Welsh Parliament
Senedd Research

Bus franchising: a literature review of international practice
Guest Research Briefing

September 2024

www.senedd.wales

The Welsh Parliament is the democratically elected body that represents the interests of Wales and its people. Commonly known as the Senedd, it makes laws for Wales, agrees Welsh taxes and holds the Welsh Government to account.

An electronic copy of this document can be found on the Senedd's website:
research.senedd.wales

Copies of this document can also be obtained in accessible formats including Braille, large print, audio or hard copy from:

Welsh Parliament
Tŷ Hywel
Cardiff Bay
CF99 1SN

X: **@SeneddResearch**
Senedd Research: **research.senedd.wales**
Subscription: **Newsletter**

Welsh Parliament
Senedd Research

Bus franchising: a literature review of international practice
Guest Research Briefing

September 2024

Author:
Daniel Johnson, Professor Chris Nash and Professor Andrew Smith, Leeds University Institute for Transport Studies

Paper Overview:
This briefing reviews academic and other literature on international approaches to bus franchising. It has been commissioned by Senedd Research through the Senedd's Knowledge Exchange Programme to inform scrutiny of the Welsh Government's plans to introduce franchising in Wales.

It considers the British experience and approaches to governance of the bus sector, how competitive tendering/franchising has been implemented across the world, and available evidence on the performance of different contracting regimes.

It concludes that there is a strong case for the involvement of government in planning bus services under contract, and highlights a number of key trade-offs and other factors to be considered in implementing franchised approaches.

The views are those of the authors and not those of Senedd Research or the Senedd.

Contents

1. Introduction

Bus services in Great Britain (outside London) have been "deregulated" and market led since 1986. However, in recent years governments across the UK have sought to increase the public sector's role in service delivery. This includes moves toward franchising, where bus operators provide services under contract to a public authority.

In March 2022, the Welsh Government **published a White Paper on bus reform**, focused on Wales-wide franchising. A Bill introducing this is expected in the current Senedd term.

Given the scale of this change, Senedd Research commissioned Leeds University Institute for Transport Studies to undertake a literature review considering approaches to delivery of bus franchising to inform the Senedd's scrutiny of the Bill.

The last 35 years have seen a global trend toward private sector involvement in providing and funding many public services. This literature review identifies a strong case for government involvement in provision of bus services or at least in specifying the service levels required.

Why franchise?

Franchising means potential service providers compete "for the market." Also known as "ex ante competition", this sees operators bid for exclusive rights to provide bus services.[1]

This contrasts with "in the market" or "on the road competition". Here, operators compete directly with each other in a deregulated market to deliver services according to their own assessment of the market and commercial priorities. Socially necessary services, which aren't commercially viable, can be procured by government.

Competition for the market means government can specify what it wants services to provide, such as routes and service quality elements like frequency, timetables, fares, ticket options and vehicle quality. The market then bids for exclusive right to provide these services on a route or routes.

1 Note that for the purpose of this briefing we use the terms franchising, competitive tendering and concessioning interchangeably.

This approach avoids the possible loss of economies of scale (i.e. unit cost savings through operating more services overall) and/or density (i.e. unit cost savings through running more services on a given route) as well as the limited integrated planning of services and fares implied by competition in the market.

Figure 1: Regulated and deregulated governance of bus services

Approaches to provision of bus services	
Competition "for the market" (or 'ex ante competition')	**Competition "in the market" (or 'on the road competition')**
▪ The market is regulated by contract with the public authority. ▪ Public authority involved* in specifying routes and service levels / quality (e.g. fares, tickets, frequencies, vehicles etc.). ▪ Routes may be bundled to include a mix of profitable and socially necessary services permitting cross subsidy. ▪ Operators are selected to operate routes under contract to set standards, often following a tender exercise. * Extent of public authority involvement varies and is usually greater in gross cost contracts than net cost (see figure 4 below).	▪ The market is deregulated. ▪ Operators themselves assess market needs, routes and service levels / quality on a commercial basis. ▪ Public authority fills gaps, funding 'socially necessary services' not provided by commercial operators. ▪ No 'cross subsidy' between commercial and socially necessary services.

Source: SeneddResearch

Effective for the market competition aims to capture the benefits of competition, like innovation and improved value for money for public funders and passengers, through the bidding process. It also avoids the costs of government ownership/ service provision, though setting up and managing the contract is not without cost. However, a restrictive service specification might stifle some innovations, such as the introduction of smaller buses running more frequently on some routes, as was seen in Britain following deregulation.

Globally, in most cases, bus services are provided either by state-run bodies without competition, or via competition for the market. Occasionally where there is no competition this is deliberate to allow an incumbent to retain the market for a period based on a negotiated settlement. In other cases it's because public services haven't yet been opened up to competition.

Competitive tendering is employed for all services in Sweden, many in Germany, Norway, Denmark, and the Netherlands as well as some cities in the United States, Australia, and New Zealand **(Hensher and Wallis, 2005)**.

There are limited examples of on-road competition in the bus market most notably, in terms of developed markets, in Great Britain (outside London). It's also found in some developing countries and for long distance bus services in the EU. Chile underwent British style bus deregulation in the late 1970s, but gradually re-regulated until services were franchised in the 1990s.

The next section reviews recent British experience in the bus sector and discusses what's happening in Wales. The briefing then considers the implementation of competitive tendering across the world, before reviewing evidence on performance of different contracting regimes.

2. The British experience since bus deregulation

The ***Transport Act 1985*** saw Britain move from the public ownership model in 1986. Britain is unique in that the Act simultaneously introduced competition for the market in London, and competition in the market for profitable services in the deregulated market outside London (with competitive tendering for some non-profitable but socially necessary services). Most existing bus companies were privatised, although some local authority owned bus companies remained.

Northern Ireland remains a separate case with services primarily operated by a publicly owned company.

In the subsequent ten years, operating cost per bus kilometre fell in real terms by 45% both in London and elsewhere, reversing a long-term upward trend (**Nash, 1993**). This reduction is exaggerated by the fact that some costs (e.g. timetabling, publicity and provision of bus stops/shelters) remained with local authorities, and also there was a trend for smaller buses. However, it's clear there was a very substantial cost reduction, only partly at the expense of the wages and staff conditions (**Heseltine and Silcock, 1990**). It's worth noting this cost reduction wasn't sustained, and between 1996 and 2006 costs rose both in London and elsewhere, but remained well below what might otherwise have been expected.

Fares and service levels

Fares and service levels (for example frequency) initially rose under both regimes. In London, increased service levels have been sustained as a deliberate local transport authority policy. It was a more short term market reaction elsewhere in the deregulated commercial market outside London.

Outside London, with a few exceptions (see for example **Cowie (2012)[2])** price competition appears relatively ineffective. Passengers didn't choose their bus based on cost, instead taking the first bus to arrive. Service frequency was therefore more important to competitors than price.

It's worth noting effective on street competition has been comparatively rare. Most British bus services are provided by unregulated private monopolies - large bus companies formed following widespread takeovers and mergers, (**Competition Commission, 2011**). However, these monopolies are potentially subject to the threat of entry by competitors in the deregulated market.

Impact on patronage

The impact on patronage (i.e. passenger numbers) has been the biggest difference between competition for and in the market in Britain.

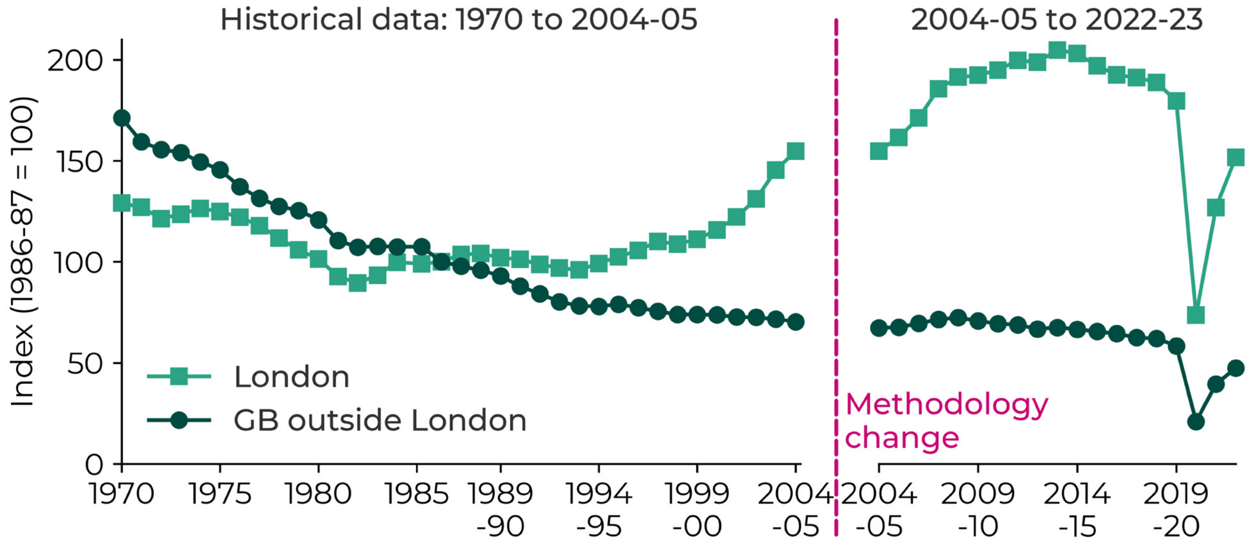
As shown in Figure 2, London saw bus patronage rise modestly over the ten years after the introduction of franchising. Subsequently, growth was much stronger,

2 Cowie (2012) was primarily focused on the impact of the threat of competition impacting prices even in monopolistic markets and found there to be an effect, but only in a small number of markets. Likewise in a limited number of cases Cowie found that actual competition impacted prices.

but in the context of increased subsidies to improve the fare and service level mix. Elsewhere in Britain bus patronage has continued its downward trend.

As Britain's largest city by far, London offers a more favourable environment for bus operation, with denser population and lower car ownership than elsewhere. But **Fairhurst and Edwards (1996)** found this more favourable trend in London was partly due to better integrated services. Elsewhere, the deregulated market led to lack of planning around regular interval services and common fare structures meaning patronage was below what might otherwise have been expected given fares and bus kilometres operated.

Figure 2: Index comparing passenger journeys on local bus services in London to the rest of Great Britain 1970 to 2023-24 (Index 1986-87 = 100)



*Source: **UK Government - Department for Transport data**, Senedd Research analysis.*

Note: a methodology change was applied to the data in 2004-05. Direct comparisons before and after this change should not be made.

Moves to reregulate outside London

In the light of this experience, the UK Government introduced changes to improve service quality and planning. Legislation, particularly the ***Transport Act 2000*** and the ***Local Transport Act 2008*,** provided new tools for local authorities in England and Wales (The Scottish Parliament **legislated separately**). "Quality partnerships" between bus companies and local authorities were introduced, which saw both parties agree to cooperate to raise service quality.

The reforms also included Quality Contracts, effectively a form of franchising. However, the complexity of the Quality Contract approach made them difficult to implement and subject to legal challenge. None were introduced, and governments in England, Scotland and Wales have moved to simplify implementation of franchises.

Bus reform in England

The *Bus Services Act 2017* *and the* **National Bus Strategy (DfT, 2021)** aimed to make adoption of franchising in England outside London easier to implement. However, currently only Mayoral Combined Authorities can adopt a franchising approach without the Secretary of State's permission.

Bus services in England outside London have been in serious decline in recent years. **Le Vine and White (2020)** emphasise the role of demographic factors whilst **Friends of the Earth (2023)** points to declining local authority budgets causing extensive reductions in tendered services particularly in rural areas.

To combat this the national strategy for buses also made Bus Service Improvement Grants (BSIG) available to English local authorities that submit a Bus Service Improvement Plan.

BSIG grants are only available to local authorities introducing either franchising or an enhanced partnership. An enhanced partnership is an agreement between the local authority and bus operators in the area as to agree common aims for the bus network and set out a plan for how these are to be delivered.

The first city outside London to begin introducing franchising is Manchester. Transport for Greater Manchester, on behalf of Greater Manchester Combined Authority, is introducing franchising district by district with the first contracts already let.

Manchester is introducing a mixture of large and small gross cost contracts (explained below) to enable small operators to continue to participate. For large contracts, the authority supplies the depots and electric vehicles where these are required; elsewhere operators supply both depots and vehicles.

Liverpool, West Yorkshire and South Yorkshire are also developing franchising plans.

Following the UK General Election on 4 July, **the new UK Government has indicated** that it intends to remove "barriers" to franchising, and make it available more widely to local authorities across England.

Bus reform in Scotland

The ***Transport (Scotland) Act 2019*** **gave local transport authorities** a range of powers in relation to bus services, including around **Bus Service Improvement Partnerships** (BSIPs) and local bus service franchising.

Regulations implementing these elements came into force in December 2023. **Transport Scotland indicates** further regulations will be laid throughout 2024 which, alongside planned guidance, will "give the partnership and franchising powers full effect". The Act also allowed establishment of municipal (local authority owned) bus companies, with these powers coming into force in June 2022.

The partnership and franchising powers in the 2019 Act are evolutions of the existing Quality Partnership and Quality Contract approaches. Few formal Quality Partnerships were established, and the Quality Contract provisions have never been used.

The new powers have yet to be used. Strathclyde Partnership for Transport (SPT) commissioned transport consultants **to undertake a study**, published in 2022, into the creation of municipal bus companies, improvement partnerships and local service franchises. This concluded there is a case for franchising as the best option to deliver "transformational change" but "...local transport authorities should be under no illusion that the process will be anything other than time consuming, expensive and will create significant new risks to the authorities that it does not currently bear."

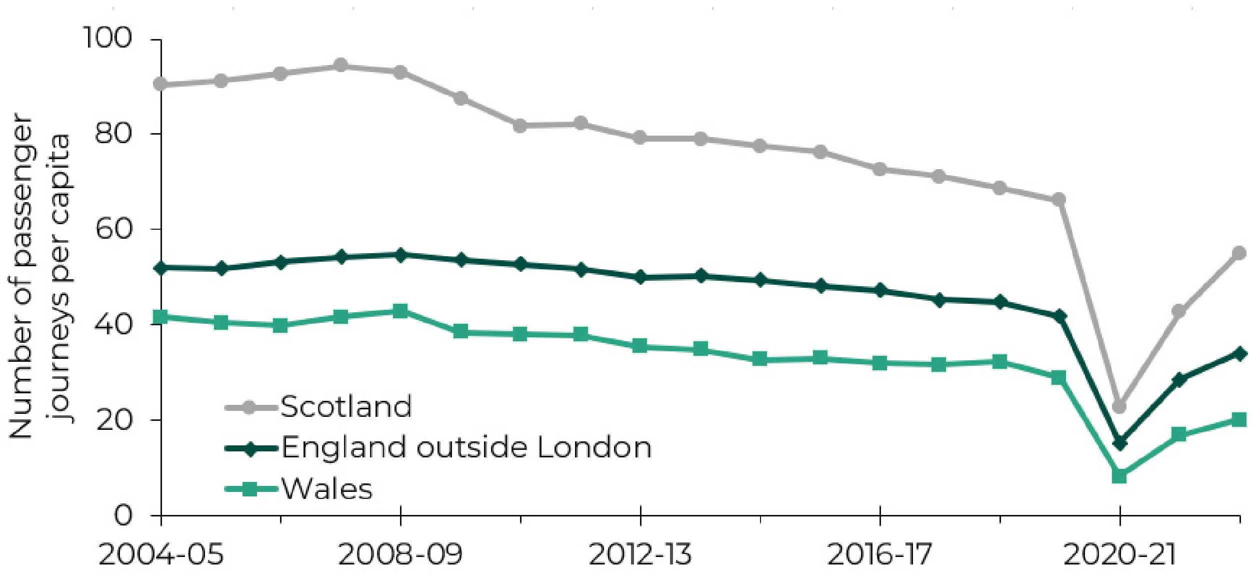
SPT consulted on the introduction of franchised services during April and May 2024.

Bus services in Wales and proposals for reform

While British bus services have been under pressure for some time, the situation in Wales appears more challenging than in England and Scotland.

As shown in Figure 3, Welsh bus journeys per capita have been consistently lower than other parts of Britain over the last two decades, and slower to recover following the pandemic.

Figure 3: Number of passenger journeys on local bus services in Wales per capita, compared with England (outside London) and Scotland



*Source: **UK Government - Department for Transport data**, Senedd Research analysis.*

Note: The bus journeys include non-resident journeys, while the population only takes into account residents.

The evolution of Welsh bus reform

Bus reform has been planned in Wales for some time, but the approach has undergone significant change.

A ***Bus Services (Wales) Bill*** was introduced in March 2020, only to be **withdrawn** in July largely due to the pandemic. The Bill proposed to give Welsh local authorities optional tools to intervene in the deregulated market through Enhanced Quality Partnerships and franchising. It also addressed information provision and proposed to remove restrictions on council run bus services.

The pandemic changed the environment completely. **In May 2023,** as the Welsh Government provided emergency support to the industry, the then Deputy Minister for Climate Change, Lee Waters MS, said the pandemic "blew up an already brittle business model" for bus services exposing "the hollowness of the privatised model of deregulation."

The approach to bus reform in Wales changed as the public sector took a greater role in funding and planning bus services during the emergency pandemic response. **Announcing emergency funding for bus services** in July 2020, the Welsh Government said it considered this "the first stage of a wider plan" where public funders would "begin to regain control of buses for the first time since deregulation".

The March 2022 White Paper on bus reform set out a new approach where franchising is no longer optional, but implemented across Wales. Franchising powers would sit with the Welsh Ministers, rather than local authorities, which instead would work with Transport for Wales and the Welsh Government on network design. The Welsh Government would carry the revenue risk, paying operators a fee – the "gross cost" model described below. The White Paper also proposed to permit local authorities to establish new municipal bus companies, and relax restrictions on existing municipal operators.

The Welsh Government published, "**Our roadmap to bus reform**" in March 2024, giving further detail on how franchising would be implemented.

3. Competitive tendering issues and experience

This section considers several key decisions that must be taken in moving to franchising/competitive tendering, the options available and the theoretical arguments for these drawn from **Nash (2019)**, **Smith and Nash (2021)** and a range of wider academic sources.

In all cases, a tendering authority with appropriate skills and resources is required to draw up appropriate contracts, monitor performance and take enforcement action should the franchisee fail to deliver. This is usually a government agency, or a regional joint authority covering several local authorities. It needs to be large enough to exploit economies of scale in the size of tenders, but small enough to determine local needs.

A summary of the contracting approaches described here is presented in Figure 4 below.

Net or Gross Cost Contracts

The decision on whether to take a net cost or gross approach is key:

- **Net cost contracts:** the operator bids to provide services in return for a certain level of subsidy – or to a pay a premium back to the tendering authority if the franchise is expected to be profitable - and takes all the risks regarding both revenue and costs.
- **Gross cost contracts:** the operator bids for a payment to run the service and pays the fare revenue to the authority, bearing cost risk only, for example fuel and staff cost fluctuations. There is no incentive to increase patronage or revenue unless expressly included in the contract.

Net cost contracts strongly incentivise the operator to boost revenue (though less so on heavily subsidised services where revenue is small relative to costs). However, they also expose the operator to risks outside their control, including the state of the economy and local employment which are strong determinants of demand. While costs are also outside the operator's control, cost risks are generally less critical than demand to the viability of the franchised service.

In rail there were examples of operators under net cost being stripped of their franchises for failing to meet contract payments, such as Great North Eastern Railway (GNER) in 2007 and Virgin East Coast in 2018. Overall this is perhaps less likely to be an issue in the bus market with shorter contracts and also less chance of overestimating demand growth.

Post-pandemic, the UK Government is changing the rail contracts it's responsible for to a concession approach more closely aligned with gross cost arrangements. The Scottish and Welsh Governments have chosen to take the franchises they are responsible for into public ownership and control.

Net contracts may include some protection for the operator against these external demand risks. Incentives can be integrated into gross cost contracts through payments based on revenue (as in London), patronage or passenger satisfaction.

The effect of increased risk

Exposure to high levels of risk may discourage some operators, especially smaller ones who cannot pool risks through multiple contracts, from bidding at all. Alternatively, those who do bid may build in a large risk margin to their bids.

It may also lead to high levels of franchise failure, where operators become bankrupt or exercise contract termination rights. This gives the authority the cost and challenge of maintaining services (sometimes at short notice) and prematurely tendering for a new contract. To some extent risk can be mitigated by breaking services up into smaller tenders, so that if the contract runs into problems the effect for the owning group is limited.

Net cost contracts in London have also incentivised operators to try to take traffic from operators of overlapping franchises, by racing or holding back to try to reach busy stops just in front of the other operator.

Autonomy within the contract

The choice between net and gross contracts is often linked to how far operators are allowed to plan services and set fares.

If operators have significant freedom under the contract, subject to providing a minimum service level, it is particularly important they are offered strong incentives to increase patronage and revenue. A net cost contract may be most appropriate in these circumstances, particularly where services are commercially viable and making profit.

Alternatively, if a franchising authority intends to determine timetables and fares, limiting the operator's ability to influence revenue, a gross cost contract with some quality incentives may be most appropriate. This also removes revenue risk from the operator and may be a more stable and secure contracting approach, with the contract less likely to fail or be terminated.

Quality considerations

The extent to which quality is a factor in the award of the contract also varies. "Service quality" includes a wide range of elements, from fares and ticketing options, to frequency and vehicle quality.

Usually, a prequalification procedure rules out bidders deemed incapable of providing services at the required quality, or who have inadequate finance.

Additional incentives may occasionally be needed to encourage operators to reduce costs and increase service quality, particularly where contracts are short.

Demand side incentives are particularly important for gross cost contracts, where the operator doesn't carry the revenue risk, to encourage the operator to improve quality and increase patronage. However, they may apply to both.

Contracts may include a set of key performance indicators (KPIs) covering issues such as crowding and reliability, which may be linked directly to financial incentives, or may simply be contractual requirements. Ultimately, failure to meet KPIs may require the franchising authority to take remedial action, perhaps including contract termination, if the operator's action is deemed inadequate.

In their global review featuring largely developed western countries, **Pedro and Macário (2016)** found 53% of contracts (of all types) featured incentives such as service level, environmental or operational performance. Monitoring can be through published quality figures, auditing or monitoring data.

Alternative contract approaches

Other contract approaches are available alongside franchise options, and are briefly discussed here for completeness.

Management contracts

Management contracts see the authority typically – though not invariably - retain ownership of depots and vehicles and pay operators an annual fee on a 'cost-plus basis', i.e. operators are paid an amount to cover their costs and a negotiated premium with no long term cost or revenue risk.

These are not as common as net or gross cost contracts, although they are widely used in France for urban bus services. Sometimes management contracts are used for a time to maintain services following franchise failure, for example as in rail services in Great Britain.

Negotiated Performance Based Contracts

Hensher and Stanley (2010) report that Negotiated Performance Based Contracts (NPBCs) are a key development in the international literature. Contracts are renegotiated with existing operators, subject to meeting certain conditions such as patronage targets, as an alternative (or successor) to tendering.

NPBCs may also offer operators more freedom to develop services in comparison to tendering approaches.

Performance pressure is maintained through externally verified performance benchmarking. Tendering is kept as a back-up if performance is poor.

This approach focuses on trusting relationships between the franchising authority and the operator to help planning and delivery of services where such skills might be scarce on both sides. It addresses the fear and risk for even an efficient operator that they might lose the next tender, potentially limiting long-term commitment and investment. NPBCs also potentially lower transaction costs as neither the authority nor operator incur tendering costs.

Figure 4: Summary of approaches to contracting bus services

Competition "for the market" approaches			
Franchise approaches		Alternative approaches	
Gross cost franchise	**Net cost franchise**	**Management contract**	**Negotiated performance based contracts (NPBC)**
▪ Public authority retains fare revenue and takes the 'revenue risk' if passenger targets aren't met. ▪ Public authority is responsible for marketing. ▪ Operator delivers services in return for a fee. ▪ The operator carries 'cost risk' only (eg fuel or staff cost fluctuations). ▪ Operator is incentivised to reduce costs to maximise return on its fee. ▪ Less incentive to grow revenue unless performance incentives are included in the contract.	▪ Operator retains fare revenue taking both revenue and cost risk. ▪ Subsidy is usually required, a premium may be returned to the public purse in a profitable franchise. ▪ Greater incentive for the operators to reduce costs and grow patronage.	▪ Public authority often owns depots and vehicles. ▪ Public authority carries both cost and revenue risk. ▪ Operator is paid a fee on a 'cost plus' basis – covering actual operating costs with a negotiated premium. ▪ Costs are renegotiated on an annual basis. ▪ Little risk for the operator. ▪ Little incentive to reduce cost or grow patronage unless the contract includes incentives.	▪ Contracts (re) negotiated with existing operators subject to meeting conditions. ▪ An alternative (or successor) to tendering. ▪ Performance and quality are incentivised through the contract with benchmarking and review. ▪ Tendering is kept as a back-up. ▪ Can help manage uncertainty/ contract specification issues. ▪ Based on trust - useful where operator and public authority lack contracting skills. ▪ Could be net or gross cost,

Source: Senedd Research

4. Selecting the contract type

This section draws out some key considerations in selecting the contract approach based on international experience.

The prevalence of contract types

A variety of contractual forms are used in Scandinavia, the most popular being gross cost contracts incorporating financial incentives based on customer satisfaction and passenger numbers (**Rye, 2018**).

Authorities plan integrated timetables and fare structures and use cross subsidisation (i.e. bundling profitable and non-profitable routes) to improve services on less profitable routes. Operators usually provide the vehicles but to strict specifications including environmental standards.

Preston and Walters (2020) report a general movement internationally towards gross cost from net cost contracts. In their global review of public transport contracting, **Pedro and Macário (2016)** found gross cost contracts most common in their sample at 44%, with 34% net cost and 10% management contracts, with the remainder being some form of direct award.

In England, in areas where services are tendered currently, net cost contracts are often adopted in rural areas in order to utilise the local knowledge of operators in marketing services.

Transitioning to regulation

As with the introduction of franchising generally in Great Britian outside London, Wales plans to move to franchising from a deregulated commercial market. This is not common. Most contracting regimes have been introduced to replace previously publicly operated services (as was the case in London).

However, both Singapore and New Zealand have moved to contracting from commercially run services.

The Singapore Bus Contract Model (BCM) - planned between 2008 and 2014 and implemented from 2014 - adopted a mix of negotiated contracts and competitive tenders in the first cycle to achieve a smooth transition from net cost licensing to gross cost contracts. This model included a quality incentive scheme based on lateness. These contracts involve “public provision of depots, interchanges, buses, and common systems such as fleet management and ticketing." (**Preston and Walters, 2020)**.

In New Zealand, Auckland and Wellington services are run under a new gross cost competitive tender regime for all socially necessary services which aren't commercially viable. Contracts negotiated on a like-for-like basis ("grandfathered") are used for the rest (**Preston and Walters, 2020**).

Experience with contract size and scope

The geographical size of the contract and whether it covers a single mode or all public transport modes in the area are key issues for franchising authorities (**Smith and Nash, 2021**).

Practice ranges from contracts to cover all modes for metropolitan areas (e.g. Lille), down to individual bus routes (e.g. Ripon-Richmond). Contract size needs to be large enough to exploit potential economies of scale.

Generally the bus industry is characterised by economies of density and potentially economies of scale. These can emerge through factors like better crew and vehicle utilisation, discounts for larger orders and ease of raising capital.

There is conflicting evidence on scale. **Windle (1988)** found evidence of economies of density but not of economies of scale in the US bus industry. **De Borger and Kerstens (2008)** show these findings are consistent over various methodologies and countries. In contrast, **Cambini and Filippini (2003)** suggest on the basis of economies of scale in the Italian context, that tendering is best carried out at an area level rather than route by route.

It's necessary to consider how to offer opportunities to different sized operators in a franchise area. This can help sustain a diverse network of operators across different operating environments and generally promote more competition. For example, this seems to be present in the planning of delivery of franchising in Greater Manchester with a mix of small and large service contracts tendered.

In Scandinavia (**Rye, 2018**) contracts generally vary in size but typically cover several different routes to enable smaller operators to compete. Usually, competitive tendering takes place at a route or corridor level but sometimes (for example France and Spain) the entire city's public transport system is let as a single contract.

In Auckland and Wellington, groups of routes of previously commercial services were used as tendering units, with the motivation that identifiable customer markets are attractive to operators and reflect network effects from interconnections (**Wallis, 2020**).

Contract length

There are also difficult trade-offs to make regarding contract length, which again interact with other aspects of the contract.

Short contracts (as short as a year in some cases) maximise the contracting authority's flexibility, in terms of future service changes, and competition, by granting a short term monopoly.

However, they may not be attractive to operators, because bidding and start-up costs must be recovered in a very short time. These may only attract a small number of relatively uncompetitive bids. They give no incentive for investment, whether in physical assets (which may be minimised depending how the ownership of assets is organised- discussed below) or in marketing, planning or improving the efficiency of working practices. The costs of competition for the authority running the competition and bidders developing bids also occur at frequent intervals.

Alternatively, it's possible to go for a long franchise, occasionally as long as 15 years. These also have problems. Long contracts grant a monopoly for an extended time period. While break points may be built in under which continuation of the contract is dependent on performance, if these are too rigorous the operator may regard the contract as a series of shorter agreements from a risk and investment perspective.

Operators and public authorities inevitably require a mechanism allowing the contract to be updated in the light of market developments which might change the services needed and affect the financial elements of the contract. These cannot sensibly be specified for the full contract period in a long contract. This may be a time-consuming and contentious issue, if both parties try to take advantage of the situation.

Asset ownership, for example buses and depots, is key when considering contract length. If these are supplied by the operator then clearly a long contract, or some other way of relieving the operator of the residual value risk, is needed. For example, guaranteeing the taking over of the assets by the succeeding operator at a fair price. Moreover, ownership of the assets will give the incumbent a strong advantage in any bidding process. Conversely, a private sector operator may have a greater incentive to choose assets efficiently than a public franchising authority.

Experience with varying contract lengths

In Scandinavia (**Rye, 2018**), gross cost franchises run for 1-10 years, with options to extend on shorter contracts. In New Zealand (**Wallis, 2020**), contract length was around nine years for tendered contracts and 6-12 for negotiated contracts (12 where commercial operators were already running services).

In France there is a legal requirement to tender every six years (**Gautier and Yvrande-Billon, 2013**). In the Netherlands, **Preston and Walters (2020)** report gross cost contracts up to 15 years to support investment in low emission vehicles, though not necessarily as long if assets held by the public authority.

In Europe more generally, **Nash and Wolanski (2010)** suggest an optimal bus contract duration of around eight years where new buses are required. European public service contracts are normally regulated, and under EU law (on internal markets and state aid) most must not exceed 10 years for bus and coach services (**Pedro and Macário (2016)**).

However, the much lower cost and more active second hand market in buses means even where the operator is required to provide the buses, contracts of five years or less are common. In Manchester, contracts run for five years with optional extensions.

Finally, longer contracts can increase the risk to operators, particularly where they retain revenue risk and passenger numbers turn out lower than expected.

Evidence of the impact of franchising on performance

Service quality

Franchising in Scandinavia is generally considered a success (**Rye, 2018**); patronage is mostly increasing but so is the subsidy level required as a result of increased service frequency.

Franchising of Swedish bus services in the early 1980s saw supply increase 20%, and patronage 30%. Lower level increases continued later. Operating cost reductions of around 10% in Norway have been reinvested to enhance the service levels.

Skåne in Sweden has seen a raft of public transport improvements introduced, including multi-modal smartcard ticketing systems, modern low floor low emission vehicles and improved frequencies leading to a doubling of patronage.

Rye indicated there would be no diesel-powered buses in Oslo and Skåne's bus fleet would be fossil fuel-free by 2020.

The only study we could find relating to service provision aspects of different contract types was **Ida (2018)** based on Israel. This found no significant difference in service provision between net and gross cost contracts compared to what was planned (i.e., actual vehicle kilometres operated relative to what was specified in the tender). However, the overall service quality score, based on deviation from levels of service specified in the tender in relation to frequency, information and reliability, was significantly better under gross-cost contracts. This was attributed to the integration of incentive payments under gross-cost contracts.

Cost and Efficiency

Hensher and Stanley (2010) find overall international literature shows 10-50% savings from competitive tendering where services were originally state provided (which is not the case in Wales). However, this depends on having enough bidders and on the design/management of the tendering process.

The literature shows that in some cases cost increased in subsequent tenders. This could be because of unsustainable bids in the first round, a lack of bidders in later rounds, or because savings achieved have been exhausted.

The danger is a focus on cost rather than what the bus system is intended to achieve – so alternatives like NPBCs are being pursued around the world achieving similar outcomes to tendering but avoiding high transaction costs and building in performance goals. The authors also highlight the Dutch experience of moving from competitive tendering to a negotiated contract approach. This was to address a perceived lack of incentives for operators including short contract lengths, but also cultural issues (e.g. differences in management styles between operators and authorities) and operational issues in this particular context.

Hensher and Wallis (2005) found 20-30% short run cost reductions when competitive tendering was used to award previously largely publicly owned monopoly public bus service contracts. Once cost efficiency is reached subsequent tendering often leads to increases in bid prices. This echoes **Nash and Wolanski (2010)**; **Wallis et al (2010)**; **Aarhaug et al (2018)**.

5. Conclusions

Many choices are required when implementing competitive tendering. These often involve difficult trade-offs. For example, between long net cost franchises, with operators owning assets and having considerable freedom in planning services and fares, and short gross cost franchises with the franchising authority providing the assets and tightly specifying timetables and fares.

The best approach is likely to vary greatly with circumstances. What follows is that franchising is a skilled business on the buyer side, requiring staff with appropriate ability and experience. Where it's undertaken by many different local or regional bodies, sharing data and experience will be important to ensure it is undertaken efficiently. Hence, **in Wales, it may be sensible to concentrate franchising at the Transport for Wales level; with strong input from local authorities providing local knowledge.**

Bus tendering is widespread in Europe and also found elsewhere. **The evidence supports the theoretical prediction that tendering will reduce costs,** although the savings achieved are variable and tend to be lower when the incumbent is already a private company, as in Wales.

Competitive tendering has generally been implemented to address inefficiencies in public service provision, so there's **little hard evidence of cost or service level enhancements when moving from commercial services to franchising**. In Great Britain, local bus services are provided by both competition for the market (franchising in London) and competition in the market (the deregulated market elsewhere in Britain).

From this example, it appears competition for the market has worked better in terms of patronage, because of better coordination of services. However, the obvious differences between London and the rest of Great Britain, for example network density, demand levels and measures discouraging private car use, make that conclusion tentative.

It's well documented, by the Competition Commission for example, that deregulated competition in the market has not yielded a genuine competitive environment which works well for the user.

There is evidence of the successful application of franchising from many countries as well as London. But there appear to be a wide range of approaches adopted with no clear evidence on what works best in different circumstances.

There seems to be a **trend towards gross cost contracts particularly in cities with public authorities responsible for a planned and integrated network of services and fares.** This is the approach taken in Manchester with a variety of patterns of contract size and ownership of depots and vehicles.

Hensher and Stanley (2010) summarise experience of twenty years of contracting regimes and present relevant success factors. These boil down to operators understanding and buying into contractors' policy goals and having a clear sense of direction for service development and the relative roles and responsibilities between operator and contractor. The requirement for a skilled and informed buyer is also highlighted. However, the evidence suggests successive waves of tendering don't achieve further savings compared with the first, and indeed some of the initial gains are lost. That has led to the suggestion that **negotiated contracts, with benchmarking to check costs and strong contractual incentives, may be a good option after the initial round of tendering.**

Competitive tendering certainly offers potential for cost savings, service level benefits and more integrated services which address societal and economic objectives. It also could be considered a useful step towards regulated private provision through negotiated performance based contracts for successful incumbent operators.

What about Wales?

The Welsh Government's White Paper and Roadmap to Bus Reform give an indication of the approach to be taken in Wales and how the Welsh Government intends to address some of the issues raised above.

The roadmap makes clear Wales will adopt "an incentive-based gross-cost model," with procurement led by Transport for Wales collaborating with the Welsh Government, and regional local government structures (Corporate Joint Committees) as well as operators and other stakeholders.

Transport for Wales will receive fare revenue and pay operators a fixed sum to run specified services, and apply quality incentives. Local authorities will remain responsible for bus stops/stations and bus priority measures, as well as related areas like school transport. The roadmap envisages that "ultimately" Transport for Wales will procure and own the buses used, but in the short term these will be a mix of publicly and privately owned buses.

Based on the evidence provided in this report gross cost contracts seem to provide the best balance between providing more certainty to operators but still driving patronage and efficiency through incentivisation. Operators may even be willing to trade-off some degree of profit margin for lower risk. In line with our findings from the literature, where ownership of buses lies with Transport for Wales, shorter contracts up to five years could be considered.

The Roadmap also outlines key issues like the transition process and timeline, suggesting an approach similar to Manchester with franchising rolled out regionally, with a series of franchises in each region. It also stresses the need for a diverse range of operators, including small and medium sized operators. However, it is clear that significant work is ongoing to develop and test the approach.

Wales is larger in population and much larger in area than Greater Manchester and Transport for Wales already has experience of procuring and managing the Welsh rail franchise, which should transfer to bus franchising. But the detailed approach to developing franchise packages, working collaboratively with operators and other key stakeholders, will be crucial in ensuring local knowledge is reflected in the planning of services.

The diversity of Wales, for example in terms of urban and rural areas, population density etc., is obviously much greater than Greater Manchester. The city areas of South Wales are similar to those of Greater Manchester, although smaller, so we suggest a similar approach be adopted there. We suggest larger contracts for urban areas with the possibility for economies of scale and also passenger benefits from integrated, well connected local networks.

On the other hand the issue in rural areas may be how to attract bidders and in particular small local operators, who may have expert local knowledge as existing incumbents. It may be necessary to have small contracts for just one or a small number of routes consistent with the scale of operations small operators can provide.

In the spirit of negotiated contracts discussed here it is also important to have open lines of communication between operators and authorities, and have the flexibility to make adjustments to contracts as and when required, particularly during the transitional phase of the early franchises.