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years from the beginning

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EDITORIAL

5 Years from the beginning of RTE

The human mind is the most powerful tool that nature has created. Is enough to bring in mind a beautiful idea and this will grow and materialize in something special.

How RTE started?

All has started from an idea raised by the Dean of Faculty of Economics and Business Administration, Prof. Ph.D Constantinescu Dumitru, at one of the young generation from our faculty meeting in 2002. He saw the potential and the solidarity of the young generation of economists and wanted to do something for it. The best thing to do was to give it an important goal to achieve: "To focus on research, to try to achieve the best quality level of research activities and to promote the results at national and international level".

Only an idea it's enough to do this?

Surely Yes, especially if you start in the right directions from the beginning. Mr. Dumitru Constantinescu knew this and he gave us the chance to start by organizing the first National Conference "The Young Economists and the challenge of the future" in 2003. This was an important task and in the same times a test that we had to take. Its results can be evaluated by the participants of the event. Our colleagues worked very hard to organize the event and in the same time to conceive the RTE journal. First thing we do for the journal was to establish the main objective and a structure that will permit to cover all the important aspects of the economic field.

The main objective established for the journal was "to promote the results of the economists researches from all generations, especially the young one from Romania and abroad".

The structure of the journal was well balanced to cover all the main aspects from the economic field grouped in four sections: Finances - Accounting, Management - Marketing -Tourism, Economic Theories - International Economic Relations and Business Statistics - Economic Informatics.

What we realized until now?

Making a long story short...

Following the goal, the RTE journal has passed step by step from the national level to the international level. Until now in its pages publish authors from countries like: France, Switzerland, Portugal, Hungary, Bulgaria, The Czech Republic, Turkey, India, Pakistan, Croatia and Macedonia.

In present the journal has a well known continuity and regularity, and an international visibility promoted by all means including by its own website.

What we wish to do in the future?

We wish to do our best by continuing what we have started five years ago and by making the journal to achieve a better level of quality.

Whom do we thank?

Very special thanks we give to Prof. Ph.D Dumitru Constantinescu who believes in us and who give us the opportunity to do what we can do.

We give many thanks to all member of Academic Review Board for the effort to increase the quality of the journal.

We thank to all authors who give us the opportunity to make the journal better and better.

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THE APPLICATION OF OPTIMUM CURRENCY AREA CRITERIA TO CROATIA

Research Assistant Tanja Broz The Institute of Economics Zagreb Zagreb, Croatia

Abstract: This paper investigates if Croatia would benefit from the introduction of euro. Croatia has been gravitating towards Europe for decades, especially towards Germany. The same period, until the introduction of stabilization program in late 1993, was characterized by hyperinflation which caused loosing the trust in domestic currency. Also, Croatia is a small country in territory and in economic power, so one could argue that loosing monetary independence would not hurt it. But what if Croatia does not have synchronized business cycle with the euro area? Then a single monetary policy would not be of benefit to it and Croatia is too small country to have powerful voice in ECB. The theory of optimum currency areas can help to find the answer to those concerns.

Key words: optimum currency area criteria, Croatia

Introduction

This paper investigates if Croatia would benefit from introduction of euro. Croatia has been gravitating towards Europe for decades, especially towards Germany. The same period was characterized by hyperinflation which caused loosing the trust in domestic currency. Also, Croatia is a small country in territory and in economic power, so one could argue that loosing monetary independence would not hurt it. But what if Croatia does not have synchronized business cycle with the euro area? Then single monetary policy would not be of benefit and Croatia is too small country to have powerful voice in ECB. The theory of optimum currency areas (OCA) can help to find the answer, but first it is necessary to see macroeconomic situation in Croatia since its independence.

The rest of paper is organized as follows. Chapter 2 explains some elements of macroeconomic situation in Croatia, chapter 3 gives more details about foreign trade, while chapter 4 applies OCA criteria to Croatia. Last chapter concludes.

Macroeconomic situation since Croatian independence

Before it declared independence in 1991, Croatia was a part of Yugoslavia together with other 5 republics. After 1991 Croatia exists as an independent state with its own government and central bank. First few years were very difficult for Croatia due to war for its independence, but also due to break up of Yugoslavian and east European market. War ended in 1995, but during the war Croatia experienced severe economic instability, which however started in the whole Yugoslavia in 1980's. During the war, third of Croatian territory was occupied and most industries in those areas were

destroyed. This period was also characterized by hyperinflation¹, severe fall in industrial production² and GDP and supply side shocks. In order to stabilize the economy, government employed Stabilization program in October 1993. The program had 3 phases³, but only the first one – reduction of inflation – had noticeable results. Program was well communicated with the public and public had faith in government's determination to reduce inflation. The most important anchor was the exchange rate, because of very long relationship between Dutch mark and domestic currency. The choice of the anchor was natural, since hyperinflation lasted for long period of time and people started to use Dutch mark as a reference currency. Thanks to the strong belief in the program, inflation decreased immediately and in several months in 1994 we also recorded deflation. In the same time instead of planned slow depreciation of domestic currency against Dutch mark, exchange rate started to appreciate.⁴ Reason for that can be found in increased credibility of domestic currency, so people wanted to hold now Croatian dinars, instead of Dutch mark.

Disinflation was successful and the economy was stabilized – GDP and industrial production started slowly to rise. However, since the government and central bank were very afraid of inflation⁵, other phases of stabilization program were neglected, so there was no strong support to developmental goals. The result of that, but also of crisis of banking sector and structural problems, was a deterioration of economic situation which started in 1997 and Croatia entered into recession which started in the last quarter of 1998 and lasted until the third quarter of 1999. Improvement in economic situation was followed by recovery in household consumption, exports and tourism. Through the whole period after the stabilization program, inflation remained stable, below 5% annually, except in 1998, when it was 5.7% (Table 1). After the stabilization program, focus of public was on exchange rate, which was perceived as the main anchor. For that reason, exchange rate against Dutch mark and latter on against euro was carefully managed, which can be seen from Figure 1.⁶

Latest data show continuing improvement in economic activity. Seasonally adjusted GDP is constantly rising from the end of 2001 (Figure 2) and similar but more volatile trend is recorded for seasonally adjusted industrial production (Figure 3). Also, before the introduction of euro in 12 EU countries, Croatian citizens mostly saved their money in deutschemarks, but they often did not put the money in the banks, but rather they saved it in the "mattresses". After the introduction of euro, some of the money that

¹ Before the introduction of Stabilisation program in 1993, monthly inflation rate amounted to 30% (Crkvenac, 1997).

² Industrial production in 1993 was in real terms 42.5% lower than in 1990 (Crkvenac, 1997).

³ First phase included fast disinflation, second structural changes in the economy and third economic development.

⁴ Creators of stabilisation program thought that exchange rate would continue to depreciate, but with slower rate. They even announced tablita for the first 3 months in which they announced future expected exchange rates. However, the opposite situation happened and they abandoned the use of tablita.

⁵ Monetary policy was tight and taxes were also increased.

⁶ Lowest value of exchange rate was 6.584 kunas for 1 euro in April 1995, which was 9,5% lower that average exchange rate in selected period and highest value was 7.7408 in February 2000, which was 6.4% higher than average exchange rate.

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was put in the banks was withdrawn, but the money that stayed helped in credit growth that occurred afterwards. Expansion of credit stimulated consumption and eventually growth. Also, since banks perceive households as less risky, because of good collaterals, they were more prone to give credits to them then to business sector, which caused the change in structure of credits (Figure 4). In May 2003 credits to households got ahead of credits to business sector and they remained higher so far. Although the introduction of euro helped in credit expansion, it cannot explain the whole increase. Since most banks are owned by foreign banks (mainly Austrian and Italian), banks were able to get credits from abroad with lower interest rates and place them in Croatia with much higher interest rates. This banks' activity together with the government which used more favorable conditions in European market to issue Eurobonds, caused rapid increase in external debt (Figure 5). After government realized that external debt is going out of control, they started to issue bonds on domestic market, which, among other factors, caused the appreciation pressures on the exchange rate. Other factors that made pressure on appreciation of exchange rate in the whole period after Stabilization program are inflows of foreign currency, mostly through tourism and FDI, households' transfers and credits. However, stability of the exchange rate was not perceived good for all agents. Exporters complained that exchange rate is overvalued and that they cannot be competitive in the world markets. Arguments for those exporters see in the starting phase of stabilization program. As was previously mentioned, creators of the Stabilization program thought that exchange rate will continue to depreciate, but they hoped that exchange rate will depreciate with much slower rate after the introduction of the program. So, they induced initial devaluation of domestic currency by 19.8%. After that costs were adapted to this new level of exchange rate, but since the program was credible, people wanted to hold domestic currency and demand for it increased causing appreciation of exchange rate instead of expected depreciation. All of this caused real appreciation of domestic currency and exporters started to ask for depreciation (they are doing so even today) so that they could be more competitive. So, instead of adapting to this situation and trying to be more productive, they want to become competitive in artificial way. But, since even today exchange rate is perceived as nominal anchor and since most of households and government liabilities are tied to euro, large depreciation would very likely cause inflation.⁷ Also, as Barro and Gordon (1983) and Kyland and Prescott (1977) argue, a discretionary decision of monetary authorities will result in higher inflation in the future, at the same rate of unemployment.

Other matters of concern in Croatia are the following: unemployment remains high, structural changes are still necessary, legal system calls for transformation and corruption still exists. All of this means that macroeconomic stability is not the only important factor and that Croatia has still to work very hard to prove itself to Europe.

Trade between the EU and Croatia

Croatia is a small economy, which implies that it has to import a lot, since it cannot competitively produce all it needs. So, in order to import required goods, Croatia needs also to export, so that it can earn foreign currency with which it can pay for its

⁷ However, it is true that Croatian central bank shouldn't have allowed tiding liabilities to euro and that they should have considered exit from this kind of exchange rate regime, but now it is not acceptable to most agents to have high depreciation of domestic currency, because this would have negative impact on their wealth.

imports. If a country does not export enough goods, it can have surplus in service sector and in transfers or it need to have surplus in capital account.

Since independence, Croatia had surplus in balance of foreign trade only once in 1992. After that Croatia has continuous deficit in balance of foreign trade (Figure 6). Deficit in balance of foreign trade is not something bad if import is used in export sectors or if it is used for developmental goals. But if a country imports mainly consumer goods, then import will not increase export production, but will increase debt that has to be returned.⁸ This is what is happening in Croatia. Maybe the reason for that can be found in the fact that Croatia was part of communist country for decades, so that people could not have all consumer goods they wanted, but also government can be blamed because of no development and export strategy. Croatia's exports stayed almost unchanged in dollar terms for more than a decade, while imports rose causing widening of deficit of foreign trade balance. Only in the last couple of years exports (but also imports) increased dramatically. However, dollar depreciation against the euro contributed to the large part of this increase, since Croatia mainly exports in euros and reports export and import data in dollar terms.

Main Croatian trading partners are EU and Bosnia and Herzegovina. In the EU, the most important partners are Italy, Germany and Slovenia. Since Italy and Germany have euro, with Slovenia introducing it in 2007 and Bosnia and Herzegovina has currency board with euro, it is noticeable that euro is the most important currency in the foreign trade for Croatia. This can also be seen from exports and imports by type of currency. About two thirds of exports and about three quarters of imports are invoiced in a euro, which as well implies that the euro is by far the most important currency in the foreign trade.

More on trade will be in the later chapters.

How well Croatia apply to different criteria of optimum currency areas?

Discussion about common currency areas usually rests on the theory of optimum currency areas, which was created by Mundell (1961) and supplemented by many other authors.⁹ For that reason in this chapter we will explore several optimum currency area criteria and their application to Croatia.

Openness

Openness can be measured as a share of foreign trade in GDP.¹⁰ Smaller countries are usually more open to trade than larger countries. Some reasons for that were already described (smaller countries can hardly be self-sufficient). So, if country needs to import a lot, it has to export in order to have foreign currency to pay for imports. When exports and imports in small economy are summed, we get usually relatively high share of GDP. Table 2 shows data for Croatia. After decrease of share in the middle of the 90's, Croatia increased openness in the new millennium and now openness ratio amounts to more than 110%. This number means nothing if it not compared with other economies. Economies like EU or USA have openness ratio of less then 25, so compared with them Croatia is a very open economy. On the other

⁸ This is true if service balance is not positive enough to pay for goods deficit.

⁹ Survey of optimum currency areas literature can be found in Broz (2005).

¹⁰ Even though Mckinnon (1963) defines openness as a ratio of tradables to nontradables, it is hard to get those data. So, we used here share of foreign trade (exports plus imports) in GDP as a measure of openness.

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hand, Belgium has even higher degree of openness. It can be concluded that smaller economies are in the same time more open. Also, when the economy is more open, then larger part of it is influenced by changes in exchange rate. So, if country has a dominant trading partner, it would be of benefit to it to peg its currency to trading partner currency. Croatia indeed has a dominant trading partner – EU – and this fact is now even more pronounced since EU 12 (13 now with Slovenia) introduced a single currency. Hence, if we look only to this criterion, it is possible to conclude that Croatia should peg its currency to euro and when the time comes it should introduce the euro.

Size of the economy

Croatia is a very small economy comparing to USA, Germany or Japan, but also comparing to Spain, Switzerland and Belgium. In 2004 GDP (in current prices) in the USA was 9433 billion euros, in Germany 2216 billion, Japan 3690 billion, Spain 837 billion, Switzerland 289 billion and in Belgium 288 billion, while Croatian GDP was 27.6 billion euros (Eurostat and Croatian national bank). Croatian GDP is only 0.3% of USA GDP and 9.6 % of Belgium. Small economy, which is often relatively open, has higher import dependence then large economy. Hence, changes of the exchange rate have larger impact on the economy. If in relatively large economy, with import dependence of 10%, there is 30% depreciation, this will increase costs of production by 3% due to increased prices of inputs. On the other hand, the same depreciation in a small economy with import dependence of 50% will mean increase of production costs by 15%. Since Croatia is a small economy with high import dependence, it would benefit from stability of exchange rate, according to this criterion.

Diversification of export

The less diversified is the economy, the more attractive is flexible exchange rate. Table 3 shows diversification of Croatian export and import structure. It is noticeable that category machinery and transport equipment are the most important. Almost third of total export falls in this category, which is substantial amount. Also, it is important to notice that main part of this category is ship building. In the same category of import structure, import of cars is the most important. It is also of interest to mention that cars are mainly bought on credit or leasing. Other important categories are miscellaneous manufactured articles, manufactures goods classified chiefly by material and mineral fuels and lubricants. However, even though Croatian export structure has one category that is more represented, this category does not comprise of major part of total exports. Countries with share of 80% of one product in total exports are considered to be not diversified, and that is considerably higher than Croatian machinery and transport equipment category. For that reason it is possible to conclude that Croatia is a diversified economy and that it would benefit from the single currency, so that it should join the EMU, once it joins the EU.

Labour mobility

As Mundell (1961) points out, labour mobility is a mechanism which could meliorate the impact of adverse shocks and restore equilibrium. Croatia, as most of Europe, does not have very mobile work force. The only mobility that is recorded is toward capital city Zagreb. Zagreb has about 1 million inhabitants (almost a quarter of the total population) and it is the richest part of Croatia. Government and all ministries are placed in Zagreb, even Ministry of tourism and Ministry of agriculture are in Zagreb, despite the fact that most of tourism revenues are generated at the coast and agriculture is the most important activity in Slavonija (eastern part of Croatia). Also, even though government introduced some tax measures in order to attract firms and labour force to depopulated areas, some regions (i.e Lika) are still almost completely depopulated. In this situation it is naturally to expect that adverse shock could hit different regions and that labour mobility will not help to meliorate the shock.

Capital mobility

Croatia has convertible current account of balance of payments, but it does not have yet complete convertibility of capital account. However, with Croatia's path towards the EU, it will have to eliminate all the barriers and investment will be easier. This will enable Croatian citizens as well as foreigners to diversify their incomes and assets. But, until Croatia does not enter the EMU, there will be exchange rate risk present in the economy, which will increase uncertainty of potential profit on investment and put pressure on exchange rate. Hence, unless Croatia does not adopt some sort of rigidly fixed exchange rate regime until the introduction of euro, it would be better to have floating exchange rate regime so that potential exchange rate crisis can be avoided. After the introduction of euro, a single currency will enhance capital mobility between Croatia and the rest of EMU since there will not be exchange rate risk any more.

Credibility

Croatia has a long history of inflation. Now, since the Stabilization program we have low inflation for more than a decade. Also, monetary authorities behave very responsible since the introduction of the program and they did not show any signs of weakness. Government now cannot take any credits from the central bank and central bank is carefully monitoring inflation developments. However, one might conclude that Croatians still do not have trust in domestic currency, since most of savings is in foreign currencies or tied to them (Figure 7). The reason for that could be this long history of inflation. So, in order not to repeat the history, one might say that Croatians would prefer fixed exchange rate regime and that introduction of euro would be of benefit to them.

Level of eurisation

Data show that Croatia has high level of unofficial eurisation, since most of residents' savings is in foreign currency (mainly euros) and Croatians use foreign currency, mostly euro, for larger purchases like houses and cars. Figure 7 shows deposits in domestic and foreign currency. Deposits in foreign currency are significantly higher than in domestic currency as it was explained in previous section. On the other hand, salaries are expressed in kunas, so change in exchange rate affects value of income, but at the same time citizens are hedged with their savings. As well, credits for larger purchases like houses and cars are tied to foreign currencies, mostly to euro and to smaller amount to Swiss frank, which enhances level of eurisation. Since the level of eurisation is rather high, it would not be difficult to completely abandon domestic currency and introduce euro.

Shocks

It is important to see what kinds of shocks are hitting Croatia. There are different types of shocks. If a country is facing foreign nominal shocks, having a fixed exchange rate will be attractive. On the other hand, if what a country is facing a real shocks (domestic or foreign), a flexible exchange rate would be more feasible. In Croatia, nominal shocks are more pronounced than real shocks. One of the most important nominal shocks is capital inflows and Europeans are the most important investors. Oil shock can be presumed as a real shock, but this shock is hitting all countries in the EU, not only Croatia. Further, for more than a decade export was

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stagnant no matter what happened. Only in the last two years it increased dramatically, but major part of that can be explained with depreciation of dollar. So, it can be said that no major real shock in form of aggregate demand shock hit Croatia since independence. Hence, it can be concluded that single monetary policy that ECB conducts for whole EMU could be of benefit for Croatia, if mainly nominal shocks from EMU hit Croatia.

Business cycle synchronization

Among many criteria for joining/forming a common currency area, one has quite an influential status in the recent years and that is the synchronization of business cycles. This means that if the business cycles of members of a common currency area are synchronized, the cost of not having its own monetary policy that would fight against disturbances is minimized. There are many methods which can be used to determine if countries have synchronized business cycles, but VAR approach is most commonly used. Examples include Boone (1997), Frenkel and Nickel (2002) and Fidrmuc and Korhonen (2003). Also, method that is widely used to determine existence of business cycle synchronization is cointegration (eg. Korhonen, 2003 and Broz, 2006). Croatia is rarely found in samples, so here we will present results from Broz (2006). The result of the cointegration test has shown that there is no cointegration between Croatian and the euro area in terms of industrial production so that variables in question can move independently of each other and can drift apart. This result implies that Croatian and the euro area's business cycles are not synchronized. So, one of the OCA criteria is not satisfied and in this context this means that Croatia and euro area do not form an optimum currency area and that in the long run ECB monetary policy may not suite Croatia. Hence, Croatia would not benefit from the introduction of euro at this time.

Endogeniety

Endogeniety of optimum currency areas is a relatively new idea presented by Frankel and Rose (1997). As they point out, theory shows that increased trade in common currency area can cause either increased industrial specialization between regions, in goods in which they have comparative advantage, which results with asynchronous business cycles resulting from industry specific shocks, or increased trade can result with increased correlation between business cycles if common demand shocks prevail or if intra-industry trade accounts for most of the trade. Their standpoint is the latter one and they argue that international trade patterns and international business cycle correlations are endogenous, so it represents a simple application of the famous Lucas critique. This standpoint can help Croatia to think about the euro, even though present research show limited synchronization of business cycles between Croatia and the euro area. Introduction of euro would increase trade integration between them, which could increase intra-industry trade and thus Croatia could find itself in the acceptance area. This indicates that Croatia could satisfy the OCA criteria ex post, even though it did not ex ante.

Conclusion

Inspection of most OCA criteria suggest that Croatia should introduce euro as soon as possible or at least peg its currency to euro. However, business cycle synchronization criterion suggests the opposite and it can be said that this criterion

includes several criteria in itself.¹¹ According to this criterion, monetary policy of the euro area would not suite Croatia. However, this is not so difficult to accept. The reason why Croatia and the euro area are not cointegrated in this respect can be found in convergence theory. As Croatia is at lower level of development than EU average, convergence theory implies that Croatia is expected to grow much faster and needs to have higher growth rates. This means that their industrial production indices will diverge from each other, until Croatia comes to euro area's level of development. So, if Croatia would join the euro area now, different states of the economy would require different monetary policy.

Hence, even though traditional OCA criteria suggest that Croatia should peg its currency to euro and introduce euro as soon as possible, we would advocate, according to business cycle synchronization criterion, that Croatia should deal with the problems that it has by itself and use monetary policy as an instrument of economic policy as long as it can. Later on, when Croatia will be completely ready and when Croatian and euro area's business cycles will be more synchronized, it can start to think about the euro.

Appendix

	1997	1998	1999	2000	2001	2002	2003	2004
GDP (MILLION EUR, CURRENT PRICES) ^A	17.790	19.281	18.679	19.976	22.177	24.220	25.526	27.629
GDP PER CAPITA (IN EUR)	3.891	4.284	4.102	4.560	4.998	5.451	5.747	6.224
GDP - YEAR-ON-YEAR RATE OF GROWTH (IN %, CONSTANT PRICES)	6,8	2,5	-0,9	2,9	4,4	5,2	4,3	3,8
AVERAGE YEAR-ON-YEAR INFLATION RATE ^B	3,6	5,7	4,0	4,6	3,8	1,7	1,8	2,1
CURRENT ACCOUNT BALANCE (AS OF % GDP)	-12,3	-6,8	-7,0	-2,5	-3,7	-8,7	-7,3	-5,2
EXPORTS OF GOODS AND SERVICES (AS OF % GDP)	40,3	39,8	40,9	47,1	48,7	45,9	51,5	51,5
IMPORTS OF GOODS AND SERVICES (AS OF % GDP)	56,8	49,1	49,3	52,3	54,6	57,0	59,5	58,8
EXTERNAL DEBT (AS OF % GDP)	38,0	47,6	54,1	60,6	60,7	62,2	77,6	82,1
EXCHANGE RATE ON 31 DECEMBER (HRK : 1 EUR)	6,9472	7,3291	7,6790	7,5983	7,3700	7,4423	7,6469	7,6712
CONSOLIDATED CENTRAL GOVERNMENT DEFICIT (AS % OF GDP) [©]			-6,5	-7,1	-5,4	-5,0	-4,9	-4,7
UNEMPLOYMENT RATE (ILO, PERS- ONS ABOVE 15 YEARS OF AGE) ^D	9,9	11,4	13,6	16,1	15,8	14,8	14,3	13,8

Table no. 1 Selected economic indicators of Croatian economy

Source: Croatian national bank, <u>www.hnb.hr</u>

¹¹ The synchronisation of business cycles is an important element in the research of, for example, the endogeneity of OCA criteria (Frankel and Rose, 1997), intensity of bilateral trade and correlation of business cycle (Frankel and Rose, 1996), monetary integration as disciplinary effect (Buti and Suardy, 2000) and specialisation hypothesis (Krugman, 1993).

Finances - Accounting

^A Calculated by applying the average annual exchange rate (HRK/1 EUR) to the GDP in kuna terms.

^B Inflation rate was measured by the RPI in the 1994-1998 period. From 1999 on, it is measured by the CPI.

^COn a cash basis.

^D Unemployment rates as at November 1996 and as at June 1997.



Source: Croatian national bank, www.hnb.hr

Figure no. 1 Exchange rate against euro and US dollar



Source: Croatian Central Bureau of Statistics and author's calculation Figure no. 2 Croatian GDP index, original series and seasonally adjusted, 1997 =100



Source: Croatian Central Bureau of Statistics and author's calculation

Figure no. 3 Croatian industrial production index, original series and seasonally adjusted, 2000 = 100



Source: Croatian national bank, www.hnb.hr

Figure no. 4 Credits to households and business sector, in million kunas



Source: Croatian national bank, www.hnb.hr

Figure no. 5 Croatian external debt



Source: Croatian national bank, <u>www.hnb.hr</u> Figure no. 6 Croatian imports, exports and balance of trade

Table no. 2 For	eign i	trade	(goo	us an	a ser	vices	as a	perce	entag	eore	JDP	
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Exports of goods and services (as of % GDP)	56.8	48.8	37.7	38.7	40.3	39.8	40.9	47.1	48.7	45.9	51.5	51.5
Imports of goods and services (as of % GDP)	53.0	45.4	49.5	48.0	56.8	49.1	49.3	52.3	54.6	57.0	59.5	58.8
Sum of exports and imports	109.8	94.2	87.2	86.7	97.1	88.9	90.2	99.4	103.3	102.9	110.9	110.3

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Source: Croatian national bank, www.hnb.hr

Table no. 3 Exports and imports by commodity sectors of Standard International **Trade Classification**

	Share the to	of group in tal exports	Share the to	of group in tal imports
	2003	2004	2003	2004
Food and live animals	9,06	6,30	7,04	7,17
Beverages and tobacco	2,63	2,38	0,82	0,74
Crude materials, excluding fuels	5,65	5,59	2,29	2,13
Mineral fuels and lubricants	9,62	11,33	10,94	11,98
Animal and vegetable oils and fats	0,22	0,16	0,29	0,31
Chemicals	9,59	9,37	10,98	11,16
Manufactures goods classified chiefly by material	14,05	14,82	18,73	19,65
Machinery and transport equipment	29,47	32,25	37,05	34,92
Miscellaneous manufactured articles	19,58	17,76	11,59	11,89
Commodities and transactions, n.e.c.	0,13	0,01	0,25	0,05

Note: Author's calculation based on Croatian Central Bureau of Statistics



Source: Croatian national bank, www.hnb.hr

Figure no. 7 Deposits in domestic and foreign currency, in millions of kunas

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ACCOUNTING, AMORTIZATION, FISCALITY – A TRIO STILL GENERATING DEBATE

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Abstract: Although, in the fight with inflation, Romania has lately obtained indubitable success, the inflation rate in our country continues to be high. Although in the Romania of the year 2007 we speak of a one-digit inflation rate, still, it continues to represent a danger, both at the micro economical level and at the macro economical one. In this context we feel it is still useful to approach the problems regarding the amortization of the immobilized actives, both in relationship with inflation as well as in relation with the fiscal implications that derive of it.

Key words: accounting, amortization, fiscality, IFRS

Even if, in what the battle with inflation is concerned, Romania has been obtaining indubitable victories lately, the inflation rate in our country is still high. Although in the Romania of the year 2007 we speak of a one-digit inflation rate, still, it continues to represent a danger, both at the micro economical level and at the macro economical one. Moreover, the latest increases in the prices of food, generated by the existence of an agricultural production that didn't meet the expectations, the increase of the price of electricity, natural gas, and certain salary claims, we believe put in danger the level BNR aims at for inflation in 2007 and not only.

In this context we feel it is still useful to approach the problems regarding the amortization of the immobilized actives, both in relationship with inflation as well as in relation with the fiscal implications that derive of it.

As we are well aware of, when the historical cost is found in the base for the calculation of the amortization, the amount resulted at the end of the period of amortization is, as result of its expression in constant currency, inferior to the initial investment, the difference being even more pronounced when the amortization period is longer, and when the inflation is stronger. This situation represents one of the limits of accounting in historical costs and implicitly of the amortization, calculated in such conditions, as a division mechanism on the result of the exercise of the cost of the immobilizations.

The amortization methodology shows the evolution of the amortization rhythm and of the values not yet amortized for the life duration of the immobilizations. The decision of the enterprises to choose one or another of the approved fiscal methods takes into account their development strategy, as well as the state's attitude towards the investment process in a certain period of time. No matter what amortization methodology is used, we feel it must meet several criteria, such as:

• the amortization must be included in the cost of the products or of the services provided by the company, in a sufficient degree, so as not to lead neither to the appearance of fictive profits, nor the their artificial decrease, because the registering of amortizations under the real value of the

depreciation determines exaggerated profits, which, in turn, create the distribution of fictive dividends and the payment of over-assessed taxes, while the inclusion of exaggerated amortizations in the costs generate the creation of resources for self-funding, in the case of the regular payment of the products/services, but will affect the interests of the stock-holders, as well as the company's image in the eyes of potential investors;

- the amortization plan must give the possibility of the uniform influence of the costs of the products/services provided;
- to limit the losses resulting from the moral decay;
- the amortizations must give the possibility for the renewal of the equipment in the rhythm decided by the company, meaning their perpetual correlation with the replacement value.

In the case of unstable economies or periods of time, from an economical point of view, monetary and financial, the increase of the inflation rate gravely impacts on the reproduction of the fixed capital, and the amortization looses its role in this respect. In the case of a decrease of the purchase power of the currency, and of a rapid increase of the prices, the calculation of the amortization with the historical cost as its base doesn't allow the efficient fulfillment of the function of maintaining the integrity of the productive capital any more and of the measuring of the depreciation, thus resulting a loss manifested in two directions:

- the existence of a final result superior to the real one because of the inclusion in the costs of underestimated amortizations, an aspect which leads to fictive profits, and from here on, to the obligation of paying over-rated taxes and dividends;
- the impossibility of renewing, in an identical way, of the production capacities, especially given the accelerated technical progress the identical reconstruction is not sufficient any more in order to maintain the production force.

So, the effect of the interaction between inflation and amortization is the decapitalization of the company, first of all, by using the available funds as a result of the distribution of fictive dividends and paying artificially increased taxes, and second of all, by the impossibility of maintaining the production capacity with the replacement of used goods.

When the problem of attenuating the interaction between amortization, inflation and fiscality is discussed, we feel that several factors must be taken into account:

• The optimal dimensioning of the production capacities, as well as the determination of economical production flows, which can ensure a shorter period of time from the launch of the raw material into production to when it's transformed into the product, with the purpose of increasing the efficiency of the use of the immobilized actives and by means of the expenses they transmit to the cost of the created utilities.

◆ The optimal dimensioning of the amortization periods. We feel that when determining the amortization periods one must seek the optimizing of the conflictive aspects which co-interest, on the one hand, the competitive interest of the company in relation with the competition, which claims the increase of the periods, and, on the other hand, the financing interest for the reproduction of immobilizations, according to which the shortening of the amortization periods is requested. From this point of view the problem analyzes, in our opinion, has, under inflation, certain particularities, meaning that when the economy is marked by a galloping increase of the prices the

interest of the economical agents claims the decrease of the amortization period, because the negative effects of de-capitalization can be overcome with much more difficulty than the effects of the decrease of the product competitive character, especially because in an inflationist economy many times the price increases can be attributed to this phenomenon, even if they are not always justified.

Of course we mustn't omit the fact that amortization, by conception and formula, is a process with fiscal implications, a reason for which we mustn't also neglect the state's interest as an entity seeking to attract increasingly bigger income for the national budget. We feel that this conflict that exists between amortization and inflation is also fueled by its fiscal component, because the state's interest aims at diminishing the expenses with amortization, so that the tax on income paid by the company is larger. Although such a policy, on the short term, produces the increase of budget income, on the medium and on the long run determines major unbalances at the micro economical level, which later on propagate to the macro economical level.

We feel that under persistent inflation, as is the case of Romania, the state's fiscal interest mustn't rule, which is why we say that in such an economical environment, the normal periods of functioning must be adjusted and adapted so that to reach a compromise regarding the financing interest of the capital reproduction, manifested at the level of the economical agents, and the interest to collect as much income possible to the state budget.

Of course we mustn't neglect the need to cover the budget expenses, but we believe that the effects of de-capitalization of companies, as a result of the impossibility to reproduce capital, are very damaging, first of all for the economical agents, and later on, for the state, the Romanian economy being a very good example of that.

Another aspect we feel must be dealt with is the practical way to determine the normal durations of use. From the beginning we will state our adhesion to the pint of view that in a modern market economy the government intervention, through the mechanism of central rules, in determining amortization periods, has negative implications, through the amortization, on the competitive abilities of the companies. That is why starting form the premise that amortization is a problem that must be dealt with through company strategy, we feel that determining the periods of use must be based on professional reasoning.

In our country the normal durations of use of the fixed means are determined at the central level, by a decision of the Government¹², and are periodically revised. The law we have mentioned states, "*The normal duration of functioning is the duration of functioning when the entering value of the fixed means on the way of amortization is recovered from a fiscal pint of view. So, the normal duration of functioning of the physical is smaller than that of the fixed means.*"

Practicing the centralized method of determining the amortization period, in a time when inflation has been very high and has had damaging effects because, in our opinion, three essential objectives, whose importance is given by the order in which they are presented, have not been mentioned:

• increasing the possibilities to rebuild the fix capital through amortization, considering that even when a rapid increase of the prices appears and when

¹² HG nr. 2139/2004 for approving the Catalogue for the classification and the normal duration of functioning of the fixed means, M.O. nr. 46 of 13.01.2005.

a system of accounting using historical costs is employed, amortization significantly diminishes its role as financer of the social reproduction;

- maintaining at a level as high as possible of the competitive character of the products realized, by including a normal amortization in the costs;
- ensuring / satisfying the state's fiscal interest, by payment, by the fiscal agents, of a correct tax on income.

At first glance we might say that the three objectives are contradictory and exclude each other, but we feel that complying with the first one is essential because, in our opinion, we thus create the premises for achieving the other two objectives. Maintaining capital is a condition sine cva non, ensuring the continuity of activity, under inflation, setting as a main objective of an entrepreneur to keep a constant level of the productive force.

Even if with the new Catalog regarding classification and the normal duration of functioning of the fix means time-frames are decided, from which the economical agents can choose the duration they think is optimal considering their economical necessities, still we believe that in many cases, the minimum limit set by law doesn't coincide with the point of view of the production specialists/technicians.

• For reaching the objectives mentioned above the regime of amortization used can also contribute. In our country the companies are obligated to amortize the corporal and non-corporal immobilizations in compliance to the legislation applied¹³, using one of the linear, digressive or accelerated amortization regimes.

From these methods, it is believed that the linear amortization regime ensures the calculation of a rational and economical quantum of amortization. But if analyzed in the context of an economy constantly influenced by inflation, the linear amortization meets in the least degree the interests of the economical agents, on the one hand, and, on the other hand, contributes in a significant way to the distorting of the information provided by the historical cost accounting, because:

- the amortization calculated in a linear regime, representing a constant value for the entire period of amortization, is most affected by the decrease of the purchasing power of the currency in which it expressed, and this influences in a damaging way the company's ability of financing the reproduction of its capital;
- presenting in the financial situations of the immobilized actives at netto accounting values, resulted from the deduction from the entry value of the linear amortization, contributes to the accentuating of the phenomenon of desynchronization and to the depreciation of the quality of information, because these values are no longer up to date, but express a past purchasing power, and thus useless in the present.

Of course the other two amortization regimes stated in the national laws have all the inconveniences mentioned above, but it is believed that under inflation the digressive amortization, especially the AD2 type, and the accelerated amortization are better suited for the interests of the economical agents. In our opinion, these two amortization methods contribute better to the attenuation of the decapitalization phenomenon, but without removing it, but in what the quality of the information provided by the financial situations is concerned, regarding the fix capital, under

¹³ Law 15/1994 regarding the amortization of the capital immobilized in corporal and noncorporal actives, ripublished, with subsequent modifications, M.O. nr. 242 of 31.05.1999.

inflation, we can say that the flaws of the linear amortization are still present. Practically, none of the amortization methods stated by the Romanian law allow accounting in historical costs to provide, when the economy is marked by inflation, correct and true information regarding the company's fixed actives.

We believe that a brief comparison between IAS 16 "Corporal Immobilizations" and the national legislation is useful, which can show a few elements we think are significant for the theme we are discussing.

Thus, the standard mentioned above defines amortization as being "the systematic allocation of the amortizable value of an active for the entire duration of its active life". So, according to the definition, the expense with amortization must be systematically registered for the entire duration of useful existence of the active, so that the value that must be amortized to be recognized in the profit and loss account in the period when the economical benefits of the active are used.

One of the new aspects brought by the analyzed rule, compared to the national legislation, the way of determining the amortizable value, represented by the cost of the active, or the re-evaluated value, diminished by its residual value. The Romanian laws do not recognize the concept of residual value of an active, and in many cases it can be a neglectable or null value, because of the tendency to use the actives for the entire duration of their useful life, and do not accept the amortization deductions by considering the reevaluations done to the amortizable fixed means. Any way there are situations when the actives can have residual values, when the company decides, for various reasons that it should not continue to use them up to the end of their economical life.

When conceiving the law we are studying, the residual value is the amount the company expects to obtain from reselling the goods at the end of the use period, an amount diminished by the values of cession expenses. So, considering the concept of residual value, the standard suggests that amortization mustn't be calculated based on the total cost of the active, only if the company intends to preserve the goods until the end of its life period, the deduction of the residual value produces the diminishing of amortization, so, a result increase.

In synthesis, we can observe that in what the amortization of immobilized actives is concerned, the international laws have certain particularities compared to our own laws that currently regulate this aspect, such as:

The IAS 16 "Corporal Immobilizations" is different from the Romanian laws, for determining the amortization related to an immobilization the company being the one to decide the method of amortization, estimating, also, the duration of useful life. That is why the standard appeals to professional reasoning, not only at the beginning of the "life" of an active, but also along the way, when a review of the life duration might be necessary or even the employment of a different amortization method;

The notion of useful life duration of each active subjected to amortization is used, which must be **estimated** after analyzing several factors: the estimated employment level by the company (based on the reproduction capacity or the estimated production), the physical decay estimated according to the exploitation conditions, moral decay, juridical boundaries as to the possibility of using the active, while the Romanian legislation uses the term of normal functioning period when the entry value of the fixed means is recovered;

The amortization methods which will be used must be chosen according to how future benefits are generated, associated to the active, stipulating the need to apply the chosen method constantly, according to the principle of method permanency, except for modifications that require the use of another amortization method;

The useful life duration and the amortization methods must be periodically revised and modified, if the present estimated are significantly different from the previous ones, while the national laws state that, once the normal duration of functioning is decided, it stays unchanged until the integral recovery of its entry value;

In deciding the formula for calculating amortization a new concept applies, residual value.

The difference between the legislation for problems such as amortization and certain articles of the international standards, are in many ways essential only if we speak of aspects regarding amortization periods, choosing the amortization method, reviewing the amortization periods and methods etc. The essential difference between the Romanian laws regarding amortization and the international recommendations is, first of all, the exercising, by specialists, of the professional reasoning at a level that, for now, has yet to find an equivalent in the national laws. This is, in our opinion, a very important aspect, with numerous implications on the quality of information provided by accounting, especially under inflation.

On the other hand, analyzing the alternative accounting treatments allowed by Romanian laws, we note that reevaluation has been the "the main alternative treatments" to update the value of the fixed means.

In this context we feel that several aspects, which, in our opinion, are very important and must be considered as work hypothesis when approaching the problem of amortization under inflation must be studied:

- amortization, as regulated by the laws of the country, induces under inflation a series of negative effects, both on the company's patrimony, and on the financial situations, which provide information on the financial position, which forces to use alternative accounting treatments in order to diminish such effects;
- reevaluation, as alternative treatment, hasn't been the best way to fight efficiently the effects of inflation on amortization, because of the many limits of this procedure, at least in the forma applied in Romania;
- evaluation through methods intended to consider inflation was allowed only to the companies which adopted the accounting method based on applying the International Accounting Standard, but these companies, because of the fiscal laws, haven't been stimulated to apply such treatments;
- inflation can produce to companies, keeping the proportions, the same effects no matter the category they belong to: large, average, micro or macro enterprises;

Considering this situation, we feel that when inflation has been dominating the national economical environment, for a considerable period of time, the average national economical level for a considerable period of time, the accounting information, generally, and the one about the amortization of immobilizations, in particular, has been affected at the quality level.

Because of the inflation rate, which in Romania is still high, this state of facts is also maintained and accentuated by the fact that the fiscal authority disposed certain rules as to the deductibility from the tax on profit of the expenses with the amortization of immobilized actives. So, according to the amortization regime used, and to the fiscal facilities, we can distinguish between accounting amortization and fiscal one.

By analyzing the laws¹⁴ we can see that differences between accounting amortization and fiscal one can appear when, from an accounting point of view, amortization is done for a period of time smaller than the normal duration of functioning.

This means that Romanian companies, if they want to deduce from the taxes on profit the amortization of the entire accounting value, must respect, as amortization period, the normal duration of functioning imposed by the fiscal authority.

On the other hand, we mustn't omit that deductions are allowed without considering the accounting reevaluations of the fixed means, which makes us wonder to what degree the economical agents will be interested to perform such operations, considering the rather high degree of complexity they involve.

In our opinion, the way in which amortization is regulated in Romania can be considered one of the most eloquent examples of "fiscal pollution" of accounting, with many negative implications in economy, especially under inflation.

In this context, we feel a new method already used internationally could be applied to the Romanian economical agents, meaning the updating of inflation amortization or the annual recalculation of the amortization according to the replacement value of the immobilized actives.

The method has several variants, according to the conceptions regarding the replacement value.

If by replacement value we understand the cost or the price of an identical good as that being exploited, at the end of the usage period, the prediction is random, for which we cannot accurately predict, the rhythm of currency depreciation and the rhythm of the technical progress.

If the replacement value is understood as the cost of the reconstruction of equipment, considered at the end of each exercise, the method becomes more accurate. In this case there are different ways to calculate amortization, if the update is done successively only for the considered exercise, or is reconstructed from the moment the equipment enters the company's active.

Thus, some authors feel that when calculating the amortization based on the annual replacement value, it is advised to immediately place the amounts in other immobilized actives or even to temporarily finance the stock of circulating actives, considering the currency depreciation. When the amortization is calculated based on the annual replacement value, but reconstructing it from the moment the machine is first used, it is recommended to preserve the amounts in a fund to be used at the end of the duration of use, in order to replace the used fix means.

Even if applying this method determines the inclusion in the cost of a bigger amortization, still, it gives the possibility to reach the goal of amortization that of renewal factor for the equipment. Of course, under the fiscal aspect, the method cannot be preferred, as long as it distances from the fiscal amortization as stated by the current laws. In this context we feel that, under inflation, the state's fiscal interest mustn't be neglected, neither the companies' interest to create the necessary sources for investment, because inflation, even if it determines an increase of the budget income, on the short term, on the long run, as a result of decapitalization, has negative effects

¹⁴ Law 571/2003 on the Fiscal Code, with subsequent modifications, Official Monitor nr. 927/2003.

which impact the micro economical level, which reflect on the sources attracted to the state budget.

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FISCAL POLICY IN THE EUROPEAN UNION BETWEEN HARMONIZATION AND COMPETITION

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Abstract: This paper presents some aspects regarding competition and harmonization in European Union fiscal policy, especially after the last enlargement on 2007. The problem of tax harmonization is connected with tax competition in the context of increasing capital mobility between different countries. Using a panel data for EU countries, analyzed on 1995-2004, we find significant correlations between the implicit tax rate of business income and corporation profits and the budget deficit, public debt, GDP per capita and the degree of openness of countries, the last variable is used as a proxy for capital mobility.

Key words: fiscal policy, tax competition, tax harmonization

1. Introduction

The European Union is a consequence of the integration efforts of its members. The European Community is based on the rule that competition should be a mechanism to allocate the economic resources (Article 98 of the EC Treaty). This rule is central to the European project since the Treaty of Rome in 1957. So the uniform conditions should be secured for all competitors in the European market. Following this argument, tax rules should not hamper the free movement of goods, services (including freedom of establishments), labour and capital. Or in the other words as far as taxation is concerned, distortion through the tax system, including tax expenditures should be eliminated. This leads to tax systems' integration. However this argument doesn't justify the form of tax integration either through tax harmonization or through tax competition.

The European Court of Justice has ruled that direct taxes fall within the competence of EU member states, however, member states must implement this competence without infringing the law of the European Community.

At present, the VAT and excise duties are harmonized across the EU. Proposals to harmonize the corporate tax system, expressed for the first time in the Neumark Report in 1962, have been widely discussed until today and can be viewed as a centrepiece discussion among EU countries.

The continuous debates show that countries and their representatives differently perceive what tax harmonization is. Some consider it as a complete harmonization of the entire tax (consolidation of a base, rate and rules of payment at a single stage), while others see it also as harmonization of separate fragments of taxation (only the base, the rate, etc.). The process of tax integration over last 15-20 years was not linear. Some countries introduced some distortional solutions in their tax systems. And process of solving such distortions led to tax integration.

The EU also promote some measures against harmful tax competition for reduce distortions to the single market; prevent significant losses of tax revenue; and reverse the trend of an increasing tax burden on labor as compared to more mobile tax bases.

2. Aspects regarding the EU fiscal policy

The EU it can be considered as a whole, a high tax area. In 2005, the last year for which detailed tax data are available, the total tax ratio in the EU-27 amounted to 39.6 % about 13 percentage points of GDP above those recorded in the United States and Japan.¹⁵

But not all EU Member States individually display high tax ratios; there are wide differences in tax levels across the Union. Eight Member States display overall tax ratios below the 35 % mark, and the overall tax ratio ranges over more than twenty points of GDP, from 51.3 % in Sweden to merely 28.0 % in Romania. This band reflects the significant differences in the role played by the State within the Member States.

As a general rule tax-to-GDP ratios tend to be significantly higher in the "old" EU- 15 than in the 12 new Member States that joined the Union since 2004, but there are exceptions; for example, Ireland's overall tax ratio is over six points below the EU-27 average, while Slovenia and Hungary's exceed it.



Source: Eurostat, the Statistical Office of the European Communities

Figure no. 1 Total taxes (including social contributions)to GDP for UE member states, 2005

Therefore, the recourse to direct taxes, which are more 'visible' to the electorate, tends to be greater in the countries where tax redistribution objectives are more pronounced (like EU-15); this usually results also in higher top personal income tax rates. Generally, the new Member States have a different structure compared to the

¹⁵ Eurostat, (2007), "Taxation Trends in the European Union", European Commission, ec.europa.eu/eurostat

EU-15 countries; while most old Member States raise roughly equal shares of revenues from direct taxes, indirect taxes, and social contributions, the new Member states often display a substantially lower share of direct taxes on the total.



Source: Eurostat, the Statistical Office of the European Communities

Figure no. 2 Structure of tax revenues by major type of taxes 2005, in % of the total tax burden

The lowest shares of direct taxes are recorded in Bulgaria (merely 17.9 % of the total), Romania (19.1 %) and Poland (20.5 %); in the latter, the share of direct taxes has diminished by one third since 1995. One of the reasons for this difference can be found in the generally lower tax rates applied in the new Member States on corporate and personal income; as for progressivity, some of the new Member States have abandoned it almost completely by adopting flat tax systems (one example of this is Slovakia, Romania and Baltic's countries). Amongst the old Member States, however, there are other interesting differences. The Nordic countries (i.e. Sweden, Denmark and Finland) rely primarily on direct taxation, whereas some southern countries (in particular, Portugal and Greece) have relatively high shares of indirect taxes. Denmark stands out in another respect; most welfare spending is financed out of general taxation instead of social contributions (only 2%); therefore, the share of direct taxation in total tax revenues in Denmark is in fact the highest in the Union, while social security revenue is very low. Germany shows the opposite pattern: it has the highest share of social contributions and the lowest share of direct tax revenues in the EU-15; a similar pattern is found in France.

Since the second half of the 1990s, corporate income tax rates in Europe have been cut forcefully. The tendency has continued also in 2006, as shown by a 0.8 percentage point drop in the EU-27 average. Although the downward trend has been quite general, corporate tax rates still vary substantially within the Union between a minimum of 10 % (in Bulgaria and Cyprus) to a maximum of 38.7 % in Germany. As in the case of the personal income tax, the lowest rates are typical of countries with low overall tax ratios; consequently, the new Member States typically figure as having low rates (with the noteworthy exception of Malta, whose 35 % rate is the third highest in the Union).

The reverse is, however, not true; unlike the case of the personal income tax, the two Member States with the highest overall tax-to-GDP ratios, i.e. Sweden and Denmark, display corporate tax rates that are not much above the average due to the adoption by these countries of Dual Income Tax systems, which by nature tax capital income at a moderate rate.



Source : KPMG International; http://www.worldwide-tax.com

Figure no. 3 The Corporate Tax Rate, 2007

Hence, the top positions in the ranking are occupied by Germany and Italy, whose overall tax ratios are not amongst the highest but traditionally impose relatively high corporate income tax rates. The German government has, however, recently announced a sizeable cut in the CIT.

Consumption taxes on the rise in most Member States since 2001. The trend is particularly visible in the smaller Member States; several of these are new Member States, which in the last years have been increasing excise duties to conform to the EU minima.

The larger Member States in contrast generally show slightly declining taxation of consumption. The trend towards higher taxation of consumption may, however, be at work also in the larger Member States, as highlighted by the hike in the standard German VAT rate by three points in 2007.

Even the corporate tax rate is decreasing the effective corporate tax rate is not much lower because of broadening tax base cyclical factors. The EU tax policy is designated to assure the four freedom of the internal market for citizens and business and to reducing the economic distortions associated with national tax systems.

3. Review of the literature

Proposals to harmonize the tax system, expressed for the first time in the Neumark Report in 1962, have been widely discussed until today among EU countries. Sinn (1990) points out that though tax harmonization is needed to avoid distortions, it does not necessarily require centrally coordinated actions by European governments.

There are two routes to integration: through harmonization and through competition (Kay, 1993). In the first of these approaches the creation of free trade requires prior alignment of the policies and practices of the states involved. Under the second the favored mechanism is to promote integration as rapidly as possible, and let the consequences for rules follow from that. Generally, the EU's role in taxation has been relatively minor, so far. The EU favors tax harmonization, but it has mainly confined itself to harmonization of indirect taxes.

Frey and Eichenberger (1996) state that tax harmonization is normally advocated because it reduces *economic* distortions and tax competition because it reduces *political* distortions.

Klaver and Timmermans (1999), however, question that tax competition will hurt the European welfare states. They argue that the rising tax burden on labor in a number of countries has more to do with their failure to make structural adjustments in the public sector and their traditionally low tax burden on capital than with excessive tax competition. While Krogstrup (2002) suggests that, while full-fledged harmonization is unnecessary, a tax floor would be advisable.

On the other side the idea of tax competition is not new; it can be finding in the famous Wealth of Nations of Adam Smith. The debate on tax competition has started with the model developed by Tiebout (1956), which examines competition among governments over mobile households and it is assumed that households select the region according to their preferences for the mix of taxes and public expenditures through voting with their feet. Tiebout argues that competition for mobile households is welfare enhancing. Integration of Europe follows the conclusions from Tiebout model applied at the government level, which are competing for capital and for firms.

In the literature are many points of views that try to reveal the fiscal externality generated by tax competition through the race of the bottom in tax rate and under provision of public goods in equilibrium like in basics models of tax competition developed by Zodrow & Mieszkowski (1986), Wilson (1986), and surveyed by Wilson (1999). This view is contrasting to the thinking of conservative policymakers and the Public Choice literature.

Brennan and Buchanan (1980), or McLure (1986) have argued that competition in general, and competition among governments in particular, is beneficial because it reduces government waste and disciplines politicians. If tax rates are cut in the process of competition, government expenditures have to be reduced; this helps to avoid waste and inefficiencies in the public sector. (Boss, 1999)

The views on tax competition are divided in two parts. There are the models where tax competition leads to inefficiently low taxes due to positive externalities, and reduces welfare, may support the notion that international cooperation between countries (i.e. like in the EU) can alleviate the downward pressure in tax rates and leave all countries better off. But there is also a whole group of models which reveal the positive effects of tax competition through reducing the inefficiency in government spending and stimulate the optimal ratio *taxes-public goods* for contributors which have the possibility to choose the jurisdiction which offer the best ratio.

4. Tax Harmonization -a solution for EU fiscal policy?

The 1987 proposal of the European Commission with regard to indirect taxes was based on a rather ambitious goal of tax harmonization. Though tax harmonization ensures an efficient international resource allocation within the private sector by equalizing relative prices across borders, it does not ensure an efficient resource allocation between the private and the public sectors since it does not respect cross-country differences in the preference for income redistribution (Hagen et al., 1998).

Tax harmonization exists when taxpayers face similar or identical tax rates no matter where they work, save, shop, or invest. Tax harmonization can be achieved two different ways (Mitchel, 2004):

- *Explicit tax harmonization* occurs when nations agree to set minimum tax rates or decide to tax at the same rate. The European Union, for instance, requires that member nations impose a value-added tax (VAT) of at least 15 percent. The EU also has harmonized tax rates for fuel, alcohol, and tobacco, and there are ongoing efforts to harmonize the taxation of personal and corporate income tax rates.

- *Implicit harmonization* occurs when governments tax the income their citizens earn in other jurisdictions. This policy of "worldwide taxation" requires governments to collect financial information on nonresident investors and to share that information with tax collectors from foreign governments. This "information exchange" system tends to be a one-way street since jobs and capital generally flow from high-tax nations to lowtax nations. Under this indirect form of tax harmonization, just as under the direct form outlined above, taxpayers are unable to benefit from better tax policy in other nations, and governments are insulated from market discipline.

Both forms of tax harmonization have similarly counterproductive economic consequences. In each case, tax competition is emasculated, encouraging higher tax rates. This hinders the efficient allocation of capital and labor, slowing overall economic performance.

	Indirect taxation		Direct	taxation	Social contributions		
	Tax rate % GDP	Countries	Tax rate % GDP	Countries	Tax rate % GDP	Countries	
1. Min rate	11,5	LT	6,1	BG, SK	1,1	DK	
2. Av. rate	13,8	EU27	12,8	EU27	13	EU27	
3. Max rate	19	BG	31,2	DK	16,4	FR	
Diff. (3)-(1)	7,5		25,1		15,3		
Standard dev.	1,9		5,39		3,55		
Interpretation	Harmonization		Tax cor	npetition	Average of harmonization and tax competition		

Table no. 1 Tax revenue by main tax categories, % of GDP

Source: Eurostat, http://epp.eurostat.ec.europa.eu

Tax harmonization can be carried out in the following components of taxation: $^{\rm 16}$

1. Harmonization of an object of taxation - occur as an imperative prescription that member states all must tax a specified object, in the case under discussion, corporate profits.

¹⁶ Lithuanian Free Market Institute, (2006), "Harmonization of the Corporate Tax Base in the European Union", Analytical Study, http://www.freema.org

2. Harmonization of a tax base - regulation is laid down for principles and rules which are applied to calculating the tax base.

3. Harmonization of the rules of tax payment - regulation is set for payment of the corporate tax. Harmonization of tax payment rules is usually combined with harmonization of a tax base and rates.

4. Harmonization of a tax rate. In this case a minimal (uniform or maximal) tax rate is fixed. If harmonization of a tax rate is implemented separate from harmonization of a tax base, this is also called nominal harmonization.

Concerning the strategies of harmonization there are two solutions (Tulai & Serbu, 2005):

1. harmonization through market;

2. negotiated harmonization.

If fiscal system harmonization at EU level was regarded with hostility for a long time because of state sovereignty now it is necessary for avoiding all fiscal barriers for the Common Market. The different options for harmonization are due to national different fiscal policies that are adopted for the member states.

It can be expected that the welfare effects of tax harmonization will be unequally distributed, both over countries and over interest groups within countries. Large countries tend to benefit more from tax harmonization than small countries. Since large countries have certain advantages over small countries, they can impose higher taxes and yet remain competitive. Enterprises in small countries more often need to cross borders if they want to expand their activities than companies in large countries. Moreover, companies in a small country have fewer opportunities for loss compensation and depreciation relief than enterprises in a large country (Hoek, 2004).

5. TAX COMPETITION - A PANEL ANALYSIS FOR EU COUNTRIES

Using the panel methodology through a multiple regression with estimation by random effects we try to demonstrate some hypotheses that reveals the main arguments favorable for tax competition. Based on the hypotheses demonstrated in our model we can affirm that the best solution for European Union is harmonization for indirect taxes and competition for direct taxes.

Tax competition is necessary in the future tax policy of EU as while as tax competition is under some macroeconomic constraints as budget deficit and public debt. We can appreciate that this constrains are more efficient than other solution for eliminating and combating so called *harmful tax competition*.

Our analysis is for a period of ten years, based on annual data. The dependent variable is implicit tax rate of capital and business income. We introduce control variable - public expenditures as percentage of GDP. We estimate the impact of budget deficit and public debt on the tax burden of capital in a standard random effects model. This article analyzes 27 countries, EU members in the present, for 1995-2004 periods.

We have taking into consideration all 27 countries even in that period weren't all EU members, but for our study is important especially for predicted what it would be in the future and taking into account the major differences between the old and the new member states.

Our start point was the study of Winner (2005), which made a similar model for OECD countries We try to develop a specific model for EU taking into account the present day of EU countries, who are engaged in a race of tax competition under unequal starting conditions. Unequal conditions means that although all EMU and

prospective EMU Member States have to satisfy the two conditions of the stability pact (i.e. public debt lower than 60% of GDP and budget deficit lower than 3% of GDP) they do not start from equal starting positions concerning public debt and budget deficit (Halkos & Kyriazis, 2006)

This study try to reveal the impact of the two major constraints that have to accomplish EU members (3% for budget deficit and 60% for public debt as a ratio to GDP) on the degree of tax competition in which can be involved every EU member state. Two hypotheses are demonstrated by this study:

*H*₁: Budget deficit limit the degree of tax competition manifestation.

 H_2 : Public debt and public expenses are correlated with the degree of tax competition manifestation.

These hypotheses are verified using the next equation for the model:

(1) $ITR_{it}=c_0+c_1BD+c_2PD+c_3GDPC+c_4OP+c_5UES+c_6CONSGDP+c_7EGR$ In the next table we are presenting the results:

Independent variable	DEPENDENT VARIABLE:IMPLICIT
	TAX RATE on capital and business
	income(ITR)
Constant	28.89
	(0.00)
BD (Budget deficit)	0.27**
	(0.01)
PD (Public debt)	-0.06**
	(0.01)
GDPC (GDP per capita)	0.23**
	(0.01)
OP (Openness)	-0.06***
	(0.000)
UES (Country area as percentage of EU area)	-0.22
	(0.53)
CONSGDP(Consumption as percentage of	-0.05
GDP)	(0.64)
EGR (Economic Growth Rate)	-0.10
	(0.37)
Number of observations	203
R ²	0,81

Table no 2. Estimation results from panel regression

Notes: p-values in parenthesis. ****Significant at 1%;* ***Significant at 5%;* **Significant at 10%;*

We consider as indicator for evaluating the tax burden, the effective tax rate, calculated as a ratio between the effective tax and the tax base. At the European Union level data about the effective tax rate are very scarcely and in this case we choose an Eurostat indicator: **implicit tax rate an capital and business income** calculated as a ratio between the effective tax on capital and business income and the effective tax base, taking into account all deductions or exemptions.

The independent variables used by the model are presented below:

DB (Budget deficit) - As a percentage of GDP, is the main constraint in front of tax competition (Eurostat).

DP (Public debt) - For covering the budget deficit every country has two main solutions: raising the taxation or rising debt ratio. If the debt ratio is increase we are
expected to have a lower taxation on the short time but in the long time the public debt it will be covered from rising taxation, and we can say that public debt is a delayed tax for contributors (Eurostat).

GDPC (GDP per Capita) - It is an important difference between the old member states which have a high GDP per capita comparative with the new member and we expect to obtain some correlation between this variable and evolution of tax burden, implicitly the manifestation of tax competition (Penn World Table).

UES (Country area) - Area of every member states as percentage of total EU area (Wikipedia).

CONSGDP Consumption as percentage of GDP (Penn World Table).

OP - **Openness** is used as a proxy for capital mobility, the main factor which is favorable for tax competition. Is calculated as a ratio between the sum of imports and exports to GDP(Penn World Table).

EGR - Economic Growth Rate (Penn World Table).

Table no. 3. Interpretation of model results

V	ARIABLES
Budget	Is the most significant variable and is direct correlated with the implicit tax rate and
deficit	also with the tax competition. If one country have a high budget deficit, which is bigger than
	3% from GDP it is very difficult for that country to engage in the tax competition race. One unit
	change in budget deficit is follow by 0.31 unit change in the same direction of implicit tax rate
	on capital and business income (from the first equation).
Public debt	It is a significant variable but the correlation is not so powerful like with budget deficit
	and the correlation is indirect because in most of the cases the budget deficit is covered by
	public debt and only after that by rising taxes. When taxes raising the public debt are lower
	and vice versa. From our study we can see that for countries like Italy, Greece, Belgium is
	difficult to engage in the tax competition because the level of their public debt is double for the
	level required by the EU.
GDP per	It is significant variable only in the first three equations, the correlation is direct, and
Capita	this confirm that we can see from descriptive analysis that the new members state which have
	a lower GDP per capita are more engaged in the tax competition comparative with the old
	members states (EU 15).
Country	The same situation like for the Population variable.
area	
Openness	This variable is significant correlated with tax competition because is a proxy for
	capital mobility which is an important factor in tax competition developing. If the capital mobility
	is very high there is the possibility to choose the jurisdiction with a lower taxation and this lead
	to reduce tax burden through tax competition.

Note: The others variables (Consumption as percentage of GDP, Economic Growth Rate) have an insignificant correlation

From this empirical study we may conclude that the future of EU tax policy is based not only tax harmonization, but also on tax competition. The fight for combating the harmful tax competition is welcome but has to be done with the proper instruments and we consider that the satisfying the two conditions of the stability pact (i.e. public debt lower than 60% of GDP and budget deficit lower than 3% of GDP)are the best instruments for limiting the harmful tax competition.

Conclusions

To summarize the EU initiatives on tax harmonization, only the VAT rates and the excise duties have achieved a high degree of harmonization with the establishment of the Single Market and the abolition of intra-Community tax controls. Apart from the VAT and the excise duties, the indirect taxes may be harmonized following the article 93 EC Treaty and therefore help preventing double taxation, tax avoidance and disturbing of tax competition.

Some level of coordination is needed in the area of company taxation; however, the Commission proposed a common tax base for European companies without fixed rates, aimed in the long term at a harmonized European corporate tax base. The Commission proposal of the Home State Taxation scheme would be based on mutual recognition of the Member States' tax rules and tax coordination. European coordination may help to avoid tax revenue losses as the capital is mobile across EU countries

The personal income tax and the tax on dividends of individuals should stay under each Member State's national rules. According to the Court of Justice, in the absence of the EU harmonization, the *personal income taxation* shall be safeguarded as each Member State's national policy. In addition, general and final provisions of the EC Treaty abolish under article 293, double taxation within the Community and encourage the respect of the rights of individuals in cross-border situations.

Due to a "race to the bottom" taxes on capital income might no longer contribute sufficiently to the financing of public expenditure and it might become difficult or even impossible for governments to perform their usual tasks. An under supply of public goods and/or an erosion of the welfare state are feared to be the outcome of tax competition.

At the very least, the tax burden might be shifted away from highly mobile capital towards immobile factors such as labour; this would raise labour costs and impede the reduction of unemployment especially in Western Europe. The harmonization of tax rates is thought to be the remedy at least for indirect taxes.

EU member states participating in EMU have given up the possibility of an independent monetary policy. Therefore, they have fewer policy options, so they might have incentives to use taxes to achieve competitive advantages, which may intensify tax competition. The conclusion is that every EU member states have a different degree of tax competition and this degree is limited by the EU requires concerning the budget deficit which have not exceed 3% of GDP and 60% for public debt.

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PRESENT FRAMEWORK OF AGRICULTURAL INSURANCE

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Abstract: The international agricultural insurance market has an important dimension. The experience of economically developed countries revealed the fact that without a stable development of agricultural insurances, there is no chance for high performance agriculture. This will require the establishment of a framework for responding to severe systemic events affecting agricultural production, and establishing an appropriate regulatory environment to foster private sector innovation and investment in services for less catastrophic events. During the last few years, at the international level, a variety of new financial mechanisms present the capacity of solving many issues related to the traditional projection of agricultural insurances. New instruments operate based on the configuration of the insurance indemnity payment, thus it will be paid when it reaches a certain level determined by statistic calculations and designed as the "index".

Key words: agricultural insurance, all-risk, multi-peril, weather-based index insurance, area-based index insurance

Risk is an unavoidable but manageable element in the business. Concern for risks that stifle investment and contribute to vulnerability of the rural poor is a driving force behind various types of agricultural insurance (typically "crop insurance"). Insuring small-scale farmers against crop losses to adverse weather or other hazards has attracted public sector involvement in the provision of agricultural insurance in many countries. With few exceptions, such interventions have encountered severe problems owing to high administrative costs, moral hazard, and adverse selection. Government interventions should be aimed at improving the accessibility and quality of private sector insurance. This will require the establishment of a framework for responding to severe systemic events affecting agricultural production, and establishing an appropriate regulatory environment to foster private sector innovation and investment in services for less catastrophic events.

Agricultural insurance is a financial tool to transfer production risk associated with farming to a third party via payment of a premium that reflects the true long-term cost of the insurer assuming those risks. Past public sector interventions to provide insurance and enable the poor to cope in times of hardship typically have failed. Government response in times of severe calamity has been ad hoc and has lacked precise criteria for what "triggers" an insurance payment, thus leading to high potential for political interference and reduced opportunity to obtain reinsurance. As a result, comprehensive publicly supported crop insurance programs have been disastrous, being both ineffective and fiscally burdensome. They have involved heavy subsidization of

premiums, large delivery and service costs, and high aggregate losses. To be profitable, the ratio of average administrative costs plus average insurance payouts to the average premiums paid must be less than one. However, for most countries the ratio has far exceeded one, indicating that the programs have been unsustainable without heavy subsidization.

Traditional publicly supported crop insurance is *all-risk* or *multi-peril*, covering either all the supposed production risks or a very broad spectrum of those risks. All-risk insurance usually involves payments to the grower as compensation for any shortfall when yield declines below a level set in the policy. In some instances, this has encouraged inappropriate use of insurance and has led to excessive risk taking or moral hazard, such as growing crops in high-risk regions, thus increasing farmers' exposure to future losses. Assumption by the public sector of massive insurance losses in turn reduces opportunities to participate in broader reinsurance markets. The ad-hoc nature of government policy has frequently been coupled with an ineffective and uncertain regulatory framework that increases uncertainty for private sector providers.

Policy and implementation issues

Agricultural risks vary in terms of severity and frequency. For the more severe and less frequent events (for example, intense and widespread flooding, prolonged drought), markets typically fail to provide adequate insurance services because of limited credible long-term statistical information, an inability to reinsure on international markets, and the possibility of having to make large payments in years of catastrophic loss (especially in the early years of the program). Because of this market failure (undersupplied risk management services for catastrophic events), the private sector is also likely to fail to provide services for the less severe, more frequent disruptive events (such as localized drought, pest outbreak) that services would otherwise be provided for. When it does, services often bypass the poor or smaller farmers. Thus there is a role for the public sector to intervene (at least initially) in the area of catastrophic risk management, as well as facilitating private sector service provision for more frequent, statistically documented disasters that they are better able to insure against. The following characteristics distinguish these various kinds of risks, and potential problems:

Distorted incentives. When insurers know that government will automatically cover most losses, the incentive to pursue sound insurance practices when assessing losses is reduced. Insurers may even collude with farmers in filing exaggerated or falsified claims.

Asymmetry of information. Successful insurance programs require that the insurer has adequate information about the nature of risks being insured. However, this is very difficult for farm-level yield insurance where farmers will always know more about their potential crop yields than any insurer.

Adverse selection. Only those who are more prone to risk will purchase public crop insurance, posing a challenge to the viability of an insurer and initiating a cycle of losses. Conversely, the private sector could leave the "bad" risks to the government.

Administrative costs. Providing services to small-scale farmers can raise costs, as data for individual farm-yield based insurance are deficient, and monitoring and inspection costs are high.

Moral hazard. Insurance payout based on individual low crop yields as opposed to the *causes* of reduced crop yields leads to moral hazard - when a farmer's own behavior or management negatively influences crop yield.

Recommendations for practitioners

The overall objective for agricultural insurance should be a private sector-led and demand-oriented system in which farmers (including smallholders and the landless) can access (1) services supplied by the private sector and (2) insurance products for mainly less systemic and more independent risks, at a premium that reflects the true long-term cost of assuming those risks. Given this, and given the market failure associated with private sector supply, public sector involvement is important but should be limited to establishing a favorable environment for private sector initiative, establishing mechanisms for management of catastrophic risk that the private sector is unable to offer insurance against, and building the capacity of the private sector. Good practice for establishing private sector-led insurance is still evolving, but important implementation issues include:

Public sector initiation of agriculture risk management services. A critical public sector priority is to address large systemic risks that affect agricultural production and allow the private sector to develop insurance products for less severe events and for individual, independent farm risks. Large systemic risks must then be identified, and appropriate insurance mechanisms to manage these risks where markets fail to do so must be developed. Essential to public intervention in this area is making the government's role explicit and transparent. An unambiguous threshold to trigger government payout (identifying what will and will not be covered and to what degree) must be specified. This trigger must be quantifiable, and ideally it can be measured by an independent, competent, and credible third party. Farmers' participation in publicly supported schemes should be voluntary, the service provider should purchase reinsurance on international markets where possible, and administrative costs must be controlled.

Data collection and actuarial modeling. In designing insurance products for any type of risk, insurers (both public and private) must understand the relevant statistical properties. This requires both credible long-term statistical information and actuarial models to define the relevant risk probabilities and to predict the likelihood of various events. Various indices (for example, area rainfall or soil moisture indexes) may be particularly attractive for their practicality and cost effectiveness.

Using weather-based index and area-based yield contracts to insure against natural disasters offers increased affordability and accessibility of insurance services for the rural poor. Because triggers can be verified independently, vulnerability to political interference and manipulation of farm losses is reduced. It is practical to implement and has low administrative and transaction costs, so the private sector can provide it with little or no government subsidies.

Weather-based index insurance makes payments proportional to the difference of a measurable weather event (rainfall, temperature) from a certain trigger, as measured at regional weather stations. Area-based index insurance makes payments proportional to the decline of area yields below a certain trigger at the county or district level. For each of these, contracts are written against specific perils/events (area-yield loss, drought, or flood) defined and recorded at a regional level (local weather station). Insurance is sold in standard units (for example, $10 \in$ or 100 payouts), with a standard

contract or certificate for each unit purchased. The premium rate is the same for all buyers, who all receive the same indemnity if the insured event occurs. Buyers are free to purchase as many units of the insurance as they wish. The insurance is written against the average yield for a region (county/district), and a payment is made when the measured regional yield falls below a defined limit (say 80 percent of normal).

An important area of public sector support can be the development of information sources such as risk maps that improve the institutional capacity of both public and private sector providers to identify and analyze risk. This information can form a common foundation upon which the transparent identification and pricing of risk (premium rates) can be based. Donors can support both the development of information systems and of the capacity of institutions (such as the ministry of agriculture) to build databases that can overcome information-related constraints to private sector participation.

Creating a favorable regulatory environment. To encourage private sector initiative, the policy and regulatory environment must be deemed by all stakeholders as fair, credible, stable, and enforceable. Toward this end, donors can contribute useful policy advice and capacity building support.

Educating stakeholders. Education of stakeholders is important if farmers are to understand the benefits of insuring against certain events. Workshops, information packages, media, and other mechanisms are needed to explain the characteristics of insurance schemes and the different opportunities available. Further, technical assistance should be provided to both public and private sector suppliers to ensure that the needs of producers (particularly the most vulnerable) are met. Such assistance might be best provided through cofinancing for business service providers.

Develop effective financial systems. Generally, when the poor do not have access to credit, there is less incentive and capacity to secure insurance and pay up-front premiums. Development of financial markets should be promoted where possible to facilitate saving and borrowing and complement the insurance schemes that are established. The ability of resource-poor farmers to access these services should be at the forefront of public sector involvement. This will also contribute to improving access to funds required for making up-front margin deposits on futures and options contracts for managing price risk. Linking finance to index-based insurance is an innovative approach that has emerged from recent work.

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CONSIDERATIONS ON THE PLANNING OF THE FINANCIAL AUDIT MISSION

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Abstract: In order to exercise efficiently the financial audit it is required to adequately plan it, for each individual mission. This document synthesizes the essential aspects which must be taken into account by the auditors and divides them into groups, according to the following paths of action: obtaining a detailed knowledge of the entity audited; estimating an acceptable level of the audit risk; understanding the internal control system of the entity; determining rigorously of the terms of the mission.

Key words: audit, planning, particularities, risk, engagement.

Being an activity which aims at analyzing the results of human activities, the financial audit is done with its own methodology, meaning a number of activities, done in stages, with the role of contributing to the achievement of the final goal, that of obtaining the necessary information to express an opinion as to the annual financial statements.

In order to achieve this goal, adequate planning and the definition of an auditing model to better suit the purpose of the mission has significant implications on the whole process, as on this stage depends the positive result of the mission. In order to pan accurately the mission, the auditor must star from two essential points, meaning: the determined audit model must allow him to gather adequate and sufficient evidence, and obtaining them at reasonable cost.

That is why, in the diligence necessary to plan the mission, we must take into consideration many aspects, whose contents and implications on the other phases of the auditing process we will presents below.

The central element of the planning stage is, in our opinion, obtaining detailed knowledge of the organization being audited, which will make it easier to draft the general auditing plan and a program to better suit the given circumstances.

In such conditions it is important that the auditor obtain a good knowledge of the specific of activity and of the field in which operates the entity being audited, at least for the following reasons:

• understanding the particularities of organizing and management of accountancy, as it is a well known fact that in many areas of activity, such as constructions, railways, chemical industry, and so on, there are specific operations and events, which demand adequate accountancy solutions, thus influencing the presentations in the financial situation reports drafted by these entities;

• identifying the specific risks of the field, which influence both the way in which the audit risk is estimated at an acceptable level, and the decision about accepting the mission. In this context we must state that the field risk is considered by very many specialists as being one of the most important ones. In this way we can

justify the current tendency, registered at international level, in what reorganizing the activities of the audit firms is concerned, by concentrating only on certain fields of activity, by giving up a series of existent clients or by refusing the potential ones. By analyzing the context specific to the Romanian economy we can say that this factor has a important significance due to the profound restructuring which are currently taking place, along with the integration in the European Union;

• identifying and assessing the inherent risks, because they can be divided according to the specificities of the field of activity;

• knowing the conditions of the market, in the sense that we follow the demand for products, the position of the competition, their short and middle term perspectives, the influences of the technological development, and so on.

Among the important preoccupations of the auditor in the planning stage is estimating the acceptable level of the audit risk, as well as of the inherent risk, because the values of these two categories of risks have implications in what the future actions which will be undertaken are concerned.

Thus, in the situation when the auditor assess that for the entity being audited it is more appropriate to have a low level in what the acceptable audit risk is concerned, which expresses the degree in which it is willing to accept significant erroneous presentations in the financial situation reports, a number of measures are in order, among which we name:

• collecting a larger quantity of audit evidence, to ensure the increase of the auditor's certainty that there aren't any significant erroneous presentations to affect the contents of the reports on the financial situation. Because this risk concerns the ensemble of the audit process, the measure we have presented above leads inevitably to an increase of the audit costs and an extension of the period of time in which it is done. We thus feel that when deciding upon low levels of this category of risks, the auditor must have the professional ability of determining an optimal level in what the quantity of elements used as evidence which must be gathered, so that it doesn't affect the performance of the process as a whole;

• choosing people with a high level of experience and professional training in the team doing the audit;

• rigorously applying the procedures about the verification of the way in which the audit is done, in order to offer the guarantee that the work done is of an acceptable standard. The literature on the matter recommends, from this point of view, several options, among which using verifications operated be employees of the audit firm who aren't taking part in that particular contract is a very frequent practice.

A similar approach, from the point of view of the actions which will be undertaken, is found also in the case of the high inherent risk, as an estimate of the probability that an significant erroneous presentation exists in the case of an account, before taking action in what the assessment of the internal control system of the entity is concerned. The auditor's decision regarding the increase in the quantity of evidence is easier in this situation, because the inherent risk doesn't regard the ensemble of the audit process, but only some individual elements, so that the estimated costs related to it do no undergo major increases.

However we must mention the fact that the specialists of the field are debating on taking into consideration, in the planning stage, of the risk that the audit company or the individual auditor, as the case may be, suffer the consequences in the case of the client's bankruptcy, despite the fact that the audit done was of the finest quality. The supporters of this risk say that an increase in the quantity of audit evidence is justified because the auditor will be in a better position if it may prove necessary to defend the results of his audit in the court of law, as it is a well-known fact that the general tendency of the users of the reports on the financial situation in the case of an economical failure is to sue the auditors, no matter what the quality of their work has been.

Understanding the internal control system of the entity is another condition for an adequate planning of the audit mission, which includes, essentially, obtaining information regarding the way the devices of this control are projected, as well the way in which they are applied. The entity's internal control system is made up of several components, but during this stage the auditor is preoccupied with understanding those mechanisms which are relevant for the assertions on the reports on the financial situations. That is why special attention will be given to the internal accountancy system of the entity, so that the main categories of operations realized can be identified and understood, initiating and reflecting them in the documents justifying the audit, registering them in the accountancy department, as well as presenting them in the reports on the financial statements. In order to fulfill these demands the auditor must see if the entity's management applied an adequate system, which must have as objectives the following aspects:

• elaborating the reports on the financial situation at the dates decide upon and in compliance with the relevant accountancy references;

• elaborating the periodical accountancy reports in compliance with the laws of the country, emitted by the authorized organisms;

• doing accurately the compulsory accountancy books;

• registering the operations in the books only base don documents to justify them;

• facilitating the annual inventory.

Because, frequently, the audit for one entity is done by the same auditor every year, knowing and understanding the internal control system is reduced to updating the information obtained in the previous years, because, normally, these systems aren't subjected to radical changes in short periods of time.

No matter if it is a first time commitment or a recurring mission, the main procedures studied by the literature of the field in order to understand the accountancy and the internal control systems, can be grouped as follows:

• having discussions with the entity's personnel at managerial, supervisor or operative level;

• analyzing all of the entity's documents and evidences, to offer a supplementary confirmation of the fact that the control policies and mechanism have been applied;

• observing the entity's activities and operations, which implies observing the personnel during the drafting of the documents and evidences or while doing controls, focusing their attention on the operations specific to the accountancy department.

Furthermore, the understanding of the conception and functioning of the internal accountancy and control system of the entity is an aspect which concerns the entire audit process, not only the planning stage. To support this statement we can quote the opinion of the famous specialist of the field, Ioan Oprean, according to whom *"This understanding is necessary to the auditor both in the planning stage of the commitment (mission), as well as in the collecting and evaluating audit evidence. By knowing the*

way in which the entity is organized and the way in which the accountancy and the internal control systems function, the auditor used professional judge in order to asses the audit risks and to decide the audit procedures necessary for reducing the audit risk at an acceptable level.¹⁷.

A significant aspect in close relation to the planning activity is deciding the terms under which the audit mission will be done. In order to do this part of the stages presented above can be done based on a verbal commitment with the client, but, if the auditor decides to accept the mission, it is compulsory to draft a document to determine accurately the terms of the commitment. This is stated in the audit standards, which stipulate that *"the auditor and the client must agree on the terms of the commitment*"¹⁸, and the actual way in which these demands are done is *The letter of Commitment* or a *Contract,* in which a series of elements are decided upon, based on the circumstances of the mission.

Registering the terms of the commitment in such a document accepted by both parties is important in order to avoid any disagreement about the audit process.

Although the form and the contents of the acceptation letter of the mission is so different from one auditor to another, as well as fro one client to another, we can say that it can be structured as follows:

- confirming the acceptation of the mission;
- describing the terms and the objectives of the mission;
- stating the client's responsibilities;
- mentioning the mission's calendar, including deciding on the fee;
- mentioning the viability of the document.

Confirming the acceptance of the mission is included in the contents of the letter, by a standard formula; the audit standards recommend, in this case, the expression "we are thrilled to confirm the acceptance of this commitment by the contents of this letter."¹⁹

The description of the terms and objectives of the mission does a brief presentation of some elements necessary for the realization of the mission according to standards.

It shall thus be stated that it is necessary to have meetings with the managers of different departments, even if they, because of the nature of their activity, do not participate directly to the elaboration of the reports of financial situations, details which will be presented in a document called *Confirmation Letter*.

On the other hand, the auditors request to take part at the inventory of the corporal immobilizations must be mentioned. For this it must be requested that the procedures elaborated by the entity be made available, as well as the calendar of the said activities.

At the same time, it must be taken into account that the audit process implies the random examination of the elements supporting the presentations in the financial situation report, and, moreover, it is subjected to inherent limitations because of the internal control and accountancy system of the entity, aspects which cannot completely eliminate the risk than significant anomalies go undetected.

¹⁷ Ioan Oprean, Financial Audit and Control, Intelcredo Publishing House, Deva, 2002.

¹⁸ Audit Standard nr.210 *Terms of the audit commitments*.

¹⁹ Audit Standard nr.210 Terms of the audit commitments.

Another significant element for the contents of this section of the acceptance letter is to mention the fact that the audit will be planned and realized so that to offer reasonable insurance that the financial situation reports are free of any significant anomalies.

If the auditor thinks that he will use the confirmation procedure, we must say that the confirmation letters will be drafted by the client, for the auditor, and examining the responses received must be done by the auditor.

Stating the client's responsibilities is the section of the letter where it is stated that ensuring the management and organization of the accountancy and of the internal control system, defining and applying the policies of closing down the accounts, as well as ensuring all of the measures necessary for an accurate protection of the actives is the job of the entity's management, which, at the same time, prepares the financial situation reports and all of the other information necessary to the auditor.

The mission's calendar and deciding the fee contain a brief presentation of the main operations necessary for the audit, in relation with the period of time in which they will be done, among which we mention:

• initial discussions with the entity's employees to get a detailed knowledge of its characteristics;

• planning the audit mission per-say;

• doing control tests if the auditor has decided the preliminary estimation of the control risk at a lower level;

• assisting at the inventory operations mentioned above;

• obtaining a final control balance, to include solutions for the possible differences found during the inventory;

- doing detailed tests on the balances of the accounts;
- obtaining the final financial situation reports;
- participating at the Board Meeting which approves the financial statements;
- drafting the audit report.

In what the documentation of the actions mentioned above is concerned, it is not compulsory to specify them in the mission letter. Any way, the Romanian Chamber of Financial Auditors recommends registering them on different work sheets. In the case of our action, we have included them in this section of the mission letter, in order to show the points of view of the Romanian specialists in the field, such as professor Ioan Oprean²⁰.

At the same time, this section of the letter speaks of the fee for the realization of the mission, the way in which this aspect is presented being different according to the given circumstances (if the mission is done by a team, we can mention the fee for one hour of work, for each member). There will also be references to expenses, such as transport, boarding, and so on, which will be covered as they occur.

Stating the *validity* of the mission letter is one of its non-compulsory components. Naturally, for every audit mission it is necessary to draft such a document, but in the case of successive audit missions, if there have been no substantial modifications from one year to another, a further clause can be introduced about the validity. In this sense the audit standards recommend the following formula: *this letter*

²⁰ Ioan Oprean, Financial Audit and Control, Intelcredo Publishing House, Deva, 2002, page 169.

shall remain valid for the following years, except for the cases when it shall be declared null or replaced.²¹

The Romanian Chamber of Financial Auditors advises that the terms of the commitment be periodically revised. We must also say that when analyzing the necessity of elaborating a new commitment letter, it is necessary to give a greater attention to the changes at the management level, the modifications of the rights of property, as well as the modifications of the legal and professional standards.²²

The elements considered relevant for the contents of the commitment letter are different according to the practices of the different economical environments.

Thus, the American literature of the field states that the document mentioned above must include distinctly at least the following elements: the confirmation of the commitment for that particular financial exercise, a declaration of responsibility in the case of errors and fraud, payment commitments, as well as other terms of the mission.²³

In the case of the American specialists we can notice the high degree of importance given to the confidentiality of the information obtained during the auditing process. In this respect there are opinions²⁴ supporting the inclusion, in the mission letter, of a declaration saying that any lacks of the accounting and internal control systems discovered during the auditing process be made known to the management of the entity and not be made public to third parties, except for the legal or professional laws preventing from doing so.

In the British environment it is believed that the acceptance letter must contain, among other elements, *"a synthesis of the responsibilities of the management and of the auditors*".²⁵

A distinct issue concerning the analysis of the mission letters is represented by the fact that they are also drafted for other services offered by the auditors. In these cases most of the specialists recommend drafting a distinct document, showing the characteristics of those actions. The Romanian audit standards say that for fiscal, accountancy or management consultancy services *"it is adequate to draft separate letters"*.²⁶

A rigorous analysis of the mission letters must be done in the case of the audit of the components, when there is the possibility that the auditor of the mother-entity be, at the same time, the auditor of one of its components.

The audit standards recommend to fundament the decision about the adequate character of sensing a separate letter in these circumstances, by taking into consideration the following factors:²⁷

- who appoints the auditor of the components;
- the need to draft separate audit reports for every component;

²¹ Audit Standard nr.210 Terms of the audit commitments.

²² Romanian Chamber of Auditors, Minimum Rules of Audit, Economical Publishing House, Bucharest, 2001, page 39.

²³ D.H. Taylor, G.W. Glenzen, Auditing: integrated concepts and procedures, John Wiley & Sons Publishing House, 4th edition, 1988, page187.

²⁴ G.W. Cosserat, Modern auditing, John Wiley & Sons Publishing House, New York, SUA, 2000, page176.

²⁵ ACCA (The Association of Chartered Certified Accountants), Auditing Handbook 1998/99, 1998, SAS 140.4.

²⁶ Audit Standard nr.210 *Terms of the audit commitments*.

²⁷ Audit Standard nr.210 Terms of the audit commitments.

- the distribution of the audit work between him and other auditors;
- the level of control of the mother-entity on the components;
- the degree of independence of the management of the components;
- the existence of different legal requirements.

On the other hand, the specific of the planning stage, meaning that it can be partial done based on only a verbal agreement with the client, can lead to two distinct situations, when the auditor is asked to change his engagement: before signing the mission letter or after.

No matter in which moment he is required to do the change, the main elements leading to it can be as follows:

- a change of the circumstances affecting the need for the service;
- not understanding the nature of the audit;

• limiting the area of action of the commitment, because of the management or because of other circumstances.

Changing the terms of the commitment is, essentially, changing an audit commitment in one of linked services. In order to do so the auditor must consider the legal obligations of the change, as well ad how reasonable is the reason for this request. If there is a reasonable justification for the change, the commitment will be done in compliance with its new terms, and at the end of it there will be an accurate report.

From the point of view of the audit standards, *reasonable justification* which fundaments the decision mentioned above is grounded only in the case in which the circumstances affecting the entity have been changed, or not understanding the nature of the service demanded in the first place.

If the request for change of the commitment is linked to incorrect or incomplete information, or the area of application of the commitment is limited because of the management, the auditor will feel that there is no reasonable justification, and so, that he must back-out of the commitment.

Furthermore, we must remind the fact that the planning and programming of the audit activity is a continuous process during all the duration of the mission, due to the change of the initial conditions or to obtaining new information by applying the audit procedures. In this context, the audit standards state that *"the general audit plan and the audit program must be revised whenever necessary during the course of the audit*".²⁸

We also mention the fact that the planning stage is longer from the point of view of the diligences which must be done by the auditor, including the preliminary assessment of the significance level and of the control risk.

As we can see from this briefing, planning the financial audit mission is an action which must be done with increased care and attention on behalf of the auditor, so that the premises of the fulfillment of the assumed objectives are ensured.

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STRATEGY OF TOURISM IN CROATIA FOR COMPETING ON THE EUROPEAN TOURISM MARKET

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Abstract: The paper deals with the problems that have arisen due to the rapid development of traveling motives in the world tourism market. Croatia, as Mediterranean tourism country still does not have a clear solution of alternative tourism offer. There are other problems that are generated by the growing number of tourists and changes in tourism consumption. In the paper author have demonstrated the results of influences of trends in the tourist demand side. The changes in the tourist demand have resulted in the change in the concept of mass type of tourism. Such trends have influenced the emergence of specialized producers and offers of typical Croatian products.

Key words: Strategy, Tourism, Croatia, Alternative tourism, European market.

1. Introduction

Tourism is now one of the global engines of development. Every year, more people are in motion than ever before in history.

The supply and the demand of the tourist product meet on the market. This product includes natural beauties, goods and services. With good planning and management, tourism can be a positive force, bringing benefits to destinations around the world. Also, the tourism could be one of the important sectors that create the GDP.

The transformation of the European tourism market caused also major changes in the Croatian tourism offer. Fast and efficacious restructuring of the Croatian tourism sector is a prerequisite for successful adjustment to the EU tourism market. The subject of analysis of this paper is basic tendencies and competitiveness of the tourism sector. Basic causes of the long-term (negative) trends are identified through the alternative tourism offer today and in the future tourism trends. Lack of innovation in this way disenables the faster expansion, which would consequently result in the decrease of competitive abilities of the tourism industry and of the entire Croatian economy.

The article focus is on the use of alternative/selective tourism as a central instrument for improved planning and development of today's tourism sector.

2. Contribution of Tourism to the Croatian economy

Tourism in 2006 realized 3% more overnight stays than in the previous 12 months and by that the level of overnight stays from 1990 was exceeded. The greatest number of tourists still comes from Germany, Italy and Slovenia. During the course of the year an increase in number of tourist capacities has been recorded and now Croatia has almost 860,000 tourist beds at disposal. The occupancy rate is still low

approximately 60 days. According to the data of the Croatian National Bank, tourism has realized foreign currency income of approximately EUR 6 billion, which is in comparison with 2005 more by 3.7%. On the other side, expenditures in foreign currencies, consumption of domestic tourist abroad are by 13.6% lower in 2006 if compared to the year 2005²⁹.

It is estimated that Croatia will achieve about 65 million nights till 2010 (80% of which by foreign tourists). According to the WTTC estimation, tourism in Croatia would employ 380 thousand people till 2010, from which 180 thousand directly.

Years	2004	2005	Index 2005/2004
GDP (in mil. EUR)	27.379	30.950	113,00
Revenues (in mil. EUR)	5.505,6	5.998,9	108,96
Share of tourism in overall	20,1	19,4	
economy m 76			

Table No. 1. Tourism in the Croatian economy

Source: Croatian National Bank

Table No. 2. Basic indicators of tourism development

Years	1970	1990	1995	2005
Number of beds (in 000)	616	863	609	909
Number of tourists (in 000)	6.454	8.498	2.438	9.995
Number of overnights (in 000)	42.411	52.523	12.885	51.421
Average number of overnights per bed	72	61	21	57
Average number of overnights per	6,6	6,2	5,3	5,1
tourist arrival				

Source: Central Bureau of statistics, Croatia

In 2010 tourism will directly bring 7,5 billion USD, total effect (direct and indirect) of tourism and travel industry will be about 12,6 billion USD which will make 28,8% of GDP.

Tourism is now concentrated mainly on the coastal part of Croatia including seven counties in which 96% of total number of tourist nights is realized.

3. Croatian tourism attractions

Since its beginnings in the 1960s, the development of Croatian tourism was based on the sun and the sea as products. Mass tourism, predominant in Croatia seldom used natural advantages as a tourist attraction.

²⁹Croatian Chamber of economy, 2006.

countries (in curos, 2005)						
	Croatia	Italy	Spain	France		
Bed & Breakfast (Hotel,	28	30	30	31		
camp, Private rooms)						
Hospitality services (food,	8	14	14	15		
beverage)						
Trade services (shopping)	7	14	15	16		
Fun, recreation, other	4	11	12	15		
TOTAL	47	69	71	77		

 Table No. 3. Structure of daily tourists spending in Mediterranean receptive countries (in euros, 2005)

Source: Cerović, Z. (2006), Struktura turističke potrošnje u zemljama Mediterana, VEZ, Krk – Rijeka, p. 8.

Structure of tourist spending by Mediterranean countries (table 3.) shows the difference in all categories except Bed & Brekfast. It is the disproportion of all tourism spending structure categories except Bed & Breakfast category. We can conclude, from the table above, that Croatia does not develop alternative ways of tourism satisfaction although it has all predispositions for it.

Dr. Eduard Kušen in his book gave the detailed specification of possible tourist attractions that draw tourists in individual destination. He stated 16 attractions in the following order: geological characteristics of the place, climate, water, flora, fauna, protected natural inheritance, protected cultural and historical inheritance, famous people and historical events, manifestations, cultural and religious buildings, natural healing places, sport and recreational buildings and playgrounds, tourist paths, routes and roads, attractions for attractions and tourist para attractions.³⁰

The only developmental way out of the used product and out of the type of tourism that is definitely out on the market is a diversification. The Master Plan of Croatian tourism recognizes diversities of individual units - clusters, whose particular features will be shaped into new products that need to be competitive on the market and mutually complimentary³¹.

Continental part of Croatia is neglected as tourism resort, although it is rich in attractions like: old towns, castles, thermal water-springs, pilgrimages, rivers, panoramic roads, wine roads, national parks and other protected areas. In that part of Croatia there are preconditions for development of congress tourism, farm and rural tourism, hunting tourism, health tourism, cultural tourism etc.

Tuble 100. 1. Type of visitor tourism attractions in Croatia				
	2004	2005	INDEX	
			2005/2004	
Museum and Galleries	2.261.222	2.274.700	100,60	
Pilgrim places	730.422	710.000	97.20	
castles	70.427	74.202	105,36	
Parks of nature	364.704	323.534	88,71	
Memorial areas	2.219	2.129	95,94	
Sports events	71.995	89.105	123,77	

Table No. 4. Type of visitor tourism attractions in Croatia

 ³⁰ Kušen, E. (2002), Turistička atrakcijska osnova, The Institute for Tourism, Zagreb. P. 67-141.
 ³¹ www.istra-istria.hr/masterplan/okvir.htm

Revista Tinerilor Economiști					
	2004	2005	INDEX		
			2005/2004		
Other events	176.100	259.986	147,64		
Old cities	722.920	886.186	122,58		
Fairs	720.460	620.049	86,06		
Carnivals	54.880	10.000	18,22		
National parks	1.775.907	1.986.708	11,87		
Aquariums	134.025	155.834	116,27		
Casions	271.151	390.688	144,09		
Festivals	154.783	188.366	121,70		
Archaelogical sites	4.839	9.755	201,59		
Forest parks	10.009	17.035	170,20		
Protected landscapes	15.630	16.800	107,49		
Monasteries	4.817	3.764	78,14		
Zoological gardens	387.315	401.632	103,70		
Cultural monuments	394.781	710.677	180,02		
Arboretums	31.423	30.424	96,82		
Famous peoples birth houses	3.586	6.461	180,17		
Other natural monuments	20.873	22.272	106,70		
Special reserves	65.875	89.061	135,20		
Fish – ponds	236	214	90,68		
Other	95.265	92.120	96,70		
TOTAL	8.545.864	9.371.701	109,66		

Source: Ministry of the sea, Tourism, Transport and Development, 2005.

The seasonality is one of the main weaknesses of the Croatian tourism. The alternative forms of tourism are an optimal solution in the current tourism position. Other tourism products, apart from the sea can extend tourism season during the year. (table 4.). It is mainly concentrated on two months in a year. Over 63% of total number of nights is realized in two summer months, July and August. Other tourism products, apart from the sea can extend tourism season during the year.

The importance of the attractions can be diminished by deficient image of destination and bad organized visits. Potential tourism offering is described in the second part of the article.

4. Managing alternative form of tourism

Selective tourist activities have not been sufficiently utilized until now, but have huge potentials in cultural rural tourism, but also in wider cultural tourism, especially archaeological, speleological, adventurous, hunting, trip, curative, wellness and gastronomic tourism. In the text below are listed the most important forms of alternative tourism that Croatia can successfully valorize as alternative forms of tourism offer

4.1. Adventure tourism

Adventure tourism is attractive form of selective tourism in Croatia. Croatia has great possibilities for the development of adventure tourism because of its natural resources and healthy environment as comparative advantages (especially its archaeological, speleological, adventurous, hunting resources).

4.2. Health tourism

In this sector of tourism, Croatia has 6000 beds in 18 health establishments. In 2005 health resorts were visited by 22,213 tourists and there were 202,859 overnight stays in total. The main potential and support for future and up-to-date development of health tourism lies in the diversity of natural resources, ecological quality of Croatian regions, curative waters, sea, favorable climate and healthy food³².

4.3. Cultural tourism

The wealth of Croatian material and non-material heritage is a resource for the development of Croatian culture tourism. Culture tourism is manifested in heritage tourism, UNESCO sites, museums, archaeological sites, rural cultural tourism and ecotourism. Croatia has to offer the autochthonous atmosphere of Mediterranean coastal towns. On the other sides there are urban centers and traditional rural areas.

In 2005 there were 309 tourist rural households registered in the Republic of Croatia with 84 beds, out of which 210 or 68% offered food and drinks while 167 or 54% has brandy and wine tasting facilities. The largest number of registered tourist rural households can be found in the County of Istria, almost 80 (26%) with 408 beds or 52% of the total number of beds in Croatian rural tourism industry³³.

The County of Dubrovnik-Neretva is the second largest with 75 beds (24%), but with significantly smaller number of beds - only 17 or 2% of the total number of beds in Croatian rural tourism industry.

4.4. Nautical tourism

Croatia has 50 marinas. In the past few years it is noticed an increase in the marina traffic. At the same time, there were more than 320 charter companies with approximately 2,600 boats in 2006. The visitors in Croatian Marines are mostly from Croatia, Austria and Germany. It has been estimated that nautical tourism will be on a rising trend. Croatia has a great potential to become a leading Mediterranean country in nautical tourism.

5. Future actions in tourism at local destinations

Below is an indicative list of needed cooperation in each destination in the process of developing alternative forms of tourism offer.

Local knowledge can be a key source of unique information on such factors as local use of resources, key traditions, and the values they hold most important regarding the destination. Local residents often will have clear ideas regarding the current situation and strong opinions on what is likely to be acceptable in the future.

Table No. 5. Potential sta	akeholders in t	tourism at local	destinations
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³² Croatian Chamber of economy

³³ Ibid

Communities
Tenants
Public sector
Municipal authorities
Regional authorities (planning areas, conservation authorities, coastal zone, regional
parks, authorities)
National (end State, Province, County, Departments or equivalent) ministries responsible
for tourism and its key assets
Other ministries and agencies in areas affecting tourism (transport, natural resources,
environment, culture, infrastructure, planning, heath, etc.)
Agencies with an interest in the planning or maintenance of special attractions (parks
protected areas, museums, marketplaces, cultural sites and events).
Private sector
Tour operators and travel agents
Accommodation, restaurant and attractions, and other associations
Transportation and other service providers
Guides, interpreters and outfitters
Suppliers to the industry
Tourism and trade organizations
Business development organizations
NGOs
Environmental groups (in the destination and outside but with an interest)
Conservation groups (wetlands, native species, parks, cultural heritage)
Other interest groups (hunters, fishers, sports and adventure associations)
Tourists
Organizations representing tourists interests at the point(s) of origin
International tourism bodies

Source: Indicators of sustainable Development for Tourism Destination, (2004), A guidebook, WTO, Madrid, Spain, pg. 27.

In most tourism destinations there are many different governmental, semigovernmental and private bodies involved in the planning and management of the resources and programs affecting tourism and conditions at the destination. A challenge lies in bringing these agencies, organizations and firms together to participate in indicators development and use. In particular, local authorities, planners, and the tourism industry are key players. In most destinations there are utilities, economic planning groups, hotel associations, transport organizations, unions or labour boards and organizations charged with the development or maintenance of key assets such as parks, beaches, or cultural sites. Any participatory process should recognize both the interest of such bodies, and also the constraints associated with their participation in public processes³⁴.

³⁴Indicators of sustainable Development for Tourism Destination, (2004). A guidebook, WTO, Madrid, Spain.

6. Conclusion

In the European Union, especially in the globalization process, tourism is regarded as having a core role in regional development. The key role in strategic positioning of Croatia is played by small hospitality companies which are important part in the process of increasing the destination attractiveness. The same is a more recent mechanism to achieve economic and social objects. The potential for tourism to contribute to regional development will depend on a quality level of all offered tourism events in Croatian tourism. The research has been made on the basis of alternative/selective tourism offer. The same factor should be increased in the future tourism development.

Tourism administrations and other public authorities at the regional and national levels, should aggregate data from several sites or destinations. On the other hand, tour operators, transportation companies and other service providers are also important part in the development process of specific attractions, natural and cultural sites or protected areas. Researchers and students dealing with tourism-related development issues should actively participate in the process of interaction members of interest groups, community organizations and the host community.

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LOCALIZATION OF MULTINATIONAL FIRMS, TERRITORIAL ATTRACTIVITY AND INTERCULTURAL MANAGEMENT IN THE EURO-MEDITERRANEAN AREA

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Abstract: The global economy has established new game rules with regard to both the strategies of multinational companies (MNC) and the competition exerted between the territories competing for the localization of companies. The internationalization of firms is not a new phenomenon and the explanations of this process are legion. In fact, the novelty of certain works lies in the interest taken regarding the effectiveness of the various approaches which make it possible to increase the efficiency of a firm's localization strategies. From this point of view, the works of Hofstede, D' Iribarne and Hall are essential, being at the origin of the founding of intercultural management. These works shed light upon and allow one to interpret the cultural behaviors found in the management methods of numerous countries. Accordingly, this contribution will attempt to analyze the strategic impact of intercultural management on the binomial localization of MNC/ territorial appeal in light of the emergence of a Euro-Mediterranean area.

Key words: localization strategies of MNC, Euro-Mediterranean area, intercultural management, FDI.

Introduction

The global economy has established new game rules with regard to both the strategies of multinational companies (MNC) and the competition exerted between the territories competing for the localization of companies. Indeed, as long as a firm developed an activity in its area of origin, company/territory relations remained close. This close relationship has gradually distended, influenced by the liberalization policies of economic activities, the rise of new communication and information technology, and above all the explosion of foreign direct investment (FDI). Consequently, it appears essential to know how to support this evolution in order to benefit from it. Thus, the appeal of Mediterranean territories designed for their ability to attract local or foreign investment, to settle and thus anchor them in a program of sustainable development becomes a strategic requirement (Michalet, 1999a; Andreff, 1999; Nekka, 2001). Indeed, can a firm's choice to localize to a particular site be explained? How do companies consider the characteristics of the territory in which they are located? How can firms which are qualified by some as being 'nomadic' be attracted and more importantly become settled into a territory? (Zimmermann, 1998, Colletis and Alii

1996) Which are the determinants of territorial appeal for MNC?³⁵ The internationalization of firms is certainly not a new phenomenon and the explanations of this process are legion. In fact, the novelty of certain works lies in the interest taken regarding the effectiveness of the various approaches which makes it possible to increase the efficiency of the firm's localization strategies. From this point of view, the works of Hofstede, D' Iribarne and Hall are essential, being at the origin of the founding of intercultural management. These works shed light upon and allow one to interpret the cultural behaviors found in the management methods of numerous countries. Accordingly, this contribution will attempt to analyze the strategic impact of intercultural management on the binomial localization of the MNC/ territorial appeal in light of the emergence of a Euro-Mediterranean area.

1. Globalization, regionalization and the new strategic logic of the MNC

Globalization has generated specific forms of regionalization appreciably reducing the analytical range of the traditional theoretical approaches relating to the analysis of regional economic integration.³⁶ Indeed, the potential opening up of the European Union to new partners, in particular Mediterranean third countries constitutes the prototype of a regionalization which disregards the economic and institutional homogeneity of the future Member States.³⁷ It is also necessary to underline a growing tendency towards regional integration which results less from an institutional process or intergovernmental political agreements than from the catalytic role of MNC. From this point of view, the European Union has affirmed its will to build a Euro-Mediterranean area of economic and political stability. The issue of regionalism is to create what Kébabdjian (1998) called the '*announcement effect*' towards investors; all the more so as the primary objective of regional integration agreements are generally to reassure the potential investors of the adoption of conventional economic policies.

In the context of a global economy a MNC is able to localize its activities where it is most advantageous (Andreff, 1999). Under these conditions, the interactions between companies and territories evolve, according to an increasingly complex logic.³⁸ Foreign investment thus corresponds to the meeting between a MNC (with a project) and a territory (having assets and weaknesses). "Simultaneously, the nation-states of the international economy lose the majesty that the concept of national sovereignty lent them and become simple economic territories, the utility platforms of globalization." (Michalet, 1999b, p.387). Thus, for approximately fifteen years, nations have entered into keen competition concerning the attraction of MNC. A veritable escalation has

³⁵ That we will qualify as multinational companies.

³⁶ In these pioneering approaches, dear to J. Viner and B. Balassa, it is necessary to specify that the concept of economic integration, starting from the creation of free trade areas followed by customs unions, is exclusively centred on the intensification of the exchange flows of goods and services induced by the suppression of customs duties between the partners to the agreements.

The theory of the customs unions is within the paradigmatic framework of the *international economy*, which excludes from its analytical field the dimension specific to new forms of regional integration centred on flows of direct investment and capital just as on the internalised networks of MNC's subsidiary companies (Storaï, 2002).

³⁷ The latter constitutes one of the cardinal hypotheses of the theory of customs unions.

³⁸ "Firms invest in areas which are increasingly remote and different from their original environment, following their own strategies which have few links with the territories concerned." (Gouëset, 1999, p.23).

resulted due to the institutional, tax, and financial advantages granted to foreign investors (Andreff, 1999). Henceforth, the strategic localization choices of MNC dictate for the most part any positive or negative effects on a given territory.³⁹ In the current configuration of the economy, the increase in inter-firm competition has led to MNC having a new strategic logic. MNC adopt global strategies and arbitrate between localizations in several territories. Consequently, the interactions between the binomial elements MNC/host-territory cannot be explained without taking account the strategies established by these same firms.

The principal objective of the following paragraphs is to address this aphorism from a theoretical point of view. The analysis will attempt to show how firms adapt to a new global environment, and in which way they are shaping it.

1.1. The dynamics of MNC

Globalization has established new game rules, both for the investment strategies of MNC and for the acute competition exerted between the territories which are potentially appealing for the setting up of companies. Since the middle of the 1990s, liberalization policies concerning generalized economic activities in a great majority of the countries, independent of their level of development, the rise of market mechanisms and private initiatives concerning state interventions and public companies have profoundly reorganized the attitude of governmental authorities with regard to foreign investment.

A logic focusing on attracting FDI has largely replaced the official restrictionregulation policies concerning the setting up of foreign firms (Andreff, 1999). Henceforth MNC strategic localization choices precede the realization of the macroeconomic repercussions inherent in foreign investment in a host territory. In exacerbating competition between firms, globalization has also generated a new behavioral logic among the actors involved in this new economic dynamic. MNC directly develop world-wide strategies⁴⁰ and arbitrate between localizations in several potential territories. In other words, the inter-territorial competition implies that the appeal of a geographical area cannot be conceived without taking into account the finalities of the companies' setting up abroad. In the logic of globalization, the dialectic of appeal inevitably relies on an interaction between micro and macroeconomic interests therefore it is essential that convergence enters into a firm's strategies and into governmental economic policies.

Traditionally, economic analysis retains a trilogy specific to the strategic behaviors of companies concerning FDI:

- a *primary* strategy or access to natural resources from the ground and below ground; - a *horizontal* strategy or market; - a *vertical* strategy or cost minimization. It is not in our intention to look further into the formal distinction between these three finalities of

³⁹ "It seems inescapable in globalisation that the firm's logic takes precedence over that of the nation-state's (...) With globalisation, the role of firms means territories compete against each other in their search for maximum competitiveness, whereas in multi-nationalisation, it was the role of governments and their administrations to select the "good" investment projects proposed by firms, according to their medium- to long-term priorities." (Michalet, 1999b, p.387 and p.391).

⁴⁰ They are qualified as "global multinationals" (Andreff, 1996).

investment decisions,⁴¹ but precisely to clarify the firm's localization choices within the framework of the global economy. This conventional triptych between the firm's behavioral alternatives with regard to FDI was undoubtedly confirmed by reality up until the middle of the 1980s; however, the stylized facts applicable to globalization make this prototype if not null and void at least non-systematic. Indeed, according to a survey carried out in 1997 by the Foreign Investment Advisory Service (FIAS)⁴² relating to FDI in ASEAN countries , the CECE (Countries of Eastern and Central Europe) as well as those of the PPM (countries on the circumference of the Mediterranean Sea), it seems that firms basically follow transversal strategies which combine, in an alternative or simultaneous fashion, the search for profitable supply sources along with the advantages of a dynamic large-scale market and the minimization of production costs.⁴³

In the global economy, MNC are simultaneously more selective in localization choices with regards to their financial, commercial or productive activities, and more credible in their ability to de-territorialize their investments and establishments. The increased flexibility of the potential processes of delocalization/ delocalization of activities thus appreciably reorganizes the analysis of the interactions between the elements of the binomial MNC/ host territories.

1.2. Territorial appeal: a paramount concept

The multinational economy saw a rupture with the traditional theoretical bases of international specialization, in particular in relation to factorial endowment. However, the global economy rehabilitates a typically *smithian* concept regarding international exchange: that of the absolute advantage. Companies in search of localization initially evaluate potential host areas, then only the sites likely to offer a certain number of localization advantages. These act in either a direct or indirect manner on the competitiveness of the firm. Indeed, the development of new activities relies on using new technologies and the continued integration of innovations, factors which weigh heavily on the companies' productive systems. Thus, with globalization, firms are forced through need to be evermore competitive. "One is witnessing a displacement of the field of competition which is henceforth based on quality, deadlines, the differentiation of products, service associated with the product (...) the position of a company is never assured." (Veltz, 1996, p.34). The reactivity of a company thus becomes a formidable weapon with which to compete. Cost control is always an imperative. Nevertheless, a company considers new factors when choosing

⁴¹ Numerous publications which are easily accessible have been devoted to this end. Cf. for example, Michalet (1998), Mucchielli (1998), Markusen (1995).

⁴² Cf. Michalet (1997), the FIAS it is a joint department of the World Bank and International Finance Corporation which undertook a study concerning the flow of FDI carried out by approximately one hundred North-American, Japanese and European multinationals involved in several branches of industry (chemistry, electronics, electric material, telecommunications, textile-clothes industry, automotive engineering, hotel trade.).

⁴³ As Andreff specifies: "Global strategies, which appeared in certain MNC about fifteen years ago, have several characteristics, the first of them being precisely that MNC systematically exploit three strategies, according (...) to their own microeconomic constraints (...) the state of the national and world markets, and the advantageous localisations which are presented to it, if not continually, at least when each strategic decision is being made." (Andreff, 1999, p. 402).

the sites on which to set up its activities. The company seeks a specific offer: *the advantage of localization*.

This can be expressed in terms of the qualifications held by the labour force, the technological environment, the local know-how. Consequently, the territory becomes a parade ground of economic activity (Veltz, 1997). All in all, the efficiency and the performance of a firm are closely related to the organization of the territory. The dynamics of the territory are related to its ability to mount a counterbalance in the face of the increasing incertitude of globalized competition (Veltz, 1996). The more the supply of territories is consistent with the demands of firms, the more strongly rooted the firm will be. The dialectical competitiveness of companies/ territories' appeal lies in a dynamic vision of this postulate. Thus, the process of internationalization and the dynamics of the territories are closely linked. They constitute two phenomena of the same process leading to a kind of territorial adjustment (Kherdjemil, 1999). Henceforth, the intensification of competition does not only concern the firm; it extends to the competition between the territories.

As a result, any geographical area eager to attract MNC must work its localization advantages. Territorial appeal is thus a new imperative for the economic policies of those states who aim to satisfy the requirements of potential investors.⁴⁴ *"More fundamentally, the localization advantages offered by a territory will be confirmed only insofar as they can contribute to the strengthening of the firm's competitiveness."* (Michalet, 2001, p.392). Nevertheless, the dynamics of appeal are designed gradually. Initially it is a matter of improving the companies' environmental quality (this phase corresponds to the construction of the prerequisites for any investment growth strategy). The second stage consists in addressing the priorities expressed by the investors.

1.2.1 The construction of territorial appeal

In the era of globalization, the concept of territorial competitiveness has acquired great importance in particular with regard to development policies. The role of the territory is to provide companies with competitive factors (capital, work), apt to receive and master new technologies and new managerial organizations. It represents an essential link *"in the process of knowledge construction, interpretative codes, co-operation and decision-making models upon which companies' innovations are based."* (Camagni, 2002, p.554). While referring to work of Colletis and alii (1996), Camagni (2002) affirms that a competitive territory is one that has a dynamic local advantage.

The availability of traditional factors such as labour and capital has an increasingly weak role. Firms seek an efficient territorial organization prepared to act as a counterbalance in the face of the increasing incertitude of globalized competition. It involves a powerful local industrial fabric where the use of new technologies is mastered and where relations between the various economic agents are rapidly established. Thus, the territories in which the fabric of production, the quality of human

⁴⁴ Note that considering the multidimensional character of globalisation, the implementation of a policy of territorial appeal should be uniform regardless of the investor's nationality: discrimination between local and foreign firms becomes unimportant in the context of the global economy.

capital and the environment are failing are exposed to marginalization.⁴⁵ In this context, it is in the interest of the institutional and political powers to favor the creation of specific resources.

The appeal of a nation (or an area) fundamentally relates to a territories' ability (national or regional) to attract and to settle foreign and local investment. To be retained as a potential place of localization, the territory must first satisfy macroeconomic preconditions allowing the investor to evaluate the profitability of the localization project and to compare it with alternatives in other possible localizations. In other words, a targeted group of variables must be considered for the *general business environment* to be analyzed. Among the information required, that relating to the sustainability of a stable economic and political regime, as well as information specifying the conditions of the investment climate seems to be the most highly valued.⁴⁶ Once the prior conditions are established, the territory will then endeavor to promote the existence of the factors likely to render credible the territories' appeal. The likelihood of the main parameters of the territories' appeal will indicate its ability to appear on the investors' "short list," to use A.C. Michalet's expression.

1.2.2 The components of appeal

It is possible to identify several dimensions essential to territorial appeal which reflect the core priorities of potential investors in view of a sustainable implantation. Firstly, the advantage of localization relative to the market size and its prospects for anticipated growth is of major importance for firms. The report of the primacy of the market, put forward by the aforementioned FIAS investigation, gives rise to some additional comments. Indeed, globalization has generated a conceptual framework inherent to the market which is quite different to the commercial analytical configuration typical of the paradigm of *the multinational economy*. Global firms design strategies not in reference to multi-domestic markets, but rather to a commercial zone which is integrated into a process of regionalization.⁴⁷

The strong appeal of certain ASEAN countries (Thailand and Malaysia), confirming the transverse strategic logic of global FDI, is perfectly characteristic of this new conceptual tendency of production organization and exchanges in globalization. The optimization of delocalized production is envisaged in an enlarged geographical area with a view to benefit from the various national potentials in terms of supply

⁴⁵ "The current phase of development, where the crucial factors are the knowledge factors and the immaterial factors related to the creativity and the ability to innovatively use the existing stock of technology and codified knowledge, requires heavy investment in tacit knowledge (...). In short, it requires rare factors, which do not necessarily exist everywhere (...)" (Camagni, 2002, p.571).

⁴⁶ However, these considerations are far from being exhaustive, as Michalet specifies: "they (investors) privilege the countries which follow a liberal economic policy, favourable to the market economy and open to the exterior because they fear the discretionary decisions made by governments and their administrations. The existence of programs of privatization constitutes a positive sign, not only because they open investment opportunities, but also because they clearly express a favourable political orientation to private initiative." (Michalet, 1999b, pp.392-393).

⁴⁷ Regionalisation regroups nation-states in political or economic sets which are more or less federate. More precisely, "regional integration binds countries which are geographically close and between which the economic relations tend to be free of the political borders so as to support the formation of integrated markets" (Siroën, 2004, p.3).

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(costs) and demand (Fabry, Maximin, 1997). Secondly, with regard to the increasing degree of sophisticated technology incorporated into the production processes of multinational firms, the availability of gualified labour in association with the existence of a powerful local industrial fabric constitute another fundamental determinant when looking at a host-territories' appeal for FDI. It is precisely the quality of human capital (a good level of experience and initial training of engineers, management and other high-level technicians) which gives an undeniable comparative advantage to the CECE concerning the appeal to foreign investors (Andreff, 1997; Drouet, 1999).⁴⁸ Lastly, from the point of view of increased specificities of the global organization of firms, the communication network efficiency of informational and infrastructures (telecommunications and transport systems) is of critical importance. The internalized space of the firm relies on a "just in time" circulation of capital, information, products and labour between subsidiary companies established in many diverse nations. This dimension of MNC management is all the more fundamental, since at the end of the 1990s, the share of intra-firm international exchanges in global trade bordered on 40%(UNO, 1999). All told, a territories' appeal supports the diamond idea of national advantage according to Porter (Porter, 1990, p.72). It is clear that FDI's ability to polarize a given geographical area is largely dependent on its propensity to satisfy the various aspects of the firms' global strategy (ibid, pp.607-613). Nonetheless, the dynamics of a nation's appeal are not a *deus ex machina*; dynamics are progressive and are created through public policies promoting foreign investment (Storaï, 2002). The construction and/or the valorization of localization advantages rely on four essential parameters: services allocated to the investors, the targeted promotion of these investors, the system of financial incentives and the image of the territory (Michalet, 1999a). Our approach is not to give an exhaustive explanation of these essential domains of activity⁴⁹ but rather to take a global view.

2. Development of MNC and the Euro-Mediterranean area: from the universal to the private individual

Two great theoretical approaches propose alternatives in order to challenge the phenomenon of internationalization. The first, the oldest, was called the theory of convergence. Of American origin, this theory calls for the harmonization of companies' practices through to the application of universal management models. This theory claimed to solve the Third World's difficulties by modernizing the "traditional" cultures which distinguished it. With the crisis during the Seventies, this model was gradually called into question. A second approach thus appeared, known as the contingency approach. Contrary to the convergence theory, it proposes that firms develop specific practices adapted to local specificities starting from a common base of universal techniques. In other words, this analysis recommends the famous maxim "Think global, act local". Thus, the idea of adhering to the "one best way" concept in regards to management gradually ran out of steam (Trompenaars, Hampden-Turner, 2001; Rojot,

⁴⁸ Obviously, globalisation has not condemned the existence of many intensive productive sectors using little qualified labour (shoes, toys...). However the *eclectic* theory, dear to Dunning, teaches us that delocalisations are carried out in the form of licence sales and/or subcontracting agreements (Dunning, 1988).

⁴⁹ The reader interested in an exhaustive development of the promotional techniques of foreign investment may refer to works of Michalet, cf. (Michalet, 1999a).

2003; Frimousse, Peretti, 2004), hence the comprehension of the cultural characteristics of countries becomes a necessity (Bosche, 1987; D' Iribarne, 1987).

According to Hofstede, culture "is in essence a collective mental programming; it is this part of our conditioning which we share with the other members of our nation, but also of our area, our group, and not with those of other nations, other areas or other groups" (Hofstede, 1987, p.10). Within the framework of the Euro-Mediterranean area, two cultural blocks dominate, one being on the northern shore and the other on the southern shore of the Mediterranean Sea. In view of the internationalization of firms, this cultural diversity calls for a specific style of management.

2.1 MNC and the management of Euro-Mediterranean diversity: the essential acquisition of intercultural competences.

If national cultures influence individuals' perceptions, this must be taken into account within framework of the internationalization of firms and adequate modes of management must therefore be adopted⁵⁰ (Aktouf, 1994; Meier, 2002). This ability to understand and to then adapt to the specificities of a situation of intercultural interaction is set out in the concept of intercultural competence (Hofstede, 1994; Trompenaars, Hampden-Turner, 2001; Bartel-Radic, 2003). The discovery of cultural differences is fundamental for firms with regard to at least three dimensions: the market, the organization of work and the decision-making processes (Desjeux, 1998; Precede, 2001). The challenge is to analyze the differences so that the company may benefit from them. Accordingly, Hofstede's approach (1987) remains the most quoted reference in this field. Indeed, more than twenty years ago Hofstede published pioneering research concerning 54 countries. He looked at the values and attitudes in workplaces starting from four universal dimensions: the hierarchical distance, the control of uncertainty, individualism and male/female values. The hierarchical distance corresponds to the degree of inequality expected and accepted by the individuals. This dimension is measured by the way the subordinate perceives the power of his/her superior. In countries where the hierarchical distance is short, the company is organized according to a flattened pyramidal organization; the reverse occurs if this distance is elevated.

As for the control of uncertainty, it relates to the way in which the members of a society approach risk. This cultural dimension measures the degree of tolerance which a culture accepts in relation to the concern caused by future events. As for individualism and the community, these concepts refer to the degree of independence and freedom that the members of a society may assert.

Thus, community-based societies value the time spent for the benefit of the group. On the contrary, individualistic societies value time spent by individuals for their own personal benefit. These dimensions have repercussions on the companies' activity. Indeed, in community-based countries relations between employers and employees have a moral basis, whereas in individualistic cultures they are based on personal calculation. Lastly, the distribution of roles between genders does not occur in the same way in all societies (Bollinger, Hofstede, 1987; Precede, 2001).

⁵⁰ In this respect, the works of Benraiss and Peretti (2002) are the perfect illustration. Indeed, they compare Moroccan and French executives, looking at their perception of equity. The cultural factors are crucial since the French and Moroccan executives establish their own criteria and personal characteristics to judge their remunerations.

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From these universal dimensions, Hofstede looked at companies through three angles of analyses: direction, organization and motivation. The dominant dimensions with regard to direction are individualism and hierarchical distance. Thus, in an individualistic society, such as the United States, subordinates are authorized to take part in the direction's decisions (short hierarchical distance). On the contrary, in the countries where the hierarchical distance is greater, as in many Third World countries, subordinates refuse to become involved in the decision-making process as it is not their role. In a collectivist society the group can influence the leader. As for the structure of the organizations, the essential dimensions of a culture are the hierarchical distance and the control of uncertainty. According to Hofstede, the French organizational model can be represented by a human pyramid (elevated hierarchical distance and substantial control of uncertainty).

In Germany, the model is like that of a well oiled machine (substantial control of uncertainty but shorter hierarchical distance). In England, the model is like a village market (short hierarchical distance and weak control of uncertainty). In general, Third World countries have a familial organizational model (great hierarchical distance and weak control of uncertainty). Lastly are the theories of motivation, which are related to the individualism/ collectivism dimension. In individualistic societies, motivation is dictated by one's own obligations to oneself. On the other hand, in a more collective society motivation arises from the obligations towards the group. The control of uncertainty and the masculinity/femininity dimension also influence motivation (risk-taking is encouraged in certain societies whereas others advocate security). Peretti (2004) and Zghal (2004) discuss Hofstede's approach by stressing that culture is in perpetual construction, that the national dimension is often overestimated. Indeed, culture is regional and local and constitutes only one element of the contextual dimension.

2.2 Internationalization of firms and the Euro-Mediterranean management model: beyond culture, the contextual dimension.

Several models of management have followed on from one another. The mechanistic model corresponded to a combination of means to ensure the optimal development of a firm. The principles are universal and identical in all companies. This model was characterized by a division of labour, a coordination of tasks and the exercise of authority. The mechanistic model was appropriate for a stable environment. Following the organic model, the company endeavors to be flexible and decentralized in order to respond to environmental fluctuations which become unstable. The "robot" employee becomes an intelligent and motivated "associate" and authority is replaced by participation and reasoned responsibility. The mechanistic and organic models seek to be universal however globalization has given rise to a descriptive approach searching for innovative management models appropriate to various contexts (Orsoni, 2003).

Indeed, all societies are based upon an important edifice of local representations. Consequently, these local representations are to be considered in the running and the management of a company (D' Iribarne, 2000; 2003). Within the framework of the Euro-Mediterranean area, contextual diversity means that the management of an internationalization strategy becomes increasingly complex. In order to manage this contextual diversity two major approaches exist: the contingent approach which presents a powerful link between the context and the management method and the convergent approach, where the context has only minimal influence on

the methods of governorship (Chevrier, 1996). According to the convergence theory, contextual differences exist but the practices can be standardized using a unifying project culture (Levitt, 1983). Usunier and Sissmann (1986) qualify this strategic approach as the "steam roller".

The universalist management approach affirms that the business world is controlled by similar interests on both sides of the border. Some practices known as "good practices" significantly affect the performance of the company independently of the context. Consequently, the various countries' management methods and the forms of organization converge. However, this vision is increasingly called into question (Laurent, 1997; Schneider and all, 2003). Indeed, the precursors of the contingent analysis, among who are Lawrence and Lorsch (1969), affirm that the desire to export practices which are considered to be universal without taking cultural identities into account of is a cause of failure. Chanlat (2004) and Dolan (2000) affirm that the Anglo-Saxon management model which currently dominates in the business world, is economically effective but that it is also a cause of social toxicology (unemployment, exclusion...). As opposed to the convergent approach, the contingent approach affirms that international and trans-national projects raise technical and financial difficulties, but above all they cause cultural complexities which a company can not afford to neglect.

Each company must identify the challenges of both its external environment and its internal characteristics. The analysis of the latter enables the company to develop suitable work policies and effective practices. Huault and Charrière (2002) underline the non-existence of a single organizational form which ensures the performance all companies. The contingent approach thus seeks to identify the contextual characteristics and the variables which influence them, so as to take them into account in managerial practices (Sheppeck and alii, 2000; Tregaskis and alii, 2001). In the Euro-Mediterranean area, many demographic, economic and cultural characteristics underline a very different context for companies. The contingent approach thus seems to exclude the duplication of imported models. Indeed, given the divergence of local realities between the Mediterranean's northern and southern shores, good European practices would not be as effective in the territories on the Mediterranean's southern shore. Nowadays however, this restrictive view is somewhat limited since in all countries, the most powerful companies are based on universal practices. Consequently, the logic of contingency is not incompatible with that of convergence.

Moreover, the technological changes, the international economic environment and demographics are just as much contingency factors which tend to converge (Frimousse, Peretti 2004). This rapprochement of contexts supports the convergence of managerial practices. Indeed, as long as firms are confronted with the same competing pressures, they choose similar practices (Gooderham, Brewster, 2003). Moreover, with the volatility of firms and communication and information systems, the practices are propagated from one country to another favoring their homogenization (Peg wood-O' Creevy, 2003). Thus, even if the companies are subjected to certain universal fundamental obligations (commitment to quality...), the interpretation and the local methods used to express these aspects generally remain specific (Premium, 2001; Peretti, 2002). Precede and Usunier (2003) underline the need to integrate the unique and the local with the common and the global. Tregaskis and all (2001) use the term "global/local mix".

Conclusion

The rise of MNC, major actors in globalization, results in the implementation of intense and multiform exchange networks, beyond increasingly porous national borders, between various regionally integrated areas of economic activity (Hatem, 2004). The ability of these areas to attract firms' investment projects – firms which are themselves selective in the search for the most favorable localizations - constitutes a capital development issue. In the context of the emergence of the Euro-Mediterranean area, issues relating to the conception of a suitable, intercultural management model which takes into account the cultural, historical and geographical identities of this area under construction are a matter of major interest. As a result, the appeal of Euro-Mediterranean territories designed for their ability to attract, settle and anchor local or foreign investment in sustainable development programs becomes a strategic requirement in order to favorably meet the future challenges of the global economy.

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THE INFLUENCE OF CULTURE ON DECISION MAKING

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Abstract: The organizational culture influences the decisional process significantly, acting in an insidious way, both upon the decisional environment, in its heterogeneous structure, and upon the deciders. We will proceed in making an analysis of these influences, using in this way a construction, which is developed depending on the dimensions of the cultures identified by G. Hofstede – the distance towards power, individualism/collectivism, masculinity/feminity, the uncertainty avoidance and long term vs. short term approach – and the steps of the decisional process (in the simplified normative vision) – perception of the problem, generating, selecting and implementation of the chosen alternative.

Key words: decision-making process, national culture, organizational culture

The end of the Cold War has produced major political, social and economic changes in the whole world. Samuel P. Huntington, in a famous paper, "The Clash of Civilization", shows that in the new conditions, the nation-states remain the main actors in the business world. Their behavior is formed, like in the past, by the preoccupation for power and wealth, but also, influenced by cultural preferences, common points and differences. In the world after the Cold War the most important differences among countries aren't ideological, political or economical ones, but cultural ones.

At the level of a country there can be delimited, depending on the field of coverage, four categories of culture: national, economic, sectorial and organizational. Two of these categories are essential: national culture, that marks in many ways the evolution of every country and the organizational culture, which is a component and a major determinant of functionality and performance of every organization, no matter its nature.

Next we will try to clarify, by using a relevant literature in the domain, the concept of ,, organizational culture" and some terms connected to this, necessary for our approach (managerial culture, organizational climate).

To revert to the definition of organizational culture, although the concept was widely debated in the last years, it hasn't come to, and it probably never will, a definition by common consent accepted. In the most relevant approaches, in foreign and Romanian literature, it is defined as:

• "a set of symbols, ceremonies and myths which transmit the basic beliefs and values of its members' organization" (W. Ouchi, 1981);

• "a set of coherent and dominant shared values, transmitted by symbolic ways like stories, myths, legends, slogans, anecdotes, short stories" (T. Peters, R. Waterman, 1982);

• "a model of fundamental presumptions a certain group invented, discovered or invented, learning to overcome the external adjustment and internal integration problems, presumptions that have worked quite well in order to be considered valid and to be taught to other new members, as a right way to perceive, to think and to feel about these problems" (E. Schein, 1988);

• "a collective mental programming which differentiates the members of a group or a certain social category of members from the members of other groups or social category (G. Hofstede);

• the aggregate of artificial products, of basic values and concepts, of ways of thinking and behavior generally accepted in an organization, as a common base for action" (T. Zorlențan, E. Burduş, G. Căprărescu);

• a system of values, presumptions, beliefs and rules shared by the members of the organization, which get them together" (Gh. Gh. Ionescu, 1996).

In a strong organizational culture, most of the managers share a common set of beliefs, values, and behaviors concerning the way the business must be ruled. Using their position in the hierarchy of the company, they shape in a significant way, the attitudes, the decisions and the behavior of the subordinates. This is how a managerial culture appears, as a part of the organizational culture.

It is crucial for international managers to understand the influence of culture on decision-making styles and processes. Culture affects decision-making both through the broader context of nation's institutional culture, which produces collective patterns of decision-making and through culturally based value systems that affect each individual decision-maker's perception or interpretation of a situation.

A managerial culture averts the appearance of the organizational against culture (the elements opposite to the managerial culture, based on achieving the objectives) and it is strongly personalized, carrying on the fingerprint of the general manager of the company. The more the latter has a stronger personality and exert a more generous leading, oriented to people, the more the managerial culture, and the organizational one, reflects the conception, the potential and the particularities. When the personalization is excessive, it can generate, in time, functional distortions and will affect the continuity of the development (the remedy represents a participative method).

The organizational culture influences the decisional process significantly, acting in a discreet, insidious way, both upon the decisional environment, in its heterogeneous structure, and upon the deciders. We will proceed in making an analysis of these influences, using in this way a construction, quite original, which is developed depending on the dimensions of the cultures (national, organizational) identified by G. Hofstede the distance towards power, individualism/ collectivism. masculinity/feminity, the uncertainty avoidance and (less studied) long term vs. short term approach – and the steps of the decisional process (in the simplified normative vision) – perception of the problem, generating the alternatives, selecting one alternative, implementation of the chosen alternative.

Problem perception. In the organizations with a culture with high level of uncertainty avoidance, top management manifests a special trust in planning and hardly accepts the idea of existing of an unexpected decisional problem, the awareness being sometimes delayed, even late. There are also neglected the signals concerning certain dissonances, there is a focus on formal reports, usually financial- accountant ones, with historical information. In the organizations with a culture tolerant to uncertainty, the

acceptance of the dissonances is much easier, this wouldn't be seen as a situation with no exit, but, on the contrary, as a conjuncture which provokes creativity.

A high power distance means the concentration of all information concerning the activity of the organization at high managerial level. This can lead to more negative implications upon the decisional process: the leader/manager, the only one that can observe the existence of a decisional problem, knowing all the facts, may not always have the capacity or the interest (objective or subjective) to identify the problem; the subalterns, partially informed, can identify and try to resolve the "fake problems". A low power distance produces a decentralization of the decisions.

One of the major cultural variables affecting decision-making is whether a country assumes an objective approach or a subjective approach. Whereas the Western approach is based on rationality (managers interpret a situation and consider alternative solutions based on objective information), this approach is not common throughout the world. Latin Americans, among others, are more subjective, basing decisions on emotions.

Another important variable in the decision-making process is the manager's perception of the locus of control over outcomes – whether that locus is internal or external. Some managers feel they can plan on certain outcomes because they are in control of events that will direct the future in the desired way. In contrast, other managers believe that such decisions are of no value because they have little control over the future – which lies in the hands of the outside forces, such as fate, God, or nature. American managers believe strongly in self-determination and perceive problem situations as something they can control and should change. However, managers in many other countries, Indonesia and Malaysia among them, are resigned to problem situations and do not feel that they can change them. Obviously, these different value systems will result in a great difference in the stages of considerations of alternative actions and choice of a solution, often because certain solutions may or may not be viewed as a problem in the first place.

Generating alternatives. In this step a special influence have two of the five dimensions identified by G.Hofstede, such as: long/short distance towards power, big/little avoidance of risk.

In organizations with a culture characterized by big uncertainty avoidance it is identified a small number of alternatives, generally predefined, in the moment of elaboration the planning. New information is treated superficially; the importance of the available information is generalized when the various plans were made, found in formal reports. On the contrary, in organizations with a tolerant culture to uncertainty it is paid attention to all information, including the one obtained on an informal way, and are considered and analyzed all possible alternatives.

In organizations characterized by cultures with a long distance towards power, this activity is the privilege of the general manager/leader. In cultures with sort distance towards power, in order to elaborate the decisional alternatives, are taken into consideration the subalterns' suggestions.

Selecting one alternative. First we must have a discussion concerning the criteria taken into consideration to differentiate the alternatives. Thus, in an organization with a culture characterized by individualism, the logical, rational arguments are dominated; in organizations characterized by collectivism there are taken into consideration, in a specific way, the moral, ethical values. Also, the avoidance of any loss is a desideratum for collectivist societies.

In organizations with a culture typically masculine it is noticed a strong orientation towards results, towards settled objectives achievement, are taken into consideration mainly the financial parameters, while in organizations with a culture typically feminine it is privileged the maintenance of a good organizational climate, of an environment which encourages cooperation.

Still in the sphere of objectives, it can be made a distinction between organizations with a culture characterized by risk avoidance and organizations with a culture characterized by tolerance towards risk. Thus, the first ones have standards, norms, rules, clear, firm procedures for all activities, actions, missions. In organizations with a culture characterized by tolerance towards risk the criteria for appreciation of decisional variants are flexible, dynamic, and circumstantial.

The activity of gathering necessary information for substantiating a decision, is also differentiated among different kinds of organizational cultures. In organizations with a culture characterized by uncertainty avoidance it will be a lot of investment in obtaining the information in order to diminish the degree of uncertainty of decisional situations that appear at the level of that organization. Moreover, in these cultures there are rules, standard procedures which will act like control mechanisms. Also, these organizations appeal more and more to the external consultants, as a measure for uncertainty outsourcing, for its transfer to the level of the consultant, but also for the growth of the lawfulness of a certain decision.

The main decision is also differentiated among the eight (or more correctly the ten) types of culture. Thus in organizations with a culture with long distance towards power it is noticed the centralization of the decision, while in organizations with a culture with short distance towards power is realized a decentralization of the decision, to important decisional processes are co-opted all categories of stakeholders. But this may slow down a lot the decisional processe.

In this line, in organizations with collectivist culture, in adopting the decisions, especially the important ones, with major implications at the organization level, it is searched the consensus (sometimes it is imposed by pressure). In organizations with individualist culture it is specific the confrontation of ideas, and more frequently, it comes to vote, for selecting an alternative.

Another variable that affects the consideration of alternatives solutions is how managers feel about staying with familiar solutions or trying new ones. Many managers, particularly those in Europe, value decisions based on past experiences and tend to emphasize quality. Americans, on the other hand, are more future oriented and look toward new ideas to get them there.

The implementation of an alternative. S. J. Miller and collective (1999) has identified five distinctive models of implementation of a decision: imposing, change, co-operation, culture and progressive one. In an organization with a culture with short distance towards power the implementation of a decision turns into an active process, with many negotiated actions. The co-operation model is more suitable for this type of culture. In organizations with a culture with long distance towards power it is applied the imposing model.

In the same line in the collectivist type organizations the model of decision implementation can be the cultural one (creating and following a common vision, according to the values of the group). In individualist type organizations the ones implicated in taking a decision must be preoccupied by harmonization of interests, most of all divergent, of different categories of stakeholders, by diminishing the tensions among personal, individual objectives and the objectives of the organization.

Within this paragraph the debate was focused on the influences exercised by organizational culture upon organizational decisional processes. Without a doubt, the bond between culture and organizational decisional processes can be approached in a reversed way, that is culture can be modified throughout the decisions made especially by the leader of an organization, but in our opinion the impact is slow, the organizational culture couldn't change from one day to another (this direction will be approached within the next paragraph).

Finally, we will analyze, briefly, the impact of national culture upon decisional processes in organizations from a certain national spirit. More studies have shown that, in a certain measure, the decisional practices vary from one country to another. The national cultural factors can influence the attitude towards risk of the deciders, the centralization/decentralization of the decisional processes, the configuration of group decisions, the speed of adoption of the decisions etc. (see table no. 1).

Country	Distance towards power	Individualism	Masculinity	Uncertainty avoidance	Long term orientation
Romania	90	30	42	90	-
Czech Rep.	57	58	57	74	-
Hungary	46	55	88	82	-
Poland	68	60	64	91	-
Turkey	66	37	45	85	-
Greece	60	35	57	112	-
France	68	71	43	86	-
Germany	35	67	66	65	31
Italy	50	76	70	75	-
Holland	38	80	14	53	44
Denmark	18	74	16	23	-
Norway	31	69	8	50	20
Sweden	31	71	5	29	33
Arabic World	80	38	52	68	-
Argentina	49	46	56	86	-
Brazil	69	38	49	76	-
Mexico	81	30	69	82	-
U.S.A	40	91	62	46	29
China	80	20	66	40	118
India	77	48	56	40	61
Japan	54	46	95	92	80
South Koreea	60	18	39	85	75

Table no. 1 National cultural dimensions

Source: http://geert-hofstede.international-business- center.com/gooderham.shtml

In these conditions, for example in a country like India, where the distance towards power and the aversion to risks are high, the decisions are the tasks almost exclusively of top-management, which will prefer, most of the time, the decisional solutions less risky. On the contrary, in a country like Sweden, characterized by a very

low level of the two factors, managers won't hesitate to assume the risks and to encourage the employees' participation in adopting the decisions, moreover to those that are in their interest. In another plan, a country like Egypt, where there are a few temporal compulsions, managers will assign more time for a decision than their homologues in the North-American space, for example, where the decisional speed is often considered a determinant of organizational performance. In Italy, where the tradition is highly valued, managers prefer already tested decisional solutions. In France and Germany, top-managers adapt the decisional style to the respectively culture. Thus, in France, the autocrat approaches are quite frequent, and risk assumption in decisional processes is made with certain moderation. In the German space, the decisional practices are also a reflection of national culture. These are characterized by: the preoccupation for structure, order; clear delimitation of the responsibilities of each decider; the existence of some norms, clear, precise rules for decisional processes within the organization.

In Japan there is a specific modality of adopting a decision, called ringisei. This, basically an approach of the decision by consensus, radiographyates exactly the " virtues of the Japan leading system – stressing the global perspective and situating the overall interest of the organization above the own interest" (T. Hafsi). Concretely, it is done as follows: an employee finds a resolving solution for a major problem of the organization and tells it to his direct boss; this organizes a meeting in which he presents the problem and the proposed decisional variant; if the members of the organizational subdivision considers that the proposing deserves to be taken into consideration, the boss informs the department manager starting the process of obtaining the consensus within the organization; it is obtained first the consensus of the people in the department directly and indirectly implicated in solving the approached problem, then demarches the action of getting the consensus at the level of the whole organization; for this, the department manager, initiator, organizes a meeting with the representatives of the other implicated departments, where it is presented the decisional variant which is in the stage of proposal and it is done a deep exchange of information upon it (if there are needed more information, there are more meetings); when it is considered that all the necessary information is gathered, a group of specialists from the starting section writes a document in which presents the decisional variant that has been outlined, asking for the approval of all managers at medium and low level implicated; the document is handed to the superior manager of the organization which gives the final, official approval of the decision; it takes place the registration of the decision and proceeding to its implementation.

In addition to affecting different stages of the decision-making process, value systems influence the overall approach of decision makers from various cultures. The relative level of utilitarianism versus moral idealism in any society affects its overall approach to problems. Generally speaking, utilitarianism strongly guides behavior in the Western World. Research has shown that Canadian executives are more influenced by a short-term, cost-benefit approach to decision making than their Hong Kong counterparts. Canadian managers are considerably more utilitarian than leaders from the People's Republic of China, who approach many problems from a standpoint of moral idealism; they consider the problems, alternatives and solutions from a long-term, societal perspective rather than an individual perspective.

Another important variable in companies' overall approach to decision making is that of autocratic versus participative leadership. In other words, who has the

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authority to make what kinds of decisions? A country's orientation – whether is individualistic or collectivist – influences the level at which decisions are made. In many countries with hierarchical cultures – Germany, Turkey and India among others – authorization for actions has to be passed upwards through echelons of management before final decision can be made. Most employees in these countries simply expect the autocrat – the boss – to do most of the decision making and will not be comfortable otherwise. Even in China, which is a highly collectivist society, employees expect autocratic leadership because their value system presuppose the superior to be automatically the most wise. In comparisons, decision-making authority in Sweden is much decentralized.

Arab managers have long traditions of consultative decision making, supported by the Qur'an and the sayings of Muhammad. However, such consultation occurs more on a person to person basis than during group meetings and thus diffuses potential opposition. Although business in the Middle East tend to be transacted in a highly personalized manner, the final decisions are made by the top leaders, who feel that they must they must impose their will for the company to be successful. In comparisons, in cultures that emphasize collective harmony, such as Japan, participatory or group decision-making predominates, and consensus is important. The best-known example is the bottom-up (rather than top-down) decision-making process used in most Japanese companies.

Conclusions

In present conditions, marked by the effects of globalization, top-managers are, more often, in the situation to collaborate with subordinates from other cultures. In these situations, they must know the possibility of appearing of some differences among subordinates during the decisional processes in which they are implicated, differences inducted by cultural factors. The leader/manager, must build in this case, a common space, accepting and integrating elements of cultural diversity in the philosophy and the practice of adopting a decision from the organization's perspective.

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THE ECONOMICAL AND SOCIAL VIABILITY OF TOURISM IN ROMANIA

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Abstract: The transition of national economies towards macroeconomic structures, in which services dominate, constitutes one of the most important structural mutations in global economy. Global economy has begun several decades ago, but has accentuated in the last two. We encounter this process in every country but mostly in well developed ones. Services constitute the infrastructure of a national economy, whether it is well developed or in course of development. This sector is indispensable to the well functioning of an economy.

Key words: developing countries, distribution, economic viability, touroperators

Tourism acts like a dynamic element of the global economic system because it requires certain goods and services that engage a growth in their production. Like all other markets in economy, the tourist one is in continuous transformation.

On one hand, tourism represents today one of the most expansive industries in European economy because of the national and international character of tourist activities, and on the other hand because it represents the subject of many economic politics of EU. As a general tendency, it records a dynamic with a rhythm superior to the global economic growth, even in case of international, political and economic events that may affect in a negative way tourist activities. This proves a slight independence of tourism when it comes to economic and social events. Despite the absence of legal basis, the economic importance of tourism has determined the European institutions to focus upon this sector.

Despite all these, Romania and other developing countries, in comparison to those well developed, often find them in disadvantage because of the problems they have with the systems of global distribution but mainly because of lack of technology.

The bases of a developed tourism are already implemented as a sequel to the liberation of the sector of tourism and also to the continuous liberation of other sectors of services. The economic and social viability of tourism, in countries in course of development in general and especially in Romania, depends on the viability of the perspectives of growth of this sector and on its capacity of retaining more added value, also on its capacity of breaking down barriers in tourism and to reduce losses.

The economical and social viability of tourism in developing countries depends on the stability and durability of the growth perspectives of this sector, of its capacity to retain more added value, to eliminate the boundaries in tourism and to reduce the

losses. The bases of a developed tourism are already implemented in most of developing countries as a consequence of the liberalization of the touristic sector and of the progressive liberalization of other sector of services. But developing countries are, often, in disadvantage, in comparison to the already developed ones, due to the problems of access to the global distribution systems, due to the cost associated to the access to these services, of some anticompetitive practices, but, especially, because of the lack of technology.

The social-economical importance of tourism is determined by the fallowing elements:

- a. tourism stimulates the economic global system, involving through its developing important production efficiency. The tourist travel implicates a consummation of goods and specific services, which determines the production stimulation of the branches that tourism interacts with.
- b. tourism contributes to the realization of the added value in a superior proportion to the branches close from the point of view of the developing level;
- c. tourism has the role of a means of diversification of the economical structure of the countries, because, the necessity of adaptation to tourists demands helps the apparition of specific branches: the industry of pleasure, the travel agencies etc. and gives new dimensions to the already existent branches: agriculture, alimentary industry, constructions, transportations etc.
- d. tourism allows the attenuation of inter- regional disequilibrium, by the mutation it produces in the territorial field, representing, this way, a solution to the prosperity of the less fortunate arias, of the unindustrialized localities.
- e. tourism allows a superior valorization of resources, especially the natural ones and the small ones. Many elements such as: the beauty of the landscape, the thermal and mineral waters, the art monuments, the historical vestiges find the best valorization, sometimes even the only valorization, through tourism.
- f. tourism contributes to the assurance of an equilibrated circulation of money. Internal tourism, through the expenses made by tourists, gives back into circulation part of the incomes obtained by them; international tourism, through the cashing in foreign currency, contributes to the attenuation of the deficit of the payment balance, to the consolidation of the national money and of the free convertibility.⁵¹
- g. tourism contributes to the equilibration of commercial and payment balance. International tourism represents an important source of devices or of economy of devices, as a mean of valorization in more advantaging conditions in comparison to the classical forms of exports, of internal resources spent for the production of merchandise destined to the international market.
- h. tourism generates new jobs, attracting the working force surplus from other sectors and so giving its contribution implicitly to the diminution of unemployment. Tourism influences in a positive way the use of working force in its supplying branches, such as: agriculture, alimentary industry, constructions, etc. the studies show that a job coming directly from the tourism field can create from 1 to 3 direct or induced jobs.
- i. tourism contributes to the diversification of exports, because the goods and services the tourists consume in the period of their travel from one country to

⁵¹ R. Gruescu (2002), International Tourism, Publishing House Sitech, Craiova, 2002

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another can be assimilated, for the visited country with an export. Some of the products and services found at the disposition of tourists have the specific nature and, in classical conditions, whether they can be exported, whether they can be exported through great efforts and risks (because of its perishable state, of the uncompetitive prices, the long distance to the consummation markets), so the international tourism represents the only way of valorize them, as an export form.

- j. tourism represents an important means of spending the spare time, this being the main destination of spare time, for the week-ends and also for the holidays and resting vacations.
- k. tourism acts in the direction of the intensification and diversification of the connections between nations⁵², the international circulation representing an efficient way of contact, with the realities and people of other countries, more and more important as the number of those who participate at this activity increases.

In comparison with other sectors of services, the touristic sector is remarkably lacking *the professional practices*. The Secretariat's reports about the commerce problems with touristic services show that many of the stipulations that affect tourism, such as the capital limitations from the sphere of direct foreign investments, have the tendency to be above the products of general economical, political and social interest, and, so, applicable to a great number of sectors. The touristic industry is in fact an important part of the rapid world growth of direct foreign investments. As far as the commercial presence of hotel services are concerned, still, it should be taken into consideration the fact that practices such as the imposing of high tariffs on the hotel equipment can be some important boundaries for the attraction of direct foreign investments.

In some cases, *the restrictions* can be imposed as much on the importer as on the exporter of services. Such measures include especially the prevention of immigrations and the assurance of security, along with the requested documentation, like any other way of restriction on the monetary exchanges that could be applicable to individual tourists and to the business tourism. The specific stipulations applicable to the touristy sector could have as objectives the protection of the consumer, assuring the developing of the local economy and of the internal touristy industry. The lack of transparency of the stipulations could also act as general boundaries in the international commerce with touristy services.

The development of international tourism is based upon the effective commercialization of tourist products to the countries providing tourism. Most of the countries that provide tourism are developed countries that have access to technology and constantly use the computerized systems of reservation and the Internet. The world networks of information and distribution – **CRS**- Systems of computerized reservation, **GDS**- systems of global distribution and the internet play a decisive role in the sector of international tourism, because they connect the producers to the consumers of touristic products. This systems represent the vertebral spine of the international networks of information, that offer the touristic operators, tour-operators, travel agencies, air lines, facilities in order to obtain and process information, to book and commercialize tourist products.

⁵² R. Minciu, The economy of tourism, Publishing House Uranus, Bucharest, 2000, p. 36.

If, initially, the CRS were developed (1970) by the great air companies for the processing of flight reservations, afterwards they evolved and developed themselves to offer a plus of services connected to the transportation by air: the stocking of information in a world wide bases, the emission of tickets, marketing- by informing the passengers on the cost of the travels, the discount and the specific conditions, or the sell of products and services. Nowadays they cover, beside the services offered by the air lines also the land ones, offered to tourists such as: travel packages (transportation, accommodation, meals, visits and shows) or rental of vehicles. Thanks to the enlargement of the range of services, they become known as systems of strategic alliances and of other forms of cooperation these systems interfere on the most important markets and allow the minimization of costs, reducing the need for the presence of the direct commerce.

But Romania are, often, in disadvantage, in comparison to the developed ones, because of the problems of access tot the global distribution systems, because of the costs associated to the access to these services, because of some anticompetitive practices, but, most of all, because of the lack of technology. The installation and the maintaining of a system in developing countries causes great problems to the travel agencies from the developing countries because of the deficiencies in the infrastructure needed for such an informative network and because of the lack of professionals that would lead, operate and maintain the system. These facts set the travel agencies in developing countries in disadvantage to their competitors in the developed countries.

The touristic sector of the developing countries is submitted to a negative impact and because of the anticompetitive behavior of the tour- operators and of the dominant tourism agencies in the developed countries that act as much on their own markets as abroad.⁵³

The touristic market of every country providing of tourism is dominated by a small number of national firms, owners of a rather big share of market, which competes tightly one another. The travel agencies on the receiving markets of the in developing countries are almost entirely depending on their connections to dominant tour operators, and the tourism consumers become prisoners in their choices, limited to the touristic packages supplied by the dominant sustainers. This situation is found on Romania's touristic market.

The incomes and the costs of the touristic packages in Romania depend most of all on the nature and the terms of their contracts with the tour operators in the countries that provide tourism. The contract between the tour- operator and the tourism outcarriers in Romania involves the reservation on rooms in a future term at a negotiable price and specifies the terms of the dividing of risk in case not all the packages are sold. Normally, the tour- operator has a greater power of negotiation at the time of the projects finalization; this way, if he considers that the offer of the negotiation partner is not attractive enough, he can chose another hotel, from the same aria or from another region of the same country. So, we are witnessing the operator's use of the monopolylike power on the performers of local tourism.

Another important aspect, through which we can state that Romania is in disadvantage inside the international tourism, is represented by the international competition between hotels. In most of the destinations in developing countries there

⁵³ Francois Souty (2004) Passport to progress: challenges for world tourism and global anticompetitive practices in the tourism industry

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were major investments made in the receiving and accommodation sector, using national resources and attracting foreign investors. The ability of sustaining this sector in the touristic destinations in developing countries depend on the occupation rate and on the income level, which are strongly influenced by the results of the commercial transactions between the hotel operators and the operators of the providing countries. The accommodation sector is the most affected by the dominant power of the megaoperators, whose special demands in terms of the quality standards are not sufficiently compensated from the financial point of view.

The tourism supporters in Romania- hotels, internal operators and the transport companies take part to the international tourism especially through the transactions with the tour- operators and the travel agencies in the developed countries. For them the touristic package represents an attractive option, with many advantages: they assure the tourists flux, reduces the international marketing costs of destination and enlarges the volume of the travelers flux, which will probably lead to the growth of the investments made by the foreign construction companies, by the major tour- operators and by the air lines, that intend to make the touristic product more attractive to the consumers.⁵⁴

In conclusion, in order to be able to participate in advantageous conditions to the international tourism, Romania must adopt a *series of measures*: adequately cover the commitments from all the touristic activities, to improve the negotiation modalities of transactions, to prevent the monopolizing behavior and the anti- competitive practices promoted by the dominant suppliers on the main markets, to assure the efficient access and the use of information on discriminatory bases, to implement a more adequate environment for the sustenance of the development of tourism and to make efforts to protect the environment, of tourism and of the cultural inheritance.

An UNCTAD representative observed that the strategies for the enforcement of the competitive aspect of the touristic sector in Romania involves also: the modernization of the legislative environment, the enforcement of the institutional capacity (for instance the coordination and planning mechanisms); the application of international standards and the enforcement of the concurrence's stipulations. A representative of Switzerland tourism stated that tourism involves in a too low degree scale economies because of the fact that different economical sectors- most of which having only a partial connection to tourism- must closely cooperate in fields such as the distribution and advertisement systems. So, it is important for the touristic national politics to focus on the vertical nature of the sector that deals with marketing and development politics.

An important problem of the Romanian tourism deals with the inadequate infrastructure to the sustenance of the tourism activities for the internal tourism and also for the international one. This clearly includes airport facilities, port facilities, road and telecommunication system, also water supplies, electric energy, and accommodation facilities. As far as the present touristic facilities are concerned, we must take notice of legal aspects of manipulation and alimentation, and also of the local transportation. Romania also deals with significant cost and technical boundaries to the access to GDSL the small air companies and the tour- operators consider that the reservation taxes of the individual CRS are extremely high and the systems are often insufficiently developed in developing countries. The creation of associations could offer the scale

⁵⁴ G. Stanciulescu N. Lupu, G. Tigu (2002) The management of tourism operations, Publishing House ALL BECK, Bucharest

economies necessary for the CRS. At the same time, GDS could be developed nationally. The standardization of the electronic systems could lead to the reduction of costs.

In conformity to UNCTAD, the touristic exports of in developing countries are stopped by the lone distances between most of the developing countries and the main centers that provide tourist and by the big air tariffs caused by the reduced density of the air traffic. The World Tourism Council (WTTC) states that the protection politics of aviation limit the development of tourism. In conformity to an WTTC official, the aviated protection distance the clients from the entire line of travels and tourism-hotels, touristic resort, cars rentals, systems of computerized reservations, pleasure, cultural attractions and the rest of the touristic industry¹. A recent WTTC report strongly supports the liberalization of aviation, noticing the fact that, in most countries, the actual hotel and other touristic activities incomes are greater than those of the national airlines and that the diminution of winning from the foreign currency differences is more reduced. The losses from the importation for the small national airlines in developing countries are generally of 65- 70 % from the total of the operative costs.

An OMT study, entitled "Aviation and tourism politics", shows that some countries spend more money protecting their internal professions than producing at the level of the whole touristic industry.

WTTC stated that many bilateral accords encourage the inefficiency in the air transportation through the restriction of the market access, the prices and capacities control and the protection of the transport firms with main public capital generating of losses. WTTC considers that the airline services consider the crucial factor in the development of tourism and the type of property of the airlines. The recent privatization initiatives have reduced the attempt of the developing countries to protect their national airlines. The possible problems include the risk that a single company would be dominant.

Still, the concept of "open sky" has been taken into consideration, but the members of the countries in developing and of some developed countries saw that as a threat of their next participation to the international air transport. Still, it was adopted the decision that every state should chose its own changing strategy, using bilateral, regional and multilateral systems. There were discussed different options for the air liberalization step by step of developing countries, including the liberalization of the charter flying as a first stage.

In conformity to the OMT *durable tourism* is generally defined as the meeting point of the present tourists needs with those of the host regions, at the same time with the protection and the growth of the future opportunities. "Durable development" can be defined as the improvement supported of the eco- tourism, defined as a responsible journey to the natural zones that preserve the environment and help the rising of the well fare of the local population.² Although the mass tourism had been often blamed because it undermines the economical- social bases of the local traditional life, the positive effects of tourism can include in fact the rebirth of the local art and artisan products.

Strong motivations for the protection of the environment exist as much at the industrial level as at the clients' level. In 1995 WTTC, OMT and the World Council

¹ OMT (1995), Seminary about the GATS implications on Tourism, 1995, p. 36

² Wolfgang Hein (1997), The Tourism and the Durable Development

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lanced a plan of common environment called Agendum 21 for the Tourism Industry: "To a Durable Development". The plan contains problems such as: the use of dross, the energy and non recyclable resources preservation, waters protection, the involvement of the local community in the acknowledgement of the consumers and the education and preparation of the staff. Also, are included the mechanisms for the development of the consultative accords between the government, industry, local communities and the environment interests. An initiative example at the governmental level is represented by the European Union's communication network regarding the environment.⁷

The liberalization of commerce in the touristic sector, including the growth movement of the aboriginal population led also to the growth of the demand for the development of *the international standards*. OMT works at the development of other quality standards, starting with those that will be applied to touristic destinations and the International Standard Organization (ISO) created a work group for the examination of the terminological standards at the hotel accommodation.

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⁷ O. Snak, P. Baron, N. Neacsu, (2001) Tourism Economy, Publishing House Expert, Bucharest

Nominal convergence in Romania

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Abstract: The recent EU enlargement process brings in attention the next obvious step, entering European Monetary Union. For the two new EU members, as well as for the ten entered in 2004, adopting the euro as national currency seems to be a priority objective, although it is not a choice, but a must. The enlargement is an opportunity to evaluate the Maastricht criteria for adopting the single currency. This paper evaluates the degree of accomplishing of the nominal convergence criteria by Romania. Even if the euro adoption is still far away from our country, we must concentrate in the next few years mainly in the catching-up process. The study shows that even we can fulfill the Maastricht Criteria, we should wait before euro adoption until we will reach the real convergence, for avoiding the asymmetric shocks.

Key words: European Monetary Union; ERM II; Euro; Maastricht Criteria; real convergence

1. Introduction

The accession to the euro area will represent a second step of great importance for Romania, after the accession in the EU at 1st of January 2007. The period 2007-2012 of preparation for the euro adoption represents a great opportunity to continue the reforms and reduce economic disparities, maintaining in the same time the macroeconomic equilibrium. If the accession to the euro area is itself a strategic objective of great importance, the schedule for euro adoption represents a timing optimization problem in which the speed should be dictated by a costs-benefits analyze with the following restrictions:

- a. the fulfillment on sustainable bases of the Maastricht criteria;
- b. the accomplishment of a satisfactory level of real convergence;
- c. reducing the participation in ERM II at the compulsory period of two years.

Starting from these ideas, this paper analyses the conditions to be accomplished as well as the main options of economic policy in order to fulfill nominal convergence criteria and the degree of achieving of this nominal convergence criteria by our country.

Romania differentiate from the majority of the new members candidates at euro adoption through the fact that it does not have problems concerning the budgetary deficit and the total public debt, namely the fields where other countries must make the most radical adjustments; instead, the inflation and interest rate levels still represent a reason of worry for our country. This asymmetry will probably impose a different strategy in the period of participation in ERM II.

2. Budgetary deficit

Romania's performance concerning the budgetary deficit is satisfactory, as the 2006 deficit, calculated in accordance with the ESA95 methodology, harmonize comfortably with the Maastricht criterion, of 3 percent, superior performance comparing with other countries members of the EU since 2004.

					,
Countries/Years	2003	2004	2005	2006	2007
					(estimation)
Bulgaria	0.3	1.9	3.1	3.7	2.0
Czech Republic	-6.6	-2.9	-2.6	-3.8	-4.6
Poland	-4.7	-3.9	-2.5	-1.7	-3.6
Romania	-1.7	-1.3	-0.4	-1.8	-2.8
Hungary	-6.4	-5.4	-6.1	-9.8	-6.8
EU-15/EU-27	-3.0	-2.6	-2.3	-2.3	-2.2

Table no. 1: Budgetary Deficit (-) / Surplus (+) (% of GDP)

Source: EUROSTAT, National Banks

3.Public debt

Romania's performance concerning public debt is also very good; the actual level of below 20% of GDP is much lower than the threshold of 60% of GDP set by the Maastricht Treaty. At the end of 2005, the government debt, calculated in accordance with the ESA95 methodology, represented 15.9% of GDP, out of which the domestic debt was 3.2% and the foreign debt was 12.7%. At the end of 2006 this indicator reached the level of 12.8% of GDP.

Countries/Years	2003	2004	2005	2006	2007
					(estimation)
Bulgaria	46.1	38.6	29.9	26.7	28.2
Czech Republic	30.0	30.6	30.5	31.5	33.2
Poland	43.9	41.9	42.5	45.5	46.8
Romania	20.7	18.0	15.2	12.8	18.2
Hungary	56.7	57.1	58.4	59.9	62.2
EU-15/EU-27	62.0	62.4	63.4	63.2	63.0

Table no.2: Public Debt (% to GDP)

Source: EUROSTAT, National Banks

Although the fiscal position of our country – if we analyze the two indicators – is comfortable now, there are elements that must be taken into consideration in order to maintain this evolution in the future. The quasi-fiscal deficits and high public expenditures which must be budgeted in the future oblige to maintain the present public deficit in more close limits than the ones set by the Maastricht Treaty.

4. Inflation rate

There are also criteria where Romania's position is not that comfortable. The most important of them is the one concerning the annual inflation rate, which was of 6.56 percent in 2006.

The causes of this situation could be found in the late ending of the prices' liberalization process, as well as in adopting a gradually reducing inflation strategy, together with the attached costs and benefits. In Romania, the last "wave" of prices and exchange rate liberalization took place in 1997, while in other countries more advanced in transition, this process took place in 1992-1994. Also, the strategy of reducing the inflation gradually, with nearly a quart from the previous year's value, initiated in 1999, was preferred to a radical solution (of the currency board's type) from the following reasons: the importance still big that Romania's external creditors continued to give to the current account deficit; the necessity of alignment to the European prices, tariffs and incomes starting from lower levels than the other countries in transition: the concern that through a fast reducing of inflation, due to adverse selection and moral hazard phenomena, the developed part of the economy should suffer more than the undeveloped one. Of course, the choice of this strategy also involved costs, especially regarding the foreign investors' under-trust in an insufficiently stabilized macroeconomic environment.

At the end of 2006, the year on year inflation rate declined to a historical minimum level of 4.87 percent, with a more obvious deceleration in April, due to a base effect, and also in July and September, when quarterly changes in CORE 1 inflation highlighted a clear slowdown in the pace of price increases. The more intense disinflation process was the result of an appropriate monetary and fiscal policy mix, improved market expectations regarding the sustainability of the disinflation process and increased competition in the retail sector.



Figure no.1: Inflation Rate (CPI) 2000-2009

For 2007, the inflation target was set at 4% dec.-on-dec. with a tolerance band of one percent point in either direction; for 2008, the central target will become 3.8% dec.-on-dec., with the same margin of tolerance, and, over the medium term, the inflation targets will be set in accordance with the path necessary for maintaining the disinflation process in accordance with the convergence criteria.

5. Long term interest rate

Closely tied to the inflation criterion is also the long term interest rate criterion. The interest rate at the last governmental bonds issue on 10 year term, realized in august 2007, was of 6.73 percent. Of course, as the disinflation process will strengthen, and the economic agents will be convinced of its sustainability, this criterion will have chances to be fulfilled.

6. Exchange rate stability

The fifth nominal convergence criterion, regarding the exchange rate stability, depends on the fulfillment of the inflation rate criterion. Since inflation was brought to a one finger value, exchange rate began to show a degree of stability compatible with the fulfillment of this criterion. In the period 2005-2006, the maximum daily appreciation/devaluation compared with the last two years average of the RON/EUR exchange rate was of $\pm 10.0\%$ /-6.1%, values within the band of fluctuation set by ERM II.



Figure no.2: Exchange Rate (daily data)

It must be specified that the relationship between the inflation rate and the exchange rate is biunivocal, in the sense that they mutually intensify. To put it differently, the much stable exchange rate is not only the result of a lower inflation, but a lower nominal depreciation (or – meaning the same thing –a higher real appreciation) may lead to a decrease in inflation rate. Therefore, a very important conclusion is that a real appreciation of the exchange rate intensifies the disinflation process. However, this real appreciation cannot be arbitrarily imposed, without observing the "gold rule" according to which the increase in labor productivity (seen as a stimulatory factor of external competitiveness) must be every year higher or at least equal with the sum between the real appreciation of the national currency and the real increase of the average wage (seen as inhibitor factors of external competitiveness).

7. Conclusions

The level of achievement of nominal convergence criteria for Romanian economy is summed up in the following table:

Nominal convergence indicators	Magatriaht aritaria	Romania		
Nominal convergence indicators	Maastricht Chteria	2006	2007	
Inflation rate (percent, annual average)	<1.5 % above the average of the 3 most performers members of the EU (2.8 percent)	6.56	4.0 (estimation)	
Long term interest rate (percent per year)	<2 % above the average of the 3 most performers members of the EU (6.2 percent)	-	6.73	
RON/EUR exchange rate (maximum daily appreciation/devaluation compared with the last two years average)	±15 percent	+10/-6.1	+10.1/-6.7	
The budgetary deficit (percent of GDP)	Below 3 percent	1.9	3.2 (2.8 according to the IMF)	
The public debt (percent of GDP)	Below 60 percent	12.4	12.6	

Table no. 3: Achievement of Nor	minal Converg	gence Criteria b	y Romania
(2	2006-2007)		

The transition to the euro area mustn't be needlessly accelerated, and the adoption of the single European currency must not be treated as a simple goal. Besides reaching the nominal convergence objectives, all economic policies must have as objective the achievement as soon as possible of the real convergence. Romania must not hurry its accession to the euro area, as our country has to cover important gaps. The accession in the ERM II mechanism is foreseen for 2012, so that the accession to the euro area may occur in 2014 - admitting that during the whole period the catching-up process is taking place.

The fixation of the year 2012 as target-date for the accession in the ERM II mechanism must be understood and treated as an extra opportunity for the real convergence of the economy and not as a *time-out* that would allow untimely relaxation of the macroeconomic policies followed by the authorities.

The period between the accession to the EU and the accession in the ERM II must be wisely used for deep economic reorganization and for realizing some investment programs capable of reducing, in the shortest time, the gap which separates us from the present standards of the European Union.

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FOREIGN DIRECT INVESTMENT AND ECONOMIC GROWTH

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Abstract: How does foreign direct investment triggered by foreign economic growth affect domestic economic activity? Estimates produced using foreign GDP growth rates for changes in foreign activity indicate that 10% greater foreign capital investment is associated with 2.2% greater domestic investment, and that 10% greater foreign employee compensation is associated with 4.0% greater domestic employee compensation. Changes in foreign and domestic sales, assets, and numbers of employees are likewise positively associated.

Key words: foreign direct investment, economic growth, multinational firms

There is considerable debate over the likely domestic effects of rapid foreign economic growth.1 While this issue is typically framed in the context of the effects of free trade, the globalization of production raises the issue of how multinational firms respond to changing patterns of economic growth, especially as production gravitates to large, growing markets. In particular, flows of foreign direct investment (FDI) to rapidly growing foreign markets generate fears that such investment displaces domestic employment, capital investment, and tax revenue. An alternative perspective suggests that growing foreign investment may instead increase levels of domestic activity by improving the profitability and competitiveness of domestic operations as firms expand globally. Very little empirical evidence is currently available with which to distinguish these views.

The fact that foreign and domestic operations are jointly determined makes this evidence difficult to interpret. Investment and desired output are functions of many variables that influence firm profitability, some of which are inevitably omitted from any empirical analysis, and these omissions may themselves induce positive or negative correlations between foreign and domestic activities. For example, the discovery of a new drug by a pharmaceutical company may be manifest in coincident positive growth of activity both abroad and at home. Alternatively, shifting consumer sentiments might make a consumer products company's wares appear less attractive at home and more attractive abroad, with resulting effects on sales and investment in the two locations.

Since the locations of foreign investments differ significantly between firms, it is possible to construct firm-specific weighted averages of foreign GDP growth. These firm-specific foreign economic growth rates can be used to generate predicted growth rates of foreign activity that are then employed to explain changes in domestic activity. This empirical procedure effectively compares two firms, one whose foreign investments in 1982 were, for example, concentrated in Britain, and another whose foreign investments were concentrated in France. As the British economy subsequently grew more rapidly than the French economy, the firm with British operations should exhibit more rapid growth of foreign investment than would the firm with French operations. If the domestic activities of the firm with British operations grow at different rates than the domestic activities of the firm with French operations, it may then be appropriate to interpret the difference as reflecting the impact of changes in foreign operations.

Weighted foreign economic growth rates are strong predictors of subsequent foreign investment by firms. Foreign growth rates predict increases in foreign investment by firms with foreign operations that are focused on serving host country markets and by firms with foreign operations that are export oriented. This finding suggests that using foreign economic growth rates as an instrument is relevant not only for studying foreign investment focused on serving host country markets but also for studying foreign investment more generally.

Second stage equations based on predictions that use foreign economic growth rates to instrument for changes in foreign activity imply that 10 percent greater foreign capital investment triggers 2.2 percent of additional domestic capital investment, and that 10 percent greater foreign employee compensation is associated with 4.0 percent greater domestic employee compensation. There are similar positive relationships between foreign and domestic changes in sales, assets, and numbers of employees.

The positive association between changes in foreign and domestic activities persists in supplemental specifications designed to address alternative interpretations of the main results. The use of weighted foreign economic growth rates as instruments for changes in foreign investment has the potential to produce misleading results if the foreign investments of firms planning rapid expansion of domestic investment are disproportionately attracted to economies expected to grow rapidly. To address this possibility, the residuals from regressing foreign GDP growth against lagged GDP growth can be used instead of actual GDP growth in explaining foreign investment; this substitution produces very similar results. Another possibility is that industry-specific shocks might be responsible for the correlation of foreign and domestic investment growth rates; reassuringly, the inclusion of industry-period constants again changes the results very little. If firms export to, and invest in, the same countries, foreign economic growth rates might stimulate domestic economic activity directly. This can be controlled for by including an additional variable equal to export-weighted foreign economic growth, which again does not alter the results. Finally, there are circumstances in which real exchange rate movements that are correlated with economic growth rates might independently influence both foreign and domestic activity, but replicating the analysis with controls for firm-specific changes in foreign exchange rates yields similar answers.

There are several channels through which foreign activities can influence the scope of domestic operations, including cases in which foreign production requires inputs of tangible or intellectual property produced in the home country. The same instrumental variables method used to identify the effect of foreign investment on domestic investment can also be used to identify the effect of foreign investment on other types of domestic activity. The estimates indicate that greater foreign activity is associated with higher exports from U.S. Parent companies to their foreign affiliates and is also associated with greater domestic R&D spending.

The nature of the instrumental variables procedure makes it possible to analyze only firms with prior foreign investments, since the geographic distribution of these investments, interacted with GDP growth rates, predicts changes in foreign operations.

Hence this procedure does not measure the impact on domestic activities of establishing foreign operations for the first time. Furthermore, the analysis is inherently partial equilibrium in nature, comparing changes in one firm against changes in another at the same time. Aggregate foreign economic growth is likely to influence factor prices and output prices in a way that might indirectly affect levels of domestic economic activities, which the cross-sectional evidence cannot incorporate. The empirical work in this paper considers reactions by individual firms to changes in their own foreign operations, providing an important part, though not all, of the evidence necessary to evaluate the impact of growth-driven FDI on total U.S. domestic economic activity.

Foreign Economic Growth and the Operations of Multinationals Firms

The effect of foreign economic growth on the foreign and domestic operations of multinational firms turns on production and cost considerations that might take any of a number of forms. One possibility is that a multinational firm's total worldwide production level is approximately fixed, being determined by resource limits, capacity constraints, or market competition. Given that foreign and domestic factors of production are conditional substitutes, any additional foreign production then necessarily reduces domestic production, hence foreign and domestic investment levels will be negatively correlated. Alternatively, the level of total production might not be fixed, but it instead may be responsive to profit opportunities that are influenced by economic growth rates. In such a framework it is possible that growth-driven FDI raises the return to domestic production, stimulating domestic factor demand and domestic output. Firms might, for example, find that foreign operations provide valuable intermediate inputs at low cost, or that foreign affiliates serve as ready buyers of tangible and intangible property produced in the United States.

In order to consider the role of foreign economic growth, economic growth rates in foreign countries are used as instruments for changes in levels of foreign investment. Rapid economic growth is associated with high investment levels by local firms, presumably reflecting that marginal q, the ratio of the market value of capital to its replacement cost, is unusually high.

U.S. multinational firms with local operations are subject to many of the same market influences as are local firms, and therefore these firms are likely to expand their own investments when aggregate q is high.

This empirical strategy takes a firm's initial distribution of activity among foreign countries to be exogenous from the standpoint of subsequent changes in domestic business activity. Foreign economies grow at different rates, and with them grow levels of economic activity by U.S.-owned affiliates. The first stages of the regressions use the fact that firms differ in their initial distributions of foreign economic activity to predict different growth rates of subsequent activity, based on differences in the average GDP growth rates of the countries in which their activities were initially concentrated. These predicted growth rates then become the independent variables in second stage equations used to explain changes in domestic business operations.

In order to serve as a valid instrument it is necessary that the average GDP growth rate of foreign countries in which a firm invests affects its domestic operations only by influencing the level and character of its foreign operations. This restriction cannot be directly tested, but reasonable specifications of production processes within multinational firms imply that by far the most likely channel by which foreign economic prosperity affects firms with local operations is by affecting local operations.

Three scenarios in which the instrument would be invalid are worth noting; these are considered in the empirical tests below. First, parent firms that are trying to grow quickly may invest in countries that are expected to grow quickly in the future. This scenario implies that only the unanticipated component of foreign economic growth would be a valid instrument. Second, industrial activity might be concentrated in certain countries, and domestic and foreign operations might experience common shocks. For example, if most of the foreign operations of electronic component manufacturing parents were located in Taiwan, a productivity shock to the industry could be associated with high growth in Taiwan while the productivity shock also has a direct effect on the growth of parent firms in the industry. The resulting possible misattribution of cause and effect can be largely prevented by including fixed effects that are specific to individual industries and time periods. Third, firms might export to the same foreign countries in which they invest, in which case foreign economic growth might stimulate exports and thereby domestic operations directly. This consideration suggests that it is useful to control for export-driven changes in domestic activity by including an independent variable equal to export-weighted foreign economic growth.

It is also possible that foreign investment by U.S. firms affects local GDP growth rates, making foreign GDP growth rates inadmissible as instruments in explaining foreign investment.

This effect is, however, likely to be very small in magnitude except for a certain number of small countries, principally tax havens, that draw disproportionate volumes of U.S. investment. Since the empirical work presented in the paper uses average foreign GDP growth rates weighted by investment levels, this consideration is very unlikely to contaminate the estimated results.

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INNOVATIVE TECHNOLOGY IMPLICATIONS ON ENVIRONMENT

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Abstract: Market failures associated with environmental pollution interact with market failures associated with the innovation and diffusion of new technologies. These combined market failures provide a strong rationale for a portfolio of public policies that foster emissions reduction as well as the development and adoption of environmentally beneficial technology. Both theory and empirical evidence suggest that the rate and direction of technological advance is influenced by market and regulatory incentives, and can be cost-effectively harnessed through the use of economic-incentive based policy.

Key words: environment, new technologies, positive knowledge, adoption externalities, cost-effective technologies

1. Introduction

The influence of technological development on energy and environmental systems permeates discussions of energy and environmental policy. New technology has been credited with solving environmental problems by mitigating the effects of pollutants, and has been maligned as a source of increased pollution. For modeling long-term environmental problems such as global climate changes, the effects of technological change compounded over long time horizons will likely be large. Thus, the single largest source of difference among modelers' predictions of the cost of climate policy is often differences in assumptions about the future rate and direction of technological change (Carraro, van der Zwaan, and Gerlagh 2003).

But technological change does not exist in a vacuum. Environmental policy interventions, such as carbon cap and trade systems and carbon taxes, generate incentives that will affect which new technologies will be developed and how rapidly and deeply they will diffuse. The induced effects of environmental policy on technology can therefore have substantial implications for the normative analysis of policy. While researchers dispute the extent to which environmental policy-induced technological change reduces the social cost of environmental compliance, there is little dispute among economists that flexible, incentive-oriented policy approaches are more likely to foster low-cost compliance paths than prescriptive regulatory approaches.

The realization that the process of technological change is itself characterized by market failures complicates policy analysis, and increases the likelihood that a portfolio of policies, rather than policy directed at emissions reduction alone, will offer a more complete response to environmental problems. The seeming intractability of some energy and environmental problems, such as global climate change, combined with considerable uncertainties and the long time frame over which their ultimate

consequences will play out, may make the development and deployment of new technologies attractive as a major policy response. That is, policies whose purpose is generating technological change are likely to be important parts of the policy portfolio for addressing certain environmental problems, in addition to the rules and regulations we normally think of as environmental policies. Technology policy can be a costly approach, however, if it is used as a substitute for, rather than complement, to environmental policy. Environmental policy targeted directly at emissions (for example through an emissions tax or cap-and-trade system) will still typically provide the most important single element of a cost-effective environmental policy strategy.

2. Economic analysis of environmental and technology policies

2.1. Aspects regarding environmental policies

Economic analysis of environmental policy is based on the idea that the potentially harmful consequences of economic activities on the environment constitute an "externality," an economically significant effect of an activity, the consequences of which are borne (at least in part) by a party or parties other than the party that controls the externality-producing activity. A factory that pollutes the air, water, or land imposes a cost on society. The firm that owns the factory has an economic incentive to use only as much labor or steel as it can productively employ, because those inputs are costly to the firm. The cost to society of having some of its labor and steel used up in a given factory is "internalized" by the firm, because it has to pay for those inputs. But the firm does not have an economic incentive to minimize the "external" costs of pollution.

Environmental policies attempt to equalize this imbalance by raising the incentive for a firm to minimize these externalities. Policy choices accomplish this in one of two general ways—either by internalizing the environmental costs so polluters make their own decisions regarding their consumption of environmental inputs, or by imposing a limit on the level of environmental pollution.

The cost of environmental policies could be in the form of decreased output of desired products (for example, a scrubber on an electric power plant reduces its electricity production from a given quantity of fuel), increased use of other variable inputs (for example, eliminating certain gases from the waste stream in a smokestack may require more fuel to be burned), purchase of specialized pollution control equipment (for example, catalytic converters on automobiles), or substitution of inferior or more expensive products or production methods to avoid pollution-causing products or methods (for example, less effective pesticides used when DDT was banned).

In the short run, setting an efficient environmental policy requires a comparison of the marginal cost of reducing pollution with the marginal benefit of a cleaner environment. All else being equal, emissions of pollutants that are very harmful should be greatly restricted, because the pollutants otherwise produce large marginal costs to society. But, all else being equal, emissions of pollutants that are very costly to eliminate should be tolerated, because the marginal cost of reducing them is high.

When technology enters the equation, the terms of the tradeoff between the marginal cost of pollution control and its marginal social benefit is altered. In particular, technology innovations—such as new pollution control equipment, cleaner production methods, or new substitutes for environmentally harmful products—typically reduce the marginal cost of achieving a given unit of pollution reduction. This means that a specified level of environmental cleanup can be achieved at lower total cost to society,

and it also means that a lower total level of pollution can be attained more efficiently than would be expected if the cost of cleanup were higher. Thus, in this simple static picture, technology improvements can be good for the environment and good for the firm that must meet environmental mandates.

2.2. Technology implications on environmental policies

In this simple analytic scenario, the technology innovation results in greater overall social benefit because the cost of reducing pollution has decreased and environmental health has improved. If this were the end of this static story, than the only effect would be to convert the analysis of environmental policy from a static cost/benefit tradeoff to a dynamic one. Policies to reduce pollution have two effects, however—they reduce pollution today, and they also typically change the incentives that firms face with regard to investing resources in developing new technology for the future. In particular, when firms face an incentive to reduce their emissions, this simultaneously creates an incentive for them to find ways to reduce pollution at lower cost. The fact that the development of such technology will, over time, change the pollution benefit/cost calculus means that choosing efficient environmental policy requires an analysis of this dynamic interaction. The simple static model does not take into account the fact that new technology is itself not free.

To reach the point where pollution is being reduced or some other benefit is realized, two things must happen, both of which require the investment of resources. The first step—innovation—involves scientific or engineering research to establish a new technical idea and to develop that idea into a commercial product or process. The second step—adoption (or diffusion)—is the process by which a new product or process gradually replaces older technology throughout many firms and applications. Adoption is also costly, because firms must learn about new technology, purchase new equipment, and adapt it to their particular circumstances. If technological change is not free, can we expect Adam Smith's "invisible hand" to choose the right level of investment in both innovation and diffusion of new technology? The problem compounds, because independent of the externality associated with pollution, innovation and diffusion are both characterized by externalities as well as other market failures.

Knowledge Externalities. In the case of pollution as an externality, the polluter reaps the benefits derived from polluting while imposing the pollution costs on others. The polluter therefore lacks an incentive to reduce those costs. However, in the case of technology, the problem is reversed. A firm that invests in or implements a new technology typically creates benefits for others while incurring all the costs. The firm therefore lacks the incentive to increase those benefits by investing in technology. Pollution creates a negative externality, and so the invisible hand allows too much of it. Technology creates positive externalities, and so the invisible hand produces too little of it.

The positive externality of innovation comes from the public-good nature of new knowledge—innovating firms cannot keep other firms from also benefiting from their new knowledge and therefore cannot capture for themselves all the benefits of the innovation. In addition, the process of competition will typically drive a firm to sell a new device at a price that captures only a portion of its full value, which means that consumers also reap some of the benefits from new technology. While patents and other institutions are employed to protect firms' investments in innovation, such protection is

inherently imperfect. A successful innovator will capture some rewards, but those rewards will always be only a fraction—and sometimes a very small fraction—of the overall benefits to society of the innovation. Hence innovation creates positive externalities in the form of "knowledge spillovers" for other firms, and spillovers of value or consumer surplus for the users of the new technology.

Adoption Externalities. The environmental and knowledge externalities discussed above have long been at the center of economic debates about technology policy. More recently, we have come to understand some additional market failures that may operate in the adoption and diffusion of new technology. For a number of reasons, the cost or value of a new technology to one user may depend on how many other users have adopted the technology. In general, users will be better off the more other people use the same technology. This benefit associated with the overall scale of technology adoption has sometimes been referred to as "dynamic increasing returns."

Dynamic increasing returns can be generated by learning-by-using, learningby-doing, or network externalities. While the image of the world beating a path to the door of the successful innovator may seem compelling, the diffusion of a new technology is typically gradual. It takes time for potential users to learn of the new technology, try it, adapt it to their circumstances, and become convinced of its superiority. An important mechanism in this learning process is the observation of the adoption of the new technology by others. Hence the adopter of a new technology creates a positive externality for others in the form of the generation of information about the existence, characteristics, and success of the new technology. This phenomenon is often called "learning-by-using."

The supply-side counterpart, "learning-by-doing," describes how production costs tend to fall as manufacturers gain production experience. If this learning spills over to benefit other manufacturers without compensation it can represent an additional adoption externality. Finally, network externalities exist if a product becomes technologically more valuable to an individual user as other users adopt a compatible product (as with telephone and computer networks, for example). These phenomena can be critical to understanding the existing technological system, forecasting how that system might evolve, and predicting the potential effect of some policy or event.

Incomplete Information. Both innovation and diffusion of new technology are characterized by additional market failures related to incomplete information. While all investment is characterized by uncertainty, the uncertainty associated with the returns to investment in innovation is often particularly large. Further, information about the prospects for success of given technology research investments is asymmetric, in the sense that the developer of the technology is in a better position to assess its potential than outsiders. A firm attempting to raise investment capital to fund the development of new technology will therefore find such investors skeptical about promised returns, and likely to demand a premium for investment that carries such risks. This likely imperfection in the market for capital for funding technology development exacerbates the "spillover" problem and therefore contributes to our expectation that the invisible hand encourages too little research and development.

In the context of environmental problems such as climate change, the huge uncertainties surrounding the future impacts of climate change, the magnitude of the policy response, and thus the likely returns to R&D investment, would seem to exacerbate this problem further. In the extreme, for example, it is difficult to see how the technological solutions that would be required to address the possibility of

catastrophic effects of climate change would be provided for by the market even if environmental policies sent appropriate signals about expected costs. In this sense, there may be considerable option value to the development of certain environmental technologies that would be difficult to capture solely through emissions policy.

With respect to technology adoption and diffusion, we have already noted that imperfect information can slow the diffusion of new technology. First, information has important "public good" attributes: once created it can be used by many people at little or no additional cost. It may be difficult or impossible for an individual or firm that invests in information creation to prevent others who do not pay for the information from using it. It is well known that such public goods will tend to be underprovided by ordinary market activity. Incomplete information can also foster principal-agent problems, as when a builder or landlord chooses the level of investment in energy efficiency in a building, but the energy bills are paid by a later purchaser or a tenant. If the purchaser has incomplete information about the magnitude of the resulting energy savings, the builder or landlord may not be able to recover the cost of such investments, and hence might not undertake them. These market failures with respect to adoption of new technology are part of the explanation for the apparent "paradox" of underinvestment in energy-saving technologies that appear cost-effective but are not widely utilized (Jaffe and Stavins 1994).

Thus the interplay of technology and the environment involves the interaction of two analytically distinct but linked sets of market failures. The consequences of this interaction can be complex. The fact that markets under-invest in new technology strengthens the case for making sure that environmental policy is designed to foster, rather than inhibit innovation. It may mean that the social cost of environmental policy is less than it would otherwise appear, because part of the cost is in the form of investments in innovation that yield positive externalities outside the environmental arena. Whether this is true or not depends on, among other things, whether the increased investment in environmental innovation brought forth by environmental policy comes at the expense of innovation in other areas. If it does, the net effect on the costs of environmental policy will depend on the relative spillovers of environmental innovation compared to innovation that is displaced. In practice, it may be difficult to sort out all of these effects, and very difficult to do so with quantitative reliability.

Thus, technological change is important for environmental policy, and analysis of energy and environmental policy can benefit from the perspective of the economics of technological change. Our general approach is to view technological change relative to the environment as occurring at the nexus of two distinct and important market failures: pollution represents a negative externality, and new technology generates positive externalities. Hence, in the absence of public policy, new technology for pollution reduction is, from an analytical perspective, doubly underprovided by markets. This suggests that the efficiency of environmental policy depends on its consequences for technological change, and also that there is a potential role for policy aimed directly at the stimulation of environmentally beneficial technological change.

3. Environmental technology policy

Given that the development of environmentally beneficial technology is subject to two interacting market failures, in cases where environmental externalities have not been fully internalized it is likely that the rate of investment in such technology is below the socially optimal level. And it is unlikely that environmental policy alone

creates sufficient incentives. Hence the optimal set of public policies likely also includes instruments designed explicitly to foster innovation and possibly technology diffusion, as distinct from environmental policies that stimulate new technology as a side effect of internalizing environmental externalities.

Of course, one way to foster environmental technology is to foster technology in general, and allow the market to determine what portion of the stimulated development will be in the environment area. The arguments for generally greater public investment in technology infrastructure are well known and have been the subject of numerous studies. We focus instead on the potential for policies aimed explicitly at the development and diffusion of environmentally benign and/or energysaving technology.

There is a strong strain in the economic analysis of technology policy of avoiding choosing particular technical areas for support, that is "picking winners." There are, however, several interrelated reasons why technology policy narrowly focused on energy and environment is likely to be socially desirable under certain circumstances. First is the public good nature of the environment itself, which makes environment, in effect, an area of government procurement like defense and space, and hence a suitable area for focused governmental technology efforts.

Another is a second-best argument related to the practical limitations of environmental policy. Most economists would argue that the most efficient single policy for addressing global climate change is an emissions policy that places a price on greenhouse gases (for example, through an emissions tax or cap-and-trade system). However, in the area of global climate change — arguably the most significant long-run environmental threat — much of the world has largely put off, for the moment, significant environmental policy intervention. Hence there is little environmental policy-induced incentive to develop technologies that reduce greenhouse gas emissions. In this second-best setting, policy to foster greenhouse-gas-reducing technology may be one of the main policy levers available and can be justified on economic grounds so long as it has positive net benefits. Technology policy can be a costly approach, however, if it is used as a substitute for, rather than complement, to environmental policy.

One might reasonably ask, however, why governments who are unwilling to impose costs on the economy to reduce greenhouse gas emissions directly should be more willing to invest resources in improving energy technologies to reduce greenhouse gases? One reason is purely political: policies subsidizing technology do in fact receive considerable political support in most countries. An explanation is that the benefits of such policies tend to be focused and the costs dispersed, giving rise to favorable political-economic conditions.

Another possible explanation may be found in the limitations of feasible environmental policies to address the dynamic nature of the problem. If the social costs of climate change are considered modest at the present but are expected to rise considerably in the future, this may warrant current investment in R&D at the same time as it explains tempered interest in current mitigation. In principle, governments could announce a time path for future environmental policies that might induce the appropriate level of R&D investment in anticipation of future emissions policy. But there are many reasons, both practical and theoretical, why such advance policy commitments are unlikely to be forthcoming, and why they may not represent credible commitments if they were announced. This difficulty of setting appropriate dynamic environmental policies may warrant more reliance on technology policy, to which governments can commit now.

In the context of environmental problems having important international dimensions, such as global climate change, there can be additional reasons related to international cooperation for considering environmental and technology policies simultaneously. The nature of global environmental problems, technological diffusion, and international trade can provide arguments for issues linkage where more countries may participate and comply with international agreements on environmental policy and technology policy if they are linked than if they are treated separately (Kemfert 2004).

4. Policies stimulating innovation

Policies that internalize the cost of environmental harm stimulate the creation of environment-friendly technology by increasing the demand for low-cost pollutionreduction methods. Thus, so-called "demand-pull" increases the return to developing such technologies. The spillover problem implies that firms can expect to capture only a portion of that return, but a portion of a large return is still more of an incentive than a portion of a small return. Government can also stimulate innovation through the supply side, either by making it less expensive for firms to undertake research in this area, or by performing the research in public institutions. Where research produces potentially large social benefits, but is so prone to the spillover problem that firms will not view it as profitable, there is an analytical basis for performing that research in the public sector or through direct private research contracts.

So long as firms see some potential for private return, public policy can counter-balance the spillover problem by subsidizing research in the private sector rather than performing it in the public sector. The advantage of this approach is that private firms may have better information than the government about the likely commercial feasibility of technologies, and hence be more successful at choosing which technologies to pursue. Subsidies can take the form of fairly general tax credits, or matching funds provided to firms for specific research proposals. In areas where the public research institutions have specific expertise, joint industry-government research can be undertaken via vehicles such as Cooperative Research and Development Agreements. Finally, because the supply of appropriately trained scientists and engineers is relatively inelastic in the short run, there is a danger that any increased expenditure on research in a given area will be at least partly consumed by an increase in wages (Goolsbee 1998), rather than going to more research effort. This tendency can be offset if subsidies to or expenditures on research are complemented by subsidies for education and training in the appropriate areas.

It is generally the case with science and technology programs that systematic assessment efforts are woefully lacking. Because success is uncertain and difficult to measure, most agencies engaged in support of research and technology adoption have resisted efforts to measure their output against quantitative benchmarks. Granted, such evaluation is very difficult, and there is a real danger that imperfect assessment methods will distort policy by encouraging efforts that "look good" on evaluation, even if such efforts are not ideally suited to the program's mission. But continuous, systematic, quantitative assessment is the only way that the relative effectiveness of alternative policy approaches can be compared over time. In particular, collecting information in a standardized way as projects are begun, implemented, and terminated is the only way to amass the data necessary for a rigorous retrospective analysis.

Retrospective assessment must of course account for the considerable uncertainties that exist when projects are undertaken, so that projects that turn out to have low value ex post may still have been good investments given ex ante possibilities. Consideration of such uncertainties may be particularly problematic for problems such as climate mitigation, where timeframes are especially long, and considerable uncertainties exist with respect to environmental benefits and with respect to baseline energy market conditions (for example, natural gas prices). Such considerations underscore the need to go beyond simplistic ex post rate-of-return analyses that ignore ex ante information sets, changing conditions, and option value. It also reinforces the value of taking a portfolio approach to R&D investments, whereby investments are made in a set of projects that are likely to pay off under differing future conditions. More important than the question of the overall rate of return is what distinguishes the successful programs from the failures. While the small numbers and inherent randomness makes it difficult to draw strong conclusions, it seems that the successful programs are ones in which significant participation by industry—in the form of many firms or consortia rather than individual contractors-helped to ensure that the photovoltaics, building energy efficiency, and advanced engine programs produced outputs that are actually or potentially of real commercial value.

5. Technology adoption policies

There has been less policy consensus regarding the desirability of using public policy to speed the adoption of new technology. Because of the positive information externality associated with technology adoption, there is a valid analytical basis for considering such policy. Further, if learning curves or other sources of dynamic increasing returns are important, there could be social benefits associated with speeding diffusion of new energy-saving or otherwise environmentally beneficial technologies.

On the other hand, the possibility of technology "lock-in" makes this a potentially two-edged sword. If the government encourages the diffusion of a particular technology, it is possible that it could become so entrenched in the market place that it stifles, at least for a time, the development of some other, superior technology. This danger creates a tension in the design of policies to encourage adoption. To maximize the exploitation of dynamic increasing returns, it is desirable to focus on the development of a small number of promising technologies. Yet to avoid accidentally helping to entrench the wrong technology, it is desirable for policy to be "technology neutral," encouraging all efforts that achieve specified objectives *without* focusing on a particular approach.

Given limited public resources, the government clearly can not subsidize all new technologies, so there is a need to focus scarce resources on commercialization opportunities for which there is the clearest need for a public role. As stated earlier, this case will be more compelling the lower are the private incentives for adoption, as in the case of environmental problems that have not otherwise been fully priced into private decisions.

As with research, the government can encourage adoption both in its own operations and by subsidizing the efforts of others. As the government is a very large landlord, vehicle operator, and user of many other kinds of equipment, its decision to purchase certain technologies for its own use can have significant effects on the rate of diffusion. Technology diffusion, and achievement of any associated benefits of dynamic increasing returns, can also be encouraged with tax credits that reduce the

effective purchase price of new equipment that meets specified criteria. There is some literature analyzing the effectiveness of energy conservation tax credits at inducing conservation investment. The empirical evidence from this literature is mixed, with some early studies suggesting that tax credits are a very ineffective policy, while some later evidence points to some effectiveness. Nonetheless, it is important to recognize some disadvantages of subsidy approaches. First, unlike policies that raise the price of emissions, adoption subsidies do not provide incentives to reduce utilization of polluting technology (Fischer and Newell 2004). Second, technology subsidies and tax credits can require large public expenditures per unit of effect, since consumers who would have purchased the product even in the absence of the subsidy (i.e., free-riders) still receive it. This free-rider effect is likely to be more of a problem for technologies that have already penetrated to a significant extent, and less so for very new technologies that are expensive compared with substitutes.

Since a major aspect of market failure in technology diffusion is imperfect information, another category of policy to encourage diffusion is information provision. With respect to technologies that appear cost-effective, but are not yet widely utilized, this kind of policy can help overcome the apparent market failure without putting the government in the position of betting on particular technologies. While analysis is limited, there is some evidence of success for information programs (Anderson and Newell 2004). Finally, command and control regulations can also be used to try to force the diffusion of particular technologies, if only by removing less expensive and less environmentally beneficial competing technologies from the market.

6. Conclusions

When economists evaluate public policies that intervene in the market economy, they generally view it from the analytical perspective of market failure. When it comes to green technology, two mutually reinforcing sets of market failures are at work-which decrease the likelihood that the rate of investment in the development and diffusion of such technology would occur at the socially optimal level. The solutions fall into two categories of approaches. One approach is to foster the development and diffusion of new technology by designing environmental policies to increase the perceived market payoff and maximize flexibility in compliance. The other approach is to implement policies aimed directly at encouraging the development and diffusion of environmentally friendly technologies. Theory suggests and empirical research confirms that innovation and technology diffusion do respond to the incentives of the market, and that properly designed regulation can create such incentives. The double market failure further clarifies the case for broad-based public support of technology innovation and diffusion. And for cases in which private incentives do not reflect the full costs of environmental externalities, for whatever reason, the efficiency of the policy mix will likely be improved by including public policies aimed directly at stimulating the development and diffusion of new environmentally benign technology. This argument is particularly strong with respect to those aspects of technology development that are most subject to market failure in the form of difficulty by private firms in appropriating the returns to innovation and adoption. Technology "infrastructure" such as data collection and dissemination, and training of scientists and engineers is likely to be seriously underprovided by market incentives alone.

Technology policy that goes beyond basic scientific research, toward the development and diffusion of specific technologies is politically controversial. There

are good reasons for this controversy, including the question of whether the government is the appropriate arbiter for determining which aspects of technology should be supported, as well as concern over the effect of political momentum forming behind illadvised initiatives, which then became difficult to stop. But problems such as global climate change are too important—and the potential positive technological externalities are too clear—to abandon policy efforts simply because they are difficult. Government must remain engaged in technology policy, but it should try a variety of ways to structure policy in this area to minimize the known policy problems. Models are already working, such as public-private partnerships that subsidize research but retain significant elements of market forces in determining which technologies to pursue. Failure of some policy initiatives should be expected, and those failures should be used to terminate or improve particular programs, not to rationalize total inaction.

Policy experimentation would logically work hand-in-hand with systematic policy evaluation. On the ground, however, policy success is very difficult to measure, because the output or effect is often intangible, the expected benefits of technologies change with changing conditions, and the evaluation period must take place over a long time period. This leads some advocates of public investment in technology to resist quantitative evaluation of technology programs on the grounds that measurements of such intangible outputs will understate the benefits and hence undermine political support for such programs. The danger of not even attempting to evaluate policies is that we perpetuate our ignorance in solving the problem, and thereby consign technology policy forever to the realm of ideology. Rather, we should embrace the fact that technological change is a long-term process, and we ought to be willing to take a long-term view. We should remain hopeful that on the time scale of years and decades, systematic evaluation will eventually allow the creation of a solid empirical base for the design of technology policy to maximize its social returns.

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THE CONSUMPTION AND THE CONSUMER IN THE ECONOMIC THEORY

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Abstract: The special complexity of the consumption imposes the mention that, in what follows, considering the criterion of the final destination of goods and services, the problem of the non-productive consumption of the population is being approached. Within the mechanism of the economic life, consumption has a central position, fulfilling various functions, determined by the mutual relationships with the different phases and processes of this mechanism, as well as by its own laws of development. Consumption gives finality to production, the usefulness of goods being recognized not only for having a specific material shape, but also because it satisfies a certain necessity.

Key words: the income effect; the substitution effect; the anticipation effect; the irreversibility of consumption; the demonstration and imitation consumption;

Basically, consumption is the act by which people use created goods and different services, satisfying the material and spiritual needs of the members of society. Insuring the covering of the different needs, it fulfills a complex of functions on the quality of life.

The level to which the consumer assimilates the new products represents one of the main parameters of the evolution of production and of the quality of life during the next period. The consumption specificity, determined by the regional or national traditions and specifics, represents one of the defining elements of the life style of different social communities.

The study of consumption involves also the approach of other concepts, such as: consumption need, consumption demand, merchandise acquisition, consumption costs. In order to clearly delimit each of these notions, the route of the need from the moment of its arousal to the moment of its fulfillment should be analyzed¹.

On the market, consumption needs materialize in the consumption demand which, confronted with the offer, determines the sale-purchase act, through consumption costs. The purchase leads to the closure of the circuit through the actual consumption (satisfying the need), but, at the same time, it gives birth to other needs and determines the recapture of the "circuit".

The sphere of consumption needs is wide and heterogeneous, comprising those material and spiritual needs of each individual that have a correspondent for their satisfaction in material goods and services. Knowing the consumption needs, economic agents anticipate the evolution of the market demand and, further on, a better satisfaction of this.

It can be stated that needs, together with the available incomes and merchandise prices, make the consumption demand a rational act, the result of a calculation. Its dynamic is direct proportional related to the consumption needs and to the size of incomes and converse proportional to the price of goods.

The effects determined by the income change over the demand, such as mentioned by P. Samuelson, are the following:

a) The income effect. The decrease of the price of a good indirectly determines the increase of the income, because the same amount of money allows the increase of the consumption. The additional income is not fully absorbed by the demand increase of the reduced price good, but part of this increase is embodied in the demand for another product, of unchanged price.

b) The substitution effect. The increase of the price of a good directly determines the decrease of the income, meaning of its purchase power, thus directing the consumer towards a good of lower price.

c) The substitution effect, due to the income effect. The price increase of a good considered essential indirectly determines the income increase (its purchase power), but, since the actual good is vital, it is being consumed at the same level, at the expense of other goods.

There is reversed relationship between demand and price. The price increase determines the reduction of the demanded quantity of a good. This phenomenon has law characteristic: Demand law. It expresses the existence of a converse proportional relationship between the quantity purchased by people of one certain consumption good and the price they have to pay. Studying thoroughly, one might say that, actually, the quantity demanded of one good depends on the prices of other goods, and the price change for one good may have various effects which, apparently, contradict the demand law:

a) The anticipation effect: the price of one good increase, and this determines an increase on the demand of that good, anticipating new price increases. In the converse situation, the price of one good decrease, still determining the demand decrease, anticipating the continuous diminish of the price.

b) The Giffen paradox: "the rule by which the increase of a price draws the decrease of its demand is conversely manifested, meaning that the price increase could be accompanied by the demand increase". This exception is, actually, valid for inferior goods – basic food. The price increase on these goods determines poor families to spend even more money on their purchase, in other words, demand increases. In the converse situation, the price decrease on basic food does not determine an increased demand, but the surplus goes towards the demand of more elevated products.

Concerning the structure of consumption demand, its analysis depending on incomes (solvable demand) has allowed, in the domain literature, the discovery of some influence factors of law characteristic².

a) The Engel law, according to which, once incomes increase, the demand for food decreases at the same level as prices. At the same time, the demand for clothes and places to live stays the same, and the demand for services increases. These evolutions are not only the effect of the income increase, but also of the progressive satisfaction of some needs with reduced level of elasticity, of the arousal of new, superior goods and services, which in themselves determine a change in the need structure.

b) The conclusions of Collin Clark: the service consumption increase, once a certain income level is surpassed.

c) The demonstration and imitation consumption (Duesenberry): differentiating the demand depending on the social group or depending on the individual's need to be assimilated by the group, to be promoted on the social scale (the consequences of snobbism and the need to parvenu).

d) The irreversibility of consumption: the increase and decrease tendency of consumption once the income changes, but not to the same extent, which would explain a certain stability of consumption depending on the income.

The circumstances of the purchase or consumption process often imply also other people, different from the consumer, who can decisively influence their behavior.

The behavior result is the decision of the purchaser concerning the purchase and the consumption of certain goods destined to satisfy their needs. The purchase and consumption decision comprises an assembly of acts or processes that are carried out in certain chronological order: the perception, the information, the attitude, the motivation and the manifest behavior. These processes, together with the bonds between them, represent the behavioral mechanism.

I. The perception – is the mental activity of noticing, understanding, judging stimuli from the ambient, all carried out with the help of the sensorial receptors system. External signals received and classification is selectively done, considering the specificities of the individual. The perception can be: 1. physical – through direct contact with the objects of the environment, based on the physiological elements; 2. cognitive – understanding the psychological meaning of the environmental objects (stimuli).

The perceptual process fulfills two functions: the selection of the encountered stimuli, respectively the organization, the regrouping of the stimuli and of the knowledge of the consumers.

II. The information (the learning) is the assembly of the means by which individuals get to know the products (the services) and learn more about them. The information sources may be personal (owe experience or that of friends) or impersonal (products characteristics). The habit of the consumer is, mostly, learned.

Learning can be defined also as a behavior change, of relatively permanent character, being the result of repeated experience (from advertising, from directly using a product). Studying the relations between perception and learning, two classes of learning can be distinguished: based on memorizing (through repeated information); through introspection (reconsidering the position towards a product).

III. The attitude – this is the mental, affective, disposition state, resulted from experience, relatively stable towards a certain "object" (product, service), with which the consumer is confronted in order to satisfy their needs.

From the definition of the attitude, some clarifications should be made:

a) Attitude is learned, not instinctive;

b) Attitude is not similar to behavior; it is a predisposition towards a certain behavior;

c) Attitude implies the existence of a relation between person and object. The object of the attitude may be another person, an institution or a physical object.

d) Attitudes are mostly stable; physical state or circumstance changes do not determine major changes in the attitude sphere.

Attitude may be deduced with the help of behavior. It is intangible and cannot be directly observed. In order to determine the attitude of a person, it is necessary to interview this person in the hypothesis that the answers will not be false.

IV. The motivation is a thinking process, an interior state by which an individual is mobilized in order to attain a purpose; it is an ordering of needs. Identification of reasons, which means responding to the question "why?", is difficult, implying the previous knowledge of the space where these have appeared.

Motifs have a profound multidimensional character, being located between biological and social, between internal pulses and knowledge.

It is necessary to clearly distinguish between motivations and instincts. Motivation is simply the cause that determines a certain conduct; it does not represent the automatic, somatic response to a stimulus. While instincts are un-programmed, inborn and involuntary reflexes, conduct, though sometimes the result of an instinctive source, is fully non-instinctive, volitional.

Motivation can have both intensity and direction, it can be positive or negative (a person can be motivated to act or not to act). Motivation can be internally (hunger, cold, thirst) or externally (for example, an invitation to a mundane event) generated. Motivation cannot be deducted with the help of behavior, it is subjective and hard to observe, and it depends on the opportunity and accessibility of the final purpose.

V. The actual (manifest) behavior is the act of purchasing or rejection, consumption or use of a product. It is the only elementary process of decision which can be directly and spontaneously observed and measured. It is the specific result of a system constituted from the more or less accentuated interdependency of the other elementary processes mentioned above.

As it will be seen, following the decision they make, consumers buy or not certain goods or services, postpone the purchase, substitute on consume a good or service with another, etc.

Placing the actual behavior as the final point of a process system can be found in numerous, relatively controversial, models and schemes of the consumer's behavior.

In other words, the above mentioned elementary processes are influenced by two groups of variable factors: exogenous and endogenous. Exogenous variables act outside the human being and comprise the factors of the environment where the consumer lives and acts. Endogenous variables depend on the human psychic – personal characteristics, its representations.

Neither endogenous nor exogenous variables act isolated, but in combinations and with diverse intensities, presenting large variations from one individual to the other and, in time, for the same individual/consumer.

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Moving beyond the local marketplace: dynamics of mergers and acquisitions

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"The M&A market, like the Lord, helps those that help themselves. But, unlike the Lord, the market does not forgive those who know not what they do" Warren Buffett

Abstract: Mergers and acquisitions (M&A), as well as the corporate restructuring intercede a great part of the corporate financial world. The most distinguished, the fifth merger wave, found to be five times larger in real terms compared to its predecessor, has involved companies within the service sector, principally those coming from the OECD countries. Historical trends, however, suggest that nearly two-thirds of big M&A have lost the value on the stock market and merely 46% have not been disappointed on their own terms. Hence, this paper aims at assessing the effects, regional and sectorial patterns of M&A, as well as to address some related implications by means of detailed and comprehensive data set.

Key words: mergers and acquisitions, sectorial break-down, regional divergence, efficiency gains, failure

Introduction

Within the last few decades the globalization of business has set off a search for competitive advantages aimed at responding the challenges to obtain scale in the rapidly consolidating world economy. In parallel with the other trends such as liberalization, dramatic changes in the capital markets, as well as the strategic corporate restructuring, the process of globalization has initiated the unprecedented emergence of the cross-border mergers and acquisitions (M&A), as common, high-profile activities for many business entities. In point of fact, almost any firm with the size momentum has experienced such a transaction in its recent memory and is also possible to be considering one or few more candidates at any given time. Namely, the value and number of completed cross-border M&A announced in 2005 was \$ 716 billion and 6.134, respectively, a level close to the one in 1999 when the latest bang of the M&A has appeared. Even as the figures are presumed to be a sign of the multinational companies' strategic choice, those are principally encouraged by the rising number of the stock market mega deals. Nonetheless, there is no immediate raise or fall in the capital invested within the target company i.e. cross-border M&A may not add on the capital stock of the host country, but certainly will stimulate the international production facility, as well as the foreign-owned capital stock.

Theoretical review

Despite the attraction and prevalence of cross-border M&A, academics have sometimes discussed the unreserved pursuit of those transactions as growth vehicles. In principle, there are no clear-cut findings about the effects of M&A on economic efficiency, since some of the research studies indicate to no evidence of profit improvements, but the others point towards significant productivity gains. The context data model built upon a set of variables, such as financial measures (profit, stock price), non-financial ones (companies' reputation), as well as the time frame (initial market reaction, pre- and post-measurement) suggests that on average, target's shareholders benefit more than the acquirer's ones (Schweiger, 2002). Several empirical studies, nonetheless, have confirmed the statistically significant positive correlation between the market share (market concentration) and profits. Economists, however, vary in their explanation of the particular finding. Namely, the so-called Event study makes a comparison between the price of shares before and after the integration process. Related conclusions suggest that target shareholders benefit, but the bidder's usually break, although the combined efficiency gains are generally positive. The second group observes the company profit in pre- and post-integration process which, upon the closer examination, appears to be associated with the noteworthy improvements within the total factor productivity (TFP).⁵⁵ Some studies (Machirajy, 2003) have found that M&A activities are likely to benefit the society, principally on account of the increasing value either of the acquirer or target firm, but without any concentration rise. Running a wideranging cross-company and cross-industry regression Berg, Duncan and Friedman (1982), estimate the impact of acquisitions on the firms' profitability. The results put forward the short-term efficiency gains dependent upon the industry selection. In other words those are found to be positive for the market oriented acquisitions, but negative in respect with the knowledge-based. Employing an adjusted data set on the size momentum, as well as the beta weighted market return, a group of researchers (Agarwal, Jaffe and Mandelkar, 1992) have found a wealth loss for the acquiring firm of nearly 10% within the period of 5 years. So as to investigate the very statistical relationship, Porter (1987) conducted a study taking into consideration the rate of the new-fangled acquisitions divestment. Interestingly, he noticed that 75% of all the acquisitions within the sample were divested during the few post-integration years. Some related findings also suggest that high level of concentration, as well as the assumed lack of competitive pressure may also be allied with the failure of firms to produce efficiently, but success of the post-integration process, however, depends upon the acquirer's prior experience integrating acquired company.

Incentives and company appraisal in mergers and acquisitions

A large number of papers on mergers and acquisitions have described them as an alternative form of investment. The very notation is considered to be understandable to some extent since those are influenced by the same factors which have a great impact on the investment decisions. Mergers and acquisitions notwithstanding are to be the

⁵⁵ For about \$6 billion, Microsoft has achieved its largest acquisition with the leading interactive US ad agency aQuantive. Taking into consideration the particular acquisition, Microsoft expects to develop the relationships with the advertisers and media-owners, as well as to increase the ability in building the next-generation advertising solutions and platforms, such as: cross-media planning, video-on-demand and IPTV.

comprehensive component of a wider strategic plan, aimed at positioning the firm to achieve its long-term objectives. Explicitly, managers hardly ever think about the price increase or static cost cutback while reaching the merger decisions (Scheffman, 1993), thus timing for mergers is unlike to a great extent in comparison with the one of general non-merger business investment (Anddrade and Stafford, 1999). In spite of the broadspectrum drives to undertake such transactions, there are few groups of factors that specify the major reasons to assume many mergers and acquisitions. Namely, firms usually merge or get acquired to enhance the capacity, enter the new products or geographic areas, lessen some production costs associated with the sector or risk of market volatility, as well as to get hold of a new so called cutting-edge technology.⁵⁶ The potential efficiency gains, however, comprise either operational efficiency (better utilization of expertise or information, efficient asset combination, economies of scale, consumption economies of scope, enhanced resource allocation), or the managerial, aimed at creating a market for corporate control as an important protection against the inefficient management. Mergers and acquisitions take also an advantage of the financial benefits, which lead to earnings diversification, thus lessening the variations associated with the profitability and risk of bankruptcy. This category comprises the tax benefits which are not considered to be the major motivating force for the most M&A prior to the mid 1980's. The main reason for the increased M&A activity in 1986, however, was the implemented tax reform within the same period, which expanded the definition of taxable income and diminished the potential tax benefits associated with the M&A. At some stage of 19th and the first half of 20th century, attaining a market power was the primary motive for many mergers and acquisitions. Some economists (Stigler, 1950) called the very period as the "mergers for monopoly" or "mergers for oligopoly" with reference to the particular wave. Bulk of the most recent mergers and acquisitions, however, could not be ascribed as an effort to ensure a market power. In other words, obtaining a good buy is considered to be the foremost reason for many mergers and acquisitions. Bearing in mind that mergers completed by stocks differ from those in cash, many academics wonders whether the "overvalued" stock may permit a particular company to "obtain a good buy". The most recent findings, however, suggest that acquirers which use stock to pay the asset have better information than the target's shareholders. The fourth merger wave have been distinguished by the introduction of leveraged buyouts, most of which financed by the junk bond market. The particular transactions resumed to be performed within the fifth way, mainly in form of a friction within the some of mega leveraged buyouts, such as RJR Nabiso. Many other motives come out to be driving forces for lots of M&A activities. Namely, some target firms seek for an acquirer to break out the unfavorable labor contracts or avoid the financial problems, but also to amplify the risk-return profile (Shleifer and Summers, 1988).

The key aspect of the M&A as a corporate strategy is the value creation for the shareholders of the both partners. The value metrics, however, suggests that M&A have to be considered within the period of three years following the deal in order to provide the acquiring company a point in time to exhibit the actions (Smith, 1999). There are

⁵⁶ ExxonMobil is considered to be the leading multinational American company which has integrated petroleum and natural gas production by merging the Exxon and Mobil in 1999. The key point of the reached agreement was the Exxon shareholders to own about 70% of the merged company, while Mobil ones 30%. Today the newly established company is to be the world's largest either by revenue (\$377.6 billion in the fiscal 2006), or the market capitalization (\$517.92 billion in 2007).

wide-ranging models, applied in the same context to value the target company. The imperative valuation mechanism for many M&A is discounted cash flow analysis that defines the current value of the company considering the predicted upcoming cash flows. In other words, the expected company's free cash flows (true operating cash flows) are discounted using the weighted average costs of capital [WECC=Kb*(1-T (B/V)+Ks(S/V), where Kb denotes the pre-tax market expected yield to maturity on debt, Ks represents the market-determined opportunity cost of equity capital, while T, B, S, and V stand for tax rate, debt value, equity value and assets value, respectively). The most applicable methods, however, are the comparative ratios, consisted of two most commonly used relative approaches, such as: price-earnings ratio (P/E ratio) and enterprise-value-to-sales ratio (EV/Sales). The first sub-method gives acquiring company the possibility to make an offer that is multiple of the target company future earnings. Complexity of the particular metric arises, however, with the estimation of an appropriate P/E ratio. The second instrument (replacement cost) refers to the expected costs to replace the target firm. The particular method notwithstanding, has many disadvantages, since tangible asset is considered to be the only one replaced, but not to all the companies. Taking into consideration the above drawbacks, McKinsey has examined the power of free cash flow to explain the market value of 35 US companies. The very high $R^2 = 0.94$ has confirmed for another time the reliability of discounted cash flow analysis in evaluating many mergers and acquisitions. Yet, it is worthy to mention that acquirers practically always pay a considerable premium on the stock market value of the target company. Thus, the premium for the purchasers refers to the post-integration synergy they expect to achieve, while it stands for the company's future prospects as regards to the seller. In other words, the success of the postintegration process depends upon the value enlargement of the buyers.

Regional divergence and sectorial break-down of mergers and acquisitions

From the chronological standpoint, cross-border M&A have made many significant fluctuations over time, both measured as the value or number of deals. At some stage of the 20th century, five waves of M&A have been acknowledged (Andrade, Mitchell, and Stafford, 2001), but special attention has been paid to the 5th, one which has started just about 1995 and broken off in 2000 (Figure 1). The major impact on the particular wave, however, had the substantial transactions of the German, French, Spanish and Nordic companies which have joined the long standing American interest in this domain after a short time lag. In addition, the most distinguishing attribute of the respective period were the so-called mega deals whose value went beyond one billion US dollars i.e. the number and the value of those transactions have almost quadrupled for the period 1996-2000. European companies have been engaged within many of them, but certainly the most reflective one is the cross-border take-over of Mannesmann (Germany) by Vodafone (UK) for about \$203 billion in 1999-2000, which is considered to be the most essential transaction even up to the present.

Nevertheless, cumulative distribution of the cross-border M&A within the most recent 6th wave (started in 2003) has confirmed for another time the major role of the OECD countries, both as acquirer or target zone. Namely, 2.154 transactions have been effectuated in 2005 with a full amount of \$774 billion. United States, however, are uppermost within the list, acquiring 514 foreign firms with total assessed value of about \$158 billion. United Kingdom takes up a first place as the largest value target country (\$144 billion), as well as second one as an acquiring with 286 deals estimated about

\$94 billion. In other words, 15 out of 20 countries considered to be the largest acquirers, emerge among the top 20 as largest target in the value conditions.



Figure 1: M&A value in millions of dollars (1987-2004)

The evidence exposed leads to the conclusion that cross-border M&A are most likely to take place among high GDP nations (Figure 2). In addition, results we have obtained from the statistically significant regression (0.00087<0.05 alpha) using a logarithmic scale, point toward a positive correlation (0.6712) between the cross-border M&A acquirers and their GDP in 2005.



Figure 2: Relationship between log M&A_(acq) and log GDP, 2005

In other words, 45% of all variations within the acquiring M&A depend upon the variations in GDP of the countries i.e. 1% positive change in GDP of a particular economy impose 0.40% increased propensity to undertake such a transaction. Some other non-specific factors, however, are found to be the principally imperative determinants of cross-border M&A, such as: distance from the respective country, the recipient's economy corporate tax, average tariff rate, as well as the combined effect of M&A enforcement by the national authorities (Evenett, 2003). Finally, the difference between horizontal and vertical FDI has to be also taken into account while explaining the above outcome. Namely, economies ranked as top 20 are mostly attracted by the high wages of the consumers more than the low factor expenditures. In other words, companies from the respective countries have more lucrative motives while undertaking the particular transaction and usually hunt for large and profitable markets.

Another critical feature of the more recent M&A wave stands for the importance of the sectors while engaging such a transaction. Namely, the examination we made by the Chi-Square test of independence, revealed a sectorial break down of the cross-border M&A at some stage in 1980s and 1990s (Table 1). Based on a benchmark of .05 alpha, the estimated p-value of 0.0000 suggests that there is a statistically significant difference in the proportions among multiple independent populations (sectors).

Results		
Critical Value	109.7733	
Chi-Square Test Statistic	1.62E+09	
<i>p</i> -Value	0.0000	
Reject the null hypothesis		

 Table 1: Chi-Square Hypothesis Testing (PHStat for MS Excel)

One outstanding finding is the quite smaller meaning of the manufacturing cross-border M&A within the late 1990s (35.1% as a proportion of the value as a whole, against 62.2% in the previous wave). Moreover, merely three service sectors explain a half of the total M&A in the late 1990s (business services, finance and communications). As related literature argues, the very sectorial dissimilarities are imposed by many political and economic factors. Black (2000) accentuates the failing of the "old anti-takeover coalition" which imposes more stock options for the managers and relates their payment to the corporate performance. He also notes that the lower inflation, as well as the rolling stock markets has diminished the costs in support of financing the cross-border mergers and acquisitions. On the other hand, Evenett (2002) asserts that sectors which confront violent import competition are less likely to make out the cross-border M&A results in higher prices. Thus, sectors where the companies offer a wide-spectrum range of products (banking) are more likely to benefit from the M&A transactions with the financial institutions. Taking into account the prompt technological improvements within the communication sector, he argues the role of the cross-border M&A as a very important mechanism to spread them across the borders. Finally, reduced trade barriers, as well as the more concentrated competition in the markets of manufactures, lessen the necessity to undertake cross-border M&A aimed at reducing some risks associated with the declined market power or higher tariff rates. Increased number of M&A in the service sector, among others, has been induced by the deregulation, privatization, as well as the attenuation on the foreign ownership restrictions in many industrial economies.

Intellectual property due diligence in mergers and acquisitions

One of most important factors that influenced the fifth merger wave was the valuable intellectual properly provided by the technology sector. The fast growing high tech sector has impelled the corresponding industry entrants to look for an asset in form of intellectual property in order to keep the pace with the technological improvements. This might explain to some extent the success that Cisco and Lucent Technologies has

achieved within the fifth merger wave. In point of fact transactions based upon the intellectual property might present the exclusive set of challenges, since the particular asset is often hard to be appraised due to the intangible nature. Therefore, possibility of acquiring the asset less or more valued than the expected is much more grater in comparison with the transaction engaged in tangible assets. Taking into consideration the sensitivity, the successful dealing with intellectual property matters is considered not only from time-costs perspective, but the post-closing difficulties, as well. Thus, acquirers have to bear several moments in mind before the transaction is completed, such as: importance and place of intellectual property in the transaction, tax considerations, due diligence, foreign law, distinguishing between tangible and intangible asset, etc.

Enhancement of the collective funds as a budding resource of investment

Collective investment funds (private equity firms and hedge funds) are arguably the latest source of investment, particularly in the domain of cross-border M&A. Those might be the most recent illustration of portfolio investment revolving into FDI (Dunning and Dilyard, 1999). Once regarded as useful supplements to mainstream investments, private equity funds are principally completed within the startups, companies in distress or those in necessity of venture capital. Those, however, are considered to be a long-term investment and are less liquid in comparison with the publicly traded stocks.



Figure 3: M&A by collective investment funds (1987-2005)

Within the last few years such funds have extended in the other regions aside of United States and United Kingdom, attracted by the companies with growth potentials, but in financial crisis (Asia), or the rising integration of financial markets and implementation of a single currency (Europe). Hedge funds are also big players as lenders in leverage buyout transactions with a record \$1.200 billion gained in 2005. Yet, private equity firms, together with some additional borrowings obtain a majority of shares in the target company, thus they tend to have a much longer time frame than the other funds. In 2005, private equity firms invested in various industries and sectors, such as: services sector, including real estate (Europe), the banking industry in

developing Asia, and finance and leisure industries in Japan. In addition, evidence suggests that such investments permanently broaden the scope of their activities and encounter more litigation, reaching a record of \$135 billion i.e. 19% of the cross-border M&A as a whole in 2005 (Figure 3). The rising value of deals attempts some new funds to enter the market and undertake such transactions within the service sector of developing countries (80% of the total value), Asia in particular. These figures, however, have been a subject to strong debate about the impact of the private equity funds on the host economies. Explicitly, firms get certainly hold of an external equity and better utilization of their potentials (Colombo and Grilli, 2005), but scope of the private investors' activities might give them an exceptional political influence over private corporate behavior. In many cases, they sell again the target companies within a very short point in time, after bleeding white the profits out of them.

Mergers and acquisitions: why they fail to achieve the intended purpose?

Companies usually merge and finish up the business increasing their economic supremacy, but the most important concern comes out from the possibility to obtain an increased market power or augmented competitive advantages aimed at reaching better stock prices (Sikora, 2005). Many studies, however, have found that nearly two-thirds of big mergers have lost the value on the stock market and merely 46% have not been disappointed on their own terms. M&A, however, do not fail as one of the partners haven't fulfilled the obligations of due diligence. Some other issues associated with the market share, strategic shifts, financial performance, reputation and patient origin are considered to be the major obstacles to post-integration success. Moreover, mergers executives very often suffer from having a "realistic outlook" and usually discount the business strategy, thus buying the competition is the foremost driving force regardless of the shares price afterward. In addition, focal point for many merging companies is declining the costs, thus they tend to overlook day-to-day the business, failing to create the value for the shareholders. A large number of scholars point toward the neglict of the issues related to human resources as one the major rationale for many M&A failure, such as: poor communication among the people at any stage of the organization, information withholding from employees on side of the senior executives, loss of key people and talented employees, thus losing the corporate productivity and customers, power politics, corporate culture clash, an inadequate planning, etc. Nevertheless, it is noteworthy to mention that the particular factors are to be important, but not the unique to maximize the likelihood of achieving a successful merger if those are being dealt on time.

Conclusion

Mergers and acquisitions are to be the fastest and the best way for many companies to get ahead. At least in the theory, those improve the operating performances, mainly induced by the increased synergy and economies of scope, as well as the possibility for cutting the costs, rising the production activities, strengthening the company's market position, entering new markets, acquiring the new cutting-edge technology etc. Taking into consideration that behind the M&A stand the possibility to create value over and above the one of the both companies many issues related to the costs and benefits have to be a subject of detailed analysis before the transaction is completed. Thus, acquirers usually employ different legitimate methods to value the target companies, such as price/earning ratio, enterprise value to sales ratio,

replacement cost, but also discounted cash flow analysis which is thought out to be the key valuation instrument for many companies. The most important to be noticed, however, is appearance of the mergers and acquisitions in form of waves, whereupon the ones from 1920s and 1960s have augmented the economic concentration in manufacturing, mainly determined by the accelerated industrialization of the economies. The more recent waves, seen to be five times larger even corrected for the increasing price of the financial asset, have appeared particularly in the service sector (communication, finance and business services), once again among the OECD countries. The reasons behind emerge from the market-seeking motives of the most companies engaged in M&A i.e. those are interested in higher wages of the consumers, more than the low factor expenditures. Recently, the most imperative resource for many mergers and acquisitions are the collective investment funds accomplished within the start ups, companies in distress or those looking for buyouts financing. Yet, a large number of the big mergers and acquisitions are being disappointed on their own terms, failing to create value due to the many reasons, such as: loss of revenue momentum, lack of management prudence, as well as inability to prevail over the practical challenges.

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AN ASSESSMENT OF THE CROP WATER DEMAND AND IRRIGATION WATER SUPPLY AT PABBI MINOR OF WARSAK GRAVITY CANAL

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Abstract: The research study was conducted on irrigation water supply and demand at Pabbi minor of Warsak gravity canal from June to August 1998. Objectives of the research were to assess the actual supply of irrigation water, irrigation water demand of major crops, and comparison between water supply and demand for all the outlets of Pabbi minor. Actual irrigation supply was determined by cutthroam flumes. Cropping pattern was determined by interviewing the farmers by making use of proformas developed for that purpose.

Key words: Cropping pattern, evapotranspiration, sanctioned discharge, fallow, water demand, water supply

1. Introduction

Pakistan's agriculture is predominantly irrigated and is based on one of the oldest and largest contiguous gravity flow irrigation system in the world. The Indus Basin irrigation system encompasses the Indus river and its tributaries, three major storage reservoirs, 19 barrages/headworks, 12 link canals and 43 canal commands. The total length of the canal system is 40,000 miles with 80,000 watercourses and field ditches running another 1.0 million miles. (Ali, 1993). In canal irrigation system, farmers are not independent in their choice of growing crops because they have to adjust their cropping patterns according to the available water supply. For proper development of agriculture, it is very important to conduct studies at various places to determine the difference water supplied and water requirement of the crops in that area to assess whether irrigation water is according to the demands of the crops or not. That is why a shift from the traditional supply oriented system of irrigation operations to one that is based on demand, or to one that corresponds to crop-water requirements, is among the most challenging issues confronting Pakistan's irrigation system. In order to put more and more area under irrigation, water has to be conserved and present available water should be efficiently used. It is desirable to reduce water losses in the field by finding out the actual crop water requirement, and compare it with the water supplied to ensure an equitable supple of water to all the farmers in an irrigation unit throughout the year. This study was undertaken to compare the available water supply with the crop water requirements under the traditional gravity irrigation system.

Main objectives of this study were:

- 1. To determine cropping pattern at the outlets of Pabbi minor
- 2. To determine crop water demands at the outlets
- 3. To measure the irrigation water supply to the outlets
- 4. To compare available irrigation water supplies to the crops water demand in the area

2. Materials and Methods

2.1 Site Description

This research work was conducted at the Pabbi minor of Warsak Gravity Canal (WGC). This canal off takes at the exit of 5.6 kilometers (km) tunnel through Mullagori hills on right bank of river Kabul and upstream of Warsak dam. The total length of WGC is 72.8 km and has full supply discharge (FSD) of 311 cusecs. The Culturable Command Area (CCA) of this canal is 58,681 acres, and has eleven minors, out of which, Pabbi minor is situated at the tail. Pabbi minor is 8000 ft. in length with a design discharge of 6.5 cusecs, while the sanctioned discharge is 3.53 cusecs. The gross command area (GCA) of this minor is 1010 acres, whereas CCA is 909 acres. Pabbi minor has six outlets; 600/R, 1308/R, 3900/R, 3900/L, Tail/R and Tail/L, having sanctioned discharges of 0.19 cusecs, 0.19 cusecs, 0.94 cusecs, 0.45 cusecs, 0.81 cusecs and 0.83 cusecs respectively. (Iqbal, 1995)

2.2 Cropping Pattern

Cropping pattern at the outlets was determined by means of proformas which consisted of following questions: farmer's name, total area owned, irrigated area, fallow land, crops grown, date of planting and harvesting, area under specific crop and tenancy status of the farmer etc.

2.3 Crop Water Requirements

For measuring crop water requirements, the following steps were taken:

2.3.1 Reference Crop Evapotranspiration (ETo)

Reference crop evapotranspiration was determined by using the computer software "CROPWAT" (5.7) developed by Land and Water Development Division of FAO. The software utilizes Penman-Montieth method for determination of ETo⁵⁷.

2.3.2 Crop Coefficient (Kc)

The effect of crop characteristics on crop water requirements is given by crop coefficients. It represents relationship between reference evapotranspiration (ETo) and crop evapotranspiration (Etc). Kc values for different crops used as reported in the Water management manual, FAO 24 for the research period.

Weighted Kc (Kc).

$$Kc = \frac{Kc_1(A_1) + Kc_2(A_2) + \dots + Kc_n(A_n)}{A_1 + A_2 + \dots + A_n}$$

Rn is solar Radiation, f(u) is wind related function

⁵⁷ ETo= C[W.Rn+(l-w)fu][ea-ed] where, C is adjustment factor, W is weighted factor related to temperature

⁽ea-ed) is difference between saturated and actual vapor pressure

2.3.3 Crop Evapotranspiration (Etc)

Crop evapotranspiration (Etc) were determined by multiplying the \underline{Kc} value for each month with the ETo value for the respective month.

2.3.4 Effective Rainfall (P_{eff})

CROPWAT computed the effective rainfall by using rainfall data from Agricultural Research Institute, Tarnab. Fixed percentage (80%) formula was used for computation of effective rainfall.

 P_{eff} = 80% P_e Rainfall (mm/month), where P_e is total monthly rainfall (mm/month)

2.3.5 Net Irrigation Requirements (In)

The monthly net irrigation requirement in mm/day was calculated as:

In (mm/day)= Etc- P_{eff}

2.3.6 Gross Irrigation Requirements (Ig)

Gross irrigation requirements in mm/day were obtained by the use of an assumed efficiency value of 65% for the whole system.

2.4 Flow Measurements at the outlets

Discharge measurements at the outlets were accomplished using "Cutthroat flumes" which are used to measure flow in watercourses.

3. Results and Discussions

Results of the study regarding comparison of water supply with crop water demand at all the six outlets are given in the preceding sections:

3.1 Cropping Pattern

Due to the non-availability of adequate irrigation water at the outlets, farmers had left major portion of the area as fallow. Major crops grown were Maize, Sugarcane, Orchards, Tomatoes and Cucumbers. At outlet no. 600/R, Sugarcane covered major parts, 3.68 hectares (ha) or 42.1% of the cultivated area. At outlet no. 1300/R, Maize was the dominant crop covering 10 ha (35%) area. At outlet no. 3900/R, sugarcane remained dominant covering 26.28 ha (26%) of cultivated area. At outlet no. 3900/L, Maize was dominant covering 14.32 ha (29%) of the cultivated area. At outlet Tail/R, orchards were dominant covering 13.9 ha (16%) of the cultivated area. At outlet Tail/L, Maize remained dominant crop covering 18.48 ha (20%) of the cultivated area. Hence, throughout the season, Maize was the dominant crop covering major proportion of the cultivated area.

3.2 Crop Water Requirements

Crop Water Requirements were calculated by taking into account the reference crop evapotranspiration, effective rainfall, crop coefficient values and crop evapotranspiration values.

3.2.1 Reference Crop Evapotranspiration (ETo) and Effective Rainfall (Peff.)

ETo was calculated for the whole year (1998) from climatic data obtained from Agriculture Research Institute, Tarnab. CROPWAT software calculated ETo values for the whole year, which showed maximum ETo value of 6.1 mm/day in June and minimum value of 1.4 mm/day in December. Values of Peff. were also calculated from the climatic data. Maximum value of 93.9 mm/day was observed in February where

minimum value of 5.16 mm/day observed in November. Values of ETo and Peff. are given in the following table:

Months	ETo (mm/day)	Peff. (mm/month)	Peff. (mm/day)
January	1.7	31.7	1.05
February	2.1	93.9	3.13
March	3.1	49.1	1.63
April	4.3	76.9	2.56
May	5.6	22.5	0.75
June	6.1	10.6	0.35
July	5.6	64.5	2.15
August	5.2	36.6	1.22
September	4.6	40.0	1.33
October	3.4	14.4	0.48
November	1.9	5.6	0.18
December	1.4	21.9	0.73

Table 1: Reference Crop Evapotranspiration (ETo) and Effective Rainfall (Peff.)

Source: Agriculture Research Institute Tarnab (1998)

3.2.2 Crop Coefficient (Kc)

Kc values for different crops are given the preceding table. It is clear from the table that the Kc values of perennial crops, sugarcane, peaches and plums remained the same throughout the research period, because they were in development stage. In June, maize was in initial stage, and in July and August it entered the development stage, so the Kc values increased. Tomato, in July and August was in late season stage, and so Kc decreased.

Crop	June	July	August
Maize	0.6	0.95	1.02
Sugarcane	0.85	0.85	0.85
Tomato	1.15	0.87	0.87
Cucumber	0.95	0.97	1
Peaches	1.15	1.15	1.15
Plums	1.15	1.15	1.15

Table 2: Crop Coefficient (Kc) values

Source: Pakistan Agriculture Research Council (1982)

3.2.3 Wighted Kc (Kc)

The value of weighted Kc were calculated and given in the following table:

Table 5: wighted KC (KC) values					
Outlet No.	June	July	August		
600/R	0.73	0.89	0.92		
1308/R	0.82	0.95	0.93		
3900/R	0.81	0.92	0.93		
3900/L	0.76	0.92	0.93		
Tail/R	0.88	0.99	0.96		
Tail/L	0.9	0.94	0.75		

Table 3:	Wighted	Kc (Kc) values

Source: Field survey (1998)

3.2.4 Crop Evapotranspiration (Etc) Etc values or individual months at the outlets are given in the following table:

-						
	Outlet No.	June	July	August		
	600/R	4.45	4.98	4.78		
	1308/R	5	5.32	4.83		
	3900/R	4.9	5.1	4.8		
	3900/L	4.6	5.1	4.78		
	Tail/R	5.36	5.5	5		
	Tail/L	5.49	5.26	3.9		

Table 4: Crop Evapotranspiration (Etc) values

Source: Field Survey (1998)

3.2.5 Irrigation Requirements

Preceding table shows the monthly net irrigation requirements (In) and gross irrigation requirements (Ig) in mm/day. It is evident from the table that crops demand at outlet no. 600/R was minimum, because of having a small CCA; supply at 600/R thus exceeded crops demand. Whereas cops demand at Tail/R was maximum and exceeded the available water supply; major proportion of the area was left fallow.

Outlet No.	June		July		August	
	In	lg	In	lg	In	lg
600/R	4.1	5.8	2.83	4.04	3.56	5.08
1308/R	4.65	6.5	3.17	4.5	3.61	5.1
3900/R	4.55	6.5	2.95	4.21	3.58	5.1
3900/L	4.25	6.07	2.95	4.21	3.56	5
Tail/R	5.01	7.1	3.35	4.7	3.78	5.4
Tail/L	5.14	7.3	3.11	4.4	2.68	3.8

Table 5: Irrigation Requirements at the outlets

Source: Field Survey (1998)

3.3 Actual Water Supply

Water supply data is shown on decade basis in the preceding table for the outlet. It can be noted from the data that water supply to outlet no. 600/R was maximum and was minimum to outlet Tail/L. High seasonal evaporation losses and seepage losses as well as illegal water withdrawal could be some reasons attributed to the scenario.

	ruble of Return Water Supply at the outlets					
	600/R	1308/R	3900/R	3900/L	Tail/R	Tail/L
June 1	6	3.8	2.9	5.3	1.6	1.3
June 2	6.7	4.3	2.97	5.6	1.9	1.5
June 3	6.1	3.7	2.8	5.4	1.1	1
July 1	6.4	4.2	2.8	4.9	0.9	1
July 2	6.2	4	2.7	4.8	1.4	1.2
July 3	6	4	2.7	4.9	1.1	0.9
August 1	6.3	4	2.9	4.8	1.2	1
August 2	6.8	4.4	3	5.6	1.3	1.1
August 3	6.7	4.4	3	5.1	1.2	1

Table 6: Actual Water Supply at the outlets

Source: Field Survey (1998)

3.4 Sanctioned Water Supply

The sanctioned water supply or allocated water supply, as allowed by Provincial Irrigation Department (P.I.D) was taken into account to make comparisons.

3.5 Comparisons

Comparisons between total actual supply and water demand are discussed in the preceding sections and presented graphically. In the figures, Qa represent actual discharge, Qd is the water demand and Qs is the government sanctioned supply discharge.

3.5.1 Outlet No. 600/R

In June, water demand was 5.80 mm/day. Average supply in first decade of June (June-I) was 6 mm/day. Average supply in second decade of June (June-II) was 6.7 mm/day. Average supply in third decade of June (June-III) was 6.19 mm/day. Thus in June, actual supply was 8% more than the demand. In July, average water demand was 4.04 mm/day. Average supply in July-I was 6.4 mm/day. Average supply in July-II was 6.8 mm/day and average supply in July-III was 6 mm/day. Throughout July, average supply was 6.25 mm/day and exceeded the crops water demand by 35%. In August, water demand throughout the month was 5.08 mm/day. Average supply August-I was 6.3 mm/day. Average supply in August, average supply was 6.8 mm/day and in August-III was 6.7 mm/day. Throughout August, average supply was 6.8 mm/day and was 25% more than the demand.



Figure no. 1: Demand and Supply at outlet no. 600/R

3.5.2 Outlet No. 1308/R

In June, irrigation water demand was 6.6 mm/day. Average supply in June-I was 3.8 mm/day. Average supply in June-II was 4.31 mm/day and in June-III was 3.7 mm/day. Throughout June, average supply was 3.97 mm/day. Thus in June, irrigation water demand was 39.8% more than the actual supply. In July, irrigation water demand was 4.5 mm/day throughout the month. Average supply in July-I was 4.2 mm/day, average supply in July-II was 4 mm/day and in July-III was 4 mm/day. Throughout July, average supply was 4 mm/day. Thus in July, irrigation water demand was 11.1% more than actual water supplied. In August, irrigation water demand was 5.1 mm/day throughout the month. Average supply in August-I was 4 mm/day, in August-Ii was 4.4 mm/day. Throughout July, average water supplied was 4.27 mm/day. Thus in August, irrigation water demand was 16% more than actual supply.



Figure no. 2: Demand and Supply at outlet no. 1308/R

3.5.3 Outlet No. 3900/R

In June, irrigation water demand was 6.5 mm/day throughout the month. Average supply in June-I was 2.9 mm/day, average supply in June-II was 2.9 mm/day, and average supply in June-III was 2.8 mm/day. Throughout June, average water supplied was 2.9 mm/day. Thus in June, irrigation water demand exceeded the water supplied by 55%. In July, irrigation water demand was 4.2 mm/day throughout the month. Average supply in July-I was 2.8 mm/day, in July-II was 2.7 mm/day and in July-III was 2.7 mm/day. Throughout July, average water supply was 2.7 mm/day. Thus in July, irrigation water demand was 38% more than actual supply. In August, irrigation water demand was 5.1 mm/day throughout the month. Average water supply in August-I was 2.9 mm/day; average water supply in August-III was 3 mm/day. Throughout August, average water supply was 2.98 mm/day. Thus in August, irrigation water demand was 41.5% more than actual supply.



Figure no. 3: Demand and Supply at outlet no. 3900/R

3.5.4 Outlet No. 3900/L

In June, irrigation water demand was 6.07 mm/day throughout the month. Average supply in June-I was 5.3 mm/day, average supply in June-II was 5.6 mm/day and in June-III was 4.4 mm/day. Throughout June, average water supply was 5.14 mm/day. Therefore in June, water demand was 15% more than actual supply. In July, irrigation water demand was 4.21 mm/day throughout the month. Average supply in July-I was 4.9 mm/day, average supply in July-II was 4.8 mm/day, and average supply in July-III was 4.9 mm/day. Throughout July, average water supply was 4.9 mm/day.

Thus in July, water supply was 14% more than water demand. In August, irrigation water demand was 5.0 mm/day throughout the month. Average supply in August-I was 4.8 mm/day, in August-II was 5.6 mm/day, and in August-III was 5.1 m/day. Throughout August, average water supplied was 5.2 mm/day. Thus in August, water supply was 4% more than water demand.



Figure no. 4: Demand and Supply at outlet no. 3900/L

3.5.5 Outlet Tail/R

In June, irrigation water demand was 7.10 mm/day throughout the month. Average water supply in June-I was 1.6 mm/day, average supply in June-II was 1.9 mm/day and average supply in June-III was 1.1 mm/day. Throughout June, average water supply was 1.59 mm/day. Thus in June, water demand was 77.6% more than water supply. In July, irrigation water demand was 4.70 mm/day throughout the month. Average supply in July-I was 0.9 mm/day, average supply in July-II was 1.4 mm/day, and in July-III was 1.1 mm/day. Throughout July, average supply was 1.3 mm/day. Thus in July, water demand was 72% more than water supply. In August, water demand was 5.40 mm/day throughout the month. Average supply in August-II was 1.2 mm/day, in August-II was 1.3 mm/day and in August-III was 1.2 mm/day. Throughout August, average supply was 1.29 mm/day. Thus in August, water demand was 76% more than actual water supply.



Figure no. 5: Demand and Supply at outlet Tail/R

3.5.6 Outlet Tail/L

In June, irrigation water demand was 7.3 mm/day throughout the month. Average supply in June-I was 1.3 mm/day. In June-II, average supply was 1.5 mm/day,

and in June-III, average supply was 1 mm/day. Throughout June, average supply was 1.35 mm/day. Thus in June, water demand was 81.55 more than the water supplied. In July, irrigation water demand was 4.4 mm/day. In July-I, average water supply was 1 mm/day and in July-III, average water supply was 0.9 mm/day. Throughout July, average water supply was 1.09 mm/day. Thus in July, water demand was 75.2% more than water supplied. In August, water demand was 3.8 mm/day throughout the month. Average water supply in August-I was 1 mm/day, in August-II was 1.1 mm/day and in August-III was 1 mm/day. Throughout August, average was supply was 1.08 mm/day. Thus in August, water demand was 71.5% more than water supply.



Figure no. 6: Demand and Supply at outlet Tail/L

3.6 Overall Comparison

Throughout the research period, irrigation water demand was 46% more than water supply in June, 22% more than water supply in July, and 26% more than actual water supply in August. High temperature and less rainfall in the month of June can here be attributed to an elevated water demand in this month. Due to this mismatch between water demand and supply, farmers had left major proportions of the culturable area as fallow. The fact of outlet no. 600\R being located along the head of Pabbi minor is attributed to lesser water demand here, whereas outlet no. 3900/L had a small CCA and supply here surpassed the crops water demand. As with other outlets, high water demanding crops (sugarcane, maize, vegetables etc) and fairly high culturable areas restricted adequate water supply to fulfill the crops water demands. In June, July and August, actual supply was more than the government sanctioned supply by 40%, 36% and 41% respectively.

Results achieved from this research study differ from the results achieved during similar research study at Turlandi minor by Paracha (1998). His results showed that at Turlandi minor of Lower Swat Canal, water supply to the area was in excess of the irrigation water demand, due to very low evapotranspiration that occurred during the research period. Especially during October, supplies were very high as compared to demand due to maximum rainfall (104.2 mm). High water allowance of the minor was another reason for excess water supply. Also Iqbal (1995) obtained results, which showed more supply as compared to crops demand in the head of minor, whereas in middle, supply was less than demand due to greater CCA, and in tail of minor, supply was in excess as a consequence of a small CCA.

4. Conclusions and Recommendations

It was concluded from this study that due to non-availability of adequate amount of water, major proportion of the culturable command areas at the outlets were left as fallow. Maize was the most dominant crop and was being utilized as a staple food. Water supply to outlet no. 600/R and 3900/L was more than the demand by 23.1% and 7.2% respectively. At all the other outlets, crops demand exceeded the available water supply. At outlet no.1308/R, it exceeded by 24.4%, at outlet no. 3900/R by 45.7%, at outlet Tail/R by 75.7% and at outlet Tail/L by 77.3%. Overall, irrigation water demand exceeded the actual supply in June, July and August by 46%, 22% and 26% respectively.

It is recommended on the basis of this study to perform similar kind of research studies for Rabi (winter) season to compare water required and supply. Also, cropping pattern, which was assessed by proforma method, may also be done by other methods, e.g. stepping method, to compare results of both the methods. It is also a dire need and a vital recommendation to conduct studies of similar capacity for assessing crops water demands at the command areas under the irrigation system hierarchy, which could help scientists in achieving new modes of demand-based irrigation systems.

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STATISTICAL ANNALISYS OF THE CORRELATION BETWEEN GDP, PRODUCTIVITY AND BRUTE INVESTMENTS AT THE LEVEL OF OLTENIA REGION*

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Abstract: This article try to put in debate the problem of obtaining a balanced development of the regions from a country by using correlation models which include variables like: GDP, productivity, brute investments etc. The purpose is to find the most important variables that can strongly influence the evolution of GDP at the regional level and also can be use to do that in practice. The base of this debate is a statistical analysis realized on Oltenia region at general level and at the level of almost every activity sectors.

Key words: GDP, productivity, brute investments, correlation, statistical analysis

Every country of the world wants to have a balanced development of their regions. This fact is not so easy to achieve because of many factors. First, we have to measure the actual development stage of each region, using dedicated set of variables that can be utilized at the level of each region. Second, we have to identify that variables what can influence the development of each region at the general level and activity sector level also. In fact, we must build a model for development at level of each region. That work can be started by building models based on correlation between the variables what can measure the development of region and variables what can cause this effect.

Romania is not an exception, it have the same problem of development. It has many regions with very different stage of development and it want to obtain a balanced development that correspond to the European policy also.

Even we go gradually by focusing first only on one region and try do build such a correlation model we must override many obstacle like: choosing the variable what will be included in the model, determining the availability of data at the level of region, at the level of each activity sector from the region and for entire period of time also.

For this initial study we were selected the South-West region of Romania: the Oltenia region.

Like we anticipated, the choice of the variables that can be included in the correlation model was hard to do because of the restrictions. One of that was the impossibility of obtaining data corresponding to the entire period of time at the level of all economical sectors and at the level of Oltenia region for all variables included initially. Also, even for the selected variables it does not succeed the study of all economical sectors because of the impossibility of collecting the necessary data. An

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example for this kind of sector, with an important weight (15,87%) in formation of the regional GDP is the *Agriculture, hunting and silviculture* sector.

For eliminating the distortions generated by the inflation, the influence of inflation was eliminated at the level of all affected variables included in the correlation, for the entire studied period of time, by recalculating their values in comparable prices at the level of 2005 year. From all the variables selected initially, only the productivity (W) and brute investments (IB) was the variables that can be used.

The analysis of the correlation between of the GDP and the productivity and brute investments highlighted the following:



Figure no.1.The multiple correlation rapport for each economical sector at the level of Oltenia region

At general level there are a very strong dependence between the cause variables and GDP (determination coefficient 0.9916, multiple correlation rapport 0.9958). The identified regression model is presented below:

PIB = 0,1361×*IB* +229136,9974×*W*

We must underline from the beginning that the IB variable has a small influence about the change of GDP comparing with the W variable. This fact is due to the way that the cause variables act on the effect variable. While the W variable has an immediate influence on GDP (the effect can be observed in the same year), the influence of IB variable on GDP is not visible, and the exception is the last analyzed sector.

After testing the correlation rapport, is turned out that its value is significant. Testing the signification of the regression coefficients we found that the value of regression coefficient associated with IB variable cannot be considered significant. By continuing the analysis and determining the partial correlation coefficients we confirm this conclusion. Based on their values we can say that the GDP is significant influenced

by the W variable (the value of the partial correlation coefficient 0.7638), while for IB variable the value of partial correlation coefficient is -0.03. This situation is not a normal one and it can be explained by the fact that the investments realized does not produced the waited results, case in witch we can say that either the investments were normal finalized but the insertion of them were not in that sectors witch would be permit the obtaining of significant and long duration effect, or the investments were not proper finalized even if them were realized in the sectors witch would be permit the obtaining of the desired effects.

At the economical sector level, like at the general level, the dependence between analyzed variables is visible, direct and is characterized by a strong intensity (with values between 0.9978 and 0.9979).

Economical	R	R ²	Partial correlation coefficients		Regression model	
5000			PIB←IB	PIB←W		
Total	0,9958	0,9916	-0,0304	0,7638	PIB = 0,1361 × IB +229136,9974 × W	
Industry	0,9974	0,9948	-0,4335	0,7378	<i>PIB</i> = -0,0641 × <i>IB</i> +83287,1806 × <i>W</i>	
Constructions	0,9978	0,9955	0,2023	0,9599	PIB = 0,1304 × IB +24921,5237 × W	
Commerce	0,9788	0,9580	0,4829	-0,2916	<i>PIB</i> = -0,6866 × <i>IB</i> +14324,3977 × <i>W</i>	
Hotels and restaurants	0,9838	0,9678	0,3337	-0,4452	PIB = -1,3347 × IB +6081,928 × W	
Transports, storage and communications	0,9927	0,9854	0,0154	0,6571	PIB = 2,3599 × IB +13909,7604 × W	
Real estate transactions, rentals and services for enterprises	0,9779	0,9563	0,8771	-0,4565	PIB = 2,2736 × IB +58333,8171 × W	

The obtained results are presented in the following table:

After testing, the correlation rapport proved to be significant at the level of each sector. Analyzing the regression coefficients values corresponding to the two variables we observe again that the productivity variable (W) is the one with the greatest influence. Also, we must highlight the fact that the sector where W has the greatest influence is the *Industry* sector, followed by the *Real estate transactions, rentals and services for enterprises*. The productivity variable has the lowest influence at the level of *Hotels and restaurants* sector.

Going deeper with the correlation analyze by using the partial correlation we highlight that the IB variable has a low influence on GDP. The exception is the last analyzed sector (*Real estate transactions, rentals and services for enterprises*) where the recorded value is 0.8771.

In the W variable case, the partial correlation confirmed the direct and strong dependence but not in the following sectors:

- Commerce

- Hotels and restaurants

- Real estate transactions, rentals and services for enterprises

where the dependence highlighted would be an inverse and weak intensity one. However the W variable evolution is an ascendant one in all three situations, the GDP

does not following the same trend because it is stronger influenced either by the IB (see the case of the last analyzed sector) or by other variables not included in regression model.

Finally, we can say that the determined model permit a limited control on GDP. There are a few elements which permit to achieve greater values for that, like: *At the general level*

- the main utilization of productivity factor for obtaining an immediate effect on GDP
- the utilization of IB factor for obtaining durable effect on GDP

At the level of activity sectors

- the use of resources for increase the values of IB and W first in the sectors what determine the main modification of Oltenia region's GDP. The right order of these sectors is:
 - 1. Industry
 - 2. Agriculture
 - 3. Real estate transactions, rentals and services for enterprises
 - 4. Transports, storage and communications
 - 5. Commerce
 - 6. Constructions

Only one from all elaborated and tested models achieve the greatest precision at the region level but also at the level of each analyzed activity sectors. By using this model we realized the prognosis for 2006-2008 period. The conclusions are presented below:

At the regional level:

- the number of employees, after 2004 (year with the smallest value) will slowly grow. In 2008 the number of employees will raise at the level close to the one recorded in 1998;
- the turnover will continue to grow, like it done it along entire analyzed period of time, highlighting the fact that the economical sector has already a solid base made by the small and medium enterprises;
- the brute investments the factor what was unvalued along analyzed period of time, will suffer important changes having a 4 years periodicity. The year 2008 will be the nearest year when the brute investments will heavy grow;
- the productivity will continue to slowly grow along of the 2006-2008 period. In 2008 will reach values twice bigger than the values recorded in the 1998;
- based on the evolution presented above, the GDP will slowly grow in the years 2006-2008.

At the activity sectors level

- the GDP will grow at the level of every activity sectors, except the *Hotels* and restaurants sector where the GDP level will maintain constantly. The biggest grows of GDP will be recorded at the level of *Industry* and *Real* estate transactions, rentals and services for enterprises sector;
- the IB factor had an accentuated variation at the level of every sector. In almost all cases the tendency was to maintain constant values (this is the case for *Transports, storage and communications* sector) or to slowly increase (this is the case for *Real estate transactions, rentals and services*

for enterprises and *Hotels and restaurants* sectors). The exception is the *Industry* sector where the tendency was a non-linear one with a minimum point in 2002. For this sector, in the 2006-2008 period, the tendency of IB is to grow more than in the rest of the sectors. The growth of IB in the *Commerce* sector follows after growth of IB in the *Industry* sector.

- the productivity has recorded at the level of every sector a growing tendency that will maintain even in the 2006-2008 period of time. The biggest grows was determined at the level of the following sectors (in descendent order):
 - Commerce
 - Industry
 - Hotels and restaurants
 - Transports, storage and communications
 - Real estate transactions, rentals and services for enterprises

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Appreciations regarding the prediction of the Gross Domestic Product in the period after Romania's adherence to the EU

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Abstract: The paper proposes to present a picture of the evolution of the GDP in the immediate period after Romania's adherence to the European Union. In order to do this we find necessary a retrospective of the dynamics of this macroeconomical indicator in the period before the adherence. Thus, in the first part of the paper it is realized an analysis of the dynamics per total of the GDP but also per the components which enter its calculation through the final use method. In the second part, based on the obtained results, we determine the trend, we elaborate prognoses and analyze the rhythm of the dynamics and each component's contribution to the GDP's general dynamics.

Key words: gross domestic product, final consumption, gross fixed capital formation, net export

Introduction

Romania's economical integration in the European structure supposes political, economical and reforms who need, in order to be viable, an absolute type of informational system, which through objectivity, should allow concomitantly the connection at European level.

Any economical program contains a set of political measures destined to achieve the main objectives of the macroeconomical politics, which - usually - are the following: the economical growth, the occupation of the work force, the stability of prices and of the external payments balance.

These objects are quantified through four fundamental variables, also called key macroeconomical variables, through which we measure, correlate and analyze each economy's performances: the increase rhythm of GDP; the unemployment rate; the inflation rate and the surplus stock payment balance current account.

The macroeconomical results indicators have a large utilization for international comparisons, for the correct comprehension of the phenomena and processes from the world economy, of the international economical interdependences, of the country's participation to the world economical circuit.

Within these macroeconomical indicators, the GDP as aggregate which represents under a synthesized form the quantitative and qualitative evolution that a country registers during one year time, plays an important part in the appreciation of the economical growth of a country. In accordance to its level we can adjust the economical politics, we can make comparisons between different countries etc. All these considered we can believe as necessary an analysis of the dynamics of this indicator, especially in the context of complying the criteria of adherence with the European Union.

The forecast represents the practical activity through which we anticipate the probable evolution of some phenomena, influenced by certain elements: the previous experience and the contoured tendencies; present and durable requirements; predictable changes; the risk margin; the suggestions offered by the prospective studies.

The prognosis is the instrument of the forecasting activity and it can show which are the future implications of the tendencies, how they can influence other factors also (besides the tendencies), what advantages are there, what is the optimal variant and how we should defalcate the objectives from the prognosis on instruments which act on short terms.

Based on the statistical data from the period previous to the adherence moment we will elaborate and analyze also the prognosis regarding the evolution of the GDP and of the elements which enter its calculation through the final use method, during 2007-2010.

In the case studies regarding this indicator's dynamics, the presentation of the diagrams with the evolution and with the general trend and also the elaboration of prognoses, we will use modern methods of processing and analysis of the statistical data, implemented with the statistical analysis program MINITAB 14.1.

Tendencies in the dynamics of Romania's Gross Domestic Product realized during 2000-2006

The macroeconomical results are the outputs from the activities of the aggregated economical agents that the market validates, the society recognizing their utility in satisfying the multitude of social needs.

Also, based on them we make international comparisons, regarding the economical potential, the efficiency and the competitiveness of the economical products produced in different countries of the world, we establish each country's place in the world hierarchy.

The system of the National Accounts is the essential instrument for collecting numerical and quantification data, in a synthetic, simplified form, of the main operation from the national economy. These data allow the knowledge and characterization of the main variables such as: the domestic product, the national product, the national income, the final consumption, the formation of the capital, the personal available incomes of the population, the export, the import, the investments etc. elements which constitute basic factors in the characterization and the analysis of the economical state and of the modifications occurred in it, in a period of time.

We know the fact that the size of the GDP can be determined throughout three methods [2]: the production method (or the added value method), the final production use method (or the expenses method) and the incomes method.

We will analyze in the paper the GDP and its components' dynamics, calculated through the final use method. The Gross Domestic Product determined through this method, represents the sum of the expenses for: the final consumption (FC) calculated as sum between the final consumption of the population (FCP) and the final consumption of the administration (FCA), the gross fixed capital formation (GFCF), the variation of stocks (VS) and the net export (NE) as difference between export (E) and import (I).

In table 1 are presented the values of the GDP and of the elements corresponding to the method of the final use for the 2000–2006 period, expressed in millions of lei (RON) on current prices.

	Table no. 1									
	Indicators	2000	2001	2002	2003	2004	2005	2006		
	0	1	2	3	4	5	6	7		
	GDP	80377	116768	151475	197564	246468	288047	342418		
	FC	69253	99473	127269	169233	210155	252431	300953		
	-FCP	63459	91718	116940	149259	191050	225978	269807		
	-FCA	5794	7755	10328	19974	19104	26453	31146		
	GFCF	15194	24115	32283	42293	53850	66503	84260		
	VS	454	2229	556	873	4792	-1096	-1312		
	NE	-4525	-9049	-8633	-14835	-22329	-29791	-41483		
	-E	26418	38914	53677	68583	88554	94874	110904		
	-1	30943	47964	62310	83419	110884	124665	152387		

Source: Romanian Statistical Yearbook 2006. Monthly Statistical Bulletin No.1/2007.

The evolution of the Gross Domestic Product and of the components on use categories is presented in figure 1, and the weight of each component in GDP total, in table 2.



Figure no. 1 The evolution of the GDP - total and per use elements

The summary analysis of the evolution of the GDP, shows that Romania is presently in the seventh consecutive year of positive evolutions, the relatively great annual growth rhythms assuring the gradual reduction of the gaps in report to the European Union.

The most important contribution to the formation of the GDP is held by the final consumption and the gross fixed capital formation, namely the internal demand which represented the main growth factor. From the analysis of the series of data we observe that the weight of the final consumption is in average of 86%, with no very great variations around this figure. On the analyzed period, the difference between the first and the last year is of only 1,73 percents. This indicates a moderation of the final consumption while the gross fixed capital formation had an increasing evolution.

Within the final consumption, the biggest weight is held by the actual individual final consumption of the administrations of the population, appreciatively 90%. However the tendency is of a slight decrease while the final consumption of the public administration registers a continual increase. Thus, if 2000, the population consumption represented 91,63%, at the end of the period the weight was 89,65%, while the consumption of the public administration grew from 8,37% in 2000 to 10,35% in 2006.

Table no. 2									
Componente	The weight in GDP (%)								
components	2000	2001	2002	2003	2004	2005	2006		
GDP	100	100	100	100	100	100	100		
FC	86,16	85,19	84,02	85,66	85,27	87,64	87,89		
-FCP	91,63	92,20	91,88	88,20	90,91	89,52	89,65		
-FCA	8,37	7,80	8,12	11,80	9,09	10,48	10,35		
GFCF	18,90	20,65	21,31	21,41	21,85	23,08	24,61		
VS	0,57	1,91	0,37	0,44	1,94	-0,38	-0,39		
NE	-5,63	-7,75	-5,70	-7,51	-9,06	-10,34	-12,11		

The gross fixed capital formation presents an increasing trend, the weight in the GDP evolving from 18,90% in 2000 to 24,61% in 2006, this meaning a permanent increase of the investments. In 2006, the sums allocated to the fix capital consumption were of 84260,3 millions lei (RON) increasing by 1,53 percents as compared to the 2005.

The investments registered a constant increase over the last years in Romania and especially over the last period of time as a result of the fiscal relaxation. In 2005, the net inputs of direct foreign investments maintained at a high level, of 6,6% of the GDP. After the reaching of a record value for Romania in 2005, the investments kept on registering high increase rhythms, which led to the substantial increase of their contribution to the real increase of the Gross Domestic Product. Thus, the investment rate calculated as a report between the gross capital formation and the GDP knew an increasing evolution, from 19,46% in 2000 to 24,22% in 2006.

The net export generally had a negative contribution to the GDP increase, as a consequence of some increased goods and services imports caused, first of all by the high dependence of the Romanian economy on the energetic and raw materials imports, and secondly by the imports of capital goods. Every year, the value of the imports exceeded the value of the exports, having closer values between 2000 and 2002 when weights smaller than 5,63%, namely 5,70% of the GDP, have been registered.

The negative contribution of the net export to the GDP increase grew by 1,77 percent in 2006 in report to 2005. This is due to the superior dynamics of the goods and services imports (122,2%) comparatively to the exports' one (116,8%).

In order to determine each components' contribution to the general dynamics of the GDP first it is calculated the general rhythm of the dynamics of the GDP with the relation [8]:

$$R_{1/0}^{GDP} = \frac{\Delta_{1/0}^{GDP}}{GDP_0} \cdot 100 = \frac{GDP_1 - GDP_0}{GDP_0} \cdot 100$$
(1)

where 1 represents the current period and 0 is the previous period.

The contribution of the composing elements from the method of the final use is determined through the following relations [8]:

• The contribution of the final consumption (*FC*):

$$A_{1/0}^{CF} = \frac{\Delta_{1/0}^{FC}}{PIB_0} \cdot 100 = \frac{FC_1 - FC_0}{GDP_0} \cdot 100$$
(2)

• The contribution of the gross fixed capital formation (*GFCF*):

$$A_{1/0}^{GFCF} = \frac{\Delta_{1/0}^{GFCF}}{GDP_0} \cdot 100 = \frac{GFCF_1 - GFCF_0}{GDP_0} \cdot 100$$
(3)

• The contribution of the variation of the stocks (VS):

$$A_{1/0}^{VS} = \frac{\Delta_{1/0}^{VS}}{GDP_0} \cdot 100 = \frac{VS_1 - VS_0}{GDP_0} \cdot 100$$
(4)

• The contribution of the net export (*EN*):

$$A_{1/0}^{NE} = \frac{\Delta_{1/0}^{NE}}{GDP_0} \cdot 100 = \frac{NE_1 - NE_0}{GDP_0} \cdot 100$$
(5)

We observe that:

$$R_{1/0}^{GDP} = A_{1/0}^{FC} + A_{1/0}^{GFCF} + A_{1/0}^{VS} + A_{1/0}^{NE}$$
(6)

Thus, for 2006, the rhythm of the dynamics of GDP is the following:

 $R_{2006/2005}^{GDP} = \frac{342418,0 - 288047,8}{288047,8} \cdot 100 = 18,87\%$

The contribution of the components:

$$A_{2006/2005}^{FC} = \frac{300953,8 - 252431,8}{288047,8} \cdot 100 = 16,85\%$$

$$A_{2006/2005}^{GFCF} = \frac{84260,3 - 66503,8}{288047,8} \cdot 100 = 6,16\%$$

$$A_{2006/2005}^{VS} = \frac{-1312,8 + 1096,3}{288047,8} \cdot 100 = -0,08\%$$

$$A_{2006/2005}^{NE} = \frac{-41483 + 29791,5}{288047,8} \cdot 100 = -4,05\%$$

We observe that relation (6) is verified: 18,87=16,85+6,16-0,08-4,06

By analyzing these results it comes out the fact that a part of the components namely the final consumption and the gross fixed capital formation - influenced the dynamics of the GDP in an increasing way, and the other two - the variation of the stocks and the net export - in a negative sense.

It also results that the first two had a consistent contribution, a contribution that increased the GDP by 18,87%.

Analogously, we calculate the rhythm of the dynamics and the contribution of the components for the entire analyzed period, the results being presented in table no. 3.

Table no.3									
	2000	2001	2002	2003	2004	2005	2006		
The dynamics of the GDP (Rhythms with the chain basis -%)									
GDP	47,29	45,28	29,73	30,43	24,75	16,86	18,87		
The contribution of the components - %									
FC	38,15	37,60	23,80	27,70	20,71	17,15	16,85		
GFCF	10,14	11,10	7,00	6,61	5,85	5,13	6,16		
VS	2,46	2,21	-1,43	0,21	1,98	-2,39	-0,08		
NE	-3,46	-5,63	0,36	-4,09	-3,79	-3,03	-4,06		

During 2000–2006, the first two components of the GDP (FC and GFCF) maintained their supremacy within the contribution at its general dynamics.

The prediction of the Gross Domestic Product during 2007-2010

From the summary analysis of the series of statistical data relatively to GDP from table 1 we can deduce the fact that the tendency is linear. We do not observe that the series would contain also a cyclic and season component, which makes us believe that the results of the analysis point put the usual trend.

All these things suggest the fact that in order to estimate the evolutional tendency of the GDP we can use the linear model. Obviously, all the deviations of the empirical values from the values of the linear model, represent the residual component.

In order to implement this model we used the MINITAB 14.1 program and namely the Trend Analysis component, through which we have obtained a series of results and also the regression coefficient, the determination coefficient, the theoretical and residual values that allow us to analyze the GDP dynamics.

Fitted Trend Equation: Yt = 28492, 4 + 43702, 6*tTime GDP Trend Residual 80377 72195 8182,30 1 2 116769 115898 871.06 151475 159600 -8125,19 3 4 197565 203303 -5738,13 5 246469 247006 -536,77 288048 290708 -2660,41 6 342418 334411 8007,14 7 S = 0.157563 R-Sq = 99.6% R-Sq(adj) = 99.5%

From the analysis of the results, we observe that the empirical trend only contains two components: the linear trend and the residual trend.

We can observe also the fact that the linear trend, in this case, estimates quite well the tendency of the GDP. The average growth from year to year is synthesised by the regression coefficient, which has a quite small value (43702,6) in report to the levels of the dynamic series. The positive value of this coefficient indicates us an increasing tendency of the GDP during the analyzed period.
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The determination coefficient (R-Sq) has a quite high value (0.996), which means that 99,6 % from the total variation is explained through the linear model.

Considering the information obtained above we can make a prevision on the evolution of the GDP during 2007-2010.

By using the Trend Analysis function of the MINITAB program we obtain the graphical representation form figure 2 and the following values forecasted for the GDP:



Figure no. 2 The tendency of the GDP during 2007–2010

We proceed similarly for the components of the final use method, the results being presented in table 4, and their weight is illustrated in table 5.

During this period also the most important contribution to the formation of the GDP is held by the internal demand, namely the final consumption and the gross fixed capital formation.

The analysis of the data from table 5 shows us that the weight of the final consumption in the GDP, is about 87,54% the variations around this figure being not very great. Taking 2006 as reference year - being the last year before Romania's adherence to the European Union - we observe that the level of the weight of the final consumption each year of the forecasted period does not the value of 87,89% registered on the adherence date to the European Union. This shows us that in the very next period, the weight of the final consumption in the GDP will not register important increasing, we can actually state that there will be a stagnation process.

	Table II0. 4						
Indicators	2007	2008	2009	2010			
GDP	378114	421816	465519	509221			
FC	330374	369084	407793	446503			
GFFC	100249	118915	139240	161225			
VS	993	1586	2375	3355			
NE	-53502	-67769	-83889	-101862			

Ta	ble	no.	4

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In the support of the above affirmations comes the information from table 6 where we show the dynamics of the GDP and of the use components. Thus, the final consumption after a 16,84% increase rhythm to be registered in 2006, as a consequence of the amplification of the population credit, starting with 2007 we observe a significant reduction of the growth rate - to 9,78% in 2007 - as a consequence of the implementation of some limiting measures of the extension of the credit by promoting some real rates of the interests practiced and the maintenance of some cautious wage politics in the public sector. Along the entire analyzed period the average rhythm of the dynamics of the final consumption is 10,37%.

Table no. 5							
Componente		Weight in GDP (%)					
components	2007	2008	2009	2010			
GDP	100	100	100	100			
FC	87,37	87,50	87,60	87,68			
GFCF	26,51	28,19	29,91	31,66			
VS	0,27	0,38	0,51	0,66			
NE	-14,15	-16,07	-18,02	-20,00			

The gross fixed capital formation will register important growth rates - averagely by 17,61% per year - based upon the announced public investments and the private investments internal and external fluxes, as a result of the improvement of perceptions regarding the business environment once our country adhered to the European Union.

Table no. 6								
	2007	2008	2009	2010				
The dynamics of the GDP (Rhythms with chain basis -%)								
GDP	10,42	11,56	10,36	9,39				
The dynamics	of the use	compone	nts of the G	SDP -%				
FC	9,78	11,72	10,49	9,49				
GFCF	18,97	18,61	17,1	15,78				
NE	28,97	26,67	23,79	21,42				

The weight of the gross fixed capital formation in the GDP, will have an increasing trend during 2007-2010 starting from 26,51% in 2007 and reaching 31,66% in 2010, with an annual average of 29,06%. All these values are above the value of 24,61%, registered in 2006, year where we have registered the greatest value form the 2000-2006 period.

The variation of the stocks, with an average weight in the GDP, of 0,45% will have next a modest influence at the formation of the Gross Domestic Product during the 2007-2010 period.

In the following period also, the net export will negatively influence the increase rhythm of the GDP because the bigger and bigger necessary of equipments and technologies and raw materials and materials, which will make the imports continue to surpass the exports.

Thus, in the next four years the weight of the net export in GDP will evolve from -14,15% in 2007 to -20,00% in 2010, with an annual average of -17,06%.

The rhythm of the GDP and its components dynamics are illustrated in table 7.

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According to the above macroeconomical previsions the increase of the nominal Gross Domestic Product will be, averagely, of 10,43% with the possibility to register rate above the average at the middle of the forecasted period. A consequence will be the reduction of the economical and gaps between Romania and the other state members of the European Union.

The analysis of the evolution of the final consumption points out the fact that after a 16, 85% contribution to the dynamics of the registered in 2006, we observe a pronounced decrease, from 8,59% in 2007 and this low level is maintained over the next period, where an average contribution of 9,08% will be registered. All these show us that over the next period the contribution of the final consumption to the dynamics of the GDP will have a decreasing trend.

Table no. 7							
	2007	2008	2009	2010			
The dynamics of	The dynamics of the GDP (Rhythms with chain-basis -%)						
GDP	10,42	11,56	10,36	9,39			
The contribution of	^t the compo	onents to t	he dynamic	s GDP-%			
FC	8,59	10,24	9,18	8,32			
GFCF	4,67	5,45	4,81	4,72			
VS	0,67	-0,36	0,19	0,21			
NE	-3,51	-3,77	-3,82	-3,86			

The contribution of the gross fixed capital formation will have per ensemble an increasing trend in the analyzed period with an annual average dynamics of 4,91%, the greatest contribution being registered in 2008. This tendency shows us an increase of the investments which will positively influence Romania's development rhythm.

The variation of the stocks will have a quite small contribution to the dynamics of the GDP and the negative value from 2008 is to be noticed.

The net export will negatively influence the rhythm of the GDP, with an evolution from 3,51% in 2007, to 3,86% in 2010 with an average annual value of 3,77%. However, its contribution every year of the forecasted period does not exceed the 4,06% level registered in 2006, fact which shows us a certain stagnation of the gap between the goods and services import and export during the forecasted period.

Conclusions

The paper presents a picture of Romania's economical evolution, by enlightening the dynamics of the Gross Domestic Product and of its use components, in the context of the existence of two programs - the Convergence Program and the Preadherence Economical Program - which had as a the creation of the economical conditions for an adherence to the European Union.

The analyses made showed a positive economical evolution of Romania during 2000-2006, afterwards in the previous years negative rhythms of growth were registered.

The Gross Domestic Product had in the analyzed period an increasing tendency, with an annual average rhythm of 30,45%. The greatest weight to the formation of the GDP was held by the final consumption and the gross fixed capital formation, with annual average values of 85,98%, namely 21,68% of GDP.

The net export negatively contributed to the increase of the GDP, as a consequence of the superior dynamics of the imports and exports. Each year the value of the of the imports exceeded the value of the exports, closer values being in 2000 and 2002 when there were registered weights smaller than 5,63%, namely 5,70% of GDP.

Through the use of the statistical analysis program MINITAB, we made forecasts regarding the evolution of the GDP and of its use components, for the 2007-2010 period.

The results obtained, confirm the tendencies registered during 2000-2006. Thus, the GDP will have next an increasing tendency with an annual average rhythm of 10,43%, and the most important contribution will be held still by the internal demand (formed of the final consumption and the gross fixed capital formation).

The net export will continue to negatively influence the increase of the Gross Domestic Product, still the deficit registered each year of the forecasted period will not exceed the one registered in 2006.

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A STUDY REGARDING THE BANKRUPTCY IN ROMANIA. REGIONAL COMPARISONS

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Abstract: The academic world showed a big interest for the study of the companies in financial distress in the last years, due to the implications of the bankruptcy process on the Romanian economy. In this paper, we carried out a study of the main specific features of the bankruptcy in Romania in the period 2003 – 2005. Also, we made a comparison with other countries from the Eastern and Central Europe. The results of this study emphasizes that the trading branches provide the biggest number of bankruptcies in the Romanian economy and also that Romania has a bigger bankruptcy rate than the average level in the Eastern Europe.

Key words: bankruptcy, failure, financial distress, judiciary reorganization

The academic world showed a big interest for the study of the companies in financial distress in the last years, due to the implications of the bankruptcy process on the Romanian economy. The economical growth posted by the Romanian economy at the beginning of this decade and setting the bases for a strong market economy imposed the institution of bankruptcy as a true regulator of the Romanian business environment.

The specific features of the Romanian economy determined a specific pattern for the failures against other emerging economies from the region. The factors that explain most of the bankruptcies in the last years can be found both in the internal and external environment of the enterprises and mainly regard an unsatisfactory meeting of the changing requirements of the market by the products and services of the company. The growth of the people's income and the requirements of joining European Union generated increasing preferences of the consumers for high quality products; but making these products implies both know-how and investments in the operating activity for the enterprises. The low technical and financial potential of many Romanian enterprises, especially SMEs, but also the increasing competition led to the disappearance of many companies from the market, to a concentration of the market and to a consolidation of the Romanian economy.

Within this paper, we carried out a study of the bankruptcy in Romania in the period 2003-2005, on branches of activity, and also we made a comparison with other emerging countries from the region of Central and Eastern Europe.

For the year 2005, the distribution of bankruptcies on branches of activity, in the Romanian economy, is presented in the following table:

Table no.1									
The branch of activity	Companies in bankruptcy	Companies in judiciary reorganization	Companies closed due to the lack of assets	Total	Weight				
Wholesale trading and									
distribution	716	41	54	811	22.64%				
Agriculture, forestry, hunting									
and fishing	499	22	66	587	16.39%				
Retail trading	383	21	38	442	12.34%				
Food and beverage industry	372	17	27	416	11.61%				
Textile, clothing and footwear									
products manufacturing	175	8	10	193	5.39%				
Metallurgical industry	111	8	2	121	3.38%				
Transports	100	7	8	115	3.21%				
Wood processing industry	196	10	7	213	5.95%				
Machines and equipments									
industry	24	1	2	27	0.75%				
Constructions	162	7	10	179	5.00%				
Hotels and restaurants	78	1	3	82	2.29%				
Other activities mainly									
provided to the companies	109	2	4	115	3.21%				
Chemical substances and									
products manufacturing	80	4	2	86	2.40%				
Entertaining, cultural and									
sport activities	25	1	6	32	0.89%				
Real estate transactions	21	2	6	29	0.81%				
Other activities of personal									
services	27	0	5	32	0.89%				
Financial services	21	1	0	22	0.61%				
Extractive industry	12	1	2	15	0.42%				
Post and telecommunications	7	1	1	9	0.25%				
Informatics and additional									
activities	19	0	0	19	0.53%				
Wealth and social security	8	0	0	8	0.22%				
Electrical and thermic power,									
gas and water	6	0	0	6	0.17%				
Sanitation and trash									
removing; salubrity and									
similar activities	20	1	2	23	0.64%				
ΤΟΤΑΙ	3171	156	255	3582	100%				

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Source: Coface Intercredit Romania, www.coface.ro

We notice that the biggest weight is hold by the branch of *wholesale trading*, with more than 22% from the number of bankruptcies. At the same time, *the retail trading* holds a percent of 12%, which shows the vulnerability of this sector to the increasing competition from the last years. This branch will post high weights in the next period too, considering the preference of the population for modern trade, represented by hypermarkets, supermarkets, malls. These will determine a decrease of the activity and of the number of traditional enterprises, aligning the Romanian market to the European tendencies.

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The enterprises from *agriculture* hold the second place in the bankruptcy top, which is explained by the disappearance of the small agricultural lands, insufficient for running efficient activities. The reduction of the number of agricultural companies is favorably appreciated, as it is followed by the development of big companies in this field or by implantation of big European enterprises. But this trend was only partially visible, because, while the West of the country took advantage of consistent investments in this branch, most of the country still confront with subsistence agriculture.

In *the food industry*, the enterprises have a low capacity to meet the European requirements; thus, the obsolete technologies, the lack of investments in high-tech equipments, a bad implementation of the food safety regulations, the low subsidies against the neighbor countries make this sector one of the most vulnerable in the next period, which will increase the number of bankruptcies.

In *the textile industry*, a strong reduction was noticed in the last years, after a long period of time when it had a high development and contributed to cutting down the unemployment in the economy. By gradually diminishing the main competition advantage, the low wages, the markets were lost for the Asian companies benefit and this led to the reduction of the number of bankruptcies in this field. However, the impact on the economy was not significant, due to the low contribution of this branch to creating value added.

A low number of bankruptcies can be found in *the extractive industry, in the electrical, thermic, water, gas and salubrity,* meaning branches dominated by state owned companies or where the state is the main client or beneficiary. In every economy, these companies have the lowest bankruptcy risk.

A low weight of bankruptcies is also posted by *the financial and IT services*, branches that have a high dynamic of development nowadays and that will continue to have high rates of growth in the following years. The financial and banking market, after confronting big bankruptcies at the middle of the last decade, now have a very good period, with accelerated rates of development.

The next table presents the weight and the evolution of the bankruptcies on branches of activity, in the period 2003-2005.

		Year		Variation				
Branch of activity	2003	2004	2005	2004/2003	2005/2004			
Wholesale trading and distribution	19.30%	20.14%	22.64%	0.84%	2.50%			
Agriculture, forestry, hunting and								
fishing	17.77%	19.69%	16.39%	1.92%	-3.30%			
Retail trading	14.83%	12.38%	12.34%	-2.45%	-0.04%			
Food and beverage industry	11.89%	13.18%	11.61%	1.29%	-1.57%			
Textile, clothing and footwear products								
manufacturing	5.98%	5.85%	5.39%	-0.13%	-0.46%			
Metallurgical industry	4.46%	2.81%	3.38%	-1.65%	0.57%			
Transports	4.21%	3.57%	3.21%	-0.64%	-0.36%			
Wood processing industry	4.16%	4.04%	5.95%	-0.12%	1.91%			
Machines and equipments industry	3.68%	3.06%	0.75%	-0.62%	-2.31%			
Constructions	3.68%	3.84%	5.00%	0.16%	1.16%			
Hotels and restaurants	3.04%	2.29%	2.29%	-0.75%	0.00%			

Table no. 2

		Business	s Statistic	– Economi	c Informatics
Dreuch of estivity		Year		Va	riation
Branch of activity	2003	2004	2005	2004/2003	2005/2004
Other activities mainly provided to the					
companies	1.72%	2.69%	3.21%	0.97%	0.52%
Chemical substances and products					
manufacturing	1.65%	1.98%	2.40%	0.33%	0.42%
Entertaining, cultural and sport					
activities	0.66%	0.75%	0.89%	0.09%	0.14%
Real estate transactions	0.63%	0.45%	0.81%	-0.18%	0.36%
Other activities of personal services	0.58%	0.95%	0.89%	0.37%	-0.06%
Financial services	0.48%	1.05%	0.61%	0.57%	-0.44%
Extractive industry	0.35%	0.40%	0.42%	0.05%	0.02%
Post and telecommunications	0.33%	0.38%	0.25%	0.05%	-0.13%
Informatics and additional activities	0.30%	0.13%	0.53%	-0.17%	0.40%
Wealth and social security	0.13%	0.18%	0.22%	0.05%	0.04%
Electrical and thermic power, gas and					
water	0.10%	0.13%	0.17%	0.03%	0.04%
Sanitation and trash removing;					
salubrity and similar activities	0.05%	0.05%	0.64%	0.00%	0.59%

Source: Coface Intercredit Romania, www.coface.ro

The dynamic of bankruptcies in the three years is not spectacular. We notice the retail trading, which have a decrease, more accentuated in 2004, in contradictory with the wholesale trading, which have a bigger growth in 2005. In agriculture, after a 1.92% growth in 2004, the percent of bankrupt companies decreases with 3.3% in the next year. The enterprises from wood processing field have a significant increase of the percent of bankruptcies in 2005, from 4.04% to 5.95%. For the other branches, the rate of bankruptcies is very low and also the dynamic in the analyzed period is insignificant.

The next table synthetically presents the level and the dynamic of the bankrupt and active enterprises for the period 2004-2005:

Table no. 3							
	Ye	Year		2005/2004			
	2004	2005	Absolute	Relative			
Failures	2,031	3,171	1,140	56.13%			
Judiciary reorganization	25	156	131	524.00%			
Closed procedure – lack of assets	264	255	-9	-3.41%			
Total bankruptcies	2,320	3,582	1,262	54.40%			
Active companies	410,514	525,000*	114,486	27.89%			
The bankruptcy rate	0.57%	0.68%	0.12%				

* estimation

Source: Coface Intercredit Romania, www.coface.ro

The improvements brought to the bankruptcy law in 2005 determined an increase of the number of bankruptcies, from 2320 in 2004 to 3582 in 2005. The rate of bankruptcies (against the active companies) grew from 0.57% to 0.68%. The level is still small, considering the big number of enterprises in financial distress that are operating in the economy. However, the changes of the bankruptcy law had

consequences, determining the increase of the number of bankruptcy and there are expectations for this number to increase in the following years.

In the structure, we notice a growth of the number of failed companies (with more than 56%), from 2031 to 3171; at the same time, the companies in judiciary reorganization increased from 25 to 156, which means a relative variation of more than 500%. The number of enterprises closed due to the lack of assets decreased a little, with about 3%. The rise of the number of active companies with more than 27%, up to around 525000 in 2005, determined a moderate increase of the total bankruptcies, considering that the number of bankrupt enterprises grew with 54.4%.

The situation of bankruptcies in Romania is similar with the other countries from The Central and Eastern Europe. In these countries too the procedure for a company to file for bankruptcy is quite difficult and the recovery debts are small in comparison with value of the claims. This can be partially justified by the exaggerated fear of these states (most of them joined EU in 2004) that the integration will determine a massive growth of bankruptcies, especially SMEs; this way, they were not interested in implementing a facile mechanism of filing for bankruptcy.

The table 4 presents the situation of bankruptcies from the Eastern European countries in the period 2004-2005, divided into three groups: failed enterprises, in reorganization or closed procedure due to the lack of assets.

	2004				2005			
	Failed	Reorg.	Closed procedure – lack of assets	Total	Failed	Reorg.	Closed procedure – lack of assets	Total
Czech Rep.	1,460	21	753	2,234	1,205	2	600	1,807
Hungary	7,495	24		7,519	8,099	27		8,126
Poland	889	227		1,116	637	156		793
Slovenia	437	88	264	789	449	106	178	733
Slovakia	223	0	767	990	293	0	1,352	1,645
Estonia	260			260	208			208
Latvia	1,386			1,386	647			647
Lithuania	624			624	577			577
Bulgaria	208			208	238			238
Croatia	330		1,408	1,738	212		630	842
Romania	2,031	25	264	2,320	3,171	156	255	3,582
TOTAL	15,343	385	3,456	19,184	15,736	447	3,015	19,198

Table no. 4

Source: Coface Intercredit Romania, www.coface.ro

In 2004, we observe the big number of bankruptcies posted by Hungary, at high distance from the second country, Romania. Poland, the biggest state out of the analyzed ones, has a surprising low level of bankruptcies, of 1116 enterprises only. In 2005, the hierarchy is not changing much; Hungary has a growth of the number of bankruptcies, followed by Romania, with a considerable increase, up to the level of 3582 companies. Czech Rep., Poland, Latvia and Croatia have a strong diminution of the bankruptcies, while Slovakia has an increase from 990 companies to 1645.

In the structure, we notice, in 2004, a big number of Croatian enterprises closed due to the lack of assets (1408), against the failed companies, of 330 only. A similar

situation is also met in 2005, when the enterprises with insufficient assets are three times more numerous than the failed ones. This could reflect an inadequate bankruptcy law, with an insufficient protection provided to the creditors. A similar situation presents Slovakia, with an increasing disproportion between the two categories in 2005.

We see that we can't identify a pattern of bankruptcies in the Eastern European countries, all these posting varied levels and dynamics. For the states that joined EU at the middle of the year 2004, we notice that the fears regarding a large number of bankruptcies were not confirmed; on the contrary, most of them had a decreasing dynamic against the previous year. At the same time, the size of the country is not relevant for the number of bankruptcies, as we can see from the situation of Poland, Hungary, Latvia and Croatia.

We notice a strong growth of the number of bankruptcies in Slovakia (above 66%) which is the only that detaches itself from the countries that joined EU in 2004. Out of the other states, a similar situation can be found in Romania, with a rise of 54.4%. The states with the biggest percentage reductions are Latvia and Croatia, with more 50% decrease each. On the ensemble of the region, the dynamic of the bankruptcies is insignificant, with an increase of 0.07% in 2005 against 2004. In the structure, for the companies in judiciary reorganization, large variations can be met for Romania (increase of 524%) and Czech Republic (-90.48%). For the enterprises which are to be closed because of the lack of assets, large variations present Slovakia and Croatia, as for the failed companies, Latvia and Romania have a more accentuated variation (-53.32%, respectively +56.13%).

In order to make a correlation between the number of bankruptcies and the size of each country, one could calculate the bankruptcy rate, as a ratio between the number of bankrupt enterprises (no matter the procedure) and the number of active companies. For the previous analyzed countries, the bankruptcy rate in 2005 is calculated in the next table:

					The state of a state
	Active	Total	Ine	I ne weight of	The weight of active
	companies*	bankruptcies	bankrupicy	bankruptcies in the	companies in the total
	_	-	rate	total of the region	of the region
Czech					
Rep.	700,000	1,807	0.26%	9.41%	10.96%
Hungary	440,000	8,126	1.85%	42.33%	6.89%
Poland	3,300,000	793	0.02%	4.13%	51.65%
Slovenia	109,000	733	0.67%	3.82%	1.71%
Slovakia	434,000	1,645	0.38%	8.57%	6.79%
Estonia	96,000	208	0.22%	1.08%	1.50%
Latvia	197,000	647	0.33%	3.37%	3.08%
Lithuania	164,000	577	0.35%	3.01%	2.57%
Bulgaria	360,000	238	0.07%	1.24%	5.63%
Croatia	64,000	842	1.32%	4.39%	1.00%
Romania	525,000	3,582	0.68%	18.66%	8.22%
TOTAL	6,389,000	19,198	0.30%	100%	100%

Table no. 5

Source: Coface Intercredit Romania, www.coface.ro

* estimation

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The average bankruptcy rate in the region is 0.30%, very reduced considering the financial difficulties these companies face. A higher level than the average is posted by Hungary, Croatia, Slovenia, Slovakia, Latvia, Lithuania and Romania. Hungary and Croatia have the biggest levels, above 1%, while Poland and Bulgaria have the smallest ones.

By comparing the weight of bankruptcies in the entire region with the weight of active companies, we notice that the biggest discrepancies are presented by Hungary, which has a weight of 6.89% only of the active companies, but 42% from the total number of bankruptcies, and by Poland, with 51% from the active companies and with a weight of bankruptcies of 4% only. Out of the other states, only Romania has an unbalanced situation, with a weight of 8.22% from the active companies and 18.66% from the bankrupt enterprises. Four countries have a lower weight of bankruptcies than of the active companies (Czech Rep., Poland, Estonia and Bulgaria), while, for the other states, the biggest discrepancies in relative terms are encountered by Hungary and Croatia.

On the ensemble, we conclude that, with a few exceptions, the states that joined EU in 2004 did not face an avalanche of bankruptcies and they managed to absorb quite well the shocks of integration. Out of the two states that joined in 2007, the best position is for Bulgaria, both as the bankruptcy rate and as the dynamic of the number of bankruptcies.

In every market economy, the bankruptcy rate is a barometer of the state of wealth of the economy, but only if the bankruptcy law operates properly and cleans the business environment from the non-competitive enterprises. For the Eastern European countries, a low bankruptcy rate could hide an insufficient motivation of the government for cleaning the business environment or a bad implementation of the law in this field. For this reason, the results of this study must be cautiously analyzed when there are made appreciations regarding the competition capacity of the companies from a specific country or regarding the wealth of the business environment. Also, the results of the previous study are affected by the special situation of Poland, with more than a half of the active companies from the region but with a weight of the number of the bankrupt enterprises of 4.13%. Removing this state from the survey would increase the bankruptcy rate in the region and would change the results.

For the following period, the bankruptcy will gradually become in Romania a true barometer of the wealth of the economic system, reflecting its capacity of regenerating and removing the disequilibrium and the deficiencies from the economy. With a bankruptcy rate above the average level of the region, Romania has a low rate of recovering the debts (6.9% from the debts), but a relative short period of time of cashing a claim against other Eastern European countries (335 days). The efficiency of the current legislation will be proved in the next period, depending on the will of the authorities to successfully implement it.

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THE INFLUENCE OF THE FOREIGN DIRECT INVESTMENT UPON THE FOREIGN TRADE

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Abstract: The increase of the foreign direct investments' volume intercepted by a country determines the increase of the trade balance deficit, due to the imports of technology and of know-how realized by the multinationals' subsidiaries in the host countries, to which are added important profits repatriated proceeded from the exploitation of the economical objectives. The paper proposes to study the effects that the foreign direct investments have upon the imports and the exports of the host countries, concretized in analyses of correlation and regression basing on the data regarding Romania.

Keywords: foreign direct investment, foreign trade, exports, imports, trade balance

The relationships created between the foreign direct investment (FDI) and the commerce of the involved countries, both on the host countries and also on the origin countries, was and still is a subject for study for numerous economical analysts. These ones tried to establish in what measure the foreign direct investments affect the foreign trade and what correlations are established between the two variables.

The economist Rock analyzed⁵⁸ the activity of the multinationals' subsidiaries' activity in the developing countries, establishing that FDI affect the size and the direction of the commercial flows. He found arguments that supported his hypothesis according to which the subsidiaries localized in the host countries import equipments, cars and various components from the mother-company localized in the origin country. After the realization of the production, most of the commercial flows take place, conversely, towards the USA. The analyst concluded that there is a significant correlation between the commerce of these countries with the USA and with the American investments realized in these countries.

Unlike this one, Solomon and Ingham, following their study⁵⁹, reached the conclusion that despite the fact that FDI localized in one country involve important imports necessary in the production process, the multinationals' subsidiaries export few products that need technologies and that have high added value. They show that, although it seemed that the multinationals are oriented towards an intensive commerce, this thing was more a reflection of the activities in which these are involving in and not an own feature of behavior.

Most recently it has been concluded that the multinationals' subsidiaries have a various influence upon commerce, both from the host countries and also from the origin

⁵⁸ M.T., Rock, *Cross-country Analysis of the Determinants of U.S. Foreign Direct Investment in Manufacturing in Less developed Countries*, Ph. D. dissertation, University of Pittsburgh, 1973.

⁵⁹ R.F., Solomon, K.P.D., Ingham, *Discriminating between MNC Subsidiaries and Indigenous Companies: A Comparative Analysis of British Mechanical Engineering*, Oxford Bulletin of Economics and Statistics, vol. 39, 1977, pp. 127-138.

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countries. This way, the quota of the multinationals' subsidiaries proceeded from the developing countries in the total of the exports was of 0,6% in India in 2000, of 11% in China in 2002 and of 2% in USA in 2003. According to the studies⁶⁰ effectuated for the ASEAN area, the transnational's subsidiaries belonging to the developing countries exported 77% of the production in 2005, comparing with the transnational's subsidiaries belonging to the developing countries for which the percent was of only 67%. Unlike these ones, in the same year, in the African host countries the proclivity towards exportation of the developing countries multinationals was a little bit bigger than that of the firms' subsidiaries belonging to the developing countries (17,6% comparing to 15,8%)⁶¹.

Nowadays there are controversies regarding the report between FDI and exports, meaning, if between these two variables is a relationship of complementarity or of substitution. In other words, in what measure the production and the sales of the subsidiary of some multinational replace or stimulate the increase of the exports from the country where it is localized?

One of the reasons which plead in favor for the substitution of the commerce by FDI is the fact that both of them represent alternative ways of entering on the market. On the other way, the realization of FDI in a country allows the company to establish a new base of production which involves the increase of the distribution market, enlarging this way the range of sold products on the host country's market in a much higher measure than it could have realize only by exporting on the respective market. At the same time, there are commercial flows in a double way, reported to the host country: the localization of the subsidiary brings about imports of raw materials, technologies, equipments etc., and the activity of production leads most of the time to exportation of finite products.

According to Mucchielli, the FDI can influence the exports of the host country, acting in many ways⁶²:

-they can localize in a country in order to realize production for the export, be it for the origin country or for third countries or for the gain of new markets in the region;

-FDI can compete with the local firms, obliging them this way to become more competitive or to disappear;

-FDI modify the specialization of the host country exportation.

In their turn, Bouteiller and Fouquin studied⁶³ the evolution of the exports from South-East Asia's country, including Japan. The structure of these countries' exports knew an evident improvement once with the amplification of the international subcontracting phenomenon. Most of these countries initially realized exports of national products with a low added value, which led in time to the increase of the trade balance deficit. At the same time, the authors focused in their study upon the importance of the training effects of the exportation industries upon the rest of the economy. They reached the conclusion that FDI were at the base of three waves of industrialization which succeeded in the Asian countries, thing that determined each

⁶⁰ UNCTAD, WIR 2006, pp.190-191.

⁶¹ Idem.

⁶² J. L. Mucchielli, *IDE et exportations: compléments ou substituts?*, Problèmes économiques nr. 2751, 2002.

⁶³ E. Bouteiller, M. Fouquin, *Le développement économique de l' Asie orientale*, Edition La Découverte, Paris, 2001.

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time the increase of the exports with a high added value in order to keep up with the concurrence of the countries that wanted to impose themselves on the market.

A study⁶⁴ made by Maxwell Fry concentrated on the analysis of the FDI flows' entrance effects upon a group of 6 Asian countries: Indonesia, Filipinas, Korea, Malaysia, Singapore and Thailand. Using regression equations, he determines five channels through which FDI influence the balance of payment, and implicitly, the economy of some country: the investments, the economy, the imports, the exports and the economic growth. The first four variables determine positive effects upon the balance of payment, with a delayed answer for exports. The impact upon the economic growth takes place indirectly through the effects of the investments and of exports.

The result of the dynamic simulation showed that once with the increase of the investment rush, has also grown the current account deficit. Fry sustained that a constant flow of FDI leads to the increase of the economy in a bigger proportion than the investments do, having as effect in the long run the improvement of the balance situation. Though, his study was contradicted by the reality of the Asian crisis in the following years, determined, among others, by a too big deficit of the current account.

A special case and very interesting to analyze is China. A study of the Economist Intelligence Unit from 1996 draws the conclusion that the effect of FDI upon the balance of payment was positive, reported to the level of the 90's, due to the large volume of FDI entrance in the country. In exchange, the net commercial effect of the multinationals was negative because these ones were centered on raw materials imports, on the usage of cheap labor for their procession and on goods exports with a low added value. This aspect has improved in time by diminishing the report between the imports and the exports of less manufactured products from 92% in 1994 to 78% in 1996. Though, they situated at the level of 1996 under the local firms' values, whose exports implied an added value of 66%.

The specialists' study of the profile magazine predicted an increase of the payment balance deficit of China due to the increase of the repatriation of the afferent products to the foreign capital, being maintained at the same time, at high quotas the volume of the investment flows, which will allow the deficit's financing.

And still, analyzing in time the economical evolution of China, the specialists⁶⁵ conclude that the reality contradicted the predictions. FDI contributed, approximately with about 0,6% per year to the increase of the China's GDP during 1992-2004. The current account of the payment balance records surpluses from one year to another⁶⁶, while the economic growth is registered at values of over 8%. This "miracle in the history of the economical human development"⁶⁷ has as a starting point a total change of optics regarding the macro economical politics of the state which consist, among others, in imposing conditions to the investors in order to realize exports with a high

⁶⁴ M. Fry, *How Foreign Direct Investment in Pacific Asia Improves the Current Account*, Journal of Asian Economies, 7, 1996, pp. 459-486.

⁶⁵ Justin Yifu Lin, *The China Miracle:How OECD Country Policies Contributed?*, May 2004, Paper prepared for the Conference "The Impact and Coherence of OECD Country Policies on Asian Developing Economies," held at Paris on June 10-11, 2004, p. 29.

⁶⁶ According to the statistics OECD, in the year 2004, the current payment balance account of China registered a pozitive balance account of 69.69, and in 2005 this one has increased at 160.818 \$.

⁶⁷ Justin Yifu Lin, op. cit., p. 2.

added value and in reinvesting the profits, corroborated with an immense tank of natural and human resources.

In Romania, priority after 2000, when we can speak of positive economic growth, the foreign trade of goods recorded an ascendant evolution, the growth being of 197,4% in 2005 at exports comparing with the year 2000 and of 228,8% at imports reported to the same years⁶⁸.

At the level of the year 2000, the multinationals' subsidiaries localized in Romania had an intense capacity of export in proportion of approximately 75% of the business number, and more than 50% of these imported raw material and the materials in proportion of $100\%^{69}$.

The firms with foreign capital from the processing Romanian industry activated most of the time in branches that present competitive advantages of Romania, branches that can be characterized by a low added value: the wood processing industry, the confections' industry, the leather goods' industry and the shoes' industry. Though, the foreign capital had a significant presence and in branches with a superior degree of processing, such as the industry of electrical and optical equipments, the industry of road ways of transportation or the chemical industry.

Also, in accordance to the Romanian specialists, foreign firms are more performing than those with an autochthonous capital concerning the productivity of work and of the capital, the capacity of exportation, the investment effort and the usage of subcontracting. Though, at an aggregate level, the weight of the added value in the business number was at minimal values, which shows that FDI were oriented prevalent towards activities with a low added value by the practice of the processing with lohn.

The situation maintains unchanged in the following years, 2001-2004, the main source of the Romanian export being the processing industry that supplied 97,1% of Romania's exports. These practices led in time to the worsening of the current account deficit.

In 2005 can be noticed a small modification in the structure of the foreign trade, meaning that the exportation of goods with medium and high degree of processing and diminishing their weight concerning the goods processed with lohn increased. Altogether with these ones, the import of raw materials, alongside with machines, outfits, devices, equipments and know-how afferent to foreign investments increased.

In our opinion, the practice of lohn, characterized by massive imports of raw materials and materials, followed by the exportation of products with allow added value (clothing, shoes, knitwear, confections etc.) is totally negative for the Romanian industry, contributing in an exaggerated measure to the growth of the trade balance deficit. This deficit is diminished in a small measure by the exports with a low added value practiced by the multinationals' subsidiaries, the report between the value of expatriated incomes and that of exports being totally unbalanced. These firms only exploit the cheap labor from Romania and have in view to repatriate the profits.

In such situation, we consider that the Romanian state has the duty to interfere in order to discourage the investments that use the technique of processing with lohn and to orient them towards production sectors with a high added value.

⁶⁸ Acording to the NIS, the annual of External Commerce of Romania, 2006, p.10.

⁶⁹ V. Boşcaiu, D. Liuşnea, C. Munteanu, L. Puşcoi, *Impactul comerțului exterior și investițiilor străine directe asupra productivității în industria prelucrătoare. Cazul României*, CRPE, Lucrare nr. 22/iulie 2000.

Further on our study, we will realize correlation and regression analyses between FDI variables, exports and imports in order to determine the degree in which the foreign direct investments influence Romania's trade.

The correlation and regression analyze between FDI variables and the foreign trade of Romania

For an analysis as relevant as possible we have in view the evolution of the three indicators, FDI, exports, imports for the entire period 1991-2005:

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Year	FDI (mil. dolari)	Exports FOB	Imports CIF
rear		(mill. dollars)	(mill. dollars)
1991	973,988	4164	5723
1992	563,399	4892	6522
1993	385,855	6151	7109
1994	851,203	7910	10278
1995	220,785	8084	11435
1996	511,039	8431	11280
1997	352,762	8302	11838
1998	789,096	8503	10395
1999	1872,938	8487	10557
2000	754,243	10367	13055
2001	203,471	11385	15552
2002	888,029	13876	17862
2003	1407,087	17618	24003
2004	2948,882	23485	32664
2005	3149,044	27730	40463

Table 1. The volume of FDI and of foreign trade

Source: NIS, The Statistical Annual and The Monthly Statistical Report nr. 12/2005

1. The correlation and regression analysis between FDI variables and imports

Correlations

			foreign direct
		exports	investment
Pearson Correlation	exports	1.000	.827
	foreign direct investment	.827	1.000
Sig. (1-tailed)	exports		.000
	foreign direct investment	.000	-
Ν	exports	15	15
	foreign direct investment	15	15

The Pearson correlation coefficient is equal with 0.827, which signifies that the connection between the two variables is direct and very tight.

The correlation coefficient Sig=0,000<0,05, so the connection between the two variables is statistically significant. It results that the FDI variable influences the exports' variable.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.827 ^a	.684	.660	3940.3339

Model Summary^b

a. Predictors: (Constant), foreign direct investment

b. Dependent Variable: exports

The determination report R Square is equal with 0,648. It results that 64,8% from the variation of the exports is explained by the variation FDI.

anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,37E+08	1	437295106,7	28.165	.000 ^a
	Residual	2,02E+08	13	15526231,59		
	Total	6,39E+08	14			

a. Predictors: (Constant), foreign direct investment

b. Dependent Variable: exports

Through ANOVA is tested the significance of the correlation R report.

The Fisher test is significant statistically because Sig=0,00<0,05. With a probability of 99% we can affirm that the connection between the two variables is significant statistically.

			Coefficient	S			
Model	Unstand Coeffi	dardized icients	Standardized Coefficients	t	Sig.	95% Confide for	ence Interval B
	В	Std. Error	Beta	1		Lower Bound	Upper Bound
1Constant	4878.372	1579.786		3.088	.009	1465.451	8291.293
FDI	6.062	.001	.827	5.307	.000	.004	.009
	D 1 /	x 7 · 1 1					

a Dependent Variable: exports

We admitted a linear connection between the two variables. The regression equation has the form:

Y=a+bX,

where:

a-the constant; b-the regression coefficient (the straight slope).

The regression equation is:

Y=4878,372+6,062X,

where:

Y=exports X=FDI.

Sig=0,00<0,05, so the beta regression coefficient is statistically significant.

In conclusion, if the FDI grow with one unity (one unity = one million dollars), then the exports grow with about 6,062 million dollars.



Figure 1. The connection between FDI and FOB exports, at Romania's level, during 1991-2005.

2. 1	The correlatio	n and regression	n analysis between	FDI variables and imports
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		imports	foreign direct
Pearson Correlation	imports	1.000	.826
	foreign direct investment	.826	1.000
Sig. (1-tailed)	imports		.000
	foreign direct investment	.000	
N	imports	15	15
	foreign direct investment	15	15

Correlations

The Pearson correlation coefficient is equal with 0.826, which signifies that the connection between the two variables is direct and very tight.

The correlation coefficient Sig=0,000 < 0,05, so the connection between the two variables is statistically significant. It results that the FDI variable influences the imports.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826 ^a	.682	.657	5796.9513

Model Summary^b

a. Predictors: (Constant), foreign direct investment

b. Dependent Variable: imports

The determination report R Square is equal with 0,682. It results that 68,2% from the variation of the imports is explained by the variation FDI.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9,36E+08	1	935919677,3	27.851	.000 ^a
	Residual	4,37E+08	13	33604644,44		
	Total	1,37E+09	14			

a. Predictors: (Constant), foreign direct investment

b. Dependent Variable: imports

The Fisher test is significant statistically because Sig=0,00<0,05. With a probability of 99% we can affirm that the connection between the two variables is significant statistically.

	Coefficients							
	Unstand	dardized	Standardized	+	Cia.	95% Confid	ence Interval	
Model	Coeff	icients	Coefficients	ι	Sig.	fo	r B	
	В	Std. Error	Beta			Lower Bound	Upper Bound	
1Constan	t 5865.708	2324.155		2.524	.025	844.678	10886.739	
FDI	8.868	.002	.826	5.277	.000	.005	.012	

a Dependent Variable: imports

The connection between the two variables is linear. The regression equation has the form:

Y=a+bX,

where:

a-the constant; b-the regression coefficient (the straight slope).

The regression equation is:

Y=5865,70835 + 8,868 X,

where:

Y=imports

X=FDI.

The beta regression coefficient is statistically significant: Sig=0,00<0,05.

If the FDI grow with one million dollars, then the imports grow with about 8,868 millions.



Figure 2. The connection between FDI and CIF imports, at Romania's level, during 1991-2005

In conclusion, the foreign direct investment influence the size and the redirection of the commercial flows but, despite the fact that the FDI localized in one country bring about important imports necessary in the production process, multinationals' subsidiaries export few products than need advanced technologies of fabrication and which have high added value.

The investments intercepted by Romania influence both the imports and also the Romanian exports, but the rhythm of the imports' increase outruns the exports one. This aspect has as direct effect the accentuation of the current account deficit from one year to another. This is why we suggest the implication of the Romanian state through adequate macro economical politics, by reorienting the foreign investors towards economic sectors with a production of high added value, which should produce both for the interne market in order to diminish the imports and also for the external market for the equilibration step by step of the trade balance.

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