

**BEST PRACTICE IN  
SUSTAINABLE TRANSPORT POLICY IMPLEMENTATION:  
LESSONS FROM CONTINENTAL EUROPE FOR SCOTLAND, UK**

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**Abstract**

Based on a 2002 research project for the Scottish Executive, this paper aims to demonstrate how delivery of transport policy (in the form of schemes and services on the ground) in Scotland could be enhanced by adopting structures and processes used in other parts of Europe.

Keywords: Sustainable transport policy; Scotland  
Topic Area: H1 Public Sector Performance

**1. Introduction**

The objectives that were set for this research were to:

- understand the combination of factors that together combine to bring about best practice in the delivery of transport policy;
- consider those areas of Europe that have made exemplary progress in delivering transport policy and determine the underlying mechanisms – such as single bodies and regional/city-wide approaches to transport planning and delivery – contributing to this success;
- assess the delivery benefits that have been obtained through these mechanisms and whether their implementation can be seen as Best Practice; and
- assess how effective these mechanisms would be if transferred to Scotland and identify any barriers that would have to be overcome for their successful implementation.

The paper draws on various sources of information, as follows:

- A literature review of available journal articles, EU research project reports, reports from other government bodies, and publications of regional transport bodies themselves.
- A questionnaire survey of regional transport organisations throughout Europe. Some 58 questionnaires were sent out and 21 returned.
- Some 15 interviews with employees of regional transport organisations, and certain others, such as the European Commission, and Dublin Bus.

The paper is structured as follows:

- It first considers the existing transport implementation situation in Scotland.
- It then presents a review of literature and other information about transport policy delivery in a number of European cities and regions, identifying “success factors” in each case.
- From these sources, a set of “ideal pre-conditions” for the implementation of transport policy is derived.
- The existing Scottish situation is then compared with the “ideal pre-conditions”, and some consideration is given to how this ideal might assist transport policy implementation in Scotland, with particular reference to regional-scale projects.

- Final conclusions are drawn, summarising the findings and comparing these to the objectives.

## **2. The current transport implementation situation in Scotland**

Scotland is unusual in Europe in having no regional level of government with some responsibility for transport other than in the Strathclyde area, where the Passenger Transport Executive has control of rail services and the small proportion of non-commercial bus services (see below, for a further discussion of this regional body).

At the present time, the legal responsibility for transport policy delivery lies with the single level unitary local authorities created in 1996; with the Scottish Parliament and its Executive; and, one might well argue, with the private sector operators of buses and trains whose primary objective is profit maximisation – an aim not always entirely congruent with the transport policy objectives of public bodies.

In addition to these statutory entities, there are also four voluntary regional transport partnerships of local authorities in the west of Scotland around Glasgow, the east around Edinburgh, the northeast around Aberdeen, and in the rural Highlands and Islands. These bodies can implement transport policy only through the councils from which they are constituted and, therefore, can only implement regional/cross-boundary initiatives by consensus. An example of such an initiative is the regional integrated ticket recently introduced in south-east Scotland – this however is very costly when compared to other regions' (outwith the UK) integrated tickets, because it cannot by law be cheaper than tickets specific to one operator, and other bus operators' fares are not reduced by subsidy.

The delivery of new trunk (national) roads in Scotland is managed by the Scottish Executive (central government). Funding is normally entirely public, either as one-off capital expenditure, or by payment of shadow tolls (per vehicle using the road) to a private contractor who has a concession to build and then maintain the road over a set number of years.

Improvements in local bus services can be secured through a variety of mechanisms:

- Local authorities can contract operators to run additional services where these are deemed to provide best value.
- Voluntary (or statutory) partnerships between local authorities and bus operators can improve infrastructure, bus priority and vehicle quality in areas or on certain corridors ("Quality Partnerships"). The statutory option also gives the local authority some control over service frequencies. Currently in Scotland, no statutory quality partnerships exist.
- Quality contracts would allow local authorities to contract all or some bus services in their area, as occurs in Stockholm or London, for example. Subject to the approval of central government, this would give them full control over fares, routes and frequencies, which the other options do not.

Subject to public consultation, Scottish local authorities have the authority to make legal orders to manage the use of road space and reallocate it between different road users – thus they can make cycle paths, bus lanes and manage parking, for example. They can also fund, plan and build local roads.

Rail project implementation is a complex exercise within the current framework in Scotland and, indeed, Britain. Ownership of the infrastructure is separated from operations; the operators are private limited companies running under franchise to a central government agency (the SRA); the infrastructure owner is a not-for-dividend company limited by guarantee. Should a local authority wish to, for example, open a new station on a rail line in its area it will have to:

- Raise funds – normally from a variety of sources, sometimes including the private sector.
- Involve operator, SRA, infrastructure owner and health and safety agency in the planning of the station and the services that will serve it (for example, ensuring that the trains will stop at the station).
  - Draw up legal agreements regarding the ownership of the asset once it is built.
  - Obtain the agreement of the infrastructure owner to take possession of the railway land in order to build the station.
  - Go through the legal process to compulsorily purchase any other land required.
  - Contract out the construction of the station to one of a limited number of approved contractors.
  - If necessary, indemnify the train operator and infrastructure owner against any knock-on delays that may result from the construction of the station.
  - If necessary, pay for new trains that may be required to reliably run the timetable that includes stopping at the new station.

There is anecdotal evidence that the involvement of many different parties in such a process can slow it down and increase costs. Since the creation of this structure, in April 1996, one project (Crossrail in Edinburgh) involving two new stations and conversion of 0.66 km of track from freight to mixed passenger and freight operation has been implemented in Scotland.

Should a local authority in Scotland wish to have a new tram or guided bus way in its area, this would normally be pursued by public-private partnership (PPP). Sufficient public capital funding would be made available by central government and from the local authority's own capital resources to subsidise the construction cost of the project to a point where a private sector consortium can fund the balance of the construction costs and be confident that income from fares – which it would be able to keep for a specified number of years after opening – would be sufficient to repay the capital debt, and to make an operating profit. Planning and contract preparation prior to the letting of the PPP contract would have to be carried out by the local authority. The process has a degree of risk and uncertainty somewhat greater than if the project were entirely publicly funded and the construction and operation then contracted out. To date, no guided bus or tram projects in Scotland have been delivered using this mechanism.

### **3. Literature review**

The literature shows that the attainment of better/best practice appears to depend on three factors in particular.

The most important and inescapable factor is a willingness to spend money, and a ready source of this money, be it local income tax (Sweden) or employers' tax (France), or the national government for infrastructure investment (as in Spanish suburban rail lines). The money is spent on both infrastructure investment and fares subsidies. On its own, such a policy can achieve increases in public transport ridership, but rarely modal shift from car.

The second factor, which is particularly helpful in the attainment of mode shift objectives, is the existence of policies - such as traffic calming, pedestrianisation and car park charging - that restrain car use; and land-use planning that complements public transport use. For these policies, regional bodies are usually dependent on municipalities - rarely do they have control over these policies directly. Thus in only a relatively few cases is mode shift away from car achieved.

The third is the existence of some kind of regional structure - but these can be voluntary (as in Berlin, for example), and are normally limited to managing public

transport. The most important functions of the regional structure are to deliver integrated ticketing, service integration, franchising of bus and other services, and to lead and promote regional transport investment – especially investment in public transport. There is no region that has achieved better practice in transport delivery in Europe that is without a regional body; but there are regions that have a regional body but that have, for other reasons, *not* achieved better practice. This suggests that the regional body will not *on its own* lead to success – but success is unlikely to be obtained without it.

#### **4. Results of interviews and questionnaires**

The picture of transport policy delivery that emerges from the interviews and questionnaires is as follows:

- Transport policy objectives are similar across the cases surveyed, and thus similar to those in Scotland.
- Progress has been made towards implementing the infrastructure and services to achieve these objectives, but little progress made towards the objective of reduction in mode share for car and increasing that for public transport has been achieved in only a very few regions. Progress has been most marked towards accident reduction and increasing the accessibility of public transport fleets.
- Large scale regional projects – roads, rail schemes and new metros or trams – are more likely to be implemented than local schemes, according to the respondents for this research.
- Policies focusing on the restraint of the private car, and sustainable urban land-use (densification not dispersal) are the most difficult to implement.
- The most fundamental condition for the achievement of transport policy objectives is to have sufficient funding in place. This funding must also be spent on services and infrastructure that relate to those objectives (e.g. spend the money on public transport if the objective is to increase use of public transport).
- Political consensus and long-term political support for sustainable transport objectives is also very important, as it takes time to achieve transport policy objectives.
- Most regions have a regional body with responsibility for transport.
- The creation of these regional bodies has had beneficial impacts on transport policy delivery in some of the regions from which questionnaires and interview results were obtained.

#### **5. Case studies**

From the literature review, it was possible to identify a number of cities and regions whose transport policy, system and governance structure combine in some way to move those areas towards what is definitely better practice, if not best practice. The cities and regions are:

- Madrid, Spain.
- Barcelona, Spain.
- Jonkoping, and Sundsvall, both in Sweden (considered together).
- Berlin-Brandenburg, Germany.
- Copenhagen, Denmark.
- Helsinki, Finland.
- Stockholm, Sweden.
- London, UK.
- Munich, Germany.

- Zurich, Switzerland.
- Vancouver, Canada.

The review of each city or region was structured around the following factors, which relate to the overall objectives of the study:

- Their transport policy objectives.
- How they organise transport policy implementation.
- How they are governed.
- How they are funded.
- Whether there have been any major changes in their activities, or governance structure, in the recent past, that have either made it easier or more difficult to achieve their transport objectives.
  - The actual measures that have been implemented.
  - Levels and types of fare available for public transport services.
  - Their costs, both for operations and investment.
  - Measures of achievement - increases in public transport ridership, increases in quality of public transport, evidence of success in achieving land use policy goals and, most importantly, any changes in modal share for trips in their region.
  - Success factors in each case.

Table 1. presents the most important success factors that, from the review of available evidence, appear to have most influence on the achievement of transport policy objectives. Some of these factors are structural and political; and some are actual transport policies that appear to be particularly important in achieving overall objectives. The first six rows of the table cover these structural factors; and the other rows, the policies that have been most important in achieving objectives. “Public support” refers to the popularity of the region’s transport objectives with the public. “Political champion” refers to the presence, or otherwise, of a prominent politician who champions particular transport policies. “Central government “steer” ” refers to the degree of guidance from central government to local and regional authorities on the transport policy decisions that they should make. Key statistics on funding are shown in Table 2.

Table 1 shows that, after the existence of integrated ticketing, the most important factor in the successful delivery of transport policy is funding. Therefore, for those regions for which it was possible to gather information, financial data are presented in Table 2, and compared with the situation in the Lothians (the Edinburgh region of Scotland) and Strathclyde (the urban region around Glasgow in Scotland). This shows that, for both Scottish regions, public transport subsidy is below the average of the other areas, public transport investment is significantly below, and monthly season tickets cost significantly more, than in other areas of Europe. Public transport mode share is much lower. This confirms other work, for example by CfIT (2001). (The figures for subsidy are taken from the annual reports of regional public transport organisations. In some cases these figures may not include some of the costs of rail subsidies, which may be absorbed by national rail organisations – so subsidies *may* be higher than stated.)

Table 1 – Success factors in each case study

	Madrid	Barcelona	Jonkopin g/Sundsvall	Berlin- Brandenburg	Copenhag en	Helsi nki	Stockho lm	Lond on	Muni ch	Zur ich	Vancou ver	To tal “+”
Regional body	++ +	++	+++	+++	++	+++	+++	+++	++	++	++	28
Political consensus		--	+++	+++		+++	+++	--		++	--	9
Public support			+	++			++	++		++		9
Political champion		++					++	+++				7
Central government "steer"					++	++						4
Policy in place many years					++	++	++		++	++		10
Investment in infrastructure/services	++ +	+++	++	+	+++	+++	+++	++	+++	++	+++	29
Tendering of operations	+	+	+++	++	+++	+++	+++	+++		+		19
Parking restraint policy					++		++		++	++	+	9
Land-use transport integration	+	+			+++		+++		+++	++	++	16
Lower fares	++ +	+++	++	++			++	+				13
Integrated ticketing	++ +	+++	+++	+++	+++	+++	+++	(bus) +++	+++	++	++	31
										+		

+++ = very important factor

++ = moderately important factor

+ = slightly important factor

-- = factor works against success

Table 2 – Financial comparisons

	Popula tion (000)	Subsi dy (000)	PT Investment (000)	Subsidy/ Pop	PT Investment/ pop	Single fare	Monthly pass	PT mode share (all trips)	PT trend	use
a	Barcelona	4,228	£70,000	£2,500	£16.56	£0.59	£0.65	£20.00	30%	Up
gen	Copenha gen	1,800	£200,000	£8,240	£111.11	£4.58	£1.00	£20.00	22%	Stable
	Helsinki	1,200	£85,000	£48,000	£70.83	£40.00	£1.50	£30.00	26%	Up
m	Stockhol m	1,500	£212,000	£150,000	£141.33	£100.00	£1.20	£35.00	35%	Up *
	London	7,000	£200,000	£300,000	£28.57	£42.86	£2.00	£74.00	31%	Up
	Munich	2,500	£180,000	£500,000	£72.00	£200.00	£1.20	£25.00	25%	Up *
	Zurich	1,200	£150,000	£20,000	£125.00	£16.67	£1.50	£35.00	62%	Up *
er	Vancouv er	2,000	£150,000	£100,000	£75.00	£50.00	£1.20	£30.00	12%	Up
	<b>Average</b>	<b>3,003</b>	<b>£166,333</b>	<b>£128,749</b>	<b>£74.33</b>	<b>£51.12</b>	<b>£1.21</b>	<b>£30.56</b>		
Area	SPT Area	2,000	£102,300	Not known	£51.15	Not known	£1.50	£66.20**	13%	Stable (bus); increase on rail
h/ Lothians	Edinburg h/ Lothians	700	£41,000	£15,000	£58.57	£21.42	£1.30	£81+	14%	Stable (bus); increase on rail

\* evidence of mode shift from car to public transport

\*\* 4 zone Zonecard

+ Lothians OneTicket exc. N.Berwick

All figures are annual

Subsidy and investment for Zurich, London, Barcelona excludes national rail

Subsidy for Edinburgh includes an assumed £35 million of ScotRail subsidy; investment by operators in buses is an assumed £5 million (= 35 buses)

Subsidy for SPT from SPT accounts 2000/01

Subsidy for London and Edinburgh excludes BOG (formerly fuel duty rebate)

Notional single fare for Edinburgh and SPT interpolated from bus and rail fares in region; not weighted by usage

Mode share figures for Strathclyde and Lothian – from SHS 1999 and 2000 data – special run.

Table 2 also shows that the three areas that have achieved modal shift from car to public transport spend significantly above average on investment and/or subsidy, as well as having strong land use and parking restraint policies.

Table 2 shows, further, that the existence of regional bodies can be seen to be linked to the successful implementation of transport policy. This is not a function of the regional body *per se*, but rather of two key transport policy measures that have been implemented in the regions concerned: integrated ticketing, and (to a lesser extent), tendering of public transport services. This does not of course mean that these measures cannot be implemented without a regional body in place; however, the fact that all the regions considered in the Table have a regional body in place provides strong circumstantial evidence that there is a link between the governance structure, and what is implemented.

Table 1 can also be interpreted to provide a summary of the factors that have contributed to success in each case. It is obvious from the table that more factors have been important in the case of Stockholm than in the case of Madrid. However, there is no direct link between the number of success factors and the degree of success in policy implementation. Since 1986, for example, public transport ridership has been rising more steeply in the Madrid than in the Stockholm region, due to greater in-migration and changes in the distribution of population and jobs in the Spanish, compared to the Swedish, capital region. On the other hand, Stockholm has made some small progress towards reducing the use of cars, at least for commuting, whilst Madrid has not.

The simple count of plus signs in the final column of Table 1 gives us some indication of the factors that contribute most to effective transport policy implementation. These are (in order of frequency, with the most important first):

- Integrated ticketing.
- Funding.
- The existence of a regional body (although the questionnaires show that the existence of a regional body does not on its own guarantee successful transport policy implementation).
- Tendering of public transport operations.

Whilst evidence is very limited, further factors that are important if a mode shift from car to other modes is to be achieved, are as follows:

- A restraint-based parking policy, sometimes supported by road space allocation policies that give more space to cyclists, pedestrians and public transport (e.g. Zurich and Munich).
- Integration of transport and land use policy.
- Implementation of a consistent policy over a period of decades.

## 6. Conclusions

The paper has, through a questionnaire survey, identified that the objectives of Scottish transport policy are typical of regions and cities throughout Europe, and further afield. It has also shown that the key mechanisms and factors that underlie transport policy delivery to achieve these objectives are:

- The availability of capital funding for public transport at about twice current levels available in Scotland.
- The availability of revenue funding for public transport at about 20% higher levels than in Scotland.
- Lower public transport fares, and the availability of an integrated multimodal ticket at the regional level.
- Integration of public transport services (timed connections, new journey opportunities etc).



- That integrated services and tickets are always delivered through some form of regional transport body. In a few cases this body may be constituted on an entirely voluntary basis but, more often, its powers are statutorily defined. Unless the other factors listed above are in place, however, the regional body can achieve little.

- If mode shift from car to public transport, walk and cycle is to be achieved, then restraint of parking and reallocation of road space to more sustainable modes is very important.

- For policies to be effective, they must be in place for a long time (a decade or more), which implies consistent political consensus on their efficacy, if not party political stability.

In no region or city that can be considered to be delivering better or exemplary practice in transport policy implementation is the local roads-based public transport system deregulated; the most successful systems are run on a franchised (quality contract-type) basis. Given that some Scottish cities are currently considering how best to integrate existing bus systems with planned tram systems, it is recommended that more detailed study of contracting regimes is undertaken to assess the transferability of these to the Scottish context.

In delivering public transport infrastructure projects, none of the European case studies examined use a PPP framework, although it is quite common to run metros and trams on a franchise basis, once they have been built. However, funding for the construction of such schemes comes almost exclusively in the forms of public grant and borrowing consent.

Furthermore, the institutional structure for the delivery of rail projects in most of the European countries examined appears to be considerably more simple than in Britain.

In terms of delivery benefits, the cities and regions surveyed were asked to list projects implemented within the past 5 years; whilst these were not quantified (in terms of, for example, km of light rail installed), many of those surveyed had implemented several large projects within that timescale – tram and metro extensions, rail schemes and road schemes. There was a perception among some of the respondents that these larger schemes were more often implemented than smaller, more local schemes.

Of ten European cities for which data were available, all had enjoyed increasing public transport *patronage* over the past ten years or more, in stark contrast to the 30% drop in bus patronage in Scotland over the same period. However, only three had seen a *mode shift* towards public transport; these are areas whose central cities, in particular, have implemented parking and other traffic restraint measures.

At present, the conditions for transport policy implementation in Scotland and in Britain as a whole (outside London) are unusual when compared to those that exist in much of northern Europe; by inference, outcomes more in line with those of other parts of northern Europe would be more likely to be achieved, were those conditions to be in place here. But this cannot be guaranteed.

The key barriers to the attainment of these conditions in the Scottish case are:

- Financial costs.
- The organisational cost of setting up new organisations and transferring powers from existing organisations.
- Legislative changes, with regard to the structure of the rail industry.

These costs could be significant. It is suggested that one way to reduce possible negative impacts would be to implement experimentally the conditions that obtain in the case study cities and regions in other parts of Europe, but only in one relatively small area of Scotland, to better understand the impacts of these conditions in practice. This would also help to contain costs and any other negative impacts.

In final conclusion, therefore, this paper has surveyed and reviewed experience from several different regions and cities in Europe in order to better understand the mechanisms and conditions that appear to be most closely associated with better practice in the delivery of transport policy. These conditions are in many ways very different to those currently in existence in Scotland but, if implemented, would increase the probability that transport policy objectives would be achieved.

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