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## **THE ROLE OF HYPOTHECATION IN FINANCING TRANSIT: LESSONS FROM THE UK**

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### **ABSTRACT**

Two hypothecated charges to fund local public transport have recently passed onto the statute books in the UK. The first is road user charging, with the London and Durham the first to be implemented and the second is a workplace parking levy.

The use of such local hypothecated (or ‘earmarked’) mechanisms is not new. Indeed a variety of such charges, local taxes and levies have been in use for decades to fund public transport and (less frequently) as a tool for transport demand management in the USA, Germany, Austria, Portugal, Scandinavia, India and Singapore. In the general debate around the two new hypothecated charges in the UK, this international experience has been largely neglected. The aim of this paper is to detail a related and equally neglected area namely the local hypothecation of charges to fund public transport improvements *within* Britain.

Under existing legislation it has been possible for some local authorities to dedicate revenue streams from sources such as parking charges and planning gain to develop and improve public transport services. There is also significant experience of dedicated revenue streams in the private sector, for example at airports.

The paper details examples of the British experience of hypothecation and will consider their lessons for the new and more radical measures that are now being considered.

## **(1) INTRODUCTION**

In recent years in the UK, there has been mounting concern as to the quality of transport provision with the view being that more money should be invested in public transport systems. However, in parallel, there also appears to be an unwillingness among the public to trust politicians in deciding how best to allocate taxes or revenue raised. This is confirmed by the UK government who abandoned the ‘fuel duty escalator’ in 2001. The fuel escalator was a tax on fuel whereby the duty increased by at least 6% on average per annum in real terms.

This paper examines a number of cases where a possible solution to this conundrum is currently being applied - namely earmarking certain taxes or charges to fund public transport projects. Specifically, it identifies how the schemes came about, and possible lessons learnt that could benefit the Government’s transport policy and allow local authorities to dedicate revenues raised from workplace parking levies or congestion charging to transport improvements.

## **(2) FINANCING PUBLIC TRANSPORT**

More finance is needed to improve public transport, but less money appears to be available from the traditional forms of financing for transport improvements - i.e. grants from Central Government. For the transport sector, there are two major problems with central government funding: namely that there is a great deal of competition for public money and transport often lags behind spending in education and health, and transport projects tend to need large sums of money spent over long periods of time.

The importance of these related points is that politicians who spend money on transport projects are unlikely to reap major tangible benefits within a single term of office - and thus the temptation is to spend on other sectors where improvements can be delivered more quickly.

Thus, if investment is to be made in public transport, there are effectively two options for raising finance namely the private sector, and dedicated sources of public money. In Britain, the private sector is being increasingly involved in developing public projects that would otherwise have been delayed whilst public money is made available.

This paper concentrates on the second option, the use of hypothecated revenue streams that can be used as a stable source of funding for public transport. This does not include central government grants that require the money to be spent in a specific way, or of local authorities deciding to earmark government grants. Instead it only concerns the raising of funds locally within the remit and control of local authorities (and in some cases the private sector). This involves the use of powers to hypothecate the proceeds from local taxes or charges to fund public transport.

### **(3) THE RELATIVE MERITS OF EARMARKED REVENUE STREAMS**

Deran (1965) (1) assesses the relative merits of earmarking “a combination of economic, political and administrative issues”, namely:

#### **Criticisms**

1. Earmarking hampers effective budgetary control, to a degree which depends upon the extent (constitutional, statutory, etc.) of earmarking in the state;
2. Earmarking leads to a misallocation of funds, giving excess revenues to some functions while others are under-supported;
3. Earmarking imparts inflexibility to the revenue structure, with the result that legislatures are hard put to make suitable adjustments when conditions change;
4. Earmarking provisions often remain in force long after the need for which they have been established has vanished;
5. By removing a portion of fiscal action from periodic review and control, earmarking infringes on the policy-making powers of state executives and legislatures.

#### **Justifications**

1. Earmarking applies the benefit theory of taxation;
2. Earmarking assures a minimum level of expenditures for desirable governmental functions, avoiding the need for wasteful repeated pressure on the legislature;
3. Earmarking, by assuring continuity for specific projects, can reduce the cost of these projects through lowered bond interest rates and the advantages of long term planning;
4. Earmarking can help overcome resistance to new taxes or increased rates.

In addition, Bracewell-Milnes in (Teja and Bracewell-Milnes, 1991) (2) concludes that “the traditional objections to earmarking are weak and invalid because they assume a Utopian system of public finance and democratic decision-taking that bears little or no relation to reality. Earmarking is an exercise in the ‘second best’ or least bad: in an imperfect world, it can provide better decisions and do less damage to the creation of wealth than conventional pooled financing of government expenditures.”

He continues, “earmarking creates wealth in two separate ways: by improving the allocation of resources and by giving scope to the voluntary principle. In each of these ways wealth is created through the replacement of compulsion by choice”.

#### **(4) EXISTING BRITISH CASES OF TAXES BEING EARMARKED TO IMPROVE PUBLIC TRANSPORT**

The CEC-funded study *Fair and efficient pricing in transport: The role of charges and taxes* (CEC, 2000), (3) identified nine types of funding mechanisms where money raised was ring-fenced to pay for improvements to public transport world-wide. This work has been expanded on by Ubbels et al (2004) (4). These were payroll/employer taxes, property taxes, development levies, parking levies, road user charges, vehicle-related taxes, sales taxes, cross-utility financing and 'others' - which incorporated a levy on student fees and a tax on airport landing fees.

While the whole range of these examples could be found in the United States, there are also examples of such funding mechanisms to be found in countries as diverse as Austria, Japan, India, France, Singapore, Australia and Hong Kong. Surprisingly perhaps, even before powers granted under the Greater London Authority Act 1999 and the Transport Act 2000 have been used, there were already a number of such schemes operating in Britain. Interestingly though, the vast majority are either parking levies or developer charges. This paper examines a number of the more interesting cases, and draws lessons learnt in their implementation and operation.

##### **Parking Charges**

Parking charges are a normal fact of life and are used across Britain by local authorities and businesses as an income flow to fund their activities. Simple, cheap and quick to introduce and operate, parking charges are readily understood and relatively accepted by the public. They can also be said to conform to the 'polluter pays' principle of taxation, and usually provide a steady and continuous flow of money. Despite these advantages though, such charges are only rarely hypothecated to support local public transport, of which perhaps the best-known are run by the private sector airport operator BAA.

##### *The Heathrow, Gatwick and Stansted Airports' Parking Charge*

Heathrow Airport is located to the west of London. Around 60m passengers a year use the airport, a figure which is expected to grow substantially with the opening of a 5th terminal. Heathrow currently employs about 64,000 people. Gatwick Airport is situated to the south of London and in 1998, around 28,000 staff served 30m passengers. Meanwhile Stansted Airport to the north, currently handles 8m passengers a year, and employs over 8,000 people. The requirement for improving public transport around Heathrow Airport in particular, resulted from the need to mitigate the effects of the increasing volume of air travel on surface access to airport site.

A car park levy is in place at BAA-run Heathrow, Gatwick and Stansted Airports to pay for improvements to public transport. Passengers contribute an average 25p (40 cents) for every parking transaction, this varies between 20-40p per transaction in short-stay, to 30p in long-stay car parks. This is credited to a BAA budget that goes towards improving public transport within and around each specific airport. In addition, £12 (\$19) of the annual staff car parking pass is earmarked to improve public transport access.

The funding channel for the revenues raised, is as follows. Firstly, the parking concessionaires (firms such as Pink Elephant, National Parking Corporation) collect the money, take their administration fee, pay VAT etc., and then hand the remainder to BAA. BAA then transfers the levy (minus VAT) from their parking budget to a public transport improvement budget. This is then administered by the transport managers at the three airports, in promoting public transport networks through improved marketing, and where appropriate through improved physical measures (e.g. bus lanes, signal priority for buses etc.).

At Heathrow, complementary measures to improve public transport access to the site have included the construction of the Heathrow Express Link and a network of bus lanes in west London. In addition, the Central Bus Station has been modernised and tougher parking policies & improved traffic control measures have been introduced on site. The transport fund also paid for the UK's first motorway bus lane on the Heathrow M4 spur road. At all three airports, staff have been encouraged to use public transport through the introduction of the Airports' Travelcard and BAA Stansted in particular has also adopted a policy whereby new airport staff recruitment drives take place on public transport corridors. With local staff shortages, the airport has been forced to look further afield to recruit. Accordingly, areas along the railroad line into Liverpool Street, such as Harlow, and Tottenham Hale in east London (where unemployment is relatively higher) are being studied.

No special enabling legislation was required to introduce the mechanism, and the parking levy idea has since been recommended as good practice in guidance on transport to airports issued by the Airports Policy Division of the UK Government's Department for Transport.

Other parties involved in administering and allocating the revenues raised from the mechanism include local councils and operators involved in each Airport Transport Forum, although it should be said that BAA ultimately decide how to spend the levy. This ensures that BAA can discuss commercial matters with transport operators business to business.

Political acceptability of the mechanism is high among councils and operators, although within BAA, questions were raised in terms of "what are we funding public transport for?". On the user side, no complaints have been encountered, probably because only a small amount relative to normal parking charges is earmarked for public transport, so that the levy has gone largely unnoticed. The operation of the mechanism has also proved relatively trouble free. The estimated revenue for 1999 at Heathrow is ~£2m (\$3.2m), out of total public transport expenditure of ~£650m (\$1.1b) (including the capital costs of building Heathrow Express, Piccadilly Line extension to Terminal 5, M4 bus lane, and refitting Heathrow Central Bus Station).

The main beneficiaries of the levy are airport staff - particularly users of the local bus network. Car drivers and passengers lose out marginally, but will gain over the longer term if BAA is successful in preserving free-flowing conditions. As to the effects on travel patterns, ticket data for Heathrow shows bus use doubled between 1994 (before bus improvements) and 1997 (when service levels were increased by up to 50%).

Advantages of the mechanism are that there is a certainty of revenue stream, allowing a more effective spending profile as a result. The mechanism is flexible and dynamic, and revenue can be increased fairly quickly if necessary. Encouraging new staff to travel using public transport is also more feasible since the service is more extensive. A negative aspect however is that the staff levy currently tends to be paid for by employers and so has no impact on staff travel to work patterns.

#### *Hospital parking charges*

Hospitals too, have begun to realise the potential for using parking charges as a way to finance access to their sites. The United Bristol Healthcare Trust runs a minibus service that is entirely financed by income from staff and visitor parking charges. The 14-seater buses carry staff, visitors and patients between the various city sites and pick up passengers from the local bus station (Transport 2000 Trust, 1998) (5). On a larger scale, Nottingham City Hospital has for many years used revenues from car parking at the site to pay for measures within its Travel Plan.

#### *Parking Charges – Lessons*

*Parking charges are commonplace. These examples demonstrate how in some cities, they are being integrated into local environmental and transport policies. Parking charges are a proxy ‘polluter pays’ mechanism that can be an effective tool of demand management. However they seem to raise only a limited (though often useful) amount of revenue to support public transport.*

#### *Hypothecated revenue from parking fines*

A related source to parking levies is that of parking fines. In the past, proceeds from parking fines went to central government, but under recent legislation, parking offences have become the responsibility of local authorities (called a Special Parking Area (SPA) or a Permitted Parking Area (PPA)). The income from fines is retained by the highway authority, and any excess money from fines collected in designated areas must then be specifically used to provide parking facilities, build road improvements, or enhance public transport.

SPAs and PPAs were enabled by the 1991 Road Traffic Act. The first such area was launched in Wandsworth in late 1993, with the rest of London following suit in June 1994. As of May 2001, over 70 local authorities have now decriminalised parking enforcement powers, including 33 in London, and authorities such as Winchester, Oxford and Edinburgh (Parking Review 2001) (6).

#### *Parking Fines – Lessons*

*Their impact is probably stronger as a fund raising mechanism than as an influencer of behaviour.*



## Developer Levies

The developer levy is perhaps the most widespread form of financing arrangement where money is hypothecated to improve public transport, not just in the UK, but world-wide, with examples found in such diverse cities as Bangkok, Manila, Tokyo, Hong Kong, Milan, London, and Washington DC. Typically, they tend to operate within planning rules and are consequently often more flexible and individually tailored to suit each particular situation. While the mechanism can take a number of forms, including benefit sharing, density bonusing, development charges, sale of surplus land or air rights and connection fees (Sims and Berry, 1999) (7), in Britain most developer levies can be classed as payment by the property owner.

This occurs where developers provide a transport benefit, such as an access road, a bus service or a railway station as an agreed part of a project. In some cases the developer may actually run a bus service for a set period of time as a condition of gaining planning permission, perhaps to an out-of-town shopping mall. More frequently, they provide money to the local authority for them to finance an improvement in public transport. For example, at Chafford Hundred, on London's eastern edge, a railway station was built as part of the development of a large housing estate. More typically they provide money to the local authority for them to finance an improvement in public transport. One particularly high profile scheme occurred where the developer of Canary Wharf in the London Docklands, Olympia and York contributed £400m (\$644m) to the £2.76bn (£4.4bn) cost of extending the Jubilee Line from Green Park to Stratford in 1992.

### *'Section 106' Agreement, Bracknell, Berkshire*

In the UK such agreements (named after the section in the planning legislation – section 106 in England and Wales, section 75 in Scotland), are quite commonplace. One such planning agreement was made in 1997 between Bracknell Forest Council and developer Helical Bar Developments (South East). Here, a contribution of £50,000 (\$80,000) indexed from agreement to the date of payment was paid on occupation of the site by the developer. This was to cover the costs of providing and/or securing and or operating public transport services, the routes of which include a link between the Western Industrial Area of Bracknell and the railway and bus stations in Bracknell town centre.

### *'Section 75' Agreement, Edinburgh*

In a similar case (the Ocean Terminal by the Port of Edinburgh), the developer has made available £500,000 (\$800,000) paid to the City of Edinburgh Council for public transport improvements such as bus shelters and public transport information was agreed to underwrite any shortfall of public transport operators not providing 5000 seats per day. This was agreed under a planning agreement (Section 75 of the Town and Country Planning Act in Scotland).

Overall, the key features identified in Farrell (1999) (8) regarding the planning gain mechanism, were that such projects tend to:

- be highly localised and have an easily identifiable impact;
- have a small number of players;
- only provide a small part of the infrastructure cost in the total budget for area redevelopment.

Development gain can be a clumsy mechanism. Often where the transport investment is needed is not where the planning gain occurs. For example, it may be necessary to invest in public transport in a city centre, but new developments are on the urban fringe, making available planning gain to address the adverse transport impacts there, but not to help the city centre.

#### *Developer levies and charges - Lessons*

*Charges by local authorities as part of granting developers permission to build are commonplace. Increasingly these are used to provide infrastructure support for public transport and, although it is more difficult, sometimes also revenue subsidies as well. Developer charges are generally popular among voters because they are perceived as providing a benefit for nothing, as the developer (or the developer's client) pays instead.*

*Developer levies have a number of practical limitations however useful though they may be for a particular locality, they are not available to fund public transport infrastructure and fares over a city as a whole. Furthermore they are generally available and have to be spent in growth areas. All this is well and good, but often it is in stable areas, in places where only limited development is taking place or in areas of decline, that there is the greatest need for public transport investment. There is also an issue of timing. Developer levies do not provide capital much in advance of development, unless planning permission is sold up-front, and thus it may be hard for localities to ascertain capital needs and thus the fees. Developer levies are also criticised for deterring development and increasing new housing costs, and resulting in competition between local authorities. Communities may also change their policy preferences depending on economic conditions, for example, finding a need to subsidise new development rather than letting new development subsidise the existing community.*

*Overall developer levies have useful selected use but have severe limitations as a general source of public transport finance.*

*From a developer's perspective, impact fees may replace more unpredictable, negotiated exactions. On the other hand, UK experience suggests that developers are often more experienced at negotiating than local authorities allowing them to reduce the amount they pay. One other benefit for developers of negotiated exactions is that local authorities in economically depressed areas are often so desperate for investment that they can often be 'played off' against one another, thus resulting in a more favourable outcome.*

*Exactions allow more flexibility than fixed impact fees. The problems are that exactions are not as predictable or equitable as developer charges or impact fees, due*

*to their being individually negotiated. Fairness may be decreased if politics enter into private negotiations. In addition, the revenue source is only as predictable as the economic conditions affecting the amount of development.*

## **Road User Charging**

While road tolls were common practice during the 18<sup>th</sup> and 19<sup>th</sup> Centuries, in more recent years tolls in the UK have usually been confined to bridges and tunnels. As a result, any proposal to introduce charges to any wider road network – be it a congested city centre or motorway – is bound to be controversial. Consequently, the adoption of road user charging as a ‘polluter pays’ area-wide scheme (as first tried first as an Area Licensing Scheme in Singapore in 1975 then as an Electronic Road Pricing Scheme in 1998) rather than a ‘beneficiary pays’ road/bridge funding mechanism has not been widespread.

### **New earmarking powers**

#### *Road user charging in Durham and London*

Under the 2000 Transport Act, local authorities may introduce ‘congestion charging’ within the UK. The city of Durham was the first in the UK to implement a congestion charging scheme. From October 2002 there has been a charge of £2 (\$3) for motorists accessing the historic centre between 10am and 4pm Monday to Saturday. There is a single entrance/exit to the charging area that is controlled by an automatic telescopic bollard. The bollard is raised during the period of charging and drops when a payment is made or when a vehicle fitted with a payment transponder approaches. The road user charging scheme was introduced after extensive consultation with affected parties in the area and has enjoyed widespread support. The amount of traffic entering during the charging period has been cut by a remarkable 90% with no noticeable increase in traffic on roads outside the charging area (Ieromonachou, Enoch and Potter, 2003) (9).

In February 2003 London Mayor Ken Livingstone’s congestion charging began, with motorists charged £5 (\$8) per day to enter central London between 7am and 6.30pm under legislation enacted in the Greater London Authority Act 1999. In total, the charge is expected to raise around £130m (\$210m) per annum earmarked to pay for improvements to the city’s public transport system, although in the event this figure is likely to be rather less due to traffic levels being affected more than was predicted. Enforcement is by digital cameras on roads into the congestion charging zone reading vehicle registration plates to check that the appropriate fee has been paid. A wide group of vehicle users are exempt from the charge, including the disabled, emergency services, motorcyclists, electric and other cleaner fuel cars, ‘key public sector workers, school buses and public transport. Registered local residents pay 10% of the fee.

Local authorities in Edinburgh, Bristol, Leeds, and Derbyshire are also seriously considering plans to introduce other road-user charging schemes (Sayer, 2001) (10).

There are also some indications that existing tolling authorities may be interested in using Transport Act 2000 powers to earmark funds from bridge and tunnel tolls to pay for improved public transport alternatives. For example, toll

revenues from the Dartford Crossing to the east of London will soon pay off the construction costs of the scheme, and so local councils in the region are pressing for the money to be hypothecated some £50m (\$80m) towards funding 'Fastrack' - a superbus scheme for the Thameside area (Surveyor, 2001) (11). Local authorities on Merseyside are also pressing ministers for permission to use fees from the Mersey Tunnel to pay for improved public transport.

#### *Road user charging – Lessons*

*Overall, there are important lessons to be learnt from the successes and failures of road user congestion charging schemes to date. These are not about the technology of road pricing, which has attracted much attention, but about how schemes are designed, the effective inclusion of user concerns, the use of road user charging revenue and political sensitivity. Major factors that appear to be associated with success are:*

*Having clearly defined and complementary objectives;*

*Not trying to achieve too much in the early stages;*

*Achieving at least some of the benefits promised as quickly as possible;*

*Being supported by politicians of all persuasions;*

*Being seen to work properly and reliably;*

*Gaining the support of the public;*

*Be understood by the public;*

*Having flexibility to develop as circumstances, public attitudes, objectives and technology change, and of being tweaked to react to 'unexpected' events;*

*Offering realistic alternatives to travellers who wish to switch from driving into the cordon;*

*Paying attention to details;*

*London particularly illustrates the 'lack of an alternative' issue, where the Underground and mainline rail services are already operating at full capacity. In addition, the Mayor's 2001 Plan for London seems to focus on plans for increasing high profile (and expensive) rail projects, which are unlikely to come to fruition in under 10-15 years. The Mayor's policy of enforcing bus lanes, more local bus services and subsidising fares will undoubtedly help, but will have a marginal impact on providing a viable alternative to car drivers commuting into central London. For example, no mention has yet been made of express buses relieving rail and Tube routes – a measure that could quickly provide capacity when road charging is introduced.*

*Fundamentally, public support is crucial to this type of scheme succeeding. While users may be prepared to put up with technical glitches and various uncertainties of how the scheme works in the short term, some rapid improvements in the transport situation are needed if there is ever going to be a 'long term' the road user charging concept.*

### **The Workplace Parking Levy**

In England and Wales, though not in Scotland, councils also have the option of imposing a car parking space levy on businesses. This could potentially be a powerful tool. This is because while controlling access to parking spaces has long been considered an effective way of reducing car use, councils have been hampered because the majority of parking spaces in town and city centres tend to be privately-owned and therefore 'beyond reach'.

While interest in the levy was initially high, due mainly to the promise that 100% of revenues raised would go to improving transport infrastructure, enthusiasm for introducing the workplace parking levy among local authorities has since cooled. For example, in the West Midlands, the seven local authorities were initially looking to introduce the levy but all ultimately decided to abandon the idea entirely. In Nottingham, the City Council is struggling to convince businesses that the levy is the right way to proceed.

This reduced eagerness has been due to a number of reasons. Firstly, political opposition among businesses to the levy has worried councils that new companies may be put off from moving into their area when faced with an extra business cost, and that existing companies might relocate elsewhere. Secondly, there are fears that the levy will be difficult and expensive to administer and that the measure will be seen as unpopular politically. Finally, the delay in implementing legislation seems to have lessened the political momentum towards introducing innovative transport policy. While originally proposed as a levy on private-non-residential spaces, the scope was subsequently limited to workplace employee parking only. The social and environmental impacts associated with other PNR parking still remain to be addressed.

In addition, as with every local car restraint policy, there is the 'beggar my neighbour' effect, whereby employers may be encouraged to re-locate either to out-of-town locations, or to neighbouring towns that do not impose the levy to cut costs. A passage in *Transport in the Urban Environment* by the Institution of Highways and Transportation succinctly expressed this.

*'As with many other demand management measures, competition between adjacent localities for economic strength can seriously reduce the effectiveness of well-intended policies. Given the choice between accommodating the requirements of a major project, which will enhance the local economy, by relaxing their more stringent policies or maintaining those policies and seeing the project go elsewhere, many authorities will opt for the former. While a firm national, or regional, policy framework might help to avoid such 'bidding' situations, it would be at some cost to local autonomy on key decisions.'*

*Parking Levies – Lessons*

*Like parking charges, parking levies are a proxy 'polluter pays' mechanism. However, they are largely 'new' having been developed in response to modern transport policy needs. The success of parking levy in very car dependent cultures suggests that this is a mechanism that could be widely transferable. But it is also a mechanism that requires great care in its design and implementation. Both Perth and Seattle show the importance between the introduction of the parking licence fee and the improvement to public transport funded. Any area parking levy system needs to be carefully justified, with targeted exemptions to cover equity issues – both for social reasons and for any major 'losers'. In design, it should be as simple as possible to understand.*

**Lessons learnt**

In general, locally-applied dedicated sources of funding mechanisms have evolved because 'traditional' ways of financing public transport were withdrawn or viewed as politically problematic. UK political parties have become increasingly sensitive to the levels of general taxation, and funding for public transport is particularly vulnerable to this attitude. This is because consistent expenditure is needed over a period of time and, importantly, the results of such spending are not usually apparent within the lifetime of a single government.

From the findings listed above, it is clear that revenue to fund public transport improvements can be raised in particular circumstances. So how should local authorities go about using such mechanisms to improve their transport situation?

The major lessons derived are that:

1. Paying in small and dispersed amounts is more politically acceptable than large sums;
2. Taxing polluting transport behaviour to pay for a less polluting alternative is acceptable, but the whole finance package should provide a viable alternative as early as possible. Alternatives need to be in place (or at least underway) before the tax is in position;
3. A consequence of the previous point is that the evaluation of hypothecated mechanisms has to be viewed together with arrangements to raise the capital funds that they will finance. There is a major issue of whether this should be public bonds or be the income flow that funds private investment in a public transport system (which could include full privatisation);
4. Using hypothecated taxes or charges to fund a popular and specific project is likely to increase acceptance. Transparency is a key issue;
5. The schemes need to be as simple as possible. Complexity tends to increase costs and reduce transparency;
6. It may be necessary to reduce other taxes to compensate the biggest 'losers' from the introduction of hypothecated charges and taxes. This is in line with the

principles of Environmental Taxation Reform where by existing taxes are replaced by ecological taxation. Cutting employee taxes, Council Tax or VAT, to offset an increase in fuel duty or a new road user charge might be examples;

7. There is value in the phased introduction of new charges, with the flexibility to fine tune and adapt them over time, as it is presently not easy to accurately model the impacts and success of demand management transport policy measures. Flexibility in mechanisms is thus key.

On a practical level then, the major barriers to implementing taxes and charges earmarked to pay for public transport in Britain, would seem to be political - how will the public react? - and practical - how can we introduce this? In addition, there is also the institutional fact that most fund raising powers have been concentrated at the central government level and the related uncertainty as to what is possible. Hence the limited range of mechanisms used so far and the rather haphazard nature of their implementation.

Another key issue relates to how the income flow from an earmarked charge is used to finance public transport programs. In many cases it has funded a revenue need, but when capital projects are involved, then loans are involved, paid for by the new revenue stream. This has important implications regarding the capital market and private sector's confidence in the source of revenue to service the loan. In the USA the issuing of bonds is used, but in Europe other mechanisms can be utilized. In the UK, private sector organisations are invited into 'Private-Public Partnerships' whereby they provide capital improvements in exchange for a contracted annual fee over 20 – 30 years. Major questions are however being asked as to the cost-effectiveness of such contracts. This is an issue that merits further research, particularly on comparative USA/European experience and practice.

### **The need for a strategic framework**

While there is no doubt that such mechanisms could potentially overcome the chronic funding problem for transport nationally, there is also a need for such mechanisms to meet wider social, economic and environmental objectives if they are to contribute to solving the overall transport problem.

In general, and in particular in the United States, most local earmarked mechanisms to fund public transport have evolved with no broad guiding public finance principles linking them to transport policy. Consequently, their impact on these wider objectives are ad hoc and unintentional, with some being beneficial, some counter-productive, and others having little overall effect. Thus, in some way the lack of progress in using such instruments as sales taxes, property taxes, cross-utility financing and employer taxes may make it easier to adopt measures more consistent with the 'polluter-pays principle'. These would comply with the taxation principles set out in the CEC's Fair and Efficient Pricing and Ecological Taxation Reform (EC, 1995) (13).

Unfortunately, it is these mechanisms, which include road user charging, fuel levies, and parking levies that tend to be the least tried and the most controversial. They are therefore also the most difficult to introduce. On a more positive note, it is also possible to reform other mechanisms. For example, employer and employee taxes

which at present are neutral or counterproductive, could reward companies locating in areas of good public transport provision (or who develop effective Mobility Plans) by exemptions or a reduced tax rate. Such a principle could also apply to property taxes and development levies.

Overall though, it should be recognised that earmarked taxes and charging can only contribute in part to changing travel behaviour. Specifically, the contribution of such dedicated funding mechanisms is two-fold:

- Providing a stream of revenue that can then be used to widen choice, improve the alternatives and put staff on to buses and trains; and
- Sending very strong price signals to the consumers about the financial advantages and disadvantages of the options available for a particular trip.

Ideally, what is needed is a blend of a reformed national tax system - to remove the distortions in pricing that currently promote car use at the expense of 'greener' modes - and local charging structures that work in harmony to deliver strong pricing signals and dependable revenue streams. Importantly this type of structure reinforces the principle of subsidiarity, whereby decisions on the direction and scale of local charges are made at the local level thus helping ensure that they are properly targeted and that they fulfil specific local sustainable objectives.

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