Agenda

Advancing economics in business

What makes an 'unfair burden'? Funding social outcomes in competitive markets

National monopolies in Europe once provided services across their countries as a public service, sometimes on a non-commercial basis. However, where these monopolies now face competition, European law allows national authorities to require the costs of some non-commercial services to be shared with industry operators, but only if the costs are an 'unfair burden'. But what is an unfair burden, and can a burden to provide these services ever be 'fair'?

The concept of an unfair burden first arose in the context of funding social obligations in the communications sector. In particular, markets have now been deregulated, but former incumbents such as BT in the UK, and eircom in Ireland, continue to take sole responsibility for social commitments, including quality of service targets, and universal access to the network. Under European law, incumbent operators can recover the (net) cost of providing these universal services, but only if the services represent an unfair burden.[1]

The law does not clearly define 'unfair burden'. In the majority of EU countries, the provision of universal services has not been deemed an unfair burden. In most cases, this has been assumed rather than explicitly stated. As discussed below, it often reflects the fact that much of the burden arises in parts of the market where there is residual market power, which implies that any 'burden' will be recovered through regulated prices.

However, this is not always the case. In Ireland, for example, the incumbent communications provider, eircom, has applied for funding of the net cost of the universal service.[2] The analysis of the net cost was that it represented approximately €5m in 2009/10, at which point eircom was found to have a market share of marginally above 50%.[3] In this case, the conclusion was that, on balance, this net cost did not represent an unfair burden. This article considers the meaning of 'unfair burden', how an unfair burden might arise in communications, and how the concept might be applied more generally in infrastructure sectors with social obligations.

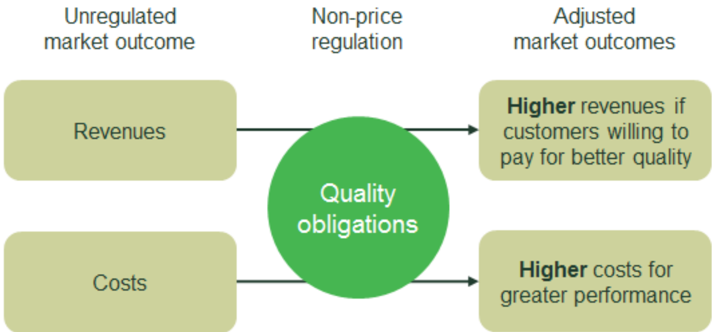
Step 1: what is an economic burden?

In economic terms, the concept of a burden being imposed on one operator or a group of operators is well understood. A burden arises when an operator is required by some form of external intervention (regulation, legislation, or less formal intervention such as voluntary undertakings) to offer a level of service that is different from that which it would offer in a competitive market.

A simple example is quality of service obligations. In some markets, one or all operators can be required to meet minimum quality of service obligations that require a greater service performance from the individual operator or from the market as a whole than might be offered for purely commercial reasons. Figure 1 illustrates that such obligations may make products more attractive, but they are also likely to increase prices.

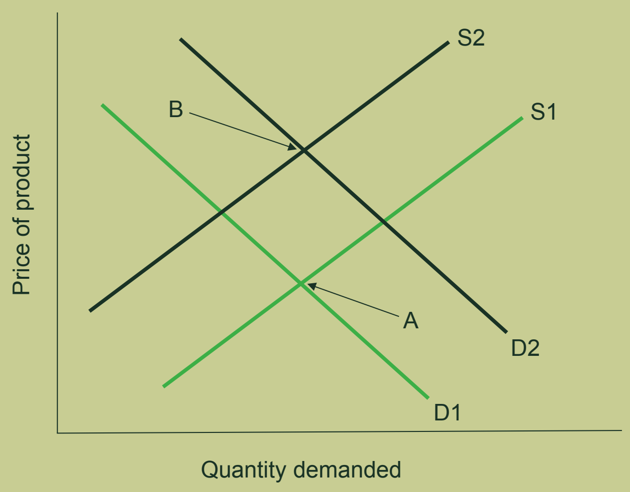
On the assumption that, in the unregulated market, the operator set prices and quality levels in order to maximise profits, the operator will presumably be worse off if it faces an additional quality of service obligation. This is illustrated in the box overleaf.

Figure 1 Impacts on service quality regulation in unregulated markets



Source: Oxera.

Changes in demand and supply due to the imposition of a burden



Source: Oxera.

The supplier has chosen its optimal price and quality of the product at point A. Suppose a regulator imposes a higher quality of service obligation on the supplier. This may increase demand (i.e. shift the demand curve from D1 to D2) for the product at a given price, due to the increase in quality. At the same time, such an obligation will decrease supply for every market price (i.e. a shift in the supply curve from S1 to S2), as production is now more costly. The result (represented by point B) is a product with a price and quality that are not optimal from the provider’s perspective—this is clear because the provider could have chosen those quality and price points, but did not do so when it had a choice.

If an obligation, such as quality of service requirements, results in higher prices, is it such a bad thing? Not necessarily. The implication of imposing a properly designed obligation is that, while the regulated company may be worse off, society could be better off. In other words, the value placed by society on the benefits from the regulation could outweigh any economic loss that may occur as a result.

In the context of a universal service obligation (USO) in the communications sector, for example, this value would reflect the benefits in terms of social cohesion from all citizens having the same access to core communication services. Table 1 gives examples of such obligations.

Step 2: introduction of the concept of an unfair burden

The concept of an unfair burden was introduced in the telecoms sector by European Directive 97/33/EC, as later amended by Directives 2002/22/EC and 2009/136/EC, which further developed the definition of universal service.[4] The principle of an unfair burden was to allow for the potentially competing objectives of European communications legislation, where national monopoly operators were

Table 1 Examples of obligations in different industries

Industry	Location	Companies involved	Type of obligation
Post	Many countries globally, including the USA and in the EU	Royal Mail, bpost, PostNL, An Post, USPS, etc.	Minimum collection and delivery requirements to all access points (e.g. houses, post boxes). In the EU, a minimum of five days a week; member states may impose geographically uniform tariffs
Telecoms (mobile)	UK, France, elsewhere	3G providers	Quality of service requirements for spectrum owners—e.g. 90% first pick-up in France, 95% coverage in the UK
Telecoms (fixed)	EU	Former incumbents (e.g. BT, eircom, France Telecom)	A range of requirements focused around universal access to the fixed network at affordable prices, including provision of services to vulnerable users and reliability obligations
Water	EU	All providers	Providers must deliver clean drinking water

Source: Oxera, based on OECD (2005), ‘OECD Communications Outlook’; Ofcom (2012), ‘4G Coverage Obligation Notice of Compliance Verification Methodology: LTE’; ECORYS (2005), ‘Development of competition in the European postal sector’; ECORYS (2011), ‘Main Developments in the Postal Sector’; European Council (1998), ‘COUNCIL DIRECTIVE 98/83/EC’; and Webb Henderson and Strategy and Policy Consultants Network (2014), ‘The Future of Regulation: An Analysis of Developments in EU Telecoms Markets and the Implications for the European Commission’s Review of Relevant Markets’.

to be required to open their markets to competition, but at the same time to retain various obligations, including an obligation to provide universal access to the fixed network, including in non-commercial (often rural) areas. For example, in the UK, BT (and only BT) must offer services on request, and meet minimum quality-of-service standards for those services, including fault repair targets.

There are examples of the USO being found to be an unfair burden for the universal service provider (USP). In Portugal, in 2009–10 the communications regulator, ANACOM, found that the former incumbent, Portugal Telecom (PTC), had an unfair burden.[5] This was in the context of PTC’s market share and profitability falling sharply, with market share below 80%, and negative profitability in 2009.[6]

In the UK, the providers BT and KCOM have to meet USO conditions. In 2005, the communications regulator, Ofcom, estimated that the costs of the USO for BT were £50m–£70m.[7]

However, despite BT now having only around 38% market share of the fixed lines in the UK and about 30% of fixed broadband provision, which are well below the levels of PTC in Portugal, Ofcom did not consider that it was unfair for BT to shoulder these obligations.[8] In fact, the last time Ofcom considered whether there was an unfair burden was ten years ago. Why?

The *Base* criteria

In 2010, the only determination of an unfair burden case to date was made by the ECJ, in respect of a Belgian dispute concerning funding of a subset of the USOs. The judgment made it clear that assessment should be on a case-by-case basis, but proposed relevant criteria for whether the net cost represents an unfair burden. It stated:

> the unfair burden…is a burden which, for each undertaking concerned, is excessive in view of the **undertaking's ability to bear it**, account being taken of all the undertaking's own characteristics, in particular [1] the quality of its equipment, [2] its economic and financial situation and [3] its market share.[1]

This assessment highlights that whether a burden is 'unfair' is linked to the wider financial environment of the provider of the USO—i.e. the undertaking that has to pay for the burden.

Note: [1] Emphasis and numbering added.
Source: Judgment of the Court (Fourth Chamber) of 6 October 2010, *Base NV and Others v Ministerraad.*

Step 3: the alternative concept: a 'fair burden'

There is one legal test of what might make a burden 'fair': the *Base* case.[9] In this case, the European Court of Justice (ECJ) concluded that the fairness of financing the USO related to a number of criteria, described in the box above. These include 'the ability of the undertaking to bear' the net cost. In other words, whether a burden is unfair is affected by the financial position of the company that bears the burden.

Equally importantly, the ECJ recognised that there was no one-size-fits-all solution, that a net cost does not necessarily imply an unfair burden, and that it should be for national authorities to determine how this would work in their respective markets.

Figure 1 in this article shows that a direct effect of imposing additional costs on operators will generally be to reduce profits. Therefore, if such costs are imposed on only one operator in a market, this is a form of market distortion. However, this will not necessarily mean that it is an unfair burden, as the impact on competition of imposing quality obligations, such as a USO, will depend on the market structure.

Table 2 compares a range of market structures, and what the imposition of a USO or quality of service obligation might mean in those markets.

Figure 2 illustrates the circumstances under which a burden may be 'fair'—i.e. where it may affect competition but does not result in a net competitive disadvantage, as there are other effects within the market which outweigh its impact. The figure

Table 2 Impact of service obligations in different markets

Market structure	Example	Effects on market	Profitability before burden	Profitability after burden
Competitive, and same obligations on all market participants	Competitive mobile markets where all spectrum owners have coverage requirements	All operators incur higher costs, and will pass these through to customers where feasible to reach a new market equilibrium	Returns on investment close to cost of capital	Returns on investment close to cost of capital
Regulated monopoly	EU water: drinking water quality requirements	Operators incur higher costs, which are included in regulatory costs and passed to customers through regulated tariffs	Returns on investment close to cost of capital	Returns on investment close to cost of capital
Developing competition: market leader(s) or former incumbents competing with entrants	Recently deregulated fixed telecoms markets in the EU	Will generally result in lower profits for market leader firms facing additional costs, with smaller firms becoming more competitive	Early stage of competition: returns on investment for market leader above cost of capital if it retains competitive advantage or other residual market distortion	Will generally reduce return on capital for market leader with USO and increase return on capital for entrants

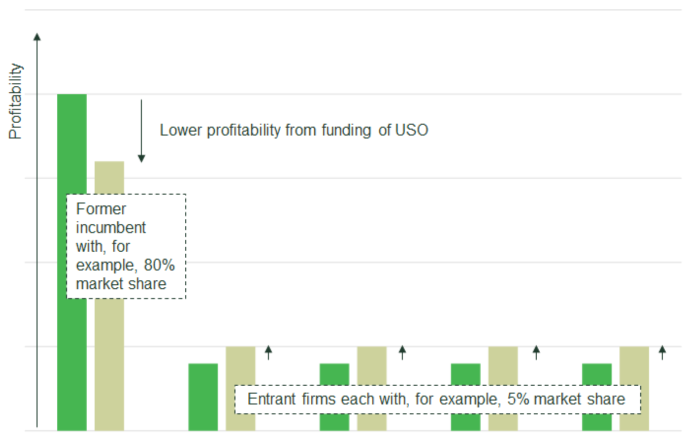
Source: Oxera.

illustrates how the case-by-case analysis envisaged by the ECJ's judgment in the *Base* case could work in practice, and how markets at different stages of competitive development may have different optimal outcomes. Another way of looking at this is by considering the impact on profitability, as in the following examples.

- **BT**—Ofcom concluded that the primary effect was that the net cost of the USO, if positive, would have a small effect on BT's profitability. As BT remains by far the largest and most profitable fixed-line operator in the UK, Ofcom has taken no action. This approach is common for quality obligations with a relatively small economic effect.

- **PTC**—in Portugal, ANACOM identified that the net cost was positive (and material relative to the costs of a

Figure 2 Impact of the USO in markets with developing competition



Source: Oxera.

sharing mechanism) and could be considered an unfair burden, as PTC had lost significant market share and seen a material impact on profitability.

- **eircom**—in Ireland, the electronic communications and postal regulator, ComReg, has implemented a formal process for assessing net cost applications by eircom. As discussed in the box below, ComReg concluded that the net cost for 2009/10, while material to the costs of a sharing mechanism, did not prevent eircom earning a fair return on capital, and therefore it could not be considered unfair.

Assessment of eircom's application to fund the net cost

In 2011, ComReg put in place a framework for the funding of net cost obligations arising from the universal service.[1] This included a description of the relevant characteristics to be considered, including:

- is there a net cost?
- is the net cost material to administrative costs?
- based on these conditions, does the net cost significantly affect the USP's profitability?
- does the net cost have a material impact on the USP's ability to compete on equal terms with other operators?[2]

Oxera supported ComReg in its review of whether eircom's net cost of the USO represented an unfair burden. The analysis indicated that, on balance, while eircom had been losing market share, the net cost itself had not significantly affected the USP's profitability. This is illustrated in the table below, which shows eircom's actual profitability for the fixed-line business in 2006–12.

Trends in eircom's fixed-line profitability

	2006	2007	2008	2009	2010	2011	2012
Revenues (€)	2,362	2,960	2,249	2,119	1,906	1,823	1,609
Operating profit (€)	267	264	320	245	305	388	338
Mean capital employed (€)	1,358	1,286	1,278	1,266	1,242	1,484	1,515
Return on capital employed (%)	**20**	**21**	**25**	**19**	**25**	**26**	**22**

Source: Oxera (2013), 'Does the universal service obligation represent an unfair burden for eircom?', prepared for the Commission for Communications Regulation, 1 February, Table 3.2.

In the context of a net cost of below 1% of capital employed, and a cost of capital in the order of 10%, it was concluded that eircom was able to bear the net cost from its own resources—i.e. that the net cost did not represent an unfair burden.

Note: [1] ComReg (2011), 'Decision on the Costing of universal service obligations: Principles and Methodologies', 11/42, 31 May. [2] In addition, ComReg's framework highlighted a number of relevant aspects of the market and financial conditions faced by eircom to be considered in assessing these questions, which are listed in Decision 42 of its 2011 Decision.

What is the future of the USO?

The challenges of how to fund new infrastructure investment are arguably getting bigger. For example, in the UK, BT may be profitable, but it has been able to roll out new technology commercially only in certain areas. In some rural or remote areas, it may not be profitable to invest in new technology. Given trends in Internet usage, and with some public services moving towards Internet-only provision, a universal service based on postal services and voice calls might not be sufficient in the future.

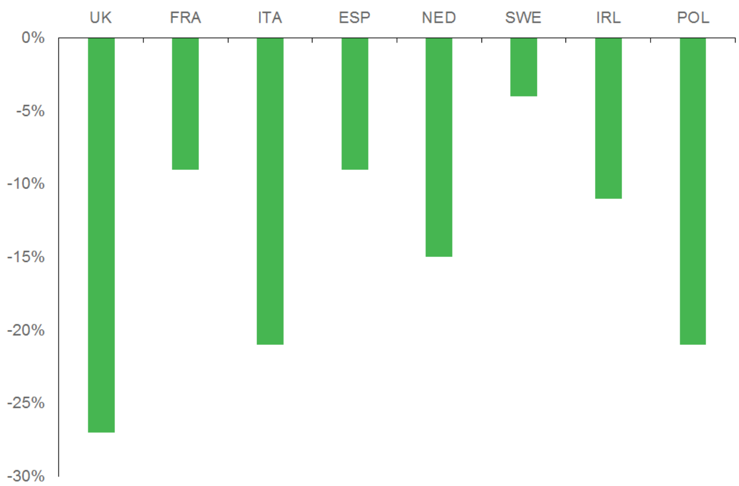
Therefore, if governments want to continue the concept of universal provision into new technologies, they may either need to fund that investment directly, or the scope of the USO, and therefore the net cost, may need to increase. However, in communications markets, the funding of the USO through a retained dominant position is likely to be increasingly difficult over time. In fixed telecoms in particular there is increasing competition and falling market shares of former incumbents, as shown in Figure 3.

This ongoing reduction in market share for the previous incumbent operators is likely to continue to reduce the ability of such operators to fund the USO through cross-subsidy. Therefore, if a government wants its incumbents to offer non-commercial services, then, arguably, some intervention is likely to be required. There are three potential models:

- subsidy (including tendering);
- a sharing mechanism;
- funding from the incumbent's residual competitive advantage (including regulation).

As described above, a sharing mechanism may, in practice, either increase or decrease market distortions, depending

Figure 3 Change in incumbent market share in selected EU countries between 2005 and 2010



Source: Oxera analysis based on Ofcom (2011), 'International Communications Market Report 2011'.

Implications of the state aid framework

The funding of USOs and the test of an 'unfair burden' use principles that are closely analogous to state aid rules, such as the 'Altmark' test for Services of General Economic Interest (SGEI), or the European Commission's state aid framework for SGEI.[1]

If the state funds a USO, through mechanisms ranging from direct subsidies to burden-sharing schemes, state aid rules, such as the SGEI framework, are likely to apply in most sectors.[2] The principle that a USO brings benefits as well as costs, resulting in the quantification of the burden as the net costs, is widely documented in state aid rules. For example, in the state aid rules for public transport, compensation is calculated as the incurred costs less any positive financial effects generated as a result of the public service obligations, plus a 'reasonable profit'.[3] Here, the positive financial effects may be indirect, and relate to (for example) network externalities or branding.

In the context of SGEI, state aid rules are primarily concerned with avoiding overcompensation. As with the test of an 'unfair burden', this involves calculating net costs and comparing the level of compensation relative to those costs (including an allowance for a 'reasonable' profit). Examples of cases in which the Commission has demanded aid repayment for overcompensation include *Deutsche Post* (up to €1bn) and *bpost* (€417m).[4]

Conversely, in the case of an unfunded USO burden, the main concern relates to undercompensation of the USOs. If an undertaking is undercompensated, the incumbent may be placed at a competitive disadvantage. The principles that are used to quantify overcompensation could also apply in the case of undercompensation. However, an undertaking in this situation cannot normally use state aid rules to seek redress.

Note: [1] The Altmark criteria are used to determine whether aid exists; for further details, see Case C-280-00, *Altermark Trans GmbH and Regierungspraesidium Magdeburg v Nahverkehrsgesellschaft Altmark GmbH*. If the Altmark criteria are met, the aid can be declared compatible with state aid rules if the conditions set out in the Commission's SGEI framework are met; see European Commission (2012), 'Communication from the Commission on the application of the European Union State aid rules to compensation granted for the provision of services of general economic interest', 2012/C 8/02, 11 January. [2] An exception to this is the *PreussenElektra* case, in which it could not be established whether there was a transfer of state resources. For more details, see Case C-379/98 *PreussenElektra AG v Schleswag AG.* [3] European Commission (2007), 'Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos 1191/69 and 1107/70', 23 October. [4] For further details, see European Commission (2012), 'State aid: Commission orders recovery of incompatible aid paid to Deutsche Post', Memo/12/37, 25 January; and European Commission (2012), 'State aid: Commission orders recovery of overcompensation paid to Bpost', Memo/12/38, 25 January.
Source: Oxera.

on the market structure. In instances where a subsidy is an option, there will be a need to have regard to the Commission's rules on state aid more generally, as described in the box overleaf.

As competition continues to increase, and if governments want to continue the USO concept into new technologies, it would appear realistic for a sharing mechanism to become the economically optimal approach for funding an unfair burden. If so, rather than declining, there may be a future for a larger USO based on access to new technologies for all. In that case, the use of a sharing mechanism should be compared to the approaches of subsidy and regulation in assessing which approach is most relevant in competitive markets.

[1] European Commission (1997), 'Directive 97/33/EC of the European Parliament and of the Council'; European Commission (2002), Directive 2002/22/EC'; European Commission (2009), 'Directive 2009/136/EC'. In the postal sector, the third European Postal Directive similarly allows for funding of the net cost: 'where a Member State determines that the universal service obligations entail a net cost, and represent an unfair financial burden on the universal service provider, it may introduce a mechanism to compensate the undertaking concerned from public funds, or mechanism for the sharing of the net cost of the universal service obligations between providers of services and/or users'. European Commission (2008), 'Directive 2008/6/EC of the European Parliament and of the Council'.

[2] ComReg (2012), 'Universal Service Obligation: Application for funding from the Universal Service Provider for the period 2009/2010', June. Oxera (2013), 'Does the universal service obligation represent an unfair burden for eircom?', prepared for the Commission for Communications Regulation, 1 February, available at: http://www.oxera.com/Latest-Thinking/Publications/Reports/2013/Does-the-universal-service-obligation-represent-an.aspx.

[3] Oxera supported the Irish communications regulator, ComReg, in the review of whether eircom's net cost of the universal service obligation (USO) was an unfair burden. ComReg (2014), 'Assessment of Eircom's Universal Service Fund Application for 2009-2010 – Response to Consultation and Determination'. Market share analysis is from Oxera (2013), 'Does the universal service obligation represent an unfair burden for eircom?', prepared for the Commission for Communications Regulation, 1 February, section 3.4, available at: http://www.oxera.com/Latest-Thinking/Publications/Reports/2013/Does-the-universal-service-obligation-represent-an.aspx.

[4] European Commission (1997), 'Directive 97/33/EC of the European Parliament and of the Council'; European Commission (2002), Directive 2002/22/EC'; European Commission (2009), 'Directive 2009/136/EC'.

[5] ANACOM (2011), 'Decision on the Definition of Unfair Burden', 15 July.

[6] In its 2011 Decision, ANACOM noted that the ROCE of PTC was -0.1% (negative) in 2009, having fallen steadily from above 20% in 2006. It defined ROCE as 'return on capital employed, which may be calculated according to the following ratio: (operating revenues) / (net assets – short-term debts – accruals and deferrals)'.

[7] Ofcom (2005), 'Universal Service Obligation: a review', available at: http://stakeholders.ofcom.org.uk/consultations/uso/main/. KCOM is the incumbent provider of telecommunications services in the Kingston-upon-Hull area.

[8] See Ofcom, 'Facts & figures', available at: http://media.ofcom.org.uk/facts/.

[9] Judgment of the Court (Fourth Chamber) of 6 October 2010, *Base NV and Others v Ministerraad*.