

A short note on the possible use of broadband vouchers

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Executive summary

In 2011 the UK government launched a programme for super-connected cities initially for a dozen cities, later adding ten smaller cities, allocating a total of £150 million. The core of this scheme has been redesigned to be based on vouchers for SMEs to be used against capital costs of installing broadband.

Such a scheme is unusual, even unique.

Keywords: Broadband, Governance, Telecommunications, Subsidies, Urban, State aid.

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1. Introduction

In late 2011, Her Majesty's Government (HMG) announced it would invest £100 million to create "super-connected" cities around the United Kingdom (UK) with:¹

- Fixed line speeds of 80-100 Megabits per second; and
- City-wide high-speed mobile connectivity.

HMG subsequently set out the allocation of those funds (see Table 1). An additional £50 million was allocated in 2012 for smaller cities (see Table 2).

Table 1 Allocation of funds for super-connected cities (millions) ²

City	Base award	Maximum possible
Manchester	£12	£12
Birmingham	£7	£10
Bristol	£4.2	£12
Belfast	£6	£13.7
Newcastle	£4	£6
Leeds and Bradford (joint proposal)	£12	£12
Edinburgh	£8	£11
Cardiff	£7	£12
London	£10	£25

Table 2 The second wave of super-connected cities

Aberdeen
Brighton and Hove
Cambridge
Coventry
Derby
Derry/Londonderry
Newport
Oxford
Perth
Portsmouth
Salford
York

The speeds of up to 100 Mbps look quite modest when compared with the USA, where Google has begun to roll-out optical fibre networks to selected cities.³ Its basic offer is of a 1 Gbps internet option for USD 70 (£45.52) per month, with Google writing off the USD 300 (£195.15) installation cost. Indeed, Akamai recently reported average peak download speeds of 63.6 Mbps in Hong Kong SAR and 50.0 Mbps in Japan, which include large

¹ Rt Hon George Osborne MP, *Press release: Autumn Statement 2011*. HM Treasury 29th November 2011. <https://www.gov.uk/government/news/autumn-statement-2011--3>

² "Ten super-connected cities announced", Department for Culture, Media & Sport, 21st March 2012. <https://www.gov.uk/government/news/ten-super-connected-cities-announced>

³ <https://fiber.google.com/cities/>

numbers of residential customers.⁴ HMG may need to reconsider the speeds that qualify as a step change, bringing them closer into line with “world class”.⁵

The decision by HMG to abandon its earlier proposal for super connected cities in favour of a seemingly hurried voucher scheme is troubling.

This short note addresses next the question of the application of state aid rules to broadband subsidies. It next considers some administrative matters. It then reviews the short history of vouchers in telecommunications, before considering service level agreements.

2. State aid rules

The delays in obtaining approval from the European Commission for the rural broadband scheme were significant.⁶ They appear to have been a major factor in the delivery delays which are expected to be about seventeen months.^{7,8}

A second set of seemingly similar, but more severe, problems have apparently occurred with the Super Connected Cities scheme.

This suggests a pattern and that the Department of Culture, Media and Sport (DCMS) has an insufficient grasp of the implementation of Article 107 TFEU.^{9,10} It may require an increase in capacity or sharing of resources with another government department with deeper experience in these matters.

3. Administrative matters

In June 2013, HMG launched a hurried consultation on “connection vouchers” as the major part of the Super Connect Cities initiative, part of the Urban Broadband Fund. Associated with this was a hearing on 9th July 2013, advertised on Twitter as late as 8th July 2012.¹¹

⁴ Akamai (2013) *The state of the Internet, 1st Quarter, 2013 Report*, Volume 6, Number 1. Cambridge, MA: Akamai.

⁵ Ewan Sutherland (2013) *A short note on world class broadband*. <http://papers.ssrn.com/abstract=2273492>

⁶ SA.33671 Broadband Delivery UK framework scheme. http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=3_SA_33671

⁷ NAO (2013) *The rural broadband programme: Report by the Comptroller and Auditor General*. HC 535 Session 2013-14.

http://www.nao.org.uk/wp-content/uploads/2013/07/10177-001-Rural-Broadband_HC-535.pdf

⁸ Public Accounts Committee (2013) *Oral evidence: The Rural Broadband Programme: 17 July 2013*. To be published as HC 474-i.

<http://www.publications.parliament.uk/pa/cm201314/cmselect/cmpublic/uc474-i/uc474i.pdf>

⁹ Consolidated version of the Treaty on the Functioning of the European Union

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2012:326:FULL:EN:PDF>

¹⁰ European Commission (2013) *EU Guidelines for the application of State aid rules in relation to the rapid deployment of broadband networks* (2013/C 25/01).

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2013:025:0001:0026:EN:PDF>

¹¹ @DCMS Urban #broadband voucher consultation forum this Wed <http://bit.ly/17AkZA7> RSVP urbanbroadbandfund@culture.gsi.gov.uk by 5pm today #bduk <https://twitter.com/DCMS/status/354232763546742785>

DCMS decided to hold this hearing *in camera*, limited to:

- Suppliers;
- SMEs; and
- Super Connected Cities.

The meeting was not web-cast and no record of the meeting has yet been made public, with no explanation offered for this lack of transparency.

The closed nature of the meeting was not made known until the day before the meeting, which is an intolerable arrangement for those based outside London.¹² In future it would be simplest to web-cast such hearings and to post videos on the GOV.UK website, in order to ensure that all who wish can participate and can learn what took place.

One consequence of this lack of transparency is that it is not possible to know which issues were raised and thus might usefully be subject to comment in this consultation. A simple solution would be for HMG to publish the written comments and to permit a reply period.¹³

The reasons for holding a closed meeting are far from obvious, so much so that the decision would appear to be one that could have been challenged in the High Court. There seems, *prima facie*, a strong possibility of having obtained interim relief to suspend the meeting and, conceivably, the consultation process.

4. Telecommunications vouchers

The idea of vouchers for telecommunications was first proposed in the USA two decades ago, to be part of its substantial programme to achieve universal service for voice telephony. It was expected that:

Telecommunications vouchers would work similar to food stamps. Qualifying individuals would be given a credit with a fixed dollar value that could be used only in the purchase of telecommunications services. Carriers would then compete for voucher holders just as they would compete for other customers, the difference being that qualifying low income customers would pay with a combination of vouchers and cash. Ideally, competition would ensure that the least cost carriers would win the business of voucher customers.¹⁴

The justification for the use of vouchers was that competition only partially internalises network externalities and that by subsidising marginal customers, those willing to pay part but not the full cost of a connection, would be brought onto the network and all would benefit. By providing public support through the use of vouchers the subsidy would be less costly, if regulators allowed operators to charge different prices to low and

¹² The cost of air travel and hotel rooms generally rises significantly if booked at the last minute or may not be reimbursed if cancelled. This is especially the case for those furthest from London.

¹³ For example, the FCC requires comments to be filed on its ECFs, which are immediately available to the public, with a fourteen day period after the deadline for submissions for replies to comments made by other filers.

¹⁴ John C Panzar & Steven S Wildman (1995) "Network competition and the provision of universal service" *Industrial and Corporate Change* 4 (4) 711-719. DOI: 10.1093/icc/4.4.711

high income households.¹⁵ One concern was that a market might emerge with people trading vouchers for cash or goods.¹⁶

A decade ago Kornbluh, for the New America Foundation, suggested the use of broadband vouchers for low-income users or those in sparsely populated regions of the USA.¹⁷ She argued this would be a pro-competitive initiative, since ISPs would actively seek out such customers. This idea was taken up by Hudson who argued that where the price of broadband was a significant barrier (and where most unconnected households already have computers), the goal of affordable access for the low-income and disadvantaged could be achieved through a discount or voucher for those who meet low-income criteria.¹⁸

Some voucher schemes have been used to encourage the digital switchover. Even then the EC recently admitted was proving to be exceedingly slow.¹⁹ There was a notorious Italian case involving the Berlusconi brothers and misspent state aid.²⁰

While there is limited experience of and some theoretical consideration about voucher schemes, these relate to individuals and households. There does not appear to be evidence of the use of vouchers to subsidise the installation or operational costs of broadband to SOHO and SME premises.

5. Service level agreements

The absence of service level agreements (SLAs) has been noted for some years by the Communications Management Association (CMA), something it has bemoaned as a failure in the broadband market aimed almost exclusively at consumers. For larger businesses there are SLAs in which operators and network service providers undertake to maintain a service to very high levels of performance, failing which to pay damages to customers. In some cases, companies will have off-site back-up facilities to which they can move in the event of, say, a fire.

While some of the additional resilience is achieved by capital expenditure, for example, by providing cables by entirely separate routes into the business premises, many elements are operational expenses. It is thus unclear to what extent a capital subsidy will help SMEs achieve higher levels of resilience than at present. In some respects they might

¹⁵ Will Mitchell & David J Teece (1995) "Introduction: Special issue on telecommunications policy and strategy" *Industrial and Corporate Change* 4 (4) 639-646. DOI: 10.1093/icc/4.4.639

¹⁶ Brooks Albery (1995) "What level of dialtone penetration constitutes 'universal service'?" *Telecommunications Policy* 19 (5) 365-380.

¹⁷ Karen Kornbluh "Fill potholes on America's info highway" *Los Angeles Times*, 13th June 2002. <http://articles.latimes.com/2002/jun/13/opinion/oe-kornbluh13>

¹⁸ Heather E Hudson (2010) "Municipal wireless broadband: Lessons from San Francisco and Silicon Valley" *Telematics and Informatics* 27 (1) 1-9.

¹⁹ EC "Europeans suffering because most Member States are too slow delivering 4G mobile broadband spectrum" Reference: IP/13/726. 23 July 2013. http://europa.eu/rapid/press-release_IP-13-726_en.htm

²⁰ Case C-403/10 P Mediaset SpA v European Commission [2011] ECR. Judgment of the Court of 28 July 2011. Full judgement available at: <http://curia.europa.eu/juris/celex.jsf?celex=62010CJ0403&lang1=en&type=NOT&ancre=>

be as well to install a Ka-band satellite dish or a Virgin Media cable connection as back-up in the event of outage to their primary broadband service.

It is worth noting that the recent evidence to the Public Accounts Committee alleged that the Rural Broadband Scheme was affected by the efforts of BT to sustain its leased line business. One way to increase resilience would be to take a leased line from BT for which an SLA is available. Thus, there may be a risk that the Super-Connected Cities scheme will be subject to the same criticism, namely that it supports BT in sustaining its leased lines revenues.

6. Conclusion

The background to the Super-Connected Cities scheme gives considerable cause for concern. The problems identified by HM Comptroller and Auditor General with rural broadband and the difficulties with approval in terms of Art. 107 TFEU do not offer much confidence.

While there is considerable experience in many countries of municipal initiatives and of public-private partnerships (PPPs), there is very little (if any) experience of voucher schemes for business broadband. At one time it was thought vouchers might be useful for universal telephony service, but this approach was not taken up. Again, while it might be plausible for broadband, it seems much more likely to be suitable for a trial than for major expenditure across twenty-two cities. Indeed, so limited is the experience that it is unclear where the Department found this idea.

DCMS is proposing to market test a voucher scheme in several cities in the summer of 2013. In many respects this imaginative scheme seems to be one better suited for a pilot than one to be launched across twenty-two cities.

By the admission of the Department a significant part of the problem concerns information, with SMEs insufficiently aware of available services and ISPs insufficiently aware of the needs of SMEs. This issue appears not to be addressed in the scheme and vouchers do little, if anything, to assist.

It seems almost inevitable that the Super-Connected Cities will be taken up by the Public Accounts Committee.

Abbreviations

BDUK	Broadband UK
bps	bits per second
CMA	Communications Management Association
DCMS	Department of Culture, Media & Sport
EC	European Commission
ECFS	Electronic Comment Filing System
FCC	Federal Communications Commission
HMG	Her Majesty's Government
NAO	National Audit Office
PPP	public-private partnerships
SLA	service level agreement
SMEs	small and medium enterprises
SOHO	small office, home office
TFEU	Treaty on the Functioning of the European Union
UK	United Kingdom of Great Britain and Northern Ireland
USD	United States Dollar



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