

Alternative Implementation Strategies For Radical Transport Schemes

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Introduction

At the beginning of the 21st Century it is widely acknowledged within the European Union that transport systems within many of its member states are stretched, and in some cases reaching breaking point. While many plans and solutions have been debated, none has yet succeeded in significantly improving the transport situation within Europe. For instance in the UK, road user charging has been consistently touted by academics and transport planners as the ideal policy mechanism for traffic reduction since the 1960s, but is only now being implemented for the first time, and its success is by no means guaranteed. It is suggested within this paper that the majority of problems, when trying to introduce ‘radical’ transport schemes, exist at the project implementation stage.

The term ‘implementation’ can be defined in many ways, for the purposes of this paper we have defined ‘implementation’ as: ‘policies, actions or decisions relevant to the target population that can be put into effect at “street level”’, and ‘implementers’ as those responsible for doing that. As the definitions imply, the policy process does not end once agreement has been reached on a legislative proposal. The agreement still has to be implemented before the policy has any real existence. Bardach (1977) has described the implementation process as a game (see also Mendrinou, 1996: pp13-16). Assuming rational behaviour, the policy-making actors will devise strategies for the implementation process, which will result in maximising their own benefits: as such there will both be winners and losers and/or successful and unsuccessful implementation. However, when a situation arises where implementation failure becomes so evident that a process of ‘re-steering’ (Lundquist, 1972: 33) has to take place, policy makers must take action to encourage or force implementers to behave in ways more likely to achieve the set policy objectives (Richardson, 1996).

The paper sets out to explain some of the common problems faced by those responsible for implementing transport projects. It goes on to examine some existing schemes from across the world and will explain how the transport practitioners overcame adverse public reaction. For example, the paper will note how the ‘Ring of Steel’ in London was introduced as a security measure, how Electronic Road Pricing was sold to the public in Singapore, and how motorists pay to enter Manhattan and San Francisco via bridge and tunnel charges. It then offers some lessons for European policy makers, showing how ‘alternative’ implementation strategies could be shaped and adopted within Europe.

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Accordingly, the following notes are more practical reflections on how existing examples of radical transport schemes might be classified according to a very simple implementation strategy framework than an academically rigorous exercise (although this might come later).

Background

Since the early 1950s all developed countries have witnessed a ‘mobility explosion’. Indeed, across the fifteen countries in the European Union (EU-15), overall passenger transport use (in cars, buses, coaches, trams, trains and aeroplanes) rose by 121% between 1970 and 1996. This translates to an increase in the average distance travelled by each EU citizen per day from 16.5km to 35km over the same period. Transport demand across the EU was calculated at being 4700 billion passenger kilometres in 1996 (EC, 1999).

The majority of this increase is almost entirely due to a rise in car use, although air transport is experiencing the fastest increase of all, albeit from a lower level than for cars. Over the 1970-1996 period, car use increased by 136%, with the modal share increasing from 74% of passenger kilometres in 1970 to 79% in 1996. This has been facilitated by increased road capacity, with income and population growth viewed as the major drivers behind increasing vehicle ownership and use (Marshall et al, 1997; Marshall and Banister, 2000). In the EU-15, there was a 34% increase in the number of vehicles owned between 1985 and 1995, with the number of cars on EU-15 roads growing from 60.77 million to 165.54 million, an average growth rate of just less than 4% a year. Thus, by 1996, there were 444 cars per 1000 EU-15 inhabitants (EC, 1999). OECD (1995a) predicted that this would increase by a further 50% between 1995 and 2020, bringing vehicle ownership levels to more than 600 per 1000 people in many EU-15 countries.

Such growth is frightening enough, but at the moment 80% of the 550 million vehicles (including 400 million cars) registered worldwide are owned by the richest 15% of people living in the ‘mainly developed’ and industrialised OECD countries. Unsurprisingly therefore, the number of vehicles and traffic levels are growing much faster in developing countries than in the developed world. Two-thirds of the rise in vehicles is forecast to occur in non-OECD nations particularly in Eastern Europe and Asia. If historic rates are maintained, the global vehicle population will exceed one billion by 2020 (Potter, 2000).

The need for radical solutions

Such a depressing prognosis requires radical treatment, but political factors have generally precluded such actions. And so the transport crisis continues to worsen... However, there are towns and cities that have managed to adopt radical car restraint policies without dramatic consequences. Using data from some of these schemes, this paper develops a number of potential implementation strategies that may be adopted by transport policy makers in the future. In short, eight strategies are suggested, four of which focus on ‘sweetening the pill’ of potentially unpopular measures, and three that aim to convince the motorist that the new policy is actually quite a reasonable response to the traffic problem. The final strategy suggests that transport policy goals need to be met through the sympathetic introduction of other ostensibly unrelated policies – surely the purest manifestation of joined up thinking.

Compensating losers¹

The introduction of road user charging in Singapore in 1975 has long been seen as a ‘one off’ event, which was only possible because of unique circumstances in that the citizens are generally law abiding, and there are no similar alternative cities for businesses to relocate to. But, while this certainly played a large part in the introduction of the original very simple and low-tech Area Licensing Scheme, which used paper windshield stickers enforced through visual inspection by traffic inspectors within a single cordon, it was less important when it was decided to adopt an Electronic Road Pricing (ERP) system in 1998.

Instead, what is less well publicised is that the Singapore Government made a policy decision to ensure that the majority of people benefited as a result of the change, and that as few people as possible lost out, at least in the short term. This was achieved by granting rebates to certain user groups. For example, taxis were given road tax rebates for the first three years after implementation, while businesses were given four years of rebates. In addition, a \$60 (€1.3) a month levy imposed on owners of non-residential parking spaces was replaced by a nominal \$1 (€0.52) per space per month licence fee in the same year. In other words, the Government ‘bribed’ the public to give the scheme a chance of working in the first year, and gambled on the scheme being accepted by the time the rebates were withdrawn.

Such an approach was possible because the main objective of the scheme is to manage traffic levels rather than raise revenue. The costs of the ‘subsidies’ were written off as a necessary implementation cost.

Bribing the motorist not to drive²

Certainly the most overt way of ‘incentivising’ drivers out of their cars is by paying to them not to use their cars for certain trips - i.e. effectively bribing motorists to use an alternative mode. One application of this principal – the parking cash out – is becoming increasingly common in the UK. Annual schemes operate at Southampton General Hospital and at Orange’s new Bristol office, while a monthly pass system operates at the Vodafone offices in Newbury, Berkshire.

Still more radical, the pharmaceutical giant Pfizer began operating a parking cash out scheme that rewards non-car commuters on a daily basis among staff at its research and production facilities at Sandwich in Kent in June 2001 and at Walton Oaks near Reigate in Surrey in December 2001. This works by using staff personalised security pass ‘proximity card’ technology. An employee’s card is credited with enough points to ‘pay’ for one month’s parking. The card opens the parking barriers and records how many points are used. If not used for parking, staff then cash in these parking points at the end of each month, which are paid through the payroll. Staff at the Sandwich site receive £2 (€2.9) per day for leaving their car at home, while at Walton Oaks the incentive is £5 (€7.2) a day – a reflection of the far tighter parking standards set by the local planning authority at the Reigate site. Overall, it is estimated that the value of cash outs given to staff will amount to around £0.5m (€0.72m) a year, and currently around a third of staff travel to work by modes other than the car.

It is not only parking spaces that motorists are paid to give up – in some cases they are paid to give up their cars. For example, during Green Transport Week in June 1999, public transport operator ‘First Glasgow’ introduced the ‘Swap a banger for a bus’ scheme, which led to more

¹ This section is based on Chan et al (2002).

² This section is based on information reported in Enoch (2002).

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than 500 residents of Glasgow swapping their car for an annual bus pass worth £560 (€10). In the USA too, a car cash out project is being tested by the State of Washington and public transport operator King County Metro in Seattle, through funding from the Federal Highway Administration value pricing programme.

Highlighting the benefits³

By contrast in Oslo, Norway, road tolls were introduced in the city to raise money to pay for new transport infrastructure, and not to reduce traffic congestion. This meant that the ‘rebate route’ might exempt too many people for the required amount of money to be raised. Indeed, the charges introduced were relatively low and were spread across the ‘population’ as far as possible so that they could maintain traffic levels and maximise revenue.

In the Norwegian case therefore, the important objective was to convince the public that the money they were being charged was being used to directly benefit them as motorists. Accordingly, much effort was spent on a well targeted and publicised information campaign, which was certainly helped by the charge being implemented only 14 days after the Oslo Tunnel (later renamed *Festningstunnelen* - the Castle Tunnel) was opened to traffic.

Offering more choice to the road user⁴

The key reason for drivers accepting the High Occupancy Toll (HOT) lane facility on Interstate 15 to the north of San Diego, is that drivers are offered a genuine and informed choice. Motorists can use the general purpose lanes for free with the likelihood of being delayed, or else they can pay but enjoy a hassle free and predictable journey time. This is a major factor missing from area charging schemes.

The HOT facility originally opened in 1988 as a High Occupancy Vehicle lane to buses, vanpools and two-person carpools. In 1991, it was suggested that the lanes could be opened to single occupancy vehicles (SOV) as only 50% of the two lanes’ capacity was being used while adjacent general-purpose lanes were experiencing severe congestion during peak periods. It was not until December 1996 that the HOT lane became a reality.

As drivers approach the HOT lane, variable message signs advise them of the toll to use the lanes. The level of this toll depends on how much spare capacity is available in the HOV lane, and varies from \$US0.50 (€0.56) to \$US4 (€4.5) in normal circumstances, with drivers paying more the busier the lanes. Around \$US430,000 (€481,000) of the annual \$US1.6m (€1.8m) toll revenue covers operating costs, and \$US60,000 (€67,000) pays the California Highway Patrol to enforce the lanes. State law requires the remaining money to be spent on developing the express lanes and improving the public transport service along the corridor, specifically, the express bus service known as the Inland Breeze, which began operating in November 1997. While initially there were concerns that the lanes would become ‘Lexus Lanes’ - i.e. only used by the rich - this has not been borne out in practice.

³ This section is based on Waerstad (2002).

⁴ This section is based on Enoch (2001).

The lesser of two evils⁵

Vaguely related to this, is the idea that the public are provided with two choices, one of which is even more politically unpalatable – yet just as logical or reasonable – as the favoured one. A recent example of this approach occurred in the City of Durham before the introduction of the congestion charge near the Cathedral in October 2002.

In summary, the problem was that traffic was causing problems for the World Heritage Site of the city’s cathedral and castle, as well as for pedestrian shoppers in the city centre. Accordingly, a transport study demonstrated that action needed to be taken – a position appreciated by almost everyone – either car drivers were to be charged for driving in the congestion area or else banned altogether. Given the alternative, it became the less controversial route for the council to adopt the access charge.

It might have been worse...

A similar tactic was used to herald the introduction of London’s Congestion Charge in February 2003. Hostile newspaper reporting prior to the introduction of the charge and predictions of traffic chaos by the London Mayor, combined with a lessening in traffic due to a half term school holiday, meant that for the first week the charge performed far better than expected. Consequently, after the first week of congestion charging the scheme was seen as a policy success. Further research is obviously required before labels such as ‘success’ or ‘failure’ can be assigned to this scheme.

Adapting tried, tested and accepted methods

Despite the recent media frenzy surrounding the launch of the London Congestion Charging Scheme in February 2003, two of the largest cities in the United States (San Francisco and New York City) have been charging vehicles to enter or exit downtown areas for many years. The two cities were able to introduce such a measure with virtually no adverse political problems. Drivers are required to pay tolls to cross eight ‘Caltrans’ bridges in the Bay Area of California, including the four bridges to enter San Francisco (Caltrans, 2000). Similarly in New York City, drivers crossing into Manhattan must pay to use seven of the city’s bridges and two tunnels (MTA, 2003). This apparent public acceptance indicates that drivers are happy to pay to use a facility such as a bridge or a tunnel, whereas the idea of paying to enter the downtown area of a city would be extremely controversial. The lesson here would therefore seem to be that ‘traditional’ charges that have been in place and accepted for many years might still do just as effective a job as something seen as new, radical and threatening, but with rather less opposition.

The Trojan Horse

Perhaps the classic case of a transport policy being introduced by a ‘trigger mechanism’ – i.e. on the back of a totally unrelated policy – is that of the so-called ‘Ring of Steel’ imposed on the City of London in 1993. This policy was executed almost overnight in response to a terrorist bomb attack in Bishopsgate, and involved restricting access to the central core of the city to a small number of roads. In addition to the closure of 17 minor streets and the conversion of 13 roads to one way, traffic signals were altered at 23 junctions and public transport and pedestrians were given greater priority (Cairns et al, 1998). Overall, as a result of what was a security policy – in the eyes of the public at least - traffic entering the restricted

⁵ This section is based on Ieromonachou et al (2003).

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area fell by a quarter from 160,000 vehicles a day, and pollution levels were 15% lower. However, there was a slight increase in traffic levels on the zone boundary.

Interestingly, the bomb exploded only a month before a traffic scheme known as “The Key to the Future” was due to be implemented that was also designed to restrict traffic for environmental reasons, and so significant elements of this proposal were incorporated into the security operation. It is probably fair to say that resistance to such a radical policy would have been far greater had the bomb not gone off, simply because the public is far more accepting of policies ‘forced’ on policy makers due to ‘circumstances beyond anybody’s control’ or by ‘safety concerns’. Therefore, similar conditions could perhaps be created by taking advantage of particularly bad weather or some other ‘Act of God’, or more predictably by maintenance problems closing roads, bridges (e.g. Hammersmith Bridge, see Rees & Williams, 1998) or car parks. Essentially, it may be worth transport planners becoming more involved with Emergency Planning sections at local councils.

Lessons to be learnt

Overall, there are important lessons to be learnt from the successes and failures of radical demand management 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 and political sensitivity. As implementation theory suggests, one of the most favourable conditions for successful implementation is where policy makers and implementers develop a co-operative relationship (Richardson, 1996: 290). Indeed, Cram suggests ‘if policies are formulated in the absence of active and enthusiastic participation by those whose co-operation is essential at the implementation stage, then implementation failure is more likely’ (1997:84). According to Pressman and Wildawsky (1984), correct implementation usually involves several semi-independent organisations or agencies, each of which can, to a large extent, block or change the direction of implementation.

Based on the findings from the case studies within this paper, the major factors that appear to be associated with successful implementation are:

- ? Being supported by politicians of all persuasions;
- ? Those responsible for implementation participate in the decision making process;
- ? Having clearly defined and complementary objectives;
- ? Gaining the support of the public;
- ? Being understood by the public;
- ? Achieving at least some of the benefits promised as quickly as possible;
- ? Being seen to work properly and reliably;
- ? Having flexibility to develop as circumstances, public attitudes, objectives and technology change requires, 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;
- ? Not trying to achieve too much in the early stages.

However, it is also clear that in many of the more radical schemes adopted around the world there are additional strategies that have been employed, either deliberately or as an act of circumstance. Firstly, the public is often willing to wait and see if a scheme will work provided that:

- ? They can perceive there is a problem and the policy seems a reasonable way of solving it;

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- ? They benefit from the scheme, are compensated in some way for any disbenefits, or are provided with a viable and acceptable alternative means of travel;
- ? They feel that other organisations or individuals are convinced the scheme is the right way to go.
- ? They feel they have been properly consulted for their opinions, and these have at least been listened to and ideally acted upon.

Secondly, the public will often accept a scheme if:

- ? They feel there is no alternative (or that it is the least worst alternative);
- ? The scheme is not so different to existing schemes or if they have had experience of similar schemes;
- ? The scheme is implemented as a response to some kind of crisis that is beyond the Government’s control – e.g. an act of terrorism or a national emergency – or that is obviously for the public good – e.g. drink driving, security.
- ? The scheme delivers what it set out to achieve.

Clearly, the strategies suggested are already implemented to varying degrees in most transport projects, but have possibly not been set out quite so bluntly in the past. It is also obvious that the appropriateness of some or all of these strategies is strongly dependent on the particular circumstances of a proposed scheme. Finally, there is scope for combining suitable strategies in order to increase acceptability still further.

In summary, increasingly, many countries experience problems with the implementation of a project – and in particular in convincing the public and/or local, national and European politicians – rather than the planning or even the financing of a project that determine whether it goes ahead or not. It is hoped that this paper might provide a slightly different way of looking at the implementation process so that future schemes may benefit.

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