax concession for all commuting by more sustainable modes has featured only latterly, and then only in the USA. Instead there have been far more targeted measures upon employer-provided support. These include incentives to encourage the use of public transport, vanpooling and parking cashout measures in the USA, and tax exemption for employer provided public transport passes in Ireland.

Key Conclusions

Several observations can be drawn from the findings.

- A general tax concession for all commuting trips creates negative transport and environmental impacts, as it tends to stimulate car commuting and trip lengthening.
- A general tax concession is also costly to the state concerned.
- While it is possible to focus a general tax concession upon public transport commuting trips, this can still contribute to trip lengthening, particularly if the concession is not capped and/or is subject to a minimum distance level.
- It can be politically difficult to reduce car commuting benefits, once these are granted.
- The Dutch example of simplifying the commuting concession to more sustainable modes as part of a general tax reduction strategy indicates an advanced level of fiscal/environmental policy integration. As part of such a strategy, the concept of tax loss becomes irrelevant as the aim of policy is to target tax cuts.
- In countries where commuting costs are not tax-deductible, targeted tax concessions upon employer-provided Travel Plan benefits have featured. These have been intended to support the development of effective Travel Plans and stimulate the use of particularly effective measures in influencing modal shift.
- An approach to support Travel Plans could also be incorporated into an advanced fiscal/environmental strategy whereby tax reductions are targeted to support policy objectives. To date, these two ‘best practices’ have not been combined.

Overall it is clear that minor tinkerings to a taxation regime, whatever the starting point, will not do much to address transport and environmental objectives, and may well have negative results. The most effective strategy is not to add on eco reforms to an otherwise unreformed taxation regime. If this is done they will largely be counteracted by other parts of the system, and are likely to be a politically weak part of that system, prone to being abandoned or ignored (as occurred in the UK Budget of 2001). The key way forward is for environmental objectives to be incorporated as part of reorientation of the entire personal taxation regime, to stand alongside the other strategic goals of equitable revenue raising and as an instrument of economic policy. Only then can the conflicts with these long-established functions of personal taxation be resolved and there be any hope of environmental reform being effective and acceptable to the taxpayer.

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References

1. Commission of the European Communities, *Towards Fair and Efficient Pricing in Transport. Policy options for internalising the external costs of transport in the European Union*. Green paper. CEC, COM (95) 691, Brussels, 1995.

2. Commission of the European Communities, *Fair Payment for Infrastructure Use*, White Paper, CEC, COM (98) 466, Brussels, 1998.
3. European Council of Ministers of Transport, *Internalising the Social Costs of Transport*, OECD, Paris, 1997.
4. Van den Branden, T., S. Potter, M. P. Enoch, and B. J. Ubbels*: Fair And Efficient Pricing In Transport – The Role Of Charges And Taxes*. Report for European Commission DG TREN, Oscar Faber, Birmingham, England, 2000.
5. Smith S. *'Green' Taxes and Charges: Policy and Practice in Britain and Germany*, The Institute for Fiscal Studies, London, 1995.
6. IBI Group, *Tax Exempt Status for Employer Provided Transit Benefits*, Final Report to the Canadian National Climate Change Process, Transportation Issue Table, chaired by Transport Canada, Ottawa, June 1999.
7. Shreffler, E. N., *What Makes for Successful TDM Programs?*, Louisville–Southern Indiana Ohio River Bridges Project, October 1999, http://www.kyinbridges.com/researchofdemand.htm. Accessed Jul. 31 2001.
8. Ligtermoet M. *Mobility Management in the Netherlands*, Report to the Netherlands Ministry of Transport, Netherlands Ministry of Transport, 1998.
9. Transit Center, *New Federal Commute Benefits With The TransitChek Program*, a presentation by the Transit Center, quoted in *(6)*.
10. US Government, National Energy Policy Act, Section 1911, 1992.
11. Association for Commuter Transportation, *Money Saving Tools*, *Explanation of the Federal Tax Advantages for Employer-Provided Transportation Benefits*, from the TDM Tool Kit, 1998.
12. Paaswell R. E. *Employee Commute Options Guidebook, Transportation Demand Strategies Technical Memorandum #7*, University Transportation Research Center, New York, May 1994.
13. Litman T. *Employer Provided Transit Passes: a Tax Exempt Benefit*, Victoria Transport Policy Institute, British Columbia, Canada 1997.
14. Department of the Environment, Transport and the Regions, *The Benefits of Green Transport Plans*, DETR, The Stationery Office, London, 1998.
15. Potter S., M. P. Enoch, T. Rye, and C. S. Black, *The Potential for Further Changes to the Personal Taxation Regime to Encourage Modal Shift*, Final Report to the Department of the Environment, Transport and the Regions and the Inland Revenue, The Open University, Milton Keynes, June 2001.

Websites

http://www.commuterchoice.com
http://www.fta.dot.gov/library/policy/cc/cc.html;
http://www.inlandrevenue.gov.uk/cars/green_travel.htm

List of Tables

TABLE 1 Vehicle, Fuel and Traffic Market-Based Incentives *(3)*

Vehicle	Tradable permits
	Differential vehicle taxation
	Tax allowance for new vehicle
Fuel	Differential fuel taxation
Emissions	Carbon taxation
	Emission fees
Traffic	Fuel taxes
	Congestion charges
	Parking charges
	Subsidies for less polluting modes

TABLE 2 Dutch Personal Tax Transport Allowances

- **Bicycles:** On an employer provided bicycle worth less than 1,500 Guilders (NLG) ($585), the employee is liable to tax only on a fixed amount of 150 NLG ($59). The employer may also provide the employee with accessories e.g. insurance, clothing, lights etc. up to a maximum of 550 NLG ($215). Such benefits may only be provided tax-free once every three years.
- If the employer loans a bicycle to the employee there is no tax on the benefit of the private use of the bicycle as long as the employee commutes on it for at least half the time.
- If the employer pays the employee's commuting costs (*reiskostenvergoeding*) for the employee using their own bicycle to travel to work, this is tax-free for distances of more than 10 km, but not for shorter distances. For employees who cycle more than 10 km, a tax-free *reiskostenvergoeding* can also be paid for the use of public transport on bad weather days as long as, in total, the employee cycles for more than half the year. There is a favourable taxation regime for what is known as "bicycle projects", where the employer buys a bicycle for an employee and then recoups the cost through salary reductions. This is particularly favourable for employers who pay the commuting costs for journey to work distances of less than 10 km.
- **Company cars:** The private use of a company car is treated as a taxable benefit if they have over 1,000 km private travel per year. Company cars are assumed to have a value to the private individual of 20% of the catalogue price, per year (24% if commuting distance one-way is more than 30 km). This sum is added to the employee's taxable income. There is no tax-free employer contribution to commuting costs (*reiskostenvergoeding)* and no commuting costs allowance they can offset against tax (*reiskostenforfait),* unless the employee is part of a registered carpool arrangement (see below).
- **Car Parking:** As in the UK, car parking provided by the employer is not regarded as a taxable benefit.
- **Works buses:** If a works bus is provided free of charge to the employee, there is no tax liability for the employee.
- **Public transport:** There is no minimum distance which an employee must commute by public transport before they can write off their travel costs or before which *reiskostenvergoeding* becomes tax-free. If a public transport costs are by the employer, this is completely tax-free to the employee.
- **Car pooling:** Since January 1998 there have been two possible ways for employees to qualify for fiscal benefits for car-pooling. The first involves all employees in a carpool signing up with each other and the employer to a car-pool contract, and car-pooling for more than half the time. The commuting distance over which they drive together must be more than 15 km. They are then entitled to a tax-free *reiskostenvergoeding* in addition to that for lone drivers (between 520 NLG and 1,040 NLG ($203 - $405) per employee per year, depending on distance driven). The second option is for the driver only to receive a tax-free *reiskostenvergoeding* of 0.6 NLG/km (23 cents) for any distance over 10 km. In this case, other members of the carpool team are not entitled to any *reiskostenvergoeding* or *reiskostenforfait*. Neither of these exemptions is applicable to vanpools.
- **Telecommuting:** Over a five year period, the employer can make a tax-free 4,000 NLG ($1560) contribution to the employee to cover costs of setting up a home office. This is on the condition that the office is used at least once per week in lieu of a normal commute; and that there is a written contract between employer and employee.
- **Tax efficient saving:** Employees in the Netherlands are encouraged to save through tax-efficient schemes with their employers. Companies who wish to provide employees with a tax-free bonus for using alternative modes may do so by paying into the scheme on behalf of the relevant employees, up to a maximum of 1315 NLG ($513) per year.

TABLE 3 Evolution of Federal Commuter Benefits in the United States *(9)*

1984: Deficit Reduction Act - $15 per month tax exemption for transit users, with restrictions
1991: IRS administrative action - increased monthly transit cap to $21
1993: National Energy Policy Act - Added Internal Revenue Code, Section 132(f) ‘Qualified Transportation Fringe’

- Vanpool expenses also qualified
- Transit/Vanpool benefits – to $60 per month
- Qualified Parking - $155 per month

1996: IRS indexing of benefits

- Transit/Vanpool benefits - $65 per month
- Qualified Parking - $165 per month

1997: Taxpayer Relief Act – taxable payments in lieu of employer provided parking permitted
1998: Transportation Equity Act For the 21st Century (TEA-21)

- Employee can elect to buy transit fares with pre-tax compensation
- Tax-free transit benefit increases to $100/month after 2001

TABLE 4 Summary of Tax Benefits for Employer TDM Measures in the United States *(11)*

Alternative Mode of Transportation	Incentive	Tax Implications
Transit and vanpools	Up to $65/month, $780 /year for transit or vanpool expenses (increases to $100/month after 2001)	Employers give their employees up to $65/month to commute via transit or vanpools; get a tax deduction and save over providing same value in gross income Or Employers allow employees to use pre-tax income to pay for transit or vanpools and employers save on payroll tax (at least 7.65% savings) Or A combination of both up to statutory limits
Qualified Parking	Up to $175/month, $2,100 /year, for parking at or near an employer's worksite, or at a facility from which employee commutes via transit, vanpool, or carpool	Employers give their employees up to $175/month for qualified parking; get a tax deduction and save over providing same value in gross income Or Employers allow employees to use pre-tax income to pay for qualified parking and employers save on payroll tax (at least 7.65% savings) Or A combination of both up to statutory limits

NOTE: Vanpool or Transit Benefits can be provided in addition to Qualified Parking for a total benefit of up to $240 /month or $2,880 /year.