POLICY BRIEF

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# Restructuring Public Utilities for Competition



## Introduction

Over the last twenty years public utility industries have been transformed by the introduction of competition. Greater reliance on competition has been a key factor in improving the way these sectors are regulated, leading to improved efficiency, innovation and more attention to the needs of consumers.

Introducing competition in different parts of public utility industries is not simply a matter of removing legal barriers to entry. It is usually also necessary to introduce new regulation to ensure that new firms have access to any key inputs or services that can only be obtained from the incumbent monopoly firm. The incumbent firm may not willingly provide these inputs, especially where doing so means the potential loss of a profitable line of business to a rival. Incumbent firms can resist the growth of competition by refusing to supply essential inputs, supplying them at a lower quality, or at a higher price.

Regulators can and do try to prevent this behaviour, but the incentives on the incumbent firm to evade the regulation are strong, and developing a regulatory response takes time. Rather than trying to directly control the behaviour of the regulated firm, it often makes sense to instead change the incentives on the regulated firm to restrict competition. Often this can be achieved through various forms of restructuring of the regulated firm. For example, by carefully separating the regulated firm into its monopoly and competitive parts.

Restructuring the regulated firm will not always be the right policy option. But certain forms of restructuring have proved effective in many industries and, as weaknesses in earlier reforms have become apparent, is being increasingly mandated in OECD countries, particularly as a tool for facilitating the growth of competition.

The OECD has recently encouraged member countries to think more closely about such “structural solutions” in the *OECD Recommendation of the Council concerning Structural Separation in Regulated Industries*, which was adopted by the OECD Council on 26 April 2001. This policy brief describes that recommendation and the accompanying report.

## Is competition possible in public utility industries?

In the past it was common to treat “public utility” industries (such as telecommunications, electricity, railroads and so on) as though they were monolithic natural monopolies. But the scope of the natural monopoly in these sectors is

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**Industries Featuring Both Competitive and Non-competitive Components**

| Sector | Activities which are usually non-competitive | Activities which are potentially competitive |
|---|---|---|
| Gas | High-pressure transmission of gas[1]<br>Local gas distribution[2] | Gas production<br>Gas storage (in some countries)<br>Gas "retailing" and "marketing" activities |
| Electricity | High-voltage transmission of electricity[1]<br>Local electricity distribution[2] | Electricity generation<br>Electricity "retailing" or "marketing" activities<br>Electricity market trading activities |
| Telecommunications | Local loop services in some areas[2]<br>Termination of calls on other networks | Long-distance services; Mobile services; Value-added services<br>Local loop services to high-volume business customers, especially in high-density areas<br>Local loop services in areas served by broadband (*e.g.*, cable TV) networks |
| Postal Services | Door-to-door delivery of non-urgent mail in residential areas[2] | Transportation of mail; Delivery of urgent mail or packages<br>Delivery of mail to high-volume business customers, especially in high-density areas |
| Air services | Access to runways, such as take-off and landing slots | Aircraft operations<br>Maintenance facilities; Catering services |
| Railways | Track and signalling infrastructure[1] | Operation of trains<br>Maintenance facilities |
| Maritime transport | Port facilities (in certain cities) | Pilot services, port services |

1. Scope for competition varies depending on geography and nature of demand, amongst other things.
2. Services in lower-density, lower volume residential areas are less likely to be competitive than services to high-density, higher volume commercial areas.

not fixed for all time – as technology develops the scope for competition changes.

One of the biggest developments in regulatory thinking in the past twenty years has been the recognition that these industries are not monolithic but are made up of many separate parts. Many of these parts can, in fact, sustain competition.

The following table lists, for a number of industries, the parts that might be able to sustain competition (*i.e.,* are "competitive") and the parts that are still a monopoly (*i.e.,* are "non-competitive"). For example, in the electricity sector, the transportation of electricity over transmission lines is usually not competitive, while the generation of electricity is usually competitive.

The introduction of competition into the competitive parts of these industries has transformed the way they are regulated. Experience has shown that reliance on competition, where it is feasible, usually delivers better outcomes for end-users than reliance on regulation. Although regulation of the true monopoly parts of these industries is essential, regulation seldom facilitates efficient production and has a tendency to hinder the development of new services and new ways of marketing those services to consumers. Greater reliance on competition has allowed the regulators to withdraw from regulating certain areas, facilitating innovation and efficiency in those sectors, while allowing the regulator to concentrate on the natural monopoly sectors that remain.

## What do we mean by restructuring?

In most cases, introducing competition into the competitive parts of a regulated public utility industry is not simply a matter of removing legal or regulatory barriers to entry. It is usually also necessary to take steps to ensure that the new firms entering the market have non-discriminatory access to any essential inputs provided by the remaining monopoly parts of the industry.

Access regulation of some kind is therefore one essential element in the process of introducing competition into a regulated industry. We focus here on the second possible element of this process – the possible restructuring of the regulated company.

There are many different ways in which restructuring could be used as a tool for promoting competition. Breaking a firm horizontally into competing pieces, for example, might be desirable to facilitate competition between the different pieces. In some countries, for

example, a monolithic electricity generator has been separated into separate competing companies, to facilitate competition in electricity generation.

It might also be useful to break up a regulated firm if doing so allowed the regulator to more precisely identify the costs of providing the regulated service, or to prevent the firm shifting its costs from unregulated to regulated activities. For example, in a recent case concerns were raised that Deutsche Post AG was able to cross-subsidise its competitive parcels service with revenue from its monopoly "reserved" services. To prevent this Deutsche Post was required to set up a separate legal entity for the provision of its non-universal and competitive parcel services. Separation of this kind facilitates the monitoring and control of anti-competitive cross-subsidisation.

These forms of restructuring are important but were not the direct focus of this study. Instead, it focused on restructuring to promote competition in those competitive markets which depend on access to the remaining monopoly for an essential input. To understand why restructuring is important in this context it is first important to understand the problems that can arise when a monopolist supplying essential inputs is itself allowed to operate in the competitive activities.

## What is the basic problem in vertically-integrated industries?

When the owner of essential inputs also competes in a downstream competitive activity it typically has both the ability and the economic incentive to restrict competition in that downstream activity.

It has the *ability* to restrict competition by restricting access to the essential input – by raising the price, lowering the quality or reducing the timeliness of the essential services it provides, relative to the services the regulated firm provides to its own downstream affiliate. For example, an integrated electricity generation and transmission company could limit competition from rival generators by raising the price that they must pay for access to the transmission network. An incumbent telecommunications operator can limit competition from rival long-distance operators by raising the price at which those rivals have access to the local loop, and so on.

When the owner of the essential input also competes in the competitive activity it may also have the *incentive* to restrict competition. This would occur, for example, when the monopoly input was tightly regulated compared to the regulation on the retail services – *e.g.,* if regulation of the transportation prices of a natural gas transmission pipeline was more tightly regulated than the price of delivered natural gas. In this circumstance the owner of the essential input has a strong incentive to itself provide the downstream services and, by restricting competition downstream, re-capture some of the monopoly rents that it would otherwise lose to regulation.

For example, if the price of delivered gas was unregulated while the price of gas transportation services was tightly regulated, a gas pipeline could enter the market for delivered gas, exclude competing gas producers and sell delivered gas at the monopoly price – recapturing the monopoly profits on its pipeline transportation business that would otherwise be lost to regulation.

The staff of the US Federal Trade Commission, speaking in the context of the US electricity industry have said:

"A monopolist whose rate of return is regulated has an incentive to evade the regulatory constraint in order to earn a higher profit. Its participation in an unregulated market may give it the means to do so, either by discriminating against its competitors in the unregulated market or by shifting costs between the regulated and unregulated markets. The discrimination strategy involves complementary products. The monopolist controls others' access to its regulated product in ways that permit it to earn *supra* competitive returns in its own operations involving the unregulated complement. Discrimination could appear as a subtle reduction in quality of service, whose effects would be more difficult to identify and measure than outright denial of access. An integrated transmission monopolist might afford other generation sources access to its transmission services only on terms that raise others' costs and permit the monopolist to make *supra* competitive profits in the generation market."

Regulators can and do try to prevent the provider of the essential services from behaving in this way, but the task is difficult. The regulated firm can use all the tools at its disposal, whether legal, technical or economic to delay, to lower the quality or raise the price of access. A well-resourced regulator, through persistence and vigilance, could hope to limit the anti-competitive activity of the incumbent, but the outcome is unlikely to be as much competition as would arise in the absence of the incentive to restrict competition. Potential entrants, fearing the effects of discrimination, despite the best efforts of the regulator, may hesitate to invest in new capacity

The staff of the US Federal Trade Commission, again in the context of the electricity industry, wrote:

"Rules mandating open access and comparable treatment would be particularly difficult to monitor and enforce in [the electricity] industry, because, to succeed, the rules must constrain transmission owners to ignore their economi c interests. Ensuring that the services and prices the integrated utility provides to and charges its competitors are equivalent to what it provides to and charges itself could require virtually transaction-by-transaction regulatory oversight. Monitoring and enforcing compliance with regulations against discrimination may be particularly difficult when quality of service is time sensitive, as it is in electric power. Because power is sold on an hourly basis, market dynamics – and thus the incentive and ability to exploit market power – can shift over the course of each day, making it virtually impossible to intervene before conditions have changed. Hemming in transmission owners' behavior, although perhaps possible in theory, will be difficult to maintain in practice. Successfully containing their behavior at one time and place may provide little assurance of containing it later or elsewhere."

## What are the alternative ways of addressing this problem?

There are at least four different ways of restructuring the regulated utility to address this incentive to resist the growth of competition:

The first possible approach is separation of the ownership of the competitive and non-competitive segments of the regulated utility, supplemented by a line-of-business restraint which prevents the monopolist from re-entering the competitive activity.

When the owner of the essential service is prevented from competing in the competitive sector, the incentive to restrict competition is eliminated. The owner of the essential input has no incentive to discriminate between any of the firms competing in the upstream or downstream competitive sector. The owner of the essential input no longer has any incentive to restrict competition. This simultaneously reduces the need for close regulatory oversight and enhances the scope for competition. This is the primary benefit of vertical structural separation.

A second possible approach is joint or club ownership of the natural monopoly facility by firms which compete in the competitive activity. Since all the competing firms are part owners of the natural monopoly facility they can ensure that they obtain access on non-discriminatory terms and conditions.

A third and related approach is allocating a share of the total capacity of the natural monopoly facility to each of the downstream competing firms. The scarce capacity of airports is often divided up in this way through the allocation of take-off and landing "slots" to airlines which use the airport. These airlines then compete with each other in the provision of services to and from the airport. In the US, competing companies may hold long-term rights to a share of the capacity of a natural gas pipeline. These companies compete with each other as though they each own their own "virtual" pipeline. This approach is useful when the capacity of the natural monopoly facility is easy to define.

A fourth approach is to separate the ownership and control of the natural monopoly facility – allowing the ownership to remain in the hands of a firm which may also compete in the competitive activity, but placing its control in the hands of a neutral body – such as a committee made up of representatives of the industry. This approach, known as "operational separation" or "operational unbundling" is common in the US electricity industry. In that case, the body which has control (but not ownership) of the transmission grid is known as the "Independent System Operator".

In certain network industries in which there is a "two-way" flow of traffic there is yet another possible way to promote competition. In this approach the incumbent firm is separated in a way which allows vertical integration but ensures that the independent firms still need to purchase essential inputs from each other. This form of separation is referred to in the OECD report as "Separation into Reciprocal Parts".

All of these approaches have in common that they seek to address the incentive of the integrated firm to restrict competition, rather than trying to control its behaviour. These approaches can therefore be called "structural approaches" to distinguish them from "behavioural approaches" which seek primarily to control behaviour. These approaches are discussed further in the OECD report *Restructuring Public Utilities for Competition*.

Each of these different approaches has its own costs and benefits and each may be appropriate in different circumstances. To illustrate some of these costs and benefits, let's look more closely at vertical separation.

## What are the costs of vertical separation?

The previous section highlighted the primary benefit of vertical separation – by eliminating the incentive to restrict competition downstream, vertical separation makes the job of the regulator easier and facilitates the development of competition. What might be the costs of vertical separation?

It is possible to identify many different costs that could be raised by separation:

- Separation may increase transactions costs. After separation, operations that were previously carried out within a single firm must now be carried out at arms-length through contracting and market arrangements. In many instances, the full exploitation of the essential input by a downstream firm will require a specialised investment and therefore close co-ordination with the monopoly – this co-ordination is usually easier when carried out within a single firm. Consider, for example, the co-ordination between separate track and train companies that might be required to install and operate a high-speed rail link to an airport. In some cases the actions of one firm may have consequences for another – the internalisation of these "externalities" is likely to be easier within a single firm. Consider, for example, the problem of optimising traffic flow on a congested rail network – a delay by one train may influence the timeliness of many others, including trains operating on completely different routes.
- Separation may force the monopolist to forego efficient ways of selling the monopoly services. For example, it is well-known that it is efficient for a monopolist to sell its goods at marginal cost whenever that is feasible. While it may be feasible for the monopolist to, in effect, sell to its own affiliate at marginal cost, if the monopolist sold to other firms at marginal cost it might not be able to recover its fixed costs.
- Separation may also force the monopolist to forego efficient forms of price-discrimination. It is usually efficient for a regulated monopolist to sell at different prices to different consumers. By bringing the monopoly firm closer to the final consumer, integration can allow the monopolist to more finely differentiate its regulated prices, enhancing overall efficiency. Separation, by cutting the link between the monopolist and the final customers may prevent the firm from discriminating in this way. For example, a rail track company is likely to be able to more finely differentiate its prices for rail services when it knows exactly what products are being carried in the trains that operate over its tracks. This information may not be available to a separate rail track company.

It is important to recognise that many of these costs are incurred as a result of the decision to introduce competition and not as a result of the decision to separate. In particular, if competitors are to operate on a level playing field then an integrated firm must be prevented from, for example, selling to its downstream affiliate at marginal cost when it sells to its rivals at an access price above marginal cost. The resulting loss of efficiency is therefore a cost that must be incurred where there is a desire to promote competition, whether or not the incumbent firm is separated.

In addition to these on-going costs, it is also important to mention the one-time costs of restructuring which can be sizeable. Some countries also consider that allowing a regulated utility to remain integrated may also facilitate the maintenance of a given level of universal service or service reliability.

## Are there alternatives to full vertical ownership separation?

- Recognising both the costs and benefits of vertical ownership separation, some countries have tried other controls which seek to achieve some of the effects of separation without actually requiring divestiture. These alternatives include:
- Accounting separation, *i.e.,* a requirement on the regulated firm to prepare separate accounts for its competitive and non-competitive businesses;
- Management or functional separation – *i.e.,* a requirement that separate activities be carried out within separate, distinct divisions of the regulated firm;

Corporate separation – the requirement that separate activities be carried out by a separate corporate entity (wholly or partially owned by the regulated firm).

These alternative forms of separation affect neither the incentives nor the ability of the regulated firm to act in an anti-competitive manner. They are often, however, an important supplement to other forms of separation, particularly as a supplement to access regulation. The information made available through accounting separation, for example, is typically used as a basis for determining access prices, for detecting cross-subsidies and for preventing discrimination.

France notes that the EC (in the electricity directive 96/92/CE and the gas directive 98/30/CE and elsewhere) have not required structural separation but

have relied on access regulation supported by accounting separation. It is the opinion of the French authorities that "these alternative forms of separation can offer good assurance of protection against anti-competitive behaviour, in particular if regulators are empowered with efficient control powers".

The EC is currently discussing proposals to enhance the extent of separation, imposing as a minimum requirement functional separation of the transmission system operator and legal separation of distribution operators by 2003 (in the case of electricity) or 2004 (in the case of gas).

The International Energy Agency, in the context of the natural gas sector, writes:

"An integrated monopolist gas company that determines …transport conditions [for] competitors … has an incentive to hinder or exclude potential competitors from using its infrastructure. And it has privileged access to commercially sensitive information, which it can and will exploit. … Regulation cannot resolve all of this. Information problems are likely to remain. False information provided by the utility can often not be verified (or recognised as such) by the regulator. This will make it very hard if not impossible to guarantee non-discriminatory treatment of competitors/customers. Unbundling the transport and gas trade activities is therefore a necessity.

… Separate internal accounts for each activity, as required by the [EC] Gas Directive, do not constitute sufficient unbundling. … Effective unbundling requires at least splitting the companies' activities of transport and trade into two subsidiaries. … From a purely competition policy perspective, ... unbundling would have to go further. … [S]hould divestment/sell-off of the transportation part from all other energy-related activities be legally possible and practical, this would be the preferred option. … From a competition logic, we recommend divestment/sell-off of storage from transport as well as from gas trading."

In the context of the rail sector, the European Conference of Ministers of Transport has argued that accounting separation, required by the EU is only a "minimal answer" and that further liberalisation will require more marked separation of infrastructure and operations:

"The separation of infrastructure from operations has been completed in many countries, at least for accounting purposes. This is a necessary, although not sufficient, condition for providing access to infrastructure for new rail operators, … and lays the foundation for competition in the sector on a non-discriminatory basis. … Simple accounting separation, for which several countries have opted, can only be seen as a minimal answer. Several countries have opted for more complete separation and have overhauled national rail companies' internal organisation. Institutional separation is not yet widespread, though a handful of examples already exist and a number of other countries, especially in Central and Eastern Europe, have announced plans to create legally independent entities for infrastructure and operations.

On-going liberalisation of the rail sector will imply an even more marked separation of infrastructure and operations than is the case at present. Such a step is a precondition for greater access to and transit across infrastructure, which in turn is the foundation for the further development and more efficient utilisation of Europe's rail network."

UK experience has shown, however, that separation of the track infrastructure from the train operations raises important issues regarding responsibility for track maintenance, difficulties in co-ordinating train scheduling and difficulties in co-ordination of investment requirements.

## Where has restructuring been tried and what was the outcome?

Public utility industries differ widely, both in the degree to which competition has been introduced and the degree to which restructuring and vertical separation is required.

For example, in the air transport industry, it is now common to have many competing airlines. At the same time, vertical integration between airlines and airports is uncommon and is often strictly prevented. In Australia, for example, vertical separation between airports and airlines is enshrined in law – no airport can own more than 5% of the shares in an airline or *vice versa* .

In other countries, where there are airports with strict capacity constraints, the slot allocation system is typically governed either by a body owned and operated by a group of airlines (a form of joint or club ownership) or through a system of slot ownership and trading rights (a form of capacity trading).

The telecommunications industry was one of the first sectors to be liberalised and one of the first to be structurally separated – with the famous break-up of

### A Natural Experiment on the Effects of Separation: Comparing GTE and Bell Conduct in US Telecommunications

In the US, the 1982 consent decree which vertically separated AT&T did not impose line of business restrictions on its smaller rival in local telephony services, GTE. As a result, unlike the "baby Bells", GTE remained integrated, providing both local and long-distance telephony services. A recent study* compares AT&T's negotiations to enter local markets served by GTE and by the local Bell company in the 22 states in which both GTE and a Bell company offered service. The results show a clear difference in behaviour of the Bell companies and GTE in regard to access negotiations. In particular, it appears that:

- Agreements on access arrangements were more likely to be reached and to be reached more quickly under vertical separation. For example, the average delay in reaching an access agreement was 70% longer with GTE – 457 days with the Bells and 781 days with GTE.
- The incumbent was systematically more aggressive in negotiating under vertical integration. When going into arbitration, GTE offers a higher price for residential service in 15 out of 18 states and a higher price for business service in 13 of 18 states.
- Despite the same access regulation, entry is systematically lower in regions served by the integrated incumbent. Bell companies had a higher per cent of resold lines 12 times out of 15 in the case of residential lines and 14 out of 14 for business lines.

Although indicative, these differences may not be due to vertical integration alone. It is also possible that the Bell companies are responding to the incentives in the 1996 US Telecommunications Act, which encourages local companies to open up their local markets in return for entry into long-distance. GTE has recently been acquired by Verizon, one of the Bell companies. As a result of this acquisition, GTE is now subject to line-of-business restrictions in the states served by Verizon. GTE divested its long-distance business in these states, creating Genuity.

* Frederico Mini, "The Role of Incentives for Opening Monopoly Markets: Comparing GTE and RBOC co-operation with Local Entrants", Georgetown University, Department of Economics, Working Paper 99-09, July 1999.

AT&T in the US. After many years of litigation and efforts by AT&T to frustrate the entry of MCI into the provision of long-distance telecommunications services, the US Department of Justice negotiated a settlement with AT&T which involved separating the competitive parts of AT&T (its long distance business) from the non-competitive parts (the local business). The result was a significant increase in competition. Even today, almost twenty years later, the US long-distance market is one of the most competitive in the world.

The consent decree which broke up AT&T did not apply to all companies, leaving some integrated. The box on this page highlights some results from a study which compares the different behaviour of these two different types of companies. Access negotiations and new entry seem easier with separated than with integrated companies.

Although other countries did not choose to follow the lead of the US in separating the telecommunications industry, this issue has not disappeared. Further structural separation in telecommunications is being increasingly advocated in recent years.

In the natural gas industry, different countries have chosen to impose different levels of separation between pipelines, on the one hand and gas production and retailing on the other.

The UK is one country which has required full structural separation of these services. In the late 1980s, the UK Monopolies and Mergers Commission recommended that "Chinese Walls" be set up between the part of British Gas involved in access negotiations and those involved in gas purchasing and supply. A few years later, in the face of continuing concerns about the lack of competition, the Monopolies and Mergers Commission recommended full structural separation. The cost of this vertical restructuring was substantial, estimated at 130 million pounds per year over ten years.

At the same time, however, the resulting benefits to users and consumers were also substantial. British Gas was eventually separated along the lines proposed by the MMC, and today the UK has probably the most competitive gas sector in the world outside North America.

In the US, although there is not strict ownership separation between pipelines and gas producers, on most pipelines a large share of the capacity of the pipeline is leased on long-term contracts to other gas companies which compete with the pipeline owner in the transportation of gas over each pipeline.

In the electricity industry, also, different degrees of structural separation between generation and retailing have been required. However, there is an increasingly clear movement towards stronger forms of separation.

For example, in the US electricity industry, despite the best efforts of the federal regulator FERC, discrimination still occurs by transmission companies against non-affiliated generation companies. The staff of the US Federal Trade Commission write:

"Several years of industry experience now appear to confirm … that discrimination remains in the provision of transmission services by utilities that continue to own both generation and transmission. Complaints about – and actions by FERC to remedy – discriminatory treatment favoring the generation assets of transmission owners are widespread. These complaints allege subtle forms of discrimination, including, for example, biases in posted assessments of transmission capacity available to serve independent merchant transactions. … [Controls on behavior] have not provided the degree of competitive benefits that FERC sought to engender when it introduced competition in wholesale electric power markets."

As a result, the US FERC is moving toward nationwide implementation of structural (operational) separation of generation from transmission.

In the rail sector, also, the extent of separation differs from country to country. The reforms imposed by the EU have imposed a limited form of separation between track infrastructure and train operations (discussed further below). The UK has gone further, fully separating the ownership of the track from the train operators. In Sweden the track infrastructure has been retained by the state and separated from the incumbent train operating company. In both Sweden and the UK a small degree of competition is emerging in train operations, particularly in the carriage of freight.

## What does the OECD Recommendation on Structural Separation say?

Recognising the potential importance of restructuring as a tool for promoting competition, in April 2001 the OECD member countries agreed on the text of an OECD Recommendation to member countries.

This recommendation explicitly recognises that separation has both potential benefits and potential costs.

The text of the recommendation proposes that when member countries are considering policy towards a vertically-integrated natural monopoly, they should carefully balance the benefits and costs of structural measures (such as vertical ownership separation) against the benefits and costs of behavioural measures (such as the regulation of access to an integrated firm).

The recommendation explicitly mentions that this balancing should take into account a number of factors such as:

- the effect on competition;
- the impact on the quality and cost of regulation;
- the transition costs (*i.e.,* the one-off costs associated with a structural change); and
- the economic and public benefits of vertical integration.

The balancing should also take into account the economic characteristics of the industry in the country under review.

The recommendation also explicitly notes that the benefits and costs to be balanced should be those recognised by the relevant agencies including the competition authority.

This balancing should especially take place in the context of privatisation, liberalisation or regulatory reform.

The OECD's Competition Committee is invited to serve as a forum for discussion of the recommendation and to make proposals for its improvement in the future. Non-member countries are also invited to associate themselves with the recommendation and to implement its proposals.

The recommendation does not provide clear, hard and fast rules for a specific industry. Nevertheless, it does urge consideration of restructuring as a policy option in the promotion of competition in public utility industries. In this respect the recommendation represents an important step forward toward an international consensus on the importance of policy towards industry structure as a tool for enhancing competition.

## In summary

The key points of this work on structural separation can be summarised as follows:

- Regulated utility industries are not monolithic natural monopolies but consist of many parts, some of which can sustain competition and some of which remain monopolies. It is widely accepted that it is preferable to rely on competition in those components in which competition is possible, to facilitate innovation and efficiency in those sectors and to narrow the focus and scope of regulation.
- When a regulated firm also provides essential inputs to its competitors in a related competitive sector, the regulated firm may have both the ability and a strong incentive to restrict competition. Attempts to control the behaviour of the regulated firm to offset this incentive are difficult and regulators may face an up-hill battle.
- There are a variety of ways that the regulated utility can be restructured to overcome this incentive to restrict competition. Perhaps the simplest way is to prevent the regulated firm from competing in the related competitive sector. Other approaches include club or joint ownership of the natural monopoly facility, sharing of the capacity of the essential facility or separation of the ownership and control of the essential facility.
- Separating the regulated utility into the competitive and non-competitive parts will likely involve certain costs. In particular, separation may raise transactions costs and may prevent more efficient forms of price discrimination. There will also be the one-off costs of the restructuring itself. These costs need to be balanced against the potential benefits to competition.
- Rather than full ownership separation, certain alternative forms of separation are often used which seek to enhance the level of competition without incurring the cost of ownership separation. These alternatives include accounting separation, management separation and corporate separation. These forms of separation have their uses but also their limits. Although these approaches reveal more information to the regulator and make anti-competitive practices easier to detect, the underlying incentive to restrict competition remains. Experience as to the weaknesses of these approaches has lead to calls for stronger forms of separation.
- The extent to which OECD governments require structural separation differs significantly from industry to industry. In certain sectors, such as the airport sector, structural separation is almost universal. In other sectors, such as the postal sector, full vertical integration is the norm. Although there has been a substantial movement towards stronger forms of separation in electricity, natural gas and rail, there remains substantial scope for further structural separation in these industries and possibly also in telecommunications and broadcasting
- The OECD has recently adopted a Recommendation which seeks to encourage consideration of restructuring as a tool for promoting competition. Specifically, the recommendation calls for careful balancing of the benefits and costs of structural measures (such as vertical ownership separation) against behavioural measures (such as regulation of access to an integrated firm). The recommendation specifies that “the benefits and costs to be balanced include the effects on competition, effects on the quality and cost of regulation, the transition costs of structural modifications and the economic and public benefits” and should be “based on the economic characteristics of the industry in the country under review”. Non-member countries are urged to associate themselves with the recommendation.

## For further information?

More information about the report *Restructuring Public Utilities for Competition* or the OECD “Council Recommendation concerning Structural Separation in Regulated Industries” can be obtained from:
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(email: *darryl.biggar@oecd.org*, tel: (33-1) 45.24.18.27).

## RECOMMENDATION OF THE COUNCIL CONCERNING STRUCTURAL SEPARATION IN REGULATED INDUSTRIES

***THE COUNCIL,***

Having regard to Article 5 b) of the Convention on the Organisation for Economic co-operation and Development of 14th December 1960;

Having regard to the agreement reached at the 1997 Meeting of the Council at Ministerial level to reform economic regulations in all sectors to stimulate competition [C/MIN(97)10], and in particular to:

> "(i) separate potentially competitive activities from regulated utility networks, and otherwise restructure as needed to reduce the market power of incumbents; (ii) guarantee access to essential network facilities to all market entrants on a transparent and non-discriminatory basis";

Having regard to the report "Structural Separation in Regulated Industries".

Recognising that there are differences in the characteristics of industries and countries, differences in the processes of regulatory reform and differences in the recognition of the effectiveness of structural measures, behavioural measures and so on, and that such differences should be taken into account when considering structural issues;

Recognising that regulated firms, especially in network industries, often operate in both non-competitive and in competitive complementary activities;

Recognising that the degree of competition which can be sustained in the competitive complementary activities varies, but that when these activities can sustain effective competition it is desirable to facilitate such competition as a tool for controlling costs, promoting innovation, and enhancing the quality of the regulation overall, ultimately to the benefit of final users and consumers;

Recognising that, in this context, the regulated firm has the ability, in the absence of antitrust or regulatory controls, to restrict competition by restricting the quality or other terms at which rival upstream or downstream firms are granted access to the services of the non-competitive activity, restricting the capacity of the non-competitive activity so as to limit the scope for new entry in the complementary activity, or using regulatory and legal processes to delay the provision of access;

Recognising that, depending upon the structure of the industry, a regulated firm which operates in both a non-competitive activity and a competitive complementary activity may also have an incentive to restrict competition in the complementary activity;

Recognising that such restrictions of competition generally harm efficiency and consumers;

Recognising that there are a variety of policies that can be pursued which seek to enhance competition and the quality of regulation by addressing the incentives and/or the ability of the regulated firm to control access. These policies can be broadly divided into those which primarily address the incentives of the regulated firm (such as vertical ownership separation or club or joint ownership), which may be called structural policies, and those which primarily address the ability of the regulated firm to deny access (such as access regulation), which may be called behavioural policies;

Considering that behavioural policies, unlike structural policies, do not eliminate the incentive of the regulated firm to restrict competition;

Considering that despite the best efforts of regulators, regulatory controls of a behavioural nature which are intended to control the ability of an integrated regulated firm to restrict competition may result in less competition than would be the case if the regulated firm did not have the incentive to restrict competition;

Considering that, as a result, the efficiency and effectiveness of regulation of the non-competitive activity, the available capacity for providing access, the number of access agreements and the ease with which they are reached and the overall level of competition in the competitive activity may be higher under structural policies;

Considering that, under such circumstances, it is all the more necessary that, to prevent and tackle restrictions of competition, competition authorities have appropriate tools, in particular the capacity to take adequate interim measures;

Considering that certain forms of partial separation of a regulated firm (such as accounting separation or functional separation) may not eliminate the incentive of the regulated firm to restrict competition and therefore may be less effective in general at facilitating competition than structural policies, although they may play a useful and important role in supporting certain policies such as access regulation;

Recognising that, in some circumstances, allowing a regulated firm operating in a non-competitive activity to compete in a complementary competitive activity allows the regulated firm to attain significant economic efficiencies or to provide a given level of universal services or service reliability;

Recognising that structural decisions in regulated industries often require sensitive, complex, and high-profile trade-offs, requiring independence from the regulated industry and requiring expertise, experience, and transparency in assessing competitive effects and comparing these with any economic efficiencies of integration; and

Recognising that the boundaries between activities which are potentially competitive and activities which may be non-competitive are subject to change and that it would be costly and inefficient to continuously adjust the degree of vertical separation;

***I. RECOMMENDS as follows to Governments of Member countries:***

1. When faced with a situation in which a regulated firm is or may in the future be operating simultaneously in a non-competitive activity and a potentially competitive complementary activity, Member countries should carefully balance the benefits and costs of structural measures against the benefits and costs of behavioural measures.

The benefits and costs to be balanced include the effects on competition, effects on the quality and cost of regulation, the transition costs of structural modifications and the economic and public benefits of vertical integration, based on the economic characteristics of the industry in the country under review.

The benefits and costs to be balanced should be those recognised by the relevant agency(ies) including the competition authority, based on principles defined by the member country. This balancing should occur especially in the context of privatisation, liberalisation or regulatory reform.

2. For the purposes of this Recommendation:

*a)* a "firm" includes a legal entity or a group of legal entities where the degree of inter-linkages (such as shareholding) among the entities in the group is sufficient for these entities to be considered as a single entity for the purposes of national laws controlling economic concentrations;

*b)* a "regulated firm" is a firm, whether privately or publicly owned, which is subject to economic regulation intended to constrain the exercise of market power by that firm;

*c)* a "non-competitive activity" is an economic market, defined according to generally accepted competition principles, in which, as a result of regulation or underlying properties of demand and supply in the market, one firm in the market has substantial and enduring market power;

*d)* a "competitive activity" is an economic market, defined according to generally accepted competition principles, in which the interaction among actual and potential suppliers would act to effectively limit the market power of any one supplier;

*e)* "complementary" is used in the broad sense to include products (and services) that enhance each other. Products that are complementary to the regulated firm's non-competitive activity therefore include (1) products bought by the firm from (upstream) suppliers, (2) products sold by the firm to (downstream) customers, and (3) other products used in conjunction with the firm's non-competitive product, and where competitors' success in providing such products depends on their or their customers' ability to obtain access to the non-competitive product;

***II. INSTRUCTS the Competition Law and Policy Committee:***

1. to serve, at the request of the Member countries involved, as a forum for consultations on the application of the Recommendation; and

2. to review Member countries' experience in implementing this Recommendation and to report to the Council within three years as to the application of this Recommendation and any further need to improve or revise the Recommendation.

***III. INVITES non-Member countries to associate themselves with this Recommendation and to implement it.***

## For further reading

**On competition and regulation issues:**

- **Reforming Russian Infrastructure for Competition and Efficiency,** January 2002, ISBN 92-64-19699-4, Paperback €20, E-book, €16.
- **OECD Journal of Competition Law and Policy,** published quarterly, ISSN 1560-7771
- **Competition Issues in Road Transport,** 2001, Free on Internet: *www.oecd.org/daf/competition* (click on "Best Practice Roundtables")
- **Competition and Regulation Issues in the Pharmaceutical Industry,** 2000, Free on Internet: *www.oecd.org/daf/competition* (click on "Best Practice Roundtables")
- **OECD Recommendation of the Council concerning Structural Separation in Regulated Industries,** April 2001, Free on Internet: *www.oecd.org/daf/competition* (click on "Recommendations")
- **Restructuring Public Utilities for Competition**, August 2001, ISBN 92-64-18726-X. Paperback €40, E-book €32.
- OECD Resources on competition law and policy can be found at *www.oecd.org/daf/competition*.

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