The Influence of the Oligopolistic Fringe on Economies of New EU Countries on the Example of the Czech Republic

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Modern economies have to deal with the problem of misusing of monopoly position by enterprises within the frame of so-called imperfect competition which is in spite of facts such as New Economy and competition reinforcing phenomenon of globalization probably irrefragable reality. Bureaus of economy competition protection lead vein fight on the level of nations against monopolistic companies which are abusing their position on the market. Situation is really problematic in small duty closed national economies.

Aim of this paper is to answer the question: "Will this situation change – if it will change at all - in countries that newly joined European Union, considering their integration in significantly bigger competition environment of economically integrated Europe:" Czech Republic which joined European Union was chosen to proof this fact. In four years there came out that many companies, which were monopolistic before joining EU, became oligopolies mainly the ones with dominant firm. A well-known economic theory says that oligopolies in comparison with monopolies have much less possibilities to abuse their position. The situation within the frame of the oligopoly is more competitive.

Oligopoly with dominant firm reality analysis has been selected not just for the fact that monopolies of the new EU-members have been turning into this oligopoly option, but mainly because by the other oligopoly options analysis, the results are more hospitable, because of an increasing competition.

The graphs in the paper furnish theoretical and graphical proof of above mentioned conclusions in the form of oligopoly price and oligopoly quantity respecting the transition dynamics.

The fact, that enterprises in the oligopoly edge that compete with the dominant firm oligopoly have and make use of an extend for positive technology transition, is taken into account. Thereby it comes not only to the product prices change (quasi decrease), but also to increase of the producing quantity and above all to the proportion changes between the quantity which is shared by oligopoly edge and dominant firm. Nevertheless the participation of the oligopoly edge grows significantly.

Above mentioned facts or their developments are not even changed by the population increasing incomes that have been analyzed in the paper concurrence oligopoly edge technology transition.

In fact e economic integration leads to the increasing space for small and middle enterprises that are frequent carriers of fundamental innovations in production and employ significant part of the country inhabitants. These are firms supported not just by governments but also by EU. Above mentioned microeconomic facts have been fully projected into the Czech economy prosperity on the macroeconomic level. The proof was given by so-called magic quadrangle and its still growing area in the suspense period. The growth of the area has been almost proportional that and it matches to the success economic development theory requests.

It is possible to state that the enter of the extra small economy to the economically integrated area of EU can lead – besides others – also by market structure transitions to consolidation of economic prosperity of such small country.

Keywords*: monopoly, oligopoly, competition fringe, magic tetragon, EU*

Introduction

Ten new countries in 2004 and two in 2007 joined the European Union in order to bypass the disparity tied to the need of mass production in connection with using new technologies that, firstly, do not pay off in small supplies and secondly, by a low value of domestic purchasing power caused not only by small pensions of these new joining countries compared with the most advanced EU countries, but mainly by small number of consumers, or inhabitants of these countries. Thirdly, the dilemma of monopolization of their markets bringing a lot of negative points was being solved by this step.

The accession of new EU countries removing boundaries for free trade of goods was a logical step endeavouring to sol ve this problem. And as the objective statistical data shown by the example of the Czech Republic, the aim has been fulfilled. Czech economy clearly improves its economic rank, which is proved by almost steadily growing surface of its magic tetragon. In connection with the membership of the Czech Republic in the EU, it obviously helped to balance the payments of the Czech checking account, which has almost become settled with a positive impact on the development of the Czech koruna exchange rate in accordance with strengthening the currency.

Yet, there arises another question and it is in what way small and medium-sized enterprises influence this new economic reality. It is an essential question because those businesses employ the biggest ratio of inhabitants, are a resource of fundamentai innovations and their participation

on the foreign trade grows rapidly. Their increasing share on the production of GDP demonstrates the country economy dependence. This is shown by the amount of small and middle enterprises (SME) in the Czech reality-see Table 1 and Figure 1.

Total Amount of SME in the Czech Republic (2005–2006)

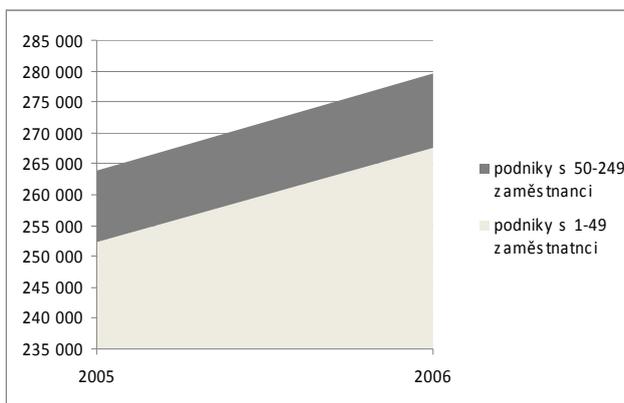|	2005	2006
Enterprises (1-49 employees)	252 317	267 690
Enterprises (50-249 employees)	11 664	12 016
Total amount of SME	263 981	279 706

Source: http://vdb.czso.cz

Figure 1: Total Number Growth of SME in 2005-2006 in the Czech Republic. *Source: http://vdb.czso.cz*

Research problem:

The research allows to the question if it is possible to prove that SME amount growth, often creating oligopoly edge, is in position to take a positive effect on the economy.

Research goal:

The basic goal was to figure this evidence graphically from the situation of transforming economic reality in the oligopoly with dominant firm conditions.

First we had to compare oligopoly and monopoly reality, second to observe oligopoly market structure development by the transforming technology and growing residents´ incomes.

Hypothesis has been specified, that growth of SME – ceteris paribus – reinforcing the oligopoly edge leads to the growth of magic tetragon flat. It was necessary to verify this hypothesis by the research.

Research methods:

Research methods are not just opinions of authors mentioned on the list of literature comparison, but above all the analysis and deduction within the frame of the known microeconomics theories.

Impacts of economic integration on the status and progress of the market structure

This applies to a transformation of monopolies into an oligopoly with a dominant firm to which the economic subjects of the offer side are forced by the increasing competition within the EU, as well as expanding demands of customers, whose buying power is surging, too. Not only formerly dominant domestic monopolies influence this reality, but also new enterprises from EU countries which often run more advanced technologies than domestic companies inclining to set themselves into a monopoly position. By suppressing such monopolistic positions is eligible for economies, but should be market-run.

Figure 1 compares the reality of oligopoly and monopoly. Additionally, it considers consequences of increasing competitiveness of the oligopolistic fringe by means of technology changes. Thus, it is obvious that – ceteris paribus – oligopolistic price is more favourable for a customer than monopolistic price and that even produced volume of production (as a quantity directly influencing GDP) is bigger.
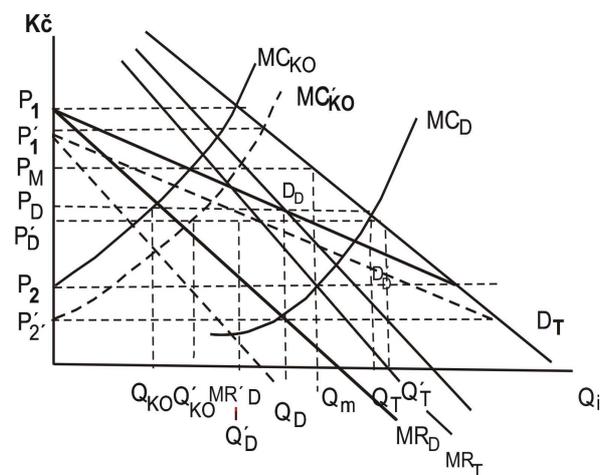

Figure 2: An oligopoly versus monopoly and progress of an oligopoly with a dominant firm (own construction)

In the oligopolistic (market competitive) fringe, or if you like the enterprises making it, there originates an interest in cutting down expenses which are too high in contrast with the dominant firm while there is no other way to increase profit than lowering costs for the oligopolistic fringe and for firms in perfect competition as well. However, cost reduction by firms of the oligopolistic fringe force the dominant firm to reduce the price which in macroeconomical context decreases the rate of inflation and simultaneously also decreases a share of this dominant firm on the market - as in Figure 3 and actually will also force it to reduce the costs, which will lead to the growth of competitiveness. So, it also influences the balance of foreign trade.

Moreover, the increase of competitiveness developed by the above mentioned facts can also affect another macroeconomical parameter of the magic tetragon and that is unemployment.

The change of forms of market structures of imperfect competition and upsurge of the portion of firms of the oligopolistic fringe in the unified market of the European Union

The creation of imperfect competition with its typical axioms has started the way to economies' monopolization,

lasting for more than one century. By its progress over the monopolistic competition, different options of oligopolies to the above mentioned monopoly may seem to be fatal. It is not like that from many more causes although one of the most inconsistent ones is integration of economies which in the positive meaning of the word "melts" the firms' monopolistic position in terms of closed national economies and by opening wider competitive environment. National monopolies become oligopolies whose influence on economy can be judged positively rather than negatively in comparison with monopolies, such as cartels, i.e. formal agreements among firms in an oligopolistic industry.

Legend:

P_M	monopoly price
P_D	dominant firm's set price
P_D	product's price set by dominant firm after changes of technology by companies of competitive fringe
P_1, P_1	prices where all demands would be saturated by dominant firm, with apostrophe - after technology change
P_2, P_2	prices where all demand would be saturated by dominant firm, with apostrophe – after technology change
Q_M	monopoly quantity
Q_D	quantity of production by dominant firm
Q_D	quantity of production by dominant firm after technology change by companies of competitive fringe
Q_T, Q_T	total quantity of production by oligopoly, with apostrophe - after technology change
MC	marginal costs where D index defines quantity of dominant firm, with apostrophe – after technology change, KO index defines quantity of competitive fringe, with apostrophe – after technology change, T index defines total costs.
MR	marginal revenue with analogical indexes as MC
D	average revenues with analogical indexes as MC
Kč	prices in CZK

This fact can be one of many reasons of the above mentioned positive development of economies of the new EU member countries. We can merge the graphical evidence of the referred calculation with Figure 1. One can notice the difference between a monopolistic and oligopolistic price, especially after the escalation of competitiveness of firms of the oligopolistic fringe. Bearing these facts in mind, the production comparison of a monopoly and oligopoly is eloquent.

Actually, we can also ask a question how the above mentioned reality will be changed by an increasing demand shown in Figure 2 which is the existing reality. It is obvious that the price P_D will increase to P_D by expansion of the demand, although the competitive pressure invoked by the technology change of firms of the oligopolistic fringe will compress it to P_D. The increase of supplied amount is equally important, but mainly the

surging portion of the oligopolistic fringe on the market qualified by the change of the quantity Q_{KO} to Q_{KO}.

Based on the presented figure, we can then assume that even increasing household buying power of the EU new member countries tied with the demand of the anticipated positive trends of progress will not change. Perceptibly growing power of an oligopoly will be the grounds for a deceleration of unwanted inflation resulting from monopolies' abuse of their dominant position.
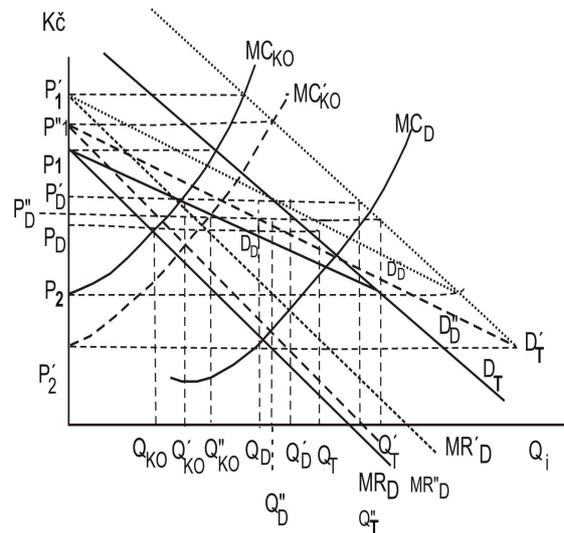

Figure 3: Change of inhabitants' pensions and technology in connection with a price change and supplied quantity (own construction)

Legend:

Quantities explained in the legend for Figure 1 are analogically used in Figure 2.

Price and amount quantities with one apostrophe represent the impact of inhabitants' pensions rise and they are shown with dotted lines.

Price and amount quantities with two apostrophes also represent the impact of improving firms' technologies of the oligopolistic fringe and are graphically shown with dashed lines.

D_D demand for products of the dominant firm after increasing people's pensions and herewith after consecutive technology change of firms of the oligopolistic fringe.

An objective aspect of evaluation of economy on the example of the Czech Republic after joining the European Union

In the above text, the expected positive evaluation of economical effects of new EU countries' (incl. Czech Rep.) accession is proved graphically by the comparison of magic tetragons of the Czech Republic from 2003 (i.e. a year before joining the EU), 2004 (joining) and 2006 (after accession, but not immediately as this could be a misguiding entry).

Figure No. 4 shows a magic tetragon of the Czech Republic in the above compared years with a magic tetragon of the European Union in 2006.

The area of the magic tetragon of the Czech Republic in comparison with the area of the EU tetragon is satisfactorily big and is getting even bigger while comparing Czech economies in 2004 and 2006 at the same time. However, this is not enough as a proof of success progress in economical theory. Not only the area of the tetragon has to rise, but also the growth must be balanced. And that has been happening in the Czech economy apart from minimal changes in the rate of inflation, where nevertheless we can be satisfied with the situation.
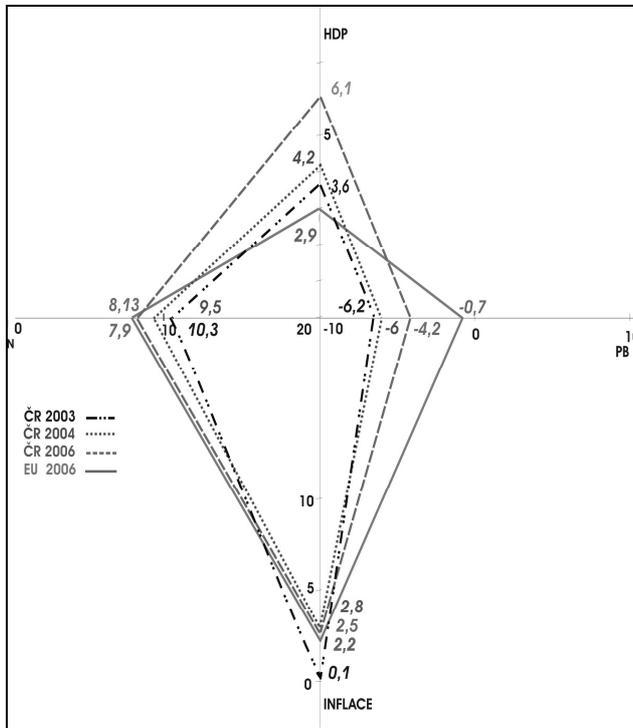

Figure 4: Magic tetragon in 2003, 2004 and 2006 (own construction)

Legend:

PB - balance of payments-checking account
HDP - gross domestic product
N - rate of unemployment
I - rate of inflation

The above mentioned facts are obvious also from the following Table 2 showing thet data in the graph.

Table 2.

Selected registers of the portfolio of economy of the Czech Republic in 2003, 2004 and 2006, and the European Union in 2006

register	CR			EU
year	2003	2004	2006	2006
rate of inflation	0.1	2.8	2.5	2.2
rate of unemployment	10.31	9.47	8.13	7.9
GDP growth	3.6	4.2	6.1	2.9
rate of balance of checking-account of trade payments on GDP	- 6.2	- 6.0	- 4.2	- 0.7

Source: www.czso.cz ; www.eurostat.eu

However, it is necessary to take into consideration the fact that a lot of other economical aspects have had an influence on the progress of the above shown registers. Those have become evident independently since the Czech Republic accession to the EU, yet we may assume with high probability that our membership in the EU along with a related new expansion of small and medium enterprises paid off the Czech economy.

The situation of small and medium enterprises as subjects of the market fringe

One can hardly ever see a situation of small and medium enterprises being extremely important for modern market economies them that present the competitive fringe in the above mentioned chain of events. They represent 99% of economic subjects comprising is 19.3 mil. enterprises inside the EU. They offer 65 million job positions, i.e. 2/3 from the total number of the unemployed. We can express their significance graphically in Figure 5.
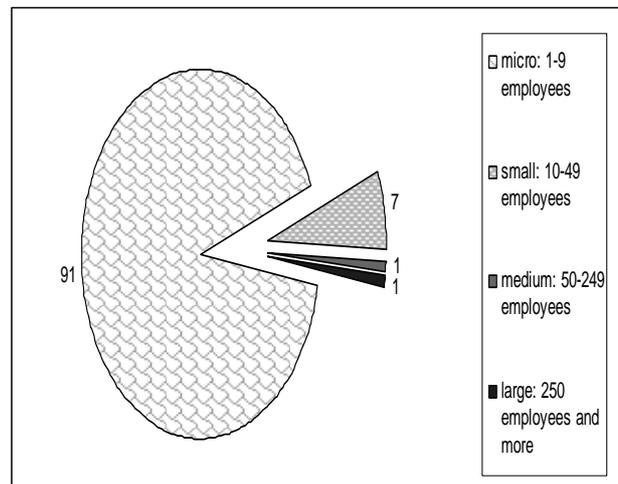

Figure 5: Enterprises structure according to their size in the EU in 2005 (%)
(http://ec.europa.eu/enterprise/smes/facts_figures_en.htm)

Any support of these small and medium-sized enterprises will be strengthened by the activities of the European Chart of Small Enterprises toward the European Union, especially if it comes to local politics. That would intensify their positive influence on creating of desired competitive environment.

Conclusion

The development of economy of the Czech Republic is, according to parameters of the alleged magic tetragon, very promising after the accession of the Czech Republic to the EU which also generally applies to other new member states.

Macroeconomic reality influences the microeconomic reality, although this determinates what macroeconomic results will be accomplished. The side of the offer (firms) was the considered microeconomic reality.

The reality of the market structure in new member countries, as well as in the Czech Republic, is obviously imperfect, however, the variety of its forms is typical for

imperfect competition. A monopoly form of imperfect competition would be intensified without accession of these countries to the EU or abolition of customs and other trade restrictions. It often leads to abuse of dominant position of a producer, let it be by a monopoly price of goods or stagnation in a monopoly disinterest in technological and economic proficiency.

This verity has positively affected the reality of accession to the EU which invoked a substitution of a monopolistic form into an oligopolistic form of imperfect competition besides other facts.

And it is the imperfect competition that can act on competitive structures in economy, especially at the point of creating an oligopoly with a dominant firm that is a frequent reality with the possibility to positively impress macroeconomic results of economy. The implemented encouragement of small and medium-sized enterprises, which in principle compose this market fringe, reinforces optimism of the perspective.

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Ogopolijos pasipipildymo įtaka naujoms Europos Sąjungos šalių ekonomikoms: Čekijos Respublikos patirtis

Santrauka

Dešimt naujų šalių 2004 metais ir dvi šalys 2007 metais įstojo į Europos Sąjungą. Šio įstojimo tikslas buvo įveikti neto lygumą, atsiradusį dėl naujų technologijų taikymo masinėje gamyboje. Naujų technologijų įdiegimas neatsiperka esant mažiems produkcijos kiekiams. Be to tam trukdo ir sumažėjusi gyventojų perkamoji galia, kuri atsiranda ne tik dėl mažų pensijų naujai įstojusiose į Europos Sąjungą šalyse palyginti su išsivysčiusiomis šalimis, bet svarbiausia dėl to, kadtose šalyse yra mažai vartotojų (gyventojų). Šių šalių rinkos monopolizavimas, kurių sukelia daug problemų, buvo išspręsta pasitelkiant šiuos žingsnius.

Kalbama apie monopolijų tapimą oligopolija su dominuojančia firma, prie kurios ekonomikos subjektai yra stumiami dėl vis didėjančios konkurencijos Europos Sąjungoje, taip pat dėl didėjančių vartotojų poreikių, nes jų perkamoji galia auga. Šiai tikrovei įtaką daro ne tik viešpataujančios vietinės monopolinės firmos, bet ir naujos Europos Sąjungos šalių įmonės, kuriose įdiegtos daug aukštesnės technologijos negu vietinėse kompanijose taip pat siekiančiose tapti monopolijomis. Tokių monopolistinių siekių apribojimas yra naudingas ekonomikai, tačiau visa tai reikia atlikti laikantis rinkos ekonomikos principų.

Esant oligopoliniam (rinkos, konkurenciniam) papildymui arba firmoms, kurios sudaro tą papildymą, atsiranda noras sumažinti išlaidas, kurios daug didesnės negu vietinėje firmoje. Kadangi nėra kito būdo padidinti pelną, tenka mažinti oligopolijos papildymo išlaidas. Išlaidų mažinimas verčia dominuojančią firmą mažinti kainas, o tai makroekonominiame kontekste ne tik sumažina infliaciją, bet ir dominuojančios firmos galimybes rinkoje. Visa tai ateityje privers dominuojančią firmą mažinti kaštus ir pakelti konkurencingumą. Šie veiksniai daro įtaką ir užsienio prekybos balansui.

Konkurencingumo didėjimas veikia ir kitus makroekonominius parametrus maniškajame keturkampyje, t. y. daro įtaką nedarbui.

Vargu ar galima įsivaizduoti situaciją, kurioje smulkios ir vidutinės įmonės vaidina lemiamą vaidmenį šiuolaikinės rinkos ekonomikoje. Tai ir yra tos firmos, kurios sudaro konkurencinį rinkos papildymą.

Smulkios ir vidutinės įmonės sudaro 99 % visų ekonominių subjektų, t. y. 19,3 milijonų įmonių Europos Sąjungoje. Joje sukurta 65 milijonai darbo vietų.

Šias smulkias ir vidutines įmones remia smulkių įmonių Europos chartija, ypač jų vidaus politikos srityje. Tai sustiprins jų įtaką kuriant norimą konkurencinę aplinką.

Naujų Europos Sąjungos narių (tarp jų ir Čekoslovakijos Respublikos) įtaką atspindi lyginant 2003 metais (prieš Čekoslovakijos respublikos Sąjungą), 2004 metus (įstojant į Europos Sąjungą) ir 2006

metus (įstojus į Europos Sąjungą), tačiau ne tuojau pat, nes tokie duomenys galėtų būti klaidinantys.

Magiškojo Čekoslovakijos Respublikos keturkampio plotas, palyginti su Europos Sąjungos keturkampio plotu, yra gana didelis ir didėja lyginant Čekijos ekonomiką 2004 metais ir 2006 metais. Tačiau ekonomikos teorijai šito sėkmingo vystymosi įrodymo nepakanka.

Turėtų didėti ne tik keturkampio plotas, bet ir visas augimas turėtų būti tolygesnis. Nepaisant minimalių pakitimų infliacijos srityje, esamą situaciją Čekoslovakijos Respublikos ekonomikoje galima laikyti patenkinamą.

Daugybė kitų ekonominių veiksnių turėjo įtakos paminėtiems pasiekimams. Galima tvirtinti, kad būtent nuo įstojimo į Europos Sąjungą Čekijos respublikos smulkios ir vidutinės įmonės daug prisidėjo prie bendrosios šalies ekonomikos.