

Regulatory Reform in the Netherlands

Regulatory Reform in the Telecommunications
Industry



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FOREWORD

Regulatory reform has emerged as an important policy area in OECD and non-OECD countries. For regulatory reforms to be beneficial, the regulatory regimes need to be transparent, coherent, and comprehensive, spanning from establishing the appropriate institutional framework to liberalising network industries, advocating and enforcing competition policy and law and opening external and internal markets to trade and investment.

This report on *Regulatory Reform in the Telecommunications Industry* analyses the institutional set-up and use of policy instruments in the Netherlands. It also includes the country-specific policy recommendations developed by the OECD during the review process.

The report was prepared for *The OECD Review of Regulatory Reform in the Netherlands* published in 1999. The Review is one of a series of country reports carried out under the OECD's Regulatory Reform Programme, in response to the 1997 mandate by OECD Ministers.

Since then, the OECD has assessed regulatory policies in 16 member countries as part of its Regulatory Reform programme. The Programme aims at assisting governments to improve regulatory quality — that is, to reform regulations to foster competition, innovation, economic growth and important social objectives. It assesses country's progresses relative to the principles endorsed by member countries in the 1997 *OECD Report on Regulatory Reform*.

The country reviews follow a multi-disciplinary approach and focus on the government's capacity to manage regulatory reform, on competition policy and enforcement, on market openness, specific sectors such as electricity and telecommunications, and on the domestic macroeconomic context.

This report was principally prepared by Wonki Min, with the participation of Dimitri Ypsilanti of the Directorate on Science, Technology, and Industry of the OECD. It benefited from extensive comments provided by colleagues throughout the OECD Secretariat, as well as close consultations with a wide range of government officials, parliamentarians, business and trade union representatives, consumer groups, and academic experts in the Netherlands. The report was peer-reviewed by the 30 member countries of the OECD. It is published under the authority of the OECD Secretary-General.

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Executive Summary

Background Report on Regulatory Reform in the Telecommunications Industry

The telecommunications industry has undergone significant regulatory reform over the last decade. By December 1998, 23 of the OECD countries had unrestricted market access to all forms of telecommunications market, including voice telephony, infrastructure investment and investment by foreign enterprises. The success of the liberalisation process depends on the presence of a transparent and effective regulatory regime that enables the development of full competition, while efficiently protecting other public interests. This report addresses whether the regulatory regime in the Netherlands can ensure the success of the liberalisation process by assessing the Dutch telecommunications regulations, recent regulatory reforms and market performance.

Telecommunications liberalisation in the Netherlands is in line with the European Commission's efforts to liberalise the European telecommunications market. In most important policy issues such as interconnection, licensing, universal service, etc., EU Directives have played a key role. At the time of writing the Netherlands has implemented virtually all EU Directives into national legislation.

The new Dutch telecommunications regime is relatively liberal, with no barriers to entry, no line-of-business restrictions and relatively few controls on prices. In the relatively short time since deregulation a large number of companies have entered the market, invested in facilities and are providing telecommunications services. Although, at present, the incumbent operator remains overwhelmingly dominant, the possibility of infrastructure competition through the virtually ubiquitous CATV networks and the possibility of strong competition from mobile services means that, in practice, there are relatively few concerns about the development of effective competition in the near future.

However, certain regulatory concerns remain such as the fact that there are different regulatory institutions for telecommunications and broadcasting services. In the longer term, the rapid convergence taking place between broadcasting, Internet and telecommunications is likely to increase the necessity to establish a regulator which supervises all the communications industry. The Netherlands, like most OECD countries, is facing a double challenge: to complete the liberalisation of the telecommunications market, and to prepare for the next generation regulatory regime in the face of convergence.

1. THE TELECOMMUNICATIONS SECTOR IN THE NETHERLANDS

1.1. *The national context for telecommunications policies*

The Netherlands is a small, densely populated country at the heart of Europe. Its population density of 379 per square kilometre is one of the highest in Europe (and compares with 229 in Germany, 105 in France, and just 29 in the USA). Of the total population of 15.5 million, a little under half live in a single urban zone known as the "Randstad" which incorporates all of the Netherlands major cities. The telecommunications market in the Netherlands brings in a total revenue of around \$7.9 billion, making this market smaller than a typical American RBOC and comparable in total size to that of Korea (\$9.1 billion), Mexico (\$7.7 billion) and Sweden (\$6.9 billion).¹

As of 31 December 1997, the total penetration of telecommunications access paths in the Netherlands (*i.e.*, the total number of fixed access lines and mobile lines per 100 inhabitants) was 56.6. This compares with that of Germany (55.0), France (57.6), and the UK (54.0). The total cable television (CATV) penetration in the Netherlands (at 93.14 per cent) is one of the highest among the OECD countries (comparing with just 46.19 per cent in Germany, 8.97 per cent in France and 9.69 per cent in the UK).²

The incumbent network operator, KPN, with a total staff of 32 708 is the 19th largest telecommunications operator in the OECD area. KPN completely digitalised its network by 1994 earlier than any other operator in the OECD area and now enjoys one of the highest labour productivity (at 271 mainlines per employee) among the operators in the OECD area.³

1.2. General features of the regulatory regime, telecommunications market and market participants

The role of the EU

The reform of telecommunications markets in continental Europe has essentially been driven by the European Union (EU) policies. Since the release of the 1987 “*Green Paper on the Development of the Common Market for Telecommunications and Services*”, the European Commission has played an important role in promoting the liberalisation of the EU telecommunication market. This culminated in the Full Competition Directive which was designed to open the EU telecommunication market to full competition by 1 January 1998.

EU Directives are meant to provide a broad framework and general objectives, as opposed to detailed prescriptions, as to how policies should be implemented. Member states therefore have considerable freedom in determining the details of each national regulatory regime. Although in some respects the Netherlands had been late in meeting the implementation deadline on some of these directives,⁴ with the new Telecommunications Act (the “Act”) it has implemented all the EU’s directives into its national legislation.

Brief history of the regime

Prior to 1990, the Royal Dutch PTT (KPN) held a monopoly on all aspects of the installation of telecommunications networks and on the provision of all telecommunications services. Over the next 7 years the market was progressively liberalised, culminating in an opening of the market to all forms of competition in voice telephony on 1 July 1997.

A brief summary of the key developments in the liberalisation process is set out in the Box 1. In 1989, a decision was taken to begin the corporatisation of KPN, and to liberalise the markets for terminal equipment and value added services. In 1993, competition was allowed for circuit and packet switched data transport services, and simple resale of leased line capacity. In 1994, voice telephony service in closed user groups was permitted. At the same time, KPN was partially privatised with a sale of 30 per cent of the government’s shares.

Prior to 1994 KPN held a monopoly on the provision of analogue mobile services. In 1995, two new licences for digital GSM mobile services were issued, one to KPN and one to a new entrant, Libertel. Libertel is jointly owned by the Dutch financial giant ING Group and the English mobile service provider Vodafone.

Box 1. History of Telecommunications Liberalisation in the Netherlands

- 1989: Corporatisation of KPN and liberalisation of terminal equipment and value added services.
- 1993: Liberalisation of data communication services and resale of leased lines.
- 1994: Partial privatisation of KPN (involving a sale of 30 per cent of the shares); voice telephony in closed user groups permitted.
- 1995: Issuing of licences in mobile services, to KPN and Libertel; further sale of 25 per cent of the shares of KPN.
- 1996: Liberalisation of telecommunications infrastructure and liberalisation of all telecommunications services except fixed voice telephony.
- 1997: Liberalisation of voice telephony (1 July) and establishment of an independent regulator (1 August).
- 1998: Issuing of 2 (and possibly 3) new national mobile (DCS1800) licences.

In 1996, the Netherlands introduced the so-called “interim legislation”.⁵ This legislation allows competition (except for voice telephony) for satellite networks and communications services, use of cable television infrastructure for telecommunications purposes, use of other alternative fixed infrastructure (*e.g.*, networks of electricity companies and the railway company) for telecommunications purposes and the installation and exploitation of new fixed telecommunications infrastructures. In July 1997, six months earlier than scheduled by EU legislation, competition for voice telephony service was introduced in the Netherlands, completing the liberalisation of the whole telecommunications market.

In 1996, on the basis of the interim legislation, two new national infrastructure licences were granted, to EnerTel (a joint venture of several Dutch electricity companies and several cable operators, acquired by Worldport Communication Inc. in June 1998), and to Telfort (a joint venture of NS Telecom, which is a subsidiary of Dutch Railways and BT). Both companies already had alternative telecommunications infrastructure. It is interesting to note that the state has a significant stake in two national telecommunication infrastructure licensees. In addition to the direct 43.8 per cent state ownership in KPN, the state owns 100 per cent of the Dutch Railways (a major shareholder in Telfort). Moreover, prior to 1997, KPN owned Casema, the largest shareholder of EnerTel. This gave rise to concerns over the extent to which competition would arise between KPN and EnerTel. To address these concerns and stimulate the development of alternate infrastructure, in 1997 the Dutch Government required KPN to divest its ownership in Casema.

As well as these national infrastructure licences, in 1997 about 1 400 regional infrastructure licences were awarded to approximately 160 companies. In most cases these companies already held permits for CATV or business networks.

In October 1998, the interim legislation was replaced by the Act which aims at ensuring full competition in all telecommunications activities and complete implementation of the EU ONP principles.⁶ The Act was originally planned to be enacted by 1 January 1998. However it took 10 more months to finalise the legislative process than was planned. The Act includes a number of new regulatory provisions and safeguards to prevent the incumbent from leveraging its dominant market position. The Act foresees the government (including the independent regulatory body) remaining as a key player in the market until it can be shown that the market or specific segments of the market are sufficiently competitive to allow the government to forebear from regulation.

The Act covers practically all areas of telecommunications regulation, including registration, spectrum frequency policy and management, numbering policy, rights of way, interconnection and special access, open network provision (ONP), universal service, type approval of terminal equipment, protection of personal data and privacy, and disputes and appeal processes among telecommunication service providers.

In February 1998, two additional national licences consisting of a combination of 15 MHz DCS 1 800 (Digital Communications System) frequencies and 5 MHz GSM business were allocated to Federa (which is the tentative working name of a consortium of Deutsche Telekom/France Telecom/ABN-Amro/Rabobank) and Telfort. Notably, the existing GSM licence holders, KPN and Libertel, were excluded from bidding for these licences. Sixteen smaller DCS 1 800 packages were also awarded.

The Dutch CATV industry is potentially a strong source of competition for the local loop. Virtually 100 per cent of households are passed by cable networks in the Netherlands and about 94 per cent are connected to cable networks. Under the interim legislation, CATV companies are allowed to use these networks for telecommunications purposes.

While CATV companies have considerable potential as alternative telecommunication infrastructure providers, not many companies have entered the telecommunications market yet. This is probably due to the huge investment which is necessary to upgrade their cable infrastructure in order to provide two-way telecommunications. However, big players like Casema, Castel, Edon and A2000 have made significant investments in order to provide integrated services including CATV, FM radio, Internet access, data communication and local voice telephony. It is expected that 70 per cent of the cable network will be suitable for two way communication by 1999 and 85 per cent by 2000.⁷ With the exception of A2000 which launched its voice telephony service in November 1997, other cable companies have been more interested in providing Internet access. But currently only five cable CATV companies have interconnection agreements.

Telecommunications market and participants

The current situation in the Dutch telecommunications market is summarised in Table 1. As the table indicates, KPN has a dominant position in all of the major telecommunications markets. KPN provides both fixed and mobile voice telephony services and once owned the largest cable company Casema. KPN is also a partner of Unisource, the pan-European telecommunications company, which was established in 1992 by KPN and Telia of Sweden.⁸

Even before liberalisation, KPN was regarded as one the most efficient carriers in the world. Its productivity and tariff structure are comparable to world best practices. Moreover, it achieved a 100 per cent digital switching system by 1994, earlier than any other operator in the OECD area.

Besides KPN there are currently 2 companies, EnerTel and Telfort, which provide full range nation-wide fixed voice telephony services. In addition, there are 125 CATV companies, a few of whom are already providing fixed voice telephony services at the regional level. The largest of the CATV companies are Casema, Castel, Edon and A2000. Casema is owned by France Telecom.

In mobile, KPN is the sole provider of analogue service. There are two GSM service providers, KPN and Libertel. KPN's market share in the GSM mobile market is 63.5 per cent. As mentioned earlier two further national licences for DCS1800 mobile service were offered earlier this year, to Federa and Telfort. At the same time sixteen smaller DCS packages varying from 2.4 MHz to 4.4 MHz were

auctioned. KPN has obtained 7 of these smaller packages, Libertel 2, TeleDanmark 4, Orange/Veba 2 and Telfort 1. These frequencies can be used for a wide range of purposes, such as Wireless Local Loop and regional telephony, but can also be combined to constitute a nation-wide mobile telecommunications network. In fact, TeleDanmark is planning to build a nation-wide mobile network using frequencies which it acquired in co-operation with Orange. If TeleDanmark succeeds in developing a nation-wide mobile network, the Netherlands will have five national mobile companies.

Use of Internet in the Netherlands has grown rapidly over the last few years. It is estimated that about 1 million people in the Netherlands were users of the Internet in 1996. The Internet backbone in the Netherlands are NLnet and SURFnet, and Internet connections are supplied by 75 Internet providers. In addition to KPN which provides Internet services (World access) as well as intranet services and a national version of Internet (Het net), many CATV companies are also providing Internet services.

Table 1. Major participants in the Dutch telecommunications market

	Fixed	Mobile	Internet	Notes
KPN	A Local: 99% Long Distance & International: 80%	A Analogue: 100% GSM: 63.5%	A	
Telfort	A	P (DCS 1800)		Providing value added services such as calling card, e-mail, voice mail and VPN
Enertel	A		A	Targeting top 300 companies in the Netherlands
Libertel		A GSM: 36.5%		
Federa		P (DCS 1800)		A consortium of Deutsche Telekom/ France Telecom/ABN-Amro/Robobank
TeleDanmark		P (DCS 1800)		Trying to build a nation-wide network in co-operation with Orange/Veba
A 2000	A		A	
Worldcom	A		A	
Edon	A		A	Providing fixed voice telephony services via ISDN
Casema/PNEM/ NUON	P		A	Casema is the largest cable company with 1.06 million subscribers as of 1 January 1998

A= Currently Active, P= Planned to enter.

Source: OECD.

Table 2. **Dutch telecommunications regulation at-a-glance**

Category	Regulatory Restrictions	Notes
<p>Entry regulations</p> <p>Voice Telephony</p> <p>Leased lines</p> <p>Mobile Telephony</p> <p>CATV</p> <p>Broadcasting</p>	<p>Entry on the basis of registration with OPTA.</p> <p>Entry on the basis of registration with OPTA.</p> <p>Entry on the basis of "individual licences".</p> <p>An auction is used for allocating spectrum.</p> <p>Entry on the basis of registration with OPTA.</p> <p>Subject to an individual licensing system (i.e., a "beauty contest") according to the Media Act.</p>	<p>Before January 1998, CATV licences were limited one per geographical area.</p>
Line-of-business restrictions	No line-of- business restrictions but firms must maintain separate accounts for telecommunications business. KPN was forced to reduce its CATV holdings, leading to an interest of only 20% in 1997.	KPN completely sold its holdings on Casema to France Telecom in 1998.
<p>Price controls</p> <p>On Incumbent</p> <p>On Mobile operators</p>	<p>Rate-of-return regulation (12.5%) implemented for fixed voice telephony and leased line services.</p> <p>Uniform tariff (geographically averaged rates) regulation implemented.</p> <p>None.</p>	<p>Price-cap lifted in July 1997, cost oriented tariffs introduced.</p> <p>It is planned to re-introduce price cap regulation in 1999 after establishing a reasonable starting point by using rate of return regulation.</p>
<p>Interconnection controls</p> <p>Prices</p> <p>Dispute resolution</p> <p>Scope</p>	<p>Prices based on a modified forward looking EDC (Embedded Direct Cost) accounting system.</p> <p>No requirement to make an "access deficit contribution" to the incumbent.</p> <p>Parties can notify a dispute to OPTA which must make a decision within 6 months.</p> <p>Interconnection for call termination is guaranteed.</p> <p>Unbundling of individual network elements may be required.</p>	<p>Previously within a maximum of 5 months.</p>

Table 2. **Dutch telecommunications regulation at-a-glance** (continued)

Spectrum allocation Mobile and WLL Broadcasting	Mix of "first-come-first-served" basis, and auctions; KPN and Libertel did not have to pay for GSM spectrum while new DCS1800 licensees do. On the basis of a decision by the Ministry.	No licence required for DECT (Digital European Cordless Telecommunications) Technology.
Numbering policy	Local number portability and portability of mobile numbers planned for 1 January 1999. Carrier pre-selection planned for 1 January 2000.	Call-by-call carrier selection already exists. Portability of freephone numbers and premium rate/shared cost numbers already exists.
Universal service	KPN is obliged to offer universal service without compensation for at least 12 months after it informs the Minister that it intends to end its USO provision. If, upon KPN's withdrawal, market forces prove unable to provide universal service, the Minister organises a tender, whereby the provision of universal service will be awarded to the operator which has tendered the lowest price. KPN has an obligation to participate in this tender. The cost of providing universal services will be shared by all telecommunications companies.	

Source: OECD.

2. REGULATORY STRUCTURES AND THEIR REFORM

2.1. *Regulatory institutions and processes*

From 1 January 1998, European Union telecommunications legislation requires the establishment of national regulatory authorities (NRAs) in the member states of the Union. The regulatory body must be legally distinct and functionally independent from all telecommunications organisations. A new independent regulatory body called OPTA (*Onafhankelijke post en telecommunicatie autoriteit*) was therefore established in August 1997. The Ministry is now mainly responsible for policy matters while implementation of regulation is the responsibility of OPTA.

Under the Act, the Minister of Transport, Public Works & Water Management (the Minister) is responsible for:

- establishing the frequency plan;
- granting licences for the use of sets of frequencies;
- establishing a numbering plan; and
- ensuring universal service.

Within the Ministry, the Department of Post and Telecommunications (HDTP) is the division responsible for telecommunications. HDTP comprises two operational units (the Directorate of Information Infrastructure and the Directorate of Market Development & Incentives Policy) and the Radio Communications Agency (RDR), an operational agency of HDTP which is in charge of frequency management, equipment type approval and related enforcement tasks.

OPTA is an independent regulatory body governed by a Commission of three permanent members, supported by a director with a professional staff. At present OPTA has a staff of 75. This is expected to grow to over 100 by the end of this year. It has a separate budget⁹ approved by the Minister. OPTA is in charge of the supervisory and market-oriented executive tasks, including:

- administration of registration;
- issuing of numbers;
- supervision of compliance with the regulations;
- identifying operators with significant market power; and
- resolving disputes between parties in the telecommunications sector.

Decisions of OPTA as well as the Minister can be brought before the District Court of Justice in Rotterdam. District Court rulings can be appealed to the Court of Appeal for Economic Affairs in the Hague.

Despite the legal separation, the responsibilities of the Ministry and OPTA are closely related to each other as indicated in Table 3.¹⁰ In addition, the Ministry still has regulatory power in the areas of establishing a numbering plan, assignment of universal service and giving exemptions from interconnection obligations which are critical elements of regulating a competitive telecommunications market. Retaining these functions within the Ministry reduces transparency and enhances the possibility of conflict between the different roles of the government as a regulator and a share holder. There is scope for further delegation of responsibilities to OPTA. In particular, the granting of spectrum licences should be carried out in as transparent and independent a manner as possible. Although responsibility for establishing the overall frequency plan could be retained within the Ministry, responsibility for granting licences should be devolved to OPTA.

While content is still regulated by the Ministry of Education, Culture & Science and the Media Commission, OPTA has been given certain responsibilities in the broadcasting sector. In particular, OPTA has the authority to decide on disputes between CATV companies and program providers. Considering the trend toward convergence between telecommunications and broadcasting, it is opportune for the Netherlands to have a regulatory body which supervises both telecommunications and CATV.

To ensure that sector specific regulation is lifted when effective competition develops, the issue of whether OPTA's continued existence is necessary will be re-examined in 2002 by Parliament on the basis of the Minister's advice. The Minister will evaluate the effectiveness and efficiency of OPTA and will report the conclusions of this evaluation to the Cabinet and Parliament. Parliament will decide eventually when sector specific regulation will be lifted.

Table 3. Comparison of the roles and functions of the Ministry and OPTA

Area	Ministry	OPTA
Registration for market entry	No responsibility.	Responsible for accepting or refusing registrations.
Frequency	Responsible for establishing a frequency plan and granting licenses for the use of sets of frequencies.	Advice on economic aspects in Minister's radio spectrum allocation decisions.
Numbering	Responsible for establishing a number plan.	Responsible for assigning and reserving numbers.
Interconnection	In case of cross-border interconnection, able to give exemption from the interconnection obligation in light of a "distortion of competition".	Able to give exemption from the interconnection obligation in light of technical or commercial feasibility, able to lay down the interconnection rules when there is no agreement between parties, able to require changes in concluded agreements if they are in conflict with the law and designates network/service providers with significant market power (upon which an interconnection obligation can be imposed).
Leased line and Telephone service	No responsibility.	Responsible for designating providers of leased lines, public fixed and mobile telephone network/service providers with significant market power (upon which obligations can be imposed).
Universal service	Able to assign universal service responsibilities to the significant market power service providers if universal service is not guaranteed by the normal functioning of the market.	Responsible for deciding the amount of compensation when it is needed.

Source: OECD.

On 1 January 1998, a general competition authority, the *Nederlandse Mededingingsautoriteit* (NMa),¹¹ was established in the Netherlands by the new Competition Act. The NMa is a semi-independent regulatory body; it acts on its own authority, but the Minister of Economic Affairs has the legal power to instruct it about particular cases. The NMa has been granted authority over the implementation and the enforcement of competition rules in all sectors of the Dutch economy by the Dutch Competition Act. While the Competition Act will in principle apply to the telecommunication sector, actions taken pursuant to OPTA's authority will be exempt. This issue is discussed further below in Section 2.2.8.

The role of the Ministry of Economic Affairs should also be mentioned. Although it is not a regulatory body, it plays an important policy role in areas such as electronic commerce and macro-economic related issues and is responsible for the implementation of the "National Action Program for Electronic Superhighways".

2.2. Regulations and related policy instruments in the telecommunications sector

2.2.1. Regulation of entry and service provision

Since 1 July 1997, there have been no restrictions on market entry for network-based telecommunication activities in the Netherlands. This is consistent with both the EU Directives and the WTO's February 1997 Agreement on basic telecommunication services.

Under the Act, market entry is based on a process of general registration. Individual licences are only required for the use of frequency spectrum. Companies wanting to install or provide a public telecommunications network, leased lines or a broadcasting network, or to provide a public telecommunications service or a conditional access system need only register with OPTA.

In the case of mobile networks and services, the authority to grant a licence rests with the Minister. The granting of such licences takes place in the order of receipt of applications. However, the Minister has the right to decide to award the licences by way of a competitive test or an auction. Licences can be granted with restrictions attached. The Minister also reserves the right to revoke a licence under certain conditions.¹²

There is no specific regulation on Internet and video on demand (VOD) services. Both services are regarded as a telecommunications service. Internet telephony service is, in line with a communication of the European Commission, not regarded as public voice telephony. Therefore there are no additional rules applicable other than those for public telecommunication services in general (*e.g.* registration).

In the broadcasting sector, regulatory distinctions are drawn between broadcasting networks and broadcasting services. While the installation of a broadcasting network is regulated by the Act, broadcasting services are regulated by the Media Act (see Section 2.3).

Previously, CATV licences were issued on the basis of regional monopolies (*i.e.*, only one licence was issued in each region). However, OPTA decided to permit unlimited entry into the CATV market in January 1988 (multiple licences for the same geographical area is possible). This was done both to enhance competition in the CATV market (which was a regional monopoly) and to increase infrastructure competition in the telecommunications market.

The Act confers the general right to install and maintain cables for telecommunications or broadcasting networks over public land. Telecommunications companies only need to notify the relevant municipality before commencing their work.¹³ Except for closed gardens and grounds forming part of occupied residential premises, telecommunications companies have rights of way on private land, where compensation is provided. In some cases, there may be cost savings to telecommunications companies if they are able to share ducts. While collocation and facility sharing is not required by the EU, the Netherlands, however, ensures sharing of cable ducts between telecommunications companies. The Act imposes an obligation on the telecommunications and broadcasting network providers to comply with reasonable requests for joint use of provisions for laying cables when they are technically possible. Since the Netherlands ensures rights-of-way for all telecommunications companies and requires facility sharing by network operators, new entrants are able to enter the market in a short time with relatively low cost. As a result, rights-of-way and facility sharing requirements enhances the intensity of competition in the Dutch telecommunications market.

There are no restrictions on foreign ownership in the Netherlands and no limit on the share holding a single party (including a foreign company) can have in a telecommunications company. However, privatisation has not been emphasised as an integral part of market liberalisation. The government remains the largest single shareholder of KPN and owns the National Railway company that is a shareholder of Telfort. Experience in other countries has shown that occasions can arise where there is a conflict between policies which the government wishes to pursue as a shareholder and as a policy maker and regulator.

There are no line-of-business restrictions in the Netherlands, although companies offering both telecommunications and broadcasting services must maintain separate accounts for each activity. Similarly, although there are no restrictions on the provision of both fixed and mobile telecommunications services, KPN is required to maintain “accounting separation” between the PSTN and its mobile telecommunication services in order to prevent anti-competitive cross-subsidisation.

However, in two exceptional cases, line-of-business restrictions were imposed in order to foster new network investment and to prevent the leveraging of market power into newly developing product markets. The first case relates to the decision to require KPN to divest its interests in the CATV market. In 1997 KPN was asked to reduce its share holding of Casema to 20 per cent to ensure it would not control both telecommunications and CATV infrastructures. As a result, KPN sold all of its cable holdings to France Telecom. The other case relates to the DCS 1800 auction process in which KPN and Libertel were simply prohibited from bidding for DCS 1800 licences in order to enhance competition in mobile markets. In general, where there are concerns about market power, these concerns should be dealt with through reliance on national competition law.

In summary, the Dutch telecommunications marketplace is largely without restrictions with respect to entry, ownership or line-of-business. The absence of such restrictions is a significant strength of the regulatory regime. In addition, strong rights-of-way and requirements on facility sharing provide incentives to the new entrants to enter the market. However, the continued ownership of the state in KPN can give rise to a conflict of interest between the government in its role as regulator and in its role as owner. Consideration should, therefore, be given, to further privatisation of KPN.

2.2.2. Regulation of interconnection

The EU Interconnection Directive came into force in August 1997 with a deadline of 31 December 1997 for implementation by Member states. The Directive prescribes the obligation for fixed network operators with significant market power to provide cost-oriented interconnection. The Directive also sets out the supervisory role of national regulatory authorities (NRAs) in ensuring publication of a “reference interconnection offer” describing the terms and conditions for interconnection. According to the Interconnection Directive, “an organisation shall be presumed to have significant market power when it has a share of more than 25 per cent of a particular telecommunications market in the geographical area in a Member State within which it is authorised to operate. NRAs may nevertheless determine that an organisation with a market share of less than 25 per cent in the relevant market has significant market power. They may also determine that an organisation with a market share more than 25 per cent in the relevant market does not have significant market power.”

By the so called “July legislation”, the Netherlands has imposed an obligation on KPN to interconnect and to give special access to any party wanting to use its fixed public telephone network for the provision of public telecommunications services. The interconnection requirements in the Act go further than the EU’s Directive by including mobile service providers within the boundaries of interconnection obligations. According to the Act, if public telecommunication service providers receive a request for interconnection from other service providers, they must negotiate with each other in order to conclude agreements. If no agreement is concluded, OPTA may stipulate a period within which an agreement must be concluded. Unless the providers are able to reach an agreement within the period, at the request of one or more of them, OPTA may lay down the rules which will apply. The Act requires OPTA to render a decision within six months of the request. In urgent cases, OPTA will make a provisional decision which will apply until the final decision is announced. If parties are not satisfied with the decision made by OPTA, they can appeal to the court.

Under the Act, besides general obligations, special obligations are imposed on interconnection providers with significant market power.¹⁴ Such providers with significant market power (as designated by OPTA) have to offer non-discriminatory interconnection to other providers. The objective is to ensure that the interconnection terms which apply to other parties are the same as those which are applied to their subsidiaries. When there is a request from any telecommunications service provider, the designated interconnection provider has to supply all necessary information, including intended amendments to the network that are to be introduced in the next six months. The Act requires a designated interconnection provider to set up a cost accounting system¹⁵ for interconnection in order to ensure transparent, cost-oriented, and sufficiently unbundled tariffs.¹⁶ The burden of proof that interconnection charges are derived from actual costs lies with the companies providing interconnection to their facilities. Furthermore, the designated dominant interconnection providers are required to keep separate accounts of their activities relating to interconnection as opposed to other activities.

In regard to “cross-border interconnection”, the Act requires that foreign telecommunications companies are treated in the same way as local companies. All foreign companies can request interconnection to local telecommunication companies in order to transmit calls originating from their countries to the Netherlands. However, if the compliance of “cross-border interconnection” results in a “distortion of competition”,¹⁷ the Minister can exempt companies from providing interconnection. The exemption of interconnection obligation is an *ex post* measure whereby the requested party should prove that the market is distorted because of actions of a foreign operator. Since the burden of proof lies on the requested parties, it is not likely that foreign operators would face difficulties to access to local companies’ networks in order to terminate their calls. In addition, general competition rules are applicable when the Minister decides whether actions of a foreign operator cause a “distortion of competition”.

In addition to interconnection, the Act contains provisions relating to “special access”. Special access is access to a telecommunications network at points other than the network termination points that are offered to the majority of users. While interconnection obligations are imposed on all telecommunications network providers, special access is only required of companies with significant market power, on the basis of the request for access being reasonable. While special access is not mandated as strongly as interconnection, the “Interconnection Guidelines” have been interpreted as requiring operators with significant market power to offer full access at every feasible point in the public network. In addition, OPTA has ruled that the incumbent should offer unbundled subscriber lines to its competitors on the same terms as for its own use for xDSL (Digital Subscriber Line).

Forcing a firm to make its facilities available to a competitor at regulated prices is a relatively significant regulatory intervention whose scope should be strictly limited. Such intervention poses serious dangers of distorting incentives on the part of facilities owners for further investment in upgrading or R&D. Special access should only be granted to facilities which are clearly “essential facilities”. In contrast, it appears that the intention in the Netherlands is to make special access available on a significantly wider basis.

In April 1998, OPTA ordered KPN to remove access deficit charges in its interconnection tariffs. This decision¹⁸ was based on the view that the cost deficit in the line rental charges of KPN should not be recovered from interconnection access charges paid by competitors.

At present interconnection charges are based on embedded direct costs (EDC), a modified forward-looking LRIC (Long Run Incremental Cost) system. In practice, as Table 4 shows, all interconnection charges currently fall within a region consistent with EU “best current practice”.

Table 4. **Comparison of interconnection charges***

ECU's/100 per minute

	Local	Regional	National (>200 Km)
Netherlands	0.94	1.25	1.61
UK	0.64	0.91	1.74
Sweden	1.14	1.75	2.38
France	0.71	1.73	2.55
Germany	1.00	1.71 - 2.16	2.61
EU 'Best current practice'	0.60 - 1.00	0.90 - 1.80	1.50 - 2.60

* As of 11 March 1998.

Interconnection charges per minute based on a 3 minute call duration.

Source: EU and OVUM.

Since the interconnection charges between KPN and Libertel have not been published until now, DG4 of the European Commission has asked OPTA to investigate this situation. DG4's action intends to prevent KPN from doing anti-competitive behaviour by taking advantage of its dominant market position. Since KPN operates both the fixed and mobile networks, interconnection between fixed and mobile takes place in-house. By contrast, for Libertel, the fixed network is a bottleneck facility, because most calls originating from mobile subscribers are completed to customers on the fixed network. Since KPN mostly provides in-house interconnection for its mobile service, interconnection charges are not an important issue from a company wide perspective. Not surprisingly, Libertel is inclined to seek low interconnection prices, while KPN seeks higher interconnection prices particularly since this would also weaken Libertel's competitive position.

In summary, the institutional regime governing interconnection in the Netherlands appears relatively sound. However, there is a concern over the interconnection charges in the mobile market due to the fact that the interconnection charges are not made public. Since there will be new DCS 1 800 service providers in the mobile market, OPTA should consider designating KPN as a company with significant market power in the mobile market in order to ensure that the same interconnection terms are provided to all mobile companies.

In addition, the provisions related to special access are currently being interpreted broadly to require more unbundling than is strictly necessary. Facilities should only be unbundled when they are “essential facilities” as defined in the EU competition law. Consideration should be given, therefore, to scaling back these provisions.

2.2.3. Pricing policy

In general, with certain exceptions, neither the prices of new entrants nor the prices of the incumbent in the Dutch telecommunications marketplace are regulated. However, KPN's tariffs for voice telephony and leased lines are required to be cost-oriented.¹⁹ If the other competitors file complaints about KPN's tariffs, KPN is required to provide information on its embedded cost to OPTA. If OPTA decides that KPN tariffs are not cost-oriented,²⁰ it is required to re-tariff its services. In practice, this would mean raising its prices on certain services. However, in order to prevent cost oriented pricing leading to unacceptable price increases for specific user groups, KPN is required to provide "a low user scheme".²¹

KPN is required to charge a uniform tariff over the entire country and is not allowed to differentiate tariffs between various regions until OPTA decides there is sufficient competition in the relevant markets. By contrast, KPN's competitors can differentiate their tariffs on a region by region and customer by customer basis. As a result, KPN is likely to have difficulty competing on the basis of price in low-cost markets like Randstad (a zone covering the main cities with 6 million inhabitants).

It is widely understood that this uniform tariff requirement causes market distortions and gives a significant competitive advantage to the new entrants. However the Dutch Government appears to believe that it is premature to abandon such asymmetric regulations. OPTA holds the view that to abandon KPN's uniform tariff obligation in the current market situation would raise concerns about the possibility of market entry by other parties. In addition, it is believed that allowing KPN to differentiate tariffs by region would be politically unpopular. One reason for imposing a uniform tariff obligation on KPN is to prevent price discrimination between regions. However, the development of alternative telecommunications services such as mobile telephony can resolve this problem. In the longer term, when consumers in rural areas have many possible and affordable choices for their telecommunications services not only using the PSTN, but from CATV networks and mobile networks, as competition develops, the uniform tariff regulation will need to be abolished in order to ensure cost-oriented pricing in the marketplace. Lifting this uniform tariff obligation on KPN will boost price competition in the markets and accordingly benefit customers.

Price cap regulation has, in the past, been applied to the overall price of KPN's telecommunications services. For the years 1994-1998 the prices of two baskets were regulated: an "overall basket" of KPN's services and the price of a "small-user" basket. The overall basket included a broad range of services such as voice telephony, telex, telegraph, and cell-phone calls. The small users basket focused on basic voice telephony and cell-phone services for individuals and small business users. The price of neither basket was allowed to rise faster than the rate of inflation. This was a relatively light cap compared with some other countries. For example, in the UK and Australia, the price cap requires prices to decrease at 7.5 per cent less than the rate of inflation. In the US, the price cap on some operators is now inflation - 6.5 per cent.

These price caps were lifted when KPN was required to move to "cost-based" tariffs in July 1997. Since July 1997, OPTA has imposed rate of return regulation²² on KPN. OPTA views the adoption of rate of return regulation as a temporary measure in order to bring prices closer to costs and establish a reasonable starting point to re-introduce price caps. In fact, in October 1998, based on rate-of-return regulation OPTA made a ruling which would eliminate KPN's discounts for corporate telephone service clients by 1 January 1999. Using rate of return methodology as a "one-off" tool OPTA is trying in 1998 to place pressure on KPN to adjust its prices much closer to costs, after which, in 1999 price caps will be used as the price control mechanism. In effect, OPTA is trying to achieve over the last year quite rapid rate re-balancing. Although it is clearly difficult to obtain cost information this "one-off" approach avoids a

long process of upward “ratcheting” which occurred in the UK with the price caps on BT. However, it is important to allow longer term planning stability for KPN which would come from price caps and for this reason they should be introduced as soon as practicable. Since it is generally understood that rate-of-return regulation generates undesirable incentives for inefficient behaviour, such as over-investment and various cost-padding activities. Moreover, profit controls are hardly likely to stimulate the risk-taking investments which will be required to materialise the promise of convergence.

Mobile services are not subject to price regulation.

In summary, the uniform tariff requirement on KPN hinders the ability of KPN to compete and places a protective umbrella over competitors. In order to ensure cost oriented pricing, the uniform tariff requirement on KPN should be lifted as soon as consumers in rural area have enough affordable choices for telecommunications services in any of its forms. Furthermore, in the current regulatory framework, price regulation or general competition principle is sufficient to control anti-competitive predatory pricing when it exists. Where competitors have concerns about the pricing practices of KPN (or other telecommunications firms) they can complain to OPTA (or the NMa). In addition, the re-introduction of price caps should not be delayed.

2.2.4. *Service quality*

The EU ONP Directive (95/62/EC) requires member state NRAs to establish and publish targets for time to supply initial network connections, fault rates per connection, fault repair times, call failure rates, dial tone delay, transmission quality statistics, response time for operator services, the proportion of coin and card-operated public pay-telephones in working order, and billing accuracy as service indicators. To meet EU ONP requirements, the Act requires OPTA to set targets to meet certain quality levels in specific services.

At present, the Netherlands has a general quality of service condition imposed on KPN for its fixed network and services. In addition, it has an independent body - *the Stichting Geschillencommissie Consumentenzaken and Geschillencommissie Telecommunicatie en Post* - which deals with consumer complaints. Whenever a consumer and KPN cannot reach an agreement, the customer has the option of appealing to this independent body. There were 44 complaints in 1995 and 49 complaints in 1996. A summary of complaints and an indication of decisions made is published in the KPN’s annual report and in the report of the independent body. Another mechanism for consumer protection is the representation of the National Consumer Organisation on the OPT, a body where the government, all industry players, consumer and user organisations, and employer/industry interest organisations are brought together.

2.2.5. *Resource issues*

Spectrum allocation

To obtain spectrum in the Netherlands, it is necessary to obtain a licence from the Minister. A licence may be granted subject to restrictions, especially where there is a scarcity of frequency. Certain uses of spectrum have priority in obtaining licences, namely spectrum necessary for the performance of essential government tasks, for carrying out tasks in the area of public broadcasting, and for the implementation of a statutory rule. Except for these cases, frequency is granted on a “first come first served basis” by a competitive test, or an auction. In the Netherlands, while both methods can be used under the Act, the Ministry seems to prefer auctions.²³ Recently the Dutch Government used an auction to allocate the two national DCS/GSM-licences and 16 smaller packages of DCS 1800 frequencies for mobile communication.²⁴ According to the Minister, frequency for commercial radio broadcasting will be auctioned in 1999/2000.

Since new DCS 1 800 licensees paid very high spectrum licence fees, there is a concern that such high licence fees impose a substantial tax on end-users. If the new DCS 1800 licence holders pass on the cost incurred to acquire spectrum to users, the impact of new entrants in the mobile market will be hampered. There is also an issue of competitive neutrality as KPN and Libertel (and other broadcasting companies) obtained spectrum for free, while new entrants face high spectrum licence fees. The Dutch Government tried to address this issue by retroactively attempting to collect from Libertel and KPN an amount corresponding to the amount that the DCS 1800 licensees paid. But Libertel complained to the EU's competition authority which held that requiring retroactive payments is illegal. As a result, the Dutch Government changed its position to collect licence fees from Libertel and KPN.

According to the Act, while mobile licences, which includes rights to use spectrum, are not transferable unless the Minister gives an exemption, the Act stipulates the cases such as a violation of the frequency plan which are not granted an exemption from the Minister. Therefore, except for those cases which are stipulated in the Act, in principle the transfer of a licence is allowed in the Netherlands.

In summary, while the change of in the method for spectrum allocation from a competitive test to an auction might have increased the efficiency of spectrum allocation, it raised problems of competitive neutrality between the previous licence holders and the new entrants. In this regard, the Dutch Government needs to ensure that new entrants are not at a disadvantage to compete with previous licence holders in the mobile market. To designate KPN as having significant market power in the mobile market can be one solution, because it will ensure transparent and non-discriminatory interconnection between market players.

Numbering issues

The accelerated development and modernisation of telecommunication infrastructure competition and the increasing number of new facility-based carriers has highlighted the importance of telecommunication numbering policy.²⁵ In particular it is now recognised that, "portability" of telephone numbers is an essential feature of a competitive market in telephone service. In a competitive marketplace, telephone subscribers must be permitted to change telephone service providers without changing numbers, *i.e.*, without taking on a new network identity. New entrants will have considerable difficulty in attracting customers from incumbents if customers are required to change their numbers. Considering the importance of number portability, the European Commission has proposed that when markets open to facilities and voice competition in 1998, users should be able to select service providers on a call-by-call basis, and by 2003 number portability should be available in major urban areas.

In 1995 the Dutch Government carried out a preliminary study on number portability. Based on the results of the study, the Ministry set out a schedule for local number portability.²⁶ It was decided that local number portability shall be implemented by 1 January 1999 for both the fixed and mobile networks. Notably, the inclusion of mobile services exceeds the EU requirement regarding number portability.

The Act prescribes that the service for which the provision of number portability will be determined by a governmental decree. Designated providers are obliged to offer number portability to customers changing service provider, changing address within a certain area, and purchasing a different telecommunications service from the original service provider. Because of the high cost of implementing number portability, the Act provides for the government to make rules with respect to how such costs may be passed on. In fact, the Act articulates numbering policy issues in some detail. While the Minister is responsible for establishing a numbering plan, OPTA is responsible for assigning numbers and also for keeping a register of numbers.

Another important numbering issue is equal access to customers. The European Commission proposed that the carrier pre-selection²⁷ systems be introduced by 1 January 2000 in order to maximise consumer choice and reduce prices. The European Commission calculates that the benefits of introducing carrier pre-selection could amount to as much as ECU 20-25 billion in Europe per year. While there is an argument that introducing carrier pre-selection may undermine investment in local infrastructure by reducing and redirecting profits to long-distance services otherwise flowing to local access operators, this argument will be of less importance in a world of fully re-balanced tariffs in which local charges and long-distance charges fully cover the costs of local and long-distance service, respectively.

Since 1 July 1997, the Netherlands has had a dialling system that allows carrier selection on a call-by-call basis. The subscribers can choose an alternative carrier for their international and national phone calls by dialling a four digit carrier selection code. This alternative carrier does not necessarily need to have its own infrastructure. In the Netherlands, carrier pre-selection is regarded as a form of special access in which terms and conditions are negotiated by the interested parties. In the Netherlands, KPN is preparing its network for carrier pre-selection to be in place by 1 January 2000. KPN has also started negotiations with market parties concerning the terms and conditions of access. In line with these activities, OPTA has begun a market consultation about special access and carrier pre-selection to be able to settle disputes on carrier pre-selection quickly as they arise.

To ensure equal access in the transition to a competitive market, OPTA examined the usage of numbers by the incumbent operator in order to ascertain that this number-usage would not hamper access to numbering resources for new market entrants. In this context, KPN's rights to use "special numbering resources" (e.g. four-digit VPN access code) were withdrawn. OPTA also decided to allocate the commercially valuable free-phone numbers and premium rate/shared cost numbers directly to the end using companies, by means of OPTA's own call centre.

In summary, the Dutch Government has moved very fast to implement number portability and carrier pre-selection in the telecommunications market. As a result, it can be expected that new entrants will enjoy equal access to end customers. In particular, the inclusion of mobile services in number portability is a very appropriate decision considering the rapid growth of mobile service market.

2.2.6. *Universal service obligation*

The Netherlands has taken a step by step approach to universal service based on a market solution.²⁸ KPN is obliged to offer everyone certain basic public telecommunications services or facilities of a certain quality at an affordable price without financial compensation until 12 months after it informs the Minister that it intends to end the USO provision. If, upon KPN's withdrawal, market forces prove unable to provide universal service, the government will intervene in the market. The Minister will organise a tender, whereby the provision of universal service will be awarded to the operator which tendered the lowest price. KPN has an obligation to participate in this tender. The cost²⁹ of providing universal services will be shared by all telecommunication companies.³⁰

Box 2. **Universal service coverage in the Netherlands**

- Access to and use of the fixed voice telephone network.³¹
- Availability of a sufficient number of public telephone boxes (1 per 5 000 inhabitants).
- Free access to emergency service.
- Availability of telephone guidebooks and public telephone information service.

While the Netherlands has specified a mechanism to ensure universal service, it takes the position that the development of effective competition will reduce the unprofitable regions and customers, and that eventually market forces can provide universal service to all customers.

In view of the strong possibility that significant competition will develop in the Netherlands, this “wait and see” approach to universal service provision appears sound. Experience in other countries shows that competition tends to enhance the penetration of telephone service. This has occurred, for instance, through the entry of niche market operators (*e.g.*, providing pay-phones as in the UK) into areas once considered to be loss making.

2.2.7. *International aspects*

The Netherlands as a member country of the EU, made commitments in the context of the WTO Agreement on basic telecommunications service which was signed on 15 February 1997 and came into effect on 5 February, 1998. The Netherlands committed to the WTO schedule of the EU with no exceptions or conditions. Access to the Dutch market is totally open to foreign service providers including call-back service providers. Service providers do not need a legally registered representative in the Netherlands to provide a service in the country. There are no restrictions regarding the size of share holding or other ownership restrictions on individuals and corporations investing in telecommunications service providers.

Table 5. **The Netherlands WTO commitment as a Member country**³²

Range of services ³³ opened	Timing of liberalisation	Commitment to common set of regulatory principles	Foreign ownership restrictions	MFN exemptions
Full	By 1 January 1998	Full	No	No

Source: WTO.

As a result of the market opening measures, foreign telecommunications companies are able to establish new network infrastructure inside the Netherlands and become a facilities-based carrier providing cross-border services or resale carrier services. In addition, foreign telecommunications companies enjoy the same interconnection rights as local telecommunications companies, except in cases where there is a “distortion of market” (see Section 2.2.2).

2.2.8. *Streamlining regulation and application of competition principles*

Under the Act, OPTA is responsible for telecommunications issues such as number allocation, the interconnection accounting system, and the designation of companies with significant market power. The regulation of competition law issues such as anti-competitive agreements, anti-competitive mergers and abuse of dominance are assigned to the NMa. While, there is potential for conflict between the OPTA’s regulatory responsibilities and those of the NMa because of the exemption under Article 16 of the Competition Act (see background report on The Role of Competition Policy in Regulatory Reform) for conduct which is or could be regulated by a regulatory agency such as OPTA,³⁴ there is as yet no example of OPTA issuing an order in an area under the authority of NMa

In terms of the interpretation of competition rules, while OPTA and the NMa need to reach an agreement on general guidelines in relation to competition, OPTA can make its own decisions regarding anti-competitive conduct which is regulated by the Act. Since the EU’s Treaty of Rome is a common guideline for both the NMa and OPTA, it reduces the risk that competition-related decisions taken by OPTA in the context of the telecommunications industry may not be consistent with decisions concerning the wider economy taken by the NMa.

In order to ensure consistent regulation across industries, OPTA and the NMa are now trying to develop close co-operative relationship. Both agencies recognise that this co-operation is vital not only for the success of both new organisations but for the whole Dutch economy. As part of this co-operative process, OPTA and the NMa are sharing information as well as carrying out joint policy-related research on important telecommunication issues such as cross-subsidisation and pricing. In addition, OPTA and the NMa are developing a protocol on co-operation for the development of competition principles in regulating the Dutch telecommunications market.

In addition, in certain cases the Act requires the Minister to consult with the NMa before making decisions as in the case of denial or revocation of a mobile licence because of “the considerable restriction of real competition on the relevant market”. However, there is no mandate for the Minister to consult with the NMa when it decides to permit transfer of a mobile licence. The Minister should consult the NMa also in such cases in order to ensure consistent implementation of competition rules across the industry.

Although OPTA’s performance and existence will be reviewed by Parliament in 2002, there are no requirements to undertake a regular assessment of the need to streamline regulation. While OPTA can waive application of regulations in areas such as the requirement for uniform tariffs, there are no explicit forbearance provisions. While sector specific regulation can assist in the transition phase from monopoly to competition as market forces become stronger, the sector specific regulation will need to be phased out.

2.3. *The dynamic view: convergence in communications markets*

Although the Netherlands is still in the process of establishing a new telecommunications regulatory framework, the rapid convergence taking place between broadcasting, content and communications technologies and services requires consideration of “next generation regulation”. The Act removes most network-specific regulation by allowing networks to be used for any purposes. However service-specific regulation still exists in markets and the broadcasting market is still heavily regulated by many government agencies. A challenge for Dutch regulation is to move speedily from service-specific regulation to regulation based on competition policy principles so as to ensure regulatory consistency between converging sectors.

Following the revision of the Media Act in 1997 and the implementation of the Act, there are no line-of-business restrictions between broadcasting services³⁵ and telecommunications services. But broadcasting services are still subject to an individual licensing system.³⁶ The Act requires accounting separation between telecommunication and non-telecommunication activities in order to prevent cross-subsidisation. In the market place some innovative initiatives are coming from CATV companies with most big CATV companies now offering Internet services to customers.³⁷ For example, A2000 is offering voice telephony services using its cable network.

It is possible that differences in regulatory treatment of the different sectors are already distorting investment. One example is, differences in the regulatory treatment of Internet telephony and other forms of telephony. It is likely that for KPN, the stricter regulatory requirements it faces in the market for conventional PSTN services make the Internet an attractive alternative. KPN plans to invest US\$317.2 million over two and half years to boost its Internet business, investing in more Internet technology, dial-in structure and software to order to increase its NET users up to two million (a quarter of its 8 million telephone users) by the end of 1998.

Communications convergence in the Dutch communications market is bringing the fragmented regulatory structure between telecommunications and broadcasting into sharp focus. Currently, the telecommunications market is regulated by the Act while the broadcasting market is regulated by both the Act and the Media Act. While all networks are regulated by the Act, broadcasting and telecommunications

services are regulated by different laws. However, with the convergence of two communications media, it is becoming increasingly difficult to designate individual operators and even services as falling into one category or another. Such fragmented regulation not only restricts companies from taking full advantage of technology innovation and business opportunities, but also prevents users from enjoying better possible services. In this regard, a review of current institutional structures and procedures may be a primary requirement for the Netherlands in order to assess whether existing structures are suitable to a converging communications environment. At minimum there is a requirement at an early stage to ensure much closer co-operation and the determination of common policy goals between regulatory institutions in both sectors.

Table 6. **Comparison of the regulatory framework between telecommunication and broadcasting**

	Telecommunication	Broadcasting
Regulatory regime	The Telecommunications Act	The Media Act, The Telecommunications Act ³⁸
Market entry	No restriction (only registration is needed) except access to frequency (licence is needed)	-Network: same as telecommunications -Service: individual licensing system ³⁹
Regulatory institutions	OPTA, Ministry of Transport, Public Works & Water Management	-Technical issues: OPTA, Ministry of Transport, Public Works & Water Management -Content related issues: Ministry of Education, Culture & Science, Media Commission, National Broadcasting Organisation

Source: OECD.

3. PERFORMANCE OF THE TELECOMMUNICATIONS INDUSTRY

Having set out the key features of the regulatory regime, we now assess the level of competition in the marketplace and the performance of the regime.

3.1. *Competition analysis*

The market for traditional voice telephony can be divided into many sub-markets, corresponding to local, long-distance and international, rural and urban, residential and business.

Before 1994, KPN was the only telecommunications company providing voice telephony service for PSTN and mobile services. With entry barriers now abandoned, more than 100 companies are providing telecommunications networks and/or services. For PSTN services there are 3 companies providing nation-wide services and 5 CATV companies with interconnection agreements.

There are several reasons to be optimistic about the future of competition in the market for long-distance and international services. The market share of the new entrants reached 20 per cent at the end of 1997, six months after the introduction of competition. There are the large number of telecommunication infrastructure providers and barriers to entry into these markets are low. In addition, these markets face competition from resellers, from call-back operators and, most importantly, from Internet telephony. Indeed, facing up-coming competition from new licensees in PSTN services (especially in international service), KPN substantially reduced its international telephone rates on 3 October 1997, for calls over the fixed network. All international rates were cut by an average of 25 per cent, and a number of rates were reduced by 50 per cent or more. Furthermore, KPN significantly cut its international rates again on 1 July 1998. For instance, there were cuts of more than 50 per cent for calls to Australia and New Zealand. There is little remaining reason to be concerned about the level of competition in these markets.

In the business market, experience in other countries suggests that facilities-based entrants can compete effectively through targeting business customers as the spring board to broader market penetration. This pattern is being repeated in the Netherlands. Both EnerTel and Telfort compete well in the business market by offering services based on lower prices and new fibre optic cables. For example Telfort has contracts with many big business companies such as Unilever, Shell, and Philips. It is likely therefore, that in the near future under the current regulatory regime, businesses in the large cities will face real choice in their local telecommunications service provider.

As in all countries, local service competition presents more significant barriers to entry. In the Netherlands, the existence of a virtually ubiquitous CATV network presents an obvious alternative to the bottleneck of the local loop. CATV operators in other countries (most notably the UK) are already successfully offering voice telephony services. Indeed, in the Netherlands, A2000 has been offering voice telephony over its cable network in the Netherlands since 1997. Although at present only 5 cable companies have successfully concluded interconnection agreements, it is expected that this number will significantly increase. In addition, the local loop faces competition from mobile services. As discussed below, there is currently a high level of competition in the Dutch mobile market with a wireless local loop (WLL) emerging as a potentially viable alternative. In the light of these developments it may reasonably be expected that adequate competitive pressures will soon exist in the local rural and residential market, if they do not do so already.

In the mobile market, the granting of licences for DCS 1800 increases the number of mobile communication companies from two to four (or five if TeleDanmark succeeds in building a nation-wide mobile network). Thanks to the early start of its GSM service (just one year later than that of KPN's),⁴⁰ Libertel competes closely with KPN in the mobile market.⁴¹ Libertel's major shareholders⁴² are the Dutch financial giant ING Group and the English mobile service provider Vodafone, a combination which ensures that Libertel has both the financial and technical ability to compete with KPN.

Because there are no line-of-business restrictions in the Dutch telecommunication market, the major players are aiming to become full service providers offering both mobile and fixed voice telephony services. The two new national fixed voice telephony service providers in particular think it is essential to be a full service provider in order to compete with KPN which provides both fixed and mobile telephony services. Telfort achieved its goal by acquiring new DCS 1800 license and EnerTel officially announced its intention to become a full service company. In the longer term, it is likely that companies will have just one bill for customers using the same company's fixed and mobile services. Moreover if competition increases sufficiently, companies can bundle fixed and mobile services, a practice already implemented in Denmark.

In many European countries, liberalisation of the domestic market has led to competition between a national incumbent and new companies with connections to foreign incumbents. The Netherlands is no exception. All new companies are related to large foreign companies such as BT, Vodafone and France Telecom. This implies that competition in the Netherlands is not a battle between a "Goliath" and many small "Davids" but a war between giants. This situation has led KPN to argue that asymmetric regulation does not help customers but assists foreign companies based in countries in which KPN does not yet compete. In addition, many foreign telecommunications operators like Global One, and Worldcom are present in Dutch telecommunication market without alliance with Dutch local firms. They offer X.25 services, Frame Relay services, IP/Internet access services, Virtual Private Network services, Value Added Network services, and Managed Bandwidth services. Some companies are planning to offer ATM services. Worldcom has offered its network services to business customers in Amsterdam since 1997.

Overall, the outlook for competition in the Dutch telecommunications marketplace is very good.

3.2. *International performance comparisons*

Because the Dutch telecommunications liberalisation is so recent (indeed, important elements of the regulatory regime have not yet been put in place) it is difficult, if not impossible, to assess at this stage the overall performance of the new regime.

Among the available indicators, price movement is probably the most sensitive to changes in the market. Moreover, in the customers' view, price change is arguably the most important factor in evaluating the success of liberalisation. Since July 1997 when the Dutch fixed voice telephony market was liberalised, competition has arisen mainly in the business market (leased lines) and in the international market. To face challenges from new competitors, KPN undertook a significant rebalancing in its tariff structure. Overall, as Table 7 and Figure 1 indicate, the Dutch residential basket is cheaper than the OECD average. However, average residential users have not been made better off in terms of prices since the liberalisation of the telecommunications market. Indeed, as Table 7 indicates there has been a significant rise in usage charges between 1997 and 1998, due to the introduction of call set-up charges in July 1997. The price of the Dutch residential basket may be deceptive because it does not reflect the introduction of per-second charges which would have reduced the actual price paid. In light of KPN's argument that the set-up charges are revenue neutral, the usage charges may be exaggerated due to not reflecting the per-second charge scheme.

Table 7. **Time series of the Netherlands and OECD Average Residential Tariff Basket***

US\$PPP (excluding tax)

	Netherlands			OECD Average		
	Fixed	Usage	Total	Fixed	Usage	Total
1993	147.40	76.13	223.53	146.31	188.36	334.67
1994	156.22	81.76	237.98	146.40	183.07	329.47
1995	159.16	83.30	242.45	158.82	191.83	350.65
1996	174.93	89.14	264.07	163.39	175.36	338.75
1997	148.72	66.40	215.12	146.60	158.23	304.83
1998	153.19	104.82	258.01	149.88	153.17	303.05

Note:

* Residential Tariff Basket does not include international charges.

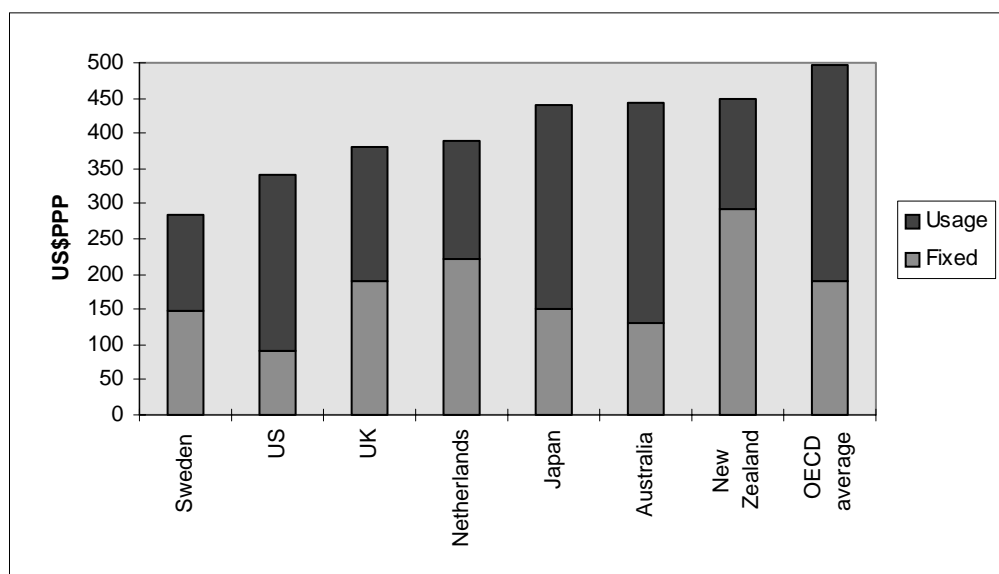
The usage charges are deflated by number of calls.

For these and other baskets, figures are for January of each year.

For a full description of the tariff comparison methodology for these and other baskets, see OECD, ICCP Series No. 22, Performance Indicators for Public Telecommunications Operators.

Source: OECD and EURODATA.

Figure 1. Comparison of Residential Tariff Basket (August 1998)



Source: OECD and EURODATA

The Netherlands business tariff basket shows one of the better performances among OECD countries.⁴³ However the usage charge for business users appears to have increased significantly after the introduction of competition due to the set-up charge.

Table 8. Time series of the Netherlands and OECD Business Tariff Basket*

US\$PPP (excluding tax)

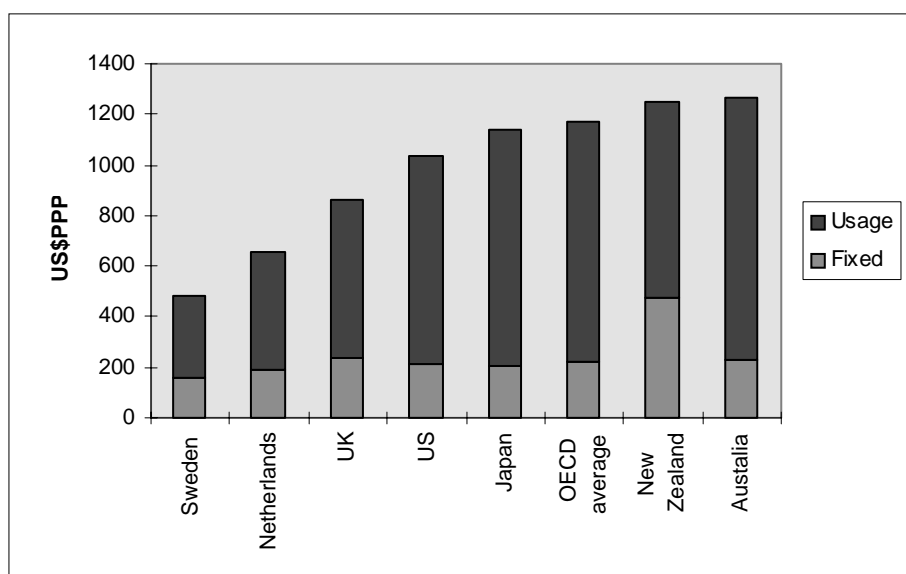
	Netherlands			OECD Average		
	Fixed	Usage	Total	Fixed	Usage	Total
1993	147.40	263.53	410.93	180.79	633.04	813.83
1994	156.22	285.79	442.01	181.46	613.65	795.11
1995	159.15	291.16	450.31	181.60	621.91	803.51
1996	148.88	265.45	414.33	178.76	559.63	738.39
1997	148.72	245.16	393.88	190.00	581.17	771.17
1998	153.19	359.92	513.11	199.44	566.70	766.14

Note:

- * Business Tariff Basket does not include international charge.
- Business Tariff Basket is mainly for small and medium size firms which do not use leased lines.
- The usage charges are deflated by number of calls.

Source: OECD and EURODATA.

Figure 2. Comparison of Business Tariff Basket (August 1998)



Source: OECD and EURODATA.

While the residential and business tariff baskets show increases after introducing competition, international call charges have dropped significantly by much more than the average drop in OECD countries, mainly due to enhanced competition.

Table 9. Times series of the Netherlands and OECD International Usage Tariffs

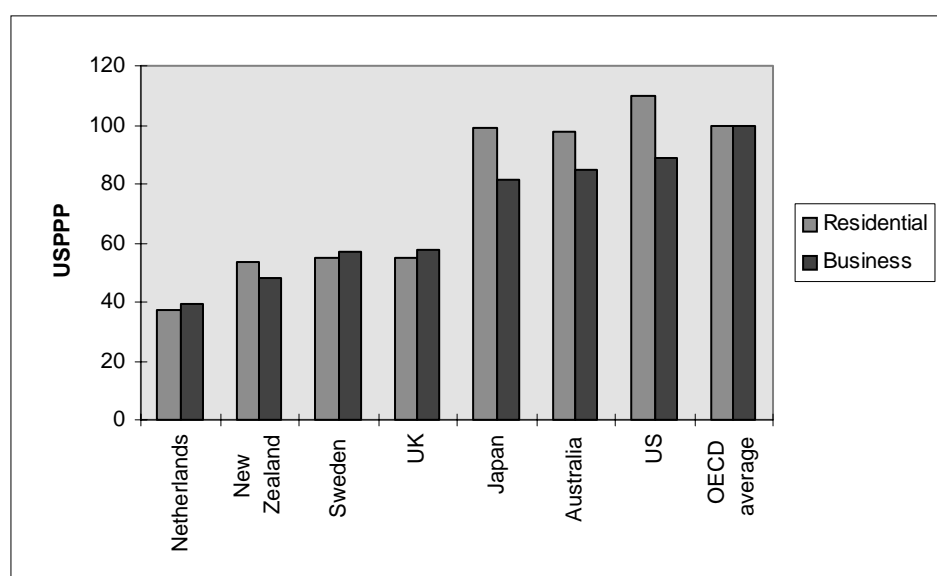
US\$ PPP (excluding tax)

	Netherlands		OECD Average	
	Peak 1 minute	Cheap 1 minute	Peak 1 minute	Cheap 1 minute
1993	0.80	0.61	1.16	0.89
1994	0.80	0.62	1.06	0.79
1995	0.76	0.65	1.00	0.74
1996	0.60	0.48	0.86	0.65
1997	0.71	0.57	0.93	0.67
1998	0.36	0.32	0.80	0.63

Note: One minute charge is calculated by (one initial minute + three additional minutes)/4.

Source: OECD and EURODATA.

Figure 3. Comparison of International Tariff Basket (August 1998)



Source: OECD and EURODATA.

Because leased lines services were liberalised as early as 1993, leased lines services provide clearer evidence of the impact of liberalisation. In 1994, just after the introduction of competition, leased line charges were reduced significantly. Due to continuing strong competition in leased line services such as packet switched data transport services and simple resale of leased lines capacity in the Netherlands, the Netherlands has much lower prices for all capacities of leased lines than the OECD average. In 1997, companies with new infrastructure licences entered leased lines services using CATV networks and other alternate infrastructure (e.g. fibre optics for railway company and electricity companies). This was an important factor driving significant price cuts in 9.6 kbit leased lines (although another factor was the migration away from such low speed lines

Table 10. Time series of the Netherlands and OECD Leased Lines Tariff Basket*

US\$PPP (excluding tax)

	Netherlands			OECD Average		
	9.6 kbit	54/64 kbit	1.5/2 Mbit	9.6 kbit	54/64 kbit	1.5/2 Mbit
1993	57386	107078	512557	45954	102107	633399
1994	34065	64865	340051	43405	80292	495049
1995	38251	64258	369624	44714	70657	432232
1996	30360	51198	294588	37008	68569	387929
1997	18681	44885	256908	34756	60388	356241
1998	17796	40314	233575	32648	49382	294339

Note:

* Monthly rental charge.

Due to missing data, the following countries are excluded from OECD average:

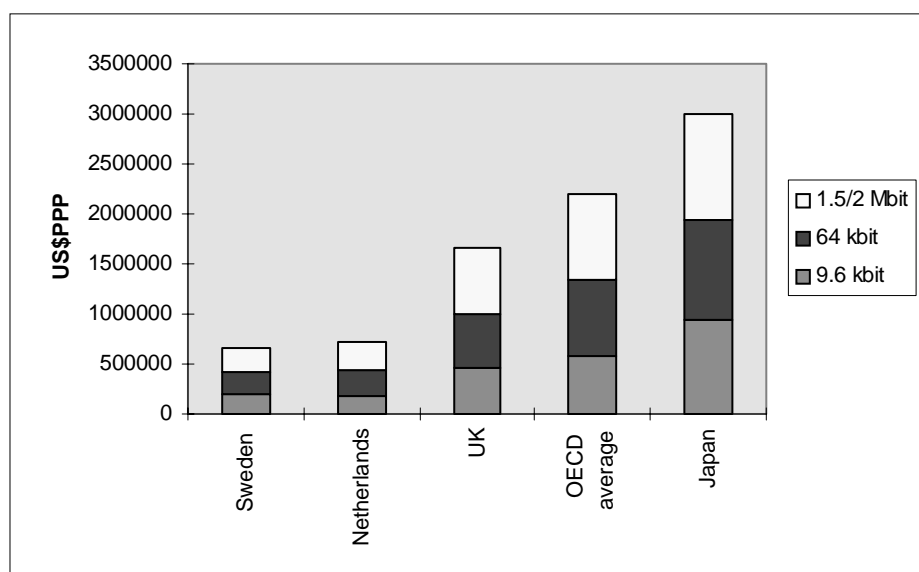
9.6 kbit: Portugal, Sweden, Mexico.

54/64 kbit: Australia, Iceland, Sweden, Turkey, Mexico.

1.5/2 Mbit: Australia, Finland, Sweden, Switzerland, Mexico.

Source: OECD and EURODATA.

Figure 4. Comparison of Leased Line Tariff Basket (August 1998)



Note: Yearly rental charges.

Source: OECD and EURODATA.

In October 1995, Libertel launched its mobile service and the subsequent competition made an immediate impact on mobile tariffs. In 1996, fixed mobile charges were reduced almost 30 per cent from the previous year. However, the duopoly situation between Libertel and KPN appeared to impede any further improvement in tariffs. In 1998, the Dutch mobile tariff basket was just below the OECD average.

Table 11. Time series of the Netherlands and OECD Mobile Tariff Basket*

US\$PPP (excluding tax)

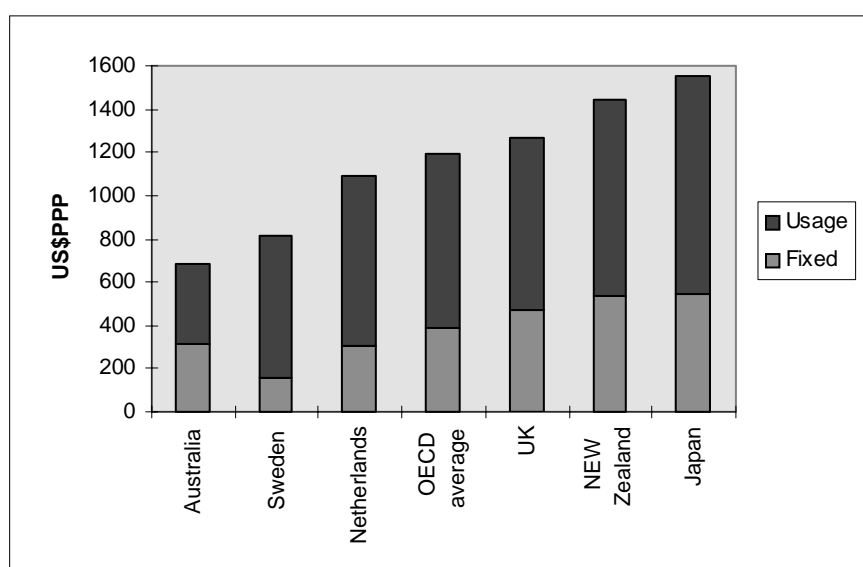
	Netherlands			OECD Average		
	Fixed	Usage	Total	Fixed	Usage	Total
1993	480.97	984.86	1465.83	459.21	1005.57	1464.77
1994	402.46	969.56	1372.02	410.38	956.95	1367.33
1995	295.88	943.17	1239.05	390.55	905.84	1296.39
1996	295.58	1037.96	1333.54	377.26	916.78	1294.04
1997	304.40	915.71	1220.12	381.37	927.02	1308.39
1998	304.46	915.89	1220.35	374.79	865.59	1240.68

Notes:

- * Usage charges are deflated by the number of calls.
- Due to breaks in the time series, Mexico and Greece are excluded from the OECD average.
- US information is not available for 1998.

Source: OECD and EURODATA.

Figure 5. Comparison of Mobile Tariff Basket (August 1998)



Source: OECD and EURODATA.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1. General assessment of current strengths and weaknesses

Box 3. Strengths

- Full implementation of EU Directives.
- No entry and line of business restrictions.
- Appropriate regulatory safeguards ensuring fair competition between the incumbent and new entrants.
- Existence of alternative infrastructures.
- Strength and high quality of new competitors.
- Narrowly focused universal service requirement relying primarily on market forces.

The Netherlands has made steady progress in telecommunications market liberalisation in the 1990s in conformance with the EU Directives, and is now one of the leading performers in terms of implementing the principles of the EU Directives.⁴⁴ In some policy areas such as interconnection and number portability, the Netherlands has gone further than EU requirements. While some asymmetric regulations remain, the Act removes unnecessary regulations such as line of business restrictions and unfair burdens arising from universal service obligations. The task now is effective implementation of this regulatory framework in a market where the incumbent is still dominant, and how to address challenges arising from the convergence between telecommunications and broadcasting.

The Netherlands has appropriate regulatory safeguards which ensure fair competition between the incumbent and new entrants. For instance, the Act has strong rights-of-way provisions and requires facility sharing between operators. In addition, number portability, including mobile service and carrier pre-selection will soon be implemented. These regulatory safeguards help new entrants to have a level playing field with the incumbent by means of equal access to customers as well as less initial cost in market entry.

The Netherlands has an advantage in infrastructure competition due to its ubiquitous CATV network which can be used as an alternative to the incumbent's bottleneck facility *i.e.*, the local loop. The Netherlands decided to take advantage of this by permitting CATV companies to enter into telecommunications markets as early as 1996 through interim legislation and by requiring KPN to reduce its stake in Casema in 1997. Together with the development of technologies which enable companies to provide less expensive local access through wireless local loop, the use of CATV networks for telecommunications will lead to increased network capacity, suitable for delivering multimedia and Internet services to end users.

As discussed earlier, the Netherlands has a focused and targeted universal service obligations. The experience of other OECD countries indicates that the funding of broadly-defined universal service entitlements through levies on the telecommunications industry can reduce efficiency and undermine other policy goals. In addition, while the Netherlands has a mechanism to ensure universal service, it opens the possibility that the development of effective competition will ensure universal service to all customers without using a special funding mechanism. Considering new strong entrants in the fixed voice telephony market and rapid growth of the mobile market, this "wait and see" approach to universal service provision seems very sound.

To large extent, effective competition depends on the quality of the new entrants. It is notable that in the Dutch telecommunications market, most entrants are high profile operators spawned from a combination of big domestic companies such as ING Group, the Dutch Railway and ABN-Amro, and large foreign telecommunication companies including Vodafone, BT, and France Telecom.

Box 4. Weaknesses

- Ministry retains regulatory powers in interconnection, numbering, universal service and licensing.
- The uniform tariff obligation on KPN restricts cost oriented pricing.
- No explicit provisions governing forbearance and withdrawal from regulation.
- Government remains a major owner in the sector.
- Fragmented regulatory regime between telecommunications and broadcasting.

While, in general, regulatory reform in the Netherlands is to be commended, there are some problems, which if not successfully addressed, will impede the future development of competition in the Dutch telecommunications market:

- a) First, under the Act, the Ministry will retain certain regulatory functions in interconnection, numbering, universal service and spectrum licensing which are better handled by a transparent, independent regulator such as OPTA.

- b) Second, the uniform tariff obligation on KPN restricts cost-oriented pricing. In addition, it prevents price competition in the marketplace by reducing the flexibility of KPN in taking the lead in setting prices.
- c) Third, although there is provision for a “review” of the existence of OPTA in 2002, the details of this review are unclear. There should be explicit arrangements for assessing the level of competition in the market with a view to forbearing from further regulation.
- d) Fourth, the Dutch Government has participated in the marketplace both as a player and a regulator. The problem is amplified by the fact that the Ministry still has regulatory power in interconnection, numbering, universal service, and licensing.
- e) Finally, as a result of convergence, telecommunications and broadcasting are increasingly becoming part of the same industry. Fragmented regulation in these areas restricts companies and users from taking advantage of the benefits of convergence. This will become an increasingly pressing issue.

4.2. *Potential benefits and costs of further regulatory reform*

As this report has emphasised, despite the weaknesses identified above, the outlook for competition in the Dutch telecommunications sector is good.

But the telecommunications industry is subject to rapid technological change. New products and services are developed all the time. Unless the regulatory regime is consistent with such change, the regulatory regime may slow the growth of competition and hinder progress.

Even though the Netherlands just finalised the changes to the regulatory framework necessary to move the telecommunications market from monopoly to a competitive market, it should now begin preparing for a “new generation” regulatory framework which can facilitate and deliver the benefits of convergence. Market players are already exploring and committing to strategic alliances, joint ventures and mergers to materialise the commercial opportunities stemming from convergence. If the Dutch Government fails to develop an appropriate regulatory framework it will cause distortions including impediments to market development, investment, pricing and service enhancement. Considering the lengthy procedure of Dutch regulatory changes, it is timely to start discussion on this issue. While the right regulatory framework in the era of convergence is a complex issue, it is of critical importance for access to new services, lower prices, new business opportunities, economic growth and new jobs.

4.3. *Policy recommendations*

The following policy options are based on the “Policy Recommendations for Regulatory Reform” set out in the 1997 *OECD Report on Regulatory Reform*.

Review regulations systematically to ensure that they continue to meet their intended objectives efficiently and effectively.

Ministers have recommended that governments review proposals for both new and existing regulations. With the implementation of the new Act, the Netherlands will have a liberal, open regime for telecommunications. However, as convergence brings the telecommunications and broadcasting industries closer together, the differences in regulatory treatment will introduce distortions in investment and competition. *The regulatory regime for broadcasting should be reviewed, in the light of convergence, as soon as possible. In the long term, it would be preferable to create a single regulator to supervise all of*

the communications sector. In the short term, it is recommended that closer co-operation should take place and the determination of common policy goals between regulatory institutions in the broadcasting sector.

Ministers have also recommended that regulations should be updated through automatic review methods such as sunseting. Although there is a provision to review the existence of OPTA in 2002 by Parliament, the details of that review (such as its scope) remain unclear. International best practice calls for regular reviews of regulation, with a view to forbearance, by an independent agency. Such a forbearance review should carefully weigh the costs of continued regulation against the potential benefits of constraining the exercise of market power by a formerly regulated firm. *The Netherlands should therefore clarify the objectives and scope for the scheduled review of regulation. The review should include an explicit cost-benefit analysis of continued regulation.*

Ensure that regulations and regulatory processes are transparent, non-discriminatory and efficiently applied.

In the OECD report, Ministers recommended that procedures for applying regulations be transparent, non discriminatory, contain an appeals process and do not unduly delay business decisions. Under the present rules, much responsibility for interconnection, numbering, universal service and granting spectrum licences remains with the Ministry. It is important that these regulatory functions be carried out in a transparent and non-discriminatory manner. Although the Ministry should retain responsibility for policy matters such as the overall frequency plan, *remaining regulatory responsibilities for interconnection, numbering, universal service, and granting spectrum licences should be delegated to OPTA.*

Review and strengthen where necessary the scope, effectiveness and enforcement of competition policy.

Ministers have recommended that sectoral gaps in coverage of competition law should be eliminated, unless compelling evidence suggests that public interests cannot be served in better ways. Ministers have also recommended that competition law should be enforced vigorously where collusive behaviour, abuse of dominant position, or anti-competitive mergers risk frustrating reform. As competition develops, the NMa's role in telecommunications sector will be increased. *Government should ensure that competition law applies to this sector in cases of merger, abuse of market power and anti-competitive behaviour in order to ensure consistent application of competition rule across all industries.*

Reform economic regulations to stimulate competition, and eliminate them except where clear evidence demonstrates that they are the best way to serve broad public interests.

Ministers have recommended that governments review, as a high priority, those aspects of economic regulations that restrict entry, exit, pricing, output, normal commercial practices, and forms of business organisation. Although the new Dutch telecommunications regime will be relatively free of restrictions on entry and exit, certain constraints on prices remain. The requirement on KPN to retain uniform tariffs will hinder its ability to compete, will promote inefficient entry and will limit the extent to which the benefits of competition are passed on to consumers. *The restraints on KPN to retain uniform pricing should be lifted when consumers in rural area have sufficient choices for telecommunications services in any form, in favour of allowing cost-oriented pricing which benefits consumers.*

The Netherlands has imposed a temporary rate-of-return price regulation on KPN's fixed voice telephony and leased line services in order to establish a reasonable starting point for price caps. *OPTA should not delay to re-introduce price-caps in 1999 since rate-of return regulation can generate undesirable incentives for inefficient behaviour.*

NOTES

1. OECD, *Communications Outlook 1999*, Paris.
2. OECD, *Communications Outlook 1999*, Paris.
3. OECD, *Communications Outlook 1999*, Paris.
4. There are two types of EU directives. One is the liberalisation directives which aim to remove exclusive rights and most special rights in the European telecommunications services and equipment market. The other is the harmonisation directives which intend to ensure fair competition in the European telecommunications market. See Annex Tables 2 and 3 for the implementation of EU Directives by the Netherlands.
5. The interim legislation is composed of the Fixed Infrastructure Act, which is the amendment of the Telecommunication Facilities Act of 1989, and the Fixed Infrastructure Licensing Act.
6. ONP rules require infrastructure companies have to charge uniform and cost based prices for network use and provide open access. Open access means that access should be provided on transparent, publicly disclosed, and equal terms.
7. Information Society Project Office of the European Commission, "Alternative Networks", April 1998.
8. In 1993, Swisscom of Switzerland became a partner of Unisource. In 1994, Unisource formed a joint venture with AT&T, called AT&T-Unisource Communications Service. Unisource is also a founding equity partner with AT&T, KDD of Japan and Singapore Telecom of the WorldPartners Company.
9. Most of its revenues come from licence and registration fees, and from its disputes resolution role among market players .
10. There are agreements between the Ministry and OPTA in the areas of exchanging information and "code of conduct".
11. See background report on The Role of Competition Policy in Regulatory Reform for more detailed information on the NMa.
12. Among other reasons, the Minister should revoke a license if it is required for compliance with a binding decision of an institution of the European Union, or for compliance with conventions and decisions of international organisations which are binding on the Netherlands.
13. Local municipalities do have a co-ordinating role in deciding when to open up the streets.
14. In general, OPTA designates the telecommunications service providers who have more than 25 per cent market share in fixed public telephone network and fixed public telephone services market, mobile public telephone networks and mobile public telephone services market, and leased lines market. Nevertheless, following the EU interconnection directive, OPTA may designate providers having a share of less than 25 per cent in the different markets as providers with significant market power, or not designate providers having a share of more than 25 per cent in the particular market as providers with significant power on the relevant market.
15. The cost accounting system needs to be approved by OPTA.

16. The European Commission recommended that NRAs should set deadlines for implementation by incumbent operators of new cost accounting systems based on current costs and activity-based accounts.
17. See discussion in Section 2.2.7, second paragraph.
18. Previously the carrier-select tariffs of KPN were 7.1 cent per minute and 8.3 cent per minute for regional and national traffic, respectively. OPTA's decision results in tariffs close to those currently charged by KPN for terminating access, at present 3.3 cent per minute and 4.2 cents per minutes, respectively. Theoretically OPTA's decision is in line with the concept of network externality. When network connections increase owing to low interconnection charges, each subscriber can reach more individuals and is thus prepared to pay more for subscription fees.
19. Telephony tariffs are based on usage time subscription fee and leased lines have flat rate, distance-dependent tariffs.
20. According to OPTA, KPN has to offer voice telephony at cost oriented tariffs for eight services:
 1. Access (problems concerning the connection network)
 2. International traffic
 3. National (inter- local) traffic
 4. Local/regional traffic
 5. 0800/090x traffic
 6. Traffic between the mobile and the fixed network
 7. Phone boxes
 8. ISDN
21. KPN offers a low user scheme called "Bell Budget" which has low monthly rental fee and relatively high call charges.
22. The Netherlands has imposed 10% rate of return regulation on CATV companies. (CPB, "Competition in Communication and Information Services", 1997).
23. On its press release on auctioning DCS 1800 frequencies the Ministry said "Through the auction process scarce resources are obtained by those companies which believe they can realise the greatest economic return on investment. In previous frequency distribution for mobile telephony in 1995, use was made of a "comparative assessment procedure". In practice, the competing offers were very close to each other. This comparative assessment procedure also requires the government to have a clear view as to the most desirable package for the market. The auction system is far more transparent and provides more scope for business to determine the final use of the frequencies."
24. There were five applications for the two licences regarding the establishment of a national mobile telephone network with DCS 1800 frequencies, combined with GSM frequencies. Deutsche Telekom/France Telecom/ABN-Amro/Rabobank and Telfort (BT/NS) were granted the licences which they bid NLG 600 million and 545 million respectively.
25. Number portability is the term used to describe the ability of customers to retain their telephone number if they change service supplier.
26. In results of the study, a steering committee comprising five operators and two working groups (technical and customer care) have been set up.
27. Carrier pre-selection is defined as a mechanism which allows users to pre-select the long-distance or international traffic carrier of their choice on a permanent or default basis. Customers can override their pre-selected carrier by dialling a short access prefix.

28. At EU level, no requirement is imposed on member states to set up national schemes to share any burden among market players which may result from the cost of universal service provision.
29. The cost of universal service depends on population density and shape of landscape. Considering high population density in the Netherlands and flat landscape, it is expected that the cost of universal service is not high.
30. The companies which provide the services, designated as universal service and the companies which have a higher turnover for the service in the Netherlands than the amount stipulated by ministerial regulation in the calendar year share the cost.
31. More specifically, a low user scheme which guarantees affordable connection to and use of the fixed voice telephone network for users who have very limited call volumes.
32. The EU offer commits to complete liberalisation of basic telecommunication services (facilities-based and resale) across the EU for all market segments (local, long distance and international). The offer also covers, for instance, satellite networks and services and all mobile and personal communications services and systems. Restrictions include foreign equity limits by France (20%: radio-based services, direct investment only) and Portugal (25%). Full liberalisation of public voice telephony and facilities-based services is to be implemented on a delayed basis only by Spain in December 1998; by Ireland in 2000; by Greece in 2003; and by Portugal in 2000 for public voice telephony and July 1999 for facilities based services. Liberalisation of internationally connected mobile and personal communications services is to be implemented on a delayed basis only by Ireland and Portugal in 1999.
33. In the EU commitment on WTO basic telecommunications services agreement, telecommunications services are defined as the transport of electromagnetic signals-sound, data image and any combinations thereof, excluding broadcasting.
34. Article 16 of the competition law provides that the competition law does not apply to agreements that are subject to the approval of another administrative agency pursuant to other legislation, that could be declared invalid or prohibited by another agency, or that have arisen pursuant to another statutory requirement.
35. The Act defines broadcasting as “an electronic media service concerned with the provision and broadcasting of programs” and broadcasting network as “technical installations, or parts thereof, that are used to broadcast programs by means of cables or radio connections between points, to one or more pieces of land, dwellings or non-residential buildings”.
36. However, point-to-multipoint terrestrial broadcasting is controlled by NOZEMA, a limited liability company with shares owned by State and public radio and TV broadcasters.
37. Casema and A2000 started offering Internet service via the cable in Delft on October 1997. As of November 1997, cable company Telekabel offer its subscribers unlimited access to the Internet at a price of around US\$26 per month. As of March 1998, Castel offers free access to the Internet in certain regions using KPN’s infrastructure.
38. It has a provision on broadcasting licences and obligations for broadcasters to carry prescribed types of television programs.
39. The public broadcasting and commercial broadcasting of television programs require individual licences. Since July 1995, there have been no restrictions on parties to obtain an individual licence to operate Satellite Earth Stations (SES).
40. KPN launched GSM service in July 1994 and Libertel launched GSM service in September 1995.

41. By the end of 1997, Libertel served 532 000 subscribers. KPN has about 1.2 million subscribers at the end of 1997. The analogue service was launched in 1980 and the subscriber numbers are stabilised at around 258 000. GSM service served 924 198 customers by the end of 1997. KPN's monthly access charge is a little bit higher than that of Libertel's but its per call charge is lower than that of Libertel's.
42. In January 1998, Vodafone increased its stake in Libertel to 61.5% by agreeing to buy out all of Libertel's minority shareholders as well as part of the ING holding for US\$ 438.5 million.
43. Only Iceland, Luxembourg, Sweden, and Norway have lower business tariff basket than the Netherlands.
44. According to the European Commission "Third report on the implementation of the telecommunications regulatory package (January 1998)", the Netherlands has implemented all liberalisation and harmonisation directives except for licensing and interconnection directives, which are only partially implemented due to delay of the Act enactment.

ANNEX TABLES

Annex Table 1. **Liberalisation of the European telecommunications market**

1984	Decision to begin work on a Green Paper on the role of telecommunications in the construction of Europe.
1987	Publication by the European Commission of the Green Paper on European telecommunications.
16 May 1988	Terminal Directive (88/301/EEC) allowing for competition for terminals, including telephones.
7 December 1989	Decision by the European Council of Ministers to progressively open most telecommunications services to competition, with reservation of the exclusive and special rights on the telephone service between fixed points and on the public infrastructures.
28 June 1990	Service Directive (90/388/EEC) allowing for competition for telecommunications services except the telephone service.
1 January 1993	Competition in the data transmission services domain.
16 June 1993	Decision by the European Council of Ministers to extend competition to all telecommunications services from 1 January 1998.
17 November 1994	Decision by the European Council of Ministers to widen competition to infrastructures from 1 January 1998.
16 January 1996	Mobile and Personal Communications Directive (96/2/EC) allowing for competition in mobile telephony.
13 March 1996	Full Competition Directive (96/19/EC) modifying Service Directive (88/301/EEC) to draw up the calendar and conditions for the extension of competition.
1 July 1996	Competition for alternative infrastructure.
1 January 1998	Competition for the provision of telephone service open to the public and for the underlying infrastructure.

Source: European Commission.

Annex Table 2. **Implementation of EU liberalisation directives by the Netherlands**

Liberalised Activity	Dutch Provision (date in effect)	EU Directive (implementation dead line)
Circuit and packet switched data transport services	Ministerial Decree (1993)	Service Directive (1990)
Voice telephony within closed user groups	Ministerial Decree (1994)	Service Directive (1990)
Simple resale of leased lines capacity	Ministerial Decree (1993)	Service Directive (1990)
Mobile network and communications services	Mobile Telecommunications Act (1994)	Mobile and Personal Communications Directive (1996)
Satellite network and communication services	Fixed Infrastructure Act (1996)	Satellite Directive (1994)
Use of cable television infrastructure for telecommunications purposes	Fixed Infrastructure Act (Aug. 1996)	CATV Directive (January 1996)
Use of other alternative fixed infrastructure for telecommunications purposes	Fixed Infrastructure Act (Aug. 1996)	Full Competition Directive (January 1996)
Installation and exploitation of new fixed telecommunications infrastructure	Fixed Infrastructure Act (1996)	Full Competition Directive (1998)
Voice telephony services	Fixed Infrastructure Act (July 1997)	Full Competition Directive (January 1998)

Source: European Commission.

Annex Table 3. **Implementation of EU harmonisation directives by the Netherlands**

Harmonised Activity	Dutch Provision (Date in effect)	EU Directive (Implementation dead line)
Creating independent regulatory body	OPTA Act (Aug. 1997)	ONP Framework Directive (December 1996)
Designating operators with significant market power	Telecommunications Act	Interconnection Directive (December 1997)
Implementation of cost accounting system	Telecommunications Act	ONP Framework Directive (December 1996)
Authorisation procedures for voice telephony and public telecommunications network	Fixed infrastructure Act (1996) Telecommunication Act	Licensing Directive (December 1997)
Publishing interconnection terms and conditions	Telecommunications Act	Interconnection Directive (December 1997)

Source: OECD.