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Cornelius Graack*

European Telecommunications Markets

International Dynamics and Implications for Transforming Economies

Today, the telecoms sector is not only one of the fastest growing sectors in the world but also one of the most rapidly changing sectors. In Western Europe different strategies under different regulatory frameworks are being pursued in the effort to meet the challenges posed by this. In Central and Eastern Europe, telecommunications networks are still extremely underdeveloped. What lessons can the transforming economies draw from the experiences of Western European countries?

Following the first liberalization efforts in the telecoms sector of the European Community in 1984, beginning with the release of the "Community action programme on telecommunications", the progress of liberalization became considerable in the early 1990s. A strong liberalization impetus came from the EC Commission's imposing EC directives on EC member states. EC Directives are binding for member states but – in accordance with the principles of subsidiarity – they leave a certain degree of freedom to the national legislature to make national law commensurate with EC legislation. The directives in the area of telecommunications focus on services, open network provision, terminal equipment, standardization, mobile communications and satellite communications. The aim of the EC legislation is to create a framework for effective competition in various telecoms segments. This is realized through harmonization (e.g. adoption of common standards, reciprocity of licenses) on the one hand and liberalization (e.g. public procurement policy) on the other hand.¹ Even if several market segments are exposed to competition, the core fields of national telecoms operators, namely voice telephony services and public switched telecommunications networks (PSTN), are dominated by highly protected national monopolies. Revenues from PSTN-services amount to up to 80% of total revenues, making it the key

segment that has to be liberalized if effective competition in the telecoms sector is the objective. Therefore, the European Council of 22 July 1993 agreed to proposals by the EU Commission to fully liberalize the telephony services within the Union on 1st January 1998; exceptions are being made for Luxembourg, Greece, Ireland, Portugal and Spain. Furthermore, to support effective competition, the Telecommunication Ministers' Council of 17 November 1994 decided to deregulate infrastructure by the same date.

Today, the telecoms sector is not only one of the fastest growing sectors in the world but also one of the most rapidly changing sectors. This holds for the regulatory framework, which is leading to more liberalized national markets, as well as for the national and international market structure, which is characterized by market entry of newcomers, mergers of regional or functional monopolies at the national level and creation of new national and international strategic alliances.

The reasons for these developments are manifold. National companies that pay little attention to the outside world are in danger of losing their ability to compete and hence losing national and international market shares. Business customers, especially

* University of Potsdam, Germany. This research was undertaken with support of the European Community's Phare ACE Programme 1994. The author wishes to thank Alison Sinclair and Paul J. J. Welfens for helpful suggestions.

¹ Cf. P. J. J. Welfens and C. Graack: Telecommunications in Western Europe: Liberalization, Technological Dynamics and Regulatory Developments, Discussion papers No. 2, 1995, Europäisches Institut für Internationale Wirtschaftsbeziehungen (EIIW), Potsdam, forthcoming in: P.J.J. Welfens, and G. Yarrow: Telecommunications and Energy in Systemic Transformation, New York 1996.

multinationals operating across national frontiers, require telecoms services in the form of one-stop shopping. One-stop shopping allows enterprises (and other customers) to contact only one telecommunications operator to order and manage all leased international links. "Seamless" global communication, meaning that a customer wants all the telecoms networks involved to appear to be a single network, is another example of new business requirements. Since national operators are often restricted to national boundaries, cooperation with other network operators is the only way to offer services tailored to the specific needs of such profitable customers as multinational companies. The question arises whether the relevant market for telecoms operators has changed over time from a purely national one to a cross-border market where international cooperation is necessary. One example of this development is Unisource, a pan-European telecommunications company by KPN (Dutch PTT Telecom), Swiss PTT, Telia of Sweden and Spanish Telefonica. Another important aspect of strategic alliances is that smaller telecoms operators improve their starting position for negotiations with telecoms giants such as AT&T, NTT and Deutsche Telekom. The same holds for the national mergers of regional or functional monopolies such as could be observed in Portugal, Italy and Denmark during recent years.

As regards the EU liberalization plans for 1998, which are intended to lead to tougher competition, government officials and representatives of national telecoms operators are undertaking the necessary preparations. While national incumbent telecoms operators are concentrating their powers, potential newcomers are doing the same. Thus, alternative network providers such as railways, electricity

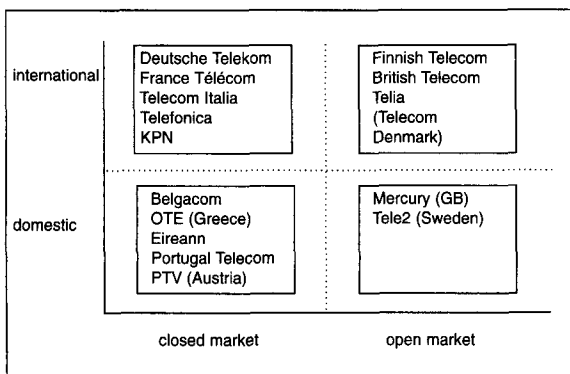
companies, water suppliers and cable network operators are looking for suitable partners with a strong financial background or the knowledge of how to run a telecoms network. New alliances are most obvious in the United Kingdom, which has one of the most liberal telecommunications markets in the world, but also in Germany with one of the world's most attractive and profitable telecoms markets and in other Western European countries. Yet the question is whether these alliances are stable or not.

Given the dynamics of international technology and the new trend towards international alliances – and the experiences made in OECD countries – the question arises which type of deregulation and privatization could enable network operators in Eastern Europe to place themselves in a position which would allow them to become "full players" in the new internationalized environment.

Strategies of EU Telecoms Operators

During the last decade, a worldwide trend towards the internationalization of economies could be observed. This trend was supported by technological changes in telecommunications and new hardware generations which facilitate the decentralized production of spares, leading to a more efficient division of labour between nations. As a result, the international coordination of goods and services makes a sophisticated logistical system even more necessary. Customers require a new range of international telecommunications services such as one-stop shopping or seamless global communications services. From an operator's point of view, these new services can only be offered by international cooperation with foreign operators or by own affiliates abroad. In a rapidly changing telecommunications environment, Western European telecoms operators are pursuing different strategies under different regulatory frameworks (Figure 1).

Figure 1
Strategies of European Network Operators under Different Regulatory Regimes



□ Belgacom (Belgium), Eireann (Ireland), OTE (Greece), Portugal Telecom and Austrian PTV are focusing solely or mainly on the national market (as a monopoly). Their strategy is to withstand increased pressure from international competition by reinforcing their national position.

□ The strategy of entering foreign markets while home markets are still protected by regulation is pursued by France Télécom, Deutsche Telekom, Telecom Italia, Telefonica (Spain) and KPN (Netherlands).

□ Finnish Telecom, British Telecom and Telia (Sweden) are expanding their activities into foreign markets, aiming to compensate losses in liberalized home markets. Since 1994 TeleDanmark has faced competition in the voice telephony segment from leased lines; by mid-1996 the Danish telecoms sector will be fully liberalized.

□ Mercury (GB) and Tele2 (Sweden) are concentrating on national markets. Yet both are backed by international consortia.

While most EU telecoms operators are pursuing a strategy of "going international", the significance of international engagements is still quite limited. In 1993 only 2% of all BT's revenues were generated from subsidiaries outside the UK and TeleDanmark's international projects contributed to only 1% of total revenues. This holds for other national operators too. Nevertheless, international strategies are indispensable to satisfy customer requirements and to assure profits in the future.

As Figure 1 shows, the internationalization plans of national operators are influenced by internal and external factors. The option between a purely domestic and an international strategy depends on the financial constraints of an operator as well as on its firm-specific advantages (skilled labour, technical know-how). Dunning suggests three prerequisites for a successful international expansion strategy.² Entering a foreign market by foreign direct investment should only be undertaken if firm-specific comparative advantages are great and compatible with country-specific advantages of the recipient state, and if other cooperative strategies seem to be less successful. In order to combine both, foreign investors often cooperate with national operators, as is the case in the mobile communication segment.³ However, comparative advantages can be distorted by the regulatory framework, leading to foreign investments by national monopolies without real comparative advantages except national monopoly profits.

The regulatory framework is the external factor influencing an operator's decision. The given examples show that incumbent telecoms operators facing competition on the national level are also engaging in foreign markets to compensate for

domestic market share losses. The question arises whether domestic competition facilitates market entry into foreign markets. Economic theory suggests that competitive pressure leads to a more efficient internal organization and hence to firm-specific advantages, which is one of the prerequisites for a successful penetration into a foreign market. This theory is being supported by experiences made in liberalized European and non-European markets. A good example of an incumbent operator becoming internationally competitive through national competition is given by British Telecom. While BT's poor performance at the beginning of the 1980s was one of the reasons for liberalizing the British telecoms market, BT is nowadays one of the global players.

Incumbent operators in markets exposed to competition are often forced to expand internationally, since newcomers that enter liberalized markets concentrate on highly profitable segments. Most newcomers, e.g. Mercury and Tele2, are backed by foreign network operators, which not only offer financial resources and managerial and technical know-how, but also provide access to the international networks.⁴ Separate internationalization strategies are therefore superfluous. The question is whether this option, internationalization via foreign capital investment or share swaps, is an appropriate strategy for Eastern European countries.

Aims and Options in Transforming Economies

The development of the international telecommunications sector much depends on the future regulatory frameworks at the national, European and international level. Currently, key services – namely voice telephony and public switched telecoms networks – are still regulated in most Western and Eastern European countries. However, the regulatory framework within the European Union will change after 1997 or even before. The liberalization of EU telecoms markets will also affect non-EU countries in Central and Eastern Europe. That holds especially for countries which have applied for full EU membership.

Until the beginning of the 1990s, telecommunications in Central and Eastern European countries had suffered a long period of neglect, resulting in a technological gap of 20-30 years

² Cf. J. H. Dunning: *International Production and Multinational Enterprises*, London: Allen & Unwin 1981.

³ Cf. e.g. ITU and OECD: *Telecommunications Indicators for Economies in Transition*, Geneva/Paris 1994; and KPMG: *Investing in Infrastructure for the European Information Society*, Brussels 1995.

⁴ Mercury is a joint-venture of British Cable & Wireless (80%) and Bell Canada (20%), while Tele2 belongs to Cable & Wireless (40%) and to the Swedish media group Kinneviks (60%). Cable & Wireless is one of the world's most international telecommunications companies with operations in more than 50 countries.

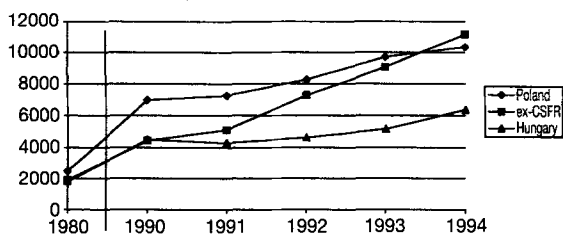
compared with the best Western European and North American telecoms operators.⁵ The telecommunications infrastructure in CEE and CIS countries is underdeveloped and fails to meet the needs of the economies in the region. The penetration rate (main lines per 100 inhabitants) varies between 10% and 20%, which is low even in comparison to relatively poor European countries like Portugal (35.1%), Ireland (35.0%), Spain (37.5%) and Greece (47.3%).⁶ The combined waiting lists in Eastern European and CIS countries exceeded 23 million lines in 1992; in many countries of this region the average waiting time for a line is between 5 and 15 years. As a general rule, the performance of telecoms services is poor, call failure rate is about 20-40% compared with less than 1% in Western European countries, while prices for services are considerably higher and distorted (profitable services are cross-subsidizing non-profitable market segments). The average penetration rate in the European Union amounted to 48% in 1994, while the average penetration rate in CEE and CIS countries was only about 15%. In order to achieve a penetration rate of about 48% in CEE and CIS countries, another 100 million or so main lines must be laid in the future. Since the average cost per main line is calculated at around \$ 1,000, total financial re-

quirements for network expansion could easily exceed \$ 100 billion, in addition to necessary investment in network modernization. Other estimates are even higher – the EBRD reckons that at least \$ 100 billion are necessary to raise penetration rates to an average of 30%.⁷ These figures make it clear that the task of establishing a modern telecommunications network within a relatively short time to fulfil business and consumer requirements is too much for a single telecom operator. Most telecommunications markets in CEE and CIS countries are still characterized by a state-owned monopoly. Others are dominated by a state-owned or partly privatized telecoms operator that retains exclusive rights in the profitable long-distance and international market segment while smaller private operators are allowed to operate within regional boundaries. Yet these operators are highly dependent on the long-distance monopolist, since in the case of long-distance (inter-regional or international) phone calls they have to interconnect to the dominant player. As a general rule, interconnection agreements between long-distance monopolists and smaller regional telecoms companies are difficult to reach and when they are reached, interconnection fees paid by the regional operator for using the monopolist's network are high (monopoly prices).

Figure 2

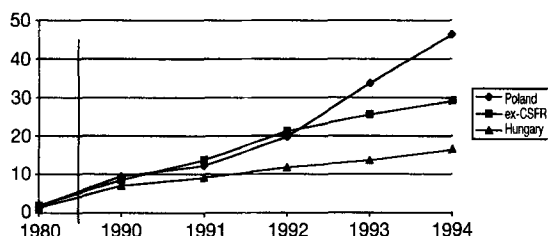
Exports and Outgoing Calls from Germany to Visegrad Countries (1980-1994)

Exports from Germany to Visegrad Countries (1980-1994, in million DM)



Outgoing Calls from Germany to Visegrad Countries

(1980-1994, call minutes in millions)



Sources: Deutsche Telekom; Statistisches Jahrbuch der BRD (various issues).

Significance of Telecommunications

One of the main problems of CEE and CIS countries is that old structures are replaced by new ones, so that in the transitional period the coordination mechanism of neither the old nor the new system really works, leading to uncertainties and higher transaction costs. Uncertainty about future prospects has a negative impact on investment decisions, resulting in fewer investment activities, less job creation and finally in lower tax revenue. In order to reduce coordination deficits and hence uncertainties in systemic transformation, the creation of an efficient telecoms sector that offers reliable services at low prices is vital for Central and Eastern European economies.

Another aspect concerns international relations.

⁵ Cf. C.E. Law: Telecommunications in Eastern Europe and the CIS, Markets and Prospects to 2000, London: Financial Times Management Report, 1995.

⁶ Data as of 31.12.1994.

⁷ Cf. G. Davies, S. Carter, S. Macintosh et al.: Key technologies and policy options for the telecommunications sector in central and eastern Europe and the former Soviet Union, London 1995.

Foreign trade liberalization and incoming foreign direct investments lead to an increase in incoming and outgoing calls. Figure 2 shows the development of exports and outgoing calls from Germany to the Visegrad countries between 1980 and 1994. The figures support the assumption that increasing foreign trade resulting from foreign trade liberalization correlates with an increase in international telephone traffic. Yet, trade in goods is only one variable on the demand side causing growth in international telephone and data traffic; other variables are trade in services such as transport of goods or banking services and higher cross-frontier labour mobility. The integration process between the European Union and Central and Eastern European countries, especially the Visegrad countries, will lead to a future increase in international phone traffic, making a modern, reliable and efficient telecoms network even more important.

Even if growth rates in some Eastern European countries have been considerable in recent years, Table 1 shows that penetration rates in Central and Eastern European countries are still low. High growth rates hold especially for Poland and Hungary, two countries with different development strategies. While the Polish TPSA is a fully state-owned telecoms operator, the Hungarian MATAV was partly privatized through its sale to an international consortium. Both operators have been granted exclusive rights in the long-distance and international telecoms markets, while private operators are allowed to operate within regional boundaries.

However, network expansion is only one measure for evaluating the national telecoms sector; network quality and reliability as well as service provision are

other main indicators for its efficiency. Assuming that Eastern European network operators mainly concentrate on their home markets and that their key objective is to foster network expansion and modernization in order to support the transformation process through increased information distribution, what are the best strategies to develop an efficient telecoms sector and what are the negative or positive side effects resulting from each option? Resorting to the strategies pursued by Western European telecoms operators, four options are available (cf. Figure 3).

Option I

Option I proposes a national state-owned monopoly. This option offers the opportunity of fast network expansion and modernization financed by monopoly profits. As a means of raising foreign currency earnings, which is a prerequisite for network modernization and expansion, the international call charges for outgoing calls could be set much higher than those set by foreign network operators for outgoing calls to the respective country. According to international agreements, charges for international calls are divided between both countries involved. If two countries A and B have a totally different regulatory frameworks – the telecoms sector in country A is exposed to competition (A-operators) while in country B a national monopoly dominates – the monopolist (B-operator) can raise additional foreign currency by increasing prices, whereas in a competitive environment the opportunity of price-setting is limited. By increasing prices, the B-operator influences international telephone traffic so that incoming calls exceed outgoing calls, resulting in higher foreign currency revenues. However, this strategy is only feasible if A-operators do not respond

Table 1
Network Developments in Eastern European Countries

Country	Main lines per 100 inhabitants			Growth in %	
	31 Dec. 1991	31 Dec. 1992	31 Dec. 1993	1991-92	1992-93
Hungary	10.71	12.26	14.22	14.4	16.0
Poland	9.29	10.22	11.41	10.5	12.1
Rumania	9.63	9.87	10.90	3.2	11.0
Slovak Republic	14.23	15.43	16.75	8.4	8.8
Czech Republic	16.56	17.61	18.95	6.5	7.8
Estonia	21.15	21.31	22.97	0.8	7.1
Latvia	24.18	25.00	25.81	1.5	6.4
Belarus	16.41	17.10	17.93	4.2	4.0
Lithuania	21.65	22.19	22.59	2.2	3.1
Russia	15.00	15.32	15.76	2.2	3.1
Ukraine	14.12	14.57	14.98	3.2	3.1
Bulgaria	24.98	26.44	27.27	6.1	3.0

Sources: Siemens: International Telecom Statistics, Munich 1995.

to price increases by offering call-back services. Another means of influencing international traffic flows is, of course, to introduce artificial bottlenecks for outgoing calls.

In line with the main objective of network expansion and modernization, option I offers the opportunity of raising needed financial resources. With regard to Western Europe, a national monopoly that concentrates its financial resources on the national market seems to be an adequate option when preparing for the single European telecommunications market. However, this strategy could negatively influence transformation processes since high call charges impair information distribution and worsen a country's international competitiveness by increasing the prices of export goods. Moreover, success in raising additional foreign currency depends on the B-operator's conduct.

Another question concerns the economic efficiency of state-owned monopolies. The efficiency of a monopoly much depends on the regulatory framework, the status of the regulatory body and the information flows between regulator and regulated firm. The latter is characterized by asymmetric information, so that regulation can hardly be a surrogate for competition. Inefficient regulation leads to inefficient use of scarce financial resources, employed according to management or employees' goals. Thus, inefficient regulation hampers economic development. This holds especially for price regulation. While too high prices negatively influence information distribution and economic growth, too low prices reduce investment and hence network expansion.

Option II

The second option consists of a national but privatized monopoly in which one or several foreign network operators have a stake. Here, we must distinguish between portfolio investments (option IIa) and strategic investments (option IIb). Comparing options I, IIa and IIb, the last of these has several advantages. First, foreign currency can be raised by foreign direct investment without distorting call charges. As a result, network expansion and higher dissemination of information can be achieved. This holds for options IIa and IIb. Second, capital inflows by strategic investors are generally associated with inflows of technical and management know-how as well as new incentive systems that decrease marginal costs. This holds especially for intra-industry tradable goods and firm-specific network management. A third

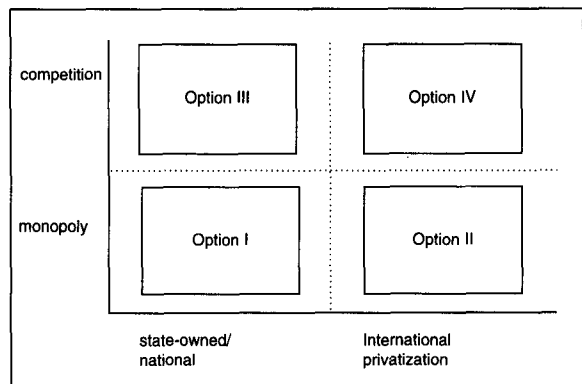
advantage concerns integration into world markets. While options I and IIa require a suitable internationalization strategy, option IIb offers the opportunity of participation in a European-wide or worldwide strategic alliance that will save scarce resources.

Yet option IIb has its disadvantages too. Privatization cum foreign capital inflows does not solve the problem of efficient regulation. Similar to option I, a privatized monopoly pursues strategies partly incompatible with those of the regulator (e.g. profit-maximizing versus universal service obligations). However, in comparison to option I, welfare effects in an unregulated market are expected to be positive under option IIb as a result of technical and managerial spill-overs.

Option III

Option III involves a former state-owned monopoly exposed to competition. The interesting point about network competition in the phase of network expansion is that competition leads to prices being equal to marginal cost or – in the case of a subadditive cost function – to average cost. Resorting to oligopoly theory, let us assume that we have two network providers with identical market shares and identical cost curves. As in the monopoly case, each operator intends to maximize profits given its individual demand curve. An operator can, however, increase profits by reducing its price according to the optimal pricing curve that results from different individual demand curves. If operator A lowers its price, the individual demand curve of operator A shifts rightwards while the demand for the service of operator B declines since overall demand has not

Figure 3
Different Regulatory Options and Development Strategies



changed. The optimal pricing curve now requires that operator B increase its price. By doing so, operator B would price himself out of the market. Therefore, B is forced to decrease its price in order to compensate for market losses. Given the Cournot equilibrium point, an operator can only increase profits by increasing demand, that is by network expansion, or by reducing its individual costs, that is by network modernization.

The "non-cooperative solution" is of course not compelling in an oligopolistic market. Especially in a duopolistic market, a "cooperative solution" is a challenge to both operators. No operator will dare to change its price knowing that the other operator will

react and that in the end both operators are worse off compared to their starting position. However, this solution is the more unlikely the more competitors there are in the market. The German market for mobile telephones provides a good example. The German GSM-market was characterized by two competitors (D1 and D2) offering services at the same prices and under the same conditions. Neither of the two competitors changed its price, knowing what the consequences would be. Then, in 1994, E-Plus, a DCS 1800 network operator, entered the market offering services at lower prices in order to gain customers (network expansion strategy). After a period of network expansion, competitive pressure

Club von Florenz (ed.)

Europa: Der unmögliche Status quo

Vorwort von Jacques Delors

Europe: The Impossible Status Quo

with a preface by Jacques Delors

The Club of Florence – a discussion forum of well known Europeanists headed by Max Kohnstamm – presents its proposals for the further direction of European integration. Central to their thesis is that the EU has to adopt to Europe's transformation without losing its spirit of integration. In a further enlarged Europe efficiency and legitimacy are of crucial importance. And the Club of Florence proposes – just in time for Maastricht II – a number of measures how this could be achieved. One thing, however, remains clear to the authors: the status quo is not an option to achieve these goals. If the EU does not find the courage to carry out the necessary reforms its stability will inevitably suffer.

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from E-Plus grew so that D2 reacted by lowering its prices. One month later, D1 adapted to the new circumstances and changed its price structure to match that of D2. This forced E-Plus to react by lowering its prices and offering special conditions for new customers.

Coming back to option III, what are the advantages and disadvantages of competition if one of the competitors is a state-owned company? A former state-owned monopoly exposed to competition will face strong pressure to adapt to new circumstances. In a market characterized by low penetration rates, the key strategy to becoming competitive is network expansion. The more customers are connected to the network of one of the competitors, the higher the demand and the lower the price for services, due to the subadditive cost function.⁸ The first question concerns the starting position. Does the state-owned incumbent operator or a newcomer have the better starting position? Important incumbent's assets such as existing networks in the local loop and seamless national network services could be offset by the better management and network techniques of newcomers, especially if new network operators are formed by international consortia consisting of foreign network operators. The second question concerns financial resources and foreign currency reserves. In the German case, Deutsche Telekom currently faces difficulties in raising the equity capital necessary for network expansion and modernization in the new Länder. The decreasing equity-to-debt ratio was one of the reasons why the German government approved the second stage of postal reform (Postreform II), including the partial privatization of Telekom in 1996. The third question addresses international relations. While the state-owned incumbent operator is expected to concentrate mainly on the national market, newcomers backed by international consortia can offer national and international services using the existing resources of their main shareholders. It is therefore likely that newcomers attract the most profitable customers: large enterprises requiring international one-stop shopping.

In Western Europe, state-owned monopolies need time to adapt to the new circumstances resulting from the 1998 liberalization program. One could argue that Eastern European countries should pursue the same strategy, which is similar to option I except that the pressure for network expansion and modernization is

stronger due to a given liberalization deadline (e.g. the year 2000). However, the disadvantages listed under option I are still valid. Moreover, due to political pressure coming from national pressure groups, deadlines could be interpreted as flexible from a political point of view.⁹ The same holds for the European Union, although the liberalization pressure coming from industry and potential network operators is much higher than in Eastern European countries.

Option IV

Option IV is a combination of option II and III. The advantages of privatization and competition are therefore combined. With regard to international cooperation and strategic alliances, this strategy is probably best for getting a foothold in international markets without neglecting national goals such as network modernization and network expansion. The position of Eastern European network operators can be strengthened if – instead of portfolio investments – a strategic investor transfers financial resources as well as managerial and technical know-how. Moreover, equity swaps could be negotiated to take place in the future. Equity swaps are a form of cross-capitalization between network operators in Eastern and Western countries. By doing so, Western network operators will not only benefit from developments in the East but vice versa. An option granting a future stake in a foreign network operator would not only avoid an early binding of scarce financial resources but also enable share swaps with state-owned Western European operators which are to be privatized in the future (e.g. Deutsche Telekom and France Télécom).

Evaluation of Options

The advantages and disadvantages of each option are summarized in Figure 4. As concerns network expansion, identified as the key objective in transforming economies, all the options are suitable. However, each strategy has a different impact on the listed side effects. As discussed above, option I has a negative impact on low call charges if the monopolist finances network expansion and network modernization via monopoly profits. The same holds for option IIb, but to a lesser extent since new management techniques and technological know-how lead to lower costs and hence lower prices. Therefore, the effect on prices is not fully predictable, but prices will certainly be higher than under

⁸ Cf. P. J. J. Welfens: Telecommunications and Transition in Central and Eastern Europe, in: Telecommunications Policy, Vol.19, No. 7, pp. 561-577.

⁹ Cf. P. J. J. Welfens and C. Graack: Telekommunikationswirtschaft: Deregulierung, Privatisierung und Internationalisierung, Heidelberg 1996.

Figure 4

Evaluation of Options

Option	network expansion	low call charges	mobilization of foreign currency	international cooperation	political independence	interest of incumbent operator
state-owned monopoly	+	-	?	-	-	+
privatized monopoly	+	?	+	+	?	?
state-owned/private operators	+	+	-/+	-/+	-/+	-
private operators	+	+	+	+	+	?

A "+" means that the respective option has a positive impact on the objective in question, a "-" that it has a negative impact and a "?" that the impact cannot be predicted without additional assumptions. The two signs "-/+" in line 4 are attached to the two different types of operators: the first sign is assigned to the state-owned, the second to private operators.

competition. For a state-owned operator, the opportunity to mobilize foreign currency – necessary for network expansion and modernization – is limited. One strategy under option I is to raise foreign currency via high international call charges. However, the success of this strategy depends on the reactions of foreign operators (e.g. by offering call back services). Under option III, this strategy is impossible.

Mobilizing foreign currency via privatization seems to be an easy option. Moreover, an alliance with strategic investors could facilitate access to international capital markets. The same holds for international cooperation and international alliances. State-owned operators must launch their own internationalization strategy (which depends on financial resources and management experience) or enter into a strategic alliance with foreign operators (which depends on the strategic value of the national operator in question), while private operators are integrated into existing international alliances via foreign strategic partners.

As seen in Belgium, government officials and trade unions have different objectives than the management of a network operator. While the management is likely to pursue a long-term strategy in order to increase the operator's competitiveness (e.g. raising productivity, modernizing networks, undertaking international investments, entering into international network alliances, rebalancing prices according to costs), government and trade unions often have short-term objectives, such as short-term profit maximization, socially determined distorted prices and a high number of employees. Therefore the political independence of both the regulatory body and the telecoms operator is a prerequisite for an efficient, market-oriented telecoms sector. However, the strategies pursued by network operators do not necessarily lead to an efficient telecoms market. Efficient competition is a mechanism that constantly forces market participants to increase productivity,

improve performance and introduce new technologies and services. Therefore, each participant has an interest in reducing competitive pressure through state-imposed regulation, as shown by Stigler,¹⁰ or via cooperation between operators – as shown in the theoretical analysis of oligopolistic markets – in order to increase prices without improving services. This holds especially for a market characterized by evenly matched participants without dominant or very innovative operators. An incumbent monopolist, of course, is interested in preserving its monopolistic position. Therefore an incumbent operator would be expected to prefer option I or – with regard to international alliances – option II. Option III, however, seems to be less favourable since state-owned enterprises – which have a reputation for over-staffing and inflexibility compared to privately run enterprises – have to compete against newcomers backed by foreign strategic investors. As displayed in Figure 4, option IV obviously ranks on top, followed by option II. This holds especially for the attraction of foreign currency and agreements on international cooperation.

Strategies, Liberalization Traps and the Sequencing Problem

If several competing private operators appear to be the best combination for an efficient telecommunications sector, the question of how to reach the final stage poses itself. Figure 5 shows different liberalization paths integrating options II-IV.

Liberalization path A starts with option III, that is, a state-owned telecoms operator is exposed to competition. This situation is likely to become reality in France after EU liberalization in 1998 or earlier, since efforts to incorporate and privatize France Télécom have been postponed. After liberalization,

¹⁰ See G. J. Stigler: *The Citizen and the State: Essays on Regulation*, Chicago: Chicago University Press 1975.

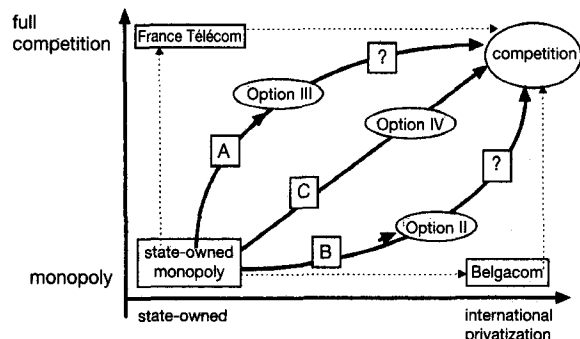
the French operator will have to prove that a state-owned company is flexible enough to survive in a competitive environment, or else market share losses, a reduction in the workforce or even public subsidies seem to be inevitable. The French case shows the trap associated with path A. While privatization seems to be an adequate strategy in order to prepare for upcoming competition, internal and external pressure groups – namely trade unions – may successfully obstruct the privatization process. The greater the political influence of these groups, the less likely are efforts to privatize the incumbent operator and the more likely are political measures (public subsidies, market entry barriers) to back the state-owned operator, leading back to the starting position. Yet, this only holds for liberalization plans initiated at the national level; national regulatory measures protecting national markets are impossible in a liberalized EU market. Therefore, national liberalization strategies backed by international agreements and developments are the most likely to succeed. However, an operator's strategic value for an international alliance much depends on its performance. In 1995, France Télécom was the fourth biggest telecoms operator in the world, making it an attractive partner for a global alliance. Yet, things might change in a liberalized market if state-owned France Télécom does not prove to be flexible enough to react to new circumstances – with a negative impact on its strategic value.

A second strategy suggests a partial or full privatization of the state-owned operator before liberalizing the national telecoms market. This strategy – described by path B – has been adopted in Belgium as well as in Hungary and the Czech Republic. What are the advantages and disadvantages of path B? Liberalization via path B is suitable for attracting strategic investors, since the value of a company depends – among other things –

on the market share and potential profits, both of which are high in a monopolistic market structure. This sequencing strategy – privatization first, then liberalization – seems best for fulfilling government goals (that is, maximizing privatization revenues) as well as the objectives of the operator (that is, integration into a global alliance). Conflicts may arise if the most suitable strategic investor bids less than the others. Then, short-term profits and long-term profits have to be taken into consideration. Yet, the danger of path B is that the liberalization process will be postponed as a result of capture activities. Foreign investors as well as the incumbent operator have a stake in maintaining the monopolistic market structure in order to maximize profits. Again, this holds only for a liberalization process initiated at the national level and, especially, if the liberalization plans and dates have not been fixed and the political power of the government is weak. Lobby activities in one direction are less likely at the European level since pressure groups pursue different objectives.

On both paths, A and B, liberalization traps could occur, hampering the development of competition in national telecoms markets. Instead of achieving the final stage (competition), both paths hide the danger of capture activities by pressure groups (incumbent operator, foreign strategic investors, trade unions) which could lead back to a protected national telecoms market. Path C describes a third alternative by combining paths A and B. In contrast to paths A and B, lobby activities are less dangerous since pressure groups (newcomers versus incumbent operator plus strategic investor) have opposing objectives. Allowing competition leads to rivalries at the economic as well as at the political level. Therefore, liberalization and privatization should be undertaken at the same time, so that newcomers can enter the market while the incumbent operator is occupied with internal restructuring. By doing so, the starting positions of newcomers and the incumbent operator are adjusted – a good basis not only for efficient competition at the national level but also for international alliances. An alternative strategy is to set a fixed liberalization date and to privatize the incumbent operator before liberalization. In this case, newcomers should be allowed to build up their own networks right from the beginning in order to offer services shortly after the date of liberalization. However, uncertainties about future regulatory developments could hamper the creation of alternative networks and hence make this option less favourable.

Figure 5
Liberalization Paths and Liberalization Traps



Conclusions

Existing and potential telecoms operators in Europe have to anticipate future liberalization developments and must seize initiatives now in order to adapt to the changes taking place. Depending on the operator's key objectives, the possible strategies are as follows:

choose between specializing or branching out into new types of activities:

- specializing in niche services;
- offering new services based on new technologies;

find a suitable balance between serving the domestic market while exploring international markets:

- penetrating into foreign markets as a newcomer;
- exploring new markets as a member of a strategic alliance;
- finding strategic foreign investors which are members of strategic alliances.

The last mentioned – which is option IIb – is probably the most suitable strategy for Central and Eastern European telecoms operators since it involves “killing two birds with one stone”: network modernization cum network expansion at the national level combined with integration into world markets via international strategic alliances. This strategy was pursued by the Estonian Telephone Company (ETC), the Hungarian MATAV and more recently by the Czech SPT Telecom.

The Estonian Telephone Company (ETC) was founded at the end of 1992 by State Enterprise Estonian Telecom (51%) and Baltic Tele AB (49%). It currently keeps a monopoly on telephone and telex services. Shareholders of Baltic Tele AB are Swedish Telia (50%) and Telecom Finland (50%). Necessary investments have been jointly financed by Telia and Telecom Finland, which have invested approximately \$ 43 million in infrastructure expansion and modernization. In 1993 the privatization of a 30% share of MATAV raised \$ 875 million. The bidding consortia were MagyarCom (Deutsche Telekom-Ameritech,

\$ 875 million bid), Euro Telecom Hungary (STET-Bell Atlantic, \$ 910 million bid) and Duna Telecom (France Télécom-US West, \$ 830 million bid). The MagyarCom consortium was successful against the two others.¹¹ At the beginning of 1996, MagyarCom paid \$ 850 million for an additional 37% stake in MATAV. This deal was accelerated because of pressure from MagyarCom, which wanted to increase its stake to consolidate control and postpone an initial public offering the government was pushing for. The estimated bids for a 27% stake in the Czech SPT Telecom were even higher. Five international consortia and foreign network operators participated in the privatization process: Cetel (Deutsche Telekom-Ameritech, \$ 1.2 billion), Telfar (France Télécom-Bell Atlantic, over \$ 1.3 billion), TelSource (Dutch PTT Telecom BV-Swiss Telecom, \$ 1.4 billion), STET (\$ 1.5 billion) and TeleDanmark (\$ 1.2 billion). However, Czech representatives stressed that the total bidding amount was only one criterion taken into consideration. Other criteria were investment schedules, technical and managerial support as well as access to international markets. In July 1995, TelSource won the contract paying the sum of \$ 1.32 billion. Privatization revenues are to be used for the modernization of the partly outdated telecoms network.¹²

However, as discussed above, option IIb has its disadvantages too, namely the problem of inefficient regulation. Therefore, further steps towards a liberalized telecommunications sector should be undertaken in order to develop national markets swiftly as well as to create a market-oriented system of checks and balances. Czech representatives have already announced that – in connection with EU membership – telecommunications markets will be liberalized by the year 2000.¹³ In Hungary, as a result of a tender procedure, several regions are now served by other network operators than MATAV. Nevertheless, the dominant role of MATAV, especially in the international market segment, hinders effective competition between national operators and leads to the problematic case of interconnection charges. The same holds for Poland where the interconnection problem is seen as one of the main obstacles to the development of rural areas since several, relatively weak, regional or local operators have to negotiate with a dominant national player.¹⁴ Whether the Hungarian, Polish or Czech liberalization model will become a success story remains to be seen. However, theoretical arguments do not favour the chosen liberalization paths.

¹¹ ITU and OECD: *Telecommunications Indicators for Economies in Transition*, Geneva/Paris 1994.

¹² Cf. *Handelsblatt: Zuschlag für PTT und Swiss Telecom*, 29. 06. 1995, p.1.

¹³ Bundesministerium für Post und Telekommunikation (BMPT): *Großes Interesse an deutscher Telekommunikations- und Postpolitik*, in: *Post Politische Information*, May 1995, Bonn, p. 5.

¹⁴ Cf. J. Kubasik: *Developments of Telecommunications Markets and Regulation in the Central and Eastern European Countries*, Country Study – Poland, draft version, November 1994.