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CROATIAN TELECOMMUNICATION MARKET: CONCENTRATION TRENDS IN THE PERIOD FROM 2003 TO 2008*

Mirjana Pejić Bach[1], Jovana Zoroja[1,] and Željko Jirouš[2]**

[1]Department of Informatics, Faculty of Economics and Business – University of Zagreb
Zagreb, Croatia

[2]c/o Faculty of Economics and Business – University of Zagreb
Zagreb, Croatia

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ABSTRACT

Telecommunication markets are a valuable factor that contributes to the economic growth and development. The development of the telecommunication markets and services was slower in the countries in transition than in developed European countries, altough after the fall of communism countries in transition implemented a big progress in spreading and modernizing of their telecommunication network.

The paper analysis the level of concentration of telecommunication industry in Croatia from 2003 to 2008. The data used in the analysis consider 50 Croatian largest IT firms that are operating on telecommunication market and specific telecommunication sectors: producers of telecommunication equipment, distributers of telecommunication services and implementers of telecommunication solutions. The main two conclusions of this article are: (1) degree of concentration on the telecommunication market in Croatia changed differently in different market shares, (2) degree of concentration on the telecommunication market in Croatia is influenced by different barriers to enter the market.

The analysis finds that Croatian telecommunication industry is in a good position even a few steps ahead of some other transition countries.

KEY WORDS

telecommunication market, concentration, Croatia, transition countries

CLASSIFICATION

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**Corresponding author, η: jzoroja@efzg.hr; +385 1 238 3276;
Faculty of Economics and Business Zagreb, Trg J.F. Kennedyja 6, HR – 10 000 Zagreb, Croatia

INTRODUCTION

Telecommunication markets are a valuable factor that contributes to the economic growth [1], especially when there are a great number of competitors [2]. The development of the telecommunication markets and services was slower in the countries in transition than in developed European countries. After the fall of communism, transition countries saw a big progress in spreading and modernizing of their telecommunication network.

Telecommunication markets in transition countries were highly concentrated at the beginning of the 21st century with only one or few telecommunication companies [3]. In most of the central and eastern European countries, there weren't more than two competitors in the telecommunication market at the end of the 20th century. The exceptions were Slovenia and Bulgaria with one operator and Estonia with three operators [1]. At the same time, the process of deregulation started in transition countries, which lead to an increase of private national and multinational companies on the telecommunication markets [4].

The beginning of the 21st century saw many changes. Most of the countries started with the liberalization of the market. United Kingdom liberalized the telecommunication market in 1980s [5]. Liberalization of the telecommunication market led to the competition between telecommunication companies, development and application of new technologies and services, lower prices, that eventually led to the increase of end users [6]. The processes of liberalization, privatization and deregulation led to the significant growth in the telecommunication market [5]. Apart from this, new investors appeared on the markets; market shares changed, and the importance of numerous telecommunication services that did not exist up to then. This confirms a significant dynamics of the telecommunications market that led to the need to analyze the concentration on the telecommunication market in Croatia. At the beginning of the 21st century, Croatian telecommunication market shows a high concentration as well as the lack of efficient regulation of access to essential network resources [7]. There is a monopoly on the market of the fixed telecommunication system, and a duopoly on the market of the mobile telecommunication. Broadband does not appear on the market until 2005. Besides this, legal regulation and administration were another barrier to the new competition. However, from 2003, the situation started changing. A new legal framework was put in place when the new Telecommunication Act was passed and in 2005, a third mobile operator entered the market of mobile services that lead to competition increase [7]. The new companies increased the competition and lower the market share of the existing operator who had a monopoly on the market [5]. This development had a positive influence on the services offered to end users.

The purpose of the paper is to research on the degree of concentration on the telecommunication market in Croatia. The research will enclose the period from 2003 to 2008, applying the method of corresponding concentration measures. The main two objectives of this article are: (1) degree of concentration on the telecommunication market in Croatia changed differently in different market shares, (2) degree of concentration on the telecommunication market in Croatia is influenced by different barriers to enter the market. To prove these goals, correspondent research methods will be used. Correspondent statistical-mathematical measures will be applied to measure the concentration; concentration ratios, Herfindahl-Hirschman (HH) index, Entropy Index, as well as Gini Coefficient and Lorenz Curve.

The paper is organized as follows; at the beginning, there is an introduction part. Section two defines concentration in transition countries. Section three presents data, research methodology and statistical analysis. Discussion part explains our findings and results. Section five concludes the paper.

INDUSTRIAL CONCENTRATION IN TRANSITION COUNTRIES

In the past 15 years, the industrial concentration has been the subject matter of many studies conducted in European transition countries.

Newbery and Kattuman conducted a research [8] on concentration and competition in selected Eastern European countries (Eastern Germany, Czechoslovakia and Poland). Centralized economies of the mentioned countries were characterized by big dominant companies within specific industrial sectors whereas medium-scale and small-scale enterprises had a marginal impact as a group. The collapse of the Soviet Union in 1989 started a process of privatization and restructuring of big companies [9]. The process of restructuring was the outcome of external pressure, in other words, competition, and was supervised by the state. Restructuring often led to discontent among workers who feared to lose their jobs. All the above led to a decrease of concentration and increase of competitiveness in EasternEuropean countries accompanied by the development of distribution of firms according to size corresponding to the free-market economy.

Furthermore, research conducted by Uncovsky [10] brought interesting results. According to the author, there are tendencies in deconcentration connected with the transition to the market economy in Slovakia. High concentration of the Slovak industry is a result of adaptation of the company to the demands of the Czech economy.

It is important to underline the work of Maryanchyk [11] that researched the influence of the concentration of competitiveness on the company profits in Ukraine during the transition period.

There are several other studies on concentration within selected industries in certain countries in transition. Sadowski [12] researched the influence of competitors from Western European countries on the telecommunication market in Poland, Hungary and the Czech Republic. Grandys [13] analyzed the characteristics of the textile industry in Poland. Their research and results discovered the decrease within the industrial concentration. Furthermore, the concentration of the bank sector is the subject matter of the research that underlined the liaison between competition, concentration and efficiency of banks [14, 15].

Gruber analysed differences of telecommunication markets between Central and Eastern Europe and Western Europe [1]. The telecommunication sector developed less in centralized economies, because it was not recognized as productive, hence production sectors were supported and the development of services neglected. This is the reason why the economic significance of the telecommunication sector in central and eastern European countries is a lot lower than in the countries of the Western Europe. In the Czech Republic and Hungary, the share of the telecommunication sector in the overall GDP is a little above 1 %, while in the OECD countries it is significantly above the 2 %. Several negative characteristics influence the telecommunication sector in countries of central and Eastern Europe; prices determined according to political goals, bad connections and long waiting lists for subscriptions, bad service quality, and recurrent connection loss and long waiting time for customer service. The fact that the telecommunication services have a positive influence on the development and growth of economies contributes to further progress of the telecommunication market.

The structure of the mobile telecommunication market differs among the countries of the EU. There are monopolized markets with a handful of subscribers and markets with several operators and a high number of subscribers [6]. The number of countries that open up to new mobile operators on their markets is growing. The number of mobile network operators increased for two reasons. The first reason is the liberalization of mobile and landline telephony that started in the 1980s. The other reason is connected to the privatization of the former incumbent public telecom operators during 1980s and 1990s. There are several

advantages to using and developing the mobile telephony within the overall telecommunication market. That is the reason why the mobile telephony is more and more used as the alternative to the inefficient fixed lines. A conclusion can be drawn that mobile telephony has a significant influence on the development of the telecommunication market as a whole. One of the reasons why telecommunication markets of countries in transition are less developed is the eight-year delay with which these countries started using mobile devices and developing the mobile telephony [1].

The competition that exists for quite some years now has brought the decrease in prices and increase in usage, especially in Luxemburg, Finland and Denmark, and somewhat less in the Czech Republic, Portugal, Austria and Greece. Mobile telephony market in the EU was liberalized until the year 2000; this brought to higher competition [5]. Besides, to further development and progress of the telecommunication sector – digital technologies, more competition and decrease of state monopoly contributed to create the sector of mobile telephony [2]. It is also important to mention that comparing fixed and mobile telecommunication industry, mobile telecommunication can provide competitive telecommunication services and can provide private capital [1].

To enter a highly concentrated telecommunication market is difficult for companies, as it is difficult to keep the first-mover advantages. Even if the companies that entered the market first have more advantages that the other [6]. The advantages that come when companies are first into the market are: ability of one company to acquire scarce assets before other competitors, targeting the most profitable parts of the market, brand loyalty, switching costs and buyer uncertainty. There are different strategies of keeping first position on the market, such as: highlighting product development, product and service quality and technology. There are also some ways for improving their position for companies that enter the highly concentrated telecommunication market [2]. Sometimes they have employed similar actions to their competitors or have totally different strategies such as: price focused strategies, innovation and new products. In their research, Fernandez and Usero [4] suggest that the best strategy for pioneers is differentiation and for followers is price.

It is also important to mention that the market share of incumbents within mobile markets has fallen when the liberalization of telecommunication markets has started. Whalley and Curwen in their research [6] stated that in some countries, the loss of market share for some incumbents within mobile markets has been sharp (Ukraine) and in some other countries have been slow (UK). Some incumbents within mobile markets are trying to regain market share, for example, Telekom Austria in Austria, T-Mobile in Croatia and C&W in Guernsey.

In Croatia, the process of liberalization started a bit later. High concentration can be noticed in the Croatian market only in the first years of the 21st century. In the market of fixed telephony, there was a monopole held by only one company up to then, and on the market of mobile telephony, there was a duopoly and no broadband until 2005. At the beginning of 2005, things change; one new operator comes into the fixed telecommunications market, and one in the mobile market [7]. Looking at the fixed and the mobile telephony a conclusion can be drawn that liberalization of fixed telephony is weak and that the company that held the monopole on the market is still too dominant compared to other operators. There are 10 fixed telephony operators on the market Amis, B.net, H1, HT, Iskon, Metronet, Optima, Primatel, VIPnet, Vodatel. Out of these 10 HT had the most subscribers and the highest profit. The telecommunication market of mobile telephony is characterized by positive liberalization and three operators: T-Mobile, VIPnet, and Tele2. It is important to underline that the growth of mobile telecommunication services draws foreign investments [1], because of faster access,

simpler infrastructure, and fewer barriers to enter the market that ensures the growth of the competition.

Whalley and Curwen (2012) conducted a research on telecommunication operators in European countries in 2010 and had interesting results. One of these results is that the competition is present in 45 out of 49 analysed countries. Four countries with only one mobile operator and where there is no competition are: Greenland, Gibraltar, Andora and Monaco. Within the 45 countries, there is more than one operator, 32 countries have two or more operators, and 14 countries have four or more mobile operators on the market. Germany, a country with a population of 80 million and Lichtenstein with a population of 35 000 have the same number of mobile operators – four. In the markets of Ukraine and UK, there were five mobile operators by the end of 2009, as well as in the Netherlands. Furthermore, they also concluded that mobile markets are highly concentrated, with the two largest mobile operators often controlling between them more than half of the market. On the basis of given results, we can draw a conclusion that next to the incumbent operator within mobile markets, there are mostly two more operators in the transition countries. The exceptions are Poland with all together 6 operators and Rumania with four.

RESEARCH METHODOLOGY AND RESULTS

This section will focus on data selection, research methodology and results. The analysis gives a short overview of the telecommunication market. Data on all the 50 biggest telecommunication companies were used, as well as data on specific sectors; producers of telecommunication equipment distributors, service providers and implementers of telecommunication solutions [6]. Publications on the biggest telecommunication companies on the Croatian market published in the Infotrend magazine in 2003, and 2008 were used as the data source for concentration trends in telecommunication markets.

Table 1 shows values of market concentration for all the 50 biggest telecommunication companies together. Data for specific sectors are also outlined; telecommunication equipment producers, distributors, service providers and solution implementers.

Comparing the given results, similarities can be noticed, and mostly in the same movement of concentration ratios. All the considered sectors, as well as all the 50 biggest telecommunication companies together there is the same direction of concentration change, regardless of which concentration measures are used, with two exceptions; Gini's coefficient moves in the opposite direction compared to the other concentration measures, but with a low intensity of the opposite movement.

LEADER'S MARKET SHARE

According to the data in the Table 1, the share of 50 biggest telecommunication companies as well as other telecommunications service providers decreased in the period from 2003 to 2008. The share of the telecommunications equipment producers increased in 2006 compared to 2005. Further increase is measured in 2007, whereas the market share of telecommunications equipment producers in 2006 and in 2008 is the same. Leader's market share of telecommunication solution's implementers increased in 2005 and in 2007. Relevant differences were not measured in the given period in leaders' market share of telecommunication solution's implementers.

Concentration ratio C2

Value of the concentration ratio C2 is an indicator of the share of the two biggest companies in the telecommunication industry. Value of the concentration ratio C2 is almost the same

within the six-year period for the 50 biggest telecommunication companies. We can mostly see the decrease in value compared to previous years, besides for the 2007 where an increase was measured compared to 2006.

Decrease of value of the concentration ratio C2 can be noticed also for the telecommunication equipment producers, besides in 2006 that measured a growth compared to 2005. In the past three years, a greater value of the concentration ratio C2 can be noticed, above 90 %, which indicates a greater degree of competition, since a smaller number of companies participated in a bigger market share. In 2006, value of the concentration ratio C2 (97,36 %) indicates that two biggest companies have 97,36 % share in the market.

In the six-year period, the value of the concentration ratio C2 for telecommunication equipment distributors had a continuous decrease, besides in 2005 and 2008 where it grew compared to the previous years. The highest value of the concentration ratio C2 (93,24 %) is measured in 2008. This means that the two biggest companies have 93,24 % of market share. There is an increase in the value of the concentration ratio C2 for telecommunication service providers in the first three years and a decrease in the last three.

Telecommunication solution's implementers have the smallest values of the concentration ratio C2. The values of the concentration ratio C2 span from 25 % to 35 %. The growth of value of the concentration ratio C2 above 30% was measured in 2005 and 2007.

Considering that the value of the concentration ratio C2 for all the above companies, mostly spans between 40 % and 99 %, it is obvious that we are dealing with a telecommunications market with one dominant company.

The value of the concentration ratio C2 in the given period of six years for all the above company types shows that the most significant difference was measured for the telecommunication equipment distributors; in 2003 the value of the concentration ratio C2 was 54,84 % compared to 93,24 % in 2008.

Concentration ratio C4

Value of the concentration ratio C4 is the indicator of the share of the biggest four companies in the telecommunication industry. Value of the concentration ratio C4 is almost the same within the given period of six years for the 50 biggest telecommunication companies. We mostly notice a decrease in value compared to the previous years, besides for the years 2006 and 2007 where there was a continuous growth.

The growth in value of the concentration ratio C4 can be noticed for telecommunication equipment producers, besides in 2008 where a minor decrease was measured compared to 2007. In 2007 and 2008 the value of the concentration ratio C4 equalled 100 % which represents a complete monopoly in the telecommunications market. Other values of the concentration ratio C4 is significantly high, which indicates a big degree of competition. It can be concluded that four of the biggest companies in telecommunications equipment producers have 90 % market share throughout the given period.

In the period of six years the value of the concentration ratio C4 for the telecommunication equipment distributors continuously decreased, besides in 2005 and 2008 where growth was measured compared to previous years. The highest value of the concentration ratio C4 (99,32 %) was measured in 2008, which means that the four biggest companies have 99,32 % share in the market.

For telecommunication service providers, growth is measured only in the first year and in all other years the value decreases. Value of the concentration ratio C4 is very high, above 90 %,

which means that throughout the whole period four of the biggest companies had more than 90 % of the telecommunication market.

The lowest value of the concentration ratio C4 is measured in telecommunication solution's implementers. The value of the concentration ratio C4 spans from 45 % and 55 %. The growth above 50 % value of the concentration ratio C4 was measured in 2005 and 2008.

HH index

HH index shows the market share distribution for the 50 biggest telecommunication companies.

The value of the HH index decreases in all the given years besides in 2007 for the mentioned companies. The HH value spans from 1800 and 2500, meaning that we are dealing with a highly concentrated market.

Decrease of the value of the HH index can also be noticed for telecommunication equipment producers, besides in 2006 where a growth is measured compared to 2005. A value above 4000 can be noticed in the HH index in the past three years. This indicated a higher degree of competition.

In the period of six years the value of HH index for the telecommunication equipment distributors continuously decreased besides in 2005 and 2008, where growth was measured compared to previous years. The highest value of HH index (6,195%) was measured in 2008, indicating a highly concentrated market.

For the telecommunication service providers, a decrease can be notices throughout all the given years, besides 2005. The HH index values are, nevertheless, high (2790 - 3873), hence above 1800. This indicates a highly concentrated market.

The lowest values of HH index are measured in telecommunication solution's implementers. These span from 800 to 1100, indicating a low concentrated market. The decrease in the HH index value was also measured in 2006 and 2008, whilst the other years indicated growth.

Comparing the HH index values throughout the given period for all the above company

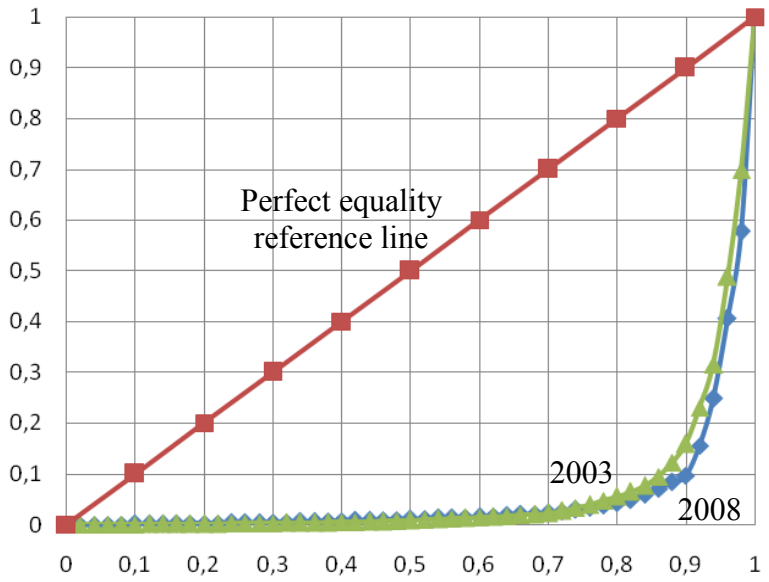

Figure 1. Lorenz curve for 50 biggest telecommunication companies in Croatia in 2003 and 2008 (adapted from [4]).

Table 1. Value of indicators of market concentration in 2003 and 2008.

Indicator of market concentration	Year	50 biggest telecommunication companies, %	Telecommunication equipment producers, %	Telecommunication equipment distributors, %	Telecommunication service providers, %	Telecommunication solutions implementers, %
Leader's market share, %	2003	42,27	53,88	29,90	54,50	14,46
	2004	39,52 ↓	48,11 ↓	25,31 ↓	52,56 ↓	13,58 ↓
	2005	36,08 ↓	42,36 ↓	75,25 ↑	52,90 ↓	17,40 ↑
	2006	33,69 ↓	50,15 ↑	57,84 ↓	44,20 ↓	12,61 ↓
	2007	33,64 ↓	52,60 ↑	48,05 ↓	42,72 ↓	16,89 ↑
	2008	30,15 ↓	50,70 ↓	76,83 ↑	39,05 ↓	15,86 ↓
Concentration ratio C2, %	2003	59,43	88,53	54,84	76,64	25,30
	2004	58,39 ↓	87,82 ↓	45,12 ↓	77,67 ↑	24,83 ↓
	2005	55,95 ↑	78,95 ↓	82,61 ↑	82,03 ↑	33,33 ↑
	2006	53,95 ↓	97,36 ↑	68,88 ↓	70,78 ↓	23,45 ↓
	2007	54,36 ↑	96,82 ↓	63,20 ↓	69,05 ↓	33,30 ↑
	2008	51,15 ↓	93,49 ↓	93,24 ↑	66,25 ↓	28,49 ↓
Concentration ratio C4, %	2003	84,41	98,41	74,94	98,55	46,89
	2004	82,31 ↓	99,20 ↑	71,12 ↓	98,16 ↑	45,11 ↓
	2005	74,63 ↓	99,15 ↑	91,62 ↑	97,62 ↓	56,45 ↑
	2006	79,58 ↑	100,00 ↑	87,48 ↓	94,49 ↓	42,94 ↓
	2007	80,81 ↑	100,00	84,29 ↓	92,46 ↓	55,98 ↑
	2008	76,89 ↓	99,21 ↓	99,32 ↑	92,20 ↓	49,59 ↓
HH index	2003	456	4158	1903	3873	842
	2004	2285 ↓	3976 ↓	1566 ↓	3756 ↓	849 ↑
	2005	1999 ↓	3483 ↓	5775 ↑	3842 ↑	1159 ↑
	2006	1989 ↓	4748 ↑	3688 ↓	3156 ↓	785 ↓
	2007	2014 ↑	4729 ↓	2809 ↓	3027 ↓	1076 ↑
	2008	1801 ↓	4425 ↓	6195 ↑	2790 ↓	999 ↓
Entropy index	2003	0,8084	0,4682	0,8072	0,4993	1,1215
	2004	0,8292 ↑	0,4638 ↑	0,8869 ↑	0,5116 ↑	1,1159 ↓
	2005	0,8842 ↑	0,5015 ↑	0,4491 ↓	0,5149 ↑	1,0760 ↓
	2006	0,8808 ↑	0,3530 ↓	0,6247 ↑	0,6054 ↑	1,1496 ↑
	2007	0,8774 ↑	0,3583 ↓	0,7372 ↑	0,6365 ↑	1,0317 ↓
	2008	0,9139 ↑	0,4069 ↑	0,3223 ↓	0,6579 ↑	1,0524 ↑
Gini coefficient	2003	0,9331	0,7110	0,8403	0,8403	0,2793
	2004	0,8873 ↓	0,6056 ↓	0,5085 ↓	0,8369 ↓	0,2961 ↑
	2005	0,8748 ↑	0,5595 ↓	0,7694 ↑	0,8629 ↑	0,4069 ↑
	2006	0,8731 ↓	0,4835 ↓	0,5044 ↓	0,8358 ↓	0,1515 ↓
	2007	0,8741 ↑	0,4937 ↑	0,6414 ↑	0,8280 ↓	0,3409 ↑
	2008	0,8687 ↓	0,5662 ↑	0,8378 ↑	0,8378 ↑	0,3543 ↓

Source: Infotrend (2004-2009). TOP50 in Croatian telecommunication industry; adapted from [4].

types, we can conclude that the biggest difference in value was measured for telecommunication equipment distributors; in 2003, the HH index value was equal to 1903, whereas in 2008 it was equal to 6195.

Considering data in Table 1 clearly the concentration movement measures by the entropy index and the Gini coefficient mostly follow the movement of the HH index.

Lorenz's curve for the 50 biggest telecommunication companies in Croatia in 2003 and 2008 (Fig. 1) confirms the results regarding high level of concentration in the telecommunication market. However, slow progress is visible to the shift in Lorenz's curve in 2008 from 2003 towards the perfect equality reference line.

DISCUSSION

We have analysed the indicators of telecommunication market in the period from 2003 to 2008. During the examined period, we have investigated the oscillations on the year-to-year basis. However, in order to discuss changes in concentration during the examined period it is necessary to compare the base period (2003) with the final period (2008).

Leader's market share indicated the higher level of control of the leading companies in the telecommunication markets. The highest leader market share in 2003 was that of the telecommunication services' provider (54,50 %), and telecommunication equipment producer (53,88 %). The lowest leader market share is that of the telecommunication solutions' implementers (14,46 %). The highest market share belongs to the telecommunication equipment distributors (76,83 %).

Concentration ratio C2 in 2003 shows a significantly higher figure compared to the leader's market share. The highest value of the concentration ratio C2 was reached by the sector of telecommunication equipment producers in 2003 (88,53 %) and in 2008 (93,49 %). Comparing the data it can be concluded that the highest growth is present in the sector of the telecommunication equipment distributors.

The concentration ratio C4 showed significantly higher figures compared to the leader's market share and concentration ratio C2 in 2003. The highest value of the concentration ratio C2 was reached by the sector of telecommunications equipment producers in 2003 (98,41 %) and in 2008 (99,32 %). It is the same situation as for the concentration ratio C2, the highest growth can be seen in the sector of the telecommunication equipment distributors.

HH index shows higher values in 2008 than in 2003. In the sector of telecommunication equipment distributors, the concentration increases. Concentration decreases in the sector of telecommunication service providers. In the sectors of telecommunication equipment producers and telecommunication solution implementers the HH index measures a slight increase in concentration.

From the data from the Table 1 it can be concluded that the values of the Entropy index, and the Gini coefficient are very similar to the values of the HH index, approximately the same decreases and increases as the values.

CONCLUSIONS

The telecommunication industry is relatively new but have a strong influence on all segments of work and life [4]. At the beginning of the 21st century, telecommunication industry started growing rapidly and competition, innovations and entering of new companies bring positive steps in liberalization and concentration of telecommunication market [6].

The paper analysis the level of concentration of telecommunication industry in Croatia. In this research, the concentration was measured by the leader's market share with concentration ratios C2 and C4, HH index, concentration index and Gini's coefficient. Concentration of all the 50 biggest telecommunication companies was analysed, and the data are gathered from the Infotrend magazine. Telecommunication companies are divided into four groups: telecommunication equipment producers, telecommunication equipment distributors, telecommunication service providers and telecommunication solution's implementers.

The paper sets two goals. The first goal assumes that the concentration degree on the telecommunication market in Croatia changed differently in different shares in the telecommunication market (producers and distributors of the telecommunication equipment, providers of telecommunication services and telecommunication solution's implementers) in the period from 2003 to 2008. Using analysis of concentration indicators the first goal was confirmed, and it was also shown that the concentration varied differently in specific sectors. The other goal assumes that the degree of concentration on the telecommunication market is influenced by barriers to enter the market. Based on the characteristics of individual sectors of the telecommunication market, it can be concluded that the barriers shrank in the observed period in the sector of telecommunication service providers but in the other sectors, there were no changes.

The telecommunication industry was under the strong influence of regulation and at the end of the 1990s private subjects were enabled to enter the market. With the growing number of the telecommunication companies, the market became more and more oligopoly. This will lead towards further deregulation and liberalization of the telecommunication market [4].

Further growth and development of the telecommunication industry will depend on liberalization, privatization and deregulation of the telecommunication market on the global level [5]. The application of brand new technologies and market competition will also have a positive influence on even better services provided to the end users in the telecommunication industry [1]. New and dynamic issues in telecommunication industry will enable new opportunities and challenges for the operators. There has been positive steps on the Croatian telecommunication market, especially for digital network, high standards for universal services and the current situation in the mobile market, comparing with some other eastern and southeastern European countries [4]. It can be concluded that Croatia is on its way to liberalize the market, and that big progress has been made within the telecommunication industry.

Further research should involve some additional variables into the research and newer data. One such variable should be the financial performance of the subjects of telecommunication markets. Data should include variables about some European countries and situation on their telecommunication markets. There is a broad range of issues to be tackled in the future work.

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TELEKOMUNIKACIJSKO TRŽIŠTE U HRVATSKOJ: KONCENTRACIJSKI TRENDOVI OD 2003.-2008. GODINE

M. Pejić Bach[1], J. Zoroja[1] i Ž. Jirouš[2]

[1]Katedra za informatiku, Ekonomski fakultet – Sveučilište u Zagrebu
Zagreb, Hrvatska

[2]c/o Katedra za informatiku, Ekonomski fakultet – Sveučilište u Zagrebu
Zagreb, Hrvatska

SAŽETAK

Telekomunikacijska tržišta su značajan čimbenik ekonomskog rasta. Dosadašnji razvoj telekomunikacijskih tržišta i usluga bio je sporiji je u zemljama u tranziciji u odnosu na razvijene europske zemlje, iako su nakon promjene društvenog uređenja, zemlje u tranzicij uvidjele prednosti razvoja i modernizacije telekomunikacijske mreže i tržišta.

Članak analizira stupanj koncentracije telekomunikacijske industrije od 2003. do 2008. godine. U analizi su korišteni podaci o 50 najvećih hrvatskih informatičkih kompanija na telekomunikacijskom tržitštu, ali i o specifičnim sektorima telekomunikacijskog tržišta kao što su: proizvođači telekomunikacijske opreme, distributeri telekomunikacijske opreme i implementatori telekomunikacijskih rješenja. Dva glavna zaključka koja proizlaze iz rezultata članka su: (1) stupanj koncentracije unutar telekomunikacijskog sektora u Hrvatskoj se mijenja različito u različitim sektorima telekomunikacijskog tržišta, (2) stupanj koncentracije unutar telekomunikacijskog sektora pod utjecajem je različitih preprekama ulaska na tržište.

KLJUČNE RIJEČI

telekomunikacijsko tržište, koncentracija, Hrvatska, zemlje u tranziciji