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**MASTER'S DEGREE IN POLITICS AND ECONOMICS OF
CONTEMPORARY
EASTERN AND SOUTH-EASTERN EUROPE**

Dissertation

The telecommunication sector in Romania

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Introduction

Romania is a country located in Southeastern and Central Europe, North of the Balkan Peninsula, on the Lower Danube, within and outside the Carpathian arch, bordering on the Black Sea. Almost all of the Danube Delta is located within its territory. Romania shares a border with Hungary and Serbia to the west, Ukraine and the Republic of Moldova to the northeast, and Bulgaria to the south. Romania, with 22.6 million people, is the second most populous country in Central and Eastern Europe. The Romanian currency is the Leu (RON) and 1 Leu equals to 0.24 euro. As of 1 July 2005, the leu (ROL), Romania's legal tender, was redenominated so that 10,000 old lei, in circulation on that date, can be exchanged for 1 new leu (RON). Romania joined the European Union on 1 January 2007 and it is expected to adopt the euro in 2014.

With the fall of the Iron Curtain in 1989, Romania started a series of political and economic reforms in order to move from a centralized socialist economy to an economy based on market relations. Romania's transition to a market economy had been protracted and painful due to its legacy of the communist regime, extreme centralization and a high degree of bureaucracy and corruption.

The successive governments which ruled the country between December 1989 and November 1996 avoided serious economic reform, fearing "shock therapy" and its anticipated social costs, mainly the attendant mass lay-offs. Inheriting an economic situation which proved to be much worse than anticipated, the coalition government formed as a result of the November 1996 national elections started its activity by drawing up a comprehensive reform package meant to establish:

- clear and efficient privatization and restructuring procedures,
- eliminate price control,
- free the exchange rate and most importantly,

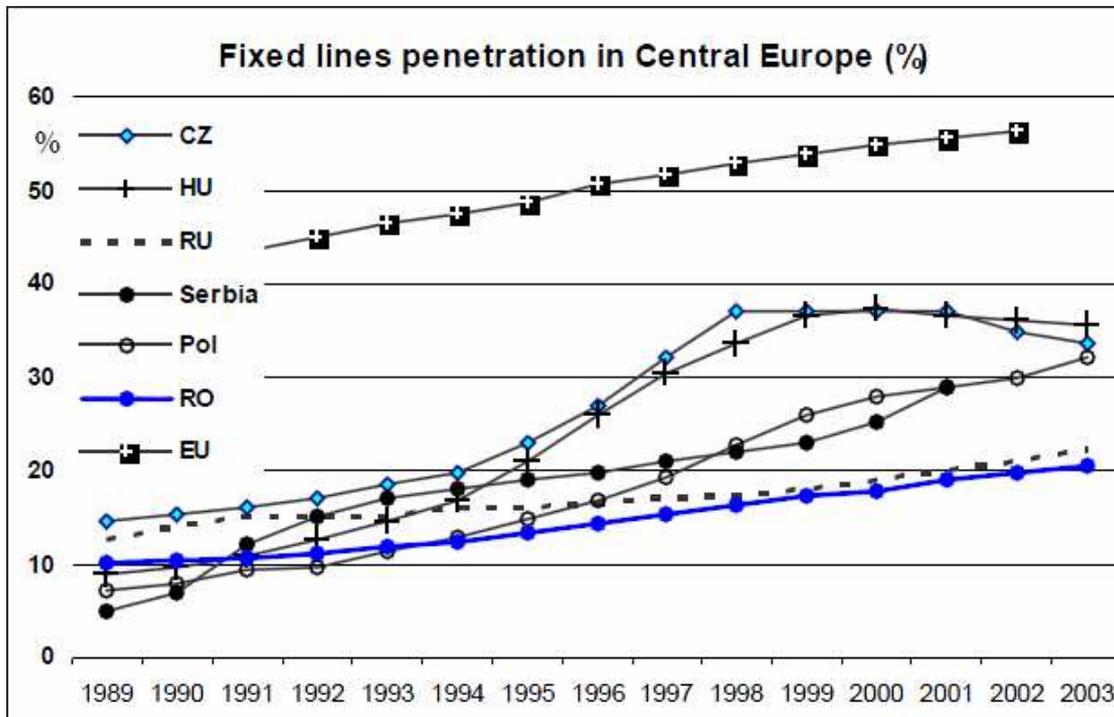
- encourage foreign investment

Romania is considered to be a unique case among all transition countries because its transition period was one of the hardest and longest, compared to the other ex-communist countries. First of all Romania suffered from a totalitarian and despotic regime characterized by extreme centralization, population movement controls, corruption, absence of political pluralism and absence of any serious political opposition. Thus when other ex-communist countries proceeded to reforms even before the change of the regime, Romania was still living in a state of economic autarchy. Another reason why Romania's transition period was longer has to do with the violent way the communist regime came to an end. The violent revolution meant not only human victims but also the disintegration, in a few days only, of the whole political, economic and administrative system which led to a total political and social void. Thus a considerable period of time was needed for the settling and the stabilization of the whole society within a structure that could be reformed. Furthermore Romania's successive governments after the revolution were unwilling to move to the necessary reforms in fear of the political cost and proceeded only to sluggish and incoherent reforms which were based on populist economic policies.

1. Romanian Telecommunication {POOR TELECOMMUNICATION INFRASTRUCTURE}

Romania delayed the reform in telecommunications for too long while the applied sectoral strategy positioned fixed telephony as a social service. The outcome was one of the weakest infrastructure in Europe, creating a gap too wide to be rapidly bridged. Due to this delayed reform and lack of understanding of telecommunications economics, Romania has nowadays one of the lowest fixed line penetration in Central Europe despite the fact that in 1989 the country was well ranked ahead of Hungary and Poland. Romania's penetration rate for fixed line telephony is about 20%, while in rural areas, where 47% of the population lives, fixed lines penetration is only 10%. There are many rural localities with no phone line (2 140 without fixed telephony, 993 without mobile coverage, 260 without fixed and mobile telephony). Also, investment costs in rural networks are much higher than those in urban areas, with difficult investment recovery due to the poverty in rural areas. According to European Directive 2002/22/EC, member states shall grant telephony services to all end-users in their territory, independently of geographical location. For Romania, this means installing telephony networks in all villages with no phone connection.

Table 1.

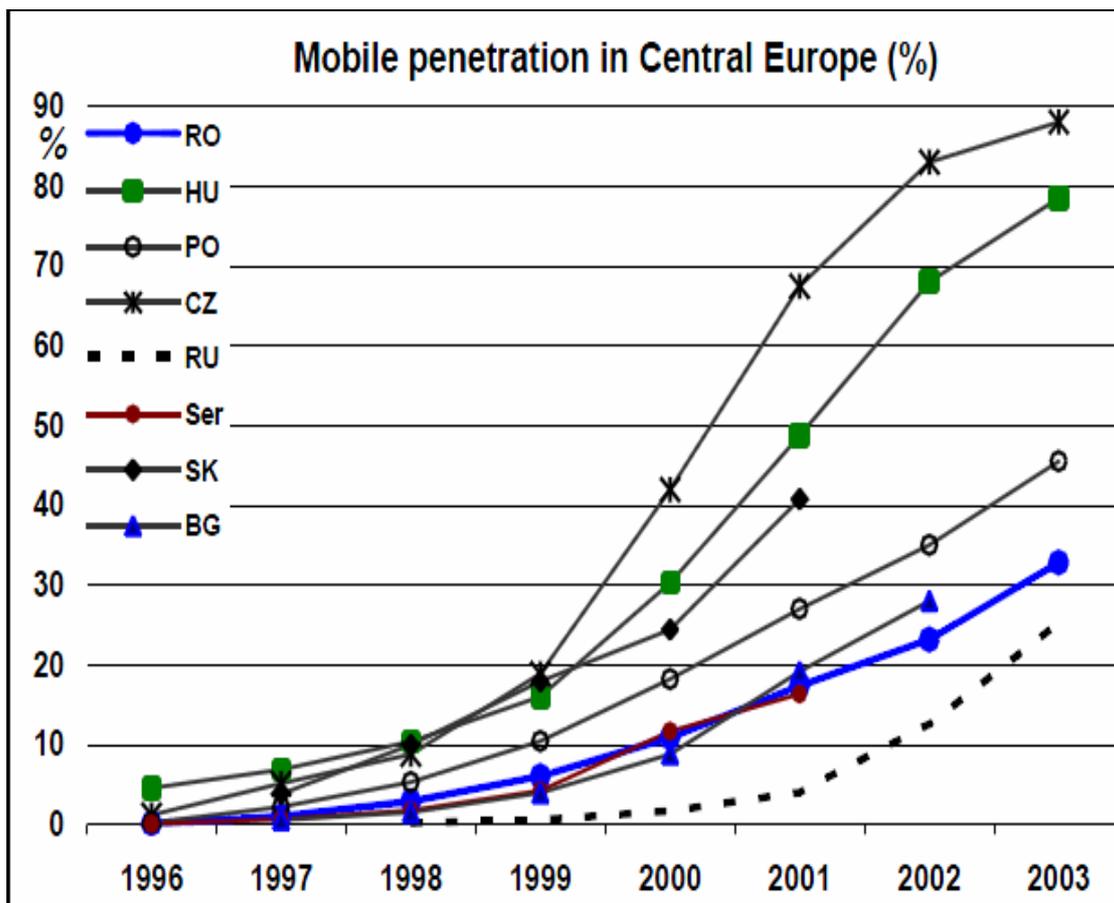


Source: Romanian Academic Society (2003)

Comparing the Romanian and EU telecommunication infrastructure one could find significant differences, which are due to general economic conditions and delayed reforms. Low tariffs left the national operator, RomTelecom, without sufficient revenues for a running a functional system. A common feature of all East European countries, including Romania, was that political pressure to maintain low tariffs prevented national operators from rapidly expanding the network. If governments had not intervened with substantial subsidies, lower revenues would have contributed to poor quality of service and long waiting lists. Where privatization was delayed, the development of telecommunications infrastructures was slower. By privatization, the state offered a long monopoly period, a 'price cap' formula for increasing tariffs taking into account inflation and an increase in real terms was used in Europe: Hungary (Matav) and Czech Republic (Cesky Telecom). In Hungary, a very well prepared privatization process led both to a high selling price and a doubling of fixed lines penetration in four years: from 14.5% in 1993 (Matav privatization) to 30.4% in 1997. This is the result of

large infrastructure investments, sustained also by increases in Average Revenue Per User (ARPU). Why did Romania, in 1989 a country better placed than Hungary and Poland from the point of view of fixed lines density, become a laggard? The answer is delayed reform, in telecommunications but not only.

Table 2.



Source: Romanian Academic Society (2003)

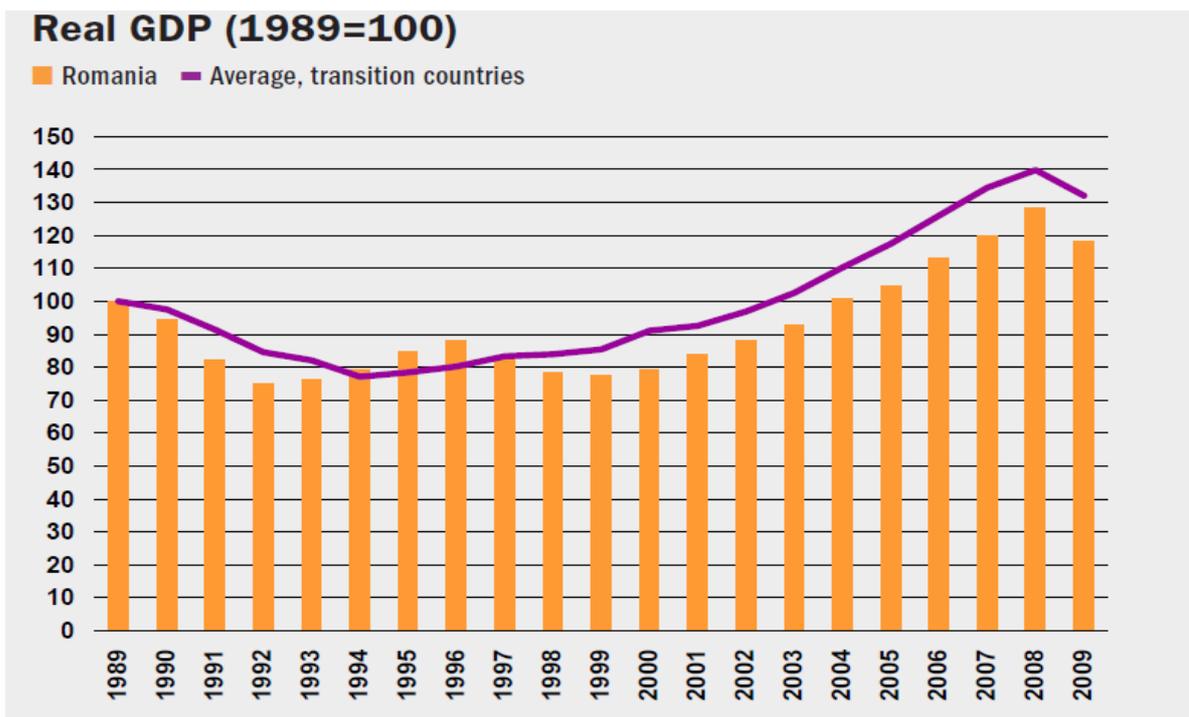
2. Macroeconomic data

Romania's economy experienced a serious recession during the late '80s, which was accelerated by the change of the regime after 1989. In 1992 a short period of recovery began which lasted until 1996, when a second round of recession occurred due to the unfinished restructuring and reforming of the economy. 1997 was the year of the "big bang" of the Romanian economy, serious and effective reforms took place and the economy entered a new period characterised by strong and sustainable growth. Between 2004 and 2008 the Romanian economy had the highest economic growth rate, and was considered to be one of the best-performing economies of the region. This economic boom was fuelled by foreign investment and credit from Western owned banks, as a result of the country's accession process to the EU. Unfortunately this economic boom has led to overheating pressures and unsustainable fiscal and external imbalances leading to a devastating drop of GDP up to 7.5%. Furthermore, businesses and households became more and more reliable to foreign credit. Moreover the country's deficit increased dramatically in a period of three years only (2005-2008). Economic actors became increasingly worried about these unfavourable conditions which eventually led to banking stress and less capital flows.

Another condition that led to Romania's recession was the depreciation of the lei by 30% from 2007 till 2009. The final blow to the economy came from a considerable decrease of export demand which plunked the economy in a severe recession in 2008. In these conditions the authorities decided to seek external financial support and so the EU, the IMF, the World Bank and the EBRD granted Romania a 20bn Euro assistance which was accompanied with a strict economic policy programme. The adoption of the programme gave the desirable results; it improved the market sentiment and gave new life on the Romanian economy. After this period of negative growth, the first signs of recovery appeared during the second half of 2009 and real GDP growth is expected to turn positive by 2010.

According to macroeconomic indicators, Romania's nominal GDP was in the first position among the transition countries of Southeastern Europe (Balkans), and approximately on the average among all of the transition countries in terms of real GDP growth as the below tables show respectively.

Table 3.



During the period 1997 – 2000 the reforms with the assistance of IMF and the World Bank began and provided new opportunities for Romania's economic growth. New legal framework concerning the attraction of FDI inflows and foreign investors, incentives for investments, such as an exchange rate driven by markets and above all privatizations were the main reforms made until 1999. And although until the end of 1999 5,155 of the 6,300 state firms had been privatized, the majority of large state-owned enterprises were still awaiting privatization or liquidation. During 1999 the government successfully privatized the national carmaker Dacia, the railways stock manufacturer Astra Vagoane Arad, the largest Danube shipyard in Galati, and two of five state-owned banks, among other privatizations.

After 2000 the Romanian economy began to create a strong and sustainable growth despite a downturn of the global and European economy, based on the acceleration of reforms and the privatization process, while negotiations and preparations to access the EU helped to maintain and deepen its macroeconomic stability. In particular, the Romanian economy experienced an economic boom during 2003 – 2008, associated with the process of accession to the EU, leading to rapid gains in poverty reduction, which declined from 28.9 percent in 2002 to 5.7 in 2008.

From the period between 2000 and 2008, Romania with the assistance of IMF succeeded a strong GDP that grew even stronger than public debt - which in absolute terms also grew, though at a slower pace -. But this sustainability of the public debt along with the rise of GDP was accompanied by the low public revenues mainly coming from the revenues from the taxes that were few, despite the tax reforms that had been made which could not make up the weaknesses of the Romanian tax collection system.

Also the strong economic growth, which reached over 7 percent in 2008, is accompanied by a fiscal deficit. Although following efforts of fiscal consolidation during 2003-05 that led to a narrowing of the fiscal deficit to 0.8 of GDP in 2005, the fiscal deficit widened again progressively to reach 4.9 percent in 2008, as the table shows below, as a result of excessive public spending policies. Government spending doubled between 2005 and 2008 pushing the public sector share of economic activity from 31 percent of GDP in 2005 to 37.5 in 2008 (see table below). Also the public sector wage bill more than doubled over these three years due to high wages increases combined with a huge increase in government employment. Finally the strong economic growth was accompanied by widening current account imbalances based on the fact that although exports to EU countries grew, domestic demand grew at an even faster rate and the current account deficit rose from 8.9 percent of GDP to 12.4 percent of GDP in 2008, as the table below indicates.

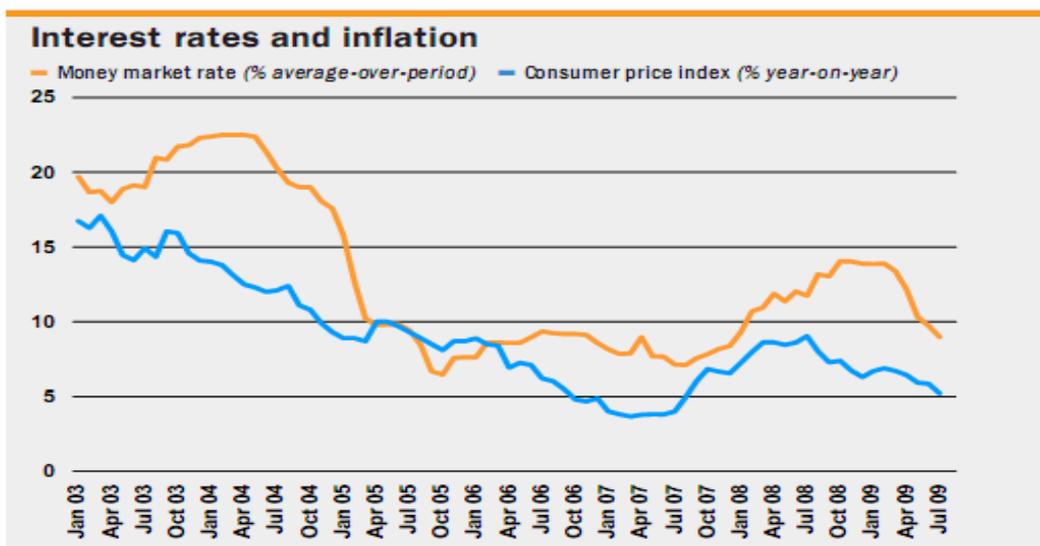
Economic activity weakened significantly in 2009, as a result of the financial crisis, after several years of a very strong performance, which

culminated in a real GDP growth rate of 7.1 percent in 2008. For 2009, EBRD forecasted the Romanian real GDP growth rate to reach - 4.1 percent, as the table shows below, while the CNP (Comisia Nationala de Prognoza) of Romania forecasted it will reach - 7.7 percent.

In March 2009 the government, due to the economic crises, agreed a two-year macroeconomic stabilisation stand –by agreement with the International Monetary Fund (IMF), backed by a 12.95 billion euro loan as a part of broader external aid package. The additional foreign financing will be provided by the European Union, the World Bank, the EBRD and the European Investment Bank. Under the terms of this programme and as far as it may concern the fiscal deficit, the government initiated measures to address the fiscal deficit and to achieve macroeconomic stabilization originally targeting at 4.6 percent, as the graph below indicates, but once the full extent of the economic downturn became clear the target was revised in August of 2009 to 7.3 percent of GDP.

In order Romania to achieve macroeconomic stabilisation it has also to lower annual inflation. During 2009 and by the end of August the inflation rate fell to 5 percent compared to 6.3 percent at the end of 2008, according to the data of EBRD – as the graph shows below - .

Table 4.



Source: Transition Report 2009 EBRD

Although Romania managed to low the inflation rate, still for 2009 it was on a very high side compared to EU standards, as the table below shows. At this point it has to be mentioned that Romania during the 1990ies was facing the phenomenon of hyperinflation. The high inflation rate occurred also in the first years after 2000 that Romania managed to change leaving the days of double-digit inflation behind and since 2005 to reduce the inflation rate in a one – digit inflation. The low inflation rate was formed due to free exchange rate and reflects the frozen salary growth and the decreasing internal demand.

In relation to unemployment rate, it seems that Romania provided incentives to foreign investors and attracted FDI inflows especially after 2000. Companies that were attracted due to low labour cost for the unskilled workers were the reason that unemployment rate decreased until 2008. However, soon after the breakout of the crisis the situation reversed completely and Romania faces now a fast rising unemployment, frozen salary growth and little prospects to recover soon.

And while unemployment rises fast the income distribution below shows the extremely unequal income distribution in this country and mainly the very low income level, which is one of the lowest in the European Union.

The chart above illustrates this inequality with the overwhelming majority of the employees - 97.5 % - to earn monthly a gross salary less than 900 EURO.

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3. ROMANIAN TELECOMMUNICATION SECTOR

3.1 The 90': Phases of telecommunication sector

Romania is an example of how reform should not be done. In July 1990, the Ministry of Communications was established, and in September 1990 Rom Post Telecom was set up as the telecommunications, radio-communications and postal operator. According to government decision no. 448/June 27th, 1991, the *regie autonomă* RomTelecom, Poșta Română, Radiocomunicații and General Inspectorate for Communications (IGC) were established as distinct entities. The national operator, RomTelecom, was established through government decision no. 448/1991, inheriting most of the assets of former Rom Post Telecom. Through government decision no. 673/October 25th, 1997, RomTelecom became National Telecommunications Company, a joint stock company with ROL1.958bn share capital (19,580,029 shares with ROL100, 000 nominal value), owned by Romanian State and represented by the Ministry of Communications.

After a long privatization process started early in 1997, on December 30th, 1998 (five years after the Matav privatization), Greece's OTE paid US\$675m for a 35% stake in RomTelecom and 16% voting rights. This deal valued RomTelecom at US\$1.93bn or US\$540/line (privatization of national operators in Hungary in 1993 or Czech Republic in 1995 led to US\$2,400/line). The remaining stake, 65%, was owned by the Romanian state, of which 5% were to be sold to company employees by May 31st, 2000, IPO being also planned. In terms of managing RomTelecom, OTE concluded a contract with GTE allowing the US firm to negotiate a stake in company within two years. EBRD also had an option to buy a stake in RomTelecom, but none of these two options were exercised.

The second phase in privatizing RomTelecom started late in 2002, during the company's cash crisis and at a moment when the world telecommunications crisis reached its peak, being concluded on March 3rd, 2003, when OTE transferred in Romania's accounts US\$30.99m, for a 3.12% stake in RomTelecom. The entire transaction, valued at US\$274m, consisted

in a share capital increase entirely subscribed by OTE and an acquisition of a 3.12% stake for US\$30.99m. After this transaction, OTE became majority shareholder owning a 54.01% stake. A government decision on the privatization of RomTelecom, released on December 18th, 2002, approved the transformation of the golden share owned by Romanian State into a common share.

On December 20th, 2002, the Romanian Senate approved the sale of RomTelecom stake, while on January 22nd, 2003 OTE's Board of Directors approved the transaction, as well. During this transaction it was accepted that the company valued US\$750m (namely US\$175/line) before share capital increase. After take-over, a long and hesitating restructuring process began, with changes in organization (structure, culture and people), as well as in strategy (services, tariffs, partnership, *etc.*). A new organization is now emerging, with an emphasis on quality, efficiency and customer care. Personnel reduction was continuous during the past years, with 6,700 cuts in 2003 to 23,870 employees, while 2004 will bring 3,500 more job cuts. In 1998, a Government decision established the 'price-cap' formula for tariff adjustment, permitting changes in response to inflation or ROL depreciation, and an increase in real terms with up to 5%/year.

Accordingly, in 1999 RomTelecom operated quarterly tariff increases but due to strong criticism in 2000 the practice was abandoned. As a result, RomTelecom reduced tariffs in real terms in last years: 11.4% in 2000; 10.2% in 2001; 6% in 2002 and 9.7% in 2003, relative to inflation. The 'price-cap' formula, which successfully contributed to doubling fixed line penetration in four years in Hungary, was forgotten. Moreover, until October 2003 RomTelecom was the only 'player' with tariffs denominated in ROL, all the others (mobile operators, cable TV operators, ISPs and even IGC) having tariffs denominated in US\$, and, consequently, revenues protected against inflation. To this, it has to be added that, after more than a year from liberalization, RomTelecom could not rebalance its tariffs, being forced by competition to reduce long distance (interurban and international) tariffs, without increasing local tariffs accordingly.

In Romania, as well as in all countries before liberalization, higher long distance tariffs were used to subsidize lower local tariffs. Nowadays low local

tariffs mean lower revenues for fixed telephony in Romania and, accordingly, poor investment capacity, and low attractiveness for local market. Since 1990 Romanian fixed telephony had a slower evolution compared to other European countries -- lower technical performance and penetration, poor quality of service -- due to low tariffs, insufficient for supporting development, the monopoly and political pressure. In this period, Romanian fixed telephony was positioned as a social service, resulting in one of the poorest telecom infrastructure in Central Europe. Preparing for liberalization, a new telecommunication law was passed in 2002. Late in September 2002 the telecommunications regulatory body (ANRC) was established and struggled to create an effective implementation of the new European regulatory framework for electronic communications, a stable legal environment to encourage competition and to stimulate investments. The EU directives were adopted, the authorization process being simplified and some 2,200 entities asked for authorization according to the new law.

3.2 The liberalization of the sector

A few years ago, Romania, like other Central European countries, started negotiations and preparations for joining the European Union (EU). In the telecommunications industry this means adopting the *acquis communautaire* based on competition (the EU liberalized telecommunications on January 1st, 1998), and building an infrastructure compatible with that of the EU countries. Since then Romania closed negotiations on Chapter 19 and absorbed the EU directives, but these actions alone do not guarantee success. Unlike Romania the EU countries fare much better in terms of telecom infrastructure. Moreover, they benefit from the substantial experience of the market liberalization in the last years. Transposing the EU legislation in Romania was the easy part; implementation is going to be more difficult; but overcoming the backwardness of the Romanian infrastructure is the really daunting task, since in this respect Romania is currently one of the least developed countries in Central Europe.

Due to late reforms and a lack of understanding of the market mechanisms governing telecommunications, the industry, even with an evolution above the average of the economy, was not able to keep up with its counterparts in neighboring countries. What should be done to close this digital divide in a period when the fixed telephony in Europe is in recession? First, we should stop treating the fixed telephony as a social service and introduce more substantial market incentives. Second, we should promote fair competition between various sectors of the industry – mobile and fixed operators. Last but not least, Romania should invest heavily in connecting the rural areas. Without proper infrastructure all the fine-looking strategies of the government – e- education, e-government, e-society – will remain empty buzzwords.

Since November 2002, as already mentioned, Romania uses the new *acquis communautaire*, adopted at the beginning of 2002 (COM2002). The completion of the regulatory framework, initiated by the Ministry of Communications and Information Technology (MCIT), led to the full transposition of the *acquis communautaire* on the regulatory framework for electronic communications networks and services. At the end of May 2002, the Government approved an Emergency Ordinance creating the general framework for communications regulation. The Ordinance regulates the access to the electronic communications networks and to the associated facilities, as well as their interconnection. The above legislation created the National Agency for Communications Regulation (ANRC), which initiated operation in July 2002. ANRC is independent from operators, service providers and equipment suppliers and there constitutes an effective structural separation of the regulatory function from activities associated with the exercise of rights deriving from the state's position as a shareholder in communications companies. Although the European Commission recognizes significant progress in the field, it continues to point out those previous assessments, which report that a considerable amount of training and financial investment is necessary to ensure adequate administrative capacity for the new regulatory authority, remain valid.

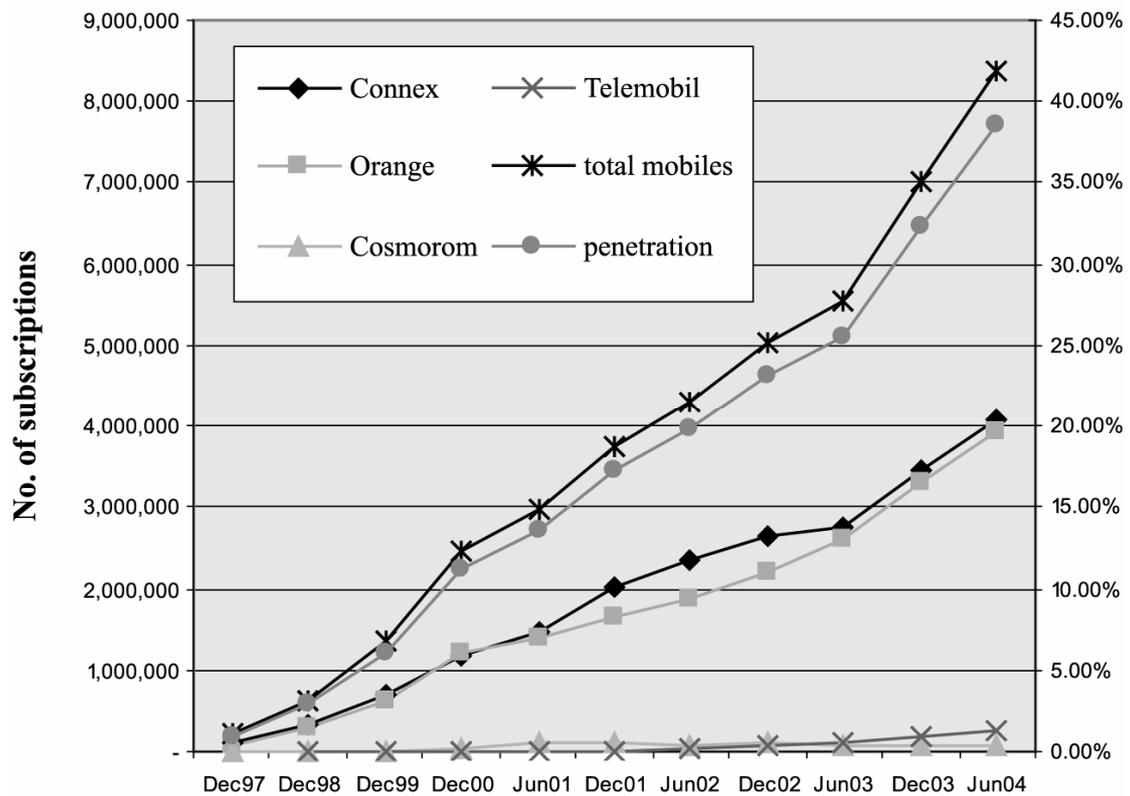
Strangely enough, the first year of liberalization meant the highest increase, of 2,000,000, in ... mobile telephony subscriber base, and the lowest

increase, of 120,000, for ... the liberalized fixed telephony market. The year when mobile telephony subscribers rose by 2m to over 7m, brought another paradox – the failure CosmoRom, the first failure among GSM operators in Europe and maybe in world. Where the Romanian state was not involved in shareholders structure, companies did well. Other reasons behind these could be the lack of market regulating mechanisms, or, maybe, the existence of still imperfect mechanisms.

The liberalization of telecommunications seems to have had an inappropriate timing in Romania. First of all, it occurred too late, when the mobile telephony boom strongly decreased the interest for fixed line business. Also, liberalization appeared in the context of world telecommunication crisis, which strongly reduced telecom investments and made financing a difficult task. One should also consider the fixed telephony recession in USA and Europe – subscribers base and turnover decreasing continuously. Also, even in Central European countries, with a macroeconomic status weaker than the EU, classical fixed telephony entered a crisis. The post-liberalization landscape seems to be not so interesting, as long as two markets, local and interurban – accounting for 80-90% of total turnover have few competitors.

Table 5.

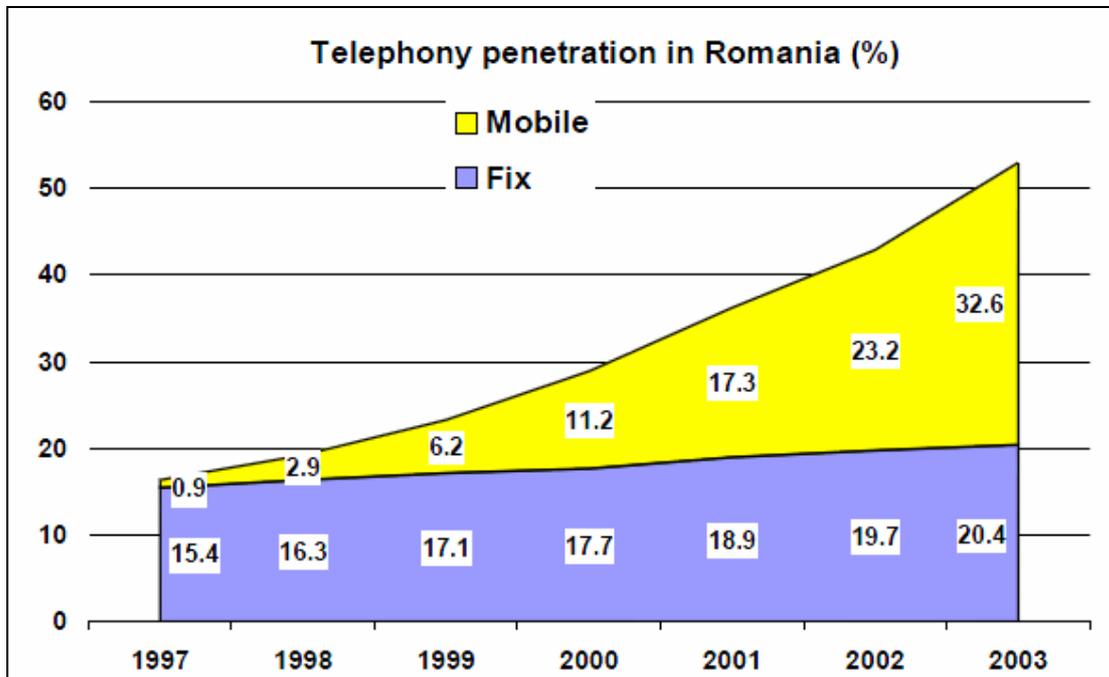
Evolution of mobile subscription per each operator



Source: ANRC, MCTI, press releases of mobile operators

But the situation is not completely dull either, as the international market is very active: numerous competitors, most of them with small turnover, are fighting to arbitrate, as long as possible, between RomTelecom tariffs and VoIP tariffs in a price sensitive market. The result: a dramatic decrease of international tariffs and a slight increase of local tariffs – all too far from tariff rebalancing. The Romanian government is also intending to spur competition on the liberalized market, more precisely three ministries (MCIT, MLPTL, MCE), are each trying to launch their own operator: POSTelecom, Telecomunicatii CFR, Teletrans. Late in 2003, the first two competitors on local market commercially launched telephony services: Atlas Telecom (Oradea, November 17th) and Astral Telecom (Bucharest, Galati, Brăila and Cluj December 3rd). On April 6th, 2004, RCS/RDS also launched their fixed line services. By the end of 2003, telephony penetration in Romania was 53%, out of which 32.6% represents mobile telephony contribution.

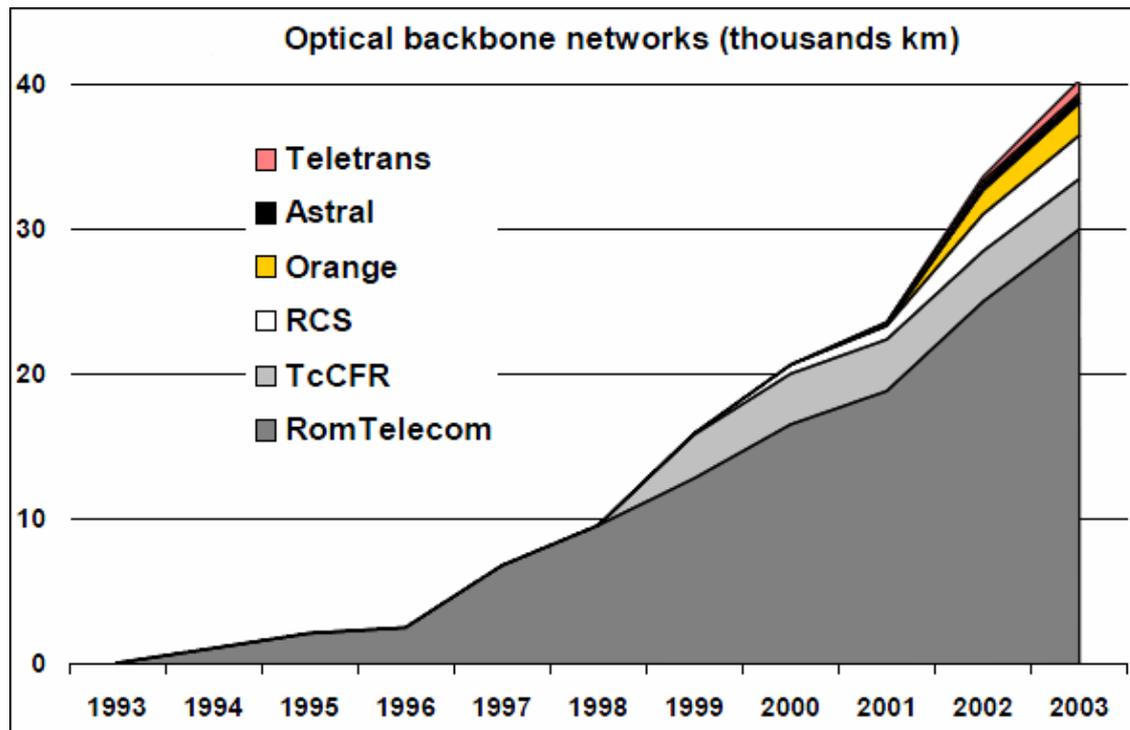
Table 6.



source: Romanian Academic Society(2003)

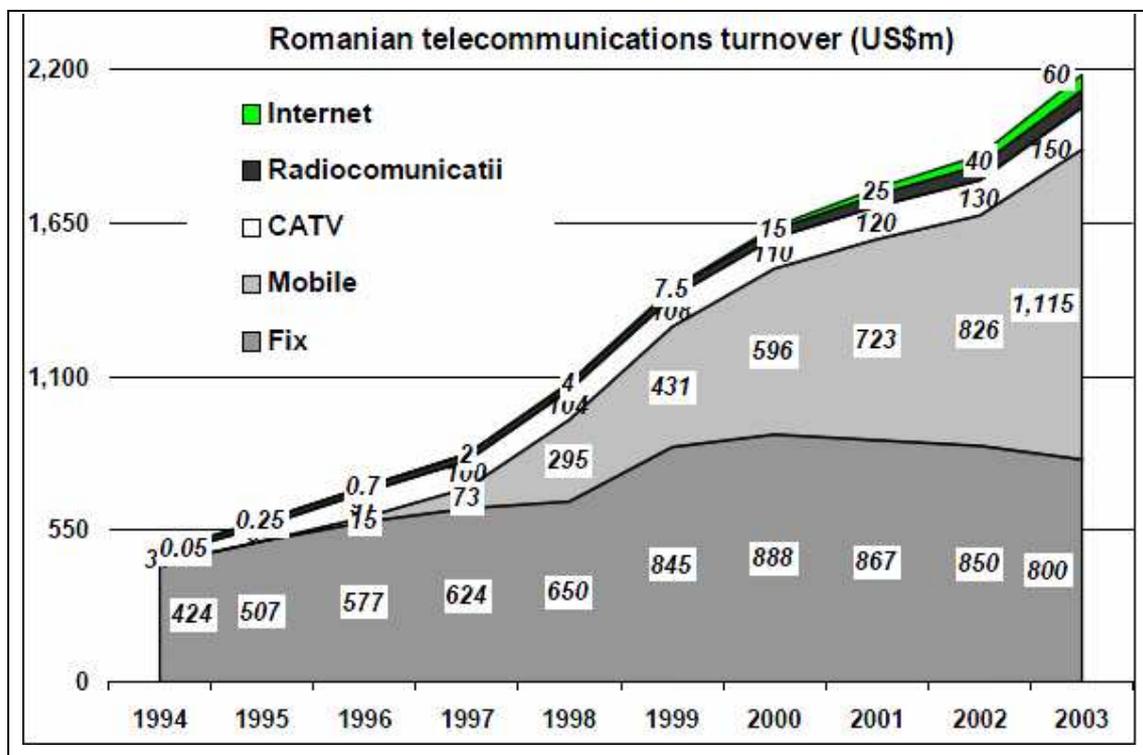
In 2003, in Romania the optical backbone networks length totaled about 40,000 Km, RomTelecom being the leader on market, followed by Telecomunicații CFR and RCS. Radiocomunicații also operates a 2,500 Km radio- relay backbone network. For time being the existing networks seem sufficient for current usage. Romanian telecommunications turnover has continuously increased in past years, the growth engine being the mobile telephony, more precisely the GSM900 operators (Connex and Orange). Together, they account for US\$1.06bn, namely about 50% of total Romanian telecommunications turnover. If turnover from cable TV and Internet (totally owned by private capital) is added, one could see a decreasing weight of state capital in Romanian telecommunications turnover.

Table 7.



Source: Romanian Academic Society (2003)

Table 8.



source: Romanian Academic Society(2003)

4. Privatisation and Investments

The legal and institutional framework for the privatization process of enterprises in Romania was set up by the Privatization Law, which was adopted in 1991. During 1991 the legal conversion of state owned enterprises began and the SOEs were divided in two big categories, the “regii autonome” and the commercial companies. The strategic companies (energy production companies and armament manufacturing companies) were included in the first group, and though they were small in number, they tended to be large in size and were not included in any privatization program until 1997. Unfortunately the privatization law was vague enough and as a result many companies that were not strategic at all, such as trade, construction and tobacco companies were included in the regii autonome. The companies of the second group were reorganized and were forced to commercialize and to become either joint-stock companies or limited liability companies, with the state as their official owner. Their shares were put in the State Ownership Fund and in one of the five Private Ownership Funds. The first fund received 70 % of each company's share and the second one the remaining 30%.

The SOF was a state holding organization, similar to others formed in the rest transition countries. In December 2000, The State Ownership Fund was dissolved and a new institution was created: the Authority for Privatization and Management of State Ownership, tasked with the monitoring of the trade companies, the re-organization of the trade companies and the granting of financial support. In May 2004, the institution underwent a new re-organization and the Authority for State Assets Recovery was created, public institution subordinated to the Government of Romania. The POFs were regional institutions and were established to carry out the voucher-privatization, through which the shares of the commercial companies were to be distributed to the Romanian population in the form of vouchers. Also for the privatization of large enterprises, the Romanian government established the National Agency for Restructuring, which was sponsored by the European Union.

4.1 The stages of privatization

Three stages of privatization can be identified: During the early period (1992 till 1995) management and employee buyouts became the norm in Romania and there was mainly the privatization of small enterprises. The second period (1995 till 1996) is characterized by mass privatization, which was made possible because of certain changes in the economy such as: the drop of the inflation rate, the increase of industrial output, the change of peoples' attitude towards private ownership and the increase of foreign direct investments due to the introduction of new laws and governmental policies. The third period (1996 and onwards) is characterised by selective privatization and with the assistance of the IMF, the World Bank and the European Union, Romania proceeded to the privatization of large industrial state owned enterprises. The methods used during the privatization process in Romania were management employee buyouts, private offers, direct investment and a combination of direct investment and management-employee buyouts.

In 1997 privatization was intensified and new laws were introduced. In 1998 it was the first time that the focus was sifted from small and medium sized enterprises to larger enterprises whose privatization has been overlooked due the potentially unfavourable political and social consequences. Between 1998 and 2000 we have the privatization of the Romanian Bank for Development, Romtelecom, Banc Post, Dacia, Tulcea and Braila shipyards, large state owned enterprises in the cement industry as well as major breweries etc.

The privatization process in Romania was accelerated because of the dissolution of the SOF and the creation of the Authority for Privatization and Management of State Ownership in 2000 and the re-organization of this institution and its transformation into the Authority for State Assets Recovery in 2004.

The reform in 2003 (coinciding with a new dialling number scheme) meant that Romanians could choose their operator, while the operating companies could select the best connection solutions and provide their own international fixed communication services. The hope was that competition

would extend fixed telephony to half of all Romanians in 10 years compared with a fifth in 2002. It came at a time of technological convergence involving the Global System for Mobile Communications (GSM), Demand Assignment Multiple Access (DAMA) as well as CDMA and broadband (BB): the UMTS (Universal Mobile Telecommunications System) involving cellular public mobile radio technology: the so-called 3G or third generation that has revolutionised business and paved the way for innovations such as science and technology parks where companies need only bring their own computer to engage with other facilities being provided by the park management.

Liberation immediately triggered increased foreign investment and reduced tariffs (especially for international calls: a 'luxury' that became accessible almost overnight). At the end of 2004 RT's 4.53mIn customers were complemented by 21,700 using 49 alternative land-line networks (of which 16 provided a national service while another 13 offered landline-mobile links and international services). These competitors emerged in late 2003 with the prospect of commercial battles in 2004 following the negotiation of 'interconnectivity' i.e. access to RT's local loops by Ancom with the responsibility to maximise benefits for users (diversity, quality and costs).

From the beginning of the transition period, Romania has engaged in a rapid opening-up process of its economy, which has resulted, among others, in attracting significant foreign direct investment (FDI). The presence of foreign firms has grown significantly, which is a sign of increasing economic integration. FDI is a key factor in the process of economic modernization, complementing domestic sources of funding and contributing to raising productivity growth through changes in the sectoral composition of production, technology transfer and greater competition pressures. Foreign investment, bringing technology and capital creates new jobs and contributes to improving the quality of work force. In order to attract FDI, it is necessary to address the challenge of supporting the competitiveness as host country.

The investor's interest for Romania increased in the last years constantly. The cheap and skilled labor force, low taxes, the improvements in the business environment, a positive attitude from foreign partners, a liberal labor code and a favorable geographical location are Romania's main advantages for foreign investors. A direct impact on the FDI level has also the

process accession to the EU that changes the investor's attitude towards the country that now has the status of a member state. But even Romania has become the main destination for the foreign direct investments among the new EU member countries, the FDI decreased in 2007 mostly because of the international circumstances (global crisis and political instability). Therefore, the value of foreign investments in Romania declined in 2007 by around 20% compared to 2006, to 7,069 million Euro.

Table 9.

Distribution per industries of share capital stock subscribed in foreign companies (as of 31 of April 2006)



Source: National Trade Registry Office

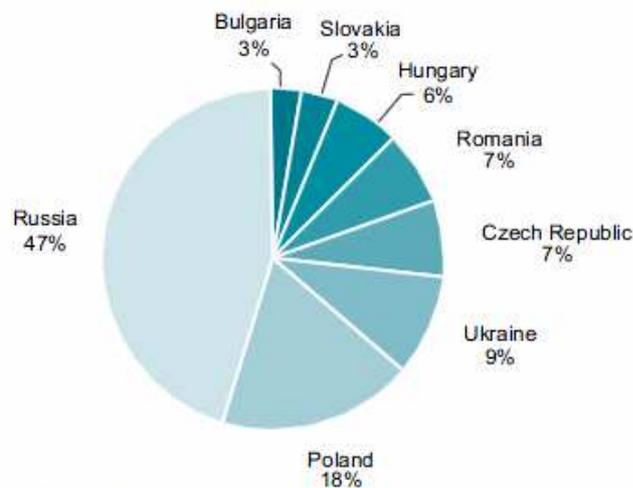
In most parts of the world, the information and telecommunications industry has become the backbone of the information society, both present and future. Electronic commerce has served to open opportunities to small and large businesses alike while fostering the evolution of electronic governments to ease and speed up the business of serving the citizenry. The information and telecommunications industry created world-wide networks interconnecting societies and influencing social and economic development and facilitating knowledge acquisition. At the heart of the information and telecommunications industry is information and communications technology (ICT).

ICT may be viewed as consisting of traditional information media such as newspapers, fixed line telephones, radios, and television. Less traditional components include PCs, Internet, and mobile phones. While building national information infrastructures (NII) remains important nationally, regulation of components of the NII gained center stage in EU member and accession countries with the European Council agreement in Lisbon during March 2000, when the Heads of European Governments adopted a strategy to prepare members and candidate countries for increased economic growth by exploiting information and communications technologies. In order to give further momentum to development of the European information society, the European Commission also launched the eEurope program. This initiative contributed substantially to plans developing an information society in Europe. It was initiated at the end of 2005.

After deregulation, expansion, and modernization over the past 10 years, Romania's telecommunications sector has grown rapidly since 2003, particularly in information technology (IT). In 2006 Romania had the highest per capita ratio of IT specialists in Europe. The market for mobile phone services in Romania is one of the most advanced in the Balkans, with mobile service more widely used than fixed-line. Of the four mobile service providers, three are foreign companies. In 2006 Romania had 14.9 million mobile service subscribers (compared with 10.2 million in 2004); the number of landlines remained stable at about 4.5 million. Internet penetration is weak by European standards, but access has increased rapidly since the early 2000s. By 2005 Romania had an estimated 4.9 million Internet users (compared with 158,000 in 1998) and 56,200 Internet hosts. Online journalism increased significantly in 2005, albeit from a modest starting point. In January 2007 Romania joined full membership of the European Union and have been required to implement all the provisions of EU legislation. This has resulted in the EC opening infringement proceedings to ensure compliance with their obligations, which were supposed to have been met before accession.

Table 10.

Shares (%) of selected countries in the cumulative value (bn) of the telecommunications services market in Central and Eastern Europe, 2009



e - estimate
Note: Bulgaria, Czech Republic, Hungary, Poland, Romania, Russia, Slovakia and Ukraine were included.
Source: PMR Publications, 2010

www.pmrpublications.com

In order to improve fixed-line infrastructure, the government has attracted funds worth of USD 7-8 billion from the EBRD and the World Bank, in a program spanning over 15 years, including provisions for the installation of 500,000 new phone lines and the introduction of digital systems. The new digital switching devices are mainly supplied by joint ventures made by local companies with world leaders of the sector - Alcatel, and Siemens. Between 1997 and 2003 the state sold in two stages a 54% stake with majority voting rights in **RomTelecom**, the national fixed-line telephony supplier, to the Greek telecommunications firm **OTE**. The residual participation of the State of 45% was sold in 2006, through an IPO on the London Stock Exchange. On the 1st of January 2003, the fixed-line telephony market was liberalized and opened to private competition. The Romanian market became one of the most

5. The domain companies

There are five companies to consider with four which are truly national: Cosmote and Zapp (Telemobil) along with Orange and Vodafone now cover virtually the entire population, while RCS&RDS manage just 50% (22% in terms of territory compared with c.90% for the others). The companies do not all use the same technology. CDMA is used by Telemobil while GSM and GPRS (Global Packet Radio Services) are used by Cosmote, Orange and Vodafone. EDGE (Enhanced Data Rates for Global Environment) is used by Orange while UMTS involves all five except Cosmote. However, it is difficult to over-estimate the importance of two companies that must clearly be counted within Romania's top ten culture-changing investors: Mobifon (Connex), now rebranded as Vodafone, with Ted Lattimore as President, and Mobilrom (Orange) under Richard Moat as General Manager. They took out 900 MHz licences at the same time and have spearheaded the mobile communications revolution with mobile banking and e-mail as well as roaming and EDGE. In 2000 Mobilrom obtained the ISO 9001 certificate – a national first for a Romanian GSM mobile telephony company – recognising the company's record in the design, management and supply of GSM TC services across the country, including. landline-mobile links and scope for downloading Java Games. The company had 3.31mln customers in 2003, 4.93 at the end of 2004 and 6.0mln in mid-2005 (ahead of Connex with 5.25mln) and 10.20mln in 2008; while its profits were €238mln in 2003 and €335mln in 2004 with rising turnover (€467–624mln) and investment (€111–145mln). They started to introduce 3G gradually in the major cities in 2006, following experience in Western Europe with EDGE as the national complementary technology. The two companies (along with Cosmote's 2.39mln) had total of 22.24mln customers at the end of 2007.

5.1 Romtelecom (RT)

It was formed in 1991 through the splitting of the old PTTR company (the state post/telegraph/telephone provider) but improvements were initially slow and non-local calls in rural areas typically required queuing at manual exchanges; while development was impeded across the region as a whole by political pressure to hold down prices (discouraging investment) and the 'strategic' nature of phone lines made for prejudice against foreign companies in the privatisation stakes. The outdated, costly and inefficient system was a drag on IT&C as a whole because it was not adapted to transmit large amounts of data. Moreover 85% of RT's old cables were made of lead: they were letting in water and deteriorating so much that replacement became essential. There was a growth in capacity from 180,000 new subscribers in 1996 to 450,000 in 1997, but this was biased strongly to urban areas and rural applicants were still destined to wait up to 20 years for a connection given the then-current rate of progress scored. But rapid change occurred following 35% privatisation of RT in 1998 in favour of Greek Telecom (OTE) which became a significant regional player (with an important stake in Telecom Serbia). OTE succeeded after the competition was reduced to STET (Italy) when French and German companies pulled out; giving rise to conspiracy theories about secret agreements to get the buying price down! Under the deal, giving OTE the right to acquire 16–35% more of the company in the second round (when its holding actually increased to 54%, while government retained 46%), capacity growth of over 500,000 new phones per annum was expected, along with a national data infrastructure including integrated services (ISDN) and Internet access; with a particularly fast expansion in Bucharest. 98% of the system is now automatic and 71% digitalised through optical fibre cable or radio relay.

Although it was always assumed that RT would retain a virtual monopoly in basic telephony there was an expectation of keen competition over valueadded services, data transmission, mobile phones and paging. Hence in June 1996 (long before RT privatisation was launched) the government invited tenders for licences to install and operate a new cellular business involving GSM technology. Licences were issued later in the year to

the two winners that were both consortia including an important local component: Mobilrom involving France Telecom (France) with four Romanian companies: Alcatel Network Romania, Computerland, MediaPro and Tomen Telecom Romania; and Mobilfon that brought together Air Touch Communications (USA) and Telesystem International Wireless (TIW) of Montreal (Canada) with three Romanian companies: Isaf, Logic Telecom and PR. As Romania was brought into the GSM family in 1997, territorial coverage in the first phase focused on the key cities.

The second phase brought in all the towns along these routes not already covered; while the third phase covered 65% of Romanian territory including all cities of 100,000 population and the national roads linking them. Conflict over use of 1,900/1,800MHz frequency was solved by RT/Cosmorom exclusivity until the end of 2002 (as included in the RT privatisation contract of 1998). But rapid development followed the launch of a CDMA digital 450MHz network late in 2001 so that both GSM and CDMA technologies were now offered by four operators, of which two had wide coverage in Romania as well as roaming services in a large number of countries. The market then encouraged third-generation (3G) BB technologies with Internet access and the government announced in 2003 that the IT&C ministry would sell four 3G licences through international tender

RT innovation continues through a deal with Media Galaxy to distribute RT data/Internet services enabling customers to test equipment before buying BB connections. Magyar Telekom (part of Deutsche Telekom) offered its Eufonika service to RT subscribers (using the RT network to reduce national calls by a fifth and international calls by 40%). The current priority is halting the drain of customers through new technology with the launch of an integrated landline/mobile service in collaboration with Cosmote although RT losses in this field rose from €27.7mIn in 2006 to €34.5mIn in 2007. RT also further reduced their workforce to 13,050 in 2005 and 10,000 by the end of 2008 (after previous massive reductions already noted) although they will still have twice as many employees as RCS&RDS and three times as many as Orange and Vodafone. RT has thus been transformed and although it still dominates the fixed telephony market with a more competitive stance over local and international call charges, this is now a declining business and the

company has diversified massively – with €500mln invested during 2005–7 at a time of falling profits – into mobile telephony through a 30% stake in Cosmote (formely Cosmorom), Internet services (through Click Net, currently offering high speed connection combined with computer games) as well as satellite TV competing with the DTH DigiTV and Focus Sat by RCS&RDS from 2004; also Digital Cable System (MaxTV) from 2005 and DTH Television Group (BoomTV) from 2006; not to mention data center facilities (CyberHost). These new services (especially BB) had attracted an estimated half million new customers by June, 2008. In addition RT now claims some 70% of all fixed telephone subscribers despite keen competition in (including a price-war that lowered charges significantly).

5.2 Mobifon/Connex now Vodafone

Vodafone started trading in March 1997, with its trademark Connex, and picked up 140,000 users in one year as the first company in Romania to offer state-of-the-art digital mobile telephony. With funding from ABN AMRO bank and EBRD it set out to cover five new roads each month using solar and aolian energy for data-transmission stations (found to be much more reliable than traditional electrical energy). For phone sales Connex worked with the Greek Germanos Company that started selling batteries in Romania in 1996 before expanding into a chain of 66 shops in 41 towns by 2003 as the independent company Germanos Telecom Romania from 2000. It has also been well-served with software from the Drutt Corporation (a leading global player); while it's public image was raised by support of culture/education and community environment projects.

Transition to Vodafone: The company was granted a mobile phone licence for 1,800MHz in 1999. Subscribers increased to 3.46mln at the end of 2003 and 4.91 a year later when profits were \$226mln. In 2005 the company was the first to offer advanced 3G services to mobile users for a smooth, cost-efficient path from the second generation GSM network; with Ericsson selected as the equipment and services supplier (for core and radio network equipment and system integration) to roll out the new WCDMA (Wideband

Code Division Multiple Access) network. The Nokia 6630 was offered at its 3G launch: the world's smallest megapixel phone for both the GSM and W-CDMA networks; and the first in a series of 3G-enabled handsets providing email (including downloading of attachments at speeds of up to 384kilobites/sec, mobile BB access to multimedia content, live video streaming and video conferencing. Meanwhile rebranding occurred as Vodafone (UK) acquired the \$3.0bln interest of TIW (Telesytem International Wireless) in the largest takeover in Romanian history to increase their share from 20 to 99%. Vodafone have now integrated Mobifon into its international operations to provide a wider range of services and generate more aggressive competition; they also have an interest in Oskar (Czech Republic) alongside their existing investments in Hungary and Poland. This is good for Romania in the sense that the cellphone market is now contested between two of the three leading world businesses: Vodafone and Orange; and certainly Romanians seem pleased that Vodafone is interested in them!

In 2007 Vodafone acquired the Petrocom chain of 57 shops as well as 66% of the former leading Orange partner Proton Technologies (started by in 1999 by Gabriel Sandu, then a young man of 23). Another Vodafone takeover target at a time when independent GSM companies (like Tel Sim GSM which has been taken over by Germanos) have taken the exit option given the maturing market and a slower growth in client numbers. Orange meanwhile are increasing their own chain of shops to 86 (it could reach 100) and their arrangements with the Fonomat chain (which has also acquired the 'Plus GSM' chain established in Cluj by businessman Razvan Ciuc): by contrast Vodafone does not have partnerships with GSM retail chains favoured by Cosmote as well as Orange. Indeed Orange have around 1,000 including a substantial chain of 130 owned by GSM Retail and developed by Silvia & Zsolt Fodor who started in Cluj in 1997 (and were rumoured to be considering disposal of the business – and also their 'Mobile Distribution' company selling Orange and Vodafone cards – in order to realise €40mln to invest in real estate).

5.3 Telemobil (Zapp Network)

This was the first cellular telephony operator on the Romanian market with an NMT licence in 1992 and it launched the first 3G mobile network on 450MHz wavelength based on CDMA technology at the end of 2001 in 15 towns and along major roads. But in 2002 this technology was introduced under the new name of Zapp Mobile, following a \$94mln loan agreement with Creditanstalt, Raiffeisen, Citibank Romania and Black Sea Trade & Development Bank to develop the network and improve services with the hope of having the same cover as GSM operators within six months. It is the only mobile operator providing mobile subscribers with voice and high speed data (up to 2.4 megabites/sec), communications services and multimedia. It uses Starent ST16 Intelligent Mobile Gateway by the American Starent Network Corporation (SNC) – ‘the preferred next generation solution for worldwide mobile operators’ – to provide BB Internet services. The Zapp-SNC partnership shows how CDMA technologies enable 450MHz analogue operators to use existing infrastructure to operate advanced wireless services. Landline-mobile links are also provided.

Zapp has progressed through four annual phases to cover 78% of the territory and 90% of the population in 2005 (240 towns, 1,500 other localities and 6,300kms of national roads) with turnover rising from \$14mln in 2002 to \$52mln in 2003 and \$93mln in 2004. 2006 saw Telemobil awarded one of the two remaining 3G licences (for 15 years extendable for 10 more) while the other winner was RCS&RDS with ‘DigiMobil’: the licences related to the use of radio frequency for provision of 3G public networks, following the World Radiocommunications Conference of that year. With particular strength in the corporate sector, the company reached 0.5mln customers in 2007 with a mobile service in 19 cities (the larger county centres) which has now advanced to 24 and is set to increase to 62. Meanwhile it continues to operate a nationwide system using CDMA technology. As part of Inquam Romania (owned mainly by the American company Qualcomm) there has evidently been difficulty getting capital for promotion and network expansion, but the situation has improved since a 50% stake in Inquam was taken by the Arab

group Saudi Oger owned by former Lebanese prime minister Rafis Hariri. With €70mIn invested during the first half of 2009 alone the company has seen a big increase in business for mobile Internet use and data services.

6. Competition and Market Share

The telecommunications sector has been deregulated, expanded and modernised. Although it remains underdeveloped by regional standards, progress has been rapid in recent years. Public operators have been granted autonomy and are scheduled to be fully privatised; private operators have proliferated in mobile telephony, cable television, radio broadcasting, data transmission and fixed satellite very small aperture terminal (VSAT) communications spaces. Fixed lines numbered an estimated 4.2m at the end of 2006, representing a penetration rate of only 19.5%, which is low even by regional standards. However, according to data from the National Communication Authority (ANC) the number of fixed lines increased significantly, to 5m at the end of 2008, boosting the penetration rate to 23.5%. Telephone density varies considerably from county to county, ranging from 51% in the capital, Bucharest, to about 10% in Dimbovita. Despite the increase in 2008, the number of fixed lines is expected to decline over the forecast period. Fixed telephony is declining throughout eastern Europe as mobile usage increasingly replaces fixedline usage.

Table 12. Telecoms expenditure in Europe (2004-2013)

Telecoms expenditure	2004 ^a	2005 ^a	2006 ^b	2007 ^b	2008 ^b	2009 ^c	2010 ^c	2011 ^c	2012 ^c	2013 ^c
Telecoms investment (% of GDP)	1.0	0.9 ^b	0.8	0.7	0.7	0.5	0.5	0.5	0.5	0.5
Fixed telecoms revenue (US\$ m)	947	1,058	1,139	1,206	1,221	813	752	712	700	691
Mobile telecoms revenue (US\$ m)	1,379	1,877	2,610 ^a	3,345	3,774	2,905	2,982	3,225	3,636	4,124

^a Actual. ^b Economist Intelligence Unit estimates. ^c Economist Intelligence Unit forecasts.

Source: Economist Intelligence Unit.

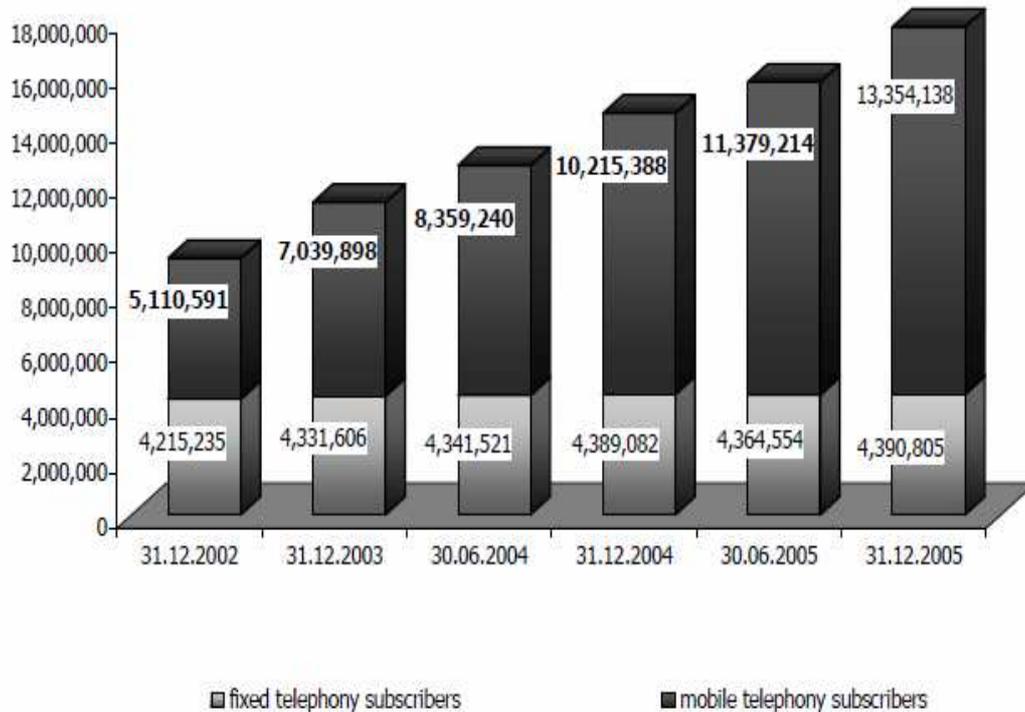
The new fixed networks, dubbed "alternative fixed lines" by the ANC, have been developing rapidly at the expense of the former monopoly, Romtelecom. The number of fixed lines belonging to alternative operators had surpassed 20% of fixed lines by the end of 2006. Strong demand has led to extremely impressive growth in mobile telephony over the past five years. Mobile penetration surpassed fixed-line penetration in 2001, and by 2007 mobile subscribers exceeded fixed-line clients by a ratio of more than five to one. The number of mobile subscribers was estimated at over 24m at the end of 2007, representing a penetration rate of about 112%. This segment continued to grow quickly in 2008, with the number of subscribers rising to around 28.6m, representing a penetration rate of more than 130%.

The telecoms market (fixed telephony, mobile telephony, the Internet and other data-transmission services) was worth an estimated \$5bn in 2007, compared with \$4bn in 2006 (an increase of 25% year on year), according to data from the ANC. The strong increase in US dollar terms in recent years indicates strong consumption growth, driven by a fast-growing economy, rising employment, and robust real growth of wages and credit. A further important factor is the decline in tariffs (mainly set in US dollars) for international telephony, mobile services and Internet access!a trend that is expected to continue over the next five years.

The mobile telephone market was worth an estimated US\$3.8bn in 2008, according to the International Telecommunication Union (ITU), up from US\$3.3bn in 2007. The mobile telephone penetration rate accelerated to 112 subscriptions per 100 people at the end of 2007, from 86 per 100 people at the end of 2006, and rose further, to 133 per 100 people at the end of 2008. This is high by international standards, outstripping many countries in western Europe, for example. However, the ANC estimates that about 14% of valid SIM cards are inactive. This would mean that the total number of active SIM cards in 2008 was 24.5m, giving a penetration rate of 114 per 100 people. Nevertheless, this penetration rate is still high, and given this, it is likely that growth rates of mobile subscribers will not be as rapid in the coming years. However, coverage is likely to surpass 140% by 2011, with most of the growth coming from the data services segment.

Table 13.

Evolution of the number of users of fixed telephone services vs. evolution of the number of users of mobile telephone services (2002-2005)



Source: ANRC, according to the statistical data reported by the providers of electronic communications networks and services

The fixed-line telephony market was liberalised on January 1st 2003, breaking the monopoly of the operator, Romtelecom, in which OTE (Greece) has a 54% stake. The government has postponed the planned sale of its 46% share on the Bucharest Stock Exchange (BSE) via an initial public offering (IPO) and has fixed no firm date for this. Romtelecom still controls most of the local fixed-line market, accounting for about 75% in 2007, but its share has declined from 90% in 2005 as a result of fierce competition from a number of alternative operators. By mid-2007 there were about 70 companies besides

Romtelecom providing fixed telephony services and accounting for 25% of the market. In the first half of 2007 only four new alternative fixed telephony service providers were registered.

Romania is potentially the second-largest telecoms market in central and eastern Europe (after Poland), and offers significant growth potential in the fixed, mobile and Internet sectors, especially now that the market has been liberalised and is becoming more competitive. Liberalisation has led to a fall in tariffs!owing to greater competition!enhanced quality and diversified services. Romtelecom has gradually extended its fibre-optic network and has initiated the deployment of new generation networks, allowing for integrated telecoms service offers, covering voice, data and virtual private network (VPN), Internet, and video services. In December 2006 OTE pledged to invest 500m US\$630m) in the Romtelecom network over the next few years to upgrade the digital and Internet protocol (IP) services. By June 2007 Romtelecom had completed the digitisation of its services.

Following the market's deregulation, those in the best position to offer fixed telephony, and thus to compete with Romtelecom, are cable television operators, Internet service providers (ISPs), mobile communications operators and large public utilities. In keeping with global trends, and now that the Romtelecom network has been completely digitised, local telecoms operators are providing an increasing number of integrated services, including data, roadband, voice over Internet protocol (VoIP) and television services.

A significant development on the market in October 2008 was the launch of telephone number portability, which should enhance competition by freeing customers to change their provider without having to change their telephone number. UTI Systems drew up the centralised database for number portability, in collaboration with Porthus (Belgium) and Microsoft Romania. According to the original plans, EU Phare funds were to finance 75% of the \$600m project, with the other 25% coming from the ANC. Number portability offers subscribers the option to keep their existing telephone number if and when they decide to switch to a different mobile or fixed-line operator. By June 2009 100,000 numbers had made use of this new system, according to the ANC.

When it comes to mobile services, Romania is one of the most advanced markets in the Balkan region. The most revolutionary development on this market was the launch of the code division multiple access (CDMA) digital 450-mhz network in late 2001. The market currently offers services using Global System for Mobile Communications (GSM) and CDMA technologies.

In February 2008 Nokia (Finland) opened its first mobile telephone assembly plant in Romania in the Tetarom IV industrial park, 20 km from Cluj in central Romania after investing \$60m. By September 2008 Nokia was employing 1,600 people at the plant, and the factory will employ 3,500 when it reaches full capacity. Nokia has not ruled out building a second plant in the same location several years hence, should world market demand for Nokia telephones justify the investment. Other companies supplying parts to Nokia are considering building production facilities close to the mobile telephone plant.

There are four main mobile telephony operators, which have extensive coverage within Romania and also offer roaming services in many countries. The market is encouraging a range of third-generation (3G) technologies, which allow users to access the Internet through their mobile telephones. Orange (France) and Vodafone (UK) gained 15-year 3G licences to use radio frequencies for providing 3G mobile communications in 2004. At the end of 2008 Orange was the market leader, with 10.4m customers, ahead of Vodafone, with 9.7m, representing market shares of 36% and 33%, respectively. COSMOTE, the mobile arm of OTE, experienced dynamic growth in 2007, with 2.8m customers by the end of the third quarter (increasing its market share from about 4% a year earlier to about 13%). This growth continued in 2008, when COSMOTE increased its market share to around 21%. In July 2009 COSMOTE finalised the purchase of Telemobil, which has an estimated market share of 1-2% under the Zapp brand name. However, the main advantage of the acquisition for COSMOTE does not centre solely on boosting its customer base, but rather on the fact that Zapp owns a 3G licence. This gives COSMOTE the potential to develop its mobile business significantly over the forecast period.

The fourth mobile operator is **RCS&RDS**, which at the end of 2008 had an estimated market share of around 8-9%. RCS&RDS launched its 3G network in late 2007. As well as RCS&RDS, five other companies currently supply digital television: ZappMobile, Digital Cable System, DTH Television Group, Focus Sat Romania and Romtelecom.

The ANC further reduced interconnection tariffs for mobile operators from 2009. Reduction of these tariffs is in line with the European Commission's recommendations to promote competition in the market. However, the ANC's decision allows for certain asymmetries, with different interconnection tariffs between different operators; these asymmetries violate the Commission's recommendations, and prompted criticism from Orange and Vodafone.

Conclusion

Comparing the Romanian and EU telecommunication infrastructure one could find significant differences, which are due to general economic conditions and delayed reforms. The liberalization of telecommunications seems to have had an inappropriate timing in Romania. First of all, it occurred too late, when the mobile telephony boom strongly decreased the interest for fixed line business. Also, liberalization appeared in the context of world telecommunication crisis, which strongly reduced telecom investments and made financing a difficult task. From the beginning of the transition period, Romania has engaged in a rapid opening-up process of its economy, which has resulted, among others, in attracting significant foreign direct investment (FDI). The presence of foreign firms has grown significantly, which is a sign of increasing economic integration.

Romania is the second-largest telecoms market in central and eastern Europe (after Poland), and offers significant growth potential in the fixed, mobile and Internet sectors, especially now that the market has been liberalised and is becoming more competitive. For Romania, now is the most challenging phase as the lack of market regulating mechanisms, or, maybe, the existence of still imperfect mechanisms is still troubling her. The matter is if Romania will continue the competitive role in Europe and if a crisis can harm what was succeeded in the last decade. Also how promising is Romania, considering the fact that in less of a decade managed to become second in that field. These are questions open to Romania to answer in the future.

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