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# The Expected Effects of the EU Accession on the Telecommunication Sector in Poland

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## **1. General effects of accession on the sector**

Comparing Poland's accession to the European Union with Poland remaining outside of European structures we can see that accession will have a more positive impact on Polish telecommunications sector. This is true even if this sector (which is considered to have lost a decade) faces competition from foreign operators that are better prepared and have higher financial resources. This is because the main objective of market liberalization is to gain consumers for whom it is indifferent if the cheap and technologically advanced services are offered to them by a national or a foreign operator. It has to be remembered that telecommunications services are, for other branches of the economy, not only the main costs of the operations, but also the foundation for the development of innovation and the Knowledge Based Economy. In turn for the consumers they guarantee the access to the Information Society services. Thus, the lack of competition in this sector slows down both individual and socio-economic development.

Therefore, the further liberalization of the sector is a fundamental result of accession and should result in the development of competition and a decrease in the price of services, more diversity in the range of services on offer and an increase in teledensity.

The telecommunications market is very dynamic. This, at the same time, forces elasticity of the companies that operate in this market and elasticity and higher activity of the regulator. This dynamic results in the telecommunications market being susceptible to innovation. As said before, the telecommunications market is the main one that affects the Information Society and the Knowledge Based Economy. Therefore, this sector is hugely important for the whole economy. This awareness should impact on the political readiness of Poland to adjust, where necessary, to the European Union before accession, so that the potential shock, that accession could have on the telecommunications market, would not transfer itself to other sectors of the economy and to the non-commercial fields such as education, science and R&D. Such a scenario would preserve our distance from the European Union.

The telecommunications issue is an integral part of so called Lisbon Strategy. The strategy aims to improve the global competitiveness of the European Union economy, through, among others, the Information Society and the Knowledge Based Economy. Part of the Lisbon strategy is created by, so called telecommunications regulatory package that is composed of 5 directives that pertain to make up the integrated sector of electronic communications. These Directives will be binding in the European Union from the middle of the year 2003.

Conforming the regulation of the Polish telecommunications sector to the European Law requires first of all completion of the compliance of the law with the European Union directives from 1999-2000. This process should end up with the evaluation of the competitiveness of the market and evaluation of the regulation and the regulator. The European Union is finishing now the process of introducing the new regulatory package. There are big changes in the Member States that will lead to the end of the telecommunications market liberalization process and entrance to the stage of the converged market of the electronic communications i.e. telecommunications, IT and media. Therefore, new legal regulations are being implemented in the Member States and the European Commission supplements to the regulatory package with guidelines and other supporting documents.

The new European directives can be implemented in Poland only once the present compliance processes to the legislation of 1990-2000 is finished. This should lead first to full liberalization of the market and introduction of the basic mechanism of the consumer protection through the special regulation imposed on the incumbent operator i.e. having significant market power. The present telecommunications law, that is in force in Poland does not comply with the European Union law in many important aspects of liberalization (the choice of the operator, number portability, leased lines, universal service, markets and obligations that

are connected with them, interconnection, local loop unbundling) including the aspect of granting rights for performing activities (since January 1, 2003 the market has been fully liberalized and rights have been made easy to obtain). Since July 2002 the amending process of the telecommunications law has been carried. It aims to lead to full compliance with the regulations binding in the European Union. The project of the amendment includes most of the most important rules on which the European telecommunications market is based. There were attempts to put the amendment in force on January 1, 2003 and then it was postponed to March 1, 2003. At present, it is difficult to predict when the amendment will be approved by the Parliament. Thus it is difficult to predict now when and with what intensity further effects of the integration and membership will happen.

Therefore, at present the result of the integration in the telecommunications sector is weak. The integration effect might be strong only when amended Polish law, fully compliant with the European, comes into force. If Poland fails to prepare the amendment; the effect will appear together with the accession, that will force the final compliance of the law. Certainly, whatever the reason of the integration effect will be, it will be spread over time as it will be tightly linked to the speed and effectiveness of the implementation of the regulation.

The competition effect is the second sectorial effect that may be distinguished when talking about Polish accession to the European Union. It will be connected with the competitive pressure from the European Union entities. When talking about the telecommunications sector in Poland the impact of such effect is difficult to estimate. This is because some of the European companies are already present as shareholders of Polish companies in Poland. It is possible that the European companies will become more interested in long-term and intensive investments in Poland. It could happen once the Polish law conforms with the European one and when conditions of performing telecommunications activities become analogous to those present in the European Union. Until now, the presence of the foreign companies has been significant only in the mobile telephony market. However in fixed telephony, especially in access infrastructure, their presence is visible and even increasing only in speculative capital market, but important serious investors are withdrawing from the Polish market. However, the presence of foreign capital is visible in the niche ventures such as for example Voice over Internet Protocol. The success of such activities was possible thanks to the gaps in the Telecommunications Law that otherwise limited the freedom of activities especially in international telephony services.

Thus the competition effect connected with the accession of Poland into the European Union, should in the case of the telecommunications market, be rather understood as internal development of competition caused by liberalisation and demonopolisation, rather than an increase caused by the competitive pressure from the EU entities.

The third aspect that can be used for the evaluation of the effects of Poland's accession to the EU is connected with the evaluation of the ability of the sector to adjust to a dynamically changing economic environment. As it was stated above, the sector by its nature is dynamic and very susceptible to innovation. In a relatively short time of the operations of telecommunications companies, their connection with European and world companies, developing competitiveness of the market, restructuring of TP S.A., technological enhancement and natural openness and interoperability of telecommunications networks are favourable for the development of new technological and service solutions.

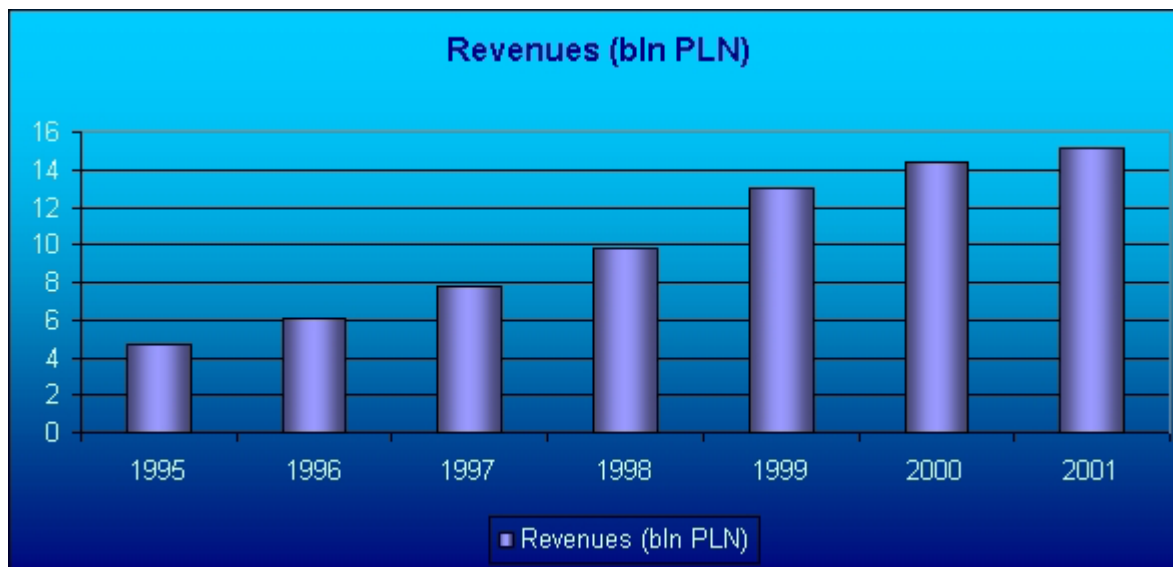
The detailed analysis of the impact of the accession on the telecommunications market is described in the chapter no 3.

## 2. Characteristics of the telecommunications sector

Over last years the telecommunications sector has developed in Poland. In 1996 its share in GDP was at the level of 2.5% and in 2000 it reached 4.4% of the GDP.

The revenue from the sales of the telecommunications services in 1995-2001 (current prices in billion? PLN) are as follows:

**Chart 1. Revenues for sales of telecommunications services 1995-2001**



Source: Central Statistical Office (GUS) – „Communications – outcomes of the activities in 1996-2001” („Łączność – wyniki działalności w latach 1996 – 2001”)

### 2 1. Fixed telephony market

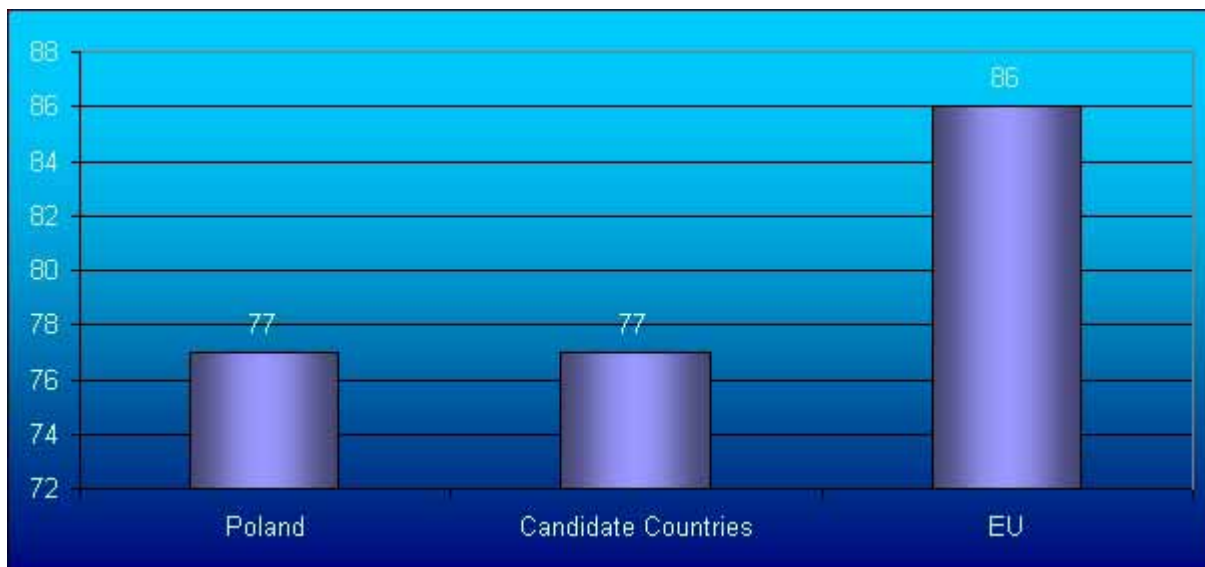
Since January 1, 2002 the local and national telephony markets have been fully liberalized. Except of Telekomunikacja Polska S.A. (incumbent operator, abbreviated: TP S.A.) there were 63 independent operators granted a license by the Minister of Communications. Over 2002 the President of the Office of Telecommunications and Post Regulation (regulatory body, abbreviated: URTiP) issued another 41 authorizations. At the end of 2002 the alternative operators were serving around 1 million subscribers reaching about 9% market share. At the same time TP S.A. had 10.6 million clients. Its biggest competitors were offering services to the following number of customers: Dialog 350 thousand subscribers, Netia 340 thousand, the companies of the Telenet Polska group almost 100 thousand, ElNet 65 thousand, NOM 55 thousand.

At present, 40 operators are entitled to offer national services. However, as the regulation is not effective, only 4 operators have signed the interconnection agreements with TP S.A. and other agreements are being negotiated. The President of the URTiP issued few interconnection decisions in favor of alternative operators. It is estimated that in the URTiP over 30 applications have been waiting to be considered.

Since January 1, 2003, international telephony services have been liberalized. The 3 operators that since 2000 have been involved in the national market have signed agreements with TP S.A. They offer much cheaper prices than TP S.A. does. For example at Netia 1 in fixed line services a subscriber pays 12.5% less for calls to Western European countries than TP S.A.'s subscriber and 15.5% less for calls to North America (USA and

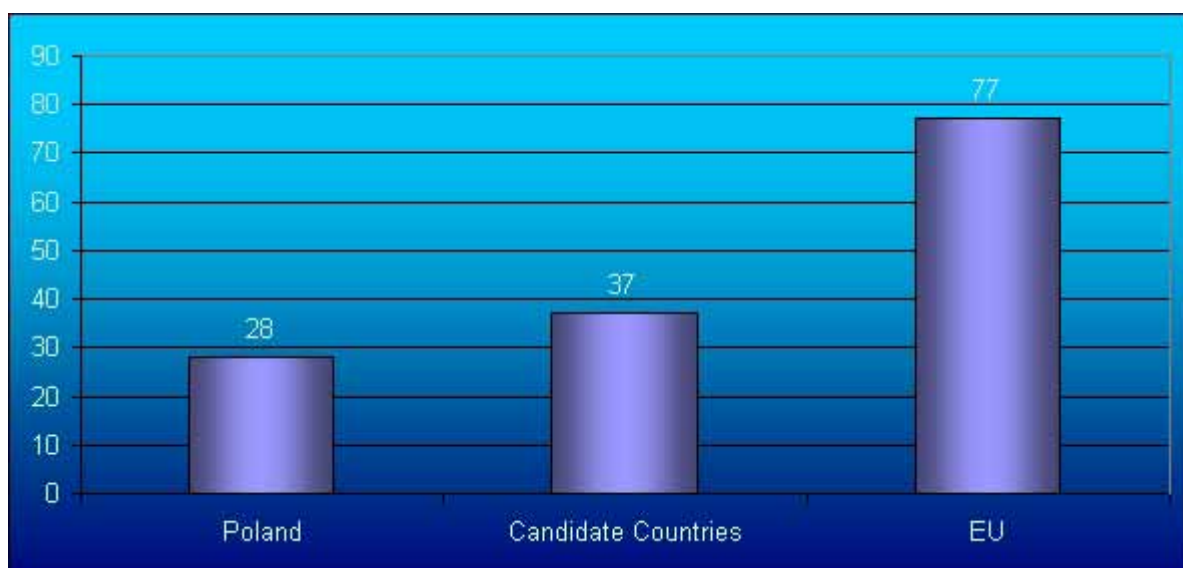
Canada). At present, when calling such distant countries as China, Taiwan or Japan the customers may pay up to 73% less. When using Energis Polska services subscribers pay 30% less for calls to Germany and even 40.5% less when calling the USA. At Niezależny Operator Międzystrefowy one minute of a dial-up international call to mobile networks in main Western European countries (connection charge per every 30 sec) costs 1.07 PLN and to such countries as the USA, Australia, China or Israel – 1.44 PLN. Only one third of TP S.A. clients may take advantage of alternative offers. TP S.A. declares that before the end of this year 90% of its switches will be able to offer services through alternative operators. The consultants estimate that in 2003 TP S.A. may loose even 40% of its international calls market. It will be possible only if the regulator becomes more active especially when enforcing obligations of operators with significant market power. The state of the Polish telecommunications market can be best described when compared with telecommunications markets in candidate countries and EU member states. The comparative figures are as follows:

**Chart 2. Percentage of households that has access to fixed line telephony in 2001**



Source: URTiP, Progress Report, Eurobarometr 2001 cited after ePolska 2006.

**Chart 3. Number of fixed telephone lines per 100 inhabitants at the end of 2001**



Sources: URTiP, Progress Report, Eurobarometr 2001, cited after ePolska 2006.

The available sources are not precise and not consistent in its calculations. However we use them not to show the exact numbers, but to demonstration some trends. The gap in telecommunications development between Poland and other European countries (even those less developed) is presented in the table below:

**Table 1. Number of telecommunications main lines per 1000 inhabitants in chosen countries (January 2001)**

| <b>Country</b> | <b>Number of lines</b> |
|----------------|------------------------|
| Switzerland    | 726                    |
| Sweden         | 707                    |
| UK             | 584                    |
| Greece         | 536                    |
| Spain          | 472                    |
| Hungary        | 377                    |
| Czech Republic | 376                    |
| Poland         | 296                    |
| Albania        | 49                     |

*Source: Central Statistical Office*

Although the investments in telecommunications infrastructure have been high, still the infrastructure is poorly developed. There is a high need for investment especially in rural areas and in small towns. None of the operators is able to incur such costs. The only chance for success lies in active participation of the state in the risk connected with such investments. Such actions will be stimulated through financial help from the European Union and involvement of private financial resources in realization of undertakings (last year the government made a step towards a similar undertaking through clearing fixed line operators of debts for licence fees; this will be done in exchange for telecommunications investments especially in rural areas, in small towns and through connecting schools).

Generally the year 2002, as with 2001, has been worse for the telecommunications sector than the nineties. The pace of the development of fixed line telephony can be described as stagnant. The segments of the market that were developing quickly encompass data transmission, especially Internet access and mobile telephony. The latter has been developing dynamically thanks to consistent policy supporting mobile operators that has been carried since 1997. It has been reached through preferential resolution of disputes with the incumbent operator and through lack of the intervention of the regulator on the retail and wholesale prices of mobile operators.

## **2. 2. Mobile telephony**

The estimates show that around 36% of Poles use mobile telephony. It is estimated that at the end of 2002 the number of fixed telephony lines increased to 11 million 968 thousand while the number of mobile telephony subscribers reached 13 million 980 thousand. This means that the number of fixed telephony lines has increased by 4.7% while the number of mobile services users has increased by 44.6% according to the URTiP data and by 38.8% according to the operators data. It can be estimated that in 2003 the mobile telephony penetration may rise to 43-45% and fixed telephony to 32.4-32.6%. In the Czech Republic, for example, this data was close to 80%. In Poland the operator: Polska Telefonia Cyfrowa has been the leader in mobile telephony and had around 4.91 million subscribers. The second operator: Polkomtel had at the end of 2002 4.5 million subscribers and the third one: Centertel 4.48 million.

According to the estimates of analysts, the total saturation of the mobile market will be reached at the level of 700 subscribers per 1000 inhabitants (this will be at the level of 28 million subscribers). The total saturation will be reached soon – most forecasts estimate 500 subscribers at the end of 2005. Thus the total 70% saturation might happen in the years 2007-2008.

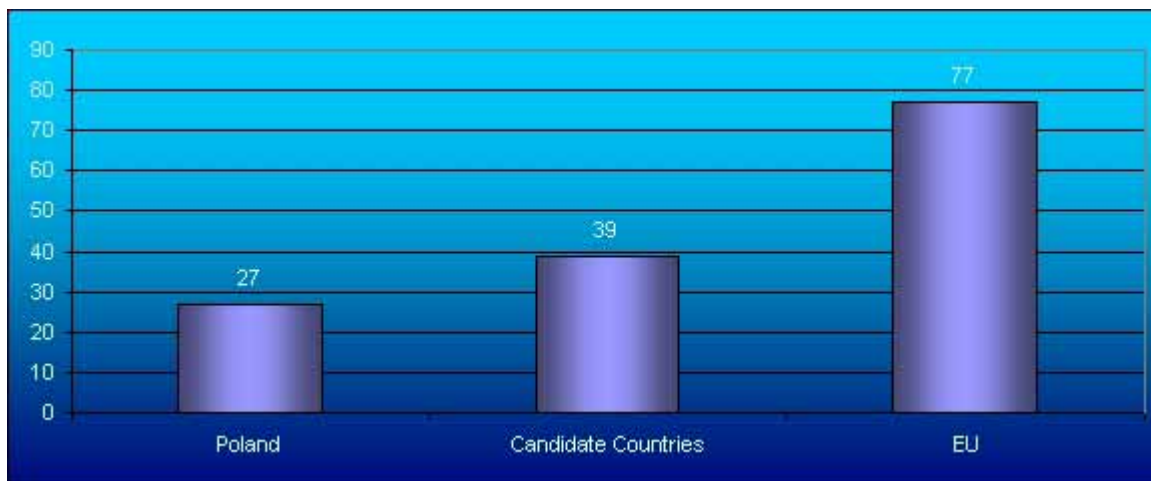
**Table 2. Number of subscribers of mobile telephony per 1000 inhabitants in chosen countries (January 2001)**

| Country        | Number of lines |
|----------------|-----------------|
| Sweden         | 730             |
| Netherlands    | 674             |
| UK             | 673             |
| Portugal       | 654             |
| Spain          | 618             |
| Germany        | 585             |
| France         | 502             |
| Czech Republic | 422             |
| Hungary        | 308             |
| Poland         | 249             |

*Source: Central Statistical Office*

Around 25% of mobile telephony users use pre-paid cards. Three operators offer services in GSM and DCS systems. All of them have as well licenses for UMTS services that will be offered from the beginning of 2005.

**Chart 4. Number of mobile subscribers per 100 inhabitants at the end of 2001**



*Sources: URTiP, Progress Report, Eurobarometr 2001, cited after ePolska 2006.*

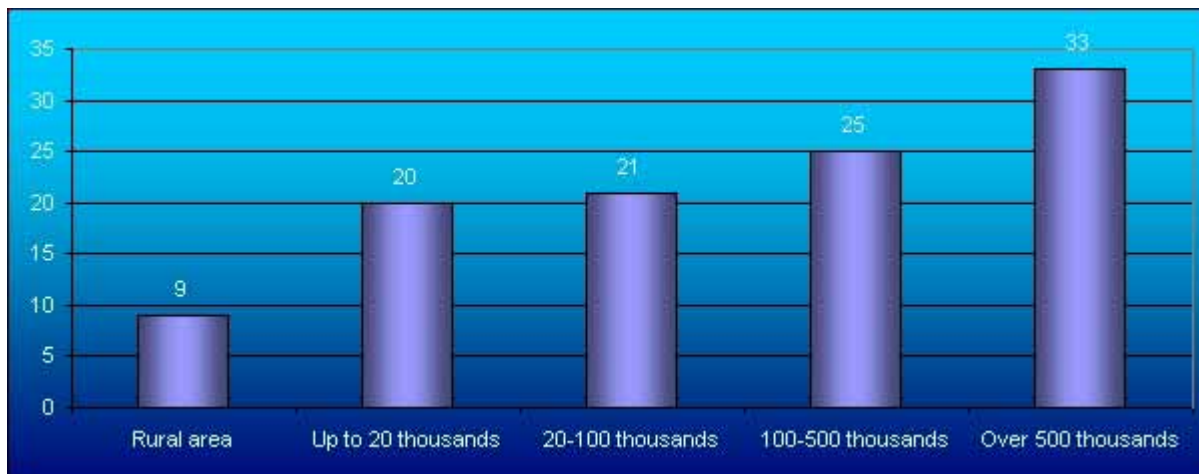


### 2.3. Internet Access

The Internet access market is developing quite dynamically as well. The number of Internet users, according to the SM/KRC data compared with the year 2001 increased in 2002 by 44.4% that is from 3.6 million to 5.2 million. The number of people using the Internet at home has increased as well (to 45.4%), but Internet use at work has decreased (to 24.78%) and – more worrying - at schools (to 29.58%). The governmental document ePolska shows other data. According to it there are 7.6 mln Internet users in Poland.

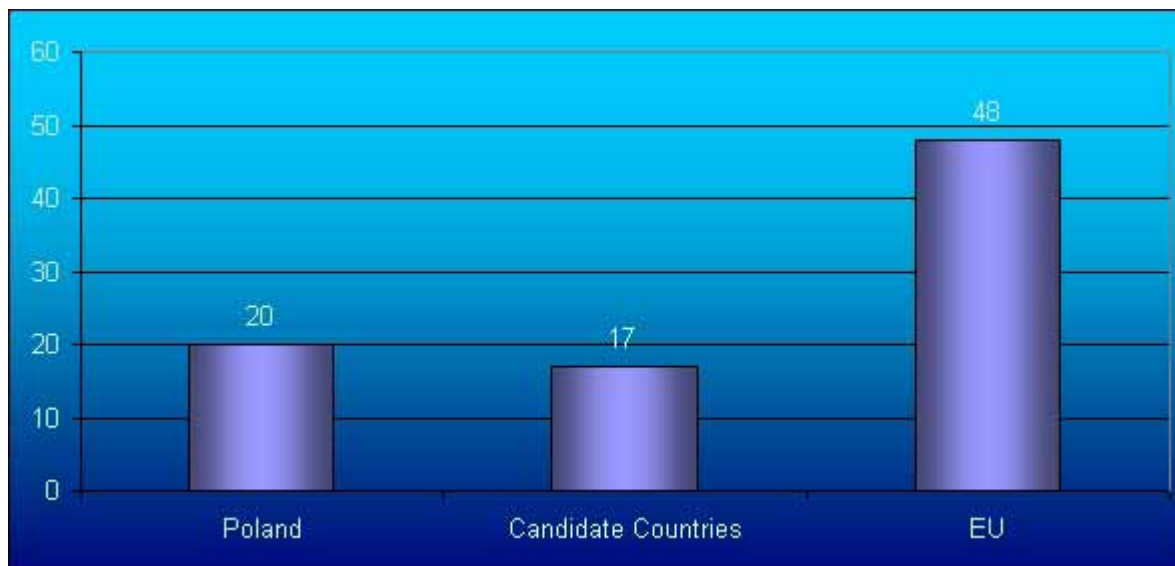
The development of Internet market in Poland compared with other candidate countries and EU Member States is presented in the graphs below:

**Chart 5. Access to internet depending on the place of residence of subscribers (2000)**



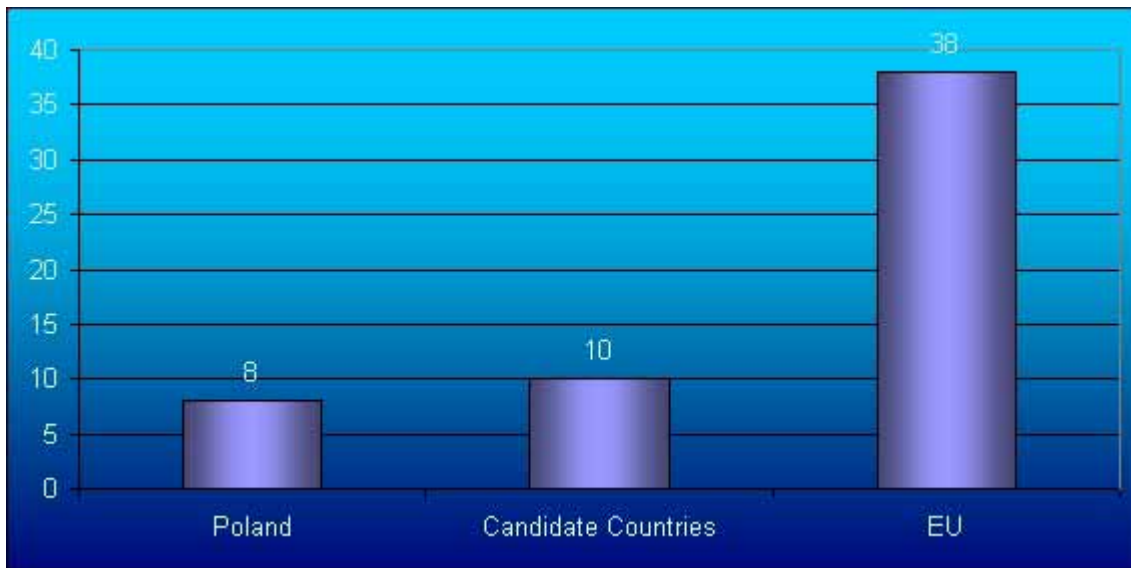
Sources: Progress Report, Eurobarometr 2001, cited after ePolska

**Chart 6. Percentage of people that use internet regularly (over 15 years old, at least once a year)**



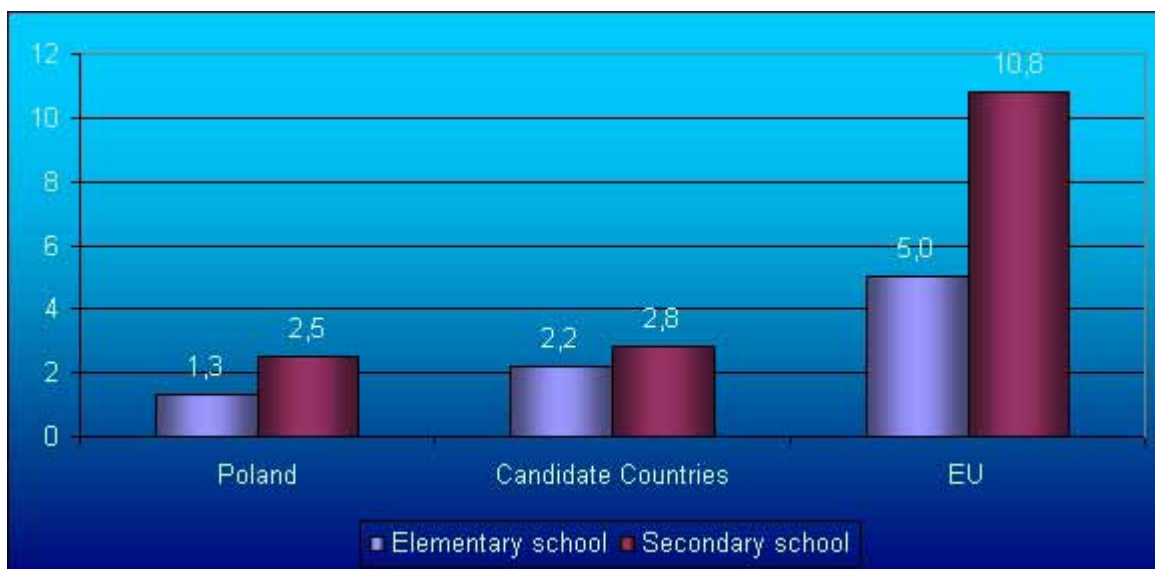
Sources: Progress Report, Eurobarometr 2001, cited after ePolska

**Chart 7. Percentage of households that had access to internet (2001)**



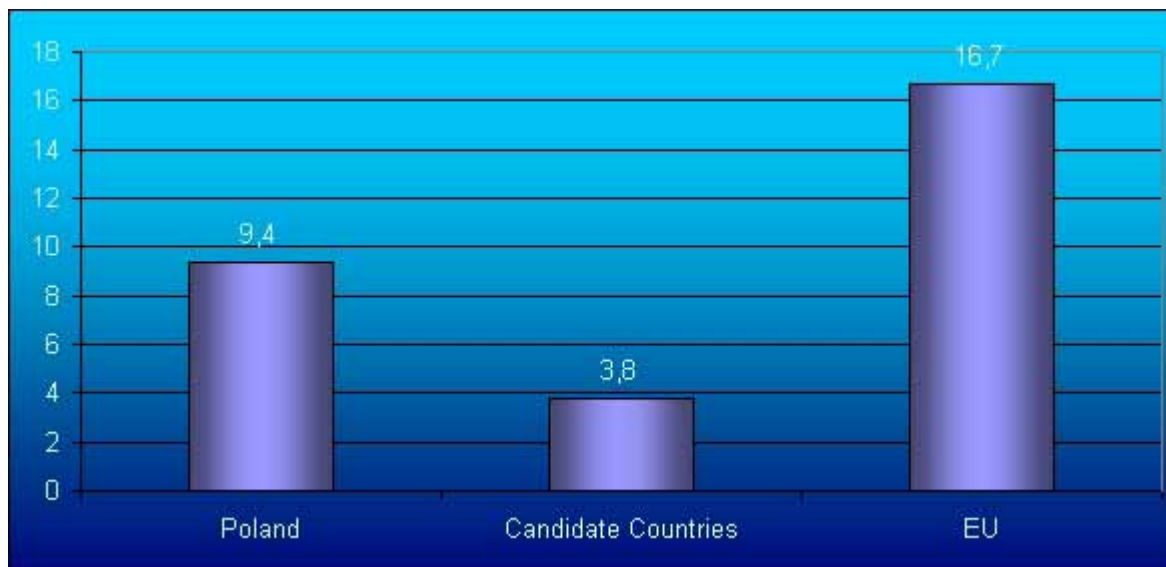
Sources: Progress Report, Eurobarometr 2001, cited after ePolska

**Chart 8. Number of computers with internet access per 100 pupils in schools (2001)**



Sources: Progress Report, Eurobarometr 2001, cited after ePolska

**Chart 9. Number of computers with internet access per 100 students at universities (2001)**

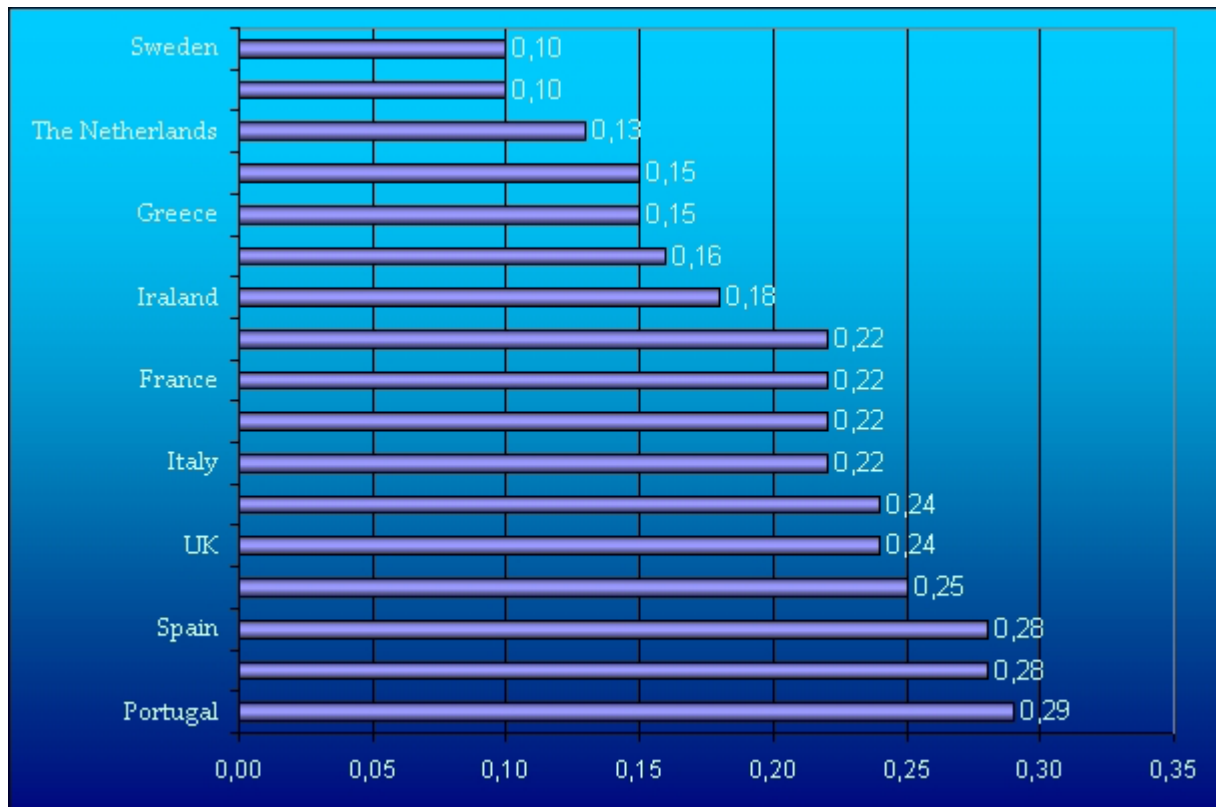


*Sources: Progress Report, Eurobarometr 2001, cited after ePolska*

## **2. 4. Prices of basic telecommunications services in Poland and in some European countries**

According to basket analysis of cost Poland is in 4<sup>th</sup> place counted from the most expensive ones among analyzed countries. The level of costs is similar here to for example Finland or France. Undoubtedly, if we analyze average incomes of the citizens of these countries, the relative price for Polish subscribers of telephone calls has not been cheap. The situation becomes even worse if we take into account the fact that in Poland, according to the OECD data; the level of prices of consumer goods is around twice as expensive in the above named countries. This shows that, really the basket cost is relatively more expensive than it stems just from a simple exchange rate of currencies.

**Chart 10: Cost of 2-minute national call (EURO)**



Source: Jan Hagemeyer based on: Universal Service Atlas, OECD, Matav, Cesky Telekom, TP S.A. data for the end of 2002.

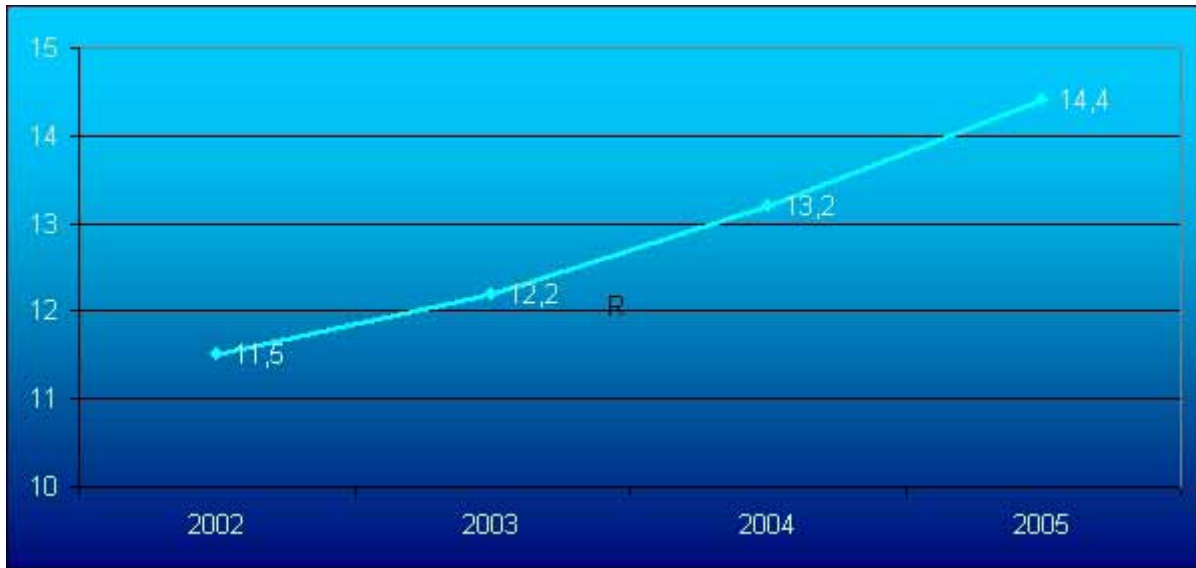
## **2. 5. Forecast**

Assuming that the liberalization of the sector (compliance with the directives of 1990-2000 and law execution made by the regulator) would come true before accession, the fixed telephony market may accelerate. The positive factors that contribute to the increase of users are mainly as follows:

- Improvement of Telekomunikacja Polska offer that would attract new subscribers,
- Liberalization of the market that would increase the dynamics and increase the number of subscribers that use services offered by alternative operators,
- Increase of telecommunications access in rural areas and in weakly developed areas from public and EU assistance funds.

Yet another important element for the evaluation of the development of the market is the ARPU i.e. average revenue per user. This revenue depends on the price level, wealth of the society, bigger activity of the operators in creating service packages and offers.

**Chart 11 : Forecast: Number of fixed lines subscribers in the years 2002-2005 (in million)**



Source: GIME

The number of mobile subscribers in Poland until the year 2005 will be increasing quicker than the number of fixed line subscribers. According to the Institute of Research on Market Economy, it is possible that in the years 2003-2004 the high speed of the rise of the subscriber number, that at present is at the level of 3 million a year, will be maintained.

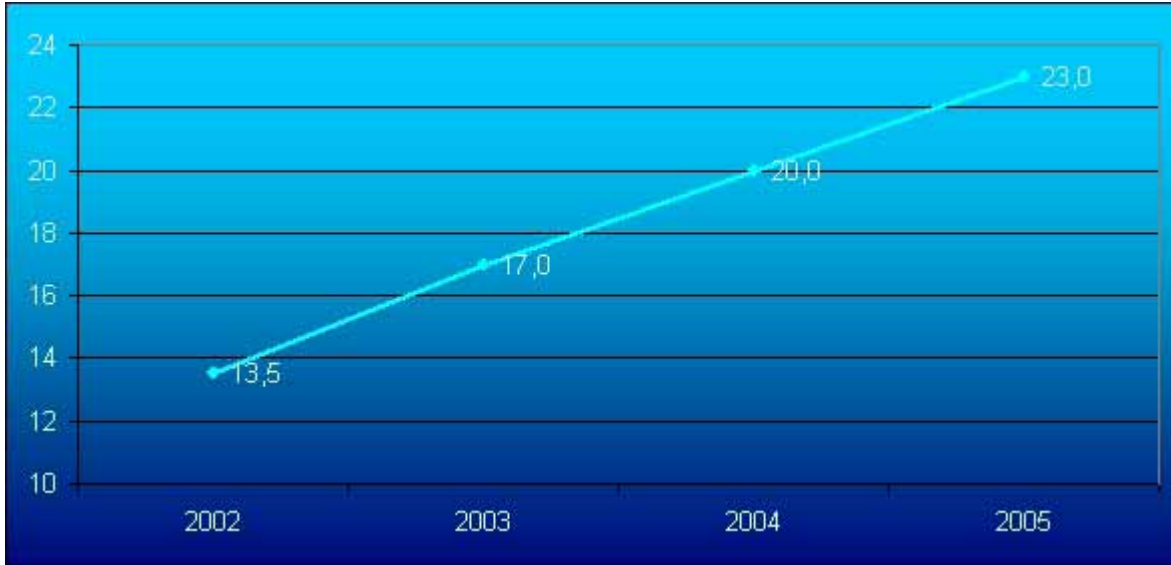
Aspects that have been taken into account in this forecast include:

- Continuation of the increase of the competition level at the market and connected with it improvement of operators' offers,
- Decrease of a price that allows operators to attract new clients from lower income levels.

The elements that are uncertain when making forecasts of the mobile telephony development encompass:

- Development of the third generation telephony (UMTS). According to the present schedule the first subscribers that will use this new technology will appear in 2004, but both the operators and the regulator agree on the need for further delay. In this analysis it has been assumed that until 2005 the UMTS subscribers will be very small and their number will not impact on the total number of subscribers,
- The state of the regulation of mobile telephony operators, especially regarding detail and wholesale prices, first of all in relation to the determination of significant market power and the consequences connected with it.

**Chart 12: Forecast: Number of mobile subscribers in the years 2002-2005 (in million)**



*Source: GIME*

Internet access, especially broadband is another market whose development depends on the regulatory state. Here, the crucial elements are interconnection charges, especially those promoting so called unmetered access and thus development of lump sums and aspects connected with local loop unbundling, especially in the context of broadband services.

### **3. Telecommunications in the European Union the Poland's stance**

In 1987, the Commission published a Green Paper in which it proposed introduction of better competition in the telecommunications market, together with the higher level of standardization of national markets aimed at maximization of opportunities offered by common EU market, for the example as the result of the economics of scale.

This was the first step in the 10-year process that culminated on January 1, 1998 with the liberalization of all telecommunications services and networks. There are four main trends, through which European Commission was trying to liberalize and regulate the telecommunications sector. These trends are still present and are remain as guidelines for Polish regulatory activities:

#### *1. Gradual liberalization of the sector that has been until now monopolistic*

Commission, heading towards full liberalization, adopted a number of directives based on the Article 86 of the Treaty. The Article 86 of the Treaty authorized the Commission to require abolition of special or exclusive rights that Member States gave to companies, in case in which other regulations of the Treaty have been broken such as regulations on protection of competition. The Commission recognized that in the telecommunications sector granting some public companies with special or exclusive rights for production of telecommunications equipment, provision of telecommunications services or servicing networks, violates the regulations of the Treaty that apply to competition and internal market. A number of directives has been adopted: the first of 1988 regards abolition of special and exclusive rights for import, marketing, connection, utilization and maintenance of terminating equipment, that existed at that time in Member States; the second directive, of 1990, regards telecommunications services. Initially services other then the voice telephony (mainly data transmission) had been liberalized, but its range was gradually extended until 1996 when voice telephony and networks were total liberalized by "Directive on Full Competition".

Main rules introduced by the Directives based on Article 86 are as follows:

- Abolition of special and exclusive rights,
- Separation of the regulator from the operator,
- Objective, no discriminatory and transparent conditions of activities.

#### *2. Means aimed at market*

Except of the Directives based on the Article 86, a number of directives of the Council and the European Parliament have been adopted based on the Articles: 95 (internal market), 47 and 55 (liberty of service provision).

The main principles of these directives have been as follows:

- Open Network Provision – ONP. This idea has been trying to promote uniform telecommunications through standardization of conditions of the access, public use of accessible networks and services. The ONP rules aim at provision of minimal set of services, guarantee of access and interconnection, standardization of technical standards and interfaces and universal service provision. These conditions have to be transparent, objective, proportional and can not be discriminatory.
- Significant Market Power – SMP. As the telecommunications market has been generally (and in great extent still remains) dominated by one operator in every Member Country, ONP network introduced an SMP (Significant Market Power) idea. The SMP operators due to their market power are subject to more strict regulation than other operators.
- Differentiation between fixed and mobile services. There has been a difference as well between regulation used for fixed and mobile sectors (regarding obligations imposed on SMP operators in these sectors). The reason for this was mainly historic; mobile sector, as new technology, introduced in the middle of 1990s, from the beginning was competitive, limited only by spectrum accessibility. Huge investments were the reason for regulations made especially for this sector and some protection in Member States. Therefore, as mobile operators had already faced competition, the ONP obligations were less burdensome for them.

### *3. Implementation of competition rules*

Except for the specific telecommunications legislation, the telecommunications sector has been, as any other sector, subject to national and EU competition law. Still, before the full liberalization the Commission had published “Guidelines for competition rules in telecommunications sector in the EU”. These guidelines have been explaining what behavior was regarded as dishonest based on the Articles 81 and 82 of the Treaty. The Commission published later “Notification on competition rules in access agreements”. Such agreements are indispensable for competition. This is because they are the condition for the access of alternative operators to end users that have been offered services by incumbent operators. The notification has been regulating access rules, that resulted from the EU competition law, has been defining relations between competition law and telecommunications regulatory framework and has explained how competition rules were supposed to be implemented in consistent way in different segments of the market.

### *4. Consumer protection legislation*

National and EU consumer laws such as, for example, directives on dishonest conditions regulate both the telecommunications sector, as other sectors, in agreements with consumers, agreements reached in distance and misleading advertisements. The consumer interest gained even more importance in the directives issued in 2002.

## **3. 1. New regulatory framework**

As on January 1, 1998 in most EU Member States full liberalization in telecommunications had been reached, the 10-year period of standardization and liberalization of telecommunications market was formally closed. However the transformation from monopoly to effective competition would have not brought results if the regulatory works had not been carried. Therefore, detailed regulations have been adopted and implemented and were followed by adoption of new regulatory package (2002). On European level the rules binding now have been regulated by liberalization acts and 14 directives and decisions on standardization that have been supplemented by number of recommendations and guidelines. The regulatory framework of the EU has



regulated rights and obligations of national regulatory bodies and national competition offices and rights and obligations of telecommunications operators and users.

Already in 1999, (that is a year after full liberalization) the Commission decided to evaluate if the opening of the telecommunications market to the competition had led in practice to its development and if therefore, the change of the regulatory approach was justified. Recognition of effective competition in one of the segments of the market would allow withdrawing gradually from ex ante regulation into specific sectorial market power regulation and replacing them with traditional antimonopoly regulations (such regulation has been applied to leased lines market in the directive of 2002). The Commission decided as well to control if Member Countries understood properly the message included in the directives adopted in 1998 and if they have been able to implement them so that goals were reached. If the insufficient effectiveness of the law were shown stricter requirements towards national laws would have been applied (thus new regulations on authorization of telecommunications activities have been adopted). Therefore, the 1999 EU Review had, as main objective, the control of adoption of the regulatory system that had existed so far and introduction of so-called twilight clauses that were determining what conditions had to be met so that a regulation, reaching its aim, could be abolished (based on the a priori assumption that the directives have reached their goals).

In July 2000, the Commission proposed a package of new directives of new approach that consisted of five projects:

- Directive on a common regulatory framework for electronic communications networks and services (Framework Directive)
- Directive on access and interconnection,
- Directive on the authorization of electronic communications networks and services (Authorization Directive),
- Directive on Universal service and user's right,
- Directive on data protection and privacy.

Parallel the project of the regulation on local loop unbundling? was proposed and it came into force very soon that is on January 1, 2001. The implementation of the new directives into national laws should finish in the middle of 2003.

The new regulatory package, among others, has the following objectives:

1. final standardization, harmonization and simplification of electronic communications law, integrating to a larger extent telecommunications, IT and media sectors,
2. abolition of other barriers of the development of the sector,
3. ensuring that users get maximum benefits of choice, prices , quality and good relation between price and quality,
4. guarantee that there are no distortions in competition development in electronic communications sector,
5. creation of incentives for effective investments in infrastructure,
6. guarantee of effective allocation of frequencies,
7. creation of foundations for the development of electronic communications as a foundation for development of the Information Society.

There are 5 characteristics of the legal system introduced by new directives:

1. Consumer as value and the main objective,
2. Reform of the final legal solutions that may impact, in a negative way, on development of competition, such as financing of the universal service,
3. maintaining the competitiveness of those segments that have been developed the extent that justifies gradual withdrawal from the individual ex-ante regulations in favor of the competition law and connected with the change of market power definition,
4. introduction of the concept of the access to the network as the superior to the interconnection concept and thus allowing all operators and users that perform activities in the “electronic communications” area to use the network of significant market power operator ; this will widen the choice for final users,
5. finishing the Commissions approach that aims at forcing Member States to get rid of the last barriers of access to the market – including the system of individual licensing.

### **3. 2. Poland’s negotiation stance**

Polish government in 1998 accepted Poland’s negotiation stance in the Telecommunications and Information Technologies area and in 1999 it was modified. In the modified negotiation stance Poland committed itself to adopt and implement the whole *acquis communautaire* in this area by the end of 2002 and has not asked for transition periods. The December 31, 2002 was accepted as the date in which Poland would be ready to membership. This date was regarding directives issued before 2000. The implementation of the EU law into Telecommunications Law of July 21, 2001 proved not fully correct and effective. Therefore the amendment to the law has been prepared and sent to Polish Parliament (Sejm). This still has been an approach to implement EU directives of 1990-2000. The amendment has been adopted in May 22, 2003. Thus, the date has been missed and the amendment aimed at conformation process has been slowed down.

Meanwhile, the works on the implementation of the new directives had to start. They have to be adopted before Poland’s accession. The Minister of Infrastructure has created a Work Group on Harmonization of Polish Law with the new regulatory package.

As the legislative works have to be finished before accession, the schedule and tools used for conformation of the Polish telecommunications law to the new regulatory framework need to be well analyzed. It has to be analyzed what is the spirit of the new regulatory framework. Poland has to make sure that the implementation would not be premature and would not lead to contrary results than those planned. Therefore, the implementation should start with the diagnosis of the market development that gives basic information for the regulatory decisions. The main rule that the European Commission is using says that tools should be adjusted to the level of market development. It has to be considered if the new regulations proposed by the EU give new chances for Polish telecommunications sector and if at all implementation periods are needed. However, this aspect is outside of the subject of this analysis. Very important for the implementation is the aspect of the trends of technological convergence that allows for wide offer of joined telecommunications, media and IT services. The aspect of implementation of the amended law and of the way and schedule of the implementation of new EU directives should become a subject of extensive public discussion.

There are the following elements of the new regulatory order that are most important from Polish point of view:

- Convergence of technologies and unified regulations for telecommunications, media and IT and inclusion in the Polish law new specific solutions for media,
- Ex-ante and ex-post solutions, tightly joined with the degree of the market development (market power and connected with obligations); switch to antimonopoly law; joined market power, new markets for determination of market power),
- Mechanisms of provision of universal services that would not be anticompetitive and mechanisms that would guarantee users access to the full spectrum of modern competitive services, including obligations imposed on operators that do not have significant market power,
- Structure and division of tasks and obligations of regulatory bodies, that would encompass media, telecommunications and IT.

The convergence of technologies and common regulatory solutions that result from it for telecommunications, media and IT and inclusion in new directives specific regulations for media, create a chance for Poland to develop modern technologies of integrated communications services. Digital technology allows nowadays provision of both traditional and new communication services – such as voice, data, sound and picture – through different networks. Operators of the EU, that profit from liberalized conditions of access to the market, benefit as well from opportunities given by technological enhancement and on one hand improve traditional services offered by them on the other hand start new activities such as data transmission and access to the World Wide Web network through mobile telephony, data transmission services through digital platforms. On-line services connected with TV broadcasting through such systems as Web-TV, transmission through digital satellites and cable modems.

Possibilities of benefiting from convergence will depend in great extent on limits imposed by regulatory environment. Present legislation has been prepared for another, not existing any more environments. When preparing new legislation – similarly as in new directives – the regulations on data transmission should be separated from the transmission of content. Moreover, potential connections between them that may be a source of potential problems connected with competition should be diagnosed. Therefore it implies:

- Equal treatment of infrastructures for transmission of accompanying services irrelevant of the type of contents and services,
- Regulations regarding content should recognize characteristics of particular services of content provision and conformity with the objectives of public policy connected with these services; here, very important are regulations that go beyond area described in this analysis, such as the law on electronic services provision;
- Introducing new legal regulations that would take into account uncertainty of the development of some segment of the market and especially need of having huge initial investments needed for introduction of such services and also protecting consumer rights.

The main dangers of the process of implementation of new regulatory package regard:

- Shortage of prepared human resources in public administration; until now the sectorial administration from the point of view of competencies, structure and skills has not been prepared to the implementation of the new legal order. This has been caused mainly by lack of financial resources that has caused temporary problems in structure and procedures,
- Closed system of legal sources, prevention of flexible reactions that are necessary for a regulatory body. These problems are connected with constitutional system of legal sources and rights of regulatory body,
- Inadequate development of telecommunications infrastructure, causing many side effects such as: need for determination of universal services provision, instead anticompetitive mechanisms of access deficit have been maintained, blocking regulations connected with local loop unbundling,
- Technical state of the network, preventing – according to the incumbent operator – full implementation of the regulatory package of 1990-2002 (liberalization of international services, guarantee of provision of requirements regarding access to the network and cooperation between operators in creation of access points, choice of the operator, number portability).

Until now, the implementation methods of the European Law into the national legal order in telecommunications have not worked out. Problems named above in insufficient investment in infrastructure and technical aspects of the network have caused that transition solutions have been used in regulations and thus, the lack of competition has been maintained and the market position of the incumbent operator has been kept. The described above development of the market development shows clearly, that over two years in which the telecommunications law has been in force and the over which regulator has been active, has not brought expected results. Thus, Poland does not catch up with EU countries and this gap is increasing. We can talk here about lost decade of the liberalization during which effective actions of the regulations have been stopped in favor of the incumbent operator.

## **4. Impact of accession on the sector: opportunities and threats**

Polish telecommunications sector seems to be in average extent prepared for the accession but still many problems have not been solved.

The main problem lies in inadequate stance of the liberalization of the sector – dominant position of TP S.A. in the fixed line services and results of transfer of such effects on the situation of mobile operators and Internet. This prevents fast development of competition and is a barrier on the way to significant improvement of the situation of competitors and consumers. This results in effect on this that Polish fixed telecommunications market has not been developing for 3 years. However, the mobile telephony has been developing quite dynamically.

The second important problem lies in small accessibility of telecommunications services, especially in rural area. This can not be improved with the efforts of alternative operators that operate in not fully liberalized market. Such investments are capital-intensive and ARPU is small and spread over time. The average ARPU in some areas equals to 60 PLN that is around 15 dollars.

The presence on Polish market of the biggest telecommunications entities as investors in the biggest national operators suggests that this sector should not have problems in cooperation with operators active in common European market. Polish operators have been already searching for partners among European and global companies. Modern service solutions promoted by foreign shareholders, impact on the service offer of Polish operators. Thus, it does not seem possible that Polish operators will be able to expand to the EU countries. Moreover, the inflow of foreign trade capital depends on the speed of the liberalization.

Poland is regarded as having telecommunications market with huge development potential and is second among candidate countries. This potential attracted in the 1990s many trade and financial investors, that between 1990-2002 have withdrawn even from the biggest companies in the market. Some operators have never attracted any investors and were subject to speculative capital. The accession, as an incentive for reforms, may impact positively on investment.

### **4. 1. Impact of Accession on Telecommunications Market**

If we recognize that accession equals the final and inevitable liberalization of the market, then opportunities and threats of the sector in the conditions of progressive liberalization will depend on the following factors:

1. Share of the sector in the added value,
2. The degree of liberalization (high level of present liberalization of the market means that Polish companies have already faced the foreign competition and “accession shock” should not happen),
3. Degree of the penetration of the market by foreign capital – the more globalized the sector is the higher is its competitive ability.

## **4. 2. Opportunities and threats for the sector connected with the inflow of investment to Poland**

As it has been said above the chances of the sector after the accession may depend on present and future inflow of investment. Just the Poland's accession into the EU will not cause significant changes for the companies with foreign investors. The present telecommunications law is liberal in terms of access to the market. However, it is probable that the change of regulatory environment of the market will, in case of implementation of 2003 regulatory package, will cause some interest of investors.

Will thus, for the telecommunications market that will be opened starting from 2003, the inclusion of Poland into common European market cause the accession shock? Such shock may be connected with the fact that full liberalization will show the gap that is between foreign operators that would like to enter Polish market and Polish operators, for whom lack of regulation means drain of financial resources and prevents development of companies. Thus, specially profitable and based on new technologies segments of the market, that require investment, will attract new players – foreign investors, leaving for the national investors markets of basic services, especially peripheral markets.

However, there are three reasons for which foreign investments lead to improvement of competition of Polish companies. The first is the demonstration effect. Irrelevant to that how much the foreign investor is trying to keep its know – how secret, selling its services it is showing which markets are profitable, thus gives for the others information on supply and demand. The second one, is competition effect – when the foreign investor produces a better product, the position of other companies is endangered, and therefore they have to improve their products. The third effect is described as learning through watching, when national companies copy experiences of companies with foreign capital.

The telecommunications companies not always can profit from these effects. This is because they are financially weak, have problems with getting bank credits for investments and rather can not count on “protective umbrella” from the state in means of public help. On the other hand interoperability?of networks is the natural characteristics of the sector. This forces the cooperation with foreign companies and thus implementation of technologies and products.

For Polish operators after the accession to EU new opportunities of expansion to the common EU market will open. They will rather search for partners for potential strategic ventures, than search for individual activities. The telecommunications, to great extent, sector will not take advantage of such opportunities as gaining foreign markets for sales and relatively low labor costs.

Transfer of technology is important advantage from inflow of foreign capital. It has two forms: direct and indirect. The direct form stems from the fact that foreign companies have relatively higher technological effectiveness than Polish companies. The indirect form means improvement of technological effectiveness of Polish companies without involvement of foreign capital as result of external results (demonstration, competition and learning). Polish telecommunications market has attracted both trade investors (as it was said before they are still present as shareholders of mobile operators and as shareholders of incumbent operator) and first of all financial investors. However the transfer of technologies in telecommunications is, first of all, connected with globalization and interoperability of telecommunications networks.

Technological advantage will play some role in being a motivation for investments in Polish telecommunications market, especially when faced with developing technological convergence. However, other motives may be more important. This is big and absorptive market, low teledensity, and low satisfaction of demand for advanced services and – having less importance-low labor costs.

### **4. 3. Opportunities and threats for Polish telecommunication operators on the internal and external market**

The most important factor influencing the opportunities and threats of the telecommunication enterprises on the internal and external market is their competitiveness. In the telecommunication sector in Poland, the factor of special significance is the competitiveness on the internal market because the level of development in this sector does not give optimistic forecasts for Polish operators to compete on the external markets. In case of the resident operators, the reason of that are the extremely high fixed costs of the enterprise, in case of the competitive operators these are the scale of operations and involvement in the problems of internal market. These are the internal and external factors that decide about the competitiveness of the sector.

The following factors, connected with internal situation of the companies, influence the opportunities and threats of the small and middle-size enterprises:

1. Financial resources in the enterprise. In the case of telecommunication sector these resources – because of regulation barriers of the development introduced – are relatively small both in the return on operation and the possibilities of gaining the external capital. (Much better than the average is the situation in the mobile operators market).
2. The second factor influencing the chances and threats - both on the internal and external market – are the human resources. In that case, one must remember about creativity and flexibility in adjusting to the market situation. The special role in that plays the efficiently managed marketing of new services and their combination.
3. The next factor influencing the chances and threats – connected with the state of the enterprise – is its ability to keep its share of the market. On the telecommunication market it is connected with the infrastructural resources, which in the situation of insufficient regulation do not double, well or release for the competitors. The operators taking part in the exchange of the traffic are in the especially difficult situation here.
4. From the point of view of the ability to keep on the market, decisive is also the quality of the product, its brand and clients attachment to the product.
5. The important element is also the demand. The standard of living in Poland is relatively low in comparison to the members of EU. It is then understood that for a longer period of time the clients here shall choose cheaper products and less advanced services. The simple telecommunication services are still core of this market. The ability to compete in lower prices shall decide about the possibilities of 'surviving' on the Polish market.

The second group of factors is often defined as external and these factors can be divided in 4 types:

- state of the market on which the enterprises operate,
- financial and taxation conditions,
- legal environment,
- access to information.

The economic growth slowing down and increasing unemployment make it even more difficult for the telecommunication enterprises to 'survive' (especially for the smallest, operating on the rural areas or in the sector of IT services that is not yet protected by the law regulations). The expected improvement of the standard of living and growth of the welfare connected with the access to EU can cause changes in the preferences of the customers and transfer of the demand to the services of higher value added. It will require higher flexibility in the future but it shall also enable the niche activity of rural operators and other small companies.

For the telecommunication operators, especially for those building the infrastructure, the crucial factor is the access to credit facilities. Poland is one of the countries where the costs of gaining capital are very high. For as long as three years the capital is almost inaccessible (or treated as highly risky) for the telecommunication sector, excluding few biggest investors. Many operators have limited their investments; some of them have suspended their operations or have crashed. Lack of capital and huge public and legal burdens have caused very difficult financial situation of big independent stationary telecommunication operators in Poland.

The system of public and legal burdens (charges for licenses) was also a big threat for operators because it involved transfer of considerable financial resources from investments to country's budget while the operators till 1998 were working on the unprofitable markets, rural and in small towns. Some of the operators still concentrate on these markets.

The stable legal environment in which they operate is very important, probably even the most important, for the operators. The changes of the conditions, lack of transparency in law regulations and inability to execute law by the regulation institution creates a serious threat. Often also lack of access to information is considered as a threat. Access of Poland to EU shall provide better forecast and stability of market conditions, including the legal and institutional regulations, and shall create new possibilities for its protection. In these new conditions the availability of external financing and profitability shall increase.

The chances and threats connected with the access to EU shall require a lot of changes and adjustments, main of which are as follows:

- a. Change of the market situation, i.e. access of the companies to the common market. Access of Poland to EU can extend the competitive threat because it shall enable the EU companies penetrate the Polish market. However, it will become a fact not earlier than after the end of liberalization process of the sector and proclaiming new telecommunication law compatible with the EU regulations. At the same time the growth of the Polish telecommunication enterprises after introduction of new law regulations shall be smaller as they will have to make up the distance in comparison to EU operators. Therefore, the expansion of Polish operators to European markets shall not be possible for a longer period of time and also the competition with foreign investors on the internal market will be very difficult for them.
- b. Adjustment to regulations and standards on the European market, especially in the area of law regulations, and also in the area of technical regulations, both obligatory and facultative.
- c. Level of technological competitiveness – smaller technological gap towards the foreign competition in the sector of services, especially in telecommunication, results mainly from the character of these operations that base their competitiveness mainly on the human resources and good idea for the profitable economic activity. The companies with foreign capital are in even better situation as they are more technologically advanced and render services of high value added.

The access to EU – except threats – shall mean also new chances for the sector. One of the most basic is the introduction of the EU regulations and policy. It should be mentioned once again how the role of the sector was treated in so called Lisbon strategy, which gives directions for the economic and social growth. The sector in the Lisbon Strategy was defined as a carrier of services for the Information Society and Knowledge Based Economy.



#### **4. 4. Estimation of preparation of the enterprises**

From the point of view of the competitiveness, the telecommunication sector is internally differentiated. Among the companies able to compete in the open economic environment there are also ones operating locally or in niches that do not take actions to adjust their activities to EU regulations as well as general liberalization and deregulation. Among them there are few enterprises, which make investments, and few in which these investments lead to their higher competitiveness and growth or preservation of their share of the market. The telecommunication companies, especially the small ones, in the market and legal situation nowadays concentrate on preservation of their share of the market. The natural limitations of the infrastructural resources are helpful in this aspect. In the last few years mainly big and middle-sized companies tend to invest. The most active in the field of research and development are the big companies while the middle-sized companies mainly seek alliances and cooperation with other subjects on the market. The telecommunication companies bind their future with the operations on the local markets and from this side they expect the incentives for the development.

The separate problem is the situation of the resident operator who also, because of exceeding protection from the side of the country for the last decade, is not ready to compete and open fully and is not able to face the liberalization together with imposition on him, as the operator with the significant market position, the special obligations regarding the competitive operators and users. However, as the experience of the last decade shows, resisting from liberalization of the internal market have resulted in lateness in development of the telecommunication market, which is now difficult to make up.

The necessary changes in law regulations favorable for the increase of competitiveness shall be undertaken much earlier – before Poland's accession to EU. It is the only situation in which the companies could use their chances of joining the common EU market and become its integral part.

## **5. Summary**

### **5.1. Characteristics of the market**

Polish telecommunication sector seems to be not ready enough for the access:

- Insufficient degree of liberalization of the market,
- Stagnation of the stationary market,
- Little availability of the telecommunication services, especially in rural areas,
- Big potential for development – second biggest market among the candidates to EU.

### **5.2. Chances and threats for Polish telecommunication operators on the internal and external market**

#### **Internal:**

1. financial resources both in the return from the operations and possibilities to gain external capital,
2. existing innovative and creative human resources,
3. ability to keep the share of the market connected with the infrastructural resources which in the conditions of insufficient regulation do not double well or release for the competitors,
4. quality of the product, its brand and attachment of customers to the product,
5. demand and ability to compete with low prices.

#### **External:**

1. state of the market on which the enterprises operate, e.g. slowing down of the economic growth,
2. financial and taxation conditions, access to credit, level of public and legal burdens,
3. unstable legal environment, lack of regulation,
4. access to information.

Opportunities and threats connected with the access are as follows:

#### **Threats:**

- a) change in the market situation, i.e. unlimited access of companies from the common market and lack of possibilities of expansion caused by the difference in development.
- Accession of Poland to EU itself will not cause significant changes in presence and functioning of the companies with foreign capital in Poland.
  - Change of the regulation conditions connected with operating on the market, in case of implementation of the regulation package of 2003, then after 2005, may cause increased interest of the investors.
  - The accession shock can be bound with the fact that full liberalization of the market shall show the distance between the foreign and local operators.
  - Profitable and based on the new technologies segments of the market that still need investments shall attract new players – foreign investors, leaving for the local operators the markets of basic services, especially suburban markets.

- Foreign investments shall lead to increase in competitiveness of Polish telecommunication enterprises by the effect of demonstration, competitiveness and learning by spying.
  - The barrier in using these elements is the financial weakness. One of the elements favorable is interoperability of the network, which makes the enterprises cooperate with foreign companies and implement new technologies and products.
  - New possibilities of expansion on the EU common market will open but mainly through looking for new partners for the eventual strategic alliances.
  - The technological superiority will play a certain role in making decisions regarding investments on the Polish telecommunication market, especially facing the progressive technological convergence.
  - However, other motives can become more significant, e.g. big and absorptive market, low telecommunication density, low satisfaction of the demand for advanced services and low labor costs.
- b) adjustment to regulations and standards on the European market, especially in the area of law regulations and also in the area of technical regulations, both obligatory and facultative.
- c) technological gap towards the foreign competitors.

### **Opportunities:**

- Introducing UE regulations and policy (including the assistance programs)