# ANALYSIS OF LIBERALISATION OF FIXED TELEPHONE COMMUNICATION MARKET IN LITHUANIA

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***Abstract.*** *This paper deals with the analysis of a relevant issue, regarding the liberalisation of the fixed telephone communication. The paper also deals with the characteristic features of monopoly markets, evaluates market power, both before liberalisation of fixed telephone communication and following the removal of monopoly powers. The paper includes an extensive discussion of the evaluation of barriers preventing entry in the market. It also determines the market power of Lietuvos telekomas (Teo LT AB) fixed telephone communication, based on various market concentration indicators. The purpose of the article is to present the analysis of the liberalization of the fixed telephone communication market in Lithuania and to reveal the inter-coherence of theoretical and practical elements of the liberalization.*

***Key words:*** *Key words: fixed telephone communication, market liberalization, entry barriers, market power, competitive advantage.*

## Introduction

The liberalisation of telecommunication sector in Europe started in around 1990. When the competition was gradually introduced, specific guide loops, providing for the purposes and stages of this process, were followed[1].

The research of the liberalisation of the fixed telephone communication market in Lithuania is based on the analysis of the activity of Teo LT, AB, once a monopolist in the market, which upon the removal of the exclusive rights of this enterprise, was given the development of the fixed telephone communication market in a new legal and economic environment.

This paper concentrates on the elements of qualitative research.

*The phenomenon under investigation* is the liberalisation process of the fixed telephone communication market in Lithuania. This undoubtedly represents an effect, depending on the legal basis and measures taken by the institutions in charge of the monitoring of theliberalisation process. The activity of market players and their

[1] See J. Faul and A.Nikpay. The EC Law of Competition. 2nd ed. Oxford University Press Inc., New York, 2007.

response to the market liberalisation environment is also very important. The paper therefore distinguishes the dependent and independent variables. *A dependent variable* represents due and adequate liberalisation of the fixed telephone communication market. The following variables are attributed to the independent variables:

1) liberalisation environment of fixed telephone communication market;
2) market liberalisation measures and complexity thereof;
3) monitoring of the development and liberalisation of the electronic communication sector and measures affecting the changes under way.

Qualitative research is based also on the quantitative variables; these allow for impartiality with regard to the object under investigation. In the case of qualitative research, both document analysis method and the interpretation of quantitative data and situation were applied. The research on marker liberalisation included the analysis of formal documents including the European Union legislation (directives, recommendations, judgements of the European Court of Justice, and press releases of the European Commission), laws of the Republic of Lithuania, resolutions of the Government, judgements of Constitutional Court of the Republic of Lithuania, legislation and resolutions approved by the Competition Council and Communications Regulatory Authority (CRA) as governing the liberalisation of electronic communication, regulation of competition, and economic and legal assumptions of market liberalisation. To evaluate the barriers preventing the entry into the market, the information presented in the reports of market research by the CRA allowing evaluation of the issues in the field of competition was used. The qualitative research also involved the method of economic analysis and included the evaluation of economic indicators, their interpretation as well as the comparative data analysis.

The research employed the reliable secondary publicly available data sources. The research has employed no corporate data of confidential character. The key source of secondary information is periodic reports on electronic communication market published by the CRA. The CRA collects these data on a regular basis from the players of the electronic communication market; these players provide the said data as obliged by the provisions of the schedule on general conditions of engaging in the electronic communication activity, approved by the order of the director of the CRA. The reports include the data allowing for impartial evaluation o fthe situation in the market.

Comparative analysis on the EU level as regards the situation in Lithuania employed the European Commission reports on the electronic communication markets and their regulation.

Calculations based on Lerner index involve the data presented in the financial reports by TEO, which the company makes publicly available in both its website and the website of the Securities Commission of the Republic of Lithuania.

## *Liberalization process of the public fixed telephone communications market*

In Europe the process of the liberalization in the market of telecommunications has been analyzed since the ninth decade of

the past century. The first European Union directive[2] in the field of electronic communications concerning the liberalization of the given market was adopted in 1990, subsequent to the Green Paper on the development of the common market for telecommunications services and equipment in 1987. The Directive provided that all Member States of the EU had to abolish all special and exclusive rights granted for the provision of telecommunication services, herewith establishing an exception for the provision of voice telephony services. The provision of telex, mobile radiotelephony, radio paging and satellite services was outside the scope of the Directive too. According to the provisions of the Directive, Member States had to inform the Commission of the measures taken or draft measures introduced as regards the implementation of it by 31 December 1990. Although this Directive has introduced the foundations for the liberalization of electronic communications market, its provisions were not applicable to the voice telephony services, therefore long-time operators could maintain their monopolist rights in the field of, *inter alia*, fixed telephone communications. On the other hand, one of the main positive aspects of the Directive was the obligation for the Member States to partly abolish the granted special and exclusive rights for the provision of telecommunication infrastructure (network) – Member States had to ensure that the telecommunication operators being in possession of the telecommunication structure, would provide others with the access to the infrastructure on a non-discriminatory basis; the access had to be provided within a reasonable period. This obligation, i.e. permitting the lease of the telecommunication infrastructure that belonged to the long-time operators, can be regarded as one of the main phases in pursuance of the opening of the fixed telephone communications market for competition.

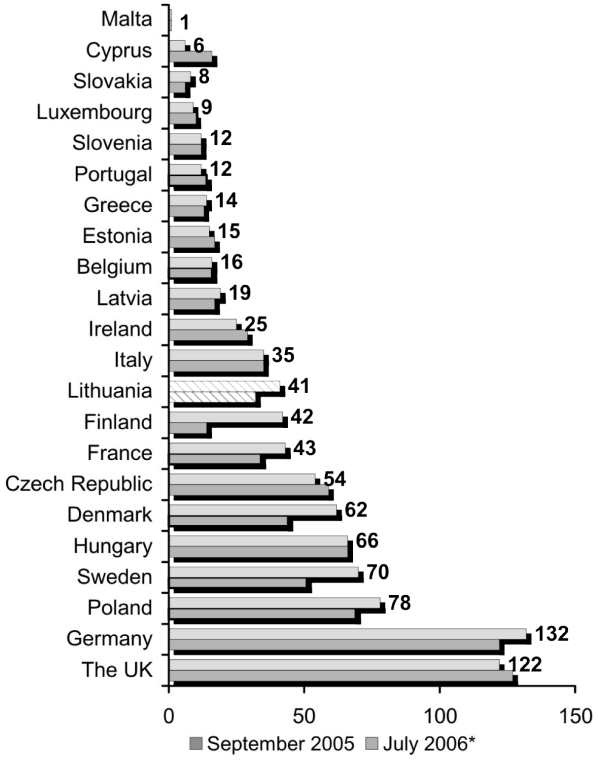
The second EU Directive[3] devoted to the liberalization of the electronic communications market was adopted in 1996. It obliged the Member States to remove all special and exclusive rights granted for undertakings as regards the provision of voice telephony services by 1 January 1998. It should be noted that for those Member States, the telecommunication infrastructure whereof was less developed, a transitional period of five years for the implementation of the Directive was granted (Spain, Ireland, Greece and Portugal).

In 2002 the third Directive[4] as regards the Liberalization of electronic communications market was adopted. This Directive repealed all anterior directives in the field of electronic communications liberalization, yet some provisions of the anterior directives were transposed to the third Directive as well. The major change concerns the replacement of the definitions "telecommunication services" and "telecommunication networks" to "electronic communication services" and "electronic communication networks". This replacement of definitions

[2] Commission Directive 90/388/EEC of 28 June 1990 on competition in the markets for telecommunications services. Official Journal L 192, 24/07/1990, p. 10–16.

[3] Commission Directive 96/19/EC of 13 March 1996 amending Directive 90/388/EEC with regard to the implementation of full competition in telecommunications market. Official Journal L 74, 22/03/1996, p. 13–24.

[4] Commission Directive 2002/77/EC of 16 September 2002 on competition in the markets for electronic communications networks and services. Official Journal L 249, 17/09/2002, p. 21–26.




*Picture 1.* ***The number of the participants, acting on the fixed communication markets of the EU Member States in 2005–2006***

*Sources*: European Electronic Communications Regulations and Markets 2005 (11th Report), European Commission, Brussels 2006;
European Electronic Communications Regulation and Markets 2006 (12th Report), European Commission, Brussels 2007.

was influenced by the technological progress and the new kinds of services, such as *voice over IP*, as well as by the possibility of transmission of radio and television programs over the telecommunication networks. The Directive reiterated once again that "*Member States must remove (if they have not already done so) exclusive and special rights for the provision of all electronic communications networks, not just those for the provision of electronic communications services and should ensure that undertakings are entitled to provide such services without prejudice to the provisions of Directives 2002/19/EC, 2002/20/EC, 2002/21/EC and 2002/22/EC*". The provision of the Directive, which provides, that Member States should apply the general permission regime instead of licenses as regards the provision of electronic communications services and the establishment and provision of electronic communication networks, is very important. It was an instrument to remove the barrier to the entry into the market, which had to arise if state institutions required a license for the provision of electronic communication services. This order of the general permission can be applied in the cases which do not concern the limited supply, for example, when there are no limited radio frequencies, however, for the provision of such services as fixed telephone communications or networks, data transmission by non-mobile networks the possession of licenses may not be required. The Directive also provides that Member States must take all measures necessary to ensure that any undertaking is en-

titled to provide electronic communications services or to establish, extend or provide electronic communications networks.

According to the European Commission the real degree of competition in the public fixed telephone communications segment is also reflected by the number of actually acting operators and service providers. Having regard to the data of the 12th Report of the Commission of the EC, the indicator in Lithuania was the fourth largest among the EU-10 Member States, and 2 per cent greater than the European Union average – 40.13. The highest number of market participants was found in Germany, Poland, the United Kingdom and Sweden (see Picture 1).

### *Evaluation of barriers preventing the entry into the market*

The paper analyses the remaining barriers preventing the entry into the fixed telephone telecommunication market, discusses the legal system governing electronic communication in Lithuania as well as market conduct by TEO. The paper analyses and evaluates the structural and strategic barriers preventing the entry into the market pursuant to OECD classification. Barriers preventing the entry into the market indicate that market is still not free and competitive. Therefore, this allows the evaluation of the liberalisation level.

The Law on Telecommunications as amended in 1998 (the Law on Telecommunications of the Republic of Lithuania 1998)[5] provides that the market of the common fixed telephone communication network operation and telecommunication services in Lithuania shall be liberal beginning with 31 December 2002. Lietuvos telekomas AB was referred to as the key common fixed telephone communication operator.[6] Article 8 of the Law on Telecommunications provided that key common fixed telephone communication operator shall be entitled, until the above date, to act as the sole common fixed telephone communication operator and common fixed telephone communication service provider. Prior to the date, no additional licences or authorisations may be issued, where these could affect the operating conditions for key common fixed telephone communication operator.

In 1999, the Constitutional Court of the Republic of Lithuania delivered a ruling on the issue whether relevant provisions of the Law on Telecommunications, governing monopoly rights of Lietuvos telekomas AB were consistent with the Constitution of the Republic of Lithuania (Ruling of the Constitutional Court of the Republic of Lithuanian of 6 October 1999)[7]. The Constitutional Court ruled that the establishment of exclusive rights in the area of the fixed telephone communication for a certain period accompanied by the temporary restriction of competition in this area should be considered as exceptional legal regulation case of the specific telecommu-

[5] State Gazette Valstybės žinios, 1998, No 56-1548.

[6] Article 2 paragraph 14 of the Law on Telecommunications of the Republic of Lithuania: "14. Key general fixed telephone communication operator is Lietuvos telekomas limited liability company or every other enterprise, successor of Lietuvos telekomas limited liability company, until the telecommunication market is liberalised."

[7] State Gazette Valstybės žinios, 1999, No 85-2548. Available on the Internet: http://www.lrkt.lt/dokumentai/1999/n9l1006a.htm.

nication market during the transition period; it was therefore consistent with provisions of the Constitution of the Republic of Lithuania.

The wording of the ruling includes the statements by Rimantas Antanas Stanikūnas, director of the then State Competition and Consumer Rights Protection Service (currently the Competition Council) regarding object of exclusive rights granted by law to Lietuvos telekomas, limited liability company. He noted that *the object of the exclusive rights is especially broad; consequently it includes anexclusive right to provide voice telephony services between terminal points of fixed market and in essence grants the said enterprise the monopoly rights to production measures regarding every commutation and transmission measures and other infrastructure serving mutual connection to common telecommunication market outside Lithuania; it further establishes the exclusive right of the said enterprise to provide services of the international voice telephony.*"

Given the terms used by the Law on Telecommunication and the case law, the following is the definition of the market where Lietuvos telekomas AB was granted exclusive conditions to operate:

- local telephone communication services provided to users via common fixed telephone communication network;
- national telephone communication services provided to users via common fixed telephone communication network;
- international telephone communication services provided to users via common fixed telephone communication network;
- reverse communication service;
- operation and provision of common fixed telephone communication networks.

Another provision of the law, which enhanced the rights of Lietuvos telekomas AB was Article 8 of the Law; it provided that prior to 31 December 2002, no additional licences or authorisations may be issued, where these could affect the operating conditions for key common fixed telephone communication operator. Provisions in Article 9 of the Law on Telecommunication also granted exclusive rights to operate in the fixed telephone communication services and networks market; this concerns provisions governing the licensing of the telecommunication activity. Licensing was applicable to telecommunication activity, which required limited resources, e.g. radio frequencies and telephone communication numbers. Therefore, those economic entities wishing to provide fixed communication voice telephony services were obliged to obtain a relevant licence since the provision of these services required telephone communication numbers. Therefore, monopoly rights of Lietuvos telekomas AB were reinforced by the further legal restriction of entry into the market, i.e. licensing system in the area of telecommunication activity.

In order to ensure due preparation for the competition in the telecommunication market, a revised version of the Law on Telecommunications was adopted in 2002 (Law on the Amendment of the Law on Telecommunications 2002)[8], which entered into effect on 1 January 2003. The law establishedthe basis for the telecom-

[8] State Gazette Valstybės žinios, 2002, No 75-3215.

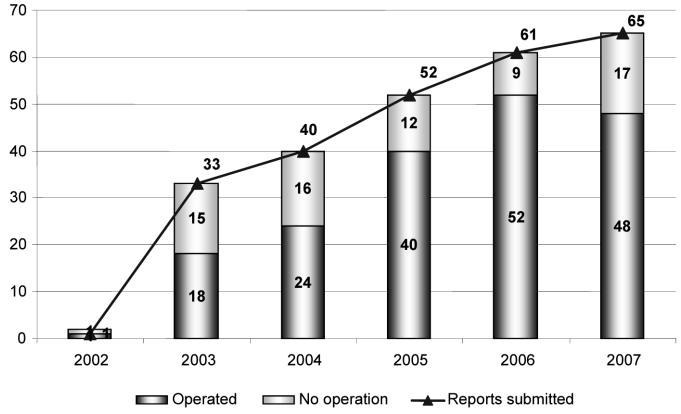
munication regulation in accordance with the requirements of the European Union law, i.e. *"to ensure final demonopolisation of the telecommunication market (de jure) in Lithuania effective 01/01/2003, liberalisation of the market in both formal manner as well as by real presumptions for new operators to enter the market, including small market players, harmonisation of the regulation of telecommunication activity in the Republic of Lithuania with the acquis of the European Union, development of telecommunication operation regulation mechanism, based on efficient management, technological neutrality, functional equivalence, and least possible regulation of limited resources (radio frequencies and numbers), characterised by legal certainty, economic development, competitiveness and user rights' protection, all compatible with dynamic market"*.

This law also replaced the telecommunication activity licensing system as it removed the licensing of the telecommunication activity and introduced the system of general authorisation[9], thereby abolishing the barriers to enter the market; it also established a flexible, detailed and transparent system on the provision of resources required for to the telecommunication activity (including radio frequencies and telephone communication numbers) (including granting of limited resources by open competition and auction). Given that this included the legal removal of monopoly, and detailed regulation of operators holding a considerable influence in the market, ensured that every market player was able to compete on equal grounds and facilitated the entry into the market for new players as well as the operation in the market for small economic entities; the law provided for the possibilities for other operators to use local loops of the dominant operator, which enables the reach of subscribers by way of telecommunication network of the historic operator. Measures facilitating the competition include the right of the subscriber to retain the telephone communication number, when the service provider was changed, the type of service or the place of provision (the so-called number portability) as well as individual and preliminary selection of the service provider. This law established both legal and economic conditions and measures for the liberalisation of the telecommunication market with the view to ensure the telecommunication market that in fact was competitive with a greater number of players.

Therefore, the said fact is also demonstrated by the new players in the liberalised market (see Picture 2).

The legal system in effect prior to 1 January 2003 provided no access to the market for the competitors of Lietuvos telekomas AB; this company was therefore the only one providing fixed telephone communication services. However, in the first year, after the market was liberalised, as many as 33 new service providers entered the fixed telephone communication market (filed applications with CRA on the intention to engage in the fixed telephone communication activity) and 18 actually started the provision of services.

[9] In the event of common authorisation, economic entities are entitled to engage in the telecommunication activity with no preliminary authorisation granted by public institutions, in compliance with the requirements applicable to telecommunication activity as prescribed by legislation. Economic entity, wishing to engage in the telecommunication activity, is obliged to inform the national regulation institution thereof.




*Picture 2.* ***Number of economic entities in fixed telephone communication market from 2002 to the end 2007 in Lithuania***

*Source:* Based on the data of regular CRA reports on the electronic communication market in Lithuania. [checked 04/05/2008]. Available on Internet < http://www.rrt.lt/index.php?-1859156062>

The theory of economics, especially the one in the area of the strategic management of micro-economics and enterprises distinguishes two key types of barriers preventing the entry into the market: structural barriers and strategic barriers. The paper now deals with these barriers to the entry into the the market in greater detail..

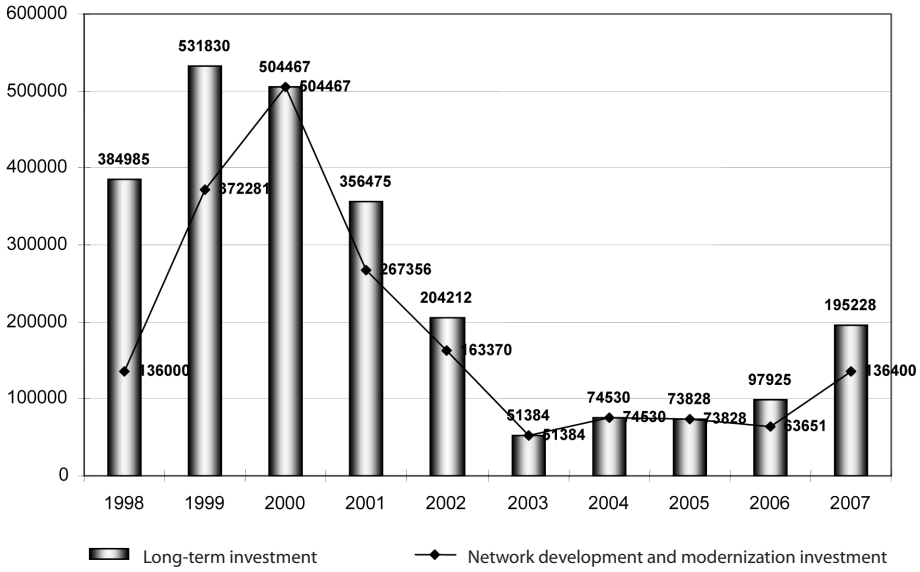
## *Analysis of structural barriers*

Structural barriers of entry into the market relate to the structure and specific nature of the given branch and are more related to costs, demand, and technologies whereas strategic barriers arise due to the tactic premeditated acts of the historic operator.

Commission Recommendation on the relevant product and service markets within the electronic communications sector susceptible to ex ante regulation states, that structural barriers to entry result from the original cost or demand conditions that create asymmetric conditions between the historic operator and the new entrants impeding or preventing the market entry of the latter. High structural barriers preventing the entry into the market are found in those markets that demonstrate high economy of scale or enterprise scale and high sunk costs.

Economy of scale in telecommunication sector is evidenced by the scale of telecommunication infrastructure, where economic entities fail to find the development of the new alternative infrastructure efficient, thereby competing with the historic operator in the market.

The paper analyses long-term (both tangible and intangible) investments by TEO (in case of digital network, computer software is an integral part of hardware) with the view to evaluate the potential of the new market players to develop telecommunication infrastructure identical to that of the historic operator,. TEO infrastructure took a long time to be developed and annual long-term investments varied from dozens to several hundred million (see Picture 3).




*Picture 3.* ***Long-term investment and investment into the network development and modernisation by TEO 1998 – 2007, thousand LTL[10]***

*Source:* Based on data in annual financial reports by TEO 1999 – 2007. [checked 25 March 2008.]. Available on Internet: < http://www.teo.lt/lt/metines_ataskait-1221.html>

As picture 3 shows, TEO was actively preparing ation for the competition; in 1998 – 2002, the company invested approximately LTL 1.5 billion into the network development and modernisation. I In its annual financial statements and operation reports TEO states that since 2003 the larger part of the investment was dedicated to the development of the data transfer and internet network development, information technologies, and since 2006, also to the implementation of new services, including digital television, and IP protocols of voice telephony. As per data of market research performed by CRA in 2006, investment by TEO into the infrastructure over the last 10 years exceeded total investments by every operator of mobile communication in the infrastructure of theelectronic communication over the given period by 31%[11].

Some investment by TEO into the market infrastructure can in part be attributed to the enhancement of the future network capabilities with the view to compete with other service providers at lower cost (effect of sunk costs). TEO network is set in 1.5 million loops (see above), whereas the number of subscriber loops at the end of 2007 amounted to 788.32 thousand[12]. Given these network capabilities, sunk costs reveal the economy of scale and represent aconsiderable source thereof[13]. The fact

[10] TEO publishes no exact data on investment in network development and modernisation 2003–2005; however, annual operation reports state that most of long-term investment was dedicated to network development.

[11] Available on the Internet: http://www.rrt.lt/index.php?-1548423541.

[12] Available on the Internet: http://www.rrt.lt/index.php?1654375079.

[13] Available on the Internet: http://www.oecd.org/dataoecd/43/49/36344429.pdf.

that TEO has network of fixed telephone communication set at 1.5 million loops whereas the number of current subscribers only accounting for half of the network capabilities means that costs related to the connection of an additional subscriber or marginal costs, especially in densely populated areas are close to none (by contrast, in rural areas connection of every new subscriber to the network may require further costs related to the covering of the last mile to the terminal subscriber). This also evidences the economy of scale.

The analysis therefore supports the conclusion that TEO in fact enjoys a competitive advantage in the market due to market economy, which is revealed by the scale of TEO infrastructure and network capabilities giving TEO an advantage due to the marginal costs that are close to none. No new competitor of TEO would find it to its economic advantage to develop such infrastructure covering entire Lithuania, be it short or long-term.

The initial investment into the infrastructure of the telecommunication networks and modernisation thereof evidence large capital costs; these investments are definitely on large scale.

Given that TEO enjoys the status of the historic operator having the infrastructure of electronic communication developed in entire Lithuania as well as the largest number of subscribers and being a vertically integrated enterprise providing market wholesale and retail services, one can come to the conclusion that the costs of the said company on every stage of service provision are less than those incurred by any other provider of fixed telephone communication services.

Using the same telecommunication network and infrastructure, apart from retail (local, national, international) public fixed telephone communication services for residents and business alike, TEO provides a variety of other services including wholesale, internet access, data transfer, network connection, rent of the infrastructure, and wholesale voice telephony services. That is the fact that allows to distribute the infrastructure costs to every of the said services and therefore acquire an advantage with regard to the potential competitors.

The advantage due to economy of scale enjoyed by the enterprise was reinforced when the market became liberal as infrastructure costs were distributed to those services which, given exclusive rights of Lietuvos telekomas AB, being the only provider of the public fixed telephone communication and network services in Lithuania, were not provided prior to 1 January 2003, including: infrastructure rent, wholesale telephony services for other service providers both offering voice telephony services in the retail market and selling telephone call flows in the wholesale market of voice services.

Furthermore, TEO offers payment plans to both private and corporate customers; these integrate services of local, national, and international calls. Table 2 lists the analysis of payment plans.

The analysis of other payment plans for services of the retail fixed telephone communication by the fixed telephone communication service providers[14] (as published

[14] The analysis included payment plans of retail telephone communication services offered by Nacionalinis telekomunikacijų tinklas UAB, Eurocom SIP UAB, Lietuvos geležinkeliai AB, Telekomunikaciju grupa, Penki kontinentai UAB.

*Table 2*. ***TEO voice call payment plans, as of June 2008***

| *Payment plan* | *Plan charge, LTL* | *Local calls* | *National calls (Lithuania)* | *International calls* | *Comments* |
|---|---|---|---|---|---|
| ***For residents*** | | | | | |
| Base | 23 | X | x | X | Calls on base rates of specific services |
| Local | 30 | X | | | Free calls: 30 hours off peak hours, and 2 during peak hours |
| In Lithuania | 30 | X | x | | Free calls: 2 hours in entire TEO network |
| Universal | 50 | X | x | X | Local and national calls in TEO network free of charge |
| World | | | | x | International calls at preferential price |
| Close | 25 | | | x | Unlimited calls to your relative in England, Ireland, US, Spain, Germany or other country |
| ***For businesses*** | | | | | |
| Calls for small business | 11.80 | X | x | x | |
| Calls for business | 60–75 | X | x | x | Preferential rates |
| National calls | 55–95 | X | x | | 5–12 hours free of charge in TEO network at fixed monthly charge. |

in respective websites) shows that most of the said service providers offer services of local, national, and international calls; however, unlike TEO, none of them offer calls for hours free of charge. TEO offers payment plans for the residents and business alike; these offer a possibility to make local, national, and/or international calls at fixed monthly charge and preferential call rates; the length of calls offered free of charge is appealing enough. This enables TEO to enjoy the advantage offered by the economy of scale and product line compared to the companies providing competing telecommunication services.

The CRA in the report on the research of retail fixed telephone communication market states that *"TEO, due to advantages offered by scale and variety, is able to provide retail public telephone communication services at a cost lower than average compared to alternative service providers, thereby restricting both the entry of potential market players in the market and development of competition between economic entities in the market*[15].

TEO reputation has suffered greatly from the policy of changing the voice telephony rates, which included the increase of the local and national call rates and the decrease of those of the international calls. As the majority of calls are local the increase in the rate thereof caused a negative response of the subscribers of Lietuvos telekomas AB. The rate-changing policy

[15] Available on the Internet: http://www.rrt.lt/index.php?-1548423541

was in part responsible for the fact that the number of subscribers of Lietuvos telekomas AB fell almost by 217 thousand (from 1.15 million by the end 1999 to 0.94 million at the end 2002)[16].

Seeking to improve its image and present a new operating strategy TEO changed its name from Lietuvos telekomas AB to TEO LT AB in 2006. The general public was informed that the change of corporate?name is a part of the development of a new image. The reputation effect in the case of TEO is therefore considered as another barrier preventing new operators from entering the market.

This effect is stronger when service is used by a larger number of users. The analysis whether this barrier preventing the entry into the market manifests itself in the case of TEO requires a proof of universal character of the very service and the benefit that it gives to consumers.

Another feature demonstrating a universal character of the fixed telephone communication service is the obligation imposed on TEO to provide universal services[17] on the entire territory of the Republic of Lithuania. Currently TEO represents the only universal service provider. The user scope in TEO network is also demonstrated by the statistics since at the end of 2007 in terms of subscriber numbers TEO possessed 93.82% of public fixed telephone communication services market[18].

Another criterion that demonstrates the network effect is the flow of local calls in the network. According to the data of 2007, the local calls in TEO network accounted for 99.3% of all local calls initiated in TEO network, whereas local calls in the networks of new public fixed telephone communication services providers accounted only for 14.8% of all call initiated in their networks[19]. The base rate of local calls is LTL 0.12 at peak hours and LTL 0.03 off peak hours, whereas the rate of local calls to other fixed telephone communication networks is as much as LTL 0.41 at peak hours and LTL 0.13 off peak hours. In this case, the user can benefit directly when calling TEO subscribers and that is what may affect the choice of user to go for TEO, rather than any other service provider.

The payment plans offered by new service providers also present an opportunity to call in their own network at a favourable price; however, due to small number of users in the said networks, the user may still choose TEO services, rather than the services of other providers, due to preferential pricing of retail services applicable to calls in its own network. A new service provider is therefore obliged to offer considerably more attractive packages for its user so that the subscribers of the historic operator could benefit substantially as compared to the advantages of being the user of the historic operator[20].

Therefore, every user of TEO, be it present or potential, sees a direct benefit

[16] Available on the Internet: http://www.teo.lt/lt/metines_ataskait-1221.html

[17] Article 31 of the Law on Electronic Communications provides that universal services include publicly available telephone services at a fixed location.

[18] Available on the Internet: http://www.rrt.lt/index.php?1654375079

[19] Available on the Internet: http://www.rrt.lt/index.php?1654375079

[20] Available on the Internet: http://www.oecdorg/dataoecd/43/49/36344429.pdf

that being a user of this network brings. There are several ways that new service providers can use to attract the users of the historic operator and new users alike, that is to offer payment plans with the rate of calls to TEO network being similar to the rate of TEO local calls in its own network (however, unless market regulation institutions intervene, it is not possible to set such rates especially when wholesale telecommunications services from TEO are purchased ); another way is to offer related service packages and offer telephony services as additional premium; that is relevant to those companies that employ optical communication networks, e.g. cable TV operators or those companies that rent TEO infrastructure to provide internet services thereby expanding its own user network.

### *Analysis of strategic barriers preventing entry into the market*

In the case of open market, the former monopoly enterprise wishing to impose restrictions on the entry of new competitors ito the market usually, apart from structural barriers, preventing the entry into the market and due to specific character of the economic field, resorts to the tactical acts restricting competition in the market. In this case tactical acts are concealed by the marketing strategies, pricing policy, and are therefore hard to identify, because, when the information on the costs of the enterprise is non existent, it is virtually impossible to prove the application of acts restricting competition.

OECD attributes the following barriers preventing entry in the market to tactical or strategic barriers of the historic operator:

- *Predatory pricing*. Historic operator at given period sets product price lower than its actual costs.
- *Limit pricing*. Historic operator sets a limit pricing strategy whereby prices exceed the costs to a certain degree, however, no new market player would be able to cover its internal costs, where it tries to apply the same prices as the historic operator.
- *Intentional over-investment in the capacity and sunk costs.* This is another method, which allows reducing one's marginal costs without recurring to the limited pricing after an another market player enters the market.

Sunk costs are considered to be one of key barriers preventing the entry into the market in the sector of electronic communication as they require a considerable investment in order to develop an efficient infrastructure of the electronic communication required to provide services on access to the infrastructure, but in the event where the new market player decides to withdraw from the market a small part of the said costs only would be covered[21].

Sunk costs as the barrier preventing the entry into the market in the sector of electronic communication can also be attributed to structural barriers.

- *Fidelity rebates and bundled rebates*. The dominant historic operator offers rebates to its loyal users who have purchased certain number of products from the historic operator. The rebates are offered also in the event of the purchase of several bundled products.

[21] J. Faul and A. Nikpay. The EC Law of Competition. 2nd ed. Oxford University Press Inc., New York, 2007, P.1476 – 1482.

- *Similarity due to product differentiation and advertising*. Product differentiation can have an effect on the user loyalty to a certain market. Advertising has certain cumulative effect whereby trademarks are developed over a certain period of time and therefore new market players find it difficult to replicatethe advertising effect achieved over an extended period of time despite a considerable funding made available for the advertising purposes.
- *Advantage due to tying of services*.
- *Exclusive dealing arrangements*. In the event where product demand exceeds the exclusive right granted to the historic operator to provide a certain number of product, a new market player would have to make less effort to enter the market. However, in the event where the historic operator has entered into long-term commercial contract on the supply of products, new economic entities may find it unattractive to enter the market.
- *Patents.*

*Margin squeeze* is another strategic barrier preventing entry in the market. The margin squeeze manifests itself where the historic operator reduces the difference between the wholesale and retail price by increasing the wholesale price and decreasing the retail price or both decreasing the retail price and increasing the wholesale price, thereby imposing a barrier on the entry into the market or excluding the current market players from the market.

Strategic barriers preventing the entry into the market are among those that restrict most the competition in the market of electronic communication. This is also evidenced by the fines imposed by the European Commission on the historic telecommunication operators of the EU member states: in 2003, German historic operator, *Deutsche Telekom*, faced a fine of EUR 12.6 million for the abuse of its dominant position, as it applied intransparent prices for the access to the fixed telephone communication network (local unbundled access). *Deutsche Telekom* set higher rates to the new market players for the wholesale access to the local loop than users of *Deutsche Telekom* paid for the fixed telephone communication loop (subscriber loop charge)[22]; in 2003, a fine of EUR 10.35 million was imposed on *Wanadoo Interactive,* the subsidiary of *France Télécom* historic operator for the abuse of the dominant position when it applied predatory pricing for the publicly available internet access (ADSL) services (The European Commission established that retail prices applied by the company were less than the costs of the service provider)[23]; in 2007 fine of EUR 151.875 million was imposed on *Telefónica,* Spanish historic operator for the abuse of its dominant position in the market of the wholesale broadband communication services when margin squeeze was applied (from 2001 to December 2006 the difference between the retail and wholesale prices of broadband communication access provided by *Telefónica* on national and regional level alike was insufficient to

[22] Available on the Internet: http://europa.eu/rapid/pressReleasesAction.do?reference=IP/03/717&format=HTML&aged=1&language=EN&guiLanguage=en

[23] Available on the Internet: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/03/1025&format=HTML&aged=1&language=EN&guiLanguage=en>

enable another operator active in the retail market to receive normal profit)[24].

On 5 October 2006 the Competition Council of the Republic of Lithuanian delivered a resolution No 2S-12 wherein it found that TEO abused its dominant position in wholesale ADSL broadband communication market and applied margin squeeze which manifested itself when TEO, a vertically integrated economic entity, applied the wholesale and retail service rates in such way as to prevent other efficient retail market service providers from deriving normal profit and are thereby excluded from the retail market. Such TEO acts were proved to be restricting competition in the market thereby imposing barriers on the potential competitors to enter the market. The Competition Council imposed a fine of LTL 3,011,000 on TEO for the abuse of its dominant position in the wholesale broadband communication service market as it applied margin squeeze and discriminating conditions[25].

Upon completion of the market research of public local and/or national communication services provided to users and recipients of services, except users at fixed location[26], the CRA found that TEO, which represented a vertically integrated economic entity and employing an advanced infrastructure in the territorial respect and holding 93.08% of national calls services to recipients market can offer predatory pricing to terminal users of the retail services thereby developing margin squeeze and preventing competition in the retail products and services market. The CRA also noted that TEO was able to apply discriminating prices, since having aconsiderable influence in the wholesale product and services market TEO was able to raise prices to the recipients of the wholesale services and impose further charges, thereby restricting the possibilities to compete in retail services market by the retail fixed communication vice telephony services providers, which provide retail services on the basis of the wholesale services purchased from TEO.

In 2008, upon the evaluation of the barriers preventing the entry into the retail fixed communication voice telephony services market the CRA imposed certain obligations on TEO and obliged the said company to eliminate the following barriers:

1. Obligation in the field of pricing control and accounting of costs as regards the provision of national calls to the service providers:
   1.1. to ensure that the price of the national calls to service recipients would not be less than the price focused on costs;
   1.2. to keep accounting of costs in line with the rules on the accounting of costs, based on the fully distributed costs method, approved by the order of the director of the CRA of 14 June 2006 No 1V-737 regarding the amendment of the order of the director of the Communications Regulatory Authority of the Republic of Lithuania of 28 December 2005 No 1V-1164 rules on accounting of costs, based on fully

[24] Available on the Internet: http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/1011&format=HTML&aged=0&language=EN&guiLanguage=en

[25] Available on the Internet: http://www.konkuren.lt/index.php?show=nut_view&nut_id=697

[26] Available on the Internet: http://www.rrt.lt/index.php?-1548423541

distributed costs method (State Gazette Valstybės žinios, 2006, No 70-2606).

2. Obligation to keep accounting in line with the accounting separation rules and in compliance with the requirements related to the accounting separation, as approved by the order of the director of the CRA of 14 June 2006 No 1V-738 on the approval of the accounting separation rules and requirements related to the accounting separation (State Gazette Valstybės žinios, No 70-2607).

The report of the market research by CRA states that TEO was in a position to apply predatory pricing and margin squeeze. This paper in order To examine if that is true the given paper compares the rates offered by TEO to private users as applied for the retail local and national calls and the wholesale calls services provided to the alternative service providers.

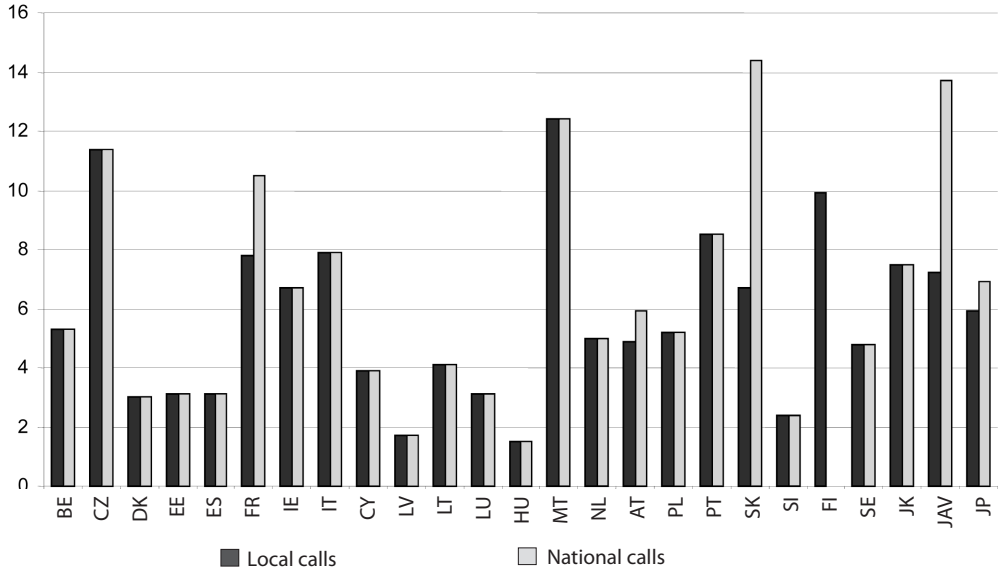
Fixed termination rates set the wholesale fixed telephone communication services prices (hereinafter referred to as fixed termination rates) and initiating rates of the fixed telephone communication call initiation (hereinafter referred to as initiating rates). Based on the 13th report on the electronic communication sectors and markets of the European Commission[27], call termination rates in network connection in TEO network in Lithuania were among the highest in the European Union countries and amounted to 3.50 euro cents (LTL 0.12); whereas the retail local and national call prices were among the lowest (see Picture 5). TEO therefore applies the pricing that is unfavourable to the competitors, thus restricting their business. Upon the evaluation of the network connection rates applied by TEO (network connection rates) the Communications Regulatory Authority passed an order and effectively imposed the obligation on TEO to reduce the network connection rates (Order of the director of the Communications Regulatory Authority of the Republic of Lithuania of 31 January 2008 No IV-101 regarding the setting of prices on TEO LT, economic entity, active in the commercial market, for call initiation, call completion, national and international transit services provided by TEO LT AB via public telephone communication network in a fixed location)[28].

These are the TEO base rates; however, no evaluation of the calls free of charge by hour is given by TEO. Taking into account the call hours given free of charge the retail rates are still smaller.

Retail local call base rates provided by TEO in its own market are LTL 0.12 in peak hours, and LTL 0.03 off peak hours; however, given TEO payment plan Local, which offers 30 hours free of charge per month off peak time, and 2 hours of calls free of charge per month during peak time, all for monthly charge of LTL 30, the rates are still smaller. Given that subscriber loop charge is LTL 30 and is included into the monthly rate of local payment plan and real call flows, the price of 1 minute increases. The following is the formula to calculate the number of minutes used for calls by the user of public fixed telephone communication services, taken on monthly average:

[27] Available on the Internet: http://ec.europa.eu/information_society/policy/ecomm/library/communications_reports/annualreports/13th/index_en.htm

[28] State Gazette Informaciniai pranešimai, 2008 No 11–146.




*Picture 5.* ***Minimal prices of local and national calls offered by historic operators in countries of European Union, US and Japan in 2007, in euro cents (including VAT)***

*Source:* Commission Staff Working Document accompanying the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Progress Report on the Single European Electronic Communications Market 2007 (13th Report) - VOLUME 2. page 59. [checked 07/04/2008 Available on Internet: <http://ec.europa.eu/information_society/policy/ecomm/library/communications_reports/annualreports/13th/index_en.htm>

*Average call duration = (local call duration (where a call is terminated in its own network, in the same geographic numeration zone) number of users)/12 months.*

The above calculations indicate the call duration of a single user per month: *(1,195,057,430 min./630,705)/12=157.9 min.* or 2.63 hours. The calculations of one-minute calls take into account the call connection charge at LTL 0.14; it is therefore assumed that the average local call lasts 10 minutes.

Given average call duration of 2.63 minutes and one call duration of 3 minutes, the price of one minute local call in TEO network, excluding connection charge, is (7 Lt – (157,9 ÷ 10 min.) × 0,14 Lt) ÷ ÷ 157,9 = 0,03 Lt/min. (including VAT).

The wholesale local call price in TEO network includes the costs on the local call made, initiated and terminated as well as retail call costs with the transit rate subtracted. These rates are indicated in the network connection contract published by TEO[29], to become effective as of 1 July 2008. Calculations on the retail price fail to take into account the call connection rate (LTL 0.14/min); therefore, calculation of 1 minute wholesale rate fails to take into account the call making rate. Therefore, those are the rates of the wholesale local call in TEO network, in peak hours: LTL 0.0472/min. (with retail call costs not

[29] Available on the Internet: http://www.teo.lt/lt/metines_ataskait-1221.html

taken into account), and off peak hours at LTL 0.0169/min. (excluding VAT). The average price of one minute is therefore LTL 0.0321/min. (excluding VAT), when VAT is taken into account (18%), the wholesale rate is obtained at LTL 0.0378/min. The calculations therefore demonstrate that retail rates of TEO local calls in the case of payment plan LOCAL are less than the wholesale rates of the same service.

In order to evaluate the national rates in TEO network, TEO payment plan In Lithuania is taken; the said plan, at LTL 30 monthly charge, grants 2 hours free of charge in TEO network in entire Lithuania. The calculation of 1 minute call rate took into account the fact that monthly charge of LTL 30 included subscriber loop charge of LTL 23, which is also included in the monthly charge of the payment plan in Lithuania. Given real call duration of one user per month, and assuming that the call lasts 10 minutes, the following is the price of 1 minute: (7 Lt – (37.32 ÷ 10) × 0.14) ÷ ÷ 37.2 = 0,17 Lt/min. (call connection rate at LTL 0.14 /minute not taken into account).

The wholesale price of the national call in TEO network includes call making, initiating 2xII type transit, call completion, and retail costs, with 1 type transit rate subtracted. In the case of identical calculations, as with local call retail rate, the national call wholesale rates by TEO are as follows: in peak hours – 0.036 + 0.042 + + 2 × 0.0365 + 0,042 – 0.0368 = 0.1142 Lt/min.; off peak hours – 0.036 + 0.015 + 2 × × 0.0131 + 0.015 – 0.0131 = 0.0791 Lt/min.

Average 1 minute price (excluding VAT) is LTL 0.0966/min. Comparison of the wholesale and retail rates requires the subtraction of the call making rate; this is LTL 0.14/minute in the case of retail call, and LTL 0.036/minute in the case of the wholesale call, and the rate is therefore LTL 0.0606 / minute (excluding VAT), and with VAT included (18%), LTL 0.0715 / minute. Therefore, a rate (excluding VAT) is LTL 0.0606, and including VAT (18%) is LTL 0.0715/minute.

The wholesale rate of the national call in TEO network when retail costs are not taken into account is less than the rate of the retail local calls by TEO payment plan in Lithuania.

It is therefore concluded that TEO applies predatory pricing in its market and margin squeeze on the local call level in order to restrict competition in the market and effectively impose barriers preventing the entry into the fixed telephone communication market. However, detailed analysis of TEO costs is required to substantiate this finding.

TEO advantage in the market due to its widely known character can be more likely related to TEO as the only service provider in the market from the very outset of telecommunication in the last century, i.e. the advantage on the primacy effect, rather than the funds allocated to advertising and user loyalty to trademark. Having enjoyed monopoly position for a long time, TEO has successfully produced an impression that the market is in no position to have other service providers. One of the ways that new market players can use to strengthen their position in the market is to be visible to the users. One of cheapest and most easily accessible ways to inform the potential users about the company as acompetitor to TEO includes public information related to one's activity and service

rates on the Internet. Active internet advertising can be expedient in this respect. Another way to make new service providers public is price comparison calculators on the internet. In 2007, CRA on website *www.skaiciuok.lt* implemented a calculator on the comparison of the electronic communication service prices, which allows for comparison of all fixed communication service providers and/or user monthly costs on the fixed communication services. This calculator uses the data **published** by service providers.

This market advantage is lesser in the event where the demand of service (product) exceeds the exclusive right granted to the historic operator to supply a certain number of the product. Although TEO is not granted an exclusive right to provide services or a certain number thereof, given the exclusive commercial connections the market advantage may be related to the long-term contracts signed by TEO with corporate users including budgetary institutions. Fixed telephone communication market is currently saturated as market value beginning with late 2004 saw a steady decline in terms of number of subscribers and income generated by the market and only came to a stable position in 2007; therefore, new market players can only operate when taking over TEO users. New market players would find it difficult to take over from TEO at least part of users in public sector given public procurement procedures as key criterion when evaluation includes a low price of the service (product). Therefore, the tenderer that offers the lowest price is awarded a contract. Given advantages enjoyed by TEO in the market due to economy of scale and network effect, new market players would have to offer considerably smaller prices of voice telephony services. However, possibilities to reduce prices are limited by the wholesale service price provided by TEO serving as a basis for other service providers to provide wholesale services. By way of conclusion, one might claim that TEO enjoys an advantage in the market due to its exclusive long-term commercial relations.

Apart from the traditional fixed telephone communication voice telephony services, TEO provides the internet access and television services on the retail level. TEO currently offers two digital TV services including an interactive one, transmitted by the internet via infrastructure of the fixed telephone communication owned by TEO and the digital one, transmitted via the digital telephony infrastructure, which is also controlled by TEO.

TEO also uses its own infrastructure to provide the interactive television services (IP TV). This brings the company an opportunity to employ the economy of scale effect and provide services at lower costs. Furthermore, those TEO clients who already use TEO voice telephony services are offered a considerable rebate where they order both internet TV and internet access services.

On 3 January 2008 TEO purchased Nacionalinė skaitmeninė televizija (National Digital Television) UAB, which holds two licences granting the right to retransmit television channels via the digital ground television networks. Income from the digital internet television in 2007 amounted to LTL 6.7 million, and the program sending by digital ground television networks another LTL 1.7 million (http://www.teo.lt/lt/info_investuotojams-898.

html). The Government of the Republic of Lithuania passed an order on the approval of the model to implement digital television in Lithuania[30]; this concerns the subsection 28 thereof, which ensures that no analogouos television will be available in Lithuania till 2012. Given the above fact, due to its primacy TEO will gain a competitive advantage even in the digital television transmission services market. With the purchase of Nacionalinė skaitmeninė televizija UAB and the licence obtained in 2005 to use radio frequencies to set up digital ground television networks, the company has enhanced advantages brought about by vertical integration.

By way of conclusion, the entry into the fixed communication voice telephony services market may be restricted by the opportunities enjoyed by TEO to provide the related services employing the infrastructure available. The CRA Doing the research of the electronic communication markets the CRA should evaluate these competitive advantages of TEO where they are existent in the future as the digital TV services market grows, the network effect may appear when both the present and prospective users of TEO voice telephony internet services would see it to their advantage to be part of the digital TV services user network of a large enterprise.

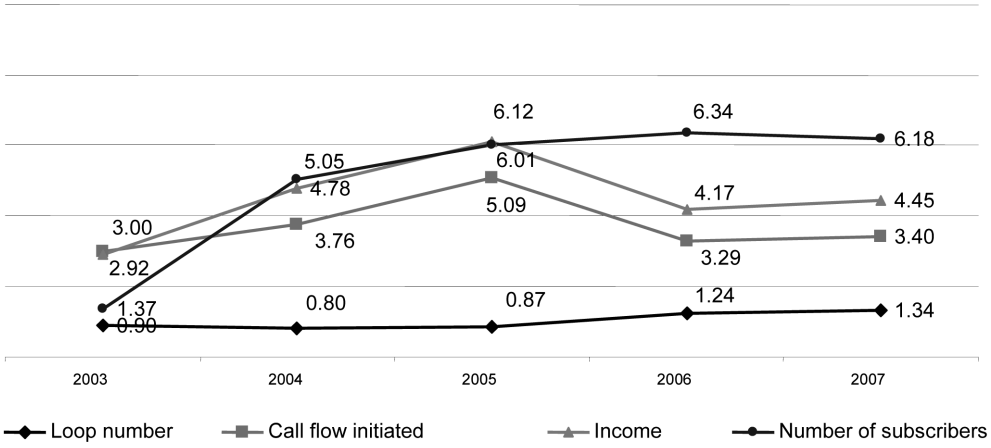
### *Evaluation of TEO power in the fixed telephone communication*

To evaluate TEO position in the fixed telephone communication market both prior to and after the market liberalisation this section employs the data of the Lithuanian fixed telephone communication market and TEO as well as calculated values of HHI and Lerner index. Alongside with other indices to measure the level of concentration, in the practice of competition evaluation both in the European Union and the USA, HHI and Lerner indices are most frequently invoked. Those indices show the degree of concentration of the market structures in the relevant markets most explicitly. Maximum value of HHI index equals 10,000 evidences that market is in control by a single market player. The decrease in the index value evidences the decreasing level of market concentration[31]. However, HHI value even closer to 10,000 may indicate that an enterprise enjoys a nearly monopoly position. The value of Lerner index higher than zero evidences that market is not competitive. This section also summarizes the findings of the market research conducted by CRA and related to TEO infrastructure. Analysis of the competitiveness of the fixed telephone communication market based on the said three criteria allows to make a many-sided assessment and draw conclusions on the level achieved in the market liberalization.

Market liberalization promised a lot to new market players; however, as Picture 7 shows, shares of new market players in the event of measuring market by income and flow of calls initiated started declining since the end 2005. Market concentra-

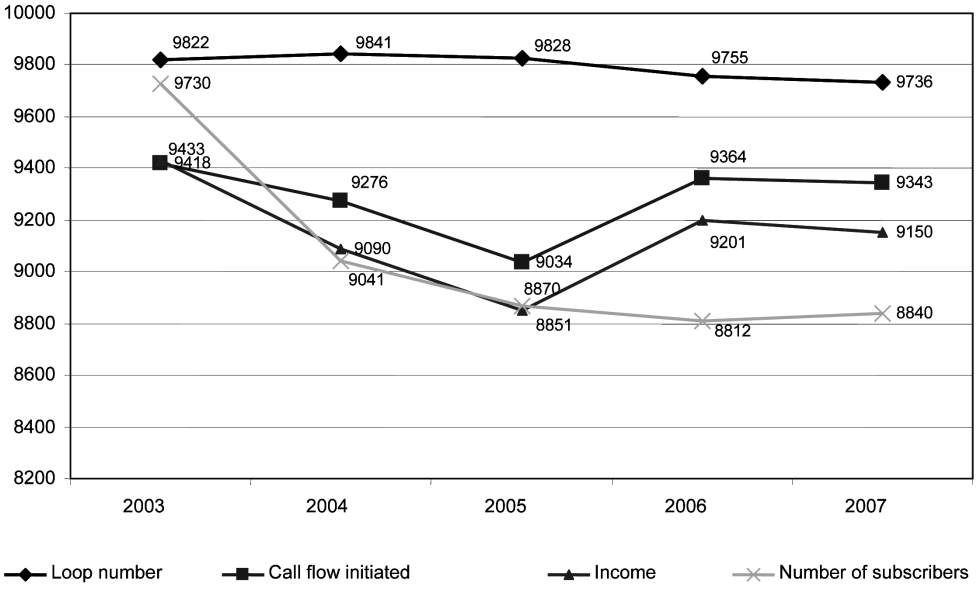
[30] Resolution of the Government of the Republic of Lithuania of 25 November 2004, No 1492 on the approval of the model to implement digital television in Lithuania. State Gazette Valstybės žinios, 2004, No 171-6336.

[31] Available on the Internet: <http://ec.europa.eu/information_society/policy/ecomm/library/communications_reports/annualreports/13th/index_en.htm>

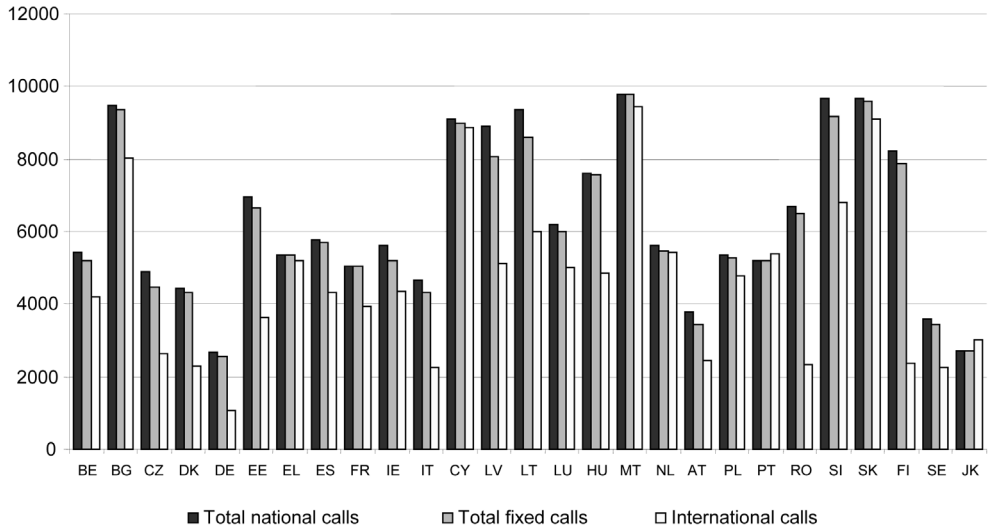



*Picture 7.* ***Dynamics of market shares of alternative public fixed telephone communication providers 2003–2007, %***

*Source:* Based on the data of regular CRA reports on the electronic communication market in Lithuania. [checked 04/05/2008]. Available on Internet < http://www.rrt.lt/index.php?-1859156062 >




*Picture 8.* ***HHI concentration index in the market of public fixed telephone communication services in Lithuania 2003–2007.***




*Picture 9.* ***Concentration in fixed telephone communication market (based on HHI) in EU countries, as of December 2006***

*Source:* Commission Staff Working Document accompanying the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Progress Report on the Single European Electronic Communications Market 2007 (13th Report) - VOLUME 2. page 40. [checked 07/04/2008]. Available on Internet: <http://ec.europa.eu/information_society/policy/ecomm/library/communications_reports/annualreports/13th/index_en.htm>

tion also showed an increasing trend since 2005 (see Picture 8).

The calculation of HHI employed the aggregate data of the market share taken up by new market players as subsection 43 of the Order of the CRA director on the approval of the general rules of engaging in the electronic communication states that no data of the said economic entity shall be published on the electronic communication activity performed, unless consent by the same is granted (where the market share taken up by the said economic entity in the reporting period was less than 2 percent of the respective market). Data on such economic entity is transferred to the summarised information on the electronic communication activity performed (Order of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 8 April 2005 No IV-340 regarding the approval of the schedule of general conditions of the engagement in the electronic communication activity. State Gazette Valstybės žinios 2005, No 49-1641). Calculations of HHI index employed data published by CRA on the electronic communication market.

Data in Picture 8 evidence that fixed telephone communication market started declining in 2003; however, it regained an upward trend since 2005. HHI value in terms of the market evaluated by different measurement in 2003 – 2007 was close to 10,000. the highest market concentration is found in the area of the fixed communication infrastructure. These data evidence that public fixed telephone communication

services market in Lithuania is highly concentrated, despite five years of the market being opened to competition.

Based on the data of the European Commission of 31 December 2006[32], high concentration was recorded in the fixed communication call market (including national calls and every fixed communication call) throughout EU member states; average concentration in the area of the international call market (HHI = 1,080) was found only in Germany. Lithuania shows market concentration indicator among the highest in the European Union countries (see Picture 9).

The value of Lerner index was calculated by this formula, to evaluate TEO market power $M = \frac{(P - AC)Q}{PQ} = \frac{PROFIT}{INCOME}$: this shows TEO group profit before taxes and income. This formula is appropriate for the long-term calculation; the more profit exceeds the income received, the higher is the monopoly power of an enterprise (Hyman D., 1989). Calculations employed the data on TEO group consolidated profit and income of every operating area. The key activity of TEO involves the fixed telephone communication infrastructure (including retail and wholesale telephony services, rent of network, IP television, internet services, etc.); therefore, the calculation of Lerner index shows the influence exercised by TEO on the entire activity related to the infrastructure available.

Table 4 lists the calculation data. Lerner index was calculated by the consolidated profit and loss data of both periods, i.e. 1998 to 2002 and with the liberalisation of the market, i.e. 2003 – 2007. It is clear that the value was 0.165 before liberalisation and thereafter fell to 0.124. This evidences that TEO market power following the liberalisation slightly decreased; therefore, monopoly power enjoyed by TEO did not change. This can be traced to the fact that TEO transferred its monopoly power in the retail services market to the wholesale services market. Given that new service providers fail to find it effective to develop (duplicate) the infrastructure by TEO, which is developed on the territory of the entire country, TEO will remain monopoly in the wholesale fixed telephone communication services. The market power is defined as the ability of an enterprise not to loose its market share taken upon setting a higher price compared to those in the competitive environment[33]. By way of conclusion, TEO market power is demonstrated by setting unduly high wholesale service prices, i.e. by applying predatory pricing tactics.

One should come to conclusion that, having legally lost its monopoly status in the retail fixed telephone communication services market, TEO has transferred its monopoly market power to the wholesale fixed telephone communication services market and imposed strategic barriers preventing entry in the market.

By way of conclusion, it may be stated that with market liberalisation TEO power in the market as well as market concentration saw only a very slight decline. Calculation based on Lerner index shows that TEO market power saw a decline; howev-

[32] Available on the Internet: http://ec.europa.eu/information_society/policy/ecomm/library/communications_reports/annualreports/13th/index_en.htm

[33] Available on the Internet: <http://icttoolkit.infodev.org/en/Section.1711.html>

*Table 4.* ***Indicators of profit and income by TEO group and market power based on Lerner index in 2002, 2006, and 2007***

| *Reporting period* | *Profit by TEO group, thousand LTL* | *Income by TEO group, thousand LTL* | *Lerner index value* |
|---|---|---|---|
| 1998 | 115,693 | 906,952 | 0.128 |
| 1999 | 142,328 | 980,299 | 0.145 |
| 2000 | 333,018 | 1,038,577 | 0.321 |
| 2001 | 138,663 | 1,058,466 | 0.131 |
| 2002 | 89,440 | 968,212 | 0.092 |
| **1998-2002** | **819,142** | **4,952,506** | **0.165** |
| 2003 | -38,231 | 809,879 | -0.047 |
| 2004 | 40,552 | 722,978 | 0.056 |
| 2006 | 108,647 | 733,495 | 0.148 |
| 2006 | 162,092 | 734,811 | 0.221 |
| 2007 | 196,147 | 793,450 | 0.247 |
| **2003-2007** | **469,207** | **3794,613** | **0.124** |

*Source:* TEO financial data taken of TEO financial reports. [checked 6 May 2008]. Available on Internet: <http://www.teo.lt/lt/finans_rezult-899.html >

er, it also evidences astrong market control and concentration enjoyed by TEO. HHI value remained close to 10,000 in the public fixed telephone communication market, despite as long as five year period following liberalisation. These are the reasons why the intervention by the regulator (the CRA) on a regular basis is necessary.

## CONCLUSIONS

Fixed telephone communication market liberalisation is a long-term process, which takes up more than several years to complete. Cancellation of the exclusive and special rights granted to the historical telecommunication operators represented but the first step, which started the very liberalisation process. Small share of the market taken up by the new fixed telephone communication service providers indicates the barriers preventing from the entry into the fixed telephone communication market; these barriers have to be eliminated. Where competition regulation system is not implemented, the liberalisation process is virtually impossible, as the former monopoly player takes measures to restrict the entry by the potential competitors into the market. The Treaty of the European Union laid the foundation for the market liberalisation and regulation of the competition within EU internal market. Decisions were taken on the EU level regarding the abuse of the dominant position by enterprises and restricting the competition in the market. The EU developed an electronic communication regulation legal system that contributed to the EU competition regulation system. Both these systems have the purpose of ensuring that no abuse of its position in the market occurs bythe former monopoly enterprise. Although the electronic communication regulation system is implemented and applied in Lithuania, TEO,the historic operator, has

enhanced its market position over the last few years.

The analysis of the fixed telephone communication market liberalisation in Lithuania shows that the legal liberalisation of the market in Lithuania included the removal of the exclusive fixed telephony services. On the other hand, the removal of legal barriers fails to provide efficient competition in the fixed telephone communication market:

1. Fixed telephone communication market liberalisation is a *de jure* phenomenon; however,the historic operator retains a *de facto* dominant position in the market; thus the market, considering the share taken up and the monopoly market characteristics, is close to the monopoly.
2. Having lost its legal monopoly position in the market of the retail fixed telephone communication services TEO has transferred its market power to the wholesale fixed telephone communication services market by the application of the strategic barriers preventing the entry into the market.
3. Fixed telephone communication market concentration remained high even after the liberalisation *de jure* and the situation has so far seen little change, if any. Market concentration indicator HHI, following the legal market liberalisation still remained close to 10,000 and TEO the historic operator, has retained its market power. Notably, market concentration in Lithuania is among the highest in the EU. Lerner index has seen a slight decline following market liberalisation and this is another fact indicating the monopoly market power by TEO. Therefore, based on the two indicators of market competitiveness, the situation on the market deserves the same evaluation.
4. Structural barriers preventing the entry into the market have remained in the picture. These are determined by the special character of the fixed telephone communication market, which was a natural monopoly for a long time. TEO enjoys the competitive advantage due to economy of scale, which manifests itself via the telecommunication infrastructure, which other market players fail to find efficient to develop; marginal costs are also close to zero, which also has to do with the infrastructure (telecommunication network) and the capabilities of the historic operator, which greatly exceed those required to meet the demand for services provided. New fixed telephone communication service providers would find it virtually impossible to achieve the economy of scale effect. Certain structural barriers related to the entry to the market have increased even more; this was caused by new wholesale services by TEO provided to new market players, which enables use of both economy of scale and vertical integration.
5. Such structural barriers preventing the entry into the market as primacy in the market and the network effect can not be eliminated via the regulatory measures; therefore, these advantages by TEO have a considerable impact on the business opportunities of the new market players as TEO has acquired a great number of users due to primacy

effect. Therefore, TEO has gained the advantage also due to the network effect. Wishing to attract TEO users in the event of the network effect new service providers have to dedicate considerable effort and offer considerably more attractive payment plans and services. Therefore structural barriers preventing the entry into the market can not eliminated in the short run even by applying the regulation of competition both *ex ante* and *ex post*. Notably, some structural barriers preventing the entry into the market can not possibly be eliminated.

6. With market liberalised, TEO resorted to the predatory prices and margin squeeze. In the event of TEO LT, it is demonstrated by the retail rates and high wholesale rates which prevented the new economic entities to attract the users and continue profitable development of activity.
7. TEO employs a new business strategy, which includes the provision of bundled services (voice telephony, television broadcast and transmission, internet access), which enhanced the enterprise position in the market. TEO became a vertically integrated enterprise and the player of the digital ground televisions services, i.e. infrastructure of the digital ground television of TEO and the purchase of licences required to broadcast may have an effect on TEO economy of scale also in this market. This in turn would restrict the operating conditions of other economic entities. Therefore, TEO power can demonstrate itself in some other r service area, i. e. that of television broadcast market.
8. Competition remains the weakest in the fixed telephone communication **infrastructure** market. TEO restricts access to the infrastructure as it sets high prices on entry in its network. New market players therefore have no possibility to claim to higher level in terms of investment and to invest in their own infrastructure.
9. Cancellation of the former monopolies is a complex and a long term process. Legal liberalisation of the market is but the first step towards liberal market. Unless competition and market regulatory institutions remain active and deliver decisions accordingly regarding the abuse of the dominating position by the economic entities, liberalisation of the fixed telephone communication market remains impossible. This also applies to other sectors of infrastructure.
10. The analysis of the fixed telephone communication liberalization process has revealed that the mechanisms of competition are still rather weak in this market. TEO's market power remains suitably significant, therefore, in pursuance of the creation of an effective competition in this market, it is necessary to establish favourable and conducive conditions for a new and strong competitor to enter the market of the fixed telephone communication.

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