KICKSTARTING GROWTH IN BUS PATRONAGE: TARGETTING SUPPORT AT THE MARGINS

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INTRODUCTION

Over the past ten years in England (outside London) both bus patronage and bus kilometres have fallen and continue to fall. The decline in bus kilometres has largely arisen from withdrawal of commercial services, which has not been wholly offset by increases in supported services despite increases in Government support for the bus industry to pre-deregulation levels in real terms (DfT, 2006a). It is therefore timely to examine innovatory methods of subsidy provision that seek to improve the commercial viability of services.

The Kickstart Scheme introduced in England in 2003 and the Bus Route Development Grant (BRDG) Scheme introduced in Scotland in 2005 attempted to address this problem awarding grants, through a competitive bidding process, of a maximum duration of three years to support the provision of new or enhanced bus services often in "marginal" operating territory. Supported services are expected to achieve financial sustainability and ideally to become commercially viable through patronage growth by the end of the funding period.

This paper is based on an assessment of the performance of the Kickstart and BRDG schemes undertaken for the Department for Transport and the Scottish Executive in 2006. The paper is structured as follows. Section 2 reviews the evidence from targeted subsidy schemes. Section 3 introduces the Kickstart and BRDG schemes and outlines the methodology. Section 4 assesses the bidding and implementation process drawing on evidence from extensive stakeholder consultation. Section 5 examines the impacts of the schemes. Section 6 considers the implications for planning and policy and the potential for Kickstart / BRDG style schemes in the future, with conclusions in section 7.

EVIDENCE ON TARGETTED SUPPORT

The number of schemes designed to push existing marginal services towards commercial viability or to create new commercially viable services is small, so a wider range of targetted subsidies were considered in order to illuminate the process of bidding and implementation as much as the outcomes. Section 2.1 briefly examines a small number of relevant non-competitive funds allocated by area type and competitive funds allocated according to scheme objectives with respect to process and implementation issues before moving on to consider patronage incentives in section 2.2 and incentives to commercial viability in section 2.3.

Evidence on Process and Implementation

Schemes examined were the non-competitive Rural Bus Subsidy Grant in England (SDG 2003) and the Rural Public Passenger Transport Grant in Scotland (SDG, 2001) and the competitive Rural Bus Challenge (RBC) in England (SDG, 2003) and the Rural Community Transport Initiative in Scotland (SDG, 2001). As Kickstart was initially introduced within the Rural and Urban Bus Challenge schemes in England, lessons on implementation should be particularly relevant. Key findings on the implementation process were:

- Ring-fencing of funds under the rural grant schemes was clearly critical in achieving objectives. However, doubts were expressed about the appropriateness of providing additional funds for rural services at a time when financial constraints were leading to service withdrawals elsewhere. The schemes were not perceived to be well coordinated with the more conventional support mechanisms for socially necessary services. The related question of equity also appears with respect to competitive schemes where some areas win and others lose.
- Speed of implementation where the nature of the funding streams led to the rapid implementation of experimental services. In some cases services were later withdrawn because they were not appropriate.
- Need for clear objectives and assessment, resources for monitoring and promotion. Monitoring appears to be a particular problem with targeted support schemes, where funds are provided for service provision only.
- Schemes seem to be effective in promoting partnership working between bus operators and local authorities.
- The focus of the RBC on innovative schemes led to technical difficulties and questions of what is innovative and whether innovation was an appropriate focus as opposed to need.
- For competitive schemes the cost of bidding and the lack of feedback. Together with the issue of non-players – do some areas require encouragement to apply?

Payment by Results: Passengers

Performance based contracts have been developed in a number of countries; however payments tend to be related to elements of service delivery rather than outcomes in terms of patronage (Hensher and Wallis 2005). A good example is Transport for London where the majority of contracts have now been re-tendered under the new Quality Incentive Contract regime, which targets reliability through bonus/penalty payments (London Assembly 2006).

In both Norway and Australia modelling work has been undertaken to identify the forms of subsidy to deliver socially optimal outcomes (Johansen et al, 2001; Larsen, 2001; Carlquist 2001 and Hensher and Houghton 2004). The results tend to favour two part support with a

base payment related to service delivery and or a minimum level of service and incentive payments above this relating to patronage and other elements of delivery. The patronage payment is designed to address both user benefits and externalities.

In the UK the Commission for Integrated Transport (CfIT) has supported work on bus subsidy and three different studies by Colin Buchanan and Partners, TAS Partnership and LEK Consulting all produced recommendations broadly supportive of a payment per passenger subsidy to replace Fuel Duty Rebate now known as the Bus Service Operators Grant (BSOG) (whereby 80% of fuel duty is rebated) in order to further incentivise operators to grow patronage (CfIT 2002). These studies were investigating the redistribution of support from BSOG to other means of support rather than additional funding. Estimates suggest that if BSOG funding were reallocated to a per passenger payment demand (in England outside London) could increase by 4.7%, with 20% to 40% of these passengers transferring from car (FaberMaunsell, 2002). However, the benefits would largely be felt on already successful urban routes with reduced profits elsewhere in the absence of additional safety net support. CfIT (2002) recommended the replacement of Fuel Duty Rebate (now BSOG) with an Incentive Payment per Passenger boarding (IPP) regime subject to additional support for adversely affected routes.

Payments based on passenger numbers have been introduced in a number of countries. Some of these provide a relatively small additional payment based on reaching patronage targets or growth alongside service quality criteria: Oslo buses (Johansen et al, 2001), Norwegian rail (Fearnley et al, 2004 and Fearnley, 2005), Oppland, Norway and Halland Sweden, bus contracts (Hagen and Longva, 2005) and some examples in the Netherlands (Van de Velde and Pruijmboom, 2005). However, there is little published evidence on the performance of the patronage related element of these contracts. There is some evidence on buses from Australia and New Zealand.

Patronage based payments were applied to bus services in both Perth and Adelaide, Australia, where area based contracts were in force and additional payments are based on additional bus kilometres and patronage. The patronage payments were based on boardings in Perth and boardings and trip length in Adelaide. Wallis (2005) gives patronage growth figures of 8% over three years in Adelaide compared to declining patronage in earlier years and 26% over four years in Perth. He concludes that key influences on this success are:

- The combination of a service based payment and a patronage payment incentivises enhancement while limiting risk;
- Partnership approach to developing services – but with government making the final decisions.
- Large area based contracts over long time periods (10 to 14 years).

The scheme introduced in New Zealand had two elements of the funding: a base payment relating to “current” patronage levels taken from 1999/00 and additional payments for increases in patronage. Patronage related payments were based on:

- Impacts of reduced car use upon travel times, fuel costs, accidents and environmental impacts
- Impacts on users of other modes through safety improvements
- Benefits of increased service provision to existing users (Mohring, 1972).

The main driver of variation between areas in payment levels was the congestion impact. Payments for additional growth were limited to three years and the rate for additional passengers was higher than for the baseline thus incentivising growth (Transfund 2003).

The initial rates of patronage funding were compared with the existing rates of support by Wallis and Gale (2001). Existing support was around $0.091 per passenger kilometre for supported bus services and around $0.01 for commercial bus services (as a result of concessionary fares) in Wellington. Under the Patronage Funding scheme rates were $0.40 per passenger kilometre in the peak and $0.08 in the off-peak where the average trip length was 4.6 kilometres. Wallis and Gale concluded that the rates would be sufficient to call forth additional services in the peak where there was suppressed demand but that this was less likely elsewhere and that for off-peak periods some expansion would occur.

Wallis and Gale (2001) reported growth of between 2% and 10%, with innovative services performing well. Later evidence reported in Wallis (2005) shows patronage increases over a two year period of 16% in Auckland, 7% in Wellington and 40% in Christchurch. However, the authors note that patronage was growing in most areas prior to the introduction of the scheme and suggest that more of the growth may be attributed to the Kickstart element of funding (see section 2.3) than the patronage funding element.

Moving to Commercial Viability

An alternative or in the case of New Zealand complementary approach is to directly target support at marginal services to achieve higher patronage and financial viability. In New Zealand it was recognised that the patronage funding scheme would not grow the market quickly as payments were only triggered after patronage had been generated, also imposing risks on the operator. In order to achieve patronage growth more quickly, a short term scheme designed to cover the transition period before the patronage funding impacts emerged.

Kick-start funded a percentage of the net cost of approved new services and initiatives to increase patronage including for example; marketing and capital expenditure to a ceiling as well as bus service provision:

- 80% of costs incurred in year 1;
- 60% of costs incurred in year 2;
- 40% of costs incurred in year 3.

The decreasing rate of support was intended to incentivise operators to grow patronage. Wallis (2005) implies that the Kick-start funding was indeed effective in growing patronage in the early years of patronage funding. Whilst Souter et al (2004) attribute growth in patronage of 27% over 20 months in Auckland to Kick-start funding which enabled capacity increases to occur. Transfund also provided funds for "commercial trials" targeted at growing patronage on already commercial services and this amounted to 27% of the funds allocated to Kick-start and commercial trials in 2003/4 (Transfund, 2003).

Work on the development of the bus network in Plymouth offers an early implementation of the principles inherent in the Kickstart approach in the UK. Bentley and Lynch (2001) report that 17 routes had been moved to commercial operation through the use of "seed corn" funding securing annual savings in subsidy support of nearly £180,000. The authors note the

[1] New Zealand Dollars, in 2007 1 NZD = £0.39 GB, €0.57 and $0.90 AUS approximately.

benefits from recycling savings into the network to allow further extensions. Services on average took five and a half years to become commercial:

> "Subsidising bus routes can be a bit like turning round a supertanker – time consuming, but ultimately successful." Bentley and Lynch, 2001.

The Stagecoach Group (2002) proposed a new funding scheme for the UK based on Transfund's successful experience with an aim of pump-priming bus improvement projects that are not commercially viable in the short term but which could be developed into commercially sustainable services over a maximum time period of three years.

The principle of Stagecoach's proposal followed the successful experience in New Zealand and a Stagecoach a pilot project in Perth, Scotland to test whether similar results could be achieved in the UK. Stagecoach selected a poorly performing, low-frequency bus route with a profile of aged owner-occupiers with high car dependency, where normal planning based on experience would not justify significant investment. Perth and Kinross Council introduced a bus priority scheme on the route and new bus shelters. Stagecoach made significant changes to the service offer: doubling the frequency; introducing low floor buses; simplifying the fare structure which reduced many fares and undertaking a wide range of marketing activities (Souter et al 2004). Reported results include:

- Passenger growth of 56% on the service for the first two years, predicted to total 63% after three years
- Modal shift from private car to bus (not quantified);
- Break-even point forecast for year four (including return on capital).

Souter et al concluded that there was considerable latent demand amongst non-users who are prepared to change modes estimating that up to 40% of the UK population have a suitable profile for conversion to bus use and that around 10% of Stagecoach routes meet the necessary criteria. They also note that a bus operator would not risk rolling out a three year programme of this type due to the impact on profits.

Based on the case study of the Perth pilot project, Stagecoach estimated that a total fund of £140 million would cover the three year project period across the UK and grow bus patronage by 2% overall. The scheme as envisaged by Souter et al would have been operator led with local authority endorsement of proposals which would go from operator to the Department for Transport directly. The bus operator would bear a degree of risk in that if patronage and revenues failed to increase as forecast the operator would bear the loss. Overall Souter et al suggest that if rolled out across the UK Kickstart could

> "transform the existing pattern of bus use across the country into one of organic growth".

Experience with Kickstart style funding whilst limited suggests that may be highly effective in growing patronage and revenues.

Conclusions

Surprisingly few schemes that have sought to incentivise patronage growth or improved the financial viability of services and the evidence on their performance is limited.

Well designed schemes with clear incentives to operators have performed well, for example, patronage funding in New Zealand. However, where objectives are not clearly defined or do not relate obviously to outcomes, for example "innovation", the results may be adversely affected.

The need for stability in funding support is clear. This is in order to provide a stable framework in which to plan rather than merely a guarantee of support levels. Indeed rolling programmes and decreasing support over time are specified in many of the patronage schemes reviewed.

There is wide support in the literature which is supported by albeit limited evidence from New Zealand and Australia that patronage funding as part of an overall support package is successful. However, it is also clear that to be successful such support has to be set at a relatively high level in order to call forth new services and that this funding will normally be additional to existing funding.

There is some UK evidence of the application of Kickstart style approaches to make services commercial using different sources of funding these include: Rural Bus Support Grant (SDG 2003), the local service tendering budget (Bentley and Lynch 2001) and commercial experiment (Souter et al, 2004).

SCHEMES AND METHODOLOGY

Kickstart and Bus Route Development Grant Schemes

Kickstart began life as part of the Urban and Rural Bus Challenge Schemes in 2003 in England. The objectives were to increase bus patronage and develop bus services as an alternative to car use, with an additional aim of achieving commercial viability by the end of the Kickstart funding period (DfT 2003a and b). Kickstart has since been expanded with amended objectives and has superseded the Challenge schemes. The latest Kickstart funding round in 2005 placed commercial viability at the heart of the initiative.

> "projects which have a clear prospect of becoming commercially viable, or otherwise fully self-sustaining with a guarantee of local authority subsidy or other sources of funding, after a finite period of Kickstart support" (DfT 2005a).

The Bus Route Development Grant (BRDG) scheme administered by the Scottish Executive (SE) operates on similar principles to Kickstart. The general purpose of the grant is to "improve access to public transport, encourage modal shift and reduce congestion" (SE 2006a). As with Kickstart there is an emphasis on projects that can achieve commercial viability but this is not prescriptive in that

> "subsidised services and subsidised elements of services will also be considered for funding where growth can be demonstrated or where other benefits such as improved accessibility or bus networks can be achieved, and where the transport authority agrees to maintain the existing level of subsidy during the specified period of service or until commercial viability is achieved." (SE 2006a).

Both Kickstart and BRDG provide support for up to three years. The first round of Kickstart schemes in 2003 saw funding amounting to £7.83 million awarded to 18 pilot schemes. A further 43 schemes were allocated funding of £20 million in the second round in 2005. The initial 27 BRDG awards totalling £12.2 million were made in March 2005. This was followed by £3.7 million funding in a second round of nine schemes later in 2005 and in October 2006 by the announcement of a further eight schemes totalling £7.5 million. This study examined 97 schemes with a total cost of £43.7 million, rather less than 2% of the total public subsidy to the bus industry.

2006 offered the earliest opportunity to examine the performance of both the services provided in relation to the objectives and of the process by which the schemes are administered. For the 2003 Kickstart awards and to a lesser extent for some of the BRDG schemes and 2005 Kickstart awards it is also possible to examine the impacts and outputs.

Methodology

The study was undertaken in 2006 and had two key themes: obtaining and analysing data on scheme performance and the development and implementation of two phases of stakeholder consultation.

The main sources of data available were the Kickstart proposal documents and the annual progress reports submitted to the Department for Transport. Although some information could be extracted from these sources for both quantitative and qualitative analysis, most of these progress reports contained little monitoring data. Additional data was therefore gathered during the consultation phase from Local Authorities and bus operators. Overall data availability and quality for the purposes of comparison was poor for a variety of reasons:

- Baseline data and targets for patronage and revenue in the bid documentation were often entered in an inconsistent manner. The Kickstart pro-forma did not require the current level of patronage for services where any enhancement was proposed.
- Local authorities do not tend to hold or request comprehensive or consistent data on Kickstart schemes.
- Operator concerns over confidentiality of data

There was a clear difference in philosophy in the reporting requirements between the Kickstart and BRDG schemes. Essentially for Kickstart reports “there are no fixed rules” (DfT, 2006b). Reports are expected to contain information on patronage, cost per passenger and marketing activities but there is no requirement to provide quantified data in a particular form. This has tended to result in descriptive reports with little or no quantified data. In contrast the Scottish Executive requires a detailed breakdown of costs, revenue and patronage on a quarterly basis to be submitted on the grant claim form (SE 2006b). This should provide the Scottish Executive with a good base from which to assess performance in terms of patronage.

As a result of data constraints quantitative analysis is limited to a simple analysis of patronage growth and support per passenger and additional passenger.

The consultation was intended to: provide insight into the performance of the services and the extent to which they are meeting their objectives; obtain information regarding any problems

and issues that had arisen in implementing the services and how these had been addressed by the partners; obtain data on scheme monitoring where available for analysis. Pilot interviews were conducted with representatives of two of the Kickstart pilot projects to test the suitability of the topic guide and to assess the average amount of time required per interview. The consultation took place in two phases.

Phase 1: face to face interviews with representatives of all 18 of the Kickstart pilot projects awarded in 2003. Separate interviews were conducted with the operator and the responsible local authority. Interviews lasted around 90 minutes on average.

Phase 2: interviews with representatives of successful 2005 Kickstart and BRDG schemes in addition some unsuccessful bidders and non-bidders were interviewed (through the use of a case study area – the East of England).

For the second phase the topic guide was amended to concentrate more on the processes and issues given that the availability of quantitative data was likely to be scarcer than for the 2003 Kickstart pilot schemes. Full details of the topic guides, successful bids and organisations interviewed may be found in Bristow et al, 2007.

PROCESS AND IMPLEMENTATION

Here we address issues uncovered in the stakeholder analysis on the process and implementation of Kickstart and BRDG. Specifically: the bidding process; the implementation process, and marketing and market research, detailed discussion of these issues may be found in Bristow et al 2007. Table 1 summarises key points arising from experience of the bidding process and case study 1 provides an illustrative example.

Table 1: The Bidding Process

Feature / Issue	Experience
Originator	Local Authorities who sought schemes that "best" fit with local objectives. These would not always be the schemes that operators felt would be most successful.
Consultation	Local Authorities need to ensure that all operators have the opportunity to put forward schemes: this didn't always happen in the 2003 round.
Bids	Prepared by Local Authorities, sometimes using in-house or commissioned consultants. Pro-formas seen as useful but still data inconsistencies and some found it difficult to make a good case within constraints.
Tendering	Schemes were developed as a partnership between the Local Authority and an operator. It was never envisaged that services would be put out to tender. Problems arose because of doubts on compliance with the 1985 Transport Act, EU legislation and competition legislation. See case study 1.
Timescale	Time between announcement and submission date for Kickstart perceived to be too short to allow: • Development of cogent, coherent proposal • Full consultation with operators • Consultation with potential stakeholders • Coordination of capital expenditure In Scotland some confusion over timescales: authorities felt the need to rush in case the "pot" was exhausted.
Scheme objectives	Scheme objectives were quite diverse especially for the 2003 pilot schemes, but fall broadly into the following categories: • social inclusion and exclusion,

	• public transport service level, • wider policy integration, • patronage, • modal shift, • financial viability / sustainability, and • infrastructure.

Case Study 1 - Post Award Tendering

- A proposal was developed in full co-operation between the local authority and the operator, for a new service to penetrate a new residential estate
- Following award of funding, the local authority was concerned that they had not circulated an open invitation to all operators to submit ideas for Kickstart bids
- As a result, the authority decided to go out to competitive tender
- The tenders received in response were higher than the funding award
- The authority is of the opinion that the pace of development means that a service is not yet required on the estate
- The operator is of the view that this is an opportunity lost
- The service is not operational and it is expected that a further tender round will be required in the future, for a reduced level of service or a shorter operating period

Table 2 summarises key points arising during the implementation process.

Table 2: The Implementation Process

Feature / Issue	Experience
Partnership	In many cases genuine partnerships between Local Authorities and bus operators have evolved or been strengthened.
Timescales	Delays most likely to occur for two reasons: • Vehicle purchase – less of a problem for national operators with fleet replacement programmes but smaller operators would need to delay orders until the award was confirmed. • Infrastructure works by the Local Authority. Perceived inequality in commitment – see case study 2.
Risk	Clearly greater for smaller operators. Local Authorities: some keen to support marginal services to aim to reduce support budget, others more risk averse only happy to support schemes with very good chance of becoming commercially viable.
Vehicles	Some authorities have tried to secure any new vehicles to routes beyond the Kickstart contract period.
Monitoring data	High degree of variability between authorities from requiring monthly returns as for a supported service to a hands-off commercial service approach.
State aid	SE in seeking to ensure that state aid rules are not breached has requested data on whole routes including parts not covered by BRDG – this has led to operator concerns with respect to confidentiality of commercial data.
Clawback	Where a BRDG service performs above forecast levels the level of support is reduced accordingly. Although in the original rules, operators felt this wasn't clear enough. This could also be seen as a penalty for success. Clawback does not apply to the Kickstart services.
Capital funding	Uncertainty as to whether such funding could be applied for under this scheme – led to some authorities bidding for and getting such support to the surprise of others.

Case Study 2 – LTA Failure to provide timeous capital works

- Proposal for an enhanced frequency town service developed in co-operation between the operator and the local authority
- Peak Vehicle Requirement of the enhanced service was determined based on infrastructure works which the authority was committing to deliver
- Immediately prior to submission of the bid, the authority informed the operator that they would not be in a position to commit all of the capital funding required for the infrastructure works
- The bid was submitted and funding was awarded, but at a greater commercial risk to the operator than would be the case had the capital funding been secured in advance.

The responsibility for marketing and market research seemed to default to the operators, in line with practice in relation to commercial bus services. The approach adopted differed between projects (and operators) with the do-minimum being a new timetable leaflet. Other interventions included:

- Door-to-door leaflet drops to properties along the route of the service immediately prior to start of the service / service enhancements.
- Customised timetable for different parts of a route providing a different timetable leaflet showing key residential areas and employment locations.
- Telemarketing: involving telephoning householders living along the route of the service to ask whether or not they use the service. Those who do are thanked for doing so and asked their opinions of the service. Those who do not use the service are encouraged to do so by the provision of free travel tickets to be used within a specific period of time. The non-user group is contacted again a few weeks later to ask whether they used the tickets and their opinion of the service.
- A series of television adverts which achieved a good response and which were specifically targeted at the target markets for the Kickstart services.
- Launch events were favoured for completely new services, with activities including competitions, distribution of free promotional items and press coverage of the event.

Case Study 3 – Marketing & Promotion

- Independent bus operator adopted a settlement-specific approach to marketing of the new service
- Leaflets produced for individual sections of the route, including door-to-door leaflet drops
- Utilised Kickstart funds to employ a marketing officer on a temporary basis to consult with employers on the industrial estate, to discuss issues such as tax breaks for encouraging employees to travel on the service
- Free travel for a month for employees who completed a travel diary
- Consultation demonstrated that original timetable was not meeting the shift requirements of the industrial estate and the timetable was amended accordingly

One trend which was noted with regard to all projects was the comparative lack of marketing and promotion of the services following the initial launch and / or start of the service. Funding has been obtained within some of the later schemes for marketing and promotion campaigns.

Very little market research has been undertaken to assess the views of users (and non-users) with regard to the new / enhanced 2005 Kickstart and BRDG services.

SCHEME IMPACTS

Here we examine evidence on scheme impacts including, patronage, modal shift, social objectives, user benefits, added value, value for public money and commercial viability.

Patronage

The 18 pilot Kickstart schemes are considered first as most have been operating for a time period that allows some assessment of patronage growth. Table 3 compares patronage for the first full year of scheme operation with that of the previous year expressed as percentage annual growth for enhanced schemes. This compares well with the fall in bus patronage of 2.3% in England outside London between 2003/4 and 2004/5 (DfT 2005b). The reference decline in patronage represents a continuation of trend over the past 10 years, in the face of which arguably any growth in patronage represents success. In at least one case performance has been adversely affected by long running major roadworks impacting on reliability.

Table 3: Percentage Annual Change in Patronage

Change in patronage	Year 1: number of services	Year 2: number of services[2]
Fall in demand	1	2
Growth 0% to <10%	4	3
Growth 10% to <20%	2	2
Growth 20% to <40%	4	1
Growth over 40%	1	1

The greatest improvement is as anticipated in the year one launch period when changes impacting on journey time, opportunities and quality are implemented and marketing activity is most intensive. The average growth rate declined from a year one level of 21.0% to 11.8% in year two. Nevertheless, two schemes achieved a higher rate of growth in year two than in year one. Overall most of services for which there is some data appear to be doing well achieving strong growth over time. Of the 16 schemes for which some information is available 12 have met or exceeded their year one patronage target, in some cases dramatically and six out of eight schemes met or exceeded their year two target.

Although the sample size is very small there are some insights to be gained from disaggregation:

- Growth rates for urban schemes are approximately twice as high as for rural schemes.
- Schemes with infrastructure investments performed on average twice as well as those without. There are exceptions.
- Most schemes involved frequency enhancements and those that did not are less likely to perform well.
- Schemes that extended their geographical coverage tend to perform less well than those that stuck to their existing operating area. But again there are exceptions.

[2] Contains some extrapolated part year data.

A limited amount of information is available on the Kickstart 2005 schemes and BRDG schemes. Three 2005 Kickstart schemes are on line to exceed their first year patronage targets and achieving high growth rates. Where problems have emerged these are largely related to the bid and implementation process or external factors such as the implementation of free concessionary fares.

For nine BRDG schemes it is possible, albeit on the basis of part year operation, to examine patronage – all are achieving some patronage growth (in some cases very high rates) and seven are on line to exceed their first year target growth.

In both cases this is again set against an overall declining market -1.2% England outside London and -0.4% Scotland for 2004/5 to 2005/6 (DfT 2006c). It seems that promoters of the later schemes have learnt from the experience of the 2003 Kickstart.

Changes in patronage are affected by many factors other than the grant scheme. These include underlying changes in bus use occurring anyway and the impact of any local factors, such as fares increases, changes to frequencies on other routes affecting the attractiveness of local bus systems as a whole, demand management measures and road works. At a national level changes have included:

- Increases in bus operating costs of 7.8% in 2004, 8.2% in 2005 and 7.1% in 2006 (CPT, 2007). These increases are running at more than twice the level of Retail Price Index increases over the same period (ONS, 2006). With respect to services re-tendered in 2005, ATCO (2005) note average price increases of 8.7% in the English counties, 11.9% in the unitaries and 13.9% in the PTE areas.
- Bus fares have been increasing above the rate of inflation in England outside London and by 2005/6 were 25.4% higher in real terms than in 1995/6 (DfT 2006c).
- Policies such as the extension of concessionary fares from half fares to zero fares in England will clearly have some effect though it is difficult to foresee what. The allocation method may leave some authorities with a shortfall in funding which could lead to cuts to supported services.

The cost increases in tendered services will have put pressure on Local Authority budgets for supported services. At a national level the increases in costs have not yet been fully reflected in fare increases. However, there have been significant fare increases in some areas and a number of schemes examined here have been subject to fare increases of up to 30 to 40% over a year, such an increase would be expected to reduce demand by 12 to 16% (all other things being equal, assuming a short run demand elasticity of -0.4, Balcombe et al, 2004). In such circumstances even declining patronage may represent relative success.

In the context of national trends the patronage growth achieved by Kickstart services is impressive.

Modal Shift

Modal shift is a difficult aim set for the Kickstart / BRDG programme, as many of the schemes are located in “traditional” bus operating territory with high indices of social and economic deprivation and low car ownership, where the opportunities and scope for modal shift are limited. Some modal shift might be expected in schemes which operate within commuting corridors where the new bus offering allows modal transfer to a high quality and frequent bus service.

Monitoring reports or other information sources based on surveys of passengers, and in some cases non-users, were available from a small number of authorities. In Devon this involved 210 on-bus interviews and 603 telephone interviews from a random sample, conducted in February 2006 (Devon County Council, 2006). In Oxfordshire 318 on-bus questionnaires were administered in May 2005 (Oxford Brookes, 2005). Two surveys were conducted relating to the Thanet Loop service the first of which obtained 321 on-bus responses and 70 responses from households (Walters, 2005) and the second involved on-bus interviews with 803 passengers (Babtie Group, 2005). Some evidence was also available for the St Helens – Liverpool John Lennon Airport "Airlink" Service.

The Culm Valley Connect service provides for commuting trips into Exeter and the proposal stated "to provide an alternative to the car for journeys to work in Exeter" as a key objective. The service saw major service enhancements including a doubling of frequency on existing elements and extensions into new areas. 36% of passengers reported that they had previously used a car or motorcycle to make the journey. Just over half (51%) had used a different bus or coach service and 9% had not previously made the journey at all (Devon County Council, 2006).

The Thanet Loop aimed at improving the network, increasing patronage and access in a relatively deprived area of Kent. Modal shift was not a stated aim. The service now offered includes peak frequencies of less than 10 minutes for some elements of the service. A survey of users (Walters 2005) found that 16.5% had not used the bus before the improvements and a quarter of these had not made the journey before. Of those that had made the journey before, just over half had switched from the car – i.e. 6.2% of users of the improved service had switched from the car (Walters, 2005). This survey also indicated that just over a quarter (27.6%) could have made their journey by car (as a driver or passenger). Another survey in December 2004 found that of those passengers interviewed who had previously made the same journey just under 2% has previously travelled by car (2.6% including taxi journeys) (Babtie 2005). It is reasonable to conclude that modal shift of 2 to 6% has been achieved.

The Abingdon-Witney Link had an objective to "reduce dependency on travel by car". A survey found that "rather more than half the users did not make the journey before the service was introduced. Amongst those that did, 1 in 3 previously travelled as a car passenger and 1 in 10 as a car driver" (OBU, 2005). The report also finds that currently "on weekdays about 1 in 8 passengers use the X15 even though they have the sole use of a car", which shows that the bus is apparently saving car trips being made by users who have a choice. Moreover, it also notes that "a half of passengers have a car in their household but do not drive – this applies particularly to students using the service", which indicates that in the absence of the bus, the trips could have moved to car passenger.

The St Helens – Liverpool John Lennon Airport "Airlink" Service was largely aimed at improving access and regeneration of commercial and district centres served. Frequencies were enhanced from 30 to 20 minutes. Merseytravel monitoring suggests that modal switch from car of around 8% has occurred.

Whilst the monitoring evidence is limited, it suggests that the level of modal shift varies, with those schemes where it was an explicit aim delivering a shift of 36% from car in the case of Culm Valley Connect and in the case of the new Abingdon – Witney link carrying around 15% of passengers who would otherwise be using car. These figures are impressive. Even services where modal shift was not an aim appear to have achieved shifts of 2% to 8%.

Despite the fact that high levels of modal shift have been forecast in some places, there appears to be little in the way of robust monitoring planned in either Scotland or England to assess the actual level of modal shift which is likely to take place. Bids for BRDG funding explicitly require an estimation of the number of modal shift trips likely to take place.

Even in the case of quality bus corridors, where the potential for modal shift is probably greatest the evidence is limited and suggests a range of modal shift between 2% and 23% (Bristow et al, 2002). There is an additional issue here of "indirect" modal shift, where change arises not through the like for like transfer of a specific journey but through:

> "A new willingness to consider bus for new journeys, for example, following a change of job or home location
> A tendency for existing bus users to be more satisfied and stay with the bus rather than seek an alternative mode." Bristow et al, 2001

More recent evidence as Quality Bus Partnerships (QBPs) start to rollout into the less attractive corridors suggests a low level of direct modal shift of around 1% but around 20% of "new" journeys and over 30% in all "car available" (Davison and Knowles 2006).

Some of these schemes were intended to serve new housing developments and may therefore capture new residents while they are considering their options and so reduce levels of car dependency. By allowing bus services to be operated before the critical mass is there to justify a commercial service (which might never occur if residents are by then captured to car) the benefits in terms of reduced car use may be high. In the context of the scale of planned housing developments particularly in the south of England this is a critical issue.

Even though the direct modal shift from car to bus may be low. Diversion from car creates benefits as the externalities of bus use tend to be lower and there is a decongestion effect. DfT guidance (2006d) provides explicit values for decongestion benefits in the case of rail schemes: the value of a car kilometre removed can be as high as £2.00 and as low as £0.015 depending on the level of congestion.

Overall, on specific corridors where modal shift was a key scheme objective, the limited evidence suggests that the levels of modal shift achieved are as good as that achieved by high performing QBP corridors. Even in less promising territory some modal shift has been achieved. The introduction of effective monitoring across schemes could reveal the impacts to be significant. It is of course more difficult to objectively measure indirect modal shift.

Diverse Social Objectives

Social inclusion and the provision of bus services in areas of high social and economic deprivation were not the major determinant in the development of the 2003 and 2005 Kickstart schemes. This issue did, however, lie behind much of the decision-making when particular schemes were chosen to be worked up into full proposals, as it was anticipated that those schemes which "ticked the most inclusion boxes" would be most likely to be funded. It was also recognised that the Kickstart programme allowed the opportunity to develop and sustain high quality bus services in areas of multiple deprivation.

In England and Scotland local authorities have taken the opportunity to pursue their accessibility agendas by agreeing to target Kickstart and BRDG funding into areas of high

social and economic exclusion. Local authorities in England have been more likely to provide a pledge to support services at the end of the three year Kickstart funding period if the services benefit areas of high deprivation.

Despite being the most often stated scheme objective there is little hard evidence of a reduction in social exclusion, save that in the reports discussed above with respect to those who had no choice of mode or other way of making the journey as reflected in the quotes below:

> "60% surveyed passengers had no alternative mode of transport before the service was introduced" (Devon-Bus Service Survey 2006);
> "24.5% of new bus users did not make their journey at all prior to the service was introduced" (Walters 2005);
> "About half of passengers never make use of any other means of transport for the journey they were making when surveyed" (Oxfordshire-OBU Study 2005);
> "Over 40% of users would not make their journey without the service" (Oxfordshire-OBU Study 2005).

As with measuring modal shift, there was only limited evidence available to determine if schemes had successfully met the diverse social objectives they had set themselves.

Every scheme from the 2003 Kickstart programme utilised vehicles that would allow access to the greatest number of potential passengers – generally low floor vehicles. Obviously such an element is very important given the profiles of the typical bus user – elderly people, parents with children (and pushchairs) and shoppers (with shopping bags) – and this is reflected where data is available. Thus, in the Kent example, some 35.6% of existing users and 17.3% of new users noted that the easy access/low floor aspect was very influential in them choosing to use the bus (Walters, 2005). Whilst for the Oxfordshire service some "one in ten users of the service has difficulty walking" (OBU, 2005).

One key way of improving access to facilities is through enhancing frequency. Here, Walters (2005) reports that in Kent the high frequency of the new service is the "most influential" reason for increased use amongst existing bus users.

Benefits to Existing / New Users

Benefits thus far have been assessed in terms of changes in patronage, in line with the key objective of Kickstart / BRDG. However, there are clearly benefits to existing users. Even in the absence of information on the nature of journeys made in terms of journey purpose, length and timing we can still speculate on the probable extent of such benefits.

Table 4: Potential User Benefits

Impact	Evidence	Value
Frequency enhancement	Most common service enhancement, increases of 25 to 100%	£0.79 per passenger for a 15 minute reduction in headway on a 4 mile journey[3]
Wait time	Frequencies in most cases not sufficient to induce random arrivals so probably little impact	2.5[4] times in-vehicle time
In-vehicle time	Reductions in running time rare under this initiative due to high costs of bus priority measures.	£4.85 per hour[5]
Walk time	Some services have extended geographical coverage, but no evidence on reduced walking times	2[4] times in-vehicle time
Reliability	May have an impact but dependent on exogenous factors	1.3 to 2[6] times in-vehicle time
Improved comfort and accessibility to vehicles	Many services are operating new vehicles, likely impact	No consensus value

Clearly existing users will benefit from enhanced comfort and accessibility from the introduction of new vehicles. The evidence on values for such attributes is limited.

It appears that Kickstart schemes are likely to deliver most benefits to users in terms of frequency enhancements and possible reliability gains. It is therefore desirable that monitoring requirements include:

- Total patronage (from which new patronage could be isolated) together with precise data on the change in frequency could be used to estimate the benefits to enhanced services.
- Scheme reliability could be monitored pre and post implementation in terms of minutes early or late to establish reliability benefits.

Added Value

Many of the Kickstart and BRDG schemes contain elements of *direct* added value where the operator puts more into the scheme, generally as a result of higher than anticipated patronage levels. These include:

- Additional vehicles to provide additional working
- Frequency increases
- Extensions to the time period of operation
- Geographic route extensions

A number of Kickstart schemes included capital funding (50% or higher) for the purchase of new vehicles to operate the service. Kickstart funding has been seen as a key part of the annual vehicle replacement programme of certain companies.

[3] Derived from Wardman 2004 and DfT 2006c
[4] Ratio in DfT 2006e
[5] Derived from values and occupancy rates in DfT 2006c
[6] Ratios suggested by Bates et al, 2001

Some operators and local authorities who have embraced the concept of Kickstart have gone on to develop their own 'Kickstart-style' schemes. Examples of such *indirect added value* include:

- An unsuccessful bid where the partners went ahead independently and implemented key parts of the scheme and have raised service quality and the levels of ridership There was not sufficient revenue funding available, however, to implement in one stage all the frequency and geographic enhancements contained within the bid. In this case, even though no Kickstart funding was given, the partnership working engendered between the operator and the local authority in the bid process led to the development of a successful Kickstart style scheme.
- A Council was successful in winning funding for all but one of the schemes submitted. The scheme which was not funded was the subject of a subsequent bid for City Growth Funding. The funding bid was successful and the service enhancements were implemented.
- An operator and local authority took advantage of the partnership working they have developed through Kickstart to revamp massively a market town service in the style of Kickstart – this saw a Monday to Saturday improvement in frequency to hourly from three per day – and the service is now performing very well in terms of patronage and is likely to become fully viable.

Value for Public Money

It is possible to identify several possible indicators of value for public money. As some schemes have a range of sources of support and others involve capital investment by the operator and any capital investment is usually front-loaded it is important that the criteria are clearly defined to enable comparison on a consistent basis between schemes within and across time periods.

Overall, looking only at revenue expenditure the average cost per passenger for the pilot Kickstart schemes was £0.93, though the median was only £0.12 reflecting the skewed distribution. This is partly due to some 2003 schemes being more traditional social schemes rather than truly within the Kickstart ethos. Cost per additional passenger was £1.44 (average) and £0.76 Median. These are the first year costs and will fall year on year.

A crude calculation based on the total public support for local bus services of £2101 million in 2005/6 (including local authority support, concessionary fares and Bus Service Operators Grant) and total bus journeys of 4719 million (DfT, 2006c) yields a support per journey figure of £0.44 per journey. Support per journey has increased by over 50% over the past ten years, from a level of £0.27 in 1994/5. The largest increase in payments has been in local authority support which in part reflects the recent decline in commercially run mileage. Of course the distribution of this support is far from even, whilst all travellers benefit from BSOG only those travelling on specific services benefit directly from Local Authority support and only those in target groups benefit directly from concessionary fares support.

The National Audit Office (NAO) and the Audit Commission (AC) (2005) examined Local Authority subsidy stating that:

> "Local authorities' subsidy costs per passenger journey on subsidised local bus services vary significantly – overall subsidy costs varied between unitary

authorities, from 50 pence per passenger journey to £3.20, and also between counties, from 85 pence per journey to £1.61 – and within authorities subsidy costs differ by route, with some routes scarcely requiring subsidy to others receiving subsidy of up to £53.34 per journey".

The costs in terms of Kickstart revenue support per passenger compare well with these figures with 12 schemes averaging support at or below £0.50, four between £1 and £2 and non exceeding £10 in year one. For year two of the schemes for which data is available no scheme averages over £1. With Kickstart capital support added in (and loaded into year one rather than smoothed eight schemes average less than £0.50, another three were below £1, four lie between £1 and £5, one below £10 and the highest is below £25.

The benefits of the schemes are difficult to assess as the evidence is not good. However, the discussion of frequency benefits in section 5.4 suggests that these benefits alone could in some cases offset the costs in terms of revenue support.

Commercial Viability

Each of the 2003 schemes produced a continuation strategy to provide for their post-Kickstart future. In nearly all cases the 2003 scheme or elements of it will survive after the end of Kickstart funding. It is difficult to generalise because of the multiplicity of service types funded under the 2003 programme; by 2005 the schemes had become very much more homogenous as local authorities and bus operators came to understand better the principles behind Kickstart. Based on the consultation undertaken with regard to the 2003 schemes:

- one has already become commercial and will remain so
- one commenced operations in October 2006
- six are very likely to become commercial (all or most of scheme)
- seven are likely to become partly commercial (with some local authority support)
- one is likely to be reformulated and refocused in order to continue
- The future operation of the remaining two schemes is uncertain because of the current uncertainties surrounding the intentions of the bus operator.

The commitment by the local authority to provide support if necessary after the funding ends is of key importance to many of the 2003 Kickstart schemes in order to ensure their long term viability. This is particularly the case for the more rural of the schemes and for those involving community transport operations.

In nearly all cases in Scotland it is anticipated that the BRDG schemes will be able to run commercially without a further funding requirement, although it appears that at least two schemes will require continuing revenue support.

Revenue growth is the key determinant of commercial viability at the end of the Kickstart period of funding. A number of the 2005 Kickstart schemes in England may be compromised in terms of their commercial viability through the new free concessionary fares scheme introduced throughout the country in April 2006.

Case Study 3 – Concessionary fares and future revenue support

- Kickstart funding was secured for a new inter-urban service
- The financial element of the bid was calculated prior to the introduction of the new concessionary fares legislation
- This new service is being treated as though it is an existing service, with all passengers being subject to the generation factor applied to other established services
- The service is performing well in terms of patronage but is unlikely to meet its revenue targets as many of the passengers using the service are concessionary travellers
- The local authority would be less likely to support this service in the future should it fall short of commercial viability, as there is another Kickstart service in the area which meets the authority's social inclusion objectives and is expected to require ongoing support after Kickstart.

MPLICATIONS FOR PLANNING AND POLICY

A number of issues have been discussed where changes could make the schemes operate more effectively. These largely fall into two areas: the detailed planning and monitoring of schemes and the broader policy context.

Detailed planning

The clarity of the bid documentation could be enhanced to ensure the provision of data in a common and consistent format. The different needs of enhanced and new services should be recognised here. Proposals for service enhancements should include base patronage data and explicitly state changes in frequency levels and other aspects of the service offered.

Consideration should be given to changes in the timescales to allow promoters more time to prepare schemes. It is clear that bidders would appreciate feedback, especially on unsuccessful bids.

Monitoring requirements should be specified in detail and include, at a minimum, the number of passenger trips carried per annum. As many of the benefits to passengers arise from changes to frequency or reliability changes the latter should be monitored. Modal shift should also be monitored through passenger surveys.

Greater facilitation within the schemes of marketing and promotion measures, perhaps through an expectation that funds will be sought for this purpose.

Clearer guidance on state aid and competition rules would be useful in offsetting concerns. A clear and definitive interpretation by Central Government would be helpful.

There is a need to ensure the local authority commitments, for example to infrastructure funding are equivalent in their binding nature to those made by operators. There is potential in the Quality Bus Partnership model.

Broader policy issues

Kickstart / BRDG has shown the potential to be part of a solution to break the vicious cycle of patronage decline in the bus industry.

A key success of Kickstart / BRDG to date has been a deepening of existing partnership working, the development of new partnerships and innovative ways of working. A key message from the recent proposals for bus services in the UK is that of the importance of partnership working (DfT 2006f).

The operation of Kickstart / BRDG in competed markets is constrained by concerns with competition law. Whilst direct on route competition is uncommon, routes will often share sections with those of competitors and this may be sufficient to raise doubts. The type of service the schemes are aimed at would not be sufficiently strong commercially to justify conventional voluntary Quality Bus Partnership working – but if Kickstart / BRDG were applied such partnerships could evolve. The Draft Transport Bill (DfT 2007a) includes a broadening of the application of the competition test (schedule 10) of the Transport Act 2000 to voluntary Quality Bus Partnerships. Multi – operator schemes within Kickstart / BRDG could be protected by such coverage.

Kickstart / BRDG support could be targeted to encourage the early introduction of bus services into new housing developments. This is an opportunity to reduce car dependency. This could particularly link into the sustainable communities developments. An exploration of the scope to integrate such bus service provision within planning permissions or the S106 process for new housing developments is indicated.

There is clearly an interest amongst some operators for operator led schemes. This idea is worthy of consideration.

It is encouraging to note, in the light of the literature review and the performance of the Kickstart /BRDG schemes that serious consideration is being given to the refocusing of subsidy in ways that could provide a direct incentive to patronage growth as part of the Government review of bus operations (DfT 2006f). However, a targeted scheme such as Kickstart might achieve greater patronage growth across a broader range of services.

Scope for Future Development

Kickstart / BRDG schemes have clearly delivered in terms of scheme performance and in the enhancement and development of partnership working between operators and LTAs. There is clearly scope for the further development of services under these schemes in a number of different markets. These include:

- The current schemes have largely been targeted at the margins of existing networks. Commercial mileage has declined from a level of 85% of total bus mileage in England (outside London) and Scotland in 1996/7 to 78% in England (outside London) and 84% in Scotland in 2005/6 (DfT 2006c) with the largest falls occurring in the PTE areas. Thus around 22% of services outside London receive support (DfT 2007b). It would not therefore be unreasonable to assume 5 to 10% of the total market to be “marginal”. This is line with the Souter et al, (2004) estimation that 10% of Stagecoach routes would be suitable for Kickstart funding.

- Whilst directly competed services are relatively rare, those that are contestable or share elements of common running are more prevalent. These markets could be targeted through Voluntary Kickstart QBP arrangements. This would allow Kickstart to enter into denser urban markets.
- New services may provide better or new links between existing attractions and destinations. Such services are inherently more risky than service enhancements and may take longer to build patronage.
- Where new developments are not served by public transport from the beginning, the habit of car dependency is unlikely to be cut. Individuals are more likely to change their travel behaviour when changing home or job locations. New developments give easy access to people who are by definition changing their journey origins and / or destinations. Commercial operators are unlikely to enter such markets until a critical mass of population is attained at which stage it is likely to be too late as car dependent patterns will have emerged. Kickstart gives a critical opportunity to support the early entry of services into new developments to provide travel choices from the beginning. Given the scale of new housing developments planned, especially in the South East of England, this type of market could be specifically targeted.
- The introduction of local road user charging will clearly require enhanced public transport provision (DfT 2006f). The incentive to build patronage within the Kickstart / BRDG schemes clearly has a role to play in such contexts.
- Rural schemes tend to grow more slowly than those implemented in urban areas. With low population densities and dispersed destinations some will not become fully commercial. Nevertheless, rural schemes can deliver increased patronage and modal shift thus reducing the level of subsidy required in the longer run.
- There may also be scope to extend the principles of Kickstart to community transport and social enterprise schemes where the focus is on growing the market and increasing the viability of such schemes.

A conservative estimate might suggest a doubling of the budget to date in England, to around £56 million for the next round and a more gradual increase in Scotland (where the budget per head of population is considerably higher than in England). Targeting on particular markets might help to reveal where the best results are to be gained.

CONCLUSIONS

The evidence suggests that Kickstart / BRDG schemes have been successful in several areas.

Patronage growth has occurred on marginal or new services in the context of an overall declining market. There is some evidence of modal shift at a level comparable with Quality Bus Partnership achievements on key corridor schemes. Modest modal shift has been achieved in less promising territory. Existing users have benefited from frequency enhancements and more accessible vehicles.

The schemes appear to have stimulated genuine partnership working whereby operators consider social needs and local authorities take account of commercial requirements in both cases leading to greater understanding. This has further encouraged entrepreneurial flair in local authority thinking. The schemes are expected to leave a positive legacy of enhanced services, reflected in the desire of both operators and local authorities to see the schemes continue.

The schemes have delivered added value through: the delivery of further service enhancements over and above those specified in the bids as patronage grows; stimulating the development of Kickstart style schemes by local authorities in cooperation with operators and the levering of additional investment / support from bus operators and others.

It appears that this form of support may offer a better return than subsidy that supports the status quo or indeed patronage based support. On the whole the supported services appear to be on-line to reduce the requirement for revenue support by lifting marginal services into commercial performance, and releasing revenue for support to other services.

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