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ARTICLES

Original scientific paper
UDK 338.1(497.1)"1952/1988"
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REGIONAL DISPARITIES IN YUGOSLAVIA FROM 1952 TO 1988

***Abstract**: Do regions converge or diverge in the process of their development? What happened in the socialist Yugoslavia to that effect? This article first considers general questions of regional disparities within the context of contemporary and often contradictory theoretical ideas. The second part describes the specific characteristics of the regional scene of the socialist Yugoslavia. Then the review of analysis methods that quantify regional disparities follows (measured by three indicators: employment, capital assets, social product) in the Federal People's Republic of Yugoslavia/Socialist Federal Republic of Yugoslavia in the period from 1952 to 1988. Then the article presents the results of measuring relative and absolute differences among "Yugoslav" regions. These results are then compared with the results of other researches in order to consider the Yugoslav regional problem within the international and historical perspective.*

***Key words**: regional disparities, Yugoslavia, Yugoslav "regions", 1952-1988.*

1. Regional disparities: convergence or divergence?

A generally accepted answer has not yet been given to the question whether the regional differences originate or disappear in the course of the development process.[1]

Generally, the observation of regional differences in development attracts attention in many ways:

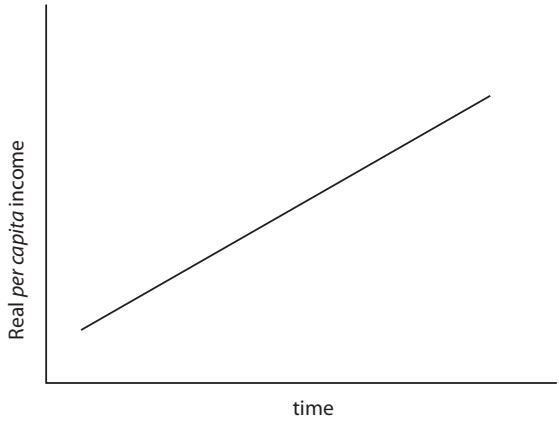
- It helps understand so-called North-South phenomenon

[1] The answer to that question in neo-classic regional analysis has been given in two following works: G. H. Borts, "The Equalization of Returns and Regional Economic Growth", *Economic Journal*, vol. 70, 1960, pp. 319-47; and G. H. Borts, P. Stein, *Economic Growth in a Free Market*, Columbia U. P., New York, 1964. An alternative answer is contained in the works by G. Myrdal, *Economic Theory and Development*, Yale U. P., New Haven, 1958 and other authors (See Chapters 4 and 5 in: Harold Brookfield, *Interdependent Development*, Methuen, London, 1975).

- It shows that dichotomous classification of countries (to developed and underdeveloped) is faulty; S. Kusnets noticed almost half a century ago that such a classification is oversimplified and showed that differences appeared especially within a group of underdeveloped countries where according to G. Myrdal cumulative and circular causes of poverty take action.

J. G. Williamson undertook the first comprehensive comparative study of the phenomenon of internal regional differences.[2] He studied 24 countries to that effect and calculated for each of them the dispersion of weighted *per capita* income for individual regions. In order to take into account the different sizes of regions and their different number in a proper manner, he changed three various dispersion measures,[3] which offered similar results. According to Williamson, if two sets of relations (first, real per capita income in some country and time and second, some measure of regional disparity and time) were observed for a long period, then they would be similar to those shown in Graphs 1 and 2.

Graph 1 describes a path of global economic growth of a country in accordance with a long prevailing concept of development (as economic growth). It is well illustrated by A. Lewis's definition of a subject of his Theory of economic growth: "The topic of this book is per capita growth of production … economic growth, and not distribution; second, not consumption but production."



Graph 1. Global economic growth path

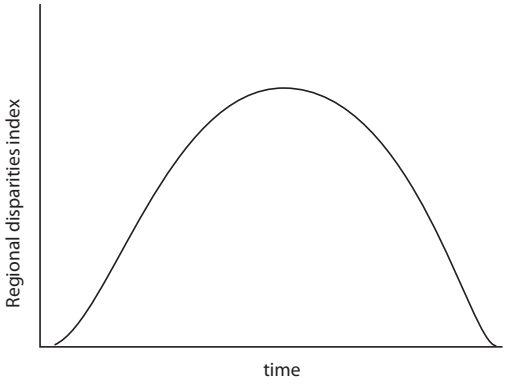
Today, however, it shows in many countries that we cannot wait for underdeveloped regions to develop without bringing into question a stable development

[2] J. G. Williamson, "Regional Inequality and the Process of National Development: A Description of the Patterns", *Economic Development and Cultural Change*, 4 (Part II), 1965.

[3] *Ibidem*, p. 40.

of national economy. Sometimes, due to the regional problem, the state order or even its survival is at stake.[4]

Graph 2 describes a universal pattern of regional disparities changes, as seen by Williamson:[5] "Ever increasing regional income disparities and growing North-South dualism are typical for early stages of development, while regional convergence – disappearance of strict North-South problems – is typical for more mature stages of national growth and development."



Graph 2. Williamson: regional disparities change pattern
Source: Geoffrey J. D. Hewings, *Regional Industrial Analysis and Develpment*, Methuen, London, 1977, p. 2.

This argument, based on comparison of relative indexes on the sample of countries at various levels of development, as well as on historical tendencies in individual countries, is usually considered as the reconciliation of two main types of theories of (regional) development – balancing and unbalancing. The second is considered characteristic for early stages of development and the first one for more mature economies.

Many implications may be inferred from the existence of such an 'unwavering' law, which provides for convergence of regional incomes as natural by-product of economic development:

1. Inherent contradictoriness of economic growth between efficiency (rate of global growth) and equality (regional inequality). Regional inequalities

[4] See for example: Č. Ocić, "The Regional Problem and the Break-Up of the State: the Case of Yugoslavia", *Acta Slavica Iaponica* (*Sapporo*), vol. 16, 1998, pp. 74-110. Electronic issues at the following addresses: http://www.src-home.slav.hokudai.ac.jp/publictn/act...v/caslav.html and http://www.slavweb.com/eng/cee/yugo-e2.html, as well as www.iet.ru/special/cepra/drob/biblio.htm

[5] *Ibid.*, p. 15.

are the price that underdeveloped countries must pay in some period in order to achieve economic maturity, which automatically leads to less sever regional inequalities.

2. Regional planning thus has to be secondary in relation to the global growth policy. If re-distribution of income is necessary because of political or social reasons, it should be known that a part of economic efficiency and economic growth are sacrificed.
3. The relation of economic growth and regional inequalities should be considered universal. Williamson's argumentation implies that 'unwavering' law is in force independently of a model of strategy of development or (capitalist or socialist) 'production relations'.[6]
4. The developing countries nowadays should follow the development pattern that the developed countries have already passed through various stages. In other words, K. Marx and W. W. Rostow are considered right.
5. The idea of strategic industrialization connected with process of urbanization stood behind the fast economic growth.

[6] PR of China can serve as a multiple example about how important regional disparities are, about disputes related to regional divergence and convergence, and finally about whether the Williamson's law is universal or valid for the market only, and maybe not for socialist economies. Only a small part of new literature on regional disparities in China will be quoted here: A. Hu, Ch. Wang, X. Kang, *Regional Disparities in China*, Liaoning People's Press, Shengyang, 1995; K. Y. Tsui, "Economic Reform and Interprovincial Inequalities in China", *Journal of Development Economics*, 50, 1996, pp. 353-368; J. Chen, B. M. Fleisher, "Regional Income Inequality and Economic Growth in China", *Journal of Comparative Economics*, 22, 1996, pp. 141-164; World Bank, *Sharing Rising Incomes: Regional Disparities in China*, The World Bank, Washington, 1997; X. Tian, R. Duncan, „China's Inter-Provincial Disparities: An Explanation", *Communist and Post-Communist Studies*, vol. 32, 1999, pp. 211-214; Y. Wu, "Income Disparity and Convergence in China's Regional Economies", *Discussion Paper 99-15*, Department of Economics, University of Western Australia, Nedlands, http://www.econs.ecel.uwa.edu.au/economics/dpapers/DP1999/9.15.pdf; X. Tian, *China's Regional Economic Disparities Since 1978. Main Trends and Determinants*, Singapore University Press, 1999; H. Sun, "Economic Growth and Regional Disparities in China", *Regional Development Studies*, vol. 6, 2000, pp. 43-66; S. Démurger, "Infrastructure Development and Economic Growth: An Explanation for Regional Disparities in China?", *Journal of Comparative Economics*, vol. 29, 2001,pp. 95-117; *China's Regional Disparities: Issues and Politics*, eds. V. F. S. Sit, D. Lu, Nova Science Publishers, New York, 2001; C. Fang, W. Dewen, D. Yang, "Convergence, Divergence and Conditions: Explaining Regional Disparities in China", *China and World Economy*, vol. 2, 2002, pp. 17-24; Cai Fang, Dewen Wang, *Regional Comparative Advantages in China: Differences, Changes and Their Impact on Disparity*, The Institute of Population and Labor Economics, Chinese Academy of Social Sciences, Beijing, December 2003; X. Wang, *China: Regional Disparity, Policy Adjustment and New Challenges*, http://www.eias.org/conferences/euchina611/regionpolicy.pdf; C. Fang, W. Dewen, D. Yang, "Explaining Regional Disparities in China", in: *China: An Economics Research Studies Series*, vol. 1: A Fresh Perspectives, Eastern University Press, Singapore, 2004, Ch. 5: pp. 61-77; X. Fu, "Limited Linkages from Growth Engine and Regional Disparities in China", *Journal of Comparative Economics*, vol. 32, 1, 2004, pp. 148-164.

6. It is considered that market mechanism is capable to provide for the efficient allocation of resources and accordingly for the high rate of growth[7], or that it is at least possible by state intervention.
7. The idea of territorial balance should not be abandoned even if the existing evidence contradicted it. Even in cases when it is admitted that the game of market power leads to greater inequality, the territorial balance is achievable as long as it is accepted that there are potentials of hidden dynamics in capitalist economy and that certain efforts will be made to enable it work on a right turning point. This is the idea of reverse polarization formulated by Richardson in 1981,[8] and which has many common elements with the essence of doctrine resulting from Williamson's work.

It seams that Williamson's 'unwavering' law is valid or out-of-fashion models may live longer despite the severe criticism they are exposed to. Williamson's theory was also a criticism (and revision) of a widely spread opinion until then according to which a vicious circle (*circulus vitiosus*) of poverty rules in underdeveloped countries, as formulated by Winslow, 1951 and Nurkse, 1952. Applied on regional disparities within underdeveloped countries, this means a constant process of growing regional differences.

Until 1950s little attention was paid to the problem of regional disparities in underdeveloped countries; researches referred to developed countries, primarily the USA. A new approach, based on the ideas of Winslow and Nurkse, was formulated by Myrdal: this is the *principle of circular and cumulative causative impact*.[9] It starts from the fact that the image of automatic system stabilization represents a false analogy for the explanation of changes in social system, considering that the balance bases on a false representation that every change of system causes automatically the reverse change. According to his theory, such a tendency of automatic system stabilization does not exist. In a normal case, writes he, the change does not cause a change of opposite sign, but the first change initiates and supports other changes that drive the system in the same direction as the first change. Due to such circular causality, the social process tends to be cumulative and often acquires growing speed. This process, thinks Myrdal, can be

[7] On various views of market and regional disparities relation, see: Z. Pjanić, "Tržište i regionalni razvoj", in: *Neravnomerni regionalni razvoj u ekonomskoj teoriji i praksi*, ed. K. Bogoev, K. Miljovski i N. Uzunov, MANU, Skopje, 1980, pp. 155-174; D. Salvatore, "The Operation of the Market Mechanism and Regional Inequality", *Kyklos*, vol. 25, 3, 1972, pp. 518-536; N. Genovese, G. Sobbrio, "Regional Inequality and the Market Mechanism – A Comment", *Kyklos*, vol. 26, 3, 1973, pp. 621-623; D. L. McKee, "Regional Inequality and the Market Mechanism – A Comment", *Kyklos*, vol. 26, 3, 1973, pp. 624-626; D. Salvatore, "Regional Inequality and the Market Mechanism – Reply", *Kyklos*, vol. 26, 3, 1973, pp. 627-633.

[8] H. W. Richardson, "Polarization Reversal in Developing Countries", *RSA Papers*, vol. 45, 1981.

[9] G. Myrdal, *Economic Theory and Underdeveloped Regions*, Gerald Duckworth, London, 1957.

stopped if new exogenous changes oppose it. Balancing powers, however, are not within the system, so the system remains unstable. Every new exogenous change acts therefore through reaction of cumulative changes within the system in the direction of a new change.

This means that under *ceteris paribus* conditions the regional disparities will continuously intensify, unless the impact of exogenous powers does not oppose them, such as for instance the discovery of mineral resources, the development of new production procedures (which requires new factor combination) and other factors that could lead to changes of economic or political constellation. The consequences, however, are not necessarily the elimination of regional imbalances. It is on the other hand possible that qualitatively different regional imbalance would appear as an outcome, that the position of one region will get better and of the other will get worse, and that there would not be narrowing of regional differences at that. However, observed from inter-temporal point of view, if Myrdal logics is followed, there may not be balancing, but regional difference may remain further (in the sense of unchanged hierarchy of the region), and that certain indicators of regional development change. This is why in this paper three representative indicators are taken when measuring regional disparities, and not only one indicator, as it is usually done.

2. Regional problem in Yugoslavia

Regional problem in socialist Yugoslavia (1945-1990) was not only the issue of economic disparities. Both ethnic problem and the question of state order reflected through it. It was the resultant of various historical influences[10] that cre-

[10] "In order to understand the historical influence," points Kosta Mihailović, "it should take into account that in the past the territory of Yugoslavia made the periphery of two empires. Bordering areas are less developed as a rule." (Regionalna stvarnost Jugoslavije", *Ekonomika*, Beograd, 1990, p. 16) Jovan Barać writes about it picturesquely: "Conquering nations took only river valleys and planes, while domestic element escaped into impassable rocky grounds and swamps. However, no matter from which side the conquerors came … our country has always been at the periphery…, far from centrum of conquering nation, so to speak, always temporarily occupied, always exposed even in the most peaceful times to guerrilla warfare and attacks by other conquerors or adventurous barbarian tribes, so that over thousands of years it has always been disturbed and always on the border. There is not any part of our country where there is not some kind of military frontier or border-land (Timočka krajina, Bosanska krajina, Kordun, Kranjska, etc.)..." (*Problem pasivnih krajeva*, Zemun, 1939, pp. 12-13). Speaking about military frontier, Pavle Mijović observes this phenomenon within a wider context: "Wider teritory of two great ancient towns of Bar and Ulcinj... is not better characterized than by their historical name 'military frontier' (krajina). Since the second half of 11th century, when our first South-Slav state on the South Adriatic was stablizied, Byzantium only touched this bordering territory... The name of this area ... reminds of a rarely interrupted state of war on both sides of the river Bojana. This military frontier of ours is not only the oldest ... but it is situated at the crossroads of great ancient civilizations, prehis-

ated the mosaic of cultural patterns. This is the source of its complex *nature* and extreme importance within Yugoslav context. A specific seal on the approach of solving regional problems was set by ruling ideology. The proportions of regional problems can be considered variously, from the point of view of value, theory, methodology and practice.

If society values egalitarianism more, then the decision makers and the public would be more susceptible to the existing regional differences; the opposite refers to the society that prefers liberalism.

Depending on theoretical concept of the entire and regional development, the proportions of regional problems can be made equal to the extent of underdevelopment, comprehended for instance as the participation of traditional (natural) sector or as the existence of absolute or relative poverty, and similar.

When quantifying the proportions of regional problems, it should take into account the level, units of observation, their characteristics (expressed by appropriate indicators) and the type of statistic representation. The republics and provinces are the units of observation at the federal level, and municipalities at the republican/provincial level of determining the proportions of regional problems. The precision of measuring, naturally, depends on the precision of gauging of the unit of observation. Territory, population, employment, capital and national product are representative *features* of every unit of observation and it is necessary to express the proportions of regional problems on each of them – as a *level index* of

toric Illyrian, Helenistic and Roman, and in the Middle Ages of the Roman, Slave and Turkish. Geographic character of this military frontier at the border of the East and the West determined since the ancient times the outcomes of all fruitful and ominous touches of both those worlds... Since God knows when all conflicts in this military frontier and in its vicinity where world conflicts, and if they appeared as local, it was only a illusion of complex contradictories among great powers." (Pavle Mijović, "Vječno na krajini", in: *Virpazar. Bar. Ulcinj*, Obod, Cetinje – Beograd, 1974, p. 11). This actually refers to all our military frontiers, more or less.

"Military frontier (Krajiška)" etimology in toponyms of former Yugoslavia can be traced from derived ones (Krajišnik, Krajište, Krajiška Kutinica) to direct ones: in Slovena Bela and neighbouring Suha Krajina, Krajina in Montenegro (between Rumija and Skadar Lake). Žarko Vidović thinks that the whole "territory of Montenegro and Brda represents a Venetian military frontier" as a complement to Austrian military frontier: "Military frontier as Serbian historical institution was *Venetian* (in Montenegro and Dalmatia) and Austrian (Lika, Kordun, Banija, Banat until Temisoara, Srem)". (Ž. Vidović, *Njegoš i kosovski zavjet u novom vijeku*, "Filip Višnjić",Beograd, 1989, pp. 66, 67). About military frontiers, see also: M. Radeka, *Gornja krajina ili Karlovačko vladičanstvo. Lika, Krbava, Gacka, Kapelsko, Kordun i Banija*, Savez udruženja pravoslavnih sveštenika SR Hrvatske, Zagreb, 1975; G. Stanojević, *Dalmatinske krajine u XVIII vijeku*, Istorijski institut, Beograd – Prosvjeta, Zagreb, 1987; *Vojne krajine u jugoslovenskim zemljama u novom veku do Karlovačkog mira 1699*, ed. V. Čubrilović, SANU, Beograd, 1989; D. M. Berić, *Slavonska vojna granica u revoluciji 1848-1849*, Prosvjeta and Institut za istoriju u Sarajevu, Zagreb – Sarajevo, 1984; S. Nakićenović, *Kninska krajina*, SKD "Zora", Beograd – Knin, 1990; V. S. Dabić, *Vojna krajina. Karlovački generalat 1530-1746*, Sveti arhijerejski sinod Srpske pravoslavne crkve, Beograd, 2000, S. Jović, *Etnografska slika Slavonske vojne granice*, Čigoja štampa, Beograd, 2004.

chosen indicators or as their participation within the total. In case of expressing by the level index, the measure may be global *average* or *the most developed region*.

From the practical aspect of social intervention in "problematic" regions, the proportions of regional problem are defined by the possibilities to solve it and they are primarily determined by the degree of general development of the country. In general, only such a determination of proportions is practically relevant, since the scope of intervention assets for realization of the goals of regional policy is determined on the basis of it. This, however, does not mean that the proportions of regional problem were determined in such a way. Their official determination, in fact, was the resultant of the relation of regional powers, economic interests, political will and ruling ideological postulates.

The status of underdevelopment and the scope of transfer depended on (unlimited) desires on one hand and on (limited) possibilities on the other.

Table 1. *The proportions of regional problem: participation of underdeveloped areas in respective aggregates of Yugoslavia*

Characteristics \ Year	1947/52	1965	1988
Area	(34.5%) 39.7%	39.7%	39.7%
Population	(26.0%) 30.6%*	33.8%	38.5%
Employment	(22.4%) 24.2%**	24.6%	29.3%
Capital assets	(18.1%) 19.8%**	25.3%	27.1%
National product	(21.1%)23.4%***	22.0%	22.6%

Year 1948; **1952; ***1947

The percentages in brackets refer to Bosnia and Herzegovina, Macedonia and Montenegro, which according to the first five-year plan (1947-1951), held the status of the underdeveloped. The percentages without brackets, in addition to these three units, include Kosovo and Metohija.

The estimates of proportions of regional problems are various.[11] First of all, the "official" proportions of regional problem within Yugoslav framework

[11] There is a general agreement that this is a long-term structural problem. Galbraith attempts to persuade us that "the structure is something stubborn that resists changes" (according to French sociologist Georges Gourvitch): "Let us assume that in 1880, we set on a railway tour around the territory marked today as a socialist camp. The highest and distributed the best living standard would be found at the territory of the German Democratic Republic today. The next highest standard would be in Czech republic, Czechoslovakia today, and then in Slovenia and Croatia, which belong to present Yugoslavia. Hungary, Austrian and German parts of Poland would be even poorer, and poorer than them would be Macedonia, Montenegro and parts of Serbia… The same tour today… would show the same relative relations of prosperity and poverty…" (J. K. Galbraith, *The Nature of Mass Poverty*, Penguin, Harmondsworth, 1980; translated as: "Priroda masovnog siromaštva", *Treći program*, 59, 1983, p. 289).

(defined by the official status of underdevelopment of the republics and provinces shown in Table 1) do not correspond to the real ones, since the boundaries of underdevelopment do not correspond to the borders of the republics and provinces. More realistic treatment of the regional problem regarding territorial scope existed only in the period from 1960 to 1965.[12] Even then, however, there were underdeveloped enclaves outside the officially determined underdeveloped areas or within developed areas, while within "the compact southern area of Yugoslavia that was (according to 1961-1965 Plan, note by Č.O. See Graph 3b) considered underdeveloped there were certain towns and small industrial centers that taken as isolated did not have characteristics of the economically underdeveloped areas. Therefore, a compact southern part of Yugoslavia, where 1/3 of the entire population of the country lived, could have been taken as economically underdeveloped area of Yugoslavia (underlined by Č.O.). According to the number of inhabitants, such a marked area almost corresponds to the results of the analysis of economic development per municipalities…"

Every analysis per municipalities would undoubtedly show the differentiation inside both developed and underdeveloped areas. Namely, there are pockets of underdevelopment inside the developed areas, as well as developed centers within underdeveloped areas.

Yugoslav regional policy, however, insisted firmly on the simplified dichotomous division to the developed economically and underdeveloped republics and provinces (which has never had *de facto* support in reality). The consequence was as follows: in 1948, 30.57% of Yugoslav population lived at the territory that after the World War II almost continuously held the status of underdevelopment (Bosnia and Herzegovina, Macedonia, Montenegro and Kosovo and Metohija) and in 1965, it was 33.84% of Yugoslav population. In 1990, the percentage increased to 40.23%.

Taking into account only these data, the Yugoslav regional policy, which (especially in the period from 1965-1990) disregarding the interdependence of development of all regions was reduced to one specific segment of regional development, i.e. to the development of underdeveloped areas – could be considered unsuccessful since it did not lead to the reduction of the number of people living under the conditions of underdevelopment but to the increase of that number. It is actually a rigid and rough determination of underdeveloped areas: regional policy clashed with real proportions of the regional problem, so that the presented data do not show what happened with the population economically at such imprecisely defined area of underdevelopment.

[12] The Social plan of the economic development of Yugoslavia for the period 1960-1965 treated the area of 105450 km or 41.2% of the total national territory as underdeveloped, and it was populated in 1960 with some 6.2 million inhabitants, or 33.2% of the entire Yugoslav population. (D. Vasiljević, "Nerazvijena područja", in: *Privredni sistem i ekonomska politika Jugoslavije*, revisors Lj. Marković, B. Mijović and Ž. Bulajić, Rad, Beograd, 1961, p. 324).

The units of observation in this paper are former Yugoslav republics and provinces. Here also, which is a frequent case, the researcher is forced to operate with the existing administrative and political delimitations, regardless of whether they fulfill economic criteria of regionalization or not. Consequently, the term 'region' (for the republic or province) will be used conditionally:[13]

"… Regional aspect of social and economic development appears as a component… of the development, i.e. as one of proportions of development that the structural coordination of the development in general depends on, and consequently the development of the whole country. It is important for the development of Yugoslavia as much as it is important for the republics and provinces. However, the question may be asked what territorial units should represent the regional aspect of the development of Yugoslavia. Considering that SFRY is the union of the SFRY nations and their states-republics, it is obvious that from the level of Yugoslavia the territories of republics (and provinces) should be taken into account for the requirements of consideration of regional aspect of development, but they should not be treated as regions. Therefore, the regional aspect of the development of Yugoslavia should not be termed "the development of republics and provinces". It could be called regional aspect of the development of Yugoslavia only *conditionally*, for practical and analytical needs. The real regional aspect of the development of Yugoslavia would be the one that would treat territorial regional units as regions, more precisely Yugoslav regions, but officially we do not have such regions."[14]

Certain efforts in the direction of regionalization at Yugoslav level, which appeared occasionally from 1945 to 1974 to define such regions for more successful global and regional development, did not yield fruit. With the exception of the period from 1961 to 1965, the republics and provinces, or to be more precise underdeveloped republics and the province of Kosovo and Metohija, were in the focus of attention at the Yugoslav level. Until 1965 they were considered within "spatially coordinated", and since that year within "spatially uncoordinated regional political target system".

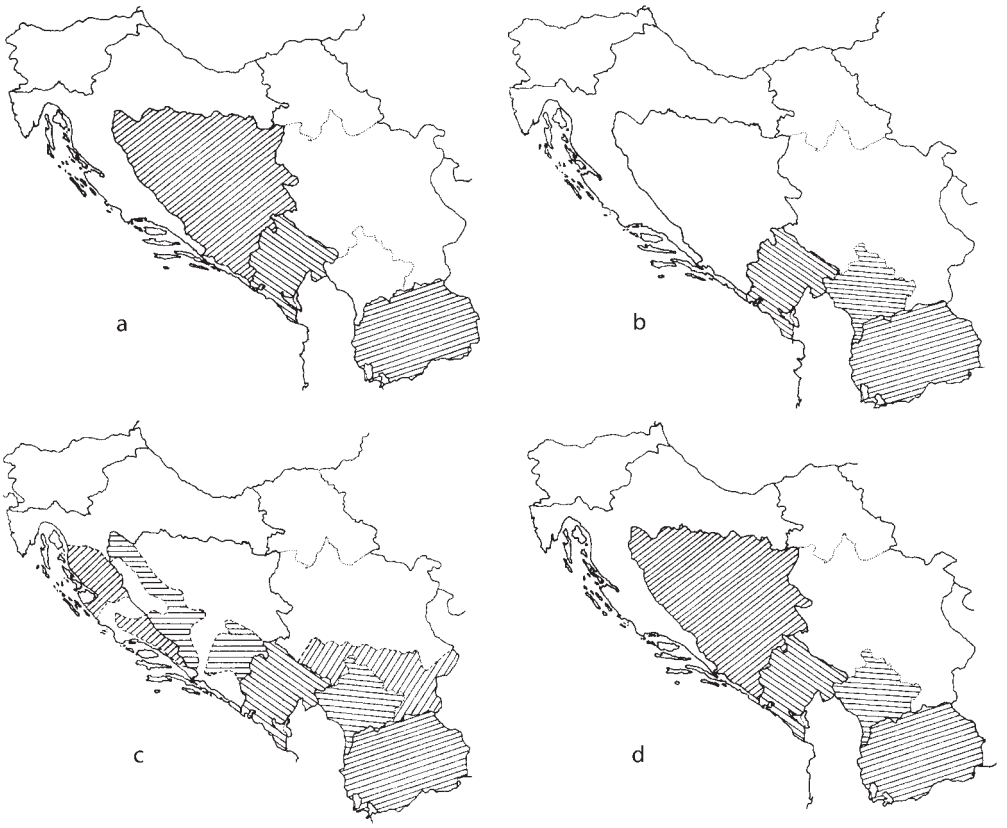
Yugoslav regional policy was basically characterized by double reductionism:

a. Focusing on republics and provinces (as Yugoslav "regions") primarily (only since 1965), and
b. Orientation towards underdeveloped Yugoslav regions.

The official definition of underdeveloped Yugoslav regions has changed over time (See Graphs 3a, b, c and d).

[13] See the discussion on the use of term "region" within Yugoslav context in: "Zajedništvo i autarkične tedencije u privredi Jugoslavije" (Round table discussion), *Treći program*, 52, 1982.

[14] B. Kubović, *Regionalna ekonomika*, Informator, Zagreb, 1974, p. 58. In the note to the final part of the quoted text, Kubović explains: "Actually, these would be bordering regions between republics where the republican borders would be neglected if required. Although the possibility of Yugoslav regions treated as republican regions should not be excluded, but only conditionally until the Yugoslav regions are formed."



Graph 3. Underdeveloped areas in Yugoslavia

a) Fom 1947 to 1957
b) From 1957 to 1961
c) From 1961 to 1965
d) From 1965 to 1990

The specific weight of the republics and provinces in Yugoslavia is determined by indicators from Table 2. The participation in total and agricultural area, population, capital assets, employment and domestic product.[15]

The institutional, or social and historical context for solving of regional problems in Yugoslavia in the period observed was changing: from the angle of regional development, two main stages can be differentiated – until 1965 and after 1965.

[15] The specific weight of Yugoslav republics and provinces is shown on maps represented at Graph 4. The program for making of these maps for the requirements of this paper was made by Vladeta Filipović, PhD, of "Mihailo Pupin" Institute in Belgrade.

Table 2. *Yugoslavia, republics and provinces: some basic characteristics*

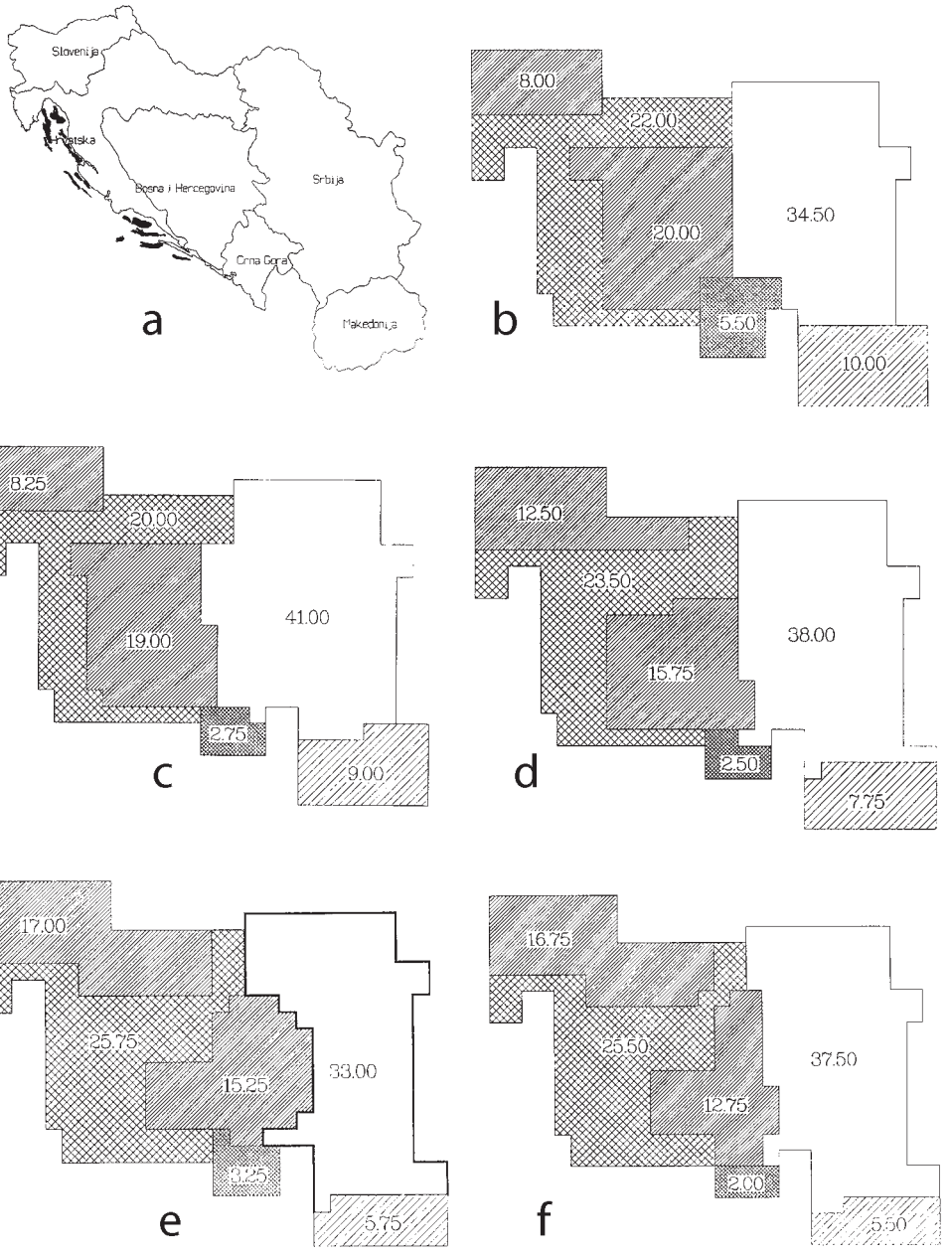
Participation in %

	Area in km²	Agricultural area	Population	Active capital assets, social sector, acquisition value, prices in 1972.	Workers in social and private sector, annual average	National product of the entire economy, prices in 1972
	1988	1988	1988	1988	1988	
YU	100.0	100.0	100.0	100.0	100.0	100.0
BIH	20.0	17.7	18.9	15.3	15.7	12.8
CGO	5.4	3.6	2.7	3.2	2.4	2.0
HRV	22.1	24.2	19.9	25.8	23.6	25.4
MAK	10.1	9.1	8.9	5.8	7.7	5.6
SLO	7.9	6.9	8.2	16.9	12.5	16.7
SRB	34.5	38.5	41.5	33.0	38.0	37.5
CES	21.9	21.8	24.8	20.6	25.3	25.0
KIM	4.2	3.6	8.0	2.8	3.5	2.2
VOJ	8.4	13.1	8.7	9.6	9.3	10.4

Economic ties of Yugoslav republic and provinces were realized during the observed forty years in various manners and in various (social, political, economic) surroundings. Formal and then cooperative (and according to some authors only facade) federalism amended or redefined by new constitutions, was combined or pushed aside by the elements of (conflicting) confederacy. National equality was largely equated with the equality of republics and provinces. The highlights on components of the entire development changed considerably (social – national, political – economic), and in the economic sphere the concept of development and institutional framework also changed considerably: from central planning, through market planning and "economy based on agreement", to market-oriented, or more specifically mixed…

The specific characteristics of Yugoslav regional scene (multi-national structure of the country, federative social system and considerable differences in the degree and structure of economic development among and within certain areas) impose the need for the discussion on Yugoslav regional relations to be held both within the context of economic rationality and in the light of conceptual political orientations, i.e. main national strategies that treated Yugoslavia as a transition or as a permanent solution to ethnic (state-related) issue.

Yugoslav regional policy persisted stubbornly on simplified dichotomous division into economically developed and underdeveloped republics and provinces (which, as we have already mentioned, *de facto* never had support in reality). Bi-polar interest regional configuration in case of rather formalized political



Graph 4.
a) and b) c) and d) e) and f)

decision-making procedure (consensus), as its unavoidable result, had the consequence of perpetuating decisions and intensification of the existing problems, especially because the original result of the interest "coordination" based on bad political compromise.[16] The mechanism of transfer of funds at the developed-underdeveloped relation caused double dissatisfaction: both those giving and receiving were dissatisfied. The developed areas put up a resistance to high priority that interregional division enjoyed, while the poor areas resisted the growing tendency of application of distribution criteria (especially profitability) in valuing of investments, and strongly opposed to the idea to control the use of transfer means. In that battle, the question whether the regional differences diminished or increased had a very large practical importance: if the differences increased then the request of the underdeveloped to increase the helping funds was justified, and if they decreased it would mean that the strategic goal of "fast development of all with faster development of the underdeveloped" could be achieved with less inflow of assets into the Federation Fund for the underdeveloped. Did regional differences really increase or decrease? Was the process of increase (decrease) constant or temporary? Did all relevant indicators show the same tendencies? This paper gives accurate answer to these questions based on the empirical analysis and considering the available statistic foundation these answers are also final.

3. Measuring regional disparities[17]

As opposed to Williamson, who uses only national product *per capita* for the purpose of the international comparison of regional disparities, in this paper the employment per 1000 of working age population and capital assets per a working age inhabitant are used here in addition to this indicator.

[16] In the social atmosphere where bad compromise prevails not one conflict can be led to the end. (Istvan Eörsi says for NIN: Ludi dani mladog Marksa, NIN, no. 1861, 31. August, 1986, p. 33). "When it is led to the end eventually, then the end is tragic, as the example of Yugoslavia shows."

[17] In public discussions (even in some 'scientific' papers) in the former Yugoslavia it was common to make the evaluation on the increase or decrease of regional disparities in the period after World War II (or some shorter part of that period), i.e. on the successfulness or unsuccessfulness of regional policy, based only on the data on the range of national product per capita between the most developed (Slovenia) and the most underdeveloped area (Kosovo and Metohija). There was a double reductionism at work: 1. only one indicator was taken into account (shown in the second column in the left Table below), and not the other indicators relevant for the measurement of the total economic development; and 2. only two – extreme – units of observation were taken. Undoubtedly, it is better to use the coefficient of correlation as a measure of total variations of (all) republics and provinces per individual indicators of development (Table on the right below) instead of the range. This is also not enough. This is why the measuring of regional disparities in this paper was carried out in the manner described in the part that follows.

The formulas according to which the trend of regional differences is quantified are as follows:

$$V_1 = \left\{ \sqrt{\sum_i [y_1 - \bar{y}]^2 (f_n / n)} \right\} / \bar{y}$$

$$V_2 = \left\{ \sqrt{\sum_i [y_1 - \bar{y}]^2 / N} \right\} / \bar{y}$$

$$M = \left\{ \sum_i \left| y_1 - \bar{y} \right| (f_i / n) \right\} / \bar{y} \cdot 100$$

Where:

N = number of regions = 8, and

i = Bosnia and Herzegovina (BIH), Montenegro (CGO), Croatia (HRV), Macedonia (MAK), Slovenia (SLO), Central Serbia (CES), Kosovo and Metohija (KIM) and Vojvodina (VOJ).

In case of the indicator *employment per 1000 working age population*:

y_i = employment per 1000 working age population in *i*-region,

$\bar{y}$ = employment per 1000 working age population in Yugoslavia,

f_i = working age population of *i*-region,

n = working age population of Yugoslavia.

Regional ranges per certain elements of economic development (the relation of maximum and minimum indicator values)				*Coefficients of region variations per certain elements of economic development expressed by os, dp and zp indicators*			
year	OS	DP	ZP	year	OS	DP	ZP
1952	6.0:1	4.1:1	5.1:1	1952	64.27	52.29	33.41
1955	6.1:1	4.3:1	3.5:1	1955	68.33	48.00	34.03
1960	5.4:1	5.4:1	3.0:1	1960	52.21	52.50	31.87
1965	4.0:1	4.6:1	3.1:1	1965	42.65	45.53	33.87
1970	3.9:1	5.7:1	3.5:1	1970	43.06	50.50	34.51
1975	3.8:1	6.1:1	3.2:1	1975	43.19	53.01	34.87
1980	4.7:1	6.0:1	3.2:1	1980	44.23	50.21	33.02
1981	4.3:1	5.4:1	2.9:1	1981	45.75	47.99	31.12
1982	4.6:1	5.5:1	3.0:1	1982	45.12	46.49	30.82
1983	4.5:1	5.2:1	3.0:1	1983	44.49	46.00	30.35
1984	5.4:1	5.8:1	3.0:1	1984	51.06	48.16	30.35
1985	4.9:1	6.3:1	3.0:1	1985	51.31	52.25	30.16
1986	5.5:1	6.8:1	3.1:1	1986	54.66	56.55	29.96
1987	6.0:1	8.0:1	3.0:1	1987	55.80	61.58	29.77

In case of the indicator *capital assets per a working age inhabitant*:
y_i = capital assets per a working age inhabitant in *i*-region,
y = capital assets per a working age inhabitant of Yugoslavia,
f_i = working age population of *i*-region,
n = working age population of Yugoslavia;

while in case of the indicator *national product per capita*:
y_i = national product per capita of *i*-region,
y = national product per capita of Yugoslavia,
f_i = population of *i*-region,
n = population of Yugoslavia.

It can be noted from these formulas that V_1 and V_2 are the measures of relative regional differences, while M is the measure of absolute regional differences. V_1 represents a weighted measure of regional differences, since the square aberrations of region indicator value and indicator value at the level of Yugoslavia are weighted by the participation of working age population, i.e. entire population within the appropriate aggregate at the level of Yugoslavia. The measure of absolute differences (M) is also calculated as weighted value, whereas weights are equal to weights used in V_1 calculation.

In order to determine general formulas of trend of regional differences in the observed period (1952-1988), each series of acquired values is regressed to time, i.e. the trend functions are evaluated.

For each of regional differences value series three main functional relations with time as independent variable are specified and evaluated: linear, log-linear and half-logarithm. The sign and value of evaluated value of β parameter shows direction and intensity of changes of regional differences value in time. The types of specified functions, where the dependent variable (regional differences value) marked with letter Z, are:

(1) Linear trend:
$Z = \alpha + \beta T$, $\quad dZ/dT = \beta$

$\beta > 0$ – regional differences increase by constant β *coefficient*;
$\beta < 0$ – regional differences decrease by constant β *coefficient*.

(2) Log-linear trend:
$Z = \alpha T^{\beta}$, $\quad dZ/dT = \alpha \beta T^{\beta-1}$

$\beta > 1$ – regional differences increase rapidly;
$0 < \beta < 1$ – regional difference increase slowly;
$\beta < 0$ – regional differences decrease slowly.

Computing this function with logarithms results in the equation suitable for evaluation by the method of common smallest squares (CSS):

$$\ln Z = \ln \alpha + \beta \ln T.$$

(3) Half-logarithm trend:

a) $Z = e^{\alpha+\beta_T} \ln Z = \alpha + \beta T$

$\beta > 0$ – regional differences increase exponent rapidly;
$\beta < 0$ – regional differences decrease exponent slowly.

Computing this function with logarithms results in the formula for evaluation:

$$\ln Z = \alpha + \beta T$$

b) $Z = \alpha + \beta \ln T \; dZ/dT = \beta/T$

$\beta > 0$ – differences increase slowly;
$\beta < 0$ – differences decrease slowly.

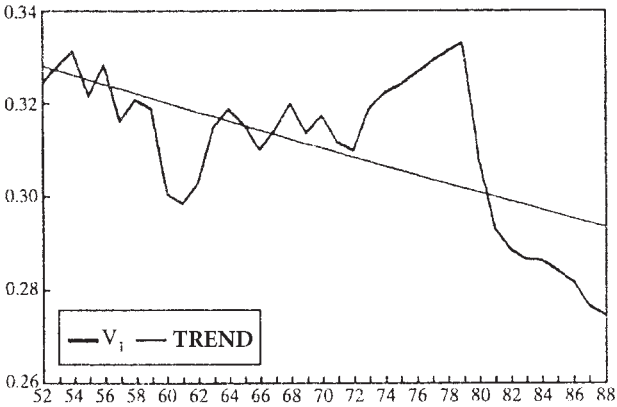
In other words, if the trend of regional differences over time is best described by the function of half-logarithm trend, in which the dependent variable is computed with logarithm, and if the sign of evaluated value of β parameter is negative, it means that the differences between regions decrease, but slowly (β is a constant, T increases, which means that the β/T value get smaller with T growth).

The choice of function for every series of dependent variable values is carried out based on criteria of statistic importance of evaluated β parameter and statistic importance of evaluated function measured by determination coefficient.

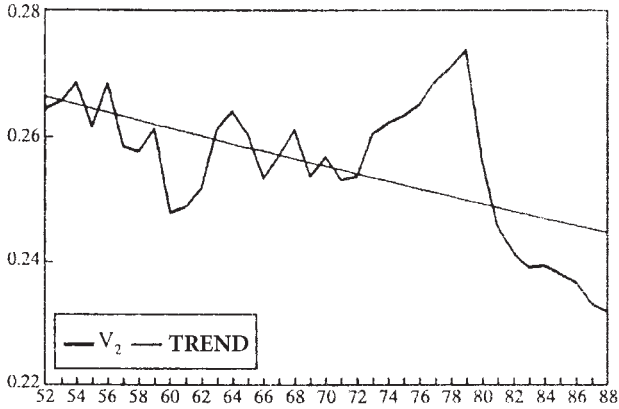
4. Relative regional differences[18]

Based on the trend of regional differences in the employment per 1000 working age population expressed by V_1 measure (Graph 5), several various sub-periods may be noticed. Since 1952 to 1961, regional differences in employment varied with the tendency of decreasing. Since 1961 to 1964, they increased continuously, and from 1964 to 1972, they varied again without any expressed tendency of either growth or fall. From 1972 to 1979, there is again a constant growth of regional differences, and from 1979 to the end of the observed period in 1988, they fell from year to year.

[18] As of 1945, the regional differences in Yugoslav theory and practice were interpreted as relative differences. Thus Kosta Mihailović ("Ciljevi i politika razvoja nedovoljno razvijenih područja i SAP Kosovo", in: *Politika i sistem podsticanja bržeg razvoja privredno nedovoljno razvijenih republika i autonomnih pokrajina*, Ekonomski institut – Institut ekonomskih nauka, Beograd, 22. avgust 1978, p. 14) thinks that the permanent main regional political goal is "uniformity as narrowing of relative differences." This paper considers absolute differences as well.



Graph 5. Employment: relative regional differences (V1)



Graph 6. Employment: relative regional differences (V2)

This nine-year continuous fall of regional differences was mostly determined by the falling trend for the whole period. The evaluated half-logarithm function of the trend is:

$$\ln V_1 = -1.1107 - 0.0032\ T \qquad R^2 = 0.3860$$
$$(-75.4736)\ (-4.6912) \qquad \bar{R}^2 = 0.3685$$

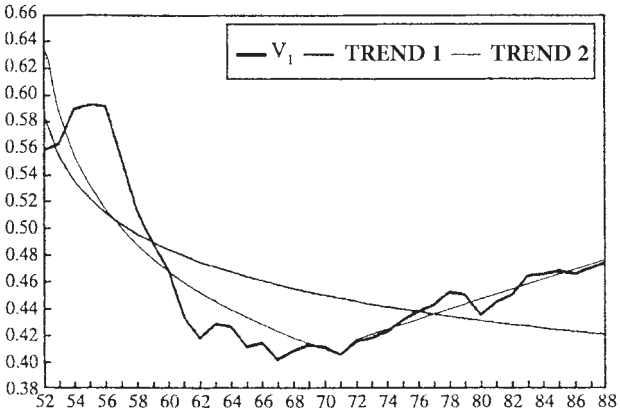
Considering the type of trend function, it can be stated that the relative regional differences in employment per 1000 working age population during the entire observed period (1952-1988) decreased rapidly.

Similar trend of relative regional differences is obtained based on V_2 indicators (Graph 6). According to this indicator also, there is a significant drop of relative regional differences during the entire period. The evaluated trend function is:

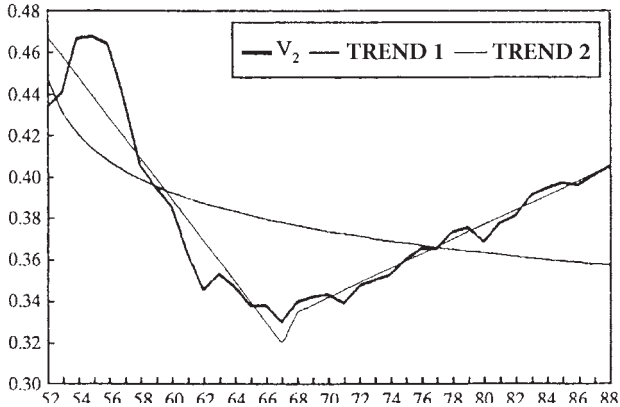
$$\ln V_2 = -1{,}3201 - 0{,}0024\ T \qquad R^2 = 0{,}3463$$
$$(-107{,}5077)\ (-4{,}3058) \qquad \bar{R}^2 = 0{,}3276$$

Table 3. *Employment: relative regional differences*

	V_1	OV_1	V_2	OV_2
1952	0.324	0.328	0.265	0.266
1953	0.328	0.327	0.266	0.266
1954	0.331	0.326	0.269	0.265
1955	0.322	0.325	0.262	0.265
1956	0.328	0.324	0.269	0.264
1957	0.316	0.323	0.259	0.263
1958	0.321	0.322	0.258	0.263
1959	0.319	0.321	0.261	0.262
1960	0.300	0.320	0.248	0.261
1961	0.298	0.319	0.249	0.261
1962	0.303	0.318	0.252	0.260
1963	0.315	0.317	0.261	0.259
1964	0.319	0.316	0.264	0.259
1965	0.315	0.315	0.260	0.258
1966	0.310	0.314	0.253	0.258
1967	0.314	0.313	0.257	0.257
1968	0.320	0.312	0.261	0.256
1969	0.313	0.311	0.253	0.256
1970	0.317	0.310	0.257	0.255
1971	0.311	0.309	0.253	0.254
1972	0.309	0.308	0.253	0.254
1973	0.318	0.307	0.260	0.253
1974	0.322	0.306	0.262	0.253
1975	0.324	0.305	0.263	0.252
1976	0.326	0.304	0.265	0.251
1977	0.328	0.303	0.268	0.251
1978	0.331	0.302	0.271	0.250
1979	0.333	0.301	0.274	0.250
1980	0.307	0.300	0.256	0.249
1981	0.293	0.299	0.245	0.248
1982	0.288	0.299	0.241	0.248
1983	0.286	0.298	0.239	0.247
1984	0.286	0.297	0.239	0.247
1985	0.284	0.296	0.238	0.246
1986	0.281	0.295	0.236	0.245
1987	0.276	0.294	0.233	0.245
1988	0.274	0.293	0.231	0.244



Graph 7. Capital assets: relative regional differences (V1)



Graph 8. Capital assets: relative regional differences (V2)

The type of trend function shows that relative regional differences are decreasing rapidly. The evaluated coefficient value in that function, however, is lower than in case of V_1 indicator, which is the logical result when it is known that V_1 indicator is calculated by weighing of aberration square.

In the trend of relative regional differences considering capital assets per a working age inhabitant, measured per both indicators (V_1 and V_2), two sub-periods are clearly noticed (Graphs 7 and 8).

In case of V_1 indicator in the first sub-period, from 1952 to 1971, relative regional differences decrease, and in the other sub-period, from 1971 to 1988, they increase. The trend of relative regional differences in the first sub-period is best described by the function of half-logarithm trend:

$V_1 = 0{,}6418 - 0{,}0791 \ln T \qquad R^2 = 0{,}7545$
$(26{,}7013)\ (-7{,}4379) \qquad \bar{R}^2 = 0{,}7409$

Table 4. *Capital assets: relative regional differences*

	V_1	O_1V_1	O_2V_1	V_2	O_1V_2	O_2V_2
1952	0.559	0.586	0.642	0.433	0.450	0.469
1953	0.563	0.554	0.587	0.441	0.432	0.459
1954	0.590	0.535	0.555	0.467	0.421	0.449
1955	0.593	0.522	0.532	0.468	0.413	0.439
1956	0.592	0.511	0.514	0.464	0.408	0.429
1957	0.553	0.503	0.500	0.437	0.403	0.419
1958	0.513	0.496	0.488	0.406	0.399	0.409
1959	0.489	0.490	0.477	0.394	0.395	0.399
1960	0.469	0.484	0.468	0.386	0.392	0.389
1961	0.434	0.479	0.460	0.363	0.389	0.379
1962	0.417	0.475	0.452	0.345	0.387	0.369
1963	0.428	0.471	0.445	0.352	0.385	0.359
1964	0.426	0.467	0.439	0.347	0.383	0.349
1965	0.411	0.464	0.433	0.337	0.381	0.339
1966	0.414	0.460	0.428	0.337	0.379	0.329
1967	0.401	0.457	0.422	0.330	0.377	0.319
1968	0.408	0.455	0.418	0.339	0.376	0.334
1969	0.412	0.452	0.413	0.341	0.374	0.338
1970	0.410	0.449	0.409	0.342	0.373	0.341
1971	0.404	0.447	0.405	0.338	0.371	0.344
1972	0.414	0.445	0.416	0.346	0.370	0.348
1973	0.416	0.443	0.420	0.349	0.369	0.351
1974	0.422	0.440	0.424	0.352	0.368	0.355
1975	0.430	0.438	0.427	0.359	0.367	0.358
1976	0.437	0.437	0.431	0.364	0.365	0.361
1977	0.442	0.435	0.435	0.364	0.364	0.365
1978	0.452	0.433	0.438	0.372	0.363	0.368
1979	0.449	0.431	0.442	0.374	0.362	0.372
1980	0.434	0.430	0.446	0.367	0.362	0.375
1981	0.443	0.428	0.450	0.376	0.361	0.378
1982	0.449	0.427	0.453	0.379	0.360	0.382
1983	0.463	0.425	0.457	0.389	0.359	0.385
1984	0.464	0.424	0.461	0.393	0.358	0.389
1985	0.466	0.422	0.464	0.395	0.357	0.392
1986	0.464	0.421	0.468	0.394	0.357	0.395
1987	0.468	0.420	0.472	0.398	0.356	0.399
1988	0.473	0.418	0.475	0.403	0.355	0.402

which means that they decrease at falling rate. In the second sub-period, their trend is best described by the linear trend function:

$V_1 = 0{,}3388 + 0{,}0037\ T \qquad R^2 = 0{,}9050$
$(39{,}1039)\ (12{,}3443) \qquad \bar{R}^2 = 0{,}8990$

which means that in that sub-period relative regional differences increase at constant □ rate.

According to V_2 indicator, however, in 1967 already there was a complete change of trends of relative regional differences considering capital assets per a working age inhabitant. Until that year they were falling, and after that year they were rising.

The trend of relative regional differences in the first sub-period (1952-1967) is best described by a linear trend function:

$V_2 = 0{,}4790 - 0{,}0100\ T \qquad R^2 = 0{,}8622$
$(46{,}4257)\ (-4{,}2503) \qquad \bar{R}^2 = 0{,}8523$

which suggests that they decrease at constant □ rate.

Linear trend is characteristic for the trend of regional differences in the second sub-period (1967-1988) also, but the value of evaluated □ parameter is positive:

$V_2 = 0{,}2761 + 0{,}0034\ T \qquad R^2 = 0{,}9764$
$(85{,}6092)\ (28{,}7995) \qquad \bar{R}^2 = 0{,}9753$

which means that the differences increase at constant coefficient.

However, when the period is observed as a whole according to both indicators (V_1 and V_2), falling tendency of relative regional differences in the value of capital assets per a working age inhabitant prevails. In both cases their trend is best described by the function of half-logarithm trend, which suggests that the fall of regional differences becomes slower over time. The evaluated trend functions are:

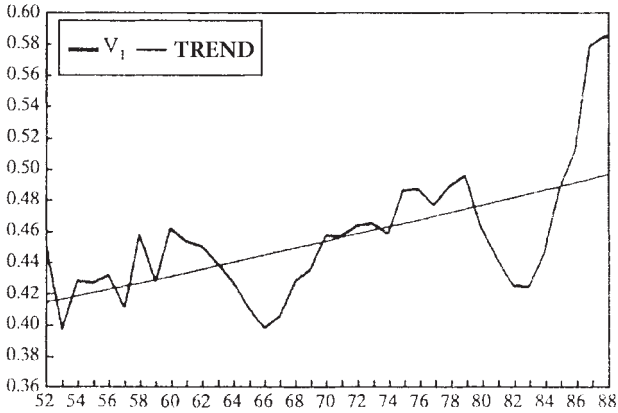
$V_1 = 0{,}5863 - 0{,}0465\ \ln T \qquad R^2 = 0{,}5014$
$(26{,}5392)\ (-5{,}9328) \qquad \bar{R}^2 = 0{,}4872$

and

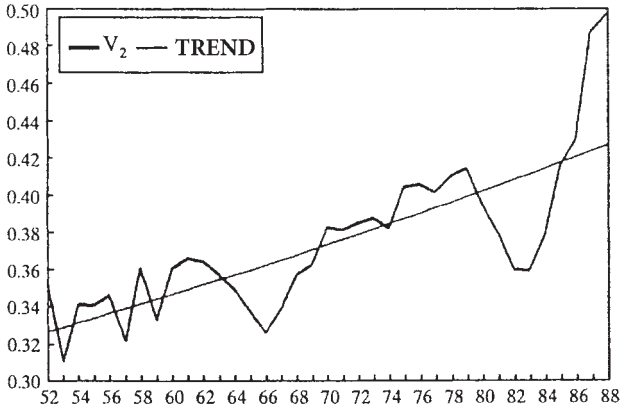
$V_2 = 0{,}4497 - 0{,}0262\ \ln T \qquad R^2 = 0{,}3404$
$(25{,}9149)\ (-4{,}2503) \qquad \bar{R}^2 = 0{,}3216$

Table 5. *Social product: relative regional differences*

	V_1	OV_1	V_2	OV_2
1952	0.453	0.415	0.355	0.327
1953	0.397	0.417	0.311	0.329
1954	0.429	0.419	0.341	0.331
1955	0.427	0.421	0.341	0.334
1956	0.432	0.423	0.346	0.336
1957	0.411	0.425	0.322	0.339
1958	0.457	0.427	0.361	0.341
1959	0.427	0.429	0.332	0.344
1960	0.461	0.431	0.360	0.346
1961	0.452	0.433	0.365	0.349
1962	0.450	0.435	0.364	0.351
1963	0.439	0.437	0.357	0.354
1964	0.427	0.439	0.349	0.356
1965	0.409	0.441	0.336	0.359
1966	0.397	0.443	0.325	0.361
1967	0.404	0.445	0.337	0.364
1968	0.427	0.447	0.356	0.366
1969	0.434	0.450	0.361	0.369
1970	0.455	0.452	0.381	0.372
1971	0.455	0.454	0.380	0.374
1972	0.461	0.456	0.383	0.377
1973	0.463	0.458	0.386	0.380
1974	0.456	0.460	0.380	0.383
1975	0.484	0.463	0.402	0.385
1976	0.484	0.465	0.404	0.388
1977	0.474	0.467	0.399	0.391
1978	0.487	0.469	0.408	0.394
1979	0.493	0.471	0.411	0.397
1980	0.459	0.474	0.392	0.399
1981	0.439	0.476	0.377	0.402
1982	0.422	0.478	0.357	0.405
1983	0.421	0.480	0.357	0.408
1984	0.443	0.483	0.376	0.411
1985	0.484	0.485	0.412	0.414
1986	0.509	0.487	0.427	0.417
1987	0.575	0.490	0.483	0.420
1988	0.581	0.492	0.493	0.423



Graph 9. Social product: relative regional differences (V1)



Graph 10. Social product: relative regional differences (V2)

The trend of relative regional differences in social product per capita shows the undoubted rising trend of the differences, measured according to both V_1 and V_2 indicators (Graphs 9 and 10). In both cases their trend is best described by half-logarithm trend function in which the dependent variable is computed with logarithm. This means that relative regional differences in national product per capita increased according to rising rate. The evaluated trend functions are:

$\ln V_1 = -0,8848 + 0,0047\ T$ $\quad R^2 = 0,3615$
$(-38,1002)\ (4,4517)$ $\quad \bar{R}^2 = 0,3433$

and

$\ln V_2 = -1,1260 + 0,0072\ T$ $\quad R^2 = 0,6003$
$(-52,1261)\ (7,2510)$ $\quad \bar{R}^2 = 0,5889$

5. Absolute regional differences

Four sub-periods with various tendencies follow each other in the trend of absolute regional differences in the employment per 1000 working age population (Graph 11.). During the sub-period from 1952 to 1964, absolute regional differences increase, from 1964 to 1971 they decrease, and from 1971 to 1979 they increase again. Finally, during the sub-period from 1979 to 1988, they decrease from year to year.

When the entire period is observed (1952-1988), the tendency of fall of absolute regional differences according to this indicator is clearly noticed. This is confirmed also by the evaluated function of half-logarithm trend:

$$\ln M = -1{,}5910 - 0{,}0042\ T \qquad \underline{R}^2 = 0{,}5845$$
$$(-120{,}8410)\ (-7{,}0168) \qquad \overline{R}^2 = 0{,}5726;$$

according to which the absolute regional differences in the employment per 1000 working age population decrease at increasing rate.

The trend of absolute regional differences in the *value of capital assets per a working age inhabitant* (Graph 12), however, does not have a common tendency during the entire observed period (1952-1988). This is confirmed also by insignificant evaluated value of parameter with complete time in all evaluated functions of the trend for the entire period.

Four sub-periods follow each other in the trend of the differences. The first one, from 1952 to 1954, in which the differences increased per constant coefficient:

$$M = 0{,}2671 + 0{,}0207\ T \qquad \underline{R}^2 = 0{,}9989$$
$$(178{,}9876)\ (29{,}9712) \qquad \overline{R}^2 = 0{,}9770;$$

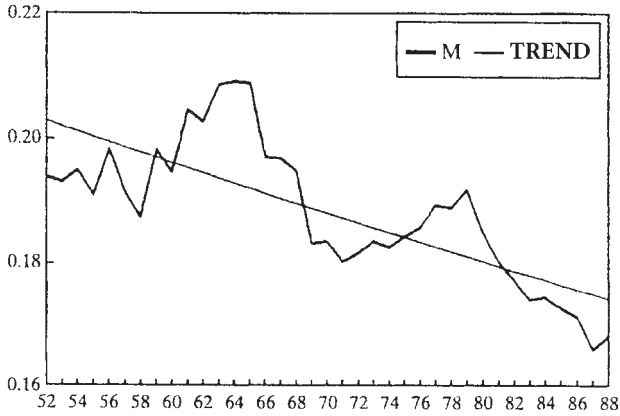
The second, from 1954 to 1964, in which the differences decreased at constant coefficient:

$$M = 0{,}3666 - 0{,}0101\ T \qquad \underline{R}^2 = 0{,}9360$$
$$(49{,}3612)\ (-10{,}1160) \qquad \overline{R}^2 = 0{,}9268;$$

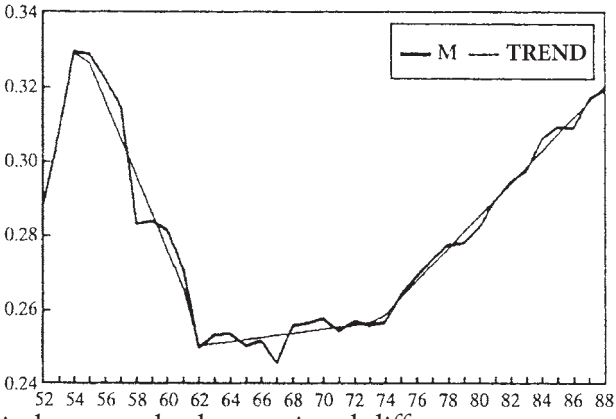
The third one, from 1962 to 1974, during which the absolute differences among regions increased:

$$M = 0{,}2446 + 0{,}0005\ T \qquad \underline{R}^2 = 0{,}3815$$
$$(66{,}8693)\ (2{,}6046) \qquad \overline{R}^2 = 0{,}3252;$$

And the fourth one, from 1974 to 1988, during which the absolute regional differences considering capital assets per a working age inhabitant also increased, but faster than in the previous sub-period.



Graph 11. Employment: absolute regional differences



Graph 12. Capital assets: absolute regional differences

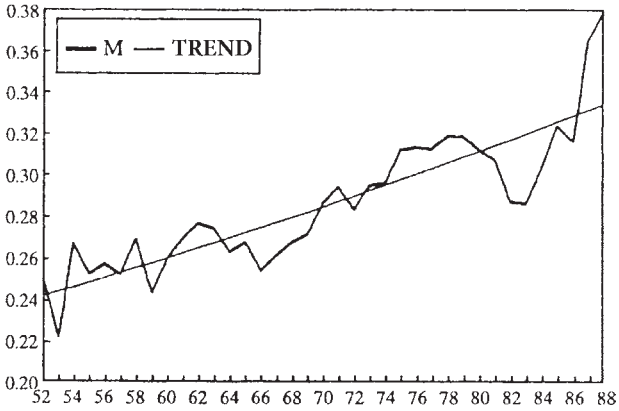
As for the national product per capita, the main tendency in the trend of regional differences (Graph 13) according to this absolute indicator is the same as in case of V_1 and V_2 indicators. Namely, absolute regional differences showed tendency of growth during the entire period (1952-1988). Judging by the functional form of trend that best describes the trend of these differences

$$\ln M = -1{,}4268 + 0{,}0087\ T \qquad R^2 = 0{,}7564$$
$$(-78{,}2746)\ (10{,}4242) \qquad \bar{R}^2 = 0{,}7494$$

they grow rapidly.

Table 6. *Employment, capital assets and national product: absolute regional differences*

	MZAP	OMZAP	MOSR	OMOSR	MDP	OMDP
1952	19.4	20.3	28.8	28.8	25.2	24.2
1953	19.3	20.2	30.8	30.9	22.2	24.4
1954	19.5	20.1	33.0	32.9	26.7	24.6
1955	19.1	20.0	32.9	32.6	25.3	24.9
1956	19.8	19.9	32.2	31.6	25.7	25.1
1957	19.1	19.9	31.5	30.6	25.2	25.3
1958	18.8	19.8	28.3	29.6	26.9	25.5
1959	19.8	19.7	28.4	28.6	24.3	25.7
1960	19.5	19.6	28.1	27.6	25.9	26.0
1961	20.4	19.5	27.1	26.6	26.9	26.2
1962	20.3	19.4	25.0	25.1	27.6	26.4
1963	20.8	19.4	25.4	25.1	27.3	26.7
1964	20.9	19.3	25.4	25.2	26.2	26.9
1965	20.9	19.2	25.0	25.2	26.7	27.1
1966	19.7	19.1	25.2	25.3	25.3	27.4
1967	19.7	19.0	24.6	25.3	26.1	27.6
1968	19.5	19.0	25.6	25.4	26.7	27.8
1969	18.3	18.9	25.7	25.4	27.0	28.1
1970	18.3	18.8	25.8	25.5	28.5	28.3
1971	18.0	18.7	25.4	25.6	29.3	28.6
1972	18.2	18.6	25.7	25.6	28.2	28.8
1973	18.3	18.6	25.6	25.7	29.3	29.1
1974	18.2	18.5	25.7	25.9	29.5	29.3
1975	18.4	18.4	26.4	26.3	31.0	29.6
1976	18.6	18.3	26.9	26.7	31.2	29.9
1977	18.9	18.2	27.3	27.2	31.1	30.1
1978	18.9	18.2	27.8	27.6	31.7	30.4
1979	19.2	18.1	27.8	28.1	31.6	30.6
1980	18.5	18.0	28.2	28.5	31.0	30.9
1981	18.0	17.9	28.9	28.9	30.5	31.2
1982	17.7	17.9	29.5	29.4	28.5	31.5
1983	17.4	17.8	29.7	29.8	28.4	31.7
1984	17.4	17.7	30.6	30.3	30.1	32.0
1985	17.3	17.6	30.9	30.7	32.1	32.3
1986	17.1	17.6	30.9	31.1	31.4	32.6
1987	16.6	17.5	31.7	31.6	36.2	32.9
1988	16.8	17.4	31.9	32.0	37.6	33.1



Graph 13. National product: absolute regional differences

The results of the analysis show that the relative and absolute regional differences in the observed period decrease in case of employment and capital assets. Lowering of risk in case of employment is accelerated, while in case of capital assets it is slow. If only the last decade is observed, both absolute and relative differences in capital assets among regions increase. As for the national product, both relative and absolute regional differences increase rapidly in the course of the entire observed period.

6. Some international comparisons

Williamson and other researchers (almost without exception) have used only one indicator in international comparisons of regional disparities. Using national product per capita, he came to the conclusion that inter-regional differences are larger in underdeveloped countries. E. Egner[19] and K. D. Klages[20] also (who rely upon Williamson) conclude that the image of expressed disparities appears in underdeveloped countries. On an average, they are much larger than in the developed industrial countries (there are some exceptions, such as India, for instance).[21]

[19] E. Egner, "Regionale Wirtschaftspolitik in Entwicklungsländern", in: *Handwörterbuch der Raumforschung und Raumordnung*, Akademie für Raumforschung und Landesplanung (Hrsg.), Gebrüder Janecke, Hannover, 1970, p. 2670.

[20] K. D. Klages, *Das Regionale Entwicklungsgefälle. Ein Beitrag zur Regionalplanung in Entwicklungsländer*, Horst Erdmann, Tübingen – Basel, 1975.

[21] See also the papers on regional disparities within certain countries or within comparative context, such as, for instance: K. L. Gupta, "Development Patterns: An Interregional Study", *The Quarterly Journal of Economics*, vol. 85, 4, November 1971, pp. 644-666; T. A. Reiner, "Welfare Differences Within a Nation", *The RSA Papers*, vol. 32, 1974, pp. 71-82; J. B. Parr, "Welfare Differences Within a Nation. A Comment", *The RSA Papers*, vol. 32, 1974, pp. 83-

Table 7. *Williamson: The results of the international cross-section analysis of regional disparities*

Country and group acc. to Kuznets	Years included	Number of regions	Dispersion measures	Order				
			V_1	V_2	M	V_1	V_2	M
Group I								
Australia	1945/50-1959/60	6	0.058	0.078	4.77	1	1	1
New Zealand	1955	10	0.063	0.082	4.93	2	2	2
Canada	1950-61	11	0.192	0.259	17.30	6	12	8
G. Britain	1959/60	15	0.141	0.156	11.39	4	4	3
USA	1950-61	9	0.182	0.189	16.56	5	6	6
Sweden	1950 1955 1961	24	0.200	0.168	15.52	7	5	5
Group II								
Finland	1950 1954 1958	23	0.331	0.276	26.64	17	14	18
France	1954 1955/6 1958	21	0.283	0.215	20.80	13	9	12
FR Germany	1950-55 1960	9	0.205	0.205	16.98	8	8	7
Holland	1950 1955 1958	11	0.131	0.128	12.45	3	3	4
Norway	1952 1957-60	20	0.309	0.253	23.84	15	11	13
Group III								
Ireland	1960	26	0.268	0.271	24.20	11	13	14
Chile	1958	9	0.327	0.440	30.65	16	19	19
Austria	1957	9	0.225	0.201	18.69	9	7	9
Portorico	1960	76	0.520	0.378	42.31	21	18	22
Group IV								
Brazil	1950-59	21	0.700	0.654	53.78	24	24	24
Italia	1951 1955 1960	19	0.360	0.367	30.94	19	17	20
Spain	1955 1957	50	0.415	0.356	32.32	20	16	21
Columbia	1953	16	0.541	0.561	46.70	22	21	23
Greece	1954	11	0.302	0.295	26.56	14	15	17
Grupa V								
Yugoslavia 1956 1959 1960	6	0.340	0.444	24.54	18	20	15	
Japan	1951-9	46	0.244	0.222	19.88	10	10	11
Grupa VI								
Philippines	1956	10	0.556	0.627	29.59	23	23	15
Grupa VII								
India 1950/51 1955/56	18	0.275	0.580	19.39	12	22	10	

As it can be seen in Table 7, Yugoslavia (together with Japan!) is in Group IV according to Kuznets's classification of countries[22] according to the state of development and in the average three stated years (1956, 1959 and 1960), it more or less fits into the described "universal" pattern of regional disparities. It should not forget, however, that

91; W. Molle, T. M. Smit, B. van Holst, *Regional Disparities and Economic Development in the E.E.C.*, Saxon House, London, 1979; R. J. Fuchs, G. J. Demko, "Geographic Inequality Under Socialism", *Annals of the Association of American Geographers*, vol. 69, 2, June 1979, pp. 304-318; M. L. Kiljunen, "Regional Disparities and Policy in the E.E.C.", in: *Integration and Uneqal Development: the Experience of the E.E.C.*, D. Seers – C. Vaitsos, eds., Macmillan, London, 1980; E. C. Hallet, "Economic Convergence and Divergence in the European Community: A Survey of the Evidence", in: *Economic Divergence in the European Community*, M. Hodges – W. Wallace, eds., Allen & Unwin, London, 1981; Paul Philips, *Regional Disparities*, "James Lorimer", Toronto, 1982; Ch. Harvie, *The Rise of Regional Europe*, Routledge, London, 1994; *Convergence Issues in the European Union*, ed. W. Meeusen, et al., Edward Elgar, London, 2002.

22 S. Kuznets, "Quantitative Aspects of the Economic Growth of Nations", *Economic Development and Cultural Change*, II Industrial Distribution of National Product and Labour Force, Supplement to vol. V, no. 4, July 1957.

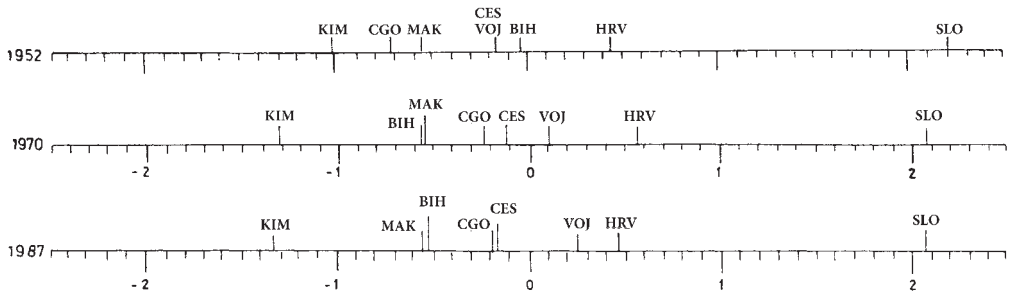
this is an *average (cross-section)* analysis. Our analysis offers more detailed information, not only because it includes the period of almost four decades but because it measures regional disparities by means of two additional indicators. As for relative (V_1 and V_2) and absolute (M) regional differences, Yugoslav condition in each of the observed years (from 1952 to 1988, see Tables 5 and 6), per characteristic sub-periods, and for the entire period, can be compared with seven groups of countries (according to Kuznets's classification) and with the average of all groups (Table 8). The data refer to the sixth decade of 20th century.

Table 8. *The degree of development and regional disparities*

	Average national product per capita	Dispersion measures		
		V_1	V_2	M
Group I	1700$	0.139	0.155	11.72
Group II	1000$	0.252	0.215	20.14
Group III	650$	0.335	0.323	28.96
Group IV	400$	0.464	0.447	38.06
Group V	270$	0.292	0.333	22.26
Group VI	200$	0.556	0.627	29.59
Group VII	100$	0.275	0.580	19.39
All groups		0.299	0.309	23.78

***

It would be interesting, and not only in order to check theses on the usefulness of methodical pluralism, to compare the results obtained with the results of factor analysis applied on the same units of observation. For the illustration, we have given here only a segment (three chosen years – 1952, 1970 and 1987), which shows how distant in economic development Yugoslav regions were based on the three mentioned indicators (employment, capital assets and national product) taken together (Graph 14).[23]



Graph 14. Classification of regions according to the degree of economic development in 1952, 1970 and 1987.

[23] For more details about this topic see: Č. Ocić, *Ekonomika regionalnog razvoja Jugoslavije*, Ekonomika, Beograd, 1988, pp. 103-166.

7. Conclusions

As distinguished to Williamson, who uses only national product per capita for the purpose of the international comparison of regional disparities, this paper in addition to this indicator uses also employment per 1000 working age population and capital assets per a working age inhabitant: V_1 and V_2 are the measures of relative regional differences, while M is the measure of absolute regional differences. V_1 at that represents a weighted measure of regional differences, since the aberration squares of value of indicators of regions and values of indicators at the level of Yugoslavia are weighted by the participation of working age population, i.e. total population within the appropriate aggregate at the level of Yugoslavia. The measure of absolute differences calculated as a weighted value, whereas weights are equal to weights used for V_1 calculation. In order to determine the general pattern of trend of regional differences in the observed period (1952-1988), each series of obtained values is regressed to time, i.e. the trend functions are evaluated. For each series of values of regional differences three main functional connections with time as independent variable are specified and evaluated: linear, log-linear and half-logarithm. The choice of trend function for each series of values of dependent variable is made based on criteria of statistic significance of evaluated parameter and statistic significance of evaluated function measured by determination coefficient.

1. Based on the trend of regional differences in employment per 1000 working age population expressed by V_1 measure, we can note several different sub-periods. From 1952 to 1961, regional differences in employment oscillated with the diminishing tendency. From 1961 to 1964, they increased continuously, and from 1964 to 1972 they oscillated again, but without any expressed tendency of either growing or falling. From 1972 to 1979, we observe again a constant growth of regional differences, and from 1979 to the end of the observed period they are falling year by year. This nine-year continuous fall of regional differences determined mostly the falling trend for the entire period. Considering the type of trend function (half-logarithm), it can be stated that relative regional differences in employment per 1000 working age population measured by V_1 indicator in the course of the entire observed period diminished rapidly. Similar trend of regional differences is obtained based on V_2 indicator. According to this indicator also there is a significant drop of relative regional differences in the course of the entire observed period. The type of trend function shows also that relative regional differences fall rapidly. The evaluated value of coefficient in this function, however, is lower than in case of V_1 indicator, which is the logical result when we know that V_1 indicator is calculated by weighing of aberration square.

Underdevelopment and relatively ample supply of labour power made a strong pressure on the employment. The employment growth was often followed (because of growing expectations of latently unemployed rural population) by the growing rate (of registered) unemployment. Formal and informal channels (nepotism, corruption…) of providing jobs were constantly used in the observed period and in all "regions" (with the exception of Vojvodina during the sub-period from 1965 to 1970) the number of the employed persons increased. High correlation of non-productive employment and the degree of development suggests that a considerable number of the employed was not in the production function. Political concept of creation of blue-collar class (industrialism and urbanization) as social foundations of new power influenced undoubtedly the intensity and sector and regional dynamics of employment in the social sector. Under the general conditions of loose budget limitations, social function of employment had priority over the function of efficient economic activities. The changes of regional disparities in employment should be observed from this perspective.

2. As for the trend of relative regional differences in the value of capital assets per a working age inhabitant, measured according to both indicators (V_1 and V_2), two clear sub-periods can be noticed. In case of V_1 indicator during the first sub-period, from 1952 to 1971, relative differences decrease, and in the second period, from 1971 to 1988, they increase. During the first sub-period the trend of relative regional differences is best described by the half-logarithm trend function, which means that they decrease at a falling rate. During the second sub-period, their trend is best described by the linear trend function, which means that the relative regional differences in this period are increasing at constant rate. According to V2 indicator, however, in 1967 already there was a change of trend tendency of relative regional differences considering capital assets per a working age inhabitant. Until this year, they were falling, and after this year they were rising. The trend of relative regional differences in the course of the first sub-period (1952-1967) is best described by linear trend function, which suggests that they decrease at constant rate. Linear trend is characteristic for the trend of regional differences during the second sub-period (1967-1988) also, but the value of evaluated parameter is positive, which means that differences increase at constant coefficient. When the period is observed as a whole according to both indicators (V_1 and V_2), the tendency of fall of relative regional differences considering capital assets per a working age inhabitant prevails. In both cases their trend is best described by half-logarithm trend function, which shows that the fall of regional differences becomes slower over time.
Similar as in case of the employment, the results obtained by the analysis of regional disparities of capital assets must be interpreted starting from

economic assumptions, but taking into account at that the social and political context. From the economic point of view, the change of values of capital assets is equivalent to gross investments in the given periods. More intensive investment activities can mark an economy as successful, providing that the investments are also efficient. The problem in Yugoslavia in fact was the efficiency of capital assets. Yugoslav economy had all the characteristics of relatively underdeveloped economy first (for instance relative abundance of work and relative lack of capital), and second, it was socialist: intentionally, work is the pivot of socialism, as capital is the pivot of capitalism. In Yugoslav case the price of capital was lower than the one suggested by its relative availability, which under the conditions of loose budget limitations leads necessarily to inefficient investments. This is why more investments did not mean more successful economy. This refers to less developed regions particularly. Therefore:

3. The trend of relative regional differences of national product per capita shows undoubted tendency of growth of these differences, measured by both *V1* and *V2* indicators. In both cases their trend is best described by the half-logarithm trend function in which a dependent variable is computed with logarithm. This means that relative regional differences in national product per capita increased at increasing rate.
4. In the trend of absolute regional differences of employment per 1000 working age population, four sub-periods with various tendencies follow each other. During the sub-period from 1952 to 1964, absolute regional differences increased; from 1964 to 1971 they decreased, while from 1971 to 1979 they increased again. Finally, during the sub-period from 1979 to 1988, they decreased from year by year. When the entire period is observed, the falling tendency of absolute regional differences according to this indicator can clearly be noticed. This is confirmed also by the evaluated half-logarithm trend function, according to which he absolute regional differences in employment per 1000 working age population decreases at an increasing rate.
5. The trend of absolute regional differences considering capital assets per a working age inhabitant, however, does not have a common tendency in the course of the entire observed period. This is confirmed also by insignificant evaluated value of parameters with time in all evaluated trend functions for the entire period. Four sub-periods follow each other in the trend of these differences. First sub-period, from 1952 to 1962, in which the differences grew at constant coefficient; second, from 1954 to 1962, in which the differences decreased at constant coefficient; third, from 1962 to 1974, in which absolute differences among regions increased, and the fourth, from 1974 to 1988, in which the absolute regional differences regarding the capital assets per a working age inhabitant also increased, but faster than in the previous sub-period.

6. As for the national product per capita, the main tendency in the trend of regional differences according to this absolute indicator is the same as in case of V_1 and V_2 indicators. Namely, the absolute regional differences increase in the course of the entire period. Judging by the functional form of the trend that best describes the trend of these differences, they increased rapidly.
7. The results of the analysis show that both relative and absolute regional differences in the course of the observed period decrease in case of the employment and in case of capital assets. The diminishing of differences at that in case of the employment is accelerated, while is case of capital assets it is slower. In the last decade of the observed period (1978-1988), however, both absolute and relative differences among regions considering capital assets increase. As for the national product, both relative and absolute differences in the course of the entire observed period increased rapidly.

The results of the quantitative analysis of regional disparities show autonomous trends at the former Yugoslav regional scene, but considering that the system then declared as egalitarian, they illustrate well the accomplishment of the goal of interregional equality, i.e. they are an accurate indicator of (un)successfulness of regional policy in FPRY/SFRY.

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Review article
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MERCOSUR FACING THE CHALLENGE OF ALCA PROJECT

***Abstract**: Integration processes in Latin America are accompanied with competing processes of globalization. On one side, there is MERCOSUR, founded in 1991, as a core of economic integration within Latin America, and on the other side there is a project of Free Trade Zone between two Americas – ALCA, which was initiated by the USA in 1994. MERCOSUR and ALCA have been incompatible so far since the realization of the ALCA project would in fact mean to annul the basic values on which MERCOSUR was created. This is why MERCOSUR must extend its influence, to be the basis of the South American Union of the Nations and thus remain the guardian of the regional specific characteristics of the South.*

***Key words**: MERCOSUR, ALCA, Latin America, regional integration, globalization.*

1. Introduction

The aim of this article is to analyze from various aspects the great challenge of the integration process in which both Argentina and Latin America participate at the end of the 20th and the beginning of the 21st century.

It is evident that we cannot leave aside all that preceded historically and fueled these problems. Although this study is not intended to analyze the integration process from historical point of view only, we must mention the Agreement of Tordesillas (*Tratado de Tordesillas*) from 1494. This Agreement was signed by Spain and Portugal in order to determine the boundaries of their territories. It was then inherited by both Argentina and Brazil, and in the centuries that followed it caused first rivalries between the two countries. These rivalries stopped mostly after the Agreement of Asuncion was signed (*Tratado de Asunción*) in 1991, which started the new stage of integration process in the region that continued then at the international level, primarily because of the influence of globalization on the world economy.

Historical complexity of Latin America largely reflects the problems that used to burden and still burden the integration processes in the region. Historical

predecessors of Latin American integrations can be traced back to 19th century, but only in 20th century, they gain in significance and become the issue of interest and political negotiations.

The end of World War II marked the beginning of a new stage in politics and economy for European governments, but horrible experience made the whole society aim at a new Europe. Entire reconstruction was not a problem for one country only, but for the whole region. Political will and society in general made integration at the old continent possible. The Roman Agreement (1957) enabled creation of the European Economic Union, the goal of which was to shape one protectionist economic bloc for the agricultural producers from mild and tropical zones. This represented a threat for the future of export-oriented agricultural economies of South America.[1] This situation instigated the need to unite powers in order to oppose the new European protectionism, because of which it was decided to restore and extend bilateral agreements. From that moment on, Latin America intensified its own negotiating process for initiation of new forms of regional integration, which resulted in signing of the Agreement in Montevideo on February 08, 1960, which formed the Latin American Association of Free Trade (*Associación Latinoamericana de Libre Comerciio* – ALALC).[2] ALALC had many rises and falls, but it should not be forgotten that Latin America in most parts was subject to coups in 1960s and 1970s, which made impossible the continuity of idea of integration. In addition, it should be taken into account that the economies of Latin American countries were primarily export-oriented, which made them mutually competitive and not complementary. This is why the economic integration began rather late and, why not say, remained our debt to the future of the region.

Only when the Latin American Association for Integration (*Asosiación Latinoamericana de Integración* – ALADI)[3] was formed, general principles of pluralism in political and economic sphere were established: progressive transition from partial influences to formation of common Latin American market, flexibility, introduction of differential treatment in accordance with the degree of development of member-countries and multiple forms of coordination of trading instruments.[4]

ALADI included in its legal structure the most various sub-regional, multilateral and bilateral integration agreements, which were signed more and more on the continent – the Andean Community of Nations (*Comunidad Andina de Naciones*), The Group of the Three (*Grupo de los Tres*), MERCOSUR.[5]

1 M. De M. Llairó, *La integración latinoamericana: de la ALALC al MERCOSUR*, Universidad de los Andes, Mérida, Venezuela, 2002.

2 M. de M. Llairó, R. Siepe, *Frondizi: Un Nuevo modelo de inserción internatcional*, EUDEBA, Buenos Aires, 2003.

3 The Agreement was signed on August 12, 1980.

4 See ALADI institutional standards.

5 About MERCOSUR, see also: L. Ruis Jimenez, "The Iberoamerican Community of Nations – The Unused Potential of a Stagnant System", *Megatrend Review*, vol. I, no. 1, pp. 65-76 (Editorial's remark).

Consequentially, The Association, as an institutional and normative framework of regional integration, had a duty to develop the activities of support and strengthening of all efforts with a view of their progressive joining into the common economic area.

ALADI has continued the integration process that started with ALALC, so in July 1986, within ALADI, the Argentine President Raul Alfonsin and the Brazilian President Hose Sarrney signed the Program for integration and economic cooperation (*Programa de Integración y Cooperación Ecónomica* – PICE). This agreement aspired not only to create the free trade zone but also foresaw gradual coordination of monetary, fiscal and currency policies. Taking into account world events and previous unsuccessful attempts in the field of regional integration, the two Presidents acknowledged the need of the two nations to prepare for the challenges of the 21st century.[6]

By signing the Act in Buenos Aires (*Acta de Buenos Aires*) on July 06, 1990, the Argentine President Carlos Saúl Menem and the Brazilian President Fernando Collor de Mello reestablished the principles and obligations contained in the Declaration of Iguazú (*Declaració de Iguazú*) of 1985.[7] They also confirmed the 1986 Act for Argentine-Brazilian integration (*Acta para la Integración Argentino-Brasilieña*)[8] and 1988 Agreement on integration, cooperation and development (*Tratado de Integración, Cooperación y Desarrollo*).[9]

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6 In the second half of 1980s, there was a rising tendency of forming regional trading blocs, which presented various degrees of openness towards the rest of the world or protection from them. Such a tendency started because of the decision of the EEC countries, adopted in 1985, to establish a common market. Soon its example was followed all over the globe and there were numerous processes of integration or free trade zones were established on various continents.

7 The Agreement of Foz – Iguazú set basis for bilateral integration with common diagnosis of problems in the region and with two fundamental principles for integration strategy: bilateral economic coordination and the development of common infrastructure and complementation of energetic, traffic and communication sector. Please note that the stated Declaration was signed in the course of a very important event within physical integration – opening of the international bridge Tancredo Neves on the Iguasu River.

8 Based on the Act of Argentine-Brazilian friendship "Democracy, Peace and Development", the Presidents Alfonsin and Sarrney re-approved in Brasilia on December 10, 1986, the coordination of five new sector protocols, which fundamentally influence metallurgy, traffic, communications and nuclear cooperation. New progress is achieved seven months later, when the same Presidents approved three new sector protocols for the fields of culture and public administration.

9 In April 1988, the Presidents of three countries examined modalities of Uruguay joining the possible three-party process of integration characterized by principles of gradualism, flexibility and balance. On November 29, 1988, two Presidents signed the Agreement on integration, the basis of today's MERCOSUR, which provided for formation of "common economic area". In August 1990, it was agreed to include Uruguay in the common market project and to invite Chile and Paraguay to join.

By concluding these contracts, signed before their coming into force, both Presidents shaped the idea to create a "common market" between Argentina and Brazil for the period not longer than four years.

In December 1990, it was decided to protocol the Agreement between Argentina and Brazil in the legal framework of ALADI, which was finally realized on March 26, 1991, by signing the Agreement of Asunsion that officially established the Common market of the South (*Mercado Común Del Sur – MERCOSUR*).[10] This Agreement was extended on Paraguay and Uruguay, which also signed the stated Agreement.

2. What is MERCOSUR?

MERCOSUR has originated as a project with political roots and economic content, supported by democratic legitimacy of Argentine and Brazilian Governments, which got the support of their Parliaments to sign the Agreement of Asunsion.[11]

From the very beginning and starting from the perspective of open regionalism, MERCOSUR took the counter-stand towards protectionist strategy with high tariffs and established the strategy, which had the aim to adjust to the requirements of the world economy in order to be able to compete with other big markets.[12]

At the beginning, consisting of Argentina, Brazil, Paraguay and Uruguay, MERCOSUR was the main system of cooperation in the region, covering the territory of over 1.186.200 square kilometers, with more than 200 million inhabitants and GDP over a billion US Dollars. Bolivia and Chile, the associate members of MERCOSUR, have almost 22 million inhabitants and GDP amounting to almost 80 billion US Dollars. Intraregional trade within MERCOSUR absorbs 25% of exports of all member countries. From the economic point of view, in addition to providing directing of a considerable part of exports of its member countries, MERCOSUR provides for the existence of a privileged area where they can empirically and operatively determine the degree of international competitiveness of some production sectors or to evaluate their achievements by means of possible technical and management improvements to that effect. In other words, MERCOSUR functions as a kind of laboratory in which its member countries can test the international competitiveness of their exports and at the same time to prepare certain sectors to face these requirements.[13]

[10] M. de M. Llairó, *ibidem.*

[11] The Agreement of constitution of the common market between the Republic of Argentina, Federative Republic of Brazil, the Republic of Paraguay and East Republic of Uruguay was signed in Asunsion, Paraguay, on March 26, 1991.

[12] B. Nofal, "Relanzamiento ya. Hacia la integración profunda", *Encrucijadas*, vol. 1, no. 4, Universidad de Buenos Aires, 2001.

[13] H. Jaguaribe, "La opción de hierro. Consolidar y expander el Mercado común del Sur", Revista *Encrucijadas*, vol. 1, no. 4, Universidad de Buenos Aires, 2001.

However, globalization with its denationalizing effects caused MERCOSUR to gain more importance as a system to preserve national autonomies of the member countries. On one hand, they were given the power of international negotiating that none of them could have on its own.[14] On the other hand, MERCOSUR was and still is the crucial factor for preservation of borders of international autonomy of member countries against the power of large multinational companies, which tend to manage from the outside through their branches. Despite all chances of success, MERCOSUR faced several important inconveniences. After the period of the greatest success in its work from 1991 to 1995, it was noted that in spite of everything there were signs of certain structural susceptibilities that Aldo Ferrer calls "four substantial defects".

These defects have impact on both Brazil and Argentina, and they are: dependence on the international financial market, insufficient internal social integrity, asymmetry of national strategies and differences considering joining the international cooperation.[15] Taking into account the importance of the stated "substantial defects" suggested by Aldo Ferrer, it is important to comment on each of them briefly.

First, overdependence on the international financial markets represents primary structural limitation for Argentina-Brazil axis. In neither of these countries, trade balance can generate enough financial assets to pay off net debts in the balance of capital transactions, which is mostly the consequence of heavy liabilities. To cover this deficit, these countries depend on the annual inflow of foreign capital in certain amounts, which creates their structural dependence on the international financial market.[16]

Second, poverty and social marginalization, important in case of Argentina, reach disturbing proportions; in case of Brazil, they affect 30% population. Until this serious defect is corrected, these countries, primarily Brazil, will continue to suffer consequences of low level of social integration, which would consequently decrease national power.

Third, serious limitations that Aldo Ferrer pointed to speaking about asymmetry of national strategies in the two countries are possible in short terms. Ferrer shows how Argentina was brought to the point where it sacrificed its industry due to serious inconsistencies of economic orientation in the last twenty years, turning country into agricultural and oil manufacturer, while Brazil maintained and extended its industrial capacity. This is where important quality imbalance comes from in the terms of trade between the two countries.[17]

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[14] *Ibid.*

[15] A. Ferrer. "Los cuatro pecados originales del MERCOSUR", *Encrucijadas*, vol. 1, no. 4, Universidad de Buenos Aires, February 2001.

[16] *Ibid.*

[17] A. Ferrer, Los Cuatro Pecados Capitales en El Cono sur y su inserción internacional. Los desafios en el tercer Milenio, Compiladores: Llairó María de Monserrat-Siepe Raimundo, Facultad de Ciencias Económicas, Universidad de Buenos Aires, Argentina, 2003.

Fourth, as for their joining the international cooperation flows, Ferrer points to the fact that in 1990s in both countries, primarily in Argentina, important segments of public opinion and majority of political power accepted neo-liberal principles as unavoidable economic laws. Passive acceptance of the rules of the game of the international market and powerful opposition to well-considered state intervening for improvement of economic development and preservation of internal economy, brought Argentina to the state of helplessness before the international economic powers with the consequential loss of possibility to decide.[18] Therefore, we agree with Ferrer here. Observed from the historical perspective, on the eve of establishing of MERCOSUR, Argentina and Brazil did not have necessary time to correct these four defects and, first of all, did not have the measures to decrease the coefficient of poverty and social exclusion.

Accordingly, we think that establishing of MERCOSUR was an extremely urgent and absolutely necessary task for the national survival of member countries of the group as a whole and their opening towards unconventional regional blocs.[19] This is why it is necessary for Argentina and Brazil to solve the problems in the mutual relations as soon as possible and within the integration, independent from what the agreements contain and, of course, taking into account the total requirement to achieve permanent consent with a view of their mutual survival.[20] Taking into account its regional importance, MERCOSUR is the guardian of regional specific characteristics of the South, but also it must and will have to overcome many difficulties: one of them is the negotiations with the bearers of the project of free trade zone of the two Americas (ALCA), although quite limited and conditioned for now, which was caused by sudden changes in the international and regional politics. We shall try to present some of these changes in the text to follow.

3. What is ALCA?

ALCA (*Área de Libre Comercio de las Américas*) means "the area of free trade of two Americas". It should be the area because it would extend from Alaska to Tierra del Fuego. Free trade would include elimination of customs barriers for the trade in the region, including movement of capital, but not the movement of

[18] *Ibid.*

[19] S. S. Pajović, "Posibilidades de un Nuevo Diálogo entre los Balcanes y el MERCOSUR", Boletin Informativo de CORI, año VIII, no. 45, p. 7-12. This article explains the motivation of the Balkans to strengthen the cooperation with MERCOSUR, i.e. how Balkan countries view the significance of MERCOSUR in Latin America and in the world, and why it would be important for the Balkans to initiate the dialogue with this group – in order to balance their dependence, primarily from Brussels (EU) and from NATO.

[20] A. Columres, "Hacia una politica de la integración en el ámbito del MERCOSUR", *MERCOSUR: la dimension cultural de la integración*, Editorial Ciccus, Argentina, 1997.

labour power. This would supposedly enable small and medium-size enterprises of the member countries to compete under equal conditions. Operative centers would be in the USA, extending to Canada. The term "two Americas" suggests that the area would consist of all American countries, excluding Cuba. Our criterion boils down to the saying: "America to the Americans, but from the North" and only 34 OAD member countries would participate.

As a project, ALCA was initiated at the third Pan-American meeting, which was titled the Summit of Americas, which was called together by the USA in Miami in December 1994. Under the wing of the USA, Latin American countries were led into accepting a number of obligations with a view of establishing the American area of free trade in 2005. This free trade system represents in fact the extension of the Agreement on free trade (*Tratado de Libre Comercio – TLC*) from 1993 to the whole America.

We think that this USA project was initiated as a sign of opposition to Iberian-American summits organized by Spain and Portugal, where the EU member countries also participated.[21] Therefore, in order to diminish the participation of Europe in Latin-American context, the USA called together the Summit of Americas.[22]

The ALCA project is characterized by the inequality between realistic power and economic and technical capabilities of the USA and the countries of the South.[23] The existing inequalities between North-American and South-American enterprises express also qualitative inequalities that are related to financial resources, technological level and managing capability, by which ALCA unavoidably directs them to contradictory specialization. This means that North-American enterprises would have the power over all sectors of higher value added, and South-American enterprises would be reduced to the conditions of supplying raw materials and unprocessed agricultural and cattle products.

It is beyond doubt that those who defend ALCA take neo-liberal stand: consumer's society would benefit from the access to better and cheap North-American

[21] IV Iberian-American summit of the heads of states and governments, Cartagena de Indias, June 14-15, 1994.

III Iberian-American summit of the heads of states and governments, Bahia, Salvador, Brazil, July 15-16, 1993.

II Iberian-American summit of the heads of states and governments, Madrid, Spain, July 23-24, 1992.

I Iberian-American summit of the heads of states and governments, Guadalajara, Mexico, July 18-19, 1991.

[22] Held in Miami from December 09 to 11, 1994. By the declaration of principles pact was established for development and prosperity, based on preserving and strengthening of the union of democracies of the two Americas. The goal of the document was to increase prosperity by means of economic integration and free trade, root out poverty and discrimination on the hemisphere and guarantee viable development and preservation of environment.

[23] A. Zabaleta Fajardo, *Relación MERCOSUR – ALCA*, Universidad Central de Venezuela, 2003.

products, but it should also be taken into account that this situation would be useful for North-American oligopolistic market that would impose the prices most suitable for it. On the other hand, the case of Mexico and the influence of North-American investments on its economy should be mentioned.[24] Namely, it is about the maquila[25] project and all included by it on a social level.[26]

Economic effects of ALCA would be very harmful for the southern countries and very useful for the USA. South-American economies would remain completely subordinated to large North-American multinational companies. Helio Jaguaribe gives the following explanations related to this:

"Since the internal consumption of these countries is based largely on the goods imported from the USA, and their international trade characterized by extremely unfavourable terms of trade, while they are the exporters of primary products and importers of goods with high value added, balance of payments would in any case be in structural deficit, by which they would become dependent on continuous compensation inflow of foreign capital. Similar regime, therefore, would soon tend to make the external autonomy of these countries unviable, which would force them into formal subordination to the USA."[27]

ALCA may influence the considerable decrease of direct foreign investments in the MERCOSUR countries, especially Argentina, as well as the loss of markets of MERCOSUR countries in Brazil and the continuous exodus of its enterprises from this country.[28] As we have already said, only the USA enterprises would benefit from ALCA, since they are more efficient and competitive, and they would force out certain Argentine products from the Brazilian market. Despite their good intentions, as the USA authorities point out, the initiation of ALCA hides many difficulties and unfavourable conditions for the majority of Latin American countries. We must take into account that the economies of these countries are on their path of development and this would hinder the possibility of development of industrial sector with high value added.[29]

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[24] P. Arroyo, et al., *Resultados del Tratado de Libre Comercio de América del Norte en México*, Red Mexicana de Acción Frente al Libre Comercio, México, 2001.

[25] Maquila – a kind of industrial development in areas situated near borders, especially characteristic of Mexico; multinational capital was invested in maquilas, factories along Mexican-American border, where assembly production processes are carried out with a very low degree of processing. They are export-oriented.

[26] J. Briceño Ruiz, "Las regions de frontera e integración internacional. Las experiencias en la Unión Europea y América Latina y las perspecitvas para el ALCA", in: J. M. Sandoval – R. Álvarey, eds.: *Integración y fronteras en América Latina*, Universidad de los Andes, Venezuela, 2003.

[27] H. Jaguaribe, ibid.

[28] D. B. M. Tussie, *El Alca y las cumbers de las Américas: una nueva relación público-privada?*, Editorial Biblos, Argentina, 2003.

[29] S. Larraín, Haciendo las conexiones apropadas entre el comercio, la sustanbilidad y las políticas de participación social. Presented at the International Conference on Trade, Environment and Sustainable Development – Perspectives for Latin America and the

4. International political context of ALCA

It is important to present the international context within which ALCA was established. This is why we have to remind of some of the most important international events of our epoch.

In 1994, the triumph of neo-liberalism in the Western world was indisputable and this is why we have to take into account some events that marked the global victory of this ideology. In June 1994, Russia joined NATO Partnership for Peace. Parallel to that, UN empowers France to intervene in Rwanda,[30] when the number of genocide victims reached 500 people. Several days later, the UN Security Council empowers the USA by the Resolution 940 for military intervention on Haiti. On August 29, of the same year, III UN Conference for population and development was held with participation of 182 countries and the central topic of discussion was abortion and not high rates of poverty worldwide. In October 1994, IMF and IBRD celebrate fifty years of signing of Bretton Woods Agreement. In November, the First Economic Summit for the development of the Middle East and North Africa was held in Morocco, where the Arabians and Israelis gathered. The Second summit on economic cooperation in Asian-Pacific region was held the same month,[31] on the occasion of which Chile was accepted as a new member and the Zone of free Trans-Pacific trade was projected (TAFTA) as far as 2020. Parallel to that, on Jamaica, in Montego Bay, the UN Agreement of Maritime Law came into effect. Moreover, what a coincidence, the year ends in Miami with the suggestion to establish ALCA. On the other hand, between 1989 and 1994, 95.2 billion US Dollars come from abroad into Mexico. The sum of 72 billion US Dollars was used to invest into chosen production branches (portfolio investments)[32] and to cover huge trade balance deficit of the country. The currency exchange rate fell from 3.5 Pesos to 7.0 Pesos for a Dollar in March. The capital outflow reached 23.4 billion US Dollars in 1994, 47% of which in the last two months of that year. In the same 1994, monetary reserves of the Mexican Central Bank fell from 29.5 billion US Dollars to 6 billion US Dollars. At that moment, President Clinton lends a helping hand.[33]

In January 1995, the Group of the Three is formed by the Agreement of free trade coming into force, which was signed by Columbia, Mexico and Venezuela, and MERCOSUR was founded by Argentina, Brazil, Uruguay and Paraguay.

Caribbean (Conferencia Internacional sobre Comercio, Ambiente y Desarrollo sustenable "Perspecitvas para América Latina y Caribe"), Mexico, 2001.

30 Resolution 929 of the UN Security Council.

31 Held in Bogora (Indonesia), with participation of 16 countries.

32 It consisted of 28 billion US Dollars from the purchase of shares and 44 billion US Dollars from short-term financial instruments; the greatest part were the Treasury bonds issued in US Dollars in 1994. The income was intended to cover foreign debts, which at that moment amounted to 63.5 billion for the six previous years.

33 Such exhaustion of monetary reseves was the reflection of the impossibility to pay off debts.

World Trade Organization (WTO) was also formed, which replaced GATT. In Europe, the European Union extended to 15 members, accepting Austria, Sweden and Finland. In August 1995, four countries (Hungary, Poland, Czech Republic and Slovakia) decided to join economically the Central-European free trade agreement (CEFTA), which would later be joined by Slovenia. At the meeting of eighteen countries of Asian-Pacific economic cooperation (APEC) in Osaka, Japan, the agreement was reached to establish Free trade zone by the year of 2010, for industrialized countries and by 2020 for the developing countries.

At the end of 1995, the European Union held a meeting in Barcelona with the eleven countries of the Mediterranean, Mauritania and Palestine among others as well, with a view to project for 2010 the establishing of free trade zone within framework of global cooperation in the world.

Many examples, only some of which are mentioned here, show that it is not accidental that the USA initiated establishing of ALCA. It is undoubted that the Free Trade Agreement (TLC) is the predecessor of ALCA and that the results were not encouraging for some of the countries that were in TLC. In case of Mexico, but also of Canada, there were harmful political and economic imbalances. During the mandate of President Carlos Salinas de Gortari Mexico offered to President George Bush Senior to cancel tariffs for the most sensitive products, increased the purchase of corn, accepted to open Mexican oil sector for foreign investors, and later, during the Presidency of Bill Clinton, rigorous regulations in the field of safety at work and environmental protection were introduced. If we leave aside economic issues and observe political panorama, there were also points of instability, such is the case of Zapatistas,[34] internal problems of Revolutionary institutional party (*Partido Revolucionario Institucional – PRI*) and the assassination of the presidential candidate Luis Donado Colosio. In case of Canada, the idea on secession of Quebec and the problem of cutting social transfers started to emerge.

5. Into which form of integration would ALCA wish to classify?

There are various forms of agreements for realization of regional integration. We shall mention only the generally known: free trade zone, customs union, common market and integration.[35] In accordance with traditional definitions, we shall try to define synthetically each of these:

- *Free trade zone* is a multilateral agreement, which enables free flow of goods, capital and persons.

[34] Zapatist army of national liberation (Ejército Zapatista de Liberación Nacional) – indihenist movement originated on November 17, 1984 in the state of Chiapas in Mexico.

[35] J. Requeijo, *Economia Mundial, un análisis de dos siglos*, Mc Grow Hill, España, 1995.

- *Customs union* adds common foreign tariff to free trade zone. Countries included in the agreement act mutually as one country. MERCOSUR represents a kind of customs union.
- *Common market* aims at adopting of common or convergent macro-economic policy. For instance, consumption must not exceed the agreed percentage of gross domestic product. That was the case with the European Union while it was on a lower level of economic integration.
- *Integration* is the widest aspect of cooperation. It implies not only the economic relations, but also the efforts to carry out the political and cultural agreements. For instance, the European Parliament and legal authorities of the EU are the example of this, as well as the uniform currency.

Continuing our analysis, we wonder where we could classify ALCA. Actually, it has the characteristics of all forms of cooperation, but cannot be classified into one of them precisely. ALCA implies free flow of goods and capital, while the free movement of persons is eliminated, so it can be classified as free trade zone. Foreign investments are secured, which would harm national companies that would never be able to compete with multinational companies.[36]

Actually, ALCA is a final stage of process of imposing hegemonistic power of the USA on the American continent, which started with the agreement known as the Washington Consensus (1989).[37] Argentina at the beginning of the 1990s is a good example. While the world interest rate was falling, Argentina decided to raise internal interest rates in order to attract foreign capital. This country looked for the ways to cover high foreign trade deficit, which originated from the conditions of overvalued domestic currency. On the other hand, public enterprises in the field of telecommunications and electric energy were sold to the USA companies, so they established technological monopoly in the field of energy sources.[38] Fiscal revenues increased thanks to the sale of public enterprises, but the effects of this sale were soon exhausted since the repayment of high domestic interest rates to foreign investors had to be financed. After serious political and economic crisis that the country experienced in 2001 and that it still has not managed to overcome, in the first years of a new millennium the intention is to change the direction of the economy to production and not speculations, as in previous years. In that context, one of the ways to strengthen production and trade is the investing in improved functioning of MERCOSUR and processes of regional integration of the South.

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36 *Clarin* Journal, November 03, 2004.

37 On Washington Consensus, see also: B. Babić, "Managing Current Development in Economies in Crisis", *Megatrend Review,* vol. 1, no. 1, 2004, pp. 33-52 (Editorial's remark).

38 F. Peña, "MERCOSUR y las relaciones entre la Argentina y el Brasil. Perspectivas para su evaluación y propuestas de acción", *Revista de CARI*, Buenos Aires, October 2004.

Having learned the lesson from these events, we can continue with some thoughts regarding ALCA. We believe that ALCA has no interest in co-habitation with any of the regional markets. Its aspirations are to form hegemonistic bloc under the USA leadership, which on the other hand, is not continuation of TLC. ALCA as an agreement is quite disputable, if we have in mind that this agreement was made secretly without the support and participation of Latin American countries, which gives it a characteristic of suspicious transparency in goal defining, but also in the domain of application. In addition, there are other issues that make the implementation of ALCA in the region difficult.[39] What would happen with the following:

- *Workers and working conditions* (in order to be able to compete at the market, local entrepreneurs will be forced to lower wages, which would cause greater imbalance in purchasing power and consumption, and poverty and social marginalization will become greater, causing retrogression in that field, and, why not say, greater lack of working motivation);
- *Privatization of social services* and all the consequences it brings;
- *National industries,* considering that it is clear that they are slowly vanishing within this framework;
- *Political rights and democratic life of countries,* since they will suffer great impact from introduction of the idea of supra-national ALCA;
- *Destruction of the environment,* due to the abuse of natural resources;
- *Concentration of the existing processes of regional integration within ALCA.*[40]

These are just some of the problems that emerged in the face of ALCA implementation. It is clear that there are many problems and unfavourable conditions hiding within ALCA, which are not possible to notice at first sight. With the initiation of ALCA, certain USA companies could move to those countries in the region where the production costs are lower or to run their business in Latin American countries from their headquarters in the USA.[41]

6. Will MERCOSUR be able to be feasible project in this context?

Taking into account some previous considerations and pointing out the need to consolidate the idea of integration as a method for achieving fast economic development of Latin American countries, we can say that some advantages could strengthen the process of Latin American integration, particular-

[39] E. Arceo, *ALCA, Neoliberalismo y Neuvo Pacto Colonial*, Ediciones CTA, Buenos Aires, 2002.

[40] *Ibid.*

[41] F. Peña, *MERCOSUR y las relaciones entre la Argentina y el Brasil. Perspectivas pare su evaluación y propuestas de acción*; Fundación Banco de Boston; Buenos Aires, 2004.

ly MERCOSUR. MERCOSUR must be a fast process of regional integration, which enables more adequate inclusion into the globalization process, preserving the identity of the countries that constitute it. History is not a linear process of evolution, it records progresses and falls, so certain events going on between Argentina and Brazil revived again the old debates regarding the path to be followed within MERCOSUR, especially regarding the issues of solving the foreign debts of these countries. In fact, these differences in opinion are those that showed the weaknesses and susceptibilities of these countries as well as their incapability of joint negotiations on their international obligations. As we see it, the relation of power between MERCOSUR and ALCA should be determined by negotiations, taking the previously signed agreements as a starting point for negotiations. This position would provide for the preservation of identity of both integration groups, and not merging of MERCOSUR into the ALCA process, which is of special interest for the USA as a part of their strategy of positioning in the new international context.[42] We agree with some authors that MERCOSUR is the guardian of regional specificities of Iberian America, but it is also true that it needs a detailed revision, or in other words coordination of the basic interests of its member countries.[43] In addition to this, it should also find an answer to the question how to arrive at a political idea to create a common market, which first implies to define common goals. Accordingly, cooperation and not competition among the member countries becomes a priority.[44] In Argentina where the social situation is disturbing because half a population is at the edge of poverty and social marginalization,[45] carrying out the integration according to the recipe of neo-liberal economic school would mean the end of the application of the concept of welfare state. In the recent years, Argentina has lost its competitiveness and technological capabilities, which makes its entrance to highly competitive world market considerably difficult.[46] If we observe the current situation in Argentina, joining the ALCA at this moment would bring more problems than advantages. MERCOSUR and ALCA are incompatible for now. MERCOSUR must extend its influence to the southern zone and achieve full economic integration. We believe that the possibility of more equal negotiations with ALCA depends primarily on strengthening of MERCOSUR.

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42 S. Anderson, et. al., *El Alto Costo del Libre Comercio*, Alianza Social Continental, México, 2003.

43 J. Sevares, *Por qué cayó la Argentina. Imposición, crisis y reciclaje del orden neoliberal*, Norma, Argentina, 2002.

44 F. Peña, ibid.

45 M. Seoane, *El saqueo de la Argentina*, Sudamericana. Argentina, 2003.

46 M. Seoane, *El siglo del progreso y la oscuridad* (1900-2003), Crítica, España, 2004.

7. Current challenges of MERCOSUR

The tenth anniversary of MERCOSUR member countries protocol, signed in Ouro Preto (Brazil) will be marked at the forthcoming summit that will be held in Ouro Preto in December 2004, and the goal of which is to coordinate the reforms among the participating countries.

At the moment of its signing, Ouro Preto I Protocol meant passing over into new integration stage, which consequently led to taking over responsibilities and challenges related to defining of total development strategy, functioning of a new institutional structure that included some other bodies and finally modified interactions and functional dynamics, the status of international legal face of the group within the international framework as a bloc in negotiations with third countries.

One of the remarks to the Ouro Preto I Protocol is that it has not included fundamental aspects referring to the principles of functioning of the system among the member countries. We also mention here that the process of decision-making maintained at the principle of legal equality among the states, without considering its real structural asymmetries, which undoubtedly influenced the whole process dynamics, mutual politics and strengthening of the regional identity.

According to this logic, the Protocol has not deepened the institutional structure, but left many unsolved problems related to application of previously adopted norms at the regional level, coordination of regional institutions and states, defining the scope of authorization between regional and national level, foreign relations of states and extending of mechanisms for settlements of disputes.[47]

The outstanding issues and problems in the developmental stage of the group so far have not been given adequate significance since MERCOSUR has shown vitality by the growth of regional trade. On the other hand, shortcomings within the institutional framework made the achievement of goals defined in the Ouro Preto protocol difficult, but also regarding other topics that could result from negotiations with third parties. MERCOSUR member countries signed Ouro Preto I Agreement in 1994, in order to improve institutionally the organic structure of the bloc, making it possible to conduct its international relations as an internationally acknowledged legal subject. Common Parliamentary Committee, Administrative Secretariat, Trade Committee and Social-economic Consulting Forum have also been established.

However, it was not until 2000, that the first and required answer to the problems caused by outstanding issues of the institutional functioning has been given by the adoption of the Agenda for reconstruction (*Agenda del relanzamiento*). This document has emerged as a consequence of the change of government in Argentina, and primarily of clear signal for strengthening of cooperation, which Brazilian foreign policy sent to the South American area and MERCOSUR. The Agenda for reconstruction identified institutional consolida-

[47] S. Penheiro Guimaraes, *El rol politico del MERCOSUR*, September 2004, <www.amersur.org.ar>

tion and adoption of standards of MERCOSUR as priorities and offered certain solutions by strengthening of MERCOSUR Administrative Secretariat and its transforming into Technical Secretariat. Political changes that occurred in 2003 in the countries of the region caused new reconsideration of the integration process in Latin America, starting from the revision of previously determined priorities, regional goals and time limits and methods. Argentina-Brazil axis managed to restart this process by affirmation of joint values designated in two basic documents: Final document from the meeting of Argentine President Kirchner and Brazilian President Lula held in Brazil on June 11, 2003, on the eve of the first MERCOSUR summit, and the document known as Buenos Aires Consent. These documents set the path that should be followed, as well as certain priorities among which institutional strengthening and establishing of regional parliament are underlined.

At MERCOSUR summit held in June of 2003, Brazil presented its proposal for achieving the final goal: establishing of common market of South America contained in the document titled Program for consolidation of customs union and initiation of common market. Goal 2006 (*Programa para la Consolidación de la Unión Aduanera y para el lanzamiento del Mercado Común. Objetivo2006*). This document underwent some modifications in accordance with the reforms introduced by the governments and was subsequently précised within the Work Program of MERCOSUR for the period 2004-2006, adopted at Montevideo summit in December 2003.[48]

MERCOSUR Work Program 2004-2006 represents a guidebook how to provide for the further development of the group by determining the exact schedule and appropriate methodologies. One of the news contained in the Work Program is that it deals with the issue of asymmetry, especially the position of Paraguay, since it is a country at a lower degree of economic development without the exit to the sea. In addition, it contains a provision of compensational financing aimed at establishing funds for structural changes that are intended to increase competitiveness of less developed partners and regions.[49]

One of the goals of Ouro Preto II is to coordinate the process of institutionalization. Two provisions refer to MERCOSUR Parliament and its institutional strengthening and these two provisions should round up the framework of cooperation in this field.[50]

According to the attitudes presented within the Common Parliamentary Committee, the regional Parliament represents the highest political instance for the debate on the MERCOSUR future. However, it cannot be seen from the pro-

[48] A. Sosa, "Los desafíos de Ouro Preto II", *Le Monde Diplomatique*, Argentina, December 2004.

[49] *Ibid.*

[50] The additional protocol to the Agreement of Asunsion on institutional structure of MERCOSUR – Protocol of Ouro Preto, Brazil, December 17, 1994.

posal of this committee in which order the ideas at regional and national level would be realized in order to overcome in a synchronized manner the issues such as what the regional parliament is for and how it is significant for society.[51] In addition, neither the goals nor jurisdictions of MERCOSUR Parliament are clear in the institutional structure of the Group, since they are not demarcated from jurisdiction of Parliamentary Committee. It can be argued that this is just another incomplete structure, which it is in fact. Nevertheless, the beginning of establishing of the regional parliament is certainly the foundation of this project. That is the reason why it is necessary to define "political Maastricht" with clear goals.[52]

Basically, the provision that refers to institutional strengthening takes over the path of the recent years and this is why Ouro Preto II Agreement is the opportunity to improve institutional structures of MERCOSUR. The improvement includes the completion of transformation of Administrative Secretariat into Technical Secretariat, functioning of Permanent Revision Court of MERCOSUR, including Advisory Forum for Political Gathering and defining jurisdiction of Committee of Permanent Representatives. In addition, the procedure for urgent adoption of regional standards will be defined for those cases where parliamentary procedure is not required. On the other hand, there will still be an open issue of the increasing participation of middle-class society in the regional process, which is stated in the Program as "strengthening of private sector".

Ouro Preto II will therefore represent a new step and necessary innovation, which would present regional situation at this moment. In addition to this, it will offer legal framework to determine the agenda of a new stage of discussion on institutional topics related to democratic and social problems, quality of informing, degree of social participation and presentation of various segments of middle-class society. It will also have to determine the principles of functioning of regional bloc in which issues related to rights and responsibilities of partners must be included, with all the susceptibility resulting from asymmetry.

It is within this context that MERCOSUR members will have to analyze the revision of the original Protocol of Ouro Preto, which established MERCOSUR bodies at the time, their jurisdictions and relations, as well as the regime of determination and importance of standards. Besides the stated institutional changes occurred in organic structure of the group, major attention will be paid to deepening of the integration process and concretization of measures for coordination of policies and creation of common market by means of integration in the fields of production of goods and services and the operatios of energy systems, supported with the appropriate provision of financial resources.[53] It is also considered important to develop economic infra-

[51] A. López, M. Laplane, *Complementación productive en MERCOSUR. Perspectivas y potencialidades*, Taller FCES, Montevideo, Septiembre de 2004.

[52] S. Pinheiro Guimaraes, *El rol politico del MERCOSUR*, Septiembre de 2004, <www.amersur.org.ar>

[53] *La Gazeta del MERCOSUR*, Buenos Aires, August 1998.

structure that would serve as a foundation of MERCOSUR.[54] Also, it is of universal importance for the Group summits to discuss economic and social inequalities existing among MERCOSUR member countries. For instance, Paraguay is a poor inland country with serious social polarization, while the main sources of economic development in Uruguay are agricultural and live stock sector and tourism. Argentina must adopt the policy of reindustrialization, because of the application of neo-liberal policy that caused the process of deindustrialization in the country, increase of unemployment and serious social polarization. In Brazil, in spite of its economic potentials, there are large social inequalities, which could be diminished in one homogenous bloc.

When analyzing the Protocol, the projects in the field of economic infrastructure, which will revive regional integration should be taken into account. It is necessary to precise and organizes the construction of transportation system, river and air traffic among other things. The projects refer to construction of inland and river roads and railways.[55] A Venezuelan initiative to sign the agreements at the South American level, which would enable business cooperation between Oil Industry of Venezuela (Petróleos de Venezuela) – PDVSA, Brazilian Oil Company Petrobras, Argentine Energy (Energía Argentina) – ENARSA, ANCAP from Uruguay and YPF from Bolivia is also interesting. In this way, there would be joint activities in the field of research, improvement and commercialization of oil and natural gas. The competition at the world market, which is controlled by oligopolies, would also be more successful. This initiative implies also the development of alternative energy resources and forming of trade-union center of the South American workers employed in energy-supply industry.[56]

The current world system is characterized by growing concentration of wealth and power. Although at the strategic and military level the United States of America are the only big power, at the economic and trading level they share power with the European Union, Japan, China and India. Therefore, the priority of MERCOSUR is to define what its role will be in the evolution of world system oriented at multi-polarity and possible conflicts within that framework.[57] In our opinion, one-sided hegemony of the United States is and will be the main characteristic of world political system, and its second characteristic is that there is a divided hegemony within the Group 7, IMF, WTO, World Bank and NATO. With such a perspective of development of world relations ahead, MERCOSUR will have to develop a viable industrial and technological strategy, if it tends to become one of the power centers, together with its partners from the South.[58] Such an orientation

[54] M. Seoane, ibid.

[55] M. de M. Llairó, *Los grandes proyectos de infraestructura del MERCOSUR. La Hidrovía, realidades y controversias*, Universidad de los Andes, Venezuela, 2002.

[56] Plan Fénix, Revista *Oikos*, Facultad de Ciencias Económicas de la Universidad de Buenos Aires, 2003.

[57] *Ibid.*

[58] S. Calloni, V. Ego Ducrot, *Recolonización o independencia. América Latina en el siglo XXI*, Norma, Buenos Aires, 2004.

will imply that the leadership in the region will have to be responsible and divided, which would contribute to solving or right treatment of existing conflicts and the conflicts that might occur.[59]

8. Establishing of the South American Union of the Nations

Before the meeting where Ouro Preto II will be adopted, the plan was to establish the South American Union of the Nations (*Unión Sudamericana de Naciones*) in the place called Ayacucho in Peru on December 09, 2004.

The goal of integration of South America is to follow the steps of the European Union and to create a similar bloc, which can face the rest of the world politically and economically. For the time being, this is one important political project, which has not yet been fully defined. The South American Union would be a product of integration of MERCOSUR (Argentina, Brazil, Uruguay and Paraguay) with Chile and the Andean Community (Bolivia, Peru, Ecuador, Columbia and Venezuela), with which it has already signed agreements on free trade that strengthens this relation additionally.

In the next six months, a new summit of all Presidents of the South American countries should be held, where a form of administration within the bloc and common instruments will be defined. All these measures would accelerate the integration process. It should not be forgotten that the European Union needed 40 years from the moment of constitution to the functioning at the present level of integration.

After the European Union and NAFTA, the South American Union would be the third economic bloc in the world with huge reserves of ores, petroleum and energy resources. In addition to this, this union would be the first food manufacturer and exporter in the world.

Eduardo Duhalde, President of Argentina 2002-2003, said at the last summit of the Rio Group that there is great enthusiasm of Presidents of Guiana, Panama and Mexico. President of Mexico, Vicente Fox, did not reject the possibility to attend the summit in Peru. For more than four years, Presidents of Latin American countries have been working on establishing of this political and trading alliance. At the Presidential summit held in Brazil on August 30-September 01, 2000, they decided to stimulate organizing of South American region, not only according to geographic criteria, but also in accordance with cultural identity, or common values of the nations in these countries.

The draft agreement of the South American Union should symbolically be signed in Pampa de Quinua in Peru on the same date and at the same place where there was the battle of Ayacucho 180 years ago, the last great battle against the

[59] Ministerio de Relaciones Exteriores de Argentina. *Argentina ante Ouro Preto II. Un enfoque abarcativo*. (October 04, 2004), <www.MERCOSUR.abc.com.ar>

Spanish Royal Army. A day earlier, Presidents of the countries that form the Andean Community should meet at Cuzco, and the next day they would sign this document in Ayacucho.

The central idea of forming the South American Union is to reach unity of the bloc in the fight against inequality, social marginalization, famine, poverty and insecurity, as is written in the outline of its foundation acts.

The intention is for South America to become one of the most competitive regions and to develop further common region. For a long term, the tendency is to achieve goals such as creation of common currency, which is an ambitious goal, to determine conditions of trade- and energy- related cooperation, cooperation in the field of telecommunication, provide for the flow of people and goods.

The decision has not yet been reached whether the final name of the integration of the South American countries will be the South American Union. The other suggestions are the Union of the South (*Unión del Sur*) and the United States of South America (*Estados Unidos de Sudamérica*).

Dualde, as the President of the Committee of permanent representatives of MERCOSUR, is leading these negotiations for establishing the South American Union, and the Minister of Foreign Affairs Rafael Bielsa is helping him as well as his Brazilian colleague Celco Amorim. It is a great political stake for Presidents of ten countries that would meet at the same soil where their nations fought together 180 years ago.

On the model of the European Union, the South American Union of the Nations would make the biggest of all the blocs of countries in the world, with 17.2 million square kilometers, consisting of 10 countries with the population of over 330 million people and regional gross product of 800 billion US Dollars.

9. Conclusions

There is no doubt that MERCOSUR is progressing, despite inconveniences, in strengthening relations with two big partners, Argentina and Brazil and by signing new agreements on free trade. There is a great progress made in getting closer to Asia by signing the agreements with India and China. In the meantime, the measures are considered to conclude negotiations for initiation of the agreement signed with the European Union in 1995 before the end of 2004.

These shifts are made while Brazil and Argentina strengthen their economies in an inspiring process, which has prospects to sustain because of what is going on in these countries and because of renowned readiness of international investors to invest in their economies, although with a delay.

However, all these positive movements do not eliminate the possibility of new problems arising, some of trade character, such as disagreements of these two countries over the measures adopted in Buenos Aires that are contradictory

to the goals to open their borders for trade. In addition, there are other political problems, such is strong opposing of Uruguayan Government to establish the MERCOSUR Parliament.

At the political level, there is another serious problem in the shape of Bolivian request for exit to the sea, which resulted in cooling of relations with Chile at the moment of initiation of the agreement on MERCOSUR joining the Andean Community, where Bolivia and Peru are members, which are associate members of MERCOSUR as well as Chile.

Trading problems will certainly be overcome as they were overcome in the past, by negotiations, which include all interested economic sectors, and by offering mutual concessions. The other two issues require political decision at the top level with the participation of middle-class society. This is the path advised, since the establishing of MERCOSUR Parliament would give a strong impulse to integration and also make adoption of far-reaching political measures easier, as it was the case in Europe with its Parliament. Since the present Uruguayan Government opposes to establishing of the Parliament, they will have to wait for the attitude and measures that a new government of this country will take in this field. It is clear that otherwise bilateral agreement of Chile and Bolivia cannot be reached with the approval of Peru, since the projected corridor would lead from Bolivia to the Pacific and pass through the territory that Peru lost in the Pacific War with Chile in the 19th century. MERCOSUR policy could play a positive role in the process of solving this issue, not only by supporting the negotiations between these countries but also by opening the possibility for the stated corridor to function as an activator for the trade of the bloc from a new port, which could be under divided sovereignty of three countries, in the same way as Bolivia and Peru have divided sovereignty in the area of the Titicaca Lake.

In any case, it is important to point out that the progress is confirmed, which is powerfully expressed by the appointment of Presidents Lula and Kirschner in their respective countries in 2003.

When the initiation of ALCA was anticipated for the beginning of 2005, this event was shaded by the beginning of negotiations between MERCOSUR and the European Union, and now quietly the project of the South American Union emerges.

It should be taken into account that the area of this union would be twice bigger than the area of the USA and that it would have 100 million people more than the USA. It would represent the largest world exporter of food, the lungs of the planet, and the territory with the richest biological diversity in the world, with considerable scientific and technological development and huge reserves of energy sources of all kinds sufficient to meet their own needs.

If the South American Union of the Nations would manage to become an acting entity, it would change the international situation considerably. There would be redistribution of power regardless of all complexities, unstable and

ever-risky situations for all actors involved. The United States of America are monitoring carefully these shifts and realize by every day that passes that initiation of ALCA planned for 2005 is harder and harder to achieve. Due to all this, it is very important to initiate the South American Union as soon as possible. Accordingly, it seems that ALCA will have to wait or to rephrase its current aspirations, which is very difficult for the time being. However, it is realistic to predict that the international situation will be changing quickly, so that ALCA that is a priority issue of the USA today might not be that in the future. Time and facts will show that.

Appendix

1989 – Washington Consensus
1990 – Initiative for two Americas
1991 – MERCOSUR
1993 – Free trade agreement (TLC)
1993 – Puebla Plan, Panama
1994 – ALCA
1999 – Columbia Plan

New rules of the game of regional integration from the Washington Consensus Consensus establishes ten assumptions of economic policy for the developing countries

1. Budget discipline
2. Changes in priorities of public consumption (less productive fields such as health care, education and infrastructure)
3. Fiscal reform
4. Financial liberalization
5. Looking for and maintaining of competitive models of change
6. Trade liberalization
7. Opening for entering of direct foreign investments
8. Privatization
9. Deregulation
10. Guarantees of proprietary rights

Consequences of ALCA implementation for Latin America

1. ALCA is the instrument of the USA for reestablishing of economic hegemony in the world
2. ALCA has double economic and strategic goal: to control production structure of the region and markets
3. ALCA can cause negative social consequences (case of maquiladors in Mexico)
4. ALCA tends to disturb workers' rights and working conditions
5. ALCA will increase poverty and social inequality
6. ALCA will cause changes of living environment
7. ALCA and the relation towards intellectual property and monopole over patents
8. ALCA and privatization of social services
9. ALCA will limit expansion of small and middle-size enterprises and lead to deindustrialization
10. ALCA and its relation towards democratic governments in the region

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AGRICULTURAL POLICY OF EUROPEAN UNION

***Abstract**: The main goal of this article is to analyze the system regulating the market of agricultural products in the European Union as well as directions and mechanisms of its reform. The analysis points out to the main characteristics of the production and exchange policy of agricultural products shich has been set on agricultural prices and the negative consequences of such agricultural policy on the budget, consumer's position, environmental protection and foreign trade flows of agricultural products. The main stages and content of the EU agricultural policy reform have been identified, in the field of current policy as well as in the sphere of transformation of structural institutes and measures. The attention has also been payed to the dangers that the EU agricultural policy will be exposed to after accession of new member states.*

***Key words**: the European Union, Common Agricultural Policy (CAP), agriculture, agricultural prices.*

1. Introduction

Agriculture is a sector of economy where the European Union (EU) has established firm integration relations since the day it was founded. Numerous common instruments and measures of agricultural policy have been made, their support provided in a special budget and considerable efforts made to make decisions for their implementation. Theoretically, such system regulating the market of agricultural products in the EU represents an example of a completed and institutionalized model suitable for analysis, generalization and prognoses.

The reasons for great interest in the EU agricultural problems lie in the fact that EU agriculture is characterized by small land territory and high labour price. So, the protection of agriculture and regulation of the related issues appear as a necessity in the process of shaping of common agricultural policy (CAP). This fact was particularly underlined because of the pressure of lower prices of agricultural products in the world. The process of forming common agricultural policy and reform that followed will be presented in the following manner.

First, we shall analyze the main concept of the so-called current agricultural policy, which is primarily defined by the system of agricultural prices and levies that have presented a trademark of the EU agricultural policy for years. Second, we shall consider crucial pressures that contributed to the reform of this concept: budgetary-, consumer-, ecology- and internationally-related. Third, we shall analyze implications of the use of production quota system in the EU agricultural policy and practice. Fourth, we shall consider the model and consequences of the system of direct payment to farmers by means of the so-called *set-aside* program. Fifth, we shall analyze the structural measures applied in the EU agriculture, as well as their sources of financing. Sixth, we shall point to the challenges that the expansion of the EU with new members will bring in the sphere of agriculture and agricultural policy.

2. Main concept of the EU agricultural policy

The reasons for establishing common agricultural policy are numerous, but undoubtedly linked directly to the lack of certain agricultural products and to the lagging of agricultural areas and their income in comparison with other reference areas and branches of economy.

From the very beginning, the EU agricultural policy focused on market policy. Solving the problems of parity income of farmers and market supply has become practically the only priority. An originally conceived application of structural policy has been left aside for years.

The main characteristic of such a system of agricultural policy in spite of various dimensions and formal intricacy are agricultural prices. It can be said that this conclusion is still valid, although the system has been reformed several times. The prices varied from country to country in the transitional stage and they were then made equal for the majority of agricultural products in 1968. The level of the prices of agricultural products is determined once a year, mostly as a result of negotiations among member-countries and not based on objective criteria. The outcome is high level of agricultural prices determined under the political influence, much higher than the prices at the world market.[1]

The organization of agricultural product market and the mechanism of protection are functioning through the following main prices: target (indicative or orientation) price, intervention price, threshold (or ceiling) price, market price, import price and world price.

Target price is a desirable price that the EU would like to provide to agricultural producers for a certain agricultural season. It is also called an indicative or orientation price, depending on the kind of agricultural product.

[1] P. S. Ivanović, "Agrarni protekcionizam i njegov uticaj na jugoslovenski izvoz", *Ekonomika poljoprivrede*, 1986, p. 24.

Intervention price is the lowest price guaranteed to the agricultural producers. The EU is obliged to buy off the offered agricultural products at these prices. This price is lower than indicative price, and the motive for its application is to protect the income of farmers in case of high supply and to stabilize the market.

Threshold price is the price defined by bodies of the EU at which the agricultural products are imported from third countries for a common market. The amount of levies is determined according to this price, i.e. the levies should level the difference between world price and threshold price. Therefore, the main purpose of threshold price is to ensure that the selling price of an imported product will be at the level of indicative price. It is also called ceiling price.

In their economic essence, *levies* represent changing customs fees. The main goal is to ensure the desirable level of internal prices at the common agricultural market and to minimize the influence of world prices on the EU internal prices. This is achieved by customs burden on importers for a certain agricultural product in case the import price is lower than the desirable domestic price. The lower the import prices are when compared with domestic ones the customs burden is higher and vice versa, the higher the import prices are the lower the customs burden is. The amount of levy, therefore, corresponds to the difference between higher domestic and lower foreign prices.

Export subsidies represent the other side of levy regime. Subsidy is used to compensate importer the difference between higher domestic and lower world prices. In this way, the competition of the EU agriculture at the world market is ensured. As a rule, the amount of subsidies equals the amount of levies for the same agricultural products.

The original system of the EU agricultural policy functions in such a way that producers are presented the target, orientation prices in advance, before the beginning of agricultural season. The state manages its agricultural policy on that basis. For instance, it offers the agricultural producers lower target prices of cereals and higher prices of milk, if there is trouble with the production of the latter. This also serves as a basis for production choice in that agricultural season to producers. The market price is formed depending on the domestic demand and supply. In case the domestic supply is higher than demand, market price is formed below the target price. The lower limit of market price from the point of view of agricultural policy is determined by intervention price that represents the lowest price guaranteed to producers. All offered quantities are purchased at that price.

In order for such a system to function, it is necessary that it is half-closed, or that it is not imbalanced by the goods from the world market. This is why the protection from imported goods in the form of levies is provided for the goods that are under the regime of intervention price at the domestic market. Thus, the system is closed and can function.

Taking into account the afore said, the organization of agricultural market can be classified into three groups,[2] based on the full price guarantee (milk and dairy products, cereals, sugar); organization of common market based on partial price guarantee (fruit and vegetable, beef) and organization of common market without the system of guarantees.

On the other hand, the system of permanently changing levies is applied in the sector of wheat, sugar, dairy products, rice and olive oil, while the system of fixed levies is applied for pork meat, poultry meat and eggs, whereas their amount is determined every three months. Combined system of customs burdens and changing levies is applied for beef.

Such organized system of agricultural policy is supplemented by the following measures: subsidizing of agricultural product stocks and intervention in cases of market disturbances; subsidies of production (awarding bonuses) per hectare or per head of cattle; subsidizing of final consumption of certain products (compensations) and subsidizing of consumption of certain inputs.

3. Consequences of agricultural policy

The EU agricultural policy has been considered efficient since the very beginning. Agricultural production in the EU, observed per all the important products, has been self-sufficient since 1970s – it either covered the needs of the internal market or, most often, it possessed important surpluses. Thus, for instance, in 1995 the situation in production, if meeting the internal requirements of the EU were marked 100%, was as follows: wheat 133%, oat 122%, barley 123%, corn 94%, potato 103%, sugar 128%, vegetable 106%, fresh fruit 98%, wine 106%, cheese 106%, butter 121%, milk 272%, beef 107%, veal 113%, pork meat 104% and poultry meat 105.[3]

However, analyzed in a wider sense, therefore taking into account the implications of agricultural policy on various economic and social structures, it produced negative consequences, causing pressure on budget, consumption and environmental protection within the EU, as well as the pressure on the international exchange of agricultural products.

3.1. Pressure on budget

The concept of agricultural policy based on the protection of farmer income and backing of prices of the prevailing group of agricultural products in the EU countries required a considerable budget support.

[2] D. Stančić, Agrarna politika Evropske unije, 2001, p. 44.

[3] Eurostat, *Yearbook of Agricultural Statistics*, various years.

Table 1. *Agricultural budget from 1970 to 2000 (in 1000 millions Ecus)*

Funds	1970*	1980*	1990*	2000*
Guarantees	2.0	11.2	29.2	39.1
Directing	-	0.4	1.6	3.1
Total	2.0	11.6	30.8	42.2

* Five-year averages around the reference year.

Source: *The Agricultural Situation in the Community*, Commission of the European Communities, various years.

In absolute numbers, the agricultural budget increased in the period from 1970 to 2000 for more than twenty times. If the average expenditures of agricultural budget are calculated for reference years per a member-country, taking into account each expansion of the EU, then these expenditures would amount to: in 1970 – 0.3 billion ECU; in 1980 – 1.3 billion ECU; in 1990 – 2.6 billion ECU; in 2000 – 2.8 billion ECU. Therefore, in the period from 1970 to 1990, based on the analyses of the average earmarking of resources for these purposes per a member-country, it can be concluded that the agricultural budget increased nine times. In the last analyzed period, from 1990 to 2000, *ad hoc* restrictive policy measures gave results, so the agricultural budget expenditures stopped to increase.

The analysis of agricultural budget share in the total EU budget indicates that its participation has been diminishing. Thus in 1980, it was 73% and in 1989, it was 66%, which was particularly the result of *ad hoc* measures as well.

The pressure to limit the agricultural budget expenditures or to limit its further increase came from the countries that were net providers of its financial resources, such as Germany and the Great Britain. In 1992, their provisions amounted to 9.7 and 2.4 billion ECU respectively. On the other hand, the countries that were net recipients of agricultural budget subventions, such as Greece with 3.6 billion ECU, Spain with 2.7 billion ECU, Ireland with 2.1 billion ECU and Portugal with 2.1 billion ECU,[4] showed less willingness to undertake reforms to that effect.

3.2. Pressure of consumers

Introduction of tariffs, especially variable ones, i.e. levies, caused certain consequences in the structure of consumption of member-countries population. Agricultural producers in these countries made profits and increased their production. However, the consumers of agricultural products faced higher prices within this regime, i.e. they were at a loss as taxpayers exposed now to higher tax paying for the agricultural budget. Gains and losses from the applied agricultural

[4] R. W. Ackrill, M. Suardi, R. C. Hine, A. J. Rayner, *The Distributional Effects of the Commom Agricultural Policy between Member States: Budget and Trade Effects*, University of Nottingham, 1986.

policy, expressed in real values are compared with the appropriate indicators for the USA and Japan in Table 2. These are comparisons referring to the end of 1980s, when the pressure to unburden the consumers from negative consequences of the agricultural policy was expressed.

Table 2. *Benefits and costs of agricultural support 1986/1987 (in billion USD)*

Country	Producer's benefit	Producer's costs	Tax-related costs	Net economic costs*
USA	26.3	6.0	30.0	9.2
EU	33.3	32.6	15.6	14.9
Japan	22.6	27.7	5.7	8.6

* Net economic costs: consumer's costs + taxpayer's costs = producer's gain

Source: V. O. Roningen, P. M. Dixit, ibid.

Producer's gain in the EU was almost equal to consumer's losses, while the costs of taxes were twice lower than consumer's costs and represented net economic costs. Net economic costs in the USA and Japan were then considerably lower than in the UE.

The amount of consumer's costs may be approached from the angle of measurement per consumer categories. It is thus estimated that the costs of the EU agricultural policy increase the living costs of a four-member family for 900 USD annually, which is 17.3 USD weekly.[5] Special problem at that is the division of costs – namely, all costs that exceed 60% affect the poorest families. Therefore, the income of poorer part of city population goes to rich EU farmers since they participate in subsidies (guaranteed prices) through larger production. Consumer associations in particular intervene in favour of changing such agricultural policy, while the so-called agricultural lobby consisting of numerous participants in the agricultural reproduction chain has an important influence on the maintaining of *status quo*.

3.3. International pressure

The EU agricultural policy led to important shifts in the trade of agricultural products in the world. Limiting the import of agricultural products, subsidizing of domestic production, appearance of surpluses and subsidizing the export of agricultural products in the EU has affected 'third countries', the countries that have comparative advantages to develop this sector of economy. The example of beef and veal trade is a good illustration of the proportions of this process. In 1973, the import of these kinds of meat into the European Community amounted to 983.000 tons. Only four years later, the imports were reduced to 210.000

[5] *Bureau of Agricultural Economics*, Agricultural Policies in the European Community, Policy Monograph, no. 2, Camberra, Australia BAE, 1985.

tons, and four years after that, in 1981, the flows changed and the European Community became a net exporter with 389.000 tons annually. In the last decade of 20th century (1995-2000), export quantities from the EU stabilized to some 600.000 tons of beef and veal annually. Therefore, not only the agricultural exporters from 'third countries', i.e. the countries outside the EU, faced the limited access to this market, but they were exposed to competition with EU producers of subsidized agricultural products at other markets. In 1980s already, the leading role of world agricultural exporter has been overtaken by the European Union from the USA.

It is natural that the USA was the main initiator of negotiations within the GATT of 1992 in the so-called Uruguay round, in the direction of reduction of agricultural subsidies. This request was supported by the so-called Cairns group, i.e. the group of the largest producers and exporters of agricultural products (Australia, New Zealand). Although agriculture was just one of 14 items on negotiating agenda, the USA stipulated that they would not sign an agreement if the issue of agriculture were not solved. After long negotiations, the agreement was concluded in 1994, providing for the following measures to be implemented starting from 2000: reduction of internal subsidies in agriculture for 20%; reduction of the existing and future tariffs for 36%, and every individual item of tariff for 15%; reduction of expenditures for export subsidies for 36%, and total scope of export subsidies for 21%.

3.4. Pressure for environmental protection

The development of agricultural production was connected with intensive use of various chemicals and the consequence of it was degradation of environment.

First, the increased use of chemical fertilizers that contributes to increase of agricultural production for more than 50%,[6] had an impact on water pollution. Namely, the use of chemical fertilizers in production leads to a certain degree of their sedimentation, which contributes to pollution of underground waters first and then of rivers and lakes. After that, expansion of agricultural areas, primarily pasture-grounds, by removal of hedges and trees, destroyed natural environment. Then, the natural environment was destroyed also by constant use of pesticides and herbicides, which both contain toxic ingredients. Further, desiccation of swamps and periodically inundated areas and pasture-ground melioration caused loss of birds, plants and insects in these areas, i.e. ambient natural balance was disturbed. Finally, undeveloped and mountain areas were permanently exposed to leaving of agricultural population, decreased use of agricultural soil and farms, as well as entire devastation of environment.

[6] V. Grbić, "Neka pitanja proizvodnje i potrošnje mineralnih đubriva u Srbiji, primena đubriva", *Ekonomika preduzetništva*, no. 1, 2002.

Organized policy to preserve natural environment in agricultural areas is of recent date. In 1984, the European Committee presented a document in which this problem was explicitly stated. The measures to reduce intensification of production as well as those aimed at preservation of traditional production methods have been undertaken since then.

4. Introduction of production control mechanisms: quota system

The appearance of agricultural product surpluses along with the maintenance of chosen price level have prompted the creators of the EU agricultural policy to undertake various measures in order to solve this problem since 1970s. Primarily, the measures of subsidizing some categories of final consumers were carried out, as well as of industrial users of agricultural products. On the other hand, there were also the measures of reduction of budget costs for some products that belonged to the regime of intervention, guaranteed prices: shortening of period for buying off these products and raising the quality standards of products belonging to the buy-off regime.[7] It should be said that the effects of these measures were modest, so the European Union made a decision to take some more radical intervening measures in order to diminish the scope of supply of agricultural products.

At the beginning of 1980s, quota system was introduced. The system was applied on production of milk and dairy products, the share of which within the total EU agricultural budget amounted to some 20% of costs. The system was introduced under the conditions of long-term surpluses of production of milk and dairy products, depression at the world market and escalation of the EU budget costs for these purposes.

The system relied on the considerable degree of administration. Each member-country got its quota based on 1981 production. Then the quotas in member-countries were allocated to farmers, again based on earlier realized level of their production. The system functioned in such a way that the threshold of production that farmers could reach was established. Not only the prices were guaranteed for the production exceeding that level, but it was also exposed to high taxation.

Quota for milk for the entire EU was reduced from 103.7 million tons in 1984 to 96 million tons in 1992. It has proved to be efficient in achieving the main goal – reduction of budget costs, and it was supported by technologically easily performable monitoring system. Namely, milk was bought off at a certain number of dairies where it was easier to determine who exceeded the allowed quota.

In 1980s, the EU introduced another two quota systems, somewhat more liberal, for the production of cereals, which appeared also to be excessive. These

[7] D. Colman, "The Common Agricultural Policy", in: M. Artis, F. Nixson, eds., *The Economics of the European Union, Policy and Analysis*, University Press, Oxford, 2001.

quota systems function in such a way that products are bought off through commercial organizations at intervention prices up to the moment when the agricultural producers reach a certain quota. After that, the additional quantities are bought off at lower prices. This system did not prove to be sufficiently efficient primarily because of the impossibility of appropriate monitoring.

Numerous shortcomings of quota system were soon noticed. "Limiting the scope of production is the artificial, non-market way of state intervention in normal flows of price formation, the functions of which are very well-known. Deformation of economic structure, 'ossification' of the existing relations, and discouragement of agricultural producers to increase their work productivity and specialized production do not contribute to rational organization of agricultural production. Constant aspiration of agricultural producers to adjust to the existing support system, produce wide range of products, ultimately uneconomical and market-unsustainable, has been noticed.

Probably the greatest shortcomings of quota system are the creation of bureaucratized instead of market economy, with all weaknesses characteristic of controlled economy. Many legal regulations, a bunch of orders, instructions, and counter-orders, created a very complex, often-chaotic system, often contradictory, where even the best legal experts could hardly manage, let alone the direct country producers. Administrative officials, accustomed to circulars, technical instructions, and similar, contributed to the fact that system largely departed from the principles of equality and impartiality, and the measures of limited production did not yield results because of a range of cessions, compromises and sudden reversals. Huge stocks of certain products created an unbridgeable gap for the placement of goods at the world market and opposing to aggressive export policy of the USA by means of its state intervention and depreciation of Dollar."[8]

5. Reforms undertaken as of 1992

The outcome of the international commercial negotiations made a crucial effect on the reform of the European agricultural policy, which was introduced in 1992 by the so-called MacShary's reformation package. As a result of these negotiations, the internal subsidies were reduced for 20% and external tariffs for 36%. Therefore, although the system of guaranteed prices was kept, it was eased because of the changes in tariff level, i.e. it was enabled for foreign cheap products to determine the lower market price. This new market situation had different impacts on the actors in this process: consumers in the EU were at gain because of the reduction of prices, the budget suffered less pressure, but the agricultural producers were at a loss: the lower prices reduced their income.

[8] D. Stančić, ibid., p. 59.

In order to correct negative consequences of these reforms for farmers' income, it was decided in the EU to compensate the potential income losses to farmers on condition that they accept certain limitations. For cattle breeders, it was decided that compensations are due only for certain number of animals based on historically determined number of heads of cattle in the herd. For cereal producers, however, the compensations were provided for those who accepted not to cultivate certain areas of their land in that production season or those who accepted the so-called *set aside* program. Let us consider more closely the latter situation.

According to the new solution of agricultural policy, cereal producers with the production exceeding 92 tons had the following possibilities: first, they could use all their arable land in production and in case of impossibility of realization at the market the production would be bought off at new (lower) intervention price; second, they could join the set aside program and be chosen for compensation payment for the products from the land that remained in production.

The farmers who chose the second strategy entered the regime of two types of compensation payments. First compensation was received based on the area of land (in ha) that was not activated in production that year (*set-aside compensation*, SAP), and second compensation was received for the production realized in that year (*arable area compensation*, AAP), but the payments were not made per yield but based on planted area (in ha), as in the previous case.

Table 3. *Compensation payments in reformed cereal regime*

		Market year		
		1993/94	1994/95	1995/96
A.	1991/92 Intervention price (ECU/t)	155	155	155
B.	Target price	130	120	110
C.	Price compensation (A-B) (ECU/t)	25	35	45(54)*
D.	Yield	5.93	5.93(5.89)*	5.93(5.89)*
E.	Price compensation (C x D)	148.25	207.55	266.85(320)*
F.	Set-aside program compensation	266.85	266.85(338)*	266.85(405)*

* Numbers in brackets are the result of adjustment of the original scheme by certain political pressures (D. Colman, ibid., 114).[9]

[9] D. Colman, ibid., p. 114.

The amount of price compensation is received by conversion of yield per area based on fixed yield factor. Yield factor is obtained based on calculation of historically based statistic series and differs from region to region. Table 3 shows how this calculation is applied in economic practice.

The Table is made at the example of England. It shows that yield factor amounts to 5.93 t/ha and it is used for three-year period. Every farmer who chose not to activate his production in that three-year transition period (SAP program) received a compensation of 266.8 Euro. On the other hand, a farmer who decided in favour of the AAP program, received the same compensation of 266.8 Euro in the last third year of compensation period. The idea of the creators of this measure was to make the starting conditions equal. It can be noted, however, that the level of price compensation gradually increased through transition period because the gap between intervention price and new indicative price, which reflects the intended tendencies in agricultural policy increased.

Which decision a farmer would make, either to participate in set-aside scheme or not, depends on market prices and yields. It is clear that if market prices are higher and if a farmer has above-average yields, higher than yield factor, then independent appearance at the market would be suitable to him and vice versa.

Eventually, let us point out that this measure of agricultural policy brought also a number of problems in implementation in economic practice. Farmers use more intensively inputs at the land remaining in production; they leave less productive areas for set-aside program; fertility of the land that remains outside production improves, which reflects on the production choice of the farmer and pressure on compensations in the following year, and so on.

6. Structural policy

In 1968, the European Union published a document titled "Memorandum on reforms of common agricultural policy (CAP)". This document is known to a wider public as Mansolt's Plan, after the name of its creator, the Vice-President of the European Commission in charge of agriculture. The main goals of the plan were, first, to reduce the number of people employed in agriculture and, second, to form bigger and more efficient farms. This plan was often quoted in the domestic literature at the time, but later also, especially considering the consequences of the achievement of its secong goal. Thus, it was pointed out that one family with two capable members could cultivate 100 ha under cereals and 30 ha under plants.[10]

[10] S. Popović, *Aktuelna pitanja agrarne politike na području SR Srbije bez pokrajina*, Institut za ekonomiku poljoprivrede, Beograd, 1979, p. 114.

First structural developmental measures in CAP were presented in 1972. Their goal was to modernize European agriculture. However, the results were not as expected since production surpluses were accumulating.

In 1983, The European Committee made a proposal for fundamental reforms.[11] Formally, this proposal was presented in publication titled *Green Paper* under the name of "Perspectives of Common Agricultural Policy". The main goal elaborated in that document was to balance the supply and demand, so new mechanisms for reduction of production surpluses were presented and alternative solutions in the future CAP development were analyzed. In 1988, The European Council agreed on the package of new measures directed at the reduction of agricultural expenditures. The main scope of these measures was to limit the CAP expenditures in the total EU budget.

Both reforms provided for the more efficient instruments to implement current agricultural policy, while the measures of structural policy were not accompanied by the appropriate financial and institutional support.

Generally speaking, the 1992 reform was considered successful. Its main elements were to reduce the prices of agricultural products, i.e. to increase their competitiveness at the world market; to compensate income losses to farmers, as well as the new measures directed at development of agriculture and environmental protection. However, a number of circumstances, such as preparation of introduction of a common EU currency, and related to this budget limitations, increased competition of other countries, especially developing countries, new round of negotiations within GATT or World Trade Organization, required further adjustment of agricultural policy.

In 1997, the European Committee proposed reforms of the Common agricultural policy within the so-called Agenda 2000. The negotiations on the adoption of Agenda 2000 lasted a few years and they were concluded by adoption of CAP reform at the European Council in Berlin in March 1999.

Agenda 2000 represents the most comprehensive and most radical measures since CAP was established. Agenda 2000 continues the 1992 reforms and creates conditions for the development of multifunctional, viable and competitive agriculture in the EU.

The main measures of structural agricultural policy include support to management, improvement of commercial channels for agricultural products and diminishing of regional differences.

How these measures are made instrumental can be best seen from the set of measures presented in Agenda 2000. It regulates two groups of measures:[12] joined reform measures from 1992 (earlier retirement of farmers; protection of agricultural envi-

[11] S. Tarditi, "The Green Paper in a long-term perspective", *European Review of Agricultural Economics*, no. 14-1, 1987.

[12] V. Grbić, "Uredba Saveta o pomoći ruralnom razvoju u Evropskoj uniji", *Evropsko zakonodavstvo*, no. 2, 2002, p. 80.

ronment and afforestation; development of insufficiently developed areas); measures for modernization and diversification of agricultural households, investments into farms; establishing of young farmers farms; training; investment support to marketing activities; additional support to forestry, promotion and conversion of agriculture.

6.1. Joined reform measures from 1992

6.1.1. Earlier retirement of farmers

The support can be granted to a farmer over 55 years of age, who has engaged in agriculture for at least 10 years and who abandons commercial production. The support amounts to 15.000 Euros annually or 150.000 Euros at the most, i.e. it is given until 75 years of age. If the farmer receives a retirement allowance already, he can be granted the difference up to the mentioned amount.

The farmer who receives a support cedes his land or part of his land to another farmer who has proved his capabilities in agriculture for the last five years. It is also possible for the land to change its purpose and become an ecological wildlife refuge or forest.

The support can be granted to agricultural workers (paid or helping hand to the family) of the same age, engaged in agriculture for the last five years for at least half work time, to the amount of 3.500 Euros per year, or 35.000 Euros to the total, when entering the regime of normal retirement age (after 75).

6.1.2. Protection of agricultural environment

This support is granted to the farmers who have applied the method provided for the protection of agricultural and rural environment for at least five years and they are aimed to promote production and farming methods adapted to such conditions (intensification of production, conservation of environment of high natural value). For these purposes, the following amounts are granted to farmers per hectare: for annual crops – 600 Euros, for several-year crops 900 Euros, for other purposes – 450 Euros.

6.1.3. Development of underdeveloped areas

Underdeveloped areas, for instance mountain areas, can be granted a support in order to provide for the continuous and viable development in the use of land, preservation of rural environment and fulfilling the requirements of agricultural environmental protection. Farmers who have engaged in at least five years of practice in accordance with the previously mentioned requirements qualify for this support, in the form of compensation for unachieved income. This compensation ranges from 25 to 200 Euros per hectare.

6.2. Measures for modernization and diversification of agricultural households

6.2.1. Investments into agricultural households

The support to investment efforts of agricultural farms is provided for with the aim to improve agricultural income and working, living and production conditions. The investments must fulfill the following conditions: reduction of production costs, improvement of production diversification that is market-prospective, improvement of quality, natural environment, health and hygienic conditions and animal care. The support cannot exceed 40% of the total investment value, except in insufficiently developed regions, where it is 50% of this value. The increase of support is possible in cases of young farmers, ranging from 45% to 55% of the investment value.

The support is granted to young farmers according to the following criteria: the property owner should be younger than 40, he should have an adequate knowledge; he should not have used this support earlier; his farm should be vital and it should fulfill hygienic and animal protection regulations. The support can have two forms: single premium amounting to 25.000 Euros or it can cover the interest on the loan taken to establish the farm.

6.2.3. Expert education

The support is given in order to improve farmers' education of new production procedures, application of production methods compatible with environmental protection, about preservation of agricultural environment, hygienic standards and animal care, as well as about the improvement of farm management.

6.2.4. Improvement of agricultural product sale

The main goal of this support is to increase the competitiveness of agricultural products, to rationalize production procedures and marketing channels, to change the structure of products in the direction of greater marketability, use of new technologies, to improve the quality control and hygienic conditions, encourage innovations and protection of environment. The support for these purposes can cover up to 50% of the accepted investment.

6.2.5. Forestry

This support is granted to private owners of forests or municipalities to improve the viable development of forests, the protection and extension of forest areas.

As for quantity, this support refers to afforestation, for compensation of income if the purpose of land has been changed, and for execution of works, and ranges from 185 to 725 Euros per hectare; protection of forest land, where protection and ecological role is of public interest. This support varies between 40 and 125 Euros.

6.2.6. Structural adjustment of rural areas

The support can be granted to other activities, which are not included in the mentioned measures and which as a whole improve rural development. These measures would include land consolidation, development of key services in rural area, renovation of the country and protection of rural heritage, promotion of tourism and crafts.

The fund for guarantees as a part of fund for agriculture (EAGGF) finances the following measures: earlier retirement of farmers, development of underdeveloped areas and protection of agricultural environment and afforestation. Other measures are financed from the fund for management, or the fund intended for financing of so-called agricultural policy. The amount of 4.300 – 4.370 million Euros per year is anticipated for the support to rural development for the period from 2000 to 2006. The support to rural development bases on the plan made by member-countries for the anticipated seven-year period. The plan (project) analyzes the existing situation, suggests strategy, expected influences, financial plan, as well as competent experts for implementation. The plan also proposes a six-month period prior to the application of regulations, and the Committee would adopt it within that four-month period.

7. CAP and joining of new members

The EU agriculture is at the threshold of new reform. One of the main reasons for new transformation is the new challenge resulting from joining of 10 new member-countries on May 01, 2004.

It brought new increase of agricultural labour in the form of the additional 3.8 million new farmers in addition to the existing 7 millions, and expansion of the market for another 75 million consumers.

Joining should provide for farmers in new member-countries to join the regime of Common Agricultural Policy as well, i.e. to enable financing of their production by intervention, guaranteed prices, bonuses, subsidies, etc. This should considerably increase budget costs, which caused concern within the EU. However, France and Germany were the originators of a new initiative of a different agricultural policy for new member-countries, which was confirmed at the Council of Europe, i.e. at its Brussels summit in October 2002. Subsidies to

farmers in new member-countries will be at the level of 25% of subsidies granted to other EU member-countries as of 2004. Therefore, new member-countries, which have lower productivity than that in the EU on an average, will be limited additionally when competing at the common agricultural market, since they will be granted 75% lower subsidies than farmers in the 15 EU states would. The new EU financial plan for the period 2007-2013, will probably include measures for gradual establishing of parity of payments to all EU farmers. What would really happen remains to be seen.

8. Instead of a conclusion

The main concept of the EU agricultural policy, based on the support to agricultural prices under the pressure of budget limitations, high prices of agricultural products and consumer dissatisfaction, requirements to preserve environment, as well as international negotiations, has been reformed several times. The reforms took place primarily in the direction of building the system that would provide for the decrease of final prices of agricultural products and maintaining at the same time the level of farmer's income by direct payments.

New agricultural mechanism enabled the transfer of agricultural policy costs from consumers to taxpayers, which provoked a chain of consequences. Positive consequences concentrate on relaxing the budget of the poorest consumers and transparency of costs set aside for these purposes. They do not remain hidden any more in consumer's expenditures, but they are clearly visible in surveys of budget transfers. Negative consequences refer to establishing of more and more intricate administrative procedures when implementing the agricultural policy, which on the other hand represents a new burden for already overheated capacities of the European Committee. This will be particularly obvious after full integration of 10 new member-countries. On the other hand, structural agricultural policy increases slowly its share in agricultural budget at the expense of the current agricultural policy. At the same time, it extends the range of its instruments and measures, which is favourable for autonomous and viable development of agriculture, therefore, the development without external interventions.

The EU expansion, in addition to the mentioned problems, opens some new ones related to administrative resources of the Committee. Starting from 2004, new member-countries participate with only 25% in the funds intended for agriculture, which puts their agricultures into artificially subordinated and non-competitive position. Whether this situation will be corrected in the new EU financial perspectives is not known at the moment.

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URBAN TRANSPORT AND SUSTAINABLE DEVELOPMENT OF WEALTHY ASIAN CITIES

***Abstract**: Wealthy Asian metropolises with their extremely dense population, efficient systems of urban and suburban railways, restrictive policies regarding the use of cars and greatly planned development of "new cities" offer particularly inventive practical planning solutions that greatly fit into the concept of a sustainable accelerated development, which has been promoted more and more in the recent years. These planning solutions can be very inspiring for metropolises of the developing countries and countries in transition, which are characterized by markedly high population density and relatively modest degree of motorization of population.*

***Key words**: wealthy Asian metropolises, sustainable urban development, urban and suburban railways, limited use of cars, "new town" concept, population density, space distribution of the employees.*

1. Introduction

A concept of a sustainable urban development, which promotes compact urban forms, higher population densities, more resolute orientation to the use of town traffic (along with walking and bicycles) and concept of accessibility are more and more favoured in the West in recent years. However, wealthy Asian cities such as Hong Kong, Singapore and Tokyo have been forced for a long time now to orient primarily to public urban transport, especially urban and suburban railways. This is why they are very interesting from the point of view of sustainable urban development.

2. Hong Kong

Theoretically, Hong Kong might not even exist, in any case not as an important world metropolis. There is not any geographic justification for those 184 km^2 to attract 5.5 million population – hilly, split into many small islands, deprived of

any important natural wealth and located near endangering world power ready to take over the majority of its territory for decades, it is not situated in the best way to attract important economic activities.

In 1920, only 450.000 people lived in Hong Kong. It served as a base of Royal Navy. When communists began to reign in China, thousands of Chinese ran over to Hong Kong and that incredible inflow continued until 1960s, when it was resolutely stopped. However, two million immigrants already settled in this colony by 1961. Cut off by political storms from its natural background, forced to accept a huge number of poor emigrants, the city seemed predestined to develop economically like any other poor metropolis. That, however, has not happened. Supported by a powerful and efficient government, traditional Chinese entrepreneurship achieved what, under such conditions, could be considered a real economic miracle: not only the accumulated population was residentially provided for but also Hong Kong became a dynamic global center of trade and industry.

Seven eighth of population lived in the metropolis that for decades had been marked by an invisible painfully clear red line to the part, which would not become a part of China in 1997 and the other part. Thus, trying to survive at a small surface that would not come under Chinese jurisdiction in 1997, the development took place mostly in Victoria – the northern part of the Hong Kong island (the remaining part is too hilly), as well as at the south peak Kowloon, across the harbour. Both sides of this picturesque harbour are set thickly with high white buildings (to the regret of those who knew well the previous colonial architecture), which today look impressive with the background of high green cliffs. Average height of buildings is 14 floors, with mixed commercial and residential contents. The population density of this metropolis is huge (over 30.000 citizens per square kilometer). It was in 1970s already that the population density "in south Kowloon was higher than 70.000 citizens per square kilometer. In parts such as Mong Kok, Sam Sui Po and Van Chai the population density exceeded considerably 100.000 citizens per square kilometer, while in the town of Kowloon and Sai Jing Pun it exceeded 150.000 citizens per square kilometer. We must bear in mind that these incredible population densities were reached in cities where there are many offices, hotels, shops and other commercial buildings."[1]

The most observable distinction of Hong Kong when compared with other Eastern or African cities of considerably high population densities is that people here are "stacked" into the 14-floor buildings instead of the one- or two-floor buildings. As in Singapore, skillfulness of the city government to cope with the problems of the growing number of citizens, lacking space and sudden growth of productivity led to the paradox situation. Those with fast rise of salaries live today in the zones of high population density and will never have a chance to move into the zones of lower population density.

[1] M. Thomson, *Great Cities and Their Traffic*, Penguin, Harmondsworth, 1978.

An incredible growth of number of citizens and population density forced the city government to an especially daring step in 1980s – they created seven self-sufficient 'new cities' for the total of 2.5 million citizens in the so-called New territories (which were returned to China in 1997). This was far odder since it was an unwritten rule during the previous decades to direct construction in the part of Hong Kong that would not fall under Chinese jurisdiction. However, while the pressure of population in Hong Kong acquires incredible proportions, globalized economy erases largely the political borders that survived.

These 'new cities' are nothing like traditional Abercrombie's 'new cities' – they are incomparably bigger, higher and more densely populated.[2] In this way Howard's concept of a "garden city" of 1898, really underwent dramatic changes: first in "new cities" of Britain in the period before and after World War II, then in Stockholm, and got its unexpected end in Hong Kong.

The fact is that the original development of Hong Kong took place with huge population density. When in 1950s it was decided explicitly to continue the construction characterized by high population density[3] (even in "new cities" in the so-called New territories), it did not leave much choice to traffic planners – they had to orient to traffic strategy that gives preference to public city transport. All choices that followed only accelerated further the tempo of integration of urban planning and orientation to public urban transport of high traffic capacity. The development of Hong Kong could not simply be imagined without the construction of the underground railway.

The development of the city railway has been the framework of Hong Kong traffic strategy since 1970s. The well-known MTR system (Mass Transit Railway), which serves the most densely populated zones of Hong Kong and Kowloon, was presented for public discussion in 1967, and approved in 1972. Its first line was opened for traffic in 1979, and in the following three years, the network extended to 43 kilometer-long three lines with 38 stops. Thanks to high density of population and employment in this metropolis, MTR today represents a railway system that is used the most in the world (measured by the scope of traffic per 1 km of the route).[4]

At the beginning of 1980s, a well-known KCR (Kowloon-Canton Railway), which serves the "new cities" in the northeast part of the New territories, was modernized. The KCR speed increased from 27 km/h in 1980, to 53 km/h in 1990. Also, 23 kilometers of left track system was constructed in the northwest part of the New territories, which links Tuen Moon with Juen Long.[5]

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2 P. Hall, *The World Cities*, Weidenfeld and Nicolson, London, 1984.

3 P. Barter, *An International Comparative Perspective on Urban Transport and Urban Form in Pacific Asia: The Challenge of Rapid Motorization in Dense Cities*, Murdoch University, Perth, 1999, p. 285.

4 C. P. Lo, *Hong Kong*, Belhaven Press, London, 1992, p. 95, 97.

5 *Ibidem*, p. 97.

Such a traffic strategy provided for not only fast development of 'new cities', but also helped further growth of employment concentration in Central Business District (CBD). The number of jobs increased from 136,000 (1980) to 193,000 (1990). It is interesting that space distribution of employees has remained the same for decades in spite of the increase of number of employees in all areas – in CBD, central area and suburbs. Namely, the employment density increased in all areas at the same time (in CBD it increased from 1,250 employees to 1,700 employees per hectare, in the central area from 480 to 780 employees per hectare, and in suburbs from 65 to 86 employees per hectare).

Something similar happened regarding the spatial distribution of population. In the period from 1970 to 1990, the total number of Hong Kong population increased from 3.9 to 5.5 million citizens, while the urban area of metropolitan zone hardly increased (from 118 km^2 to 184 km^2). It is true that there are less citizens in central area today (1,115,000) than it was in 1970 (1,470,000), so the density fell from 100,000 citizens per square kilometer to 80,000 citizens per square kilometer. However, the number of citizens in suburbs today (4,400,000) is almost doubled when compared with 1970 (2,500,000) thanks to the construction of new cities, so the density of population increased from 24,000 to 26,000 citizens per square kilometer.

These huge densities forced the extraordinary solutions with respect to a passenger car also. At the same time when the decision on the construction of the city railway[6] was brought, Hong Kong decided in favour of a very strict strategy of limiting the degree of motorization and use of cars. Therefore, the strict restriction policy considering cars seemingly preceded the introduction of the city railway.[7] Although Hong Kong has not become known worldwide for its draconian policy of restriction of car use like Singapore, its traffic strategy is perhaps more interesting. The following Table clearly illustrates the fact that to use a car in Hong Kong is twice more expensive than in Singapore and three times more expensive than in Tokyo.

Table 1. *The price and costs of using cars in wealthy Asian metropolises*

CITIES	The price of basic representative car (USD)	Car price/GDP per capita ratio	Costs 1 car-km (USD)
Hong Kong	39,260	2.8	0.80
Singapore	41,251	3.4	0.44
Tokyo	21,800	0.6	0.29

Calculated according to: P. Barter, *An International Comparative Perspective on Urban Transport and Urban Form in Pacific Asia: The Challenge of Rapid Motorization in Dense Cities*, Murdoch University, Perth, 1999; J. Kenworthy, F. Laube, et al., *An International Sourcebook of Automobile Dependency in Cities*, University Press of Colorado, Boulder, 1999.

[6] This, of course, was opened for traffic some ten years later.

[7] Only seemingly, since the creation and then construction of MRT was long under way before its first line (15.6 km long) was open for traffic in 1979.

Such a rigorous policy has limited the growth of motorization very efficiently for the last two decades. Namely, faced with the extremely limited space for further expansion and with huge density (30,000 citizens per square kilometer), city government realized at the beginning of 1970s that the possibilities to build city roads and parking lots are very limited and expensive.[8] As in the course of 1960s and at the beginning of 1970s Hong Kong already registered a sudden rise of number of private motor cars (street traffic got worse and worse rapidly[9]), the city government soon decided in favour of traffic policy that comprised three powerful components:

- Strict changes of concepts and measures directed at limiting of private cars;
- Promotion of city railway;
- Organizing various forms of urban transport under the conditions of limited area of city roads as efficient as possible.

In order to carry out this plan, the government made a decision to apply rigorous fiscal policy that drastically limited further degree of motorization of population. Fiscal policy refered to very high:

a) taxes included in the price of a car (FRT – First Registration Tax), and
b) annual taxes for registration plates (ALF – annual vehicle license fees).

The amount of these taxes was drastically raised several times (in 1974, 1982 and 1994), every time the rapid rise of salaries would annul their effect and the number of motor vehicles would start increasing quickly.

In 1979 White Paper, which deals with the issues of traffic policy, the possibilities to introduce some alternative concepts and measures were considered, such as limiting the number of parking space, physical restrictions, etc., but they were renounced and the fiscal policy was maintained as a preferred strategy.

However, in the period from 1987 to 1993, there was still a high annual growth of the number of cars of 10%, and then the considerable traffic jams followed. In 1995, the experts concluded that the rise of salaries reached such a level that the application of fiscal measures becomes insufficient and that traffic policy would have to change. Today, the possibility to introduce a system of payment for the use of street network is considered rather seriously, (which is more adequate for Hong Kong than the Singapore system of quotas for motor vehicles in CBD).

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8 T. Hau, "Transport for Urban Development in Hong Kong", in: Habitat II Global Workshop: *Transport and Communication for Urban Development*, HR, Singapore, 1995.

9 C. K. Leung, "The Process of Transport Policy Making" in: Liang-Huew Wang and Anthony Gar-On Yeh (eds.), *Keep a City Moving: Urban Transport Management in Hong Kong*, Asian Productivity Organization, Tokyo, 1993.

3. Singapore

Singapore, which was long a part of the British Empire, joined the federation with Malaysia and North Borneo at the end of 1950s. However, because of more and more expressed tensions between Chinese and Malaysian populations (approximately equal in number but not in economic power) there was secession (from Malaysian point of view) or expulsion (from Singapore point of view) and it finally got independent in 1965.

Singapore today is impressive at first sight: massive residential blocs, business towers and hotels scattered all over attractively coloured city built according to the principles of the most modern architecture, with perfectly conceived vegetation, impeccable cleanliness of streets and buildings, it can be compared only with Switzerland and Sweden. Except for traditional city core and China Town, at the beginning of 1970s already Singapore did not resemble the romantic oriental city from literature.

Zef Hamel points out: "Singapore is a copy of 19th century London. Ever since its Oxford days imbued with Victorian ideas and principles, Li Kwan Jeu managed to transpose these values into an Asiatic society, which after 1965 had to develop very quickly under a huge social pressure. Singapore is Victorian for its cult of moral values, for the sincere resentment towards poverty, for its obsession with cleanliness, blind faith in education and in natural superiority of the educated; the 'flavour' of high-tech is only added to all this.

Thus, Singapore has become an Asian variance of British welfare state, concentrated on fast construction of state flats and social services. The state is extremely powerful and intervenes systematically in the sphere of economy through a highly educated well-paid state technocracy.

This state power is manifested in physical sphere as well, where parallels with British situation are also obvious: emphasis on efficient public city transport, fast construction of public flats, successful introduction of 'new cities'; these are all British ideas that quickly found their way to this island of the Malaysian coast.

Singapore, however, differs essentially from the British Empire in that after forty years it did not create the middle class, which could manage to adjust state planning machinery to its needs. As a result, this city state continues to function with its centralized planning system without any perturbation."[10]

In 1960, Singapore took only 158 km^2, and in 1990, it took 314 km^2 of urbanized area on the island of 582 km^2. In 1990, 2.7 million people lived in it.

The determination of the government to part with the 'slams' changed the appearance and character of the traditional city core completely. Central city zone extended from 25 km^2 to 45 km^2, the number of people decreased from

[10] Z. Hamel, *How Desirable is a Fully Planned Metropolitan System?,* Megacities Foundation, Hague, 2002, p. 49.

616,000 to 560,000, and population density fell from 30,000 to 8,300 citizens per km^2. Today it is four times lower than 30 years ago.

Thanks to the accelerated construction of flats, in the period from 1960 to 1990, both the urbanized area (extended from 133 km^2 to 269 km^2) in the suburbs and the number of citizens doubled (increased from one to 2.14 million citizens), while the population density today is halved (3,500 citizens per km^2) when compared with 1960 (7,800 citizens per km^2).

Today even 60% more people work in the suburbs (940,000) than in the central zone (600,000). In the process of spatial dispersion of the employed, of course, the central role was played by the 'new cities', in which the principle of self-sufficiency was carried out incomparably more successful than in the 'new cities' of the West, i.e. the balance between the number of citizens and the number of jobs.

In addition, the absolute number of the employed decreased in the central business district (CBD) in the period from 1960 to 1990, from 390,000 to 280,000, so their share fell from 33% to 18% of the total number of the employed.

The system of the fast railway traffic is the skeleton of today's distinctly polycentric structure of Singapore. Specific centralistic planning with the addition of liberal economic policy, directed the development of wider metropolitan area into a well conceived network of 'new cities' and city sub-centers, with mixed urban contents efficiently connected by high capacity railway traffic, supported by private conventional buses and double-deckers. This is where the name "Constellation plan" comes from.

Extremely high residential and business buildings were located by planners of these 'new cities' and sub-centers near public city transport stops, maximizing thus the accessibility and minimizing the car dependence. A long-term structural development plan of Singapore of 1971 (*Constellation plan*, known also as *Ring plan*) anticipated a hierarchical networks of some fifty centers served well by the railway. The promotion of public city transport was followed by unprecedented media campaign with the ambition to raise the use of public city transport to the highest level in the world.

Table 2. *Non-residential spatial development of hierarchical network of city centers anticipated by the Singapore development plan.*

URBAN CENTERS	Non-residential area (in millions m²)	Non-residential area share (in %)			Average distance from city core (km)
		Offices	Commerce and food	Hotels and entertainment	
Regional	1.5	50	35	15	13
Sub-regional	0.5	40	40	20	6
Peripheral	0.2	35	45	20	2.5
Urban	0.1	40	60	0	-*

* Depends on the location of a 'new city'

Source: Robert Cervero, *Transit Matropolis*, Island Press, Washinton, 1999, p. 175.

By gaining independence in 1965, city state of Singapore got a more resolute, efficient and somewhat despotic government (that was still supported by everyone), and in the last three decades from the mud of the Third world poverty literally reached the level of one of the most dynamic contemporary industrial developed countries. Between 1970 and 1980, this metropolis recorded an almost incredible annual growth of GDP of 9%, while the number of jobs in industry increased from only 25,000 to 287,000, achieving the full employment.

Table 3. *Fast economic development of Singapore*

Year	1979	1990	2000
Number of the employed (in 000)	644	1,563	2,192
Per capita income (in USD)	2,798	21,812	39,585

Source: Thai-Ker Liu, *Urbanizing Singapore: Optimizing Resources*, Megacities Foundation, Hague, 2002, p. 18.

Limited by the minimum of available land and natural wealth, Singapore had to lean on good strategic location, cheap labour power, building of infrastructure and efficient physical planning, which catapulted it into the sphere of industrially developed countries with the standard approaching the living standard of Japan and Western Europe.

The creation of the complex and efficient traffic system was crucially important for its economic transformation. Today Singapore has especially important international airport, top air company, serious overseas carrier, and the second port in the world according to the scope of container traffic, a network of contemporary highways and new system of fast railway (MRT). The accelerated

construction of this complex traffic infrastructure was enabled by a highly centralized system of economic and physical planning, which wisely directed the development of city-state in the course of the last three decades.

The other product of this centralized planning was some twenty new cities – satellites, mutually connected by the efficient MRT system (Mass Rapid Transit), "like pearls in a necklace".[11] As in Stockholm and Copenhagen, the majority of new cities is concentrated around the MRT stations, with flats, shops and other services and open public areas positioned near public urban transport stops.

Table 4. *Expansion of new cities, construction of flats and percentage of population owning flats in public sector (in the period from 1970 to 2000).*

Year	1970	1990	2000
Number of new cities	1	16	23
Number of flats (in 000)	201	274	326
% of population	32	87	86

Source: Thai-Ker Liu, *Urbanising Singapore: Optimising Resources*, Megacities Foundation, Hague, 2002, p. 18.

In accordance with the 1971 development plan, the majority of new cities developed even before the planned MTR system was opened for traffic. However, their spatial and physical structure was fully compatible with the future super efficient system of urban railway,[12] which is the evidence of an extremely high degree of coordinated development of traffic system and the city and requires the most complex level of planning and functional strategy.[13] This is something because of which the most of the metropolises of the West could be envious of Singapore.

[11] R. Cervero, *Transit Metropolis*, Island Press, Washington, 1999.

[12] R. Cervero, *Transit Metropolis*, Island Press, Washington, 1999; R. Cervero, "Paradigm Shift: from automobility to accessibility planning", *Urban Futures* 22 (June), 1997.

[13] V. Vuchic, *Transportation for Livable Cities*, Center for Urban Policy Research, Rutgers, New Jersey, 2000, pp. 82-87.

Table 5. *The anticipated number of citizens of "garden city", three generations of 'new cities' of Britain, Singapore and Liu's suggestion for 'new cities' of Megacities.*

Urban cells	Year	Number of citizens
"garden city"	1902.	32,000
British new cities M I	1946-1950.	60,000
M II	1951-1959.	70,000
M III	1960-1980.	250,000
'New cities' of Singapore	Nakon 1970.	200,000-350,000
'New cities' of megacities	?	1,500,000-2,500,000*

* Number of citizens of 'New cities' of megalopolises suggested by Liu.

Adapted according to: Thai-Ker Liu, *Urbanising Singapore: Optimising Resources*, Megacities Foundation, Hague, 2002, p. 29.

The decision on construction of underground railway was made in 1980s, parallel to the creation of 'new cities'. From 1987, when the first line of underground railway was open for traffic, its network has rapidly extended. Today, it includes 83 km, and the accelerated construction continues.[14] The importance of such a conceived underground railway for the functioning of new cities is illustrated also by the fact that in only three years from its opening for traffic, the underground managed to capture a huge share of traffic market (15% of the totally realized passenger kilometers per capita), so that the rating of buses dropped (from 52% in 1980 to 32% of the total scope of passenger kilometers per citizen in 1990).

A series of draconic measures directed at limiting growth of motorization and car use was complementary to the integrated development of the railway and new cities. Actually, the strategy of limiting car use preceded introduction of the underground railway for some fifteen years, and it could be said, influenced considerably its incomparably greater economic justification.

These measures are so extraordinary even for contemporary practice of world metropolises and at that carried out with so much resolution that they were given special attention in expert literature.[15] Their introduction was preceded by two studies by UNDP (1971) and World Bank (1974). Both of them recommended introduction of a limited degree of population motorization and car use.[16] The experts in Singapore responded quickly. As a first step, an additional tax for reg-

[14] P. Barter, *An International Comparative Perspective on Urban Transport and Urban Form in Pacific Asia: The Challenge of Rapid Motorization in Dense Cities*, Murdoch University, Perth, 1999, p. 288.

[15] B. Dolven, et al., "Asia's Car Crush", *Far Eastern Economic Review*, May 1997.

[16] V. S. Pendakur, G. Menon, J. Yee, *TSM Innovations in Singapore: Lessons from Experience: 1974-88*, 1989. Paper presented at the Transportation Research Board 68th Annual Meeting, Washington, DC, 22-26 January.

istration was introduced (ARF – Additional registration fee) and additional tax for the imported cars, which in the following 18 years were increased in regular intervals (in 1974, 1975, 1980, 1983, 1988).

Still, the introduction of ALS (Central Area Licensing Scheme) was even more important than these fiscal measures, and it attracted undivided international attention. These are in fact fees paid for a car on its entering the central city zone. They were introduced in 1975, and then slightly modified in the following decades. They had, of course, instant effect on dramatic decrease of car use (and the increase of public urban transport share) in the central city zone, which from that time on remained considerably lower than before 1975![17]

In the course of 1990, the Vehicle Quota Scheme was introduced, which determines an exact (limited) number for every vehicle category that is allowed into the central zone. At the public bidding organized every month, the owners of vehicles compete for licenses to use their vehicles in the central zone and all who win pay the lowest price that 'passed' at the auction.[18] Such a system ensures limited scope of use of motor vehicles in accordance with the planned extension of street network capacity, which is approximately 3% per year.

However, even the draconic measures that have been efficient for almost 30 years in maintaining the planned low scope of traffic in the streets of central zone of Singapore are loosing their topicality. Namely, the public pressure is getting bigger and bigger to liberalize traffic market (perhaps the degree of population motorization has not risen that much but those owning the cars decided to use them intensively, even 18,600 kilometers annually, according to LTA),[19] so that in 1995 (manual) toll pay was introduced at jammed city arteries (expressways), and as of 1997, the system of electronic payment (ERP – Electronic Road Pricing).

Singapore's experience illustrates magnificently what the achievements of almost fully centralized control of urban development and shaping of residential communities, by socially oriented 'pro-public urban transport' strategy and high prices of car use can be. Singapore, in which until a few decades ago only shacks and rickshaws could be seen, has solved residential issue of the majority of citizens and has one of the most efficient and most coordinated systems of urban transport in the world. Although it can be said that the city government policy was excessively interventionist in character, or that it led to limiting of choice of once more picturesque life styles, the majority of Singapore population still supports their government and its centralist planning strongly. They also

[17] Land Transport Authority, *White Paper: A World Class Land Transport System*, Republic of Singapore, 1996, p. 34.

[18] P. Barter, *An International Comparative Perspective on Urban Transport and Urban Form in Pacific Asia: The Challenge of Rapid Motorization in Dense Cities*, Murdoch University, Perth, 1999, p. 272.

[19] Land Transport Authority, *White Paper: A World Class Land Transport System*, 1996, p. 33.

believe that this level of authoritarianism is a small price to pay for rapid growth of economic welfare and living in a modern prosperous metropolis with perfectly organized public services, including the railway system of world class.

4. Tokyo

Tokyo is a unique giant agglomeration where 32 million people live today. In 1825, there were 530,000 people who lived in Tokyo; in 1900, there were 1.5 million people, in 1925 more than 5 million people, and in 1960, there were 15.5 million citizens. Therefore, many important guidelines of urban development resulted exactly from the size of this metropolis and the fact that it experienced rapid expansion at the beginning of 20th century already. The following factors were crucial for the concept of urban development and traffic strategy of Tokyo:

- Extreme lack of land that can be used for urban development;
- Japan does not possess important energy resources (high percentage of oil is imported);
- In the period following 1960, when there was a large-scale use of cars in other world metropolises, not only the spatial and physical structure but also the whole lifestyle of Tokyo largely depended on the railway that there was not any chance for more drastic breakthrough of automobiles;
- For this analysis, perhaps, the most interesting is especially powerful symbiosis of (once state- and today privately owned) railway and companies dealing with construction of residential and commercial premises.

Japan, in fact, has very little space suitable for the development of cities and traffic infrastructure. "Approximately two thirds of territory are mountains (out of 378,000 km^2), so that the majority of population is crowded at the remaining third… In cities, of course, the population density is the highest, but the threat from earthquakes has prevented, at least until recently, the construction of high buildings in Japanese metropolises. Therefore, the space is actually a 'prize', and the value of land is extremely high, so that assigning the space for construction of highways and parking lots for private cars is incredible luxury that any of the Japanese cities can allow. At the beginning of 1950s, the Japanese road network was the most underdeveloped in the whole world. Simply, there was not any driving force for road construction in Japan until recently… Since it started its modernization in 1868, Japan concentrated its resources only to the railway…, and the first modern highway was built in 1965!"[20]

It is seemingly a paradox that Japan, which belongs to the most important world car manufacturers, introduced very early extremely strict restrictive policy

[20] McShane and Koshi and Lundin, "Public Policy Toward Automobile – A Comparative Look at Japan and Sweden", *Transportation Research* 2, 1984, p. 97.

regarding car use. This was not, however, the consequence of some urban or traffic strategy, but of macroeconomic policy. Barter points out: "One of the important reasons of restrictive policy introduced very early in Japan regarding automobile use lies in its huge dependence on foreign oil import."[21] Favoured railway used local coal, while the motor vehicle manufacturing, which was dominated by American companies after World War II, depended on the imported oil.

At the same time, after World War II, the main goal of Japan macroeconomic strategy (known as "Marjui") was to limit personal consumption in order to maximize saving, investments and export. Therefore, in spite of very fast industrialization and growth of salaries in the course of 1950s, the degree of motorization in Tokyo (16 automobiles per 1,000 citizens) was incomparably lower than in much poorer cities like Singapore and Kuala Lumpur.

Tokyo developed the majority of its railway system much before the growth of motorization became one of dominant characteristics of metropolises in the developed countries. The greatest part of suburban railway of Tokyo originated before World War II (between 1920 and 1940).[22] In fact, the railway connected Tokyo with neighbouring towns as early as in 1869 (when Tokyo-Yokohama line was open), but only in 1915 (when railroads electrification gradually began) it really got more important role in suburban traffic of this metropolis.[23] Many new suburban lines were open before World War II, especially by companies dealing with construction of residential buildings.

Population densities were, of course, extremely high. The estimate is[24] that in 1850, the population density in Japanese metropolises was 21,000 citizens per km^2, and in 1920, it was 15.000 citizens per km^2, which corresponds to the characteristics of a typical 'pedestrian city'. In 1935, in Tokyo the suburbs along the line of suburban railway extended up to 10 km from the city center,[25] so that in 1940 it largely started to gain the shape of a typical 'city with public traffic'.[26] In the period from 1940 until 1960s, Tokyo continued to develop as a typical

[21] P. Barter, *An International Comparative Perspective on Urban Transport and Urban Form in Pacific Asia: The Challenge of Rapid Motorization in Dense Cities*, Murdoch University, Perth, 1999, p. 270.

[22] P. Hall, *The World Cities*, Weidenfeld and Nicolson, London, 1984, p. 229.

[23] P. Rimmer, *Rickshaw to Rapid Transit: Urban Public Transport Systems and Policy in Southeast Asia*, Pergamon Press, Sydney-Oxford-New-York-Toronto-Frankfurt, 1986, p. 55.

[24] Y. Masai, "Metropolization in Densely Populated Asia: The Case of Tokyo", in: A. K. Dutt, F. J. Costa, S. Aggarwal, A. G. Noble, eds., *The Asian City: Processes of Development, Characteristics and Planning*, Kluwer Academic Publishers, Dordrecht/Boston/London, 1994, p. 122.

[25] R. Inoue, *Urban Development and Urban Transportation in Japan*; Paper presented at the 2nd ASEAN-Japan Workshop-cum-Seminar on Urban Transportation 1994, Nippon Convention Center, Chiba City, May 30 – June 01, 1994.

[26] P. Barter, *An International Comparative Perspective on Urban Transport and Urban Form in Pacific Asia: The Challenge of Rapid Motorization in Dense Cities*, Murdoch University, Perth, 1999, p. 54.

railway city (whereas walking and use of bicycles in 1968 still amounted to 51% of all travels in this metropolis).[27]

The first line of underground railway in Tokyo was open in 1927, but the network of its lines was considerably extended only after World War II, from 1957 to the beginning of 1970s, and completely pushed away the trams in the central city zone. They were finally cast out between 1965 and 1971.[28] Powerful, efficient system of underground railway with almost 200 km of lines is complementary to a wide network of suburban railway established even before 1940, so that in 1960 the underground and suburban railways made 90% of passenger kilometers of public urban transport, four times more than passenger cars. The demand for railway traffic in Tokyo rose in 1960s at such speed that neither a rapid expansion of railway capacities nor opening of new lines could meet these requirements.[29] In the period from 1965 to 1970, the incredible crowd in underground and suburban railways in Tokyo decreased from 240% to 220% of the designed capacities.[30] Naturally, such crowds are possible only when the passengers 'pack' in trains as sardines in a can.

The pre-war Japan had explicit policy of favouring investing in railways, which was dominated by local companies, and not in road traffic, which was dominated by foreign firms.[31] Such a national favoring of investments into railway continued until the end of 1960s. It was supported by giant corporations (*keirecu*), which were at that time extremely represented on the railway and invested almost nothing in the motor vehicle industry. These corporations also owned real estate in the central city zone and they would be financially shaken if there were dispersion development of Tokyo under the influence of cars.[32] This was certainly one of decisive reasons for the creation of particularly radial traffic structure of Tokyo. Although this was primarily railway infrastructure, even the network of arterial roads that started to be built modestly later, was particularly radial. The development of Tokyo at that time was really a good example for Thomson's "strategy of strong center".

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27 City Bureau and Building Research Institute, *Cities and Urban Transport in Japan – 1990*, Ministry of Construction and Japan Transportation Planning Association, Tokyo, 1990.

28 City Bureau and Building Research Institute, *Cities and Urban Transport in Japan – 1990*, Ministry of Construction and Japan Transportation Planning Association, Tokyo, 1990; P. Rimmer, *Rikisha to Rapid* Transit: *Urban Public Transport Systems and Policy in Southeast Asia*, Pergamon Press, Sydney – Oxford – New York – Toronto – Frankfurt, 1986.

29 P. Hall, *The World Cities*, Weidenfeld and Nicolson, London, 1977, pp. 229-231.

30 R. Cybriwsky, *Tokyo: The Changing Profile of an Urban Giant*, Belhaven Press, London, 1991, p. 102.

31 W. Hook, "The Role of Non-motorized Transportation and Public Transport in Japan's Economic Success", *Transportation Research Board Paper*, 940954, 1994.

32 W. Hook, M. Replogle, "Motorization and non-motorized transport in Asia: Transport system evolution in China, Japan and Indonesia", *Land Use Review 13 (1)*, 1996.

In 1970s, the degree of motorization begins to rise (from 11.4 automobiles at 1,000 citizens in 1960, it increased to 42.9 automobiles at 1,000 citizens in 1990). However, the spatial and physical structure of Tokyo even today is crucially influenced by the railway,[33] since the urban planning is reduced to the maximum and is influenced considerably the development of Tokyo.[34] The railway of huge traffic capacity had decisive influence on the creation of a giant business center (CBD) in the city core also, in which 1.3 million people worked in 1960, and 2.3 million people in 1990.

Table 6. *Spatial and demographic characteristics of Tokyo (1960-1990)*

Year	CBD		Central zone		Suburbs		Population density		
	Pop. in (000)	Area (km2)	Pop. in (000)	Area (km2)	Pop. in (000)	Area (km2)	CBD	Central zone	Suburb (cit./ha)
1960	545	40.2	8,310	412	7,210	1,400	135.7	201.5	51.5
1970	402	41.1	8,841	490	12,630	2,382	97.9	180.4	53.0
1980	338	41.1	8,352	545	17,487	3,056	82.3	153.2	57.2
1990	266	42.1	8,160	618	23,630	3,862	63.2	132.1	61.2

Calculated according to: J. Kenworthy, Fl Laube, et al., *An International Sourcebook of Automobile Dependency in Cities*, University Press of Colorado, Boulder, 1999.

Table 7. *Urban transport in Tokyo (1960-1990)*

Year	Passenger km per citizen		Public urban transport (PCT) – passenger km per citizen			
	Total	Auto-mobiles	PCT total (%)	Bus (%)	Railway (%)	Trams (%)
1960	4,845	917	3,928 *(81.1)*	259 *(5.3)*	3,544 *(73.1)*	126 *(2.6)*
1970	6,876	1,715	5,161 *(75.1)*	334 *(4.9)*	4,807 *(69.9)*	20 *(0.3)*
1980	7,579	2,388	5,191 *(68.5)*	262 *(3.4)*	4.925 *(65.0)*	4 *(0.2)*
1990	8,676	3,175	5,501 *(63.4)*	217 *(2.5)*	5.280 *(60.9)*	3 *(0.0)*

Calculated according to: J. Kenworthy, F. Laube, et al., *An International Sourcebook of Automobile Dependency in Cities*, University Press of Colorado, Boulder, 1999.

* The numbers in brackets are share in percentages of public city transport as a whole and its various forms in the total of passenger kilometers made per urban citizen.

Thus the most striking features of spatial and demographic development of Tokyo in the period from 1960 to 1990 were the incredible expansion of suburbs

[33] M. S. Bernick, R. B. Cervero, *Transit Villages in the 21st Century*, McGrow Hill, New York, 1997; R. Cybriwsky, *Tokyo: The Changing Profile of an Urban Giant*, Belhaven Press, London, 1991, pp. 130-133.

[34] W. Hook, "The Role of Non-motorized Transportation and Public Transport in Japan's Economic Success", *Transportation Research Board Paper 940954*, 1994; P. Hall, *The World Cities*, Weidenfeld and Nicolson, London, 1977, p. 236.

and ever increasing concentration of the employed in CBD (from 26% in 1960 it increased to 28% of the total number of the employed in 1990). While the central zone hardly extended in space (for 200 km^2, whereas the number of citizens remained almost the same – 8 million, population density decreased from 13,500 to 6,300 citizens per km^2), the expansion of suburbs was incredible: the number of citizens in suburbs increased from seven to 24 million, and their urbanized area from 1,400 km^2 to 3,900 km^2. The population density in suburbs in the same period increased from 5,100 to 6,100 citizens per km^2!

Although since 1970s the cars have been used more and more (their use increased from 900 passenger kilometers per citizen in 1960 to 3.200 passenger kilometers per citizen in 1990), the railway in Tokyo has continued its incontestable domination (in the period from 1960 to 1990, it increased from 3,500 passenger kilometers per citizen to 5,300 passenger kilometers per citizen). None other form of traffic, of course, could connect 4,500 km^2 of densely populated urbanized area and 32 million people in a unique functional entity, or provide the concentration of 2.3 million employees in CBD (Central Business District) with the area of 40 km^2, except for suburban and underground railways.

The average speed of Tokyo railway has always been considerably higher that the speed of private cars and that difference has been increasing permanently in favour of the railway. For instance, the average speed of car in 1970 was 28 km/h and the railway 40 km/h, while in 1990, the average car speed was 24 km/h and the railway was still at 40 km/h. In Tokyo, you simply travel twice faster by urban railway than by car.

Extremely high factor of railway capacity utilization level led to inconceivably high degree of public urban transport coverage by income in this metropolis of 110%, which is incomprehensible not only in the USA but also in Europe. This, of course, represents an important characteristic of all densely populated wealthy Asian metropolises.[35] It should bear in mind that public traffic in Japan gets less subventions and is being privatized. In contrast to the majority of industrially developed countries of the West, private capital in Japan is very interested in public urban and suburban traffic.

This leads us to an exceptionally interesting complex of questions. Everywhere in the developed world, the public city transport is a 'black sheep'. In the USA, the attitude prevails that the investment in public city transport is a waste of money, while in Europe, the public city transport is viewed more benignantly, but the investments are usually justified by some general interest. For instance, the conclusion of a CEMT seminar is that "in all European countries the public transportation receives subventions… It would be ridiculous to expect of the public transport to develop only along profitable lines since this

[35] An exceptionally high factor of coverage of costs by income of public urban transport is the characteristic of other densely populated wealthy metropolises in Asia: in Hong Kong it is 140%, and in Singapore 100%.

would only serve for strengthening of an already existing polarization of activities, social inequalities and, in the long term, increase enormously traffic jams and degree of pollution."[36]

As opposed to other wealthy metropolises, public city transport in Tokyo (especially railway traffic) is particularly lucrative business that private businesspersons fight for. How is that possible? What is the secret? The reasons are numerous. First, the railway system in Tokyo had been fully completed much before the degree of motorization began to rise. This huge widespread system developed high speeds and was immune to traffic jams at the street network when in 1960s and 1970s the motorization increased. Therefore, railway in Tokyo today provides for the biggest degree of accessibility and does not have competition at all. In addition, the distribution of population, the employed and traveling and spatial and physical structure have for long been fully adapted to railway traffic. Many researchers even point out that urban planning in this metropolis is almost non-existent just because the railway traffic completely dictates the type of urban development.[37]

Second, the road network in Tokyo is:

- Of rather a small traffic capacity (even the newest arterial roads have only two lanes in one direction since they were built at the time of negligible degree of motorization and served primarily for cargo traffic);
- Of particularly radial structure (so that it only strengthens additionally the power of the main urban center where 2.3 million people work), and
- There are no prospects of its extending considerably.

Namely, when in 1970s the investment into Japanese roads started, an astonishingly small road network was built in Tokyo. The main reasons were rather pronounced and inviolable proprietary rights of the real estate owners, as well as astronomic prices of urban road construction; a huge percentage, even 70%, goes on the acquisition of land for urban road construction in Tokyo![38] Small traffic capacity of roads in Tokyo is illustrated by the example from 1980s – just a slight increase of car use caused such traffic jams that people started using bicycles instead of buses on a large scale. At the end of 1980s, bicycle participated with 15% in the total scope of traveling in Tokyo, pushing away buses from the

[36] C. Reynaud, *Transport Policies in the Countries of Central and Eastern Europe. A Decade of Integration: Results and Challenges*, Transport Policy Forum, ECMT – Committee of Deputies, Paris, 2001, p. 18.

[37] P. Barter, *An International Comparative Perspective on Urban Transport and Urban Form in Pacific Asia: The Challenge of Rapid Motorization in Dense Cities*, Murdoch University, Perth, 1999, pp. 283-284; R. Cybriwsky, *Tokyo: The Changing Profile of an Urban Giant*, Belhaven Press, London, 1991, p. 93, 135.

[38] W. Hook, M. Replogle, "Motorization and non-motorized transport in Asia: Transport system evolution in China, Japan and Indonesia", *Land Use Review* 13 (1), 1996, p. 76.

position of the main means of transportation for the distribution of passengers to the railway stations.[39] There are very few parking spaces and they are extremely expensive. In Tokyo, for instance, there is such a lack of space that you must prove you own a parking space prior to registration of a private car.[40]

The complete construction in Tokyo is under the powerful influence of railway companies. In fact, the majority of private railway companies operate within large business conglomerates, which deal with construction of residential and business buildings along the railway lines.[41] Not only the private capital has been invested into the construction of the larger part (out of the total of 2000 km) of railway lines in Tokyo, but these giant conglomerates, which today deal not only with railway traffic but also with the sales of consumers goods, various services and real estate, built the whole new cities with full range of municipal services.

This concept of integrated railway development and new cities in Japan was conceived by Hanqiu railway company right after the opening of the line to Osaka in 1910. This company discovered rather soon that passenger railway transport is barely profitable and started the construction of residential buildings around the railway stations.

The second stage began right after World War II, during the Japanese economic boom, when there was a large-scale transformation of private railway companies into multi-business companies known under the name '*tarminaru*'. The concept of urban development that such multi-business companies provided for illustrates greatly just the example of the Tama new city.

The construction of Tama is the most famous, biggest and most successful project that was ever undertaken by a private railway company in Japan. The idea of Tama development concept was conceived as early as in 1918, when Shibusawa Eichi, one of the most successful entrepreneurs of Meiji era (1868-1912) created the 'corporation of garden city', that preceded the today's Tokyu company. Today this corporation owns, among other things, the largest of eight existing private railway companies in Tokyo. Thus Eichi, deriving his ideas from Howard's concept of 'garden city', wished to free Tokyo from over stuffiness by building pastoral communities. However, unlike Howard, who wanted to create self-sufficient cities, physically and economically independent from London, Eichi imagined these 'garden cities' around Tokyo as places for vacation in the country, i.e. dormitory settlements, and managed to create only a few of such suburban enclaves. His idea was brought to life not until Keita Gotoh, former minister of traffic and very successful entrepreneur.

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39 H. Yamakawa, "The Role of Possibilities for Bicycle Transportation in the Post-Motorization Age", *IATSS Research 18* (1), 1994, pp. 62-75.

40 M. S. Bernick, R. B. Cervero, *Transit Villages in the 21st Century*, McGrow Hill, New York, 1997, p. 312.

41 M. S. Bernick, R. B. Cervero, *ibid.*, pp. 312-313.

Under his leadership, from 1960 to 1984, Tokyu private railway corporation took the opportunity when 22 km of railway line was built to transform the huge hilly barely settled area into a well-planned urbanized entity on 5000 hectares, with almost 500,000 citizens. This amalgam of interrelated new cities extends along 15-35 km wide line that unites four towns in the southwest of Tokyo.

The success of Tama and many other projects realized by private railway companies inspired local and national government to that extent that they already copy their ideas and create their own version of new cities coordinated with the development of railway traffic. In the recent years, the national policy of Japan has been strongly promoting integrated urban and railway development, attempting to redirect the development from metropolitan centers into planned satellite communities. This 1988 plan was supported by the adoption of National Law for Multipolar Land Arrangement in order to encourage the development of these business core cities at the outskirts of Tokyo, i.e. to create peripheral communities that would offer both jobs and flats and be completely self-sufficient, lowering thus the pressure on railway and roads.

In this way, unlike Stockholm or Singapore for instance, it was the private sector in Tokyo, motivated by profit only, that managed to coordinate skillfully the development of the railway and the new cities in the whole region. And while in the USA and the majority of metropolises of the developed world, the model of public transport (financed by the state) and urban development (generated by private owners) after World War II became a standard (accompanied by disappointing results regarding the utilization level of capacities of public transport), in Tokyo both private and public sector profited from the use of this unique enterprising approach that links inseparably the development of the city and the public city transport.

5. Conclusion

The whole analysis so far has shown that wealthy Asian metropolises, with their particularly high densities, efficient systems of urban and suburban railways, restrictive policies regarding car use and greatly planned development of new cities offer very inventive and practical planning solutions that fit in the concept of sustainable urban development greatly. This concept has been promoted more and more in the recent years. It is obvious that these solutions can be very inspiring for the metropolises of developing countries and the countries in transition, that are characterized by rather high population densities and relatively low degree of population motorization (less than 150 automobiles per 1.000 citizens).

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GLOBALIZATION'S IMPACT ON EASTERN EUROPE

Abstract: *Globalization is an evolutionary, irreversible process. Globalization has affected the East European countries mainly through foreign direct investments. The most important objective of multinational corporations when investing in Eastern Europe is to improve their market access. The most important objective of the companies from Eastern Europe when making business wth multinationals is to attract foreign capital that they need so badly. The process in which specific industries become cross-national then international and eventually global requires companies from Eastern Europe to adapt by changing marketing, sourcing, R & D, HR, possibly all functions to conform to global markets. The governments of the East European countries whose companies, resources and peoples are involved in the globalization process have also to adapt to the "rules of the game": to the norms of major trading nations in terms of quality, finance, ecology and human rights.*

Key words: *globalization, Eastern Europe, technological change, institutional change.*

1. Introduction

The usual reaction to globalization is a defensive one: it's a conspiracy on the part of big countries like America or Japan. It only benefits the rich. It outsources jobs to low-wage countries and in effect colonizes those inhabitants in dead-end jobs. The purpose of this article is to give a more balanced view of a phenomenon I have been familiar with for nearly 60 years. In 1946, my father was employed by an American cutlery company to reconvert a plant of theirs from wartime tool production to peacetime cutlery. Within six months he was called into the New York office and told that he no longer had a job, that the company had found an Italian supplier who could land finished cutlery in the United States for less than it could be manufactured there. The company would keep its brand name but source the actual product abroad. Subsequently in my own years as an economist, as the director for strategic planning for AT&T to become a global competitor, and lately as a professor in MBA programs, I have watched this pattern repeated endless times. With the accession of 10 Eastern European countries to the European Union, and even earlier in Hungary,

Rumania, and other neighboring countries, globalization has come to this part of the world. What really is globalization? Is it a destructive force or an incentive to modernize, to raise value added and hence productivity and wages? Can the smaller countries of Eastern Europe, whether in the EU or outside of it, survive it?

2. Globalization: a definition

During the NAFTA (North American Free Trade Area) debate in the United States in 1992, Ross Perot, candidate for President and CEO of EDS, a major software supplier, denounced the proposed reduction of tariffs and regulations of Mexican goods as representing a "giant sucking sound" which would wipe out hundreds of thousands of jobs in the U.S. Such generalizations have largely been shown up as false in the years that followed. What is globalization, then? To my mind globalization could be explained as a phenomenon of trade among specific industries whereby markets become cross-national, then international and eventually global. In turn, this movement requires companies to adapt by changing marketing, sourcing, R & D, HR, possibly all functions to conform to these markets. A corollary involves governments of nations whose companies, resources, peoples are involved in such trade likewise to adapt to the "rules of the game" that are the norms of major trading nations in terms of quality, finance, ecology and human rights. In this process, specific industries are affected, not all; some companies are involved, not all; adaptation by governments in some respects is needed, not all.

It is important to recognize the specificity of the industries that undergo globalization. It started with textiles and shoes, industries where direct labor costs were a major element. Then, in the 1950's it spread to electronics (calculators, watches, TV sets, VCR's) and was quickly followed by automobiles. In the 1980's we saw financial services, aircraft production, book publishing, cigarettes, even furniture become globalized. In recent years, semiconductor chips, software writing, call centers and even medical diagnostic procedures and back-office work "go abroad'. Yet jobs in developed countries have grown, the average wage in both developed and Third world countries has expanded, yet all of the fuss about the "giant sucking sound' has been repeated over and over again.

2.1. Driving forces behind globalization

If you look beyond the specifics of the industries that become globalized, you find two major imperatives: technology and changed institutions. Technological change is recognized through the availability of production facilities in other countries, lower costs of manufactured products, intermodal transportation, product standardization (PAL/NTSC; DVD; clothing measurements, 12 volts), higher quality, less waste, higher value added and flexible manufacturing.

Institutional change is evident because of the emergence of supra-national entities (EU, NAFTA, ASEAN, MERCOSUR) and common currencies (Euro) that create price transparency. There has been a shift towards consumer and away from producer protection. There is also evidence of much greater liquidity for capital and of an increase in labor mobility and education. There is a vast increase in cross-border trade and investment with lower tariffs and quotas. Higher wages in developed countries drive outsourcing to LDCs, for example, from Germany to Czech Republic; from France to Tunisia; from the USA to Taiwan and China. New comparative advantage of nations emerged: today, Singapore is known for semiconductors, Italy for textile printing and aluminum fabrication, Canada for hydro-electricity. Mergers across national borders are taking place more and more in automobile industry, finance, oil industry, airlines services, telecommunications. The outcome of this process is a decline in relative power of nation-state vis-à-vis multinational/global corporation.

Technological changes tend to be named as the villains of the piece, yet the institutional changes, while more subtle have in reality made even more of a difference. In that sense, the lowering of barriers to investment and capital movements, as well as more slowly but inexorably, the movement of labor has become a huge source of lowered costs. Where would Germany have been in the 1950s without Greek and Turkish laborers? Who would man the kitchens of America's restaurants without Mexican and other Latin-American immigrants? Where is the largest concentration of Jamaicans outside of Jamaica: around New York City. Try to find a German gardener in Berlin - they are all Poles, legal and illegal. The largest community of Serbs outside their home country lives in Toronto, Canada. Still, there are institutional rigidities. For example, the Japanese government makes it almost impossible for the spouse of a legal working foreigner to work, and most of the EU countries have refused to allow workers from the new 10 countries to work for the next five to seven years, the exceptions being the UK and Ireland.

2.2. Triggers of globalization

There is a long list of factors that lead to an immediate emergence of outsourcing.

- Entrant in a given market might discover he can no longer just export due to protectionism but has to find a partner or build a plant in target market. That has been the case with the exports of Japanese textiles, then automobiles in the USA and in the UK and with Japanese exports of VCRs in EU.
- Low domestic market growth forces firms with over-capacity to find and exploit foreign markets through exports.
- Existing competitor could have to lower costs, so he outsources to firms in lower cost countries. That is the case with U.S. textiles, Italian shoes, German metalworking.

- New technology, such as LCD watch, transistor, Walkman, radial tire, CT-scan supervenes over older technology and brings in new foreign competitors.
- Patents expire on "new" technology and foreign "generic" firms exploit existing markets, as is the case with pharmaceuticals, vitamins, biotechnology.
- Several smaller companies wishing to compete with larger foreign competitor(s) merge or form alliance, as Airbus, Sanofi-Aventis, or OPEC members.
- Nation-state decides to compete with existing foreign firms by setting up "national champion" (e.g. Bull, Framatome, Air France, Daewoo, Ericsson, "Japan, Inc.").
- New Common Market arrangements force domestic firms to compete with foreign firms, resulting in "rationalization of the industry". That happened with telecom services, airlines, and wholesale distribution in the EU and with trucking in NAFTA.
- Client firms move abroad and force suppliers (accounting firms, component manufacturers in autos and electronics, consultants) to follow suit.

2.3. Who gains, who loses

It is a vast over-simplification to suggest that "a rising tide lifts all boats" as applied to globalization. Clearly, there are gainers and losers. Gainers are, for example, global brands (L'Oreal, Schlumberger, Boeing, Nestlé), cheap raw materials (Saudi petroleum, Australian iron), cheap labor (from Indonesia, China, Viet Nam, Madagascar), low-cost Hi-Tech (Singapore microchips, Indian software, high value-added Italian scarves), adaptive technology (Swiss robotics, Japanese autos in UK, Martin guitars, Taiwan microchip foundries), first in market scale (Microsoft, VW bug, SONY, Bic, Wal-Mart). On the other hand, loosers are firms in fixed infrastructure that cannot adapt (French fishermen, Polish shipyards, Russian Steel factories, Belgian coal), Low-Tech but high cost manufacturing (French shoes, US straw brooms, printing shops, commodity textiles), easily copied technology (AT&T telephones, British Teddybears, Gucci leather-handbags), unions in non-adaptive factories (FO in France, U.S. Hatters, German IG Metall workers), clerical/assembly/repetitive work that can be mechanized (bank tellers, mortge broking), small scale capital (small banks, insurance, healthcare).

People are not stupid: they know when they are likely to gain something or when they are at risk. You see pictures of Indian workers on the Malabar Coast gladly tearing down scrapped merchant ships. Even at $ 0.19/hour, hundreds of Indonesian women crowd into the gates of a Nike factory when a "Help Wanted" sign is posted. By contrast, look at the unionized workers marching in Paris when privatization is proposed for the electricity company (EdF) or in Poland when farm-

ers fear they will not be competitive with French or German ones and vote against joining the EU. Ironically, in 2004 the worm has turned and it's the German farmers who are losing competitively.

The question for any country is to understand clearly whether the gainers outnumber the losers, and how to deal compassionately with the losers. Look at the Gdynia shipyards in Poland: many years ago, they became uneconomic when South Korean shipyards were able to assemble equally good ships with lower labor costs. Still, Poland refused to shut these shipyards down and to retrain the workers into higher value-added jobs. One of the more realistic questions that comes out of this listing is whether unions might help their members better by proposing retraining schemes with government and employer subsidies than by going on strike for ever higher wages. The accession of Mexico to NAFTA might have been a demonstration case for adaptation, were it not for the 1995 meltdown of the Mexican peso, the resulting capital flight and depression for a couple of years.

3. The evolution of the global corporation

The above named factors have forced many companies to change their method of operation. Fifteen years ago, prof. Warren Keegan of Pace University in New York City deviced a 4 x 4 matrix to show the changes required by globalization in some of the major functions inside the affected companies. Over the years I have found it necessary to expand his list to 15 such functions.

What continues to be surprizing, is how difficult it is to move from one stage to another (from column to column) in this diagram. Most companies do not even manage to move consistently from one stage to another in all their functions, but lag behind significantly in some areas. It's worth pointing out that even as sophisticated a company as General Electric took almost 30 years to get to the global stage. While many functions are inside a given column, there are frequent outliers. AT&T International is a perfect example: when AT&T expatriates in Thailand did not receive their monthly paychecks in December 1985, AT&T Payroll in Florida just explained that it was a computer glitch but made no move to compensate for it. The clerk in Florida was unaware that, due to time differences, given different banking, withholding, and other factors, the expatriate employees would simply starve for a month. Only a threat of calling the Chairman of the Board convinced this individual's boss to establish a line of credit to the Chase Bank subsidiary in Bangkok. So much for accounting department flexibility!

Table 1. *The evolution of the global corporation*

ACTIVITY	DOMESTIC	INTERNATIONAL	MULTINATIONAL	GLOBAL
Foreign Sales	<5%	About 10%	30-50%	>60%
Example	SNCF	Chrysler, Renault	H-P (1985); Caterpillar	IBM, ABB, NISSAN
Focus	National	Similarities	Differences	Reality/ Unifying Influences
Marketing	National	Extension	Adaptation	World Brands but with differences
Finance/Acc.	National GAAP	Domestic GAAP	US & Foreign GAAP	Depends on Markets
Organization	Functional	International Div.	Area/Worldwide Product/Service	Mixed/ Matrix Structure
R & D	Domestic	Home Country	Home & Host Country many countries (not integrated)	Integrated Labs
Human Res.	Domestic	Home Country (Expatriates)	Host Country (Locals)	Best Person
Labor Relations	Single or multiple unions	Local Unions	Do what local firms do: union or non-union	Mixed/Matrix
Orientation	Domestic	Ethnocentric "American is best"	Polycentric	Geocentric
Sourcing	All Domestic	Home is still best	Local is best	Market Entry comes first then Low Cost
Ethics	Whatever is legal at home	Whatever is legal in each country	"Feel your way"	J&J type "Credo"

4. Evolution of government policies

As stated in the definition section, companies are not the only ones who must adapt. In the formal hierarchy of companies, this adaptation is still an easier task than in a politically sensitive legislature or even a country whose democratic institutions have yet to develop. It is not easy to cut deals with independent constituencies when only some of them have been exposed to the winds of globalization or feel that they have nothing to gain. Consider the following necessary changes in government policies to support the globalization process.

- Government should behave as a "rule setter", not as participant, as it is a cese, for example, in state-owned enterprises in China.
- Regulation should prevail only when market forces (competition, supply and demand functions) are not adequate. Monopolies in the field of water supply, radio spectrum, telecommunications, electricity supply, and stock exchanges have to be regulated.
- Taxation policies that do not discriminate between national and international firms, but that encourage trade, savings and investment should be implemented.
- Government policies that inhibit FDI, migration of management and professional employees should be abandoned.
- R & D activities commensurate with ability of the economy to utilize results should be encouraged, not creation of labs, universities that only benefit foreigners by "brain drain" and buy-outs of patents.
- The govrenment should provide foreign language instruction that permits national citizens to read and speak with foreigners sufficiently early.
- Infant industry subsidies or tariffs should be minimized so as not to create "White Elephants" that later have great difficulty in adjusting to competition.
- Social Policies that compromise political and competitive pressures should be implemented.
- Readjustment allowances and retraining that encourage staying in the labor force vs. unemployment should be provided.
- Governments of the less developed countries should be concerned with environmental laws and enforcement, not necessarily at the same level as the governments of the developed countries, but clearly moving in that direction.
- Governments should be also concerned with human rights, including child labor laws, safety and health, equal gender treatment, union representation.

No country does all of these things, desirable as they may be. Certainly the United States has tried to exercise its sovereign power not merely to "set rules" but recently

to interfere massively in defense industries, lumber, sugar, cotton, and steel and clothing, in some cases knowing full well that its actions were in contravention of the WTO, but secure in the knowledge that it would take several years to adjudicate!

Another important factor is the one which encourages readjustment and retraining, as opposed to straight out "welfare payments" and "unemployment compensation." Countries like France and Germany have seen their working population shrink as a percentage of total population, and unemployment rates double those of countries such as the UK and the Netherlands. In the latter, compensation was offered to those displaced by new technologies and foreign competition, but in a form that would not lead to heavy burdens on the tax base forever, but transitional payments into alternative industries.

5. Problems with globalization

Is globalization reversible? The answer to this question is fraught with difficulty. A quick look at the extent to which it has already infiltrated into the very fiber of most developed countries suggests that it would be extremely tough. Dramatic consequences of trying to reverse the globalization process would be numerous. For example, Nation-States would have to impose severe restrictions not only on imports but also on "transplants". As a consequence, prices in such countries would rise dramatically and jobs thus saved would be humongously expensive. Domestic firms would have to "unbundle" technology, marketing, personnel, finance, causing hardship.

We need to remain vigilant that there are indeed at least seven questions left behind, even though globalization may not, practically speaking, be reversible. Is it then an unalloyed "good", or should we be mindful that there remain some unanswered questions.

The first unanswered question is concerned with inequality. Does globalization result in greater inequality within or between developed and less developed countries?

The second unanswered question refers to globalization vis-à-vis democracy. Is Prof. Amy Chua fromYale Law School, who is an author of "World on Fire", right in writing that there is an inherent conflict between democracy and immigrant minorities that largely benefit from globalization?

The third unanswered question is from the field of ecology. Does globalization result in "transferring out" pollution problems to less developed countries?

The fourth unanswered question is concerned wirh perpetuating colonial status of LDCs. Does globalization mean that LDCs will not industrialize but remain only as providers of raw materials and workers to the developed countries?

The fifth unanswered question deals with the terms of trade. Given that currently much of Africa, Latin America and parts of Asia sell low value-added items, and the developed world high value-added items, will the terms of trade remain adverse?

The sixth unanswered question is concerned with imperialism. Do the developed countries impose an inferior status on LDC's because of institutions (education, governance, standards) which favor the existing order?

The seventh unanswered question is dealing with ideology. Is globalization an inevitable concurrent of capitalism (c.f. Karl Marx) imposing an ideology which is both alien and inimical to the values of LDCs?

6. Reaching markets of Eastern Europe

Globalization came to Eastern Europe mainly through foreign direct investments (FDI). Simply for ease of discussion, let us exclude from consideration for the moment, Turkey and Russia, or more precisely, the Federated Independent States of Russia. This leaves us with not only five of 10 recent EU accession countries (Czech Republic, Slovakia, Poland, Slovenia and Hungary) but also with potential entrants (Albania, Rumania, Serbia & Montenegro, Croatia, Macedonia, Bulgaria, and Moldova).

Table 2. *Basic Indicators of SEEC-8 and CEEC-5, 2001*

	Population in ths. Persons	GDP in USD mn	GDP/ capita USD at ER	GDP/capita USD nat PPP	GDP growth real, in %			
					1991-2001	2001	2002	2003
					average	WIIW forecast		
Albania	3435	4186	1219		1.5	6.5	6.0	6.0
Bosnia & Herzegovina	3750[1]	4618	1231		26.3	5.6	3.0	
Bulgaria	7929	13557	1686	7650	-1.6	4.0	3.5	4.0
Croatia	4381	20263	4625	9660	-0.9	4.1	3.0	4.0
Macedonia	2041	3426	1674	6400	-1.3	-4.6	0.0	2.0
Moldova	3640	1478	406	2110	-8.6	6.1		
Romania	22456	39714	1772	6180	-1.1	.3	3.0	4.0
Serbia & Montenegro[2]	8319	10500[3]	1260		-6.2	6.2	4.0	4.0
SEEC - 8	**55951**	**97741**	**1748**					
Czesh Republic	10280	56728	5514	15170	0.4	.3	3.0	4.0
Hungary	10195	51917	5092	12960	1.0	3.8	3.3	4.0
Poland	38632	176256	4561	9890	3.4	1.0	0.0	1.0
Slovakia	5379	20462	3804	12660	0.8	3.3	3.5	4.0
Slovenia	1990	18810	9443	17740	2.0	3.0	3.0	4.0
SEEC - 5	**66476**	**324175**	**4875**	**11630**	**2.1**	**2.2**	**1.6**	**2.5**

ER=Exchange rates. PPP=Purchasing power parity–estimates by WIIW.

Notes: 1) Excluding refugees 2) Excluding Kosovo and Metohija
3) WIIW estimate 4) Year 2000. 5) 1994–2001.

Source: Gabor Hunya: FDI in SE Europe in the early 2000's; Vienna Institute for Economic Studies, Available from <www.OECD.org>

Table 3. *Most important objective when investing outside home country (percentages)*

Improve market access	55	Reduce operating costs	17
Other factors	8	Saurce raw materials	6
Consolidate operations	4	Develop new product lines	4
Improve productivity	2	Develop new technologies	2
Improve labour force access	1	Reduce risk	1

Source: *Foreign Direct Investment Survey by Miga and Deloitte and Touche LTD*, OECD Southeast Europe FDI Investment Group, OECD, Paris, 2002.

Table 4. *FDI Inflow in Eastern Europe, USD million*

	1990	1993	1994	1995	1996	1997	1998	1999	2000	2001
Albania		58	53	70	90	48	45	41	143	200[1]
Bosnia and Herzegovina							100	90	150	130
Bulgaria	4	40	105	90	109	505	537	819	1002	689
Croatia		120	117	121	516	551	1014	1637	1126	1501
Macedonia			19	9	11	16	118	32	176	442
Moldova		14	12	67	24	79	76	40	143	149
Romania		94	341	419	263	1215	2031	1041	1040	137
Serbia and Montenegro						740	113	112	25	165
SEEC – 8[2]	4	326	647	777	1013	3154	4034	3812	3805	4414
Czesh Republic	72	654	869	2562	1428	1300	3718	6324	4986	4916
Hungary	311	2339	1147	4453	275	2173	2036	1970	1649	2443
Poland	89	1715	1875	3659	4498	4908	6365	7270	9342	8000
Slovakia		179	273	258	358	220	684	390	2075.2	1475.3
Slovenia	4	113	128	177	194	375	248	185	175.5	441.8
CEEC – 5[2]	476	4999	4292	11110	8753	8977	13051	16135	18228	17276

Notes: 1) estimate 2) Sum of available data.
Source: Gabor Hunya, *ibid.*

What characterize these Eastern European countries, with the exception of Poland and Rumania, is relatively small populations (below 10.5 million) and market economies that were mostly state-planned until recent years. The result is an inef-

ficient economy because of diseconomies of scale, as well as some other factors to be discussed later. Notice the discrepancy in the size of markets as shown in Table 2.

Clearly, no country except Poland and Romania, has population larger than 10.5 million, or a per capita income above $5500, with the significant exception of Slovenia and the Czech Republic. This poses problems about exploiting a market as compared to Western European ones (from 0.5 million to 80 million population, per capita incomes of up to $8,000). As Table 3 shows, market access is the single most important consideration in FDI.

Although a review of inward FDI for each country (Table 4) suggests considerable differences in its magnitude, it reveals that there has been significant investment in many of the South Eastern European countries. Of these Poland, Czech republic and Hungary lead the parade but Rumania and Croatia seem not too far behind.

The factor helping in reaching the markets of the East European countries may well be the tax advantages offered to foreign investors. The East European countries are in such a need of utilizing foreign capital and skills unavailable to their own citizens. The case of Whirlpool's acquisition of the Tatramat Company in Slovakia illustrates well the conditions under which a global firm is willing to acquire and expand a domestic producer in Eastern Europe.[1]

Thus, companies and governments in the region need to look at both markets and outsourcing as potential attractions for foreign capital. But this does not relieve the governments, and to some degree the private sector, from reappraising their own behavior, namely with regard to governance, transparency and bribery. For too long, the practice of "oiling the wheels" has been considered a normal business practice, whether to obtain regulatory permission from the governments, landing a profitable contract, or even attracting a foreign investor. For example, some 15 years ago, when Hungary was considering which supplier to contract with for cellular telephone service, Siemens allegedly offered to this country some 450 MHz cell phones, towers and switches. Unfortunately, these phones were not compatible with the 900 MHz standard adopted in Western Europe. Even though the contract was to have been financed by the World Bank, no one discovered that some bribes had been arranged for until after the contract was let. Such practices are being discovered sooner and more often, and once exposed to wreak, untold damage to the reputations of both parties is made.[2]

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1 Whirlpool/Tatramat Case # IMD-307965 obtainable at <www.ecch.cranfield.ac.uk>

2 Those engaged in the telecommunications industry will not soon forget the $10 billion Saudi Arabian microwave contract which EMI/Ericsson won with the help of the Crown Prince of Saudi Arabia whose Swiss bank account was enriched by the "usual" 5% commission. The losers were so outraged, an article soon appeared in Forbes magazine revealing the under-the-table-transaction, the Crown Prince was stripped of his inheritance, but the contract was not voided!

7. Obstacles in adapting to the "rules of the game"

Local companies in Eastern Europe are facing numerous obstacles in adapting to the "rules of the game" inherent in the globalization process. The following obstacles are to be mentioned: lack of standardized business accounting knowledge, lack of practical applications in education, coping with the competition from Asia, too much government interference in the economy, prevailing role of government in contracting, and culture and language barriers.

7.1. Lack of standardized business accounting knowledge

One of the more intransigent problems encountered lies in the preparation, or lack thereof of local managers who have to oversee and report on the activities of their employees to foreign investors. As illustrated in the table on the evolution of the global corporation, it is not sufficient to rely merely on past accounting practice, or for that matter, similar "national" standards in human resource management, marketing and distribution, or state-sponsored strategic planning. For example, students of Grenoble Graduate Business School from Belgrade reported that they had struggled for months to convert local accounting records to standard Western practice of profit and loss statements and balance sheets without accomplishing the "due diligence" required by Western European and American investors. Coming from a state-owned enterprise system, few Eastern European managers realize how over-staffed their operations look to foreigners. For example, many enterprises in South-Eastern Europe still operate ancillary enterprises dealing with health care (hospitals), housing, and child care (kindergartens) which push up their HR costs above those considered "normal" in the United States. Foremen are used for bailing out their employees rather than "coaching" or "teaching" them.

7.2. Lack of practical applications in education

Part of the change in Eastern Europe is likely to involve universities and especially business schools. Too many universities look down on practical applications and prefer to teach "theory", avoiding any prolonged contact with practitioners of management or the professions. This is still true even for some West European countries. For example, in France, there is still a categorical imperative for innovation and R&D comparable to Silicon Valley and Route 128 in the United States[3]. There is still a need to encourage the willingness of professors to work directly with industry, as well as universities providing for 20% time off to the professors to do that. Only reluctantly are schools in France deviating from past practice, inviting practitioners to lecture in classrooms and busi-

[3] Prof. W. P. Blass: "Critical Issues in R & D Innovation" presented to AUEG, Meylan, France, November 25, 2003.

ness firms inviting interns to work in their offices and factories. Intensive case study method is largely unknown and to some degree feared ("Isn't there *a right* answer to the problem, Professor?") by teaching faculty who themselves do not have working experience with the uncertainty and multiple viable strategies that may be used in given situations. Earlier distinctions between social classes continue to predominate[4], and the form of Japanese management where everyone wears a blue smock and is treated with the same courtesy is seldom practiced. Japanese foremen typically have what amounts to a graduate education and do not become foremen until they have shown quality performance in several different functions. Compare this with practice in France where many foremen do not even have a high school diploma!

The result of such antiquated practices would be to deprive Eastern European management of the "depth" of knowledge and experience required in modern, competitive enterprises. Exceptions exist – the Hungarian TUNGSRAM factory being a case in point, but even there, General Electric found it difficult to impose its quality and productivity standards as well as corporate culture quickly on its Hungarian acquisition[5]. Ironically, Japanese companies had similar difficulties when they took over American factories: NEC still provided a cohort of some 30 mid-level Japanese managers to its American subsidiary in Hillsboro, Oregon, some six years after building the facility. Bridgestone Tire Company, after a remarkable success in running the former Firestone truck and bus radial tire facility in LaVerne (near Nashville), Tennessee for seven years, bought out 27 tire plants worldwide from Firestone, only to discover too late that the plants did not have managers adaptable to Bridgestone quality measures, or enough Bridgestone senior managers equally fluent in English and American management to supervise these plants without considerable union opposition, strikes, and a disastrous quality lapse (the infamous Ford Explorer tire controversy)[6],. I had personally met and interviewed the Managing Director of the Nashville facility of Bridgestone, Mr. Nori Takeuchi. He was an amazing manager, completely bilingual, able to crack jokes with his workers, and earning the confidence of the union president, a man who opined "If the company doesn't make a profit, we don't have jobs: it's that simple!" I later asked Mr.Takeuchi how many similarly capable managers Bridgestone had in reserve – this was before I learned of the eventual takeover of Firestone's plants – and he modestly waffled the answer.

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4 Ph. D'Iribarne, *La logique de l'honneur*, Editions du Seuil, mai 1989. This book compares industrial practice in France, the Netherlands and the U.S.

5 "A Light in Hungary: GE acquires TUNGSRAM", Case # 196-018-1, CIBER/Indiana University, obtainable from ECCH.

6 "Firestone Tires and Ford explorer SUV's", Case # 503-130-1, HKUST Business School Hong Kong, obtainable from ECCH; "Recall 2000—Bridgestone (A)", Case # 9-302-103 Harvard Business School, obtainable from ECCH.

7.3. Competition from Asia

Inasmuch as the EU Commission has a relatively open policy to outsourcing (compared to the former British Commonwealth Preference Tariff, or the United States prior to World War II), every country wishing to join or already a member faces the threat of India and China, not to mention other Asian countries such as Viet Nam, Malaysia, and Indonesia, as across-the-board competitors. Where German firms would normally turn to Hungary, Poland or Rumania for clothing imports, it is increasingly cheaper to source them from the Far East. Many small software companies in Eastern Europe, profiting from the excellent mathematics taught in their universities now find themselves competing with labor costs one fifth to one tenth as high from Indian companies in Bangalore and Hyderabad. Electronics manufacturers are looking at $ 29 TV sets imported from China. Such competition should be a wake-up call to every company in the region. True, costs are bound to rise as they already have in the Shanghai area and many Chinese companies are "delocalizing", as the French would say, to inland China to cut rapidly rising wages in coastal areas. Thus, Eastern European companies will have to compete on grounds other than mere low price and low cost. Michael Porter's classic book "Competitive Advantage"[7] is still the bible for managers seeking to understand alternative bases for competing. I would still advise any manager or professor of management to rely more on actual case studies, or first-hand experience than on textbooks. Useful comparisons and tables may be seen in the following excerpts from a Boston Consulting Group presentation on the Eastern European Advantage.[8]

7.4. Too much government interference

There is a great temptation for newly elected governments to provide a richer "safety net" than the economy can actually afford, or to go overboard with tax subsidies, restrictive legislation, discriminatory inspections and overly strict environmental standards. Just look at what happened in Czech Republic when Vaclav Havel insisted on generous social legislation comparable to what was in force across the border in Germany, only to see the Czech economy reel as production went elsewhere for lower costs. There is a justifiable tendency to copy the advanced countries, but do the benefits outweigh the possible decision of a foreign firm simply to go elsewhere? There is an example of the latter when a CBS reporter questioned the Indonesian Labor Minister in 1996 why he allowed NIKE to pay its workers below the Indonesian minimum wage. He replied with some acerbity: "What do you think I should do, if thousands of

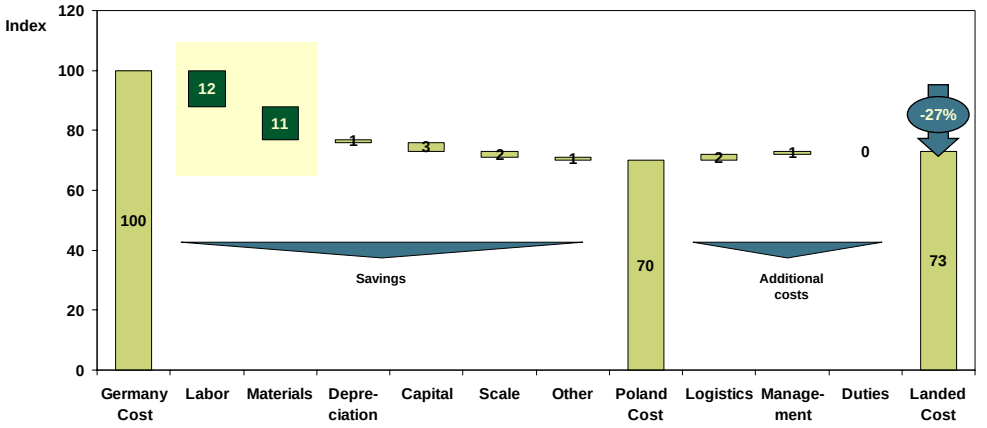
7 M. F. Porter: *Competitive Advantage*, Free Press, Homewood, IL, 1985.

8 K. Waddell: *The New Division of Labor? Production Trends in Western and Central and Eastern Europe,* Boston Consulting Group, Crynica, 2004.

BCG
THE BOSTON CONSULTING GROUP

HIGHEST SAVINGS IN LABOR AND MATERIAL COSTS

Example: Economics for auto industry sourcing from Poland to Germany



Source: Company financials statements, BCG Analysis, Various sources for macro data, Interviews

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BCG
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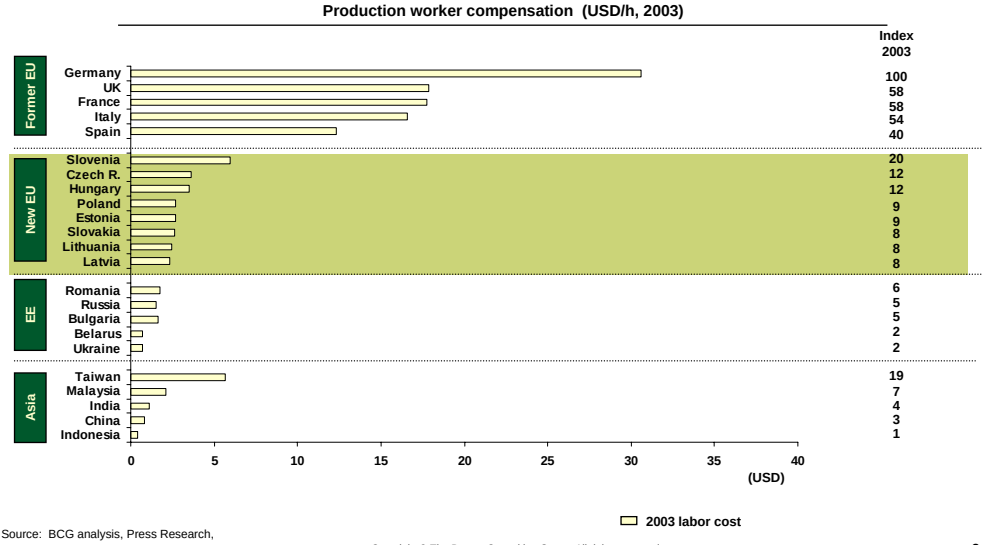
NEW EU LABOR COSTS 4-10 TIMES LOWER THAN IN WESTERN EUROPE

Production worker compensation (USD/h, 2003)



Source: BCG analysis, Press Research,

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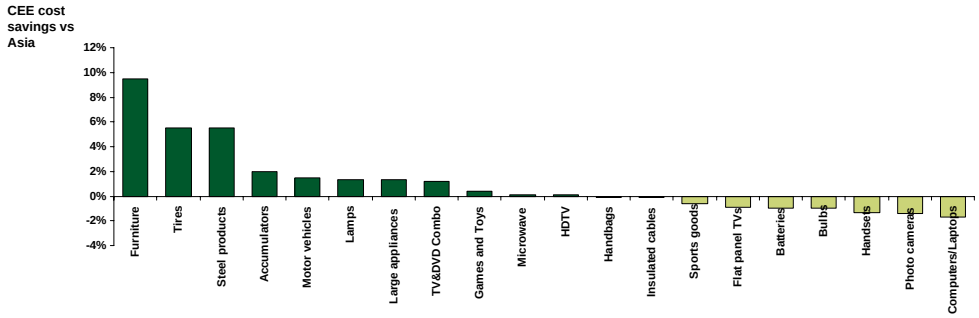
BCG
The Boston Consulting Group

CEE ADVANTAGED VS. CHINA IN MANY INDUSTRIES

20 Industry Sample: Avg CEE Advantage of 3% vs. 1% for Asia



Note: Cost savings based on cargo value, labor cost and content as well as the logistics costs
CEE countries include: Poland, Czech Republic, Russia, Slovakia, Hungary; Asian countries include: Thailand, Philippines, Malaysia, Indonesia, India, China
Source: BCG analysis

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young girls line up for jobs at this wage, and NIKE tells me they will simply close the plant and move elsewhere in Southeast Asia if I enforce the law? Which is better for Indonesia?"[9]

Looking at a different dimension, is a subsidy of $253 million too high for locating a Mercedes-Benz plant in rural Vance, Alabama in 1993? Based on previous such subsidies of $ 50-75 million to BMW in South Carolina, the prevailing opinion was yes, and the sitting governor of the state, "Big Jim" Folsom was roundly defeated in the subsequent election. In 1999, however, Honda set up a $1 billion plant in Lincoln, Alabama, expanding to 4300 workers in 2002. Hyundai started in Hope Hull, Alabama in 2002 with 2,000 workers. A Toyota engine plant was started in Huntsville, Alabama in 2003. A regional development study[10] stated that Alabama had gained some 44,000 direct jobs for more than $ 3 billion in additional payrolls. Thus, Gov. Folsom's bet seems to have paid off in the ten years that followed, despite his electoral defeat.

The moral seems to be to calculate carefully the benefits and costs, including the long-term competitive advantages that a given location brings and what inducements are necessary to bring in FDI. Admittedly the fact that Alabama had very few trade unions left and the United Automobile Workers decided against try-

9 As reported by R. Baskin in "CBS Reports/48 Hours", October 1996.

10 W. Fielding, Jacksonville, FL, Center for Economic Development quoted in D. C. Bouknight: *Plant Sites & Parks*, July, 2004. on <www.Bizsites.com>

ing to force a vote in any of the automobile plants had a considerable effect on the decisions of other manufacturers to locate in the State.

7.5. Role of government in contracting

In the West, we are used to a minor role of government in circumscribing foreign direct investments. In many Eastern European countries this role is much larger, with frequent restrictions on foreign firms which might compete "unfairly" with established local enterprises. Not surprisingly this is brought up when European and American giants such as Wal-Mart, Carrefour, GE or Siemens try to establish themselves in competition with local firms. In addition, governments may be supported by additional restrictions brought about by international organizations, such as IBRD or EBRD. So-called "Open-bidding" may be subverted by signals from the government concerned to one or another bidder; or the government is influenced by complementary considerations, such as corollary military deals, or support in supra-national organizations. In one Eastern European country, as it has been shown, the winning bidder in a cell phone contract won simply by bribing the host government, despite the fact that frequencies and formats were incompatible with Western European standards. Thus, both governments and investors should exercise greater caution in any prospective deals.

7.6. Culture and language considerations

One would think that these aspects would be self-evident, but sadly on both sides, familiarity with specialized language in requests for proposals (RFPs), cultural biases in bargaining, and the use of dialects may be absent. For example, language in a given region of Slovakia or Czech Republic may be Hungarian or German, depending on past national boundary lines and ethnic settlements. Lack of experience in negotiation may lead to apparent deadlocks when in fact, some quiet diplomacy outside the formal meetings can clarify possible "gives". Exposure by hostile media can ruin a delicately arrived at proposal by encouraging mass protests. Regional competition can adversely affect a proposed investment, although at least one region will be a net winner. In my experience, RFP's have been lacking in conventional language specific to an industry, that years later was used (adversely to the national buyer) by the foreign company to insist on expensive retrofit engineering, when any experienced adviser would have insisted on the use of "boilerplate" terms in the first place.

8. Summary and Conclusions

We have tried in the earlier part of this essay to describe globalization as an evolutionary process, albeit an all-but-irreversible one, much like evolution in the natural world. If there is a Darwinian culling of unadaptive organisms in nature, so there seems to be a similar process in the world of business. As industries become more competitive across the world as a whole, and not merely within the borders of a given country, business firms as well as their stakeholders have to adapt; they have to outsource products or services that can be delivered at lower cost; they have to figure out how to climb the value-chain with products that contain *more* services, such as bread with additional vitamins, or delivered fresher, or available in a greater variety; they have to find ways to cut costs continually to meet competition, or to provide services that can be differentiated more easily by the buyers; they need to analyze their operations so as to find ways to operate more efficiently, not necessarily by cutting labor costs, but by looking at the entire value-chain;[11] they need to monitor a larger and larger number of competitors world-wide, as well as benchmarking processes against those who do them best inside their own industry or outside; they need to lead their companies to become "learning corporations";[12] governments, trade unions, communities and other collectivities need to find a way of adapting creatively to the changes forced on them, not by "throwing money" at the problem, as is the case with the Common Agricultural Policy of the European Union, but by finding cooperative "win-win" arrangements that benefit everyone, and do not simply rob Peter to pay Paul; and, above all, all parties need to get used to a far more transparent world where compensation schemes are known, where employees have rights that must be respected, where contracts are ethically bid for, where enterprises and their regulators have arms-length relationships.

All in all, these are very demanding steps, and like the evolution of the corporation, likely to take decades to fulfill. Clearly, the scandals that have rocked America and Western Europe such as Enron or Parmalat, not to mention Eastern Europe are an indication that we all have a ways to go. Yet, it is better to anticipate the future than merely to react to it after the fact. We in the academic world need to prepare our students well in advance[13], as well as "recycling" current managers in programs that will add to their skills and insights. The university, far from being an ivory tower, needs to involve itself in the challenges that the world sets, and to come up with increasingly better solutions. Together, those of us in academia, in business and in government need to find ways that truly "lift all boats". We could do worse than to find, as did Philippe D'Iribarne[14] in his survey of the Netherlands enterprises that

[11] M. F. Porter, *ibid*.

[12] Ch. Bartlett, S. Ghoshal, "Managing Across Borders", *Sloan Management Review*, 1987.

[13] There is an article describing how Glenn Hubbard, the current Dean, wants to "involve faculty in real business projects [to] give them examples for the classroom that are powerful for our students". Financial Times: "Steward of the Columbia brand", Sept. 13, 2004, p. 11.

[14] D'Iribarne, *ibid.*, pp. 212-251.

they "listen, explain, and come to agreement." Perhaps we can learn something from these 16 million people who work together against the ever-encroaching seas and manage, one way or the other to survive and prosper in a world of nation-states and business enterprises far larger than they.

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MEASURING ENTERPRISE QUALITY LEVEL

Abstract: *TQM (Total Quality Management) is a new business philosophy, which refers to the high level of quality of organizations, processes and products, and to the high level of competence of the employees. As a result of adoption of new business goals, many quantitative and qualitative, financial and non-financial indicators are required, which have the task to determine accurately the level of quality of an organization and some of its functions and to position the organization on the path of its development and growth. This article has the task to point out the significance of the measurement of the level of quality of an enterprise and its functions and to highlight the conclusions resulting from the empirical research in highly developed countries and in Serbia.*

Key words: *TQM, measuring the enterprise quality, process management.*

1. TQM and measuring the level of enterprise quality

The development of TQM and just-in-time production and the problems accumulated in the field of organizational practice, industrial relations and technology management, relative lack of competition in relation to Japanese and some European enterprises, as well as the problems of accounting management system underlined the significance of performance measurement system.

The role of registering, grouping and analyzing data and the information themselves when measuring performance, regardless of whether it is an enterprise or some other party interested in its business performance, are essentially important for determining business success. The success of Japanese companies undoubtedly pointed to the fact that classic systems of performance measurement through financial indicators must also include many non-financial indicators at the company level and at the level of some functions in the company. Based on the above stated, it can be wrongly concluded that financial measures are less important since good non-financial performance can lead to good financial results. The problem is how to determine the optimum balance between financial and non-financial indicators, which is determined by specific conditions of business operations of every individual organization and its organizational units.

In addition, it has become important how to coordinate the conflicting goals of individual interested parties with the mission, vision and goals of business operations of a company and its organizational units. The procedure to determine the level of enterprise quality is as follows:

- the mission and vision of a company is defined;
- strategic, tactical and operational goals of an enterprise which result from the mission and vision are defined;
- strategic, tactical and operational goals of some functions are defined, whereas the tactical goals at the level of enterprise are usually strategic at the level of some functions;
- goals are reconsidered and coordinated horizontally and vertically;
- performance measure at the level of enterprise is defined, and
- performance criteria at the level of some processes and functions are determined.

In defining indicators of company business success, we should start from TQM, a synonym of "business perfection", new business philosophy that can be explained as "an approach to company management concentrated on the quality based on the participation of all its members, directed at long-term success by satisfaction of all interested parties"[1] and its results.

TQM results in:

- fulfillment and overcoming of expectations of customers/users of services and all parties interested in business operations of a company (owners, internal-external customers and sub-suppliers, syndicates, business environment);
- realization of business performance and executive business results;
- development of products/services of world class and attractive quality;
- responsibilities and authorizations of the employees;
- development and participation of all employees in the learning process;
- orientation on customers/users of services and partnership, especially on suppliers;
- resource and process management;
- continuous control, analysis, measurement, improvement and innovations.[2]

Many domestic and foreign theorists of quality consider that the award given for quality of national model of business performance is actually the award for the national model of TQM. The following quality awards are acknowledged in the world: MBNQA (Malcolm Baldrige Award of American Society for Quality;

[1] ISO 9000: 2001 and 9004-4 (1994).

[2] S. Jovetić, *The Quality Award Criteria*, Fifth Balkan Conference in Operational Research, Banja Luka, 2000.

EFQM – the award of the European Forum for Quality Management and Deming award – the award of the Association of Japanese Scientists and Engineers. Almost identical criteria for TQM achievement are in the basis of all awards.[3] Various are the paths a company should follow in order to achieve "business perfection". The award is given after measuring whether 10 criteria have been fulfilled and each criterion contains at least six additional sub-criteria. Criteria and sub-criteria are outlined in order to measure, in fact, the TQM results (leadership, policy and strategy, human resources management, resources management, customers' satisfaction, influence on the society and business result).[4]

2. TQM and process approach

One of the basic principles of business perfection, TQM is process management, i.e. defining, measuring, analysis and improvement of processes. If we view an organizational system through process approach, then the system is viewed as a network of business processes. The essence of process management is in clear definition of the process, determination of desired process values and directing effects of all positive factors on the process in order to guide it towards desired nominal values and so that process outputs would be in accordance with the results specified in advance.

The method used for process management in the Japanese TQM is the quality engineering, or Taguchi method. New production philosophy of Japan bases on the following starting points: production to order, in small series, for the known customer, with zero mistakes, with the shortest production cycle and without warehouses and stocks. In such a defined production, with perfect company quality, high technological development and high level of responsibility and competence of the employees, Taguchi approach developed.[5] The idea of Taguchi approach can be expressed in the following manner: the goal of global quality system, on line and off line quality controls, is to design processes and products resistant to the impact of accidental factors in order to minimize the loss caused by deviations in functional characteristics of products from their nominal prescribed value. The engineering of quality of processes and products is carried out in three stages of designing: system designing, parameter designing and tolerance designing. Although the statistic approach to the problem has been criticized, its main idea represents the basis of management of processes of large-scale multi-stage production TQM – six sigma.[6]

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3 *Ibidem*

4 D. Goetsch, S. B. Davis, *Introduction to Total Quality*, Prentice Hall, Columbus, Ohio, 1997.

5 S. Jovetić, *Upravljanje troškovima kvaliteta*, Ekonomski fakultet, Kragujevac, 1996.

6 T. Pyzdek, The Six Sigma, McGrow, New York, 2003, p. 61.

The essence of six-sigma philosophy (the method was developed at *Motorola*) is that statistical, engineering and managerial methods are used to design, measure, analyze and improve the complex, modern, multi-stage processes (10 or more stages) in order to create a level of quality perfection. The name has its origin in standard deviation, which shows variations of characteristic values from average values. Moreover, while in classic production the goal is to achieve 3% aberration from average value with the probability of 99%, the goal of "business perfection" is that in large-scale multi-stage production and with the application of six-sigma philosophy, only 3.4 uncoordinated units are produced out of a million produced units. Namely, if the process of classic production is carried out in two stages and if the probability of coordinated units at first stage is 0.8 and 0.9 at second stage, then the total probability of coordinated units is 72%. The probability of coordinated units of production cycle is lower than the probability of each stage respectively. In the same way in ten-stage process of large-scale production, the total number of uncoordinated units at the end of production process is 26.674 out of a million produced units. By applying special business philosophy – team work, statistical, engineering and managerial methods of measuring, analysis and improvement of a process, cost-benefit analysis and technical and economic analysis in business decision-making in every stage of production process, the number of uncoordinated products diminishes to the afore stated number. Process improvement takes place in several subsequent steps: defining, measuring, analyzing, improvement and control. The concept gives excellent results; however, it must be noted that all enterprises won one of the world quality awards before application of six-sigma philosophy and during the procedure of award winning, they followed and fulfilled criteria and sub-criteria of quality awards (over sixty).

Optimization of process management reflects in realization of effective and efficient processes within which the outputs are in direct connection with the requirements of customers/users of services and that influence the requirements of other interested parties and influence the efficiency of other processes. The process is defined as a set of interlinked resources and activities that transform input elements into output elements.[7] The main element of this definition is activity. Activities represent key points of a process. The process is determined by input, output, process stages, activities and factors influencing the process and its individual stages. The input are resources, the output are the results. The input is determined by resources, in other words by machines, materials, personnel, methods, measurements, information (including specifications) and environment. The output is determined by a product/service, information and documents. Process management includes management of key process parameters, which refer to the stated process elements. Process model of the complete system of quality management represents integration of four main requirements:

[7] ISO 9000: 2001 and 9004-4 (1994)

responsibility of the management, resource management, process management and measurement, analysis and improvement of the process. In addition, the model shows integration of vertical and horizontal processes.[8] Key horizontal process is defining requirements of customers, input, process, output, achieving customers' satisfaction. The process is with a feedback; the input is used for the improvement of the output – redefining of customer's requirements, which closes the loop of the horizontal process. Basic vertical process is responsibility of the management, resource management, process management, measurement, analysis and improvement. The whole cycle comes back to the responsibility of the management, so that the management would approve the amendments and initiate improvements. All horizontal and vertical processes are fully controlled; the activities of measurement, analysis and improvement are carried out on them, and all processes obligatorily follow PDCA-circle (Deming cycle of improvement – plan, do, control and act).

Each defined process is documented by a quality system document. Managerial/basic/main processes are documented by the procedure, sub-processes and subordinate processes by instructions, report and records, i.e. the procedure describes the process flow. If other processes related to this process or sub-processes are mentioned, then the procedure states also the code and name of instruction relating to those working/auxiliary processes and sub-processes.

Process control includes the control of quality characteristics, which should be realized in each respective stage, the relations between quality characteristics of required process output and process capabilities; factors influencing the realization of quality characteristics in each respective stage of the process and level of control for each respective factor and method of measurement of process effectiveness and efficiency.[9]

2.1. Management process indicators

Based on the analysis of many domestic and foreign publications, as well as quality measurement standard documents of many companies, it is possible to systematize the following process indicators at the level of a company and its functions, which can be used to determine the measure of quality level of a system and its sub-systems.

At the level of a company: number of employees, the relation of number of production and administrative workers, qualification structure of the employees, utilization level of the employees, qualification structure of the employees per functions, working quality of the employees, productivity of direct and indirect work, internal and external work failures.

[8] *Ibid*., p. 10.

[9] *Ibid*.

Marketing and sale: increase of market participation, measuring customer's satisfaction at domestic and foreign markets (survey), marketing cost share in the total company costs, promotion cost share in the total company costs, time expired from production of a product until its sale (in days), product distribution, development of commercial network, number of shops and territorial representation, servicing (survey).

Research, design and development: share of costs of research, design and development in the total company costs, costs of research, design and development per an employee, costs of technology purchase (basic equipment, tools and devices) per an employee, costs of purchase of patents, licenses, technical assistance and trade marks per an employee, profit from sale of patents per an employee, profit from sale of technology per an employee, costs for purchase of scientific and expert books, magazines, scientific and expert information from data basis and other technological information per an employee, cost of training personnel for use of new technology per an employee, value of the machines which has not been charged off, relation between charged off equipment and total years of their life, number of registered patents per an employee, number of improved processes and products per an employee, number of papers published in scientific and expert magazines and number of papers presented at symposiums and conferences per an employee, frequency of new products, time required for launching a new product at the market, analysis of quality of competitive products (laboratory).

Quality department: all criteria for quality award. Since the main goal of TQM is management and continuous improvement of process in a company, quality cost management comes up first,[10] then management of uncoordinated processes and losses, as well as the application of statistical, engineering and managerial methods, techniques and tools in measurement and analysis of the process.[11] In addition, regular internal and external controls according to the adopted plan should be carried out, as well as evaluation of quality system and its management.[12]

Financial department: all economic and financial goals of enterprise business operations: economy, lucrativeness, profitability, effectiveness and efficiency. Also, the flow of money and projection of money flow, interest on the invested capital, assets cover, value of assets per share, dividend cover, dividends per share, interest per share, yield-price ratio, turnover of capital, standard calculation of costs per position and working order (this criterion is very impor-

[10] S. Jovetić, *Upravljanje troškovima kvaliteta*, Ekonomski fakultet, Kragujevac, 1996; S. Jovetić, Projekti: *Upravljanje troškovima kvaliteta i procesima: "FRAD" Aleksinac (1996), "FEP" - Piva, Plužine i "Javor" Ivanjica (1997), "Zlatarplast" Nova Varoš (1999) i "Elekro-Vojvodina" Novi Sad (2000).*

[11] S. Jovetić, "Novi pristup benčmarkingu", "Menadžment totalnim kvalitetom", *JUSK*, no. 22, Belgrade, 1999; S. Jovetić, *The process management in an enterprise*, 20th European Conference Operational Research, Rhodes, Greece, 2004.

tant because it directly reduces costs and is closely related to operative sector and standard specifications in operative function), cost price per product and at the level of enterprise, profit vs. turnover, profit per an employee, sale per an employee, cover by interest.

Technical department: productivity, material stock and optimum stock level ratio, uncompleted production stock and optimum level of uncompleted production stock ratio, finished product stock and optimum level of finished product stock ratio, participation of rejections value in the value of total production, capacity utilization coefficient, employees utilization and work time utilization coefficient, effectiveness, efficiency, number of production lines, number of products within lines, costs of stoppage of production process, participation of work hours spent in control within total realized effective work hours in production, costs of internal control in production, internal and external production control costs ratio, duration of production process, duration of assembly, production process stoppages, costs of reception, inter-stage and end control of quality of products.

Purchase and servicing: ranking list of suppliers according to their evaluation (quality, price and delivery dates), participation of purchase costs within total costs, ranking list of values of complaints according to suppliers, ranking list of values of product failure within warranty period according to products and customers, ranking list of average waiting time for repair per products and customers.

The above stated parameters refer to production and non-production enterprises. The analysis does not include variable enterprise values. The dilemma resulting from the previous sentence is whether the financial and non-financial indicators are the same for small and middle-size enterprises (MSE) as for the big ones. Such a research was carried out in the Great Britain by enterprise survey.[13] The financing of the stated study and establishing of requirements for such a research came from the Department of production technology of the Ministry of trade and industry. The coordinator of activities was the Chartered Institute of Management Accountants – CIMA. Three hundred enterprises were included in the beginning. Valid reports were submitted by 77 enterprises of various types according to proprietary relations and size, 60 of them MSEs and 17 large ones. Based on the analysis of results of the survey, many conclusions can be made, but the answer to the above-mentioned dilemma is that there is not a difference in choice of indicators of quality level among large, middle-size and small enterprises, nor between production and non-production enterprises.

[12] P. R. Niven, *Balanced Scorecard, Step by Step*, John Wiley & Sons, Inc., 2002.

[13] N. Andy, *Business Performance Measurement*, Cambridge University Press, 2002.

3. Balanced Scorecard

After systematizing the indicators of process organization quality, regular determination of relation between financial and non-financial performance measures follows, which should lead to realization of strategic and all other goals of an organization. As far as the six-sigma philosophy is concerned, management of quality system and process, i.e. measuring, analysis and improvement of performances of an enterprise and process is based on the idea of Balanced Scorecard (BS). Balanced scorecard represents a review of information that give a full view of the way in which the organization presents itself to customers and shareholders, as well as a picture of key internal processes, on improvement rate and innovations. It is similar to airplane cockpit instrument panel.[14] P. Niven states: "In my work with many organizations, and in the research of the best business practice, BS is much used and I see this tool as an integration of three key things: measuring system, system of strategic management and communication tool."[15]

Balanced scorecard helps an organization overcome two key problems: effective measurement of organization performance and successful strategy implementation. The concept of balancing refers to three fields:

- *Balance between financial and non-financial indicators of BS successfulness* enables overcoming the lack of financial performance measuring by balancing with starters of the future performances. This is the basic principle of the system.
- *Balance between internal and external organizational factors*. Internal factors of organization, shown on BS, are the employees and internal process, and external factors are customers/users of services and shareholders. Their goals are conflicting. If the goal of organization is to reduce costs and increase the profit, it influences the diminishing of wages and rise of product price, which, again, leads to loosing of both employees and customers. BS recognizes the importance of balancing fully opposing interests of all parties in an effectively implemented strategy.
- *Balance between delayed action indicators and leading performance indicators*. Financial performance measures are also called the delayed action indicators because they represent the way out of actions that were previously taken. Typical delayed action indicators are customer's satisfaction and profit. These indicators cannot foresee the risk or remove uncertainty and this is why they are used in combination with other non-financial indicators that represent the starters of the future economic performances, leading indicators. Leading indicators for customer's satisfaction are quality of products, delivery dates and price. The relation between financial and non-financial performance measures depends on the specific characteristics of every organization, its mission and its strategic, tactical and operative

[14] T. Pyzdek, *The Six Sigma*, McGrow-Hill, New York, 2003, p. 34.

[15] P. R. Niven, *Balanced Scorecard, Step by Step*, John Wiley&Sons, Inc., 2002, p. 12.

goals. In fact, the leading performances are the starter performances that lead to fulfillment of financial goals, delayed action indicators. BS includes afore defined combination of both groups of indicators. Using only delayed action indicators does not explain how the goal will be achieved. If only leading indicators are used, they would lead to presentation of short-term achievements, but would not show whether this leads to improvement of results expected by customers and shareholders.

The above presented procedure of fulfilling the defined mission, strategic and other goals is measured from the aspect of consumer/user of services, internal business processes, learning and growth and fulfillment of financial results. Main goals are determined for each of these aspects, as well as the system of measurement, other goals and initiatives. In this way, four two-dimensional matrices are obtained. Pyzdek[16] calls them control panel, lamps of various colours flash and together with various measuring instruments point to various problems and give various information on fulfillment of goals and growth and development path.

Viewed from the aspect of consumers/user of services, the main thing is to find out in direct communication how they evaluate us, and what main indicators they consider for evaluation. All that can be easily found out by a survey. Many measurable and immeasurable characteristics can be included in the questionnaire. Evaluation is used for immeasurable characteristics. Once formed questionnaire should not be final. It has to be constantly improved by direct feedback. This is particularly important when a new product/service is created. The questions must refer to the following: quality, price, delivery dates, distribution, servicing, communication and similar.

Viewed from the aspect of internal business processes, it has already been pointed out that the essence of process management is to define the processes, determine the desired values and direct the effect of all positive factors on the process in order to guide the process towards the desired nominal values and so that the process output would be in accordance with the afore specified results. Only key processes are managed. These are the processes influencing the mission and strategic goals of an organization as well as the efficiency of other processes. The crucial parameters of process elements are observed. Their aberrations from the desired values are losses. If they can be expressed in terms of value, they become costs of non-quality. In order to diminish the aberrations by iterative procedure, it is important to determine costs of quality and losses and to manage them, measure them exactly, position the process in time exactly and determine the improvements of the process by statistical, engineering and managerial methods.[17] This is why the two following projects are very important in an enterprise:

[16] T. Pyzdek, *The Six Sigma*, McGrow-Hill, New York, 2003, p. 62.

[17] S. Jovetić, "Novi pristup benčmarkingu", "Menadžment totalnim kvalitetom", *JUSK*, no. 22, Beograd, 1999; S. Jovetić, *The process management in an enterprise*, 20th European Conference Operational Research, Rhodes, Greece, 2004.

- Statistical, engineering and managerial methods in process management, and
- Quality costs management.

When defining statistical, engineering and managerial methods in process management, it is best to define them for every key process respectively. The procedure is as follows: process defining, disaggregating of the process up to the level relevant for process management, defining parameters/problems that are analyzed, defining frequency of research, defining sources of data and defining the methods.[18] The costs of quality and non-quality are also defined for every process respectively, as well as the manner of their comprising, period of data gathering, manner of entering, analysis and corrective and preventive measures.

Pyzdek underlines that in addition to the stated, competent teams for process management (Black Belt) and management of business processes and products/services (Green Belt) should be used in process management.[19]

Viewed from the aspect of innovation, learning and growth, all employees must be trained to perfection in order to understand the defined goals and in order to respond to their obligations. TQM requires constant process improvements, and this means continuous education and improvement. This is especially important for conquering of new products, new markets and application of new technology. One of the requirements for operative system is flexible production, and that means highly educated personnel who can fast adapt to new work positions, new machines and new technologies. Innovations and learning are often connected to three fields: competence of employees, technology and corporate culture.

Viewed from the aspect of financial results, measuring economy, productivity, efficiency, effectivity and profitability show how rationally an enterprise uses its resources and cost reductions. Therefore, the financial results show how successfully the mission and strategy are achieved. All this influences the satisfaction of shareholders and consumers/users of services. They are synthetic, aggregate indicators and this is why it is best to make their list. Their static quality is resented. However, if they are observed over time, they can point to the future tendencies. For instance, if costs per unit product rise during five consecutive periods, it is a problem. The operative management must define the appropriate corrective measures.

All indicators shown in chapter 2 are grouped according to the functional approach and can be included in BS.

Balance scorecard is different from other methods in that it is based on exact positioning of an enterprise on its path of growth and development, on realistic

[18] The methods in almost all process in the enterprises that use the author's consulting services have been defined according to the stated methodology (described in system quality documentation).

[19] T. Pyzdek, *The Six Sigma*, McGrow-Hill, New York, 2003, p. 69.

measurement of realization of mission and strategic goals of an enterprise by means of quantitative, clearly defined cause-and-effect relations and relations between some systems, sub-systems and elements. The following is defined for every level of disaggregating: responsibility and authorizations, manner of communication, data and information. This requires perfectly developed information system of an organization and system of communication, coordinated and arranged both horizontally and vertically (feedback relation).

4. The results of the survey carried out in Serbia

Based on the stated indicators and long-lasting work of the author in the field of quality system methods (QSM), a questionnaire was made and a survey carried out in Serbia. The goal of this survey was to choose the most successful enterprise or model enterprise by comparing certain chosen indicators, and in relation to it to measure the differences in some dynamic parameters for other enterprises. The requirement was also to include 30 enterprises by a survey in order to apply cross-section analysis, which enables determination of pattern – an average within the multitude of individual cases and determining of an ideal of all enterprises surveyed. In this paper, only four enterprises were surveyed. Only these four accepted to fulfill the questionnaire. The author's experience shows that enterprises are unwilling to compare with other enterprises and do not accept to fulfill the questionnaire at all. The management holds especially negative attitude towards personal comparison, evaluation and ranking of top management. However, since the enterprises refused to compare, the average for Serbia was determined by the analysis of data of Statistical Yearbook of Serbia.

All four enterprises have established the quality system according to JUS ISO 9000 standard. All enterprises have applied for the Oscar of Quality award (the national award for quality in Serbia and Montenegro). One of them won the award and one of them won the medallion.

The results of the survey show that the enterprises could give only a small number of data (Table 1). For instance, in the function of research, design and development none of the enterprises filled in a single column, so that none of the indicators of the achieved level of technological development and growth of an enterprise could be determined. The dilemma remains whether these enterprises did not invest in technological development at all or just did not have the data. However, one of the objective problems is that the enterprises in Serbia work with outdated technology. The indicators calculated based on the survey were as follows: the relation between production and administrative workers, total income per an employee, profit per an employee, average net salary, value of realization per en employee, technology incorporated in the knowledge of personnel, economy, profit margin, profitability and productivity. All value param-

eters were calculated in DEM; the influence of inflation was eliminated so that they could be compared over time.

The survey was carried out in the year of 2003. The author wished to carry out the survey continuously; however, the management of private enterprises refused to have any cooperation with the Faculty, and socially owned enterprises were waiting for privatization, so the results of the survey would not be valid.

Table 1. *Results of the poll*

		Year			
Indicators	Enterprise	I	II	III	IV
Relation of production and administrative workers	I	2.7	2.37	2.63	2.92
	II	2.00	2.12	2.02	2.31
	III	1.58	1.51	1.51	1.11
	IV	3.12	2.83	2.67	2.80
	Average in S&M*	2.9	2.9	2.9	2.9
Total income per employee (in 000 DEM)	I	38.530	29.597	14.494	-
	II	21.538	14.507	10.973	17.339
	III	29.189	36.58	41.58	37.58
	IV	7.947	4.57	6.747	5.25
	Average in S&M	-	-	29.93	
Profit per an employee in DEM	I	8.176	0.342	0.073	-
	II	5.5579	16.08	-5993.8	314.5969
	III	414.44	2091.40	500.42	157.30
	IV	10.03	3.865	387.79	0.62
	Average in S&M	-	-	412.56	-
Average net salary (in DEM)	I	133.85	150	297	-
	II	-	-	-	-
	III	251.54	207.65	316.49	297.69
	IV	100	38.24	59.46	96.15
	Average in S&M	121.54	94.71	160.54	-
Value of realization per an employee (in 000 DEM)	I	25.150	22.976	47.799	40.322
	II	11.823	10.42	8.483	15.46
	III	29.181	36.58	41.58	37.59
	IV	7.947	4.569	6.36	5.25
	Average in S&M	-	-	9.23	-
Technology incorporated in the knowledge of personnel	I	12.206	12.62	15.95	14.49
	II	9.42	9.375	9.231	10.078
	III	9.92	9.834	10.2863	10.8241
	IV	1.50	1.45	1.458	2.131
Economy	I	127	101	101	-
	II	100.03	100.11	64.67	101.84
	III	101.44	106.06	101.19	100.45
	IV	100.13	100.08	106.09	100.01

	Average in S&M	-	-	93. 35	-
Profit margin	I	21.22	1.15	0.50	-
	II	0.026	0.110	-54.62	1.804
	III	1.42	5.72	1.17	0.44
	IV	0.126	0.0846	5.75	0.012
	Average in S&M	-	-	1.38	
Profitability	I	0.2711	0.004836	0.004154	-
	II	0.0002851	0.00087	-0.28995	0.015083
	III	0.013	0.07027	0.01228	0.0032
	IV	0.00077	0.000387	0.027	0.000053
Productivity (in 000)	III	26.37	32.99	39.49	35.02
	IV	5.72	3.308	3.99	3.33
Value of pr. per h and an employee	III	0.38	0.48	0.48	0.36
	IV	2.28	1.19	3.34	8.26

* Serbia and Montenegro

In order to score the enterprises and determine the best one, the method of evaluation was used. The order of characteristics is evaluated by grades from 4 to 1 (4 – the best value of a characteristic and 1 – the worst value of a characteristic). Every characteristic is assigned an appropriate weight factor. In this case, weight factor is 1, although the greater significance can be given to a characteristic by means of weight factor. The criterion for the choice of the best enterprise is the maximum grade. Theoretically, the highest grade for an enterprise can be 36. In the first year observed, the first enterprise is the best, and in others, the third is the best. The number of scores of the third enterprise is variable (Table 2).

Table 2. *Number of scores per years and per enterprise*

Year				
Enterprise	I	II	III	IV
I	31	26	25	-
II	13	17	12	27
III	28	32	28	29
IV	17	14	24	19

The following conclusions may be reached based on the research results: taking into account the unfavourable and insecure external and internal conditions of business practice in Serbia, it is obligatory before the comparison with the best enterprise to analyze in detail the level reached and tendencies of chosen parameters for comparisons within the enterprise itself – by the application of dynamic analysis. This analysis opened a number of problems. For instance, all observed parameters of an enterprise vary from year to year of observation. In addition, although the third enterprise is the best, some indicators are extremely

bad. For instance, the relation between production and administrative workers in this enterprise is extremely bad. The manager's explanation is that one factory separated from the rest of the enterprise (it was privatized) and all administrative and indirect workers remained.

The detailed analysis of parameters per years shows that the best enterprise does not have indicators of successful business practice. Profitability and economy are the best in the third enterprise, and are close to zero and vary from year to year.

5. Conclusion

Based on the research of the highly developed countries, the following conclusions can be made for Serbia and the following suggestions given for future solving of problems related to the choice of valid indicators of an enterprise quality level and provide for the objective evaluation of its quality system, product quality and fulfillment of defined goals and visions:

1. Define the mission, vision and strategic goals of business practice.
2. Strategic goals of business practice must be measurable and comparable over time
   - Economic and financial: productivity, economy, profitability, effectivity and efficiency.
   - Developmental: coefficient of investment in technology and development.
   - Marketing: customer's satisfaction (survey), increased participation of market realization.
   - Social: preservation of the environment.
3. In accordance with afore defined goals at the level of an enterprise, it is necessary to define strategic, tactical and operative goals at the level of functions.
4. Determine the financial and non-financial goal indicators. It should count on conservative view that financiers, bankers and managers have more trust in financial indicators.
5. Determine the optimum mixture of specific financial and non-financial indicators. Every company must find its optimum balance of criteria that it considers appropriate for managing its own operative activities.
6. All indicators should be observed in the function of time and in constant prices (eliminate the influence of inflation).
7. Performance criteria should be dynamic categories and they should depend on the influence of various factors on the company (some depend on the factors in the sphere of production technology, and some depend on individual standards accepted by the organization, such as QSM standards).

8. The result criteria should illustrate the operative complexity but they must be expressed simply. The companies whose managers understand new indicators of quality level will at the same time use those best.
9. It is assumed that non-financial indicators of business success will be accepted more and more. Modern development of operative management, development of new technologies and management of the quality system highlight the non-financial indicators. Empirical analyses in highly developed countries show that many foreign financiers and investors have success in taking over companies that were not adequately served by domestic creditors.

It is interesting to determine what actions must be carried out in order to provide for the uniform manner of expressing indicators of enterprise business success, which would enable their comparison as well. In accordance with the influence of technological progress on rapid changes of production technology, foreign competition, new management and changes in enterprise practice, as well as views that there is a crisis in the production sector, the following could be done:

1. Meetings and educational workshops should be held in order to create expert forums for exchange of information and to hear the experiences and ideas related to production performances. Bankers and investors should also be included in discussions. The aim would be to highlight the rising trends, not only in terms of versatility and dimensions of new production performance criteria, but also in terms of choice of trends in enterprise production management that are strategically oriented.
2. In order to draw more attention to these issues, periodical reports could be published on production performances, assigned to wide audience of producers and non-producers (ISO standards insist on management of quality costs, internal and external checking, monitoring measuring and analysis of the process, etc.).
3. Considering the fact that the approach of one production company to performance criteria includes the influence of customers, then they also should be included in discussion (ISO standard requirements/partner-like relation with all interested parties).
4. Empirical analysis should point to how justified the acceptance of non-financial result criteria is and how much they contribute to achieving the financial success of a company. In addition, dilemma should be eliminated in determining optimum balance between non-financial and financial criteria.
5. On the model of the most up-to-date magazines in the world, expert magazines should give presentations of top firms in their class, complete

with the appropriate financial and non-financial indicators. Databases of this kind should be formed at the state level.

6. It is useful to include information technology in observation of changes of performances. Systems of managerial control have already leaned a lot on the possibilities of information technology, including systems for support in decision-making. This can be extended to obtaining of useful information related to performances. In addition to this, it would be significant to bankers and other investors to examine the possibilities to use expert systems as means to make credit- and investment-related decisions.

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THE SIX DIMENSIONS OF TIME IN CORPORATE CULTURE: RESULTS OF AN ETHNOGRAPHIC STUDY

Abstract: *Time is often considered as a mere component of culture. This research reverses this paradigm by suggesting culture is included in time. This article proposes a new framework to study corporate cultures from a temporal perspective, thus paving the way for the concept of corporate temporal culture. Six kinds of times are identified (formal and informal time-horizons, formal and informal speeds, formal and informal synchronizations). They are illustrated by a qualitative study, undertaken during nine months in three different supermarkets by the covert participant observation method. This research suggests that managers should be aware of their corporate temporal culture and should always try to monitor it to get a better understanding of what is going on in the firm.*

Key words: *corporate temporal culture, covert participant observation, formal and informal time horizons, formal and informal speeds, formal and informal synchronizations.*

1. Introduction

Many business advisors praise to the sky the virtues of just-in-time, time-to-market and reactivity.[1] Intuitively obvious, this policy is more difficult to apply than it appears. Usunier warns against the naive faith in the holy trinity of "speed, economy and progress".[2] He points out quickness is not a good master when it becomes an uncontrolled and permanent state of emergency in many companies, leading to disorganization and burn out.[3] A short term vision and

[1] G. Stalk, T. Hout, *Vaincre le temps: Reconcevoir l'entreprise pour un nouveau seuil de performance,* Dunod, Paris, 1992.

[2] J. C. Usunier, "Perceptions du temps des affaires et cultures nationales:une comparaison internationale", *Economies & Sociétés*, *Série Sciences de Gestion*, no. 17, avril, 1991, p. 5.

[3] N. Aubert, "Le stress du chaos et la brûlure du succès", *Revue Française de Gestion*, novembre-decembre 1991, p. 86.

marketing myopia become this "unconscious camouflage of missing objectives".[4] Usunier shows how operating national cultures influence the management of time in groups and companies.[5] Moreover, Polski shows how a temporal structure of an entire industry can impact time perceptions in companies.[6] Actually, managers are often conscious of the very demanding requirement of just-in-time, but only from the "technical" perspective of management (communication and information system, logistics, market orientation, staff training and recruiting). They are also aware of the existence of a specific culture in their companies. But quite paradoxically, not a lot of researches have been made about the link between the cultural dimension of firms and the temporal perspective of business policies. For example, Fessard proposed interesting empirical guidelines to analyse the "temporal styles" of firms and services, but there is no clear link with the corporate culture.[7] Thus the research question is: "do companies have their own internal temporal pattern? And if so, can it be linked to their corporate culture?" This article aims at providing some answers to this vast and difficult issue. It shows an exemplified framework of how management can be embedded in a temporal culture, depending from their own corporate culture in addition to their operating culture and industry. The exploratory field study is based on a qualitative ethnographic approach. It also shows the advantages of participant observation both to the researcher and the manager. It enables to grasp the essence of natural facts without any censorship. Moreover, it shows that the "management by walking around" can be very useful to control more deeply the cultural acceptance of technical solution in firms.

The first part of this article provides definitions of culture, both in a general and in a corporate context. It will give a conceptual framework to analyse the suggested concept of a "temporal corporate culture". The second part deals with epistemological considerations about the covert participant observation. This methodology is sometimes controversial because it was sometimes formerly linked to unethical practices, but this study shows how powerful it is to reveal hidden informal aspects of a managerial concept. The six other parts of the article give more details on each elements of our theoretical framework. It illustrates the concept of temporal corporate culture with anecdotes and examples taken from the field observation. Finally, this exploratory study suggests further research for generalization and validation of the concept in other contexts.

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4 M. Godet, "Les dangers de la (seule) réactivité", *Revue Française de Gestion*, novembre-decembre 1991, p. 92.

5 J. C. Usunier, "The Role of Time in International Business Negociations", in: P. N. Ghauri, J. C. Usunier, *International Business Negociation*, Elsevier Science, Oxford, UK, 1996.

6 M. Polski, *Structure temporelle des Industries: le cas de la grande distribution*, PhD dissertation, Université Louis Pasteur, Strasbourg, France, 1999. 7 J. L. Fessard, *Le temps du service*, Dunod, Paris, 1993.

2. Conceptual framework

The concept of "corporate temporal culture" is rooted in the notion of culture, and more specifically in the notion of corporate culture. According to Usunier, a culture is a set of beliefs and shared norms by a group, that helps an individual to decide, create judgments and feelings, evaluate alternatives and know how to react to reach a specific result.[8] Hofstede states that culture is a learned sign, setting the belonging to a group: it is the collective programming of the mind that distinguishes members of a group from others.[9] Thus a culture organizes peoples' universe by setting their social codes. At this very beginning point, time is bound to be tightly embedded to culture as it is a *language* that codes and decodes communication between persons.[10]

Early studies suggested business organizations have their own internal culture.[11] There are many definitions of corporate culture that are not much different from general cultures, because a firm can be considered as a micro-society. However Schein underlines an interesting specificity: the culture of a firm often stems from a problem-coping attitude: a firm must adapt itself to its fast changing environment, and it must integrate its members much more quickly.[12] Thus a corporate culture has always its roots in time because its self-adaptation process requires a good *synchronization* between the insiders and the outsiders.

A corporate culture is often considered to be only what is stated in the corporate charter and in the mission statement. But it is not always as formalized and static as something graven in the marble. Rocher defined the corporate culture as the result of a *dynamic process* from a sociological and constructivist perspective: a culture is not a rigid shell containing values once for all, but the result of a continuous building interaction of conflicts, regulation, persuasion, dissuasion and sanctions.[13] Each culture has its own sub-cultures and counter-cultures that energize and balance the internal game of power. This is why the *informal* component is very important in culture. Deal & Kennedy see several elements in a corporate culture: a shared philosophy, a specific environment, values, heroes, rituals, communions, myths and rumours.[14] Thévenet describes accurately the skeleton of a corporate culture made of founders, history, know-how, values,

[8] J. C. Usinier, ibid.

[9] G. Hofstede, *Vivre dans un monde multiculturel*, Les Editions d'Organisation, Paris, 1994, p. 251.

[10] A. J. Gurevitch, "Time as a problem of cultural history", in: L. Gardner, et al. (eds.), *Cultures and Time: At the crossroads of cultures*, Unesco Press, Paris, 1976; E. T. Hall, *La danse de la vie: temps culturel, temps vécu*, Editions du Seuil, Paris, 1984.

[11] E. Mayo, *The human problems of an industrial civilization*, MacMillan, New York, 1933.

[12] F. Schein, *Organizational Culture and Leadership*, Jossey Bass, London, 1985.

[13] G. Rocher, *Introduction à la sociologie générale*, Seuil, Paris, 1986.

[14] T. E. Deal, A. A. Kennedy, *Corporate Cultures: The Rites and Rituals of Corporate Life*, Addison-Wesley, Reading, MA, 1982.

signs and symbols at various levels of the hierarchy.[15] For this reason, Détrie & Ramanantsoa prefer to use the notion of corporate *identity*.[16] These authors differentiate imaginary elements (images and representations of relationships) from instrumental elements (ideology, organization, myths, rituals, taboos). Table 1 shows a summary of this theoretical background.

Table 1. *Components of a corporate identity/culture*[17]

COMPONENTS	Formal	Informal
Imaginary => Representations	- History - Corporate communication - Official speeches - Mission statement	- Personnel's image of their firm - Representations of ideal qualities - Images of outsiders
Symbolical instruments	- Official documents - Norms and conventions - Organigrams, schedules, plans - Assemblies, parties, ceremonies	- Dominant ideology - Myths and rumours - Rituals - Taboos

The concept of temporal corporate culture has been precisely suggested first by Sainsaulieu who states a permanent confrontation between past and future through the mechanism of transmitting-prescribing-learning in the company.[18] More precisely, Gasparini states that "a temporal culture [of a firm] can be considered from one hand as an ensemble of shared representation of time, and from the other hand, as an expression of temporal experiences and practices".[19] Gasparini suggests duration, rhythm and work flexibility are the three pillars of temporal culture.[20] Studies reviewed these three components quite often, but few dealt with time horizons and temporal orientations. Fraisse[21] followed

15 M. Thévenet, *Audit de la culture d'entreprise*, Les Editions d'Organisations, Paris, 1986.

16 J. P. Détrie, B. Ramanantsoa, *Stratégie d'Entreprise et Diversification*, Nathan, Paris, 1983.

17 Inspired by: J. P. Détrie, B. Ramanantsoa, *Stratégie d'Entreprise et Diversification*, Nathan, Paris, 1983; M. Thévenet, *Audit de la culture d'entreprise*, Les Editions d'Organisations, Paris, 1986.

18 R. Sainseaulieu, *Sociologie de l'entreprise, organisation, culture et développement*, 2ème éd., Presses de Sciences Po et Dalloz, Paris, 1997, pp. 248-253.

19 G. Gasparini, "Urgence: quelques notes éparses", *Temporalistes*, no. 29, mars 1994, p. 17.

20 G. Gasparini, "Temps et travail en occident", in: J. F. Chanlat (dir.), *L'individu dans l'organisation:les dimensions oubliées*, Les Presses de l'Université de Laval, Québec, 1990, pp. 199-214.

21 P. Fraisse, *Psychologie du Temps*, 2ème éd., Presses Universitaires de France, Paris, 1967.

by Raynor[22] (1969), Gjesme,[23] Nuttin[24] and Bouffard et al.[25] proved that time horizons and orientations are valid concepts at the psychological level, but few authors applied it to a business context.[26] Moreover Gasparini does not make clearly the distinction between formal and informal elements as Thévenet and Détrie & Ramanantsoa do. This article proposes to cross their theories in a hypothesised grid (Table 2) by showing how an ethnographic method (covert participant observation) can unveil hidden elements of a temporal corporate culture.

Table 2. *Suggested analytical framework of temporal corporate culture*

Dimensions of temporal culture ➔	Duration and temporal horizons	Speed and rhythms	Flexibility and synchronization
Formal	- History - Corporate communication - Mission statement	- Official speeches - Objectives, norms, rules - Assemblies, parties, ceremonies	- Organigrams, schedules, plans - Information system
Informal	- Myths and rumours, images and representation of the past present and future	- Rituals, cycles, celebrations	- Habits, dos and donts, taboos

Some former major field studies of microsocial time used the covert participant observation method.[27] They underline the variety of social times, the

[22] J. O. Raynor, "Future orientation and motivation of immediate activity: an elaboration of the theory of achievement motivation", *Psychological Review*, vol. 76, 1969, pp. 606-610.

[23] T. Gjesme, "Goal distance in time and its effect on the relations between achievement motives and performance", *Journal of Research in Personality*, vol. 8, pp. 161-171.

[24] J. R. Nuttin, *Motivations et Perspectives d'Avenir*, Presses Universitaires de Louvain, Louvain, 1980.

[25] L. Bouffard, W. Lens, R. Nutti, "Extension de la perspective temporelle future en relation avec la frustration", *International Journal of Psychology*, no. 18, 1983, pp. 429-442.

[26] T. K. Das, "Time: the hidden dimension in strategic planning", *Long Range Planning*, vol. 24, no. 3, 1991, pp. 49-57.

[27] D. F. Roy, "Banana time: job satisfaction and infirmal interaction", in: G. Salaman, K. Thompson (dir.), *People and Organizations*, Longman for the Open University Press, London, 1960, pp. 205-222; J. Ditton, "Baking Time", *Sociological Review*, no. 27, 1979, pp. 157-167; R. Cavendish, *Women on the line*. Routledge and Paul Kegan, London, 1982; P. A. Clark, "Temporal innovations and time structuring in large organizations", in: J. T. Fraser, N. Lawrence, D. Park (dir.), *The Study of Time*, vol. 3, Springer-Verlag, New York, 1978.

building of a meaning and cultural experience of time. In a nutshell they not only study the impact of a macrosocial external time on individuals, but they also study how a new microsocial time is build from scratch just by experience. For example, Roy explains how a mere break in the working day can be a crucial moment of conviviality and social interactions between workers, vital for their morale.[28] A ritual in the production line was to share and eat bananas, and this was considered a privileged moment where each one could establish relationships with others (friendship, support, but also informal hierarchy and power). This non-clock time is also present is the Ditton study.[29] This author was interested in strategies workers used to break the monotony of their job. The workers' cyclical time was opposed to the linear time imposed by the Management. Unofficial behaviours were told to "stop", "avoid", "reshape" or "take back" the time, as the workers said. The author remarked slow rhythms enabled workers to customize their time more easily. This study was one of the first illustrating clearly an example of a hidden time and even a "contesting" time. In the same vein, Cavendish insisted on the critical role of time in social conflicts.[30] This author shed light on distinction between "the time for the boss" and "the time for us". Punctuality and promptness are often two of the most valued qualities by the management. But these values are subjective are perceptions vary according to the persons' experience and social conditions. This study shows the dialectical relationship between hierarchy, organizational structure and time representations within the firm.

More generally, Clark explained how a corporate culture can be influenced in turn by macro-economic temporal structure.[31] He presents the example of how the temporal rhythm of a sugar factory follows the natural cycle of beets harvests. Temporal perceptions and attitudes of workers and management towards time completely differ across seasons. This idea of a relationship between the time structure of industries and corporate culture of firms is reinforced in following studies.[32] With the help of these four examples, the Table 2 can be reinterpreted more globally (Table 3) keeping in mind the coexistence of conflicting times within the firm. The titles of cells will be explained more comprehensively in the following parts.

[28] D. F. Roy, ibid.
[29] J. Ditton, ibid.
[30] R. Cavendish, ibid.
[31] P. A: Clark, ibid.
[32] M. Polski, ibid.

Table 3. *Suggested analytical framework of temporal corporate culture*

Dimensions of temporal culture ➔	Duration and temporal horizons	Speed and rhythms	Flexibility and synchronization
Formal	The "time of strategy": building the firm's clock	The "time of objectives": winding the clock's spring	The "time of contracts": tightening the clock's bolts
Neformalni	The "temporal markers": drawing the clock's ticks	The "contesting time": jamming the clock's needles	The "hierarchical time": rebuilding another clock

3. Methodology

This research used an uncommon ethnographic approach called *covert participant observation*.

Observation is one of the most ancient research methods in business organizations as shown in early field works by Taylor, Mayo and Roethlisberger.[33] More specifically, *participant* observation was mainly used in sociological studies, as written by Crozier, Touraine, Sainsaulieu and Bourdieu.[34] Thus, the researcher is committed in the daily activity of the firm. In this method, observations are enlivened by the researcher's work experience. In the *covert* participant observation method (CPO), the researcher anonymously takes part in the daily activities of a community whose members are unaware of the research they are involved in. The researcher personally experiences a situation as a true insider, and does not modify the phenomenon integrity, as there is no test-bias on informants. This method was used in this research to study time management among employees in the French retailing industry. Quantitative methods and interviews fail to give an appropriate description of the use and perception of time. This concept seems to be too complex an abstraction for people to talk about it clearly and truly. Moreover, this topic is very case sensitive in the retailing industry where speed is a key factor for performance. In order to avoid this test bias, I undertook a covert participant observation, which was an asset to mingle with the very exclusive

[33] E. Mayo, *The human problems of an industrial civilization*, MacMillan, New York, 1933; F. J. Roethlisberger, W. J. Dickson, *Management and the Worker*, Harvard University Press, Cambridge, MA, 1941.

[34] M. Crozier, *Le phénomène bureaucratique*, Editions du Seuil, Paris, 1963; A. Touraine, *La conscience ouvrière*, Edition du Seuil, Paris, 1966; R. Sainsaulieu, *Les relations de travail à l'usine*, Les Editions d'Organisation, Paris, 1972; P. Bourdieu, "Sur l'observation participante", *Actes de la recherche en sciences sociales*, no. 23, septembre 1978.

retailing business. A triangulation is made at the end of the period by diplomatically revealing the study to everyone in the company, and validating researcher's perceptions with posterior interviews and focus groups. Table 4 shows nine months in three supermarkets at different levels (both of the last supermarkets "B1" and "B2" belonged to the same corporation).

Tabela 4. *Tri terenske studije*

Shop:	Supermarket A	Supermarket B1	Supermarket B2
Period:	October-January	April-June	July-August
Position:	Shop-assistant	Trainee-manager	Junior-Manager
Department:	Bazaar	Fruits and vegetables	Fresh food

But the covert participant observation raises many ethical and privacy issues. "Playing spies" can be dangerous, especially when the researcher studies closed communities, secret contexts, confidential negotiations, or strategic decisions. For instance, Humphrey's study is probably the most controversial one. He studied deviant behaviours in public toilets among the gay community.[35] Not only did he observe people in their privacy in toilets, but he also wrote down license numbers of their cars in order to find them back at home to question them on the pretext of a market study. According to Bulmer, this is an example of unacceptable CPO research as it did not respect informants' anonymity, it violated people's freedom, and it endangered them as these activities where not legal at that time.[36]

Studies in business organizations can run into very similar problems. A company, a supermarket, or a shop is a private space, belonging to a group of people or an individual owner. Do I have the right to spy in it like that? Lofland & Lofland suggested that firms are not exactly like homes, as it is a space of exchange between many people.[37] They determine an intermediate level between private and public space: the "parochial" space. So as any employee has the right to move and to be informed on what is going on in his firm, the covert researcher has the right to make a study under certain conditions, fixed by the American Institutional Review Board:

- An academic authority must supervise any CPO research project
- Informants' identities must be disguised and not recognizable

[35] L Humphrey, *Tearoom Trade: Impersonal Sex in Public Places*, Adline, Chicago, 1970.

[36] M. Bulmer, *Social Research Ethics*, MacMillan, London, 1982.

[37] J. Lofland, *Analysing Social Settings: a Guide to Qualitative Observation and Analysis* (2nd ed.), Wadsworth, Belmont, CA, 1984.

- Observations must not harm informants and the normal life of the studied community
- Publications on some topics can fall under censorship

The most problematic case is when the researcher uses illegal ways to conduct his CPO study. Here I reach philosophical considerations on truth and law. Is it a choice dilemma between a "good dishonest study" and a "bad honest study"? As says Gans: "if the researcher is honest with people, and informs them he is conducting a survey, some informants will try to hide what they consider 'not right', and thus, they will be dishonest to the researcher.[38] Hence, the researcher must be dishonest to gather honest data". In this logic, Schwartz simulated madness to be sent to a psychiatric hospital so to study how mentally disabled people are treated.[39] In a same manner, Wax infiltrated a camp of Japanese refugees during the war to see if they were correctly treated.[40] These authors put forward the legitimacy of the right for any citizen to know what really happens everywhere in their country.

But these problems are more acute in militant investigative journalism. These problems are less relevant in business research, except may be to study black-markets, smuggling, counterfeiting, drug dealing, pornography, prostitution and sexual tourism. In these cases, the CPO method seems to be the only way to study these topics, and the only possible reprehensible fact would be to interfere with a simultaneous covert police investigation. In my doctoral research, I studied the French retailing industry, which is a fairly closed industry. First, it is known to have highly confidential and controversial sides (negotiation of tariffs, business gifts, etc.). Secondly, as Chain underlines it, the French retailing industry is still deeply rooted in a traditional culture, where business is considered a strict family affair.[41] Moreover, the French retailing companies are still reluctant to take part in studies and research. Their leaders are often action-oriented self-made men who do not like intellectuals, universities and academism. So the CPO method was very adapted to penetrate easily this industry. I can even say it was my only possible choice from a practical point of view.

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[38] H. J. Gans, *The Urban Villagers: Group and class in the life of Italian-Americans*, Free Press, New York, 1962.

[39] M. Schwarz, "The Mental Hospital, the Researched Person in the Disturbed World", in: A. J. Vidich, J. Bensman, M. R. Stein (eds.), *Reflections on Community Studies*Harper & Row, New York, 1964, pp. 85-117.

[40] R. H. Wax, *Doing Fieldwork: Warnings and Advice*, University of Chicago Press, Chicago, Ill, 1971.

[41] C. Chain: *Distribution: La Révolution Marketing, ou l'Odyssée de l'Enseigne*, Editions Liaisons, Paris, 1993.

4. Main findings and discussion

In this part, the six cells of table 3 will be commented and illustrated with first-person accounts of the covert participant observation. The aim is to depict the richness of temporal corporate culture and clues that can help to better understand it from a managerial perspective.

4.1. Setting formal time horizons: the time of strategy

The mission statement and the charter are the official foundations of the corporate culture and they deliver a unique ideological message with a raison d'être and common goals. They give both a meaning and a direction to the organization. From a temporal perspective, they are very close to the time horizon. They structure an invisible time in a visible space, by blazing the trail with beacons and markers.

Access to strategic data can be useful for depicting exactly a firm identity (its goals, its know-how, its temporal planning horizon, the style of its leading executives, etc.) but they are very difficult to reach or to guess from a practical point of view. Temporal formal elements can be helpful to get a clue about them. For example, I wanted to compare the strategic planning horizon of two supermarkets. In the first shop, I worked as a mere employee and "strategic" elements were difficult to observe. I could, nonetheless, collect indications by questioning my superior or by "spying" through the windows of executives' offices: blueprints on the boss's desk indicating a new shop planned for the following year, schedules pinned on walls showing actions are planned only for the current year, latest competitors' advertisements stacked on the boss's desk indicating a concern for strategies of other shops, etc. All these hints tend to give an idea of the length of the strategic vision in this firm (probably no more than a year), but it is hard to reach further conclusions. I had a much better idea, however, of the length of the temporal planning horizon in a second shop where I worked as a department manager. Despite the fact that I was not a member of the strategic committee, I had some clues about how time was structured in this firm: for example, my career was planned for three years, all new recruits had a very structured training program, a monthly briefing gave us goals and guidelines on the coming three months, every manager had to report his results every week and performance scores were compared to those from the previous year. A lot of other elements showed how temporal horizons were planned and built on a much longer term in this firm. In addition, time and tasks were shared between employees in a more structured way, showing this supermarket had a completely different culture of time than the first one.

4.2. Searching informal time horizons: the temporal markers

According to Trice & Beyers, myths (such as anecdotes, gossips, stories) have three functions: explaining a meaning and a vision of the environment, legitimizing a consensus by a social peace, and finally instituting powers with heroes.[42] It is close to what we can call "temporal markers" that sets alternative beacons with the time horizon line of the firm.

For example, I was looking for "temporal markers" that could characterize the activity in a supermarket. First, I looked for simple objects: clocks, calendars, schedules, to-do lists, etc. I could just conclude that punctuality and word-of-mouth instructions were important parts of the temporal culture of this company. Then I was puzzled about how to go further. I really did not know what to observe next. So I kept up working as usual, leaving aside my research and then an idea came up to my mind. I translated an abstract of my research diary where I tell how I found a coherence in the general management policy of this supermarket.[43]

"(…) As usual, I was assaulted by distressed customers who harassed me with questions (…): "(…)Where are the ladders you exposed here last week? Do you still have the pencils you sold last month? Where can I find the sweaters I've seen in the leaflet? (…) etc." These questions occupied my mind while I was cleaning the shelves: "Where are…? Where is…? Where…?" (…) Suddenly I realized customer contact helped me a lot to guess the strategy of this supermarket! (…) [The supermarket] would base its strategy on "fairs", temporary promotions, special operations, and would neglect its assortment policy in "permanent" departments. (…) So fairs were a priority. This is probably why [my boss] preferred me to spend more time in filling and arranging temporary shelves instead of taking care of permanent ones (that I could not understand at that time). Moreover, I noticed permanent items were less competitive than other stores. (…) And for fairs, one needs only arms, in a temporary way, and no need for expert employees in shop. That could explain the number of young employees with short-term contracts in this supermarket. Inventory management and logistics could also be reduced to a minimum level: one mass order, a warehouse roughly organized, quick sales, and return of unsold items… Easy money, and no need for computers! Everything seems to be clear. The well-lubricated clockwork I was looking for such a long time was probably here…"[44]

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[42] Trice and Beyer, "Studying organizational cultures through rites and ceremonials", *Advances in Marketing Research*, vol. 9, no. 4, 1984, pp. 653-669.

[43] In fact, many more clues made me converge towards this result, though I don't have enough space here to quote the whole abstract. There are also references to other early parts of the diary where I suggested - quite naively - optimising logistics and human resources in this supermarket.

[44] M Polski, ibid.

A second example of temporal markers can be found in the employees' collective imaginary of another supermarket. I collected various rumours. Many believed security guards were hired just to spy on employees' work. Gossips also said the Director was a member of the mafia, owning several castles and sport cars, and that he fornicated with young female cashiers in his office during the recruitment interview. Other ones suspected managers to spy on their employees during their holidays, or to mess up their work to hassle them. Some employees even reported some paranormal activity in the warehouse, noticing boxes moving alone, strange murmurs where an accident occurred several years ago, etc. I can give one explanation to these extravagant rumours after having discussed them with colleagues. Seemingly, these chitchats result from a high division of time scales in the hierarchy. In this supermarket, the daily emergency was resolved only by authoritative assignments of urgent tasks, each superior "passing the monkey" to his subordinate. Living under constant time pressure, employees did not have a general view on the chain of tasks and decisions, as they had no autonomy in their work. When a reality is missing, people reinvent one their own way. This lack of global vision opened the way to every kind of fantasy, resentment, and slander. These facts cannot be neglected because beyond their anecdotic appearance, they are symptoms of a much more general syndrome linked with time management in the organization.

4.3. Setting formal rhythms: the time of objectives

Rules, procedures and management systems are the heart of the group regulation. Marketing events and promotional campaign are also elements of formal rhythmic components of the corporate temporal culture, which set up the pace of activity and control the speed of the firm evolution. For example, a big supermarket based its commercial activity mainly on "special operations".[45] Every ten days, a leaflet was released showing the numerous temporary discounts on certain items, often grouped in a specific department or in a particular theme (gardening, clothes, travel, seafood, etc.). Customers seemed to be really fond of these fairs as many of them shopped with a leaflet in hand. Discount operations were really the basis of the activity in this supermarket; I counted more than a dozen "fairs" during my four-month stay, only in the department where I worked (bazaar). It was very interesting from a temporal point of view, because these numerous discounts involved a rapid cycle of ordering, delivering, handling, and all other activities. And every year, the same themes came back at the same period, hence reinforcing the cycles of these operations. In fact, this supermarket based its commercial strategy on "traffic customers",[46] i.e. customers who are less faithful but very fond of discount prices, special operations and in-store promo-

[45] Also called "fairs" (in French: "foires").

[46] G. Chétochine, *Marketing stratégique de la distribution*, Editions Liaisons, Paris, 1992.

tions. On the other hand, other supermarkets based their strategy on "flow customers", i.e. customers who are more faithful, paying more attention to quality, service and regularity of assortments. I asked several managers' opinion about that theory. Actually, they did not seem to perceive this cycles, or it was so rapid that they considered it quasi-linear. According to them, there was no other system than theirs: discount prices, leaflets and punctual promotions were the only normal way of doing business. Obviously, their perception of reality was altered by their habits, as managers all came from the base of the hierarchical ladder and had all of their experience only in this supermarket. Moreover, their hierarchical position granted them a longer temporal horizon that could soothe the impression of cycles and make things more linear (managers plan their actions over one year, whereas employees knew their tasks only day after day, and sometimes hour by hour). In short, managers seemed to be so wrapped in the cycles of their activity that they could not see it. Covert participant observation permits a naïve look at a reality in order to bypass unseen automatisms in an organization.

4.4. Searching for informal rhythms: the contesting time

A contesting time often stems from rituals of a sub-culture in a firm. According to Trice & Beyers, there are four types of rituals.[47] The integration ritual eases the transition from a group to another. The reinforcement/degradation ritual protects limits and powers within the group. The motivational ritual strengthens identity, morale and self-image of the group. Finally the conflict-reducing ritual lessens the internal tensions and is a way to cope with daily problems.

The most dramatic example of such a ritual in the temporal corporate culture can be the birth of rituals so strong and so uncontrolled that can become kinds of counter-culture leading to sabotage and fraudulent behaviours. For example, I witnessed younger employees shoplifting regularly during their job-time. They did not hide it to their acquaintances. They even encouraged me to do the same, and shared their treasure with me as a sign of friendship. I explained the gravity of their acts to them and asked them the reason for doing such things. They presented them as a compensation for what the boss refused to grant them: new schedules, better work hours and a measured speed of work. Thus thefts were not only symptoms of a "rebellion" against what some employees considered to be unfair conditions; quite surprisingly, they were directly linked to a temporal problem, revealing the drawbacks of too much non-negotiated time pressure on employees. This example shows that unlawful activities are part of the daily grind of an organization, and it would be an error to close our eyes to them just because they are illegal.

[47] Trice and Beyer, ibid.

4.5. Setting the formal synchronization: the time of contracts

Task sharing, coordination and supervision mechanisms are important because they reveal the firm's structure and organisation. Schedules, timetables, hierarchical reporting and work-hour rules synchronize people's in space and time, to coordinate their work.

Corporate culture is often embodied by key-actors who convey shared values and operations processes to new-comers at work. It is not a transmission of pure knowledge or technical information. Organizational culture is also a set of habits, acquired by informal interactions and unstructured oral instructions. The CPO method enables the researcher to have a deeper insight into social relationships, because it makes the researcher the instrument of his own study. The researcher lives the situation in the long run as an anonymous insider, and then, bringing his experience back into the light of objectivity, hidden cultural facts that are considered "normal" in an organization become obviously unusual and typical of a specific context.

For instance, I noticed a vicious circle as concerns a malfunction in a supermarket that suffered from a permanent lack of motivation among its young managers. The director of the supermarket did not understand why the personnel turnover was so high: most of the young managers quickly resigned from their jobs at the end of the first year. It was not a problem of wage (every supermarket in this group offered the same level of salary), nor a problem of atmosphere or work conditions, where it was not worse than elsewhere. My personal experience as an insider showed that the lack of take-over between managers was pretty much responsible for this situation.

As a matter of fact, I often worked under time pressure as early as the first day: I was unable to get any information that could help me to save time and I had to "relearn" everything by myself (prices, staff, providers, invoices, customers' habits, etc.). Former managers were often already gone, and they didn't want to invest more time in this firm. They'd rather spend their time looking for other employments, as if they were in a hurry to leave and forget their past experience in this supermarket… Consequently, the new recruit cumulated failures or bad experiences; he became more and more unenthusiastic. Progressively, he tended to reproduce the same scheme as his predecessor, and finally quit, not willing to help his successor as he felt used and ignored by his company. I had precisely this feeling in this situation, I could generalize this mechanism by questioning my predecessor and other colleagues: all had the same experience as I and fairly agreed with my analysis. The problem was that this firm was unable to put into question its organization so as to break this vicious circle. In fact, the whole problem of take-overs was taboo in this firm, which considered it a fatality, as if a "family malediction" struck this shop. The company preferred shortsighted solutions such as quick replacements rather than long term training programs to

make their managers more faithful, thus reflecting its corporate culture oriented towards quickness and short term solutions.

In another supermarket, the CPO method revealed how rapidity became part of the corporate culture, thus tabooing any long-term strategic thinking. In the example I studied, managers all come from the bottom of the ladder. Hierarchical promotion depends just on how fast people worked, thus implying a Darwinist mechanism of selection. The faster an employee can work, the more his manager diversifies his tasks. Thus, hasty employees quickly extend their responsibilities and are promoted. At a certain level, they have to delegate some of their tasks to subalterns, hence demanding as much responsiveness as they had in the past. If new recruits fail to sustain the cadence, they are not encouraged to stay in the firm. This system of internal promotion reproduces the same scheme over time and maintains the value of quickness in corporate culture. Problems of "organizational consanguinity" and lack of renewal of strategic thinking are the drawbacks of such a system, where rapidity is taken more as "emergency" then as "efficiency"…

4.6. Searching for the informal synchronization: the hierarchical time

Existence of taboos, habits and "secret gardens" within the firm are informal elements that often helps people to protect themselves from hostile events or rules, and to reconstruct an environment in a more acceptable way for them. In the temporal corporate culture, it can be called the "hidden time", close to Hall's contextual information theory: for instance a work rhythm can be so deeply anchored in habits that it is impossible to change, because it is so embedded in minds that it became invisible and indivisible.

The situation is more serious when the covert participant observer plays an active role in fraudulent acts. These circumstances happened to me in a supermarket where I worked as a department manager. I noticed that some employees' schedules were illegal[48]. The director of the supermarket knew of this situation and asked me to solve the problem. When I met the different employees to set new work hours with them, I realised they preferred the illegal schedule to the "legalised" one, because they "customised" it progressively in accordance with their family life, transportation schedules, colleagues' work, …

Thus, employees considered the law more repressive than protective as they considered time as something very private (despite that French social law is supposed to be very favourable to workers, as it protects them against abusive work hours and poor work conditions). In addition, I noticed a whole implicit and informal hierarchy was based on these "hidden" schedules. The "control of time" was the ultimate sign of power of the older employees over the younger ones. Most

[48] In France, employees' schedules must meet certain legal criteria as concern breaks, maximum work-time in a day, time limit of work, etc.

often, secret bargaining and trade-offs occurred in the supermarket warehouse, and of course, more experienced employees imposed their views on new recruits, forcing them to work on Saturdays, or early in the morning, or late in the evening, etc. But when I decided to break these rules, the most experienced employees voluntarily disrupted the work, slowing down their teams, lowering quality controls and customer service, etc. This situation was harmful because senior employees were the most productive ones. So I had to make some concessions to please them and to restore a normal activity in the supermarket. The Director and I had to work to re-educate habits on the long run. This example shows that covert participant observation is not mere "voyeurism". Even in ambiguous situations, an insider's view can pinpoint what really happens backstage in an organization, understanding more profoundly hidden mechanisms of the culture of the firm.

5. Managerial implications and conclusion

This research showed how the conceptual framework of Table 3 could provide a convenient analytical grid to "read between the lines" in the reader's daily grind, so to understand the intricacies of his corporate temporal culture. Of course, the quoted anecdotes have not the value of proofs, but they aimed only at providing examples of observations that the reader could take from his own managerial experience. Four clues can be learned from this study.

First it emphasised the existence of the temporal culture in firms, showing that attitudes towards time are difficult to change. As any type of culture, it is not a static, formal and rational and consensual framework. Informal, dynamic paradoxical and conflicting elements are very important because time is intangible and subjective by essence. But perceptions and reasoning are embedded in culture and stepping back from it is always very difficult to achieve. If only managers could be more aware of the informal side of their corporate temporal culture, it could save a lot of time and efforts in dealing with teams and processes.

Secondly, this study depicts the nature of temporal culture. Temporal culture can be considered as a variant of corporate culture, focusing specifically on time elements. This article crossed the formal and informal elements of corporate cultures with the three most frequent concepts in time studies: duration of temporal horizons, speed and cycles, and synchronization of actions. Managerial processes and business projects lies quite entirely in these three concepts. With this framework in mind, it is easy for the manager to detect informal temporal markers, hidden dimensions of time, alternative conceptions of time, unofficial rituals and time circuits, etc.

Third, the goal of this article is also to plead for "back-to-the-field" qualitative inquiries, especially when studying cultural and temporal phenomena. With participant observation, this study shows how the researcher personally

experiences a situation as a true insider, and does not modify the phenomenon integrity as there is no test-bias on informants. However, this method requires patience, perspicacity and rigor to produce valuable results. When the observation is covert, integrity, intellectual honesty and respect for the privacy of those being studied are other fundamental conditions for this method's validity.

The final goal of this article is also to pave the way of the concept of corporate temporal culture. Further research could compensate pitfalls of this study, due to the particular nature of covert participant observation. First, one limitation of this study is to describe collective phenomena without linking them to individuals' time perceptions. Early studies showed time perceptions are deep-rooted in individuals' psychology[49]. Yet we do not precisely know how these individual time perceptions interact in the creation of the temporal culture. Thick studies and in-depth interviews could help to understand the building process of a temporal culture, and not only describing its components as this study did. Moreover, other components of time perceptions have not been reviewed here for briefness reason, such as Graham's theory of time economy[50] or poly/monochronism stated by Hall.[51] Secondly, this study occurred only in one specific context, the French retailing industry. Similar observations could be conducted in other operating cultures and in other countries to validate common points and differences between the individual and organizational level of time cultures.

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UNCONVENTIONAL METHODS OF CHOOSING CANDIDATES FOR JOB VACANCIES

***Abstract**: Although the traditional methods of choosing candidates for job vacancies – interviews and testing – are given an enormous importance, especially in the market economy countries, the fact is that companies more and more often use some unconventional, alternative methods of selection: poligraph testing, integrity tests, drug tests, graphology and astrology. Many of these alternative methods are not scientifically based nor they fulfill criteria of respect for human rights. However, their practical application is continuously increasing. Such a trend is justified by the fact that many managers put their trust more in the unconventional than in the traditional methods and instruments of selection. Moreover, the proponents of the alternative selection methods undeline that the unconventional methods of selection do not exclude the possibility of a parallel application of traditional ones.*

***Key words**: candidate selection, unconventional selection methods, organizational behaviour.*

1. Introduction

The contemporary business conditions are becoming increasingly more complex, so the companies are left with no choice but to use any means in order to survive at the market. Almost nothing is left at random. In the last decades the special attention was paid to the employees and their knowledge, skills and capabilities. The employees and their potential become the focus of attention of management of any serious company. Investment in human resources and their knowledge and capabilities is the condition for their survival at the market as well as their development. Such investments are considered more important and more profitable than the investments in any other resources. After all, it is well known that the 21st century will be the century dominated by knowledge, skills, experience and competence.

It is very important for the contemporary enterprise to provide for personnel with high developing possibilities. The candidates who are not interested in improving and progressing, in other words in the increase of their individual and organizational successfulness, become unwelcome. Due to the constant tightening of competence, the companies are forced to make the criteria for new employments more strict. Everyone contests for the best: the most capable, the most creative, the most ambitious, the most reliable and the most competent. Accordingly, various methods and instruments are applied in the course of candidate selection process in order to determine their qualities and competencies appropriately. In addition to standard selection methods, the so-called unconventional metods of candidate selection have more and more often been used recently: poligraph testing, integrity tests, drug tests, graphology and astrology.[1]

2. Selection of candidates for job vacancies

It is known that individuals differ regarding their personality characteristics: opinions, attitudes, perceptions, interests, needs, motives, aspirations, capabilites, afiliation. These differences in personality characteristics influence the differences in social and occupational behaviour. However, the companies find the differences in capabilities and competencies of the candidates chosen for job vacancies the most importantm, since these differences are most often and most directly linked to the working behaviour and various working results. This is why it is not and cannot be all the same to the employer whom he is going to employ: average, above-average or below-average candidates; energetic, ambitious or uninterested personnel; loyal, positive or conflict personalities; honest, daring or suspicious individuals.

Bearing in mind that the individual differences, which do not influence the selection process and employment decision-making are not easy to determine, it is not surprising that in addition to traditional methods the untraditional or unconventional methods and instruments of selection have started being used over time. It is most important in the course of selection process to identify the candidates who are estimated to do the job the most successfully and who will be interested in professional improvement and progress at work. Everything else is assigned an inferior position comparing to that goal.

The application of tests and interviews is the common practice for candidate selection for job vacancies. Despite certain imperfections, these methods have been successfully used for decades. Their application became topic particularly in the second half of 20th century, and their topicality has been increasing over time. In addition, the companies have been using the unconventional selection methods. Such a trend is justified by the fact that many managers put more trust

[1] M. Jovanović Božinov, Ž. Kulić, T. Cvetkovski, *Menadžment ljudskih resursa*, p. 155.

in the unconventional than in traditional selection methods. The application of unconventional methods at that does not exclude the possibility of parallel use of traditional ones. Many companies decide for their combined application, although there are companies that rely only on unconventional selection methods, all with the intention to acquire the best candidates, those who will provide for the survival and further successful development of the company.

3. Unconventional candidate selection methods

Although the traditional selection methods are given an enormous importance, especially in market economy countries, the fact is that the importance of unconventional, alternative methods of testing candidates and their intellectual and other potentials is gaining importance. Contemporary companies in highly developed countries, especially in the USA, attach great importance to the selection process and selection methods and instruments. It became clear long ago that the competitive advantage could not be acquired or maintained without good and successful co-workers and their willingness to educate permanently and improve professionally.

3.1. Polygraph testing

Polygraph testing is performed by polygraph, or lie detector. Polygraph is a special instrument that is used to determine the trueness or falseness of the statement given by a person based on physiological reactions such as heartbeat, blood pressure, frequency and depth of breathing or relevant skin response. It is well known that the lie detector is usually used in criminal-investigations, or criminal-investigation data processing. Therefore, there is a justified reason to raise a question whether it can be used in candidate selection process and what contributed to its application in organizations. The right answer is not hard to find if we know that in highly developed economies and well-off companies, especially American ones, there are huge losses occurring due to various thefts, embezzlements, industrial espionage and disclosures of business secrets, misuses and money laundering.

Therefore, it can be concluded that many reasons have contributed to the use of polygraph for the purpose of selection:

- The need to eliminate or at least mitigate the factors leading to harmful consequences caused by thefts, embezzlements, misuses, money laundering, disclosure of business secrets to competition, industrial espionage;
- Endeavour to acquire honest, loyal and solid candidates who can be entrusted with the most responsible and most delicate jobs;

- The need of banking and other financial institutions to employ the people whose integrity should not be doubted;
- The fact that companies are often forced to fight on their own against the above-mentioned forms of misdemenours, embezzlements, espionage and other forms of crime, due to their specific characteristics.

Employers are very interested in checking the integrity, honesty and reliability of their future employees who will be assigned the responsible and delicate jobs, especially if the particular job is related to money and securities. Due to certain unreliability of the results acquired by tests, interviews and other traditional selection instruments, many companies decide for application of additional selection instruments, polygraph-testing being one of them, in order to raise the value of selection results.

The two following data on the losses by American companies show how dishonesty and misdemenours of the employees may be dangerous. The estimates are that the losses of American companies occurring due to activities and actions that can be contributed to dishonesty, negligence and misuses of the employees amounted to some 40 billion US Dollars annually, and a decade later, in the middle of 1990s, American companies lost between 65 and 75 billion US Dollars per year.[2] It is also estimated that various forms of thefts, embezzlements, misuses, economic espionage, selling of business secrets and other forms of white-collar crimes contribute to retail price increase for the whole 15%.[3]

It is interesting to point out that polygraph testing is used even when such a conduct opposes the positive legal regulations. The practice of American companies confirms this claim. In spite of legal prohibitions, which are rather explicit in some American states, the use of polygraph in selection purposes in many organizations was rather pronounced. The available data show, for instance, that in 1980s more than two million candidates were tested by polygraph every year, 98% of them in private companies.[4]

In countries where polygraph testing in selection of candidates is not prohibited, in Great Britain for instance, the associations of psychologists and some non-government organizations oppose to its use when choosing the candidates interested in a particular job. The campaign against the use of polygraph in human resource selection process underlines, among other things, that its application is inadmissible from moral point of view and disputable from the professional point of view. The opponents of the polygraph testing point out especially that lie detector basically tests the state of emotions and neurosis, not the degree of integrity or dishonesty; that the results obtained by it cannot be considered

[2] D. P. Schultz, S. E. Schultz, *Psychology and Industry Today: An Introduction to Industrial and Organizational Psychology*, p. 116.

[3] F. W. Cascio, *Managing Human Resources – Productivity, Quality of Work Life, Profits*, p. 205.

[4] F. W. Cascio, ibid., p. 204.

more valid or more useful than the results obtained by standard or common selection methods and instruments.[5]

New and more updated generations of detectors have been used recently, those that register and analyze the changes of and so-called stresses in a person's voice. From the practical point of view, their advantage is that they can be used without the candidate's knowledge, or the person whose vocal changes one wishes to identify and analyze. However, from the moral point of view, such a possibility cannot be treated as an advantage, more as its greatest fault.

3.2. Integrity tests

Disputing lie detectors and the faults related to their application contributed to certain popularization of integrity tests and their frequent use in candidate selection process. Some employers decide for paper-pen integrity tests because they consider them acceptable instruments of evaluation of candidates and their integrity, both from the social aspect and moral point of view. The basic purpose is to contribute to identification of candidates who are prone to thefts, frauds and other forms of dishonest, inadmissible and irresponsible behaviour. People with such behaviour cannot be trusted or assigned serious and responsible jobs.

If he recognizes a candidate with the mentioned inclinations, the employer is largely prevented the risk from employing the wrong or unwelcome candidates. Using the integrity tests, the employer gets rid of the candidates who are estimated to be dishonest and unreliable, those who will do their job in an undisciplined and irresponsible manner, who will pay more attention to their individual needs and interests than to the needs and interests of the company. If the estimates include that they are prone to thefts, misuses and other forms of crime, the reasons to reject them are more than obvious.

The use of integrity tests bases on the testing and checking of candidate's attitudes on manifestations, forms and cases of socially and morally unacceptable and dishonest behaviour in order to estimate his/her behaviour at work. In everyday practice various forms of integrity tests are used: some are directed at determining candidate's attitudes on manifesting forms of dishonest and improper behaviour; some are directed to check broader characteristics, in other words the personal characteristics of candidates; some are directed at determining candidate's attitude on work, working behaviour, working morality and working discipline.

There are tests that are directed at checking attitudes and relations of the employees towards specific issues: drug use, smoking, disclosure of official secret, professional ethics, absence from work, interpersonal relations, teamwork, remuneration system, and rules of progress. Determining the attitudes on these and similar issues is carried out in order to identify those candidates that the employer must not rely on.

[5] F. Bahtijarević Šiber, *Menadžment ljudskih potencijala*, p. 125.

Well-trained experts are behind the integrity tests. They do not find it difficult to decide on the character and integrity of tested candidates based on the testing results. The errors are possible, of course, but they decrease over time. What is the most important is that testing is carried out by competent experts and that tests are shaped adequately well. More than one expert can participate in analysis of testing results, depending on the importance of issues included by the test.

The integrity tests most often consist of a list of 'yes' or 'no' questions. The content and number of questions are determined by the testing experts, taking into account that the questions are clearly formulated and that valid and useful responses for the process of candidate choosing can be obtained. The content of questions can be rather various. In spite of that, similar or at first sight, simple questions are usually posed in practice. For instance:

- Would you tell your manager that some co-workers, whose conduct you are well acquainted with, are stealing gradually from the company?
- In your opinion, is it right to borrow company equipment to use it at home for a longer period?
- Have you ever lied?
- Have you ever wished to be prettier/more handsome?
- Would you return to the company what does not belong to you, in case you have by mistake been paid the higher amount of your salary and no one knows about that?
- Would you reveal to the management the fact that your co-worker is disclosing business secrets?
- Have you ever regretted for something you did or something you did not do?

Companies use these tests in order to diminish the losses caused by thefts, misuses and misdemenours of the employees. There is a belief that these tests have many effects. For instance, the risk to employ the wrong or dishonest candidate decreases; the candidates who will be employed are informed that their moral qualities are not doubted and that they are expected to confirm them by their work and behaviour in the future; the employees are indirectly given message that dishonesty and untruthfulness will not be tolerated. It is obvious that each of the mentioned effects has its own weight, which is additionally increased by the importance and popularity of integrity tests.

Some companies resort to combined application of integrity tests and lie detector. Such an approach can lead to various situations. Namely, the results obtained by using one or the other selection instrument can be identical, in contrast to each other or partly identical and partly in contrast to each other. The identical results are good basis for measuring moral qualities and choosing of candidates, since they can be trusted more. The problems appear if the obtained

results are not identical. The greatest problem is when the obtained results are completely different, i.e. when they do not match in anything. In such cases, the employer is left with the possibility to repeat the testing or polygraph or to rely on the application of some other selection methods and instruments.

The experiences so far have shown that the integrity tests are valid and useful if they are used as a means to obtain some general information on the candidate and the characteristics of his/her personality. However, the problem is that based on the results obtained, it is difficult to estimate more specifically whether a particular person would steal, disclose business secrets, be involved in any misuse or be dishonest towards the employer. The greatest fault of integrity tests results from their small prognostic validity, which is also true for polygraph testing. Accordingly, the results obtained by integrity tests cannot be fully trusted, regardless of the fact that they are attached great importance in many companies. In order to prevent employing of dishonest and unreliable personnel, many companies rely on these tests very often since their management is convinced that their application mostly fulfills organizational needs and expectations. Thanks to this, their importance and their popularity are not questioned. On the contrary, it could rather be said that their popularity is on the increase, despite the fact that a part of scientific and expert public opposes their application.

There are many reasons against the use of integrity tests in selection. First, their application in the process of candidate choosing means getting into things that often exceed the competencies of a company. Second, their prognostic validity is not sufficient to eliminate candidates who are estimated as dishonest, or prone to criminal and other forms of deviant behaviour. Third, from the moral and psychological point of view, their use is inadmissible without the consent of the tested person. Furthermore, without valid proof and specific actions no one can be characterized as dishonest, prone to stealing or unwelcome. Finally, the use of integrity tests is to a certain extent in contrast to the right to work as one of universal human rights, since due to their use in the course of selection process some candidates are eliminated from the procedure in a morally problematic manner and prevented from fulfilling this right. In the recent years there have been efforts directed to increase the prognostic validity of integrity tests. The whole teams of experts work on elaboration of new, more updated and more useful tests for determining truthfulness and reliability of candidates who are looking for a job. Although it is still early to talk about the results of these efforts, the experience so far has shown that there are not any significant improvements and that the mentioned reasons to dispute the integrity tests and their application during selection can hardly be questioned.

3.3. Drug tests

Many researches show that drugs have long since entered the factories, that they have been used by many employees of all professions and that they can be found in the pockets and brief cases of some managers, even some general directors or high state officials. The consequences are more than alarming. The drug use, eventually, leads to seriously diminished working capacity, and employed drug-users have difficulties in communication with their co-workers and direct managers, since their attentiveness, capability to remember and power to concentrate decrease over time. The drug-use causes fatigue, nervousness and frequent conflicts at work, dulls the reflexes and leads to frequent injuries and accidents at work. In addition, the use of narcotics at work causes damages and many equipment breakdowns.

Due to the harmful consequences that drug-use has on the individual and organizational success, there is an increased need of companies to include drug tests in their selection process. The companies that take care of everything are no longer ready to employ drug-addicts and to deal with consequences and problems inherent to drug-abuse almost every day. The efforts are not spared to identify possible drug-users among the interested candidates, in order to eliminate them from further procedure and prevent their employment. The researches show that drug testing is becoming more and more popular selection instrument, especially in highly developed countries, since these test give results that can hardly be disputed and which, as a rule, should not be doubted, which is not the case with other selection instruments.[6]

The research carried out by the American Managerial Association, for instance, shows that during 1993, about 85% of big American companies used drug tests for selection purposes. Such a manner of selection of candidates interested in jobs was used by 74% of big American companies in 1992, which points to the fact that drug testing is on increase from year to year.[7] It is indisputable that such a trend will continue in the years to come. The similar situation is in the majority of highly developed countries.

It is interesting to point out that the researches carried out by the American Managerial Association also showed that by drug testing of candidates certain forms of their future working behaviour could also be anticipated. Accordingly, it is especially underlined that by this selection instrument it is possible to recognize those candidates, who would in the future show weak results, behave in an undisciplined and irresponsible manner, be unreliable, cause work accidents, misunderstandings and conflicts. Such predictability reinforces the commitment of contemporary companies to continue using drug tests in order to prevent employment of unwelcome candidates.

6 F. Bahtijarević Šiber, ibid., p. 426.

7 According to: W. F. Cascio, ibid., p. 202.

Some companies are additionally interested in previous check of candidates for drug use. Usually, these are the companies whose business activities are related to transport of goods and people, rendering of health care services, education and childcare. On the other hand, it can be noted that companies engaged in rendering of business and financial services are less interested in testing candidates for drug use.[8]

Drug testing incites many dilemmas and polemics in both the expert and broad public. The representatives of some institutions and associations for human rights also participate in these debates, pointing out that such a manner of choosing a candidate is an attack on an individual's personality and dignity. Due to the mentioned reasons, there is an insistence to get previous consent of candidates who would be taking the drug tests. Accordingly, special consent forms are made, which are handed over to candidates in advance together with the job application forms. In spite of some disputes, the fact is that drug-testing programs contribute to choosing of high-quality candidates for the job, and according to the opinion of many experts, even to some reductions in the abuse in the USA, Canada and the majority of West European countries.

3.4. Graphology

The word graphology is derived from the Greek word *grafein*, which means to write. Graphology includes a specific and in many ways unique procedure of analysis and identification of handwriting. It is based on the fact that an individual's handwriting is relatively stable, personalized and recognizable. The use of graphology in the process of candidate selection bases on the belief of a graphologist that handwriting reveals certain personality characteristics based on which it is possible to predict the individual's behaviour.

The proponents of graphology point out that based on specific characteristics of handwriting, such as inclination, size and width of letters and pressure on paper, it is possible to determine the following: an individual's psychological profile, good and bad qualities, value-related attitudes, motives, interests, inclinations, ambitions, and interest in job. Every person's handwriting is specific and differs from the handwriting of other persons. The handwritings of different persons must be different. If there were not people whose personalities match in every detail, then there are not handwritings the characteristics of which match in every detail. This, among other things, is confirmed by the personality characteristics, i.e. the characteristics of handwritings of identical twins.

There is no doubt that this is not a scientific method and that its application is related more to the beliefs of those using it and advertising it than to its practical value and usefulness. So far, no one has managed to substantiate or confirm

[8] M. R. Carrell, N. F. Ellbert, R. D. Hartfield, *Human Resource Management: Global Strategies for Managing a Diverse Workforce*, p. 322.

the arguments used by graphologists in a scientifically based manner. It all boils down to coincidence, speculations, improvisations and assumptions. Good estimates are usually set out as examples confirming the knowledge and skills of a graphologist, and bad estimates as accidental oversights occurred by the impact of unforeseen circumstances.

Despite much disputing and the lack of scientific arguments, graphology is widely used in many countries and companies. In contrast to the USA, where they are used to a lesser extent, the graphologist's services in selection process are very popular and appreciated in the countries of West Europe. Some researchers estimate that in the middle of 1990s more than 80% of West European companies used graphology.[9] Graphology is particularly popular in France, where according to the available data, between 75% and 80% of small and middle-size enterprises use graphology in candidate selection process when filling in managerial vacancies. In addition to this, such services are gladly used by the agencies specialized in finding managers and intermediating in their employment.[10]

Although many authors, researchers and intellectuals in England oppose to the use of graphology in selection process, the fact is that many English companies rely on the knowledge and skills of graphologists. Graphologist services are used also by a number of English employment agencies specialized in providing competent candidates, especially the candidates for managers. Similar situation is in other highly developed countries of West Europe, regardless of the fact that their organizations are not often willing to provide data on their selection arrangements with graphologists.

Judging by what has been said previously, the popularity of graphology and experts in handwriting analysis was contributed by the following reasons:

- imperfection and insufficient prognostic validity of traditional selection methods and instruments;
- simplicity of procedures of "knowledge", "capabilities" and "experiences" of graphology in selection procedure;
- transparency and certain attractiveness of identification process and analysis of candidate's handwriting;
- articles in papers where graphologists are praised and their knowledge and capabilities are made equal with the highest scientific knowledge and achievements;
- belief of a number of managers in graphology and possibilities of graphologists.

As far as graphology being used in selection purposes and its role in judging personality characteristics, some researches were carried out in order to review

[9] M. Harris, *Human Resource Management: A Practical Approach*, p. 152.

[10] J. M. Smith, M. Abrahamsen, according to F. Bahtijarevic Siber, ibid., p. 427.

the validity and usefulness of results obtained by graphologists. Psychologists, who were very interested in the outcome of this research project, had the main role in those researches. The results of these researches show that graphology cannot have any role in the selection process, or in judging either character or personality, since it has none prognostic validity required for any serious selection instrument.[11]

The mentioned researches pointed also to the problems arising due to frequent discrepancies between graphologists and their findings regarding the evaluations of candidates and their future occupational success. There are not rational reasons behind those discrepancies, but personal attitudes that cannot be justified by acceptable arguments. Most frequently, everyone stuck to their story not trying to explain the reasons for doing so. Moreover, some graphologists do not want to reveal the rules of their work, considering them a secret that should not be shared with others.

In spite of the mentioned attitudes and scientific arguments, it is most probable that the services of graphologists will still be used and paid well, as in the process of selection as in other fields. As long as the most influential managers believe in graphology and capabilities of graphologists, there will be organizations that would rely on graphologists and their "magic skills" in the candidate selection process for filling in job vacancies, even more so as this is a very simple and inexpensive selection instrument.

3.5. Astrology

The paper that should be scientifically based and verified by competent reviewers is almost unconceivable to contain topics such as astrology, or graphology and its application in the process of selection of candidates interested in employment. However, we cannot oversee the fact that astrology is gaining more and more important role in life and work of many managers, starting from those taking the starting positions all the way to those who are assigned the most responsible duties in a company. If such managers are in a situation to create, monitor and control the relations in the selection process, it is beyond doubt that they will try to give special significance to astrology and astrological way of evaluation of candidates.

The astrological predictions are based on the assumption that the position and moving of stars and planets at the moment of birth predetermine the characteristics of someone's personality. It is not unusual that managers of some companies decide to choose candidates to fill in the job vacancies with the assistance of astrologers. The opinion of an astrologer is especially appreciated when the candidates for managers are chosen, and they are frequently engaged to estimate

[11] G. Ben-Shakhar, et al., *Can Graphology Predict Occupational Success? Two Empirical Studies and Some Methodological Ruminations*, pp. 645-653.

their occupational success and their working behaviour in the future. Horoscope sign or rising sign have become one of the most important determinants of individual's personality and professional career for many people.

Great popularity of astrology and its use in selection purposes is contributed by incomplete prognostic validity of standard selection methods and instruments, but also by a widespread belief in astrology and astrologer's capabilities. In addition, affirmation of astrology in this context is substantiated by everyday media support, especially electronic media, together with guest performances of some well-known astrologers, but also by pointing out that the most powerful executives and politicians consult astrologers when they plan their key activities.

Those who evaluate candidates and their qualities may also be great fans of astrology and astrological predictions, and therefore it is not difficult to conclude that astrologers are more present in the selection process than it is thought. Their role in choosing candidates and predicting their future occupational success reflects in making their horoscopes, especially in cases of filling in managerial and other responsible positions or duties.

All serious scientific research conducted so far show that astrology is arbitrary and that it is not scientifically founded. The efforts of respected researchers and competent scientists to check the real connection between astrology and individual personality give negative results. After all, the public is more or less familiar with the fact that a huge money prize promised for the scientific proof of that connection at the end of 1980s has not still been awarded.[12] None of the scientists has succeeded so far to prove any connection between position, arrangement and moving of stars and planets at the moment of someone's birth and personality characteristics, professional development and life path. Despite of that, the interest in astrology does not subside.

4. Conclusion

In their constant struggle to survive at the market, many companies pay special attention to human resources and their development and therefore the employment of high-quality, capable, ambitious and creative personnel becomes one of the most important issues of contemporary companies. However, the problem is how to find them and how to recognize them. In their attempt to find at least partial answers to such important questions, employers try to find the solutions in various manners, being careful especially of selection methods and instruments. Since they do not fully believe in standard sources of information on candidates and traditional methods of selection, managements of many companies decide for the use of unconventional selection methods. Thanks to this, polygraph testing, integrity tests, drug tests, graphology and astrology in spite of

[12] D. Cooper, I. T. Robertson, *The Psychology of Personnel Selection*, p. 141.

many disputes concerning their scientific basis are becoming more and more a part of organizational reality, especially in the process of selection of candidates for job vacancies.

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ECONOMIC AND SOCIAL ASPECTS OF TAX EVASION

"Tax and evasion are inseparable.
Like a man and his shadow."
Gilbert Tuxier

***Abstract**: Tax evasion represents a serious social problem in Serbia. To break a rule according to which a tax, custom duties or dues should be paid is not considered a serious crime from the aspect of morality, both individual and collective. Tax evasion is often regarded even with certain inclination. The public does not condemn tax evasion in an appropriate manner due to widespread opinion that no one suffers damage indirectly. In the lack of tax discipline, the state is forced to determine relatively high taxes in order to take as large proceeds as possible from the taxed part of the economy. However, high tax rates create resistance towards tax paying even among disciplined taxpayers.*

***Key words**: tax evasion, tax morality, resistance towards tax paying.*

1. Introduction

The word evasion derives from a Latin word *evadere*, which means escape from, run away, avoid. In tax-related terminology, this term is used for various forms of avoiding tax paying. Domestic science has satisfied to define the problem of tax evasion, but has not plunged into research of deeper social, economic, psychological and other causes of it.

Tax evasion represents a phenomenon that has various consequences, as in the fiscal sphere (since the planned assets do not run into the budget), as in social and political sphere (since it jeopardizes the principle of horizontal equity). Behaviour aimed at not paying a tax often damages some social values, which must cause the appropriate reaction, either on moral or legal level.[1]

[1] D. Popović, *Nauka o porezima i poresko pravo*, p. 450.

Economic approach to tax evasion bases on the analysis of individual behaviour of taxpayers, in other words on the analysis of the manner the tax rates and instruments of tax application influence the economic circumstances of taxpayers. Taxation system and its application can incite taxpayers to conceal or present their activities incorrectly. It is a natural tendency of taxpayers to pay the smaller amount of their tax liabilities, using understatement or insufficient precision of legal regulations, as well as their effort to apply tax regulations under the most convenient conditions.

Unwillingness to tax paying and the efforts to avoid or mitigate its impact are present in all fiscal systems, including paying of all kinds of taxes, and are more or less present at the largest number of taxpayers. The intensity of this unwillingness depends on many factors. In order to depict vividly the resistance of taxpayers towards the obligation of paying tax and towards tax administration, we can use a frequently quoted attitude found at Marx: "When a French peasant wishes to imagine the devil, he imagines him as a tax-collector."[2]

The resistance towards the obligation of paying taxes to the state was the basis of many wider social movements that originated in certain historical periods. The resistance of subjugated nations towards great burdens contributed to the fall of the Roman Empire. The first constitutional document, Magna Charta Libertatum (The Great Chart), written in 1215 in England, was the consequence of the resistance towards the burden by the ruler. This document prescribed that the English King had to have consent of landed gentry when imposing taxes, which spoke of the fierce resistance to the practice of imposing taxes by force.[3] The basis of Jacquerier rising and Watt Taylor rising was to express dissatisfaction with too high taxes. France also witnessed frequent agitations due to taxes that were too high, especially during the reign of Louis XIV. The roots of the Great French Revolution could be found also in the distribution of tax burden, which was mostly born by the third class.[4] In addition, the dissatisfaction because of high tax burdens was in the basis of the Great Peasant War in Germany. The direct cause of uprising of the colonists against the British rule in North America in 1773 represented the imposing of excise duties on tea. This uprising was called the Boston Tea Party, after the dumping of chests of tea overboard His Majesty's ships. There was also much resistance due to high taxes in Serbian states, which led to rebellions and riots, as was the case with Djak rebellion in 1825, after which the taxes were decreased.

[2] B. Boldirev, Finansi kapitalističeskih gosudarstv, Moskva, 1975, p. 99.

[3] D. Popović, ibid., p. 39.

[4] B. Jelčić, *Nauka o finansijama i finansijsko pravo*, p. 179.

2. Forms of tax evasion

Not every form of tax evasion is illegal behaviour of taxpayers. However, avoiding paying fiscal obligations often implies illegal behaviour of taxpayers. Tax evasion is accordingly divided into legal – called tax avoidance, and illegal – called tax evasion.

In theory, there is not a clear line between legal and illegal tax evasion. According to our opinion, illegal evasion includes avoiding paying public dues by a criminal activity, economic offence or crime. All other forms of tax evasion are legal. Legal tax evasion or tax avoidance exists when the understatement of regulations is used to avoid tax paying. If a taxpayer gets into a conflict with legal regulations avoiding to pay taxes, then it is illegal or illicit tax evasion.

Illegal tax evasion includes activities of a taxpayer aimed at avoiding paying of tax but breaking the law at the same time. These activities boil down to either non-payment of tax or omitting to act in accordance with the requirements of the tax ruling relation, which are imposed to taxpayers in order to provide for the tax obligations to be met (to submit tax report, to keep books regularly, to allow tax inspection, etc.).

Illegal tax evasion can be classified in several manners. If we start from the scope of tax-paying avoidance, illegal tax evasion can be divided into full and partial tax evasion. Full tax evasion exists when taxpayer does not report the total amount of income or all taxable property, or if he hides the transactions leading to origination of tax liability. Partial illegal tax evasion exists when income, property or transactions are reported to tax administration but the data on them are incomplete or false, which results in diminished tax liability to which the taxpayer was not entitled. The income is seldom earned at one time or from the same source, which reduces the possibility for complete tax evasion. In practice, there are mostly the cases of partial tax evasion.

Starting from the type of tax avoided to pay, the illegal tax evasion can be divided into tax defraudation and smuggling. As a rule, tax defraudation can be met at direct taxes (such as income tax, national insurance contributions and wealth tax) and smuggling at indirect taxes (such as excise and customs duties and value-added tax).

3. Causes of tax evasion

It is not possible to study the etiology of a phenomenon and the regularity of its occurrence and development without the research of material conditions of life, economic structure and other processes in a society that can influence the phenomenon. Tax evasion has its genesis, after all, in the conditions of a certain society, social relations and structures on which it is based, which create various

deviations and illicit activities as their lawful and unavoidable products. It is a product of a particular society, i.e. the manifestation of its negative sides and characteristics.

There have been efforts to prove that avoiding paying public revenues depends also on a nation. Heribert Schölten thus considers that Roman nations, such as Italians, Spaniards, French, part of the Swiss and Valonian Belgians are traditionally skeptical towards any authority, tax collector and tax. In contrast to Roman nations, the English and Scandinavians are more disciplined to that effect.[5]

The causes and consequences of tax evasion can be objective or subjective in character. Objective causes result from social environment, while the subjective causes are in the personality of a taxpayer.

3.1. Objective causes of tax evasion

The first set of causes are those independent of taxpayers, including total economic condition, amount of tax burden and stability of tax rates, equity in treating taxpayers, tax form, purpose of collected taxes, presence of shadow economy. The influence of these causes to tax evasion is different, depending on the subjective attitude of a taxpayer towards them.

Tax evasion is caused by the overall economic condition of a state. If the economic condition is stable, there are fewer reasons to avoid tax paying. However, in states where there is an economic crisis, the presence of tax evasion is much bigger. The bigger the crisis is the greater are the chances to avoid tax paying.

The changes that occurred in Serbia in recent years caused various changes in the field of proprietary relations, way of life, thinking, behaviour, social values and other values of life. These transformations supported tax evasion, since it was related to the stated.

The aim of economic activities is to provide profitable business operations. This is not easy to provide under the conditions of disturbed economic relations, whether there is a surplus of commodity at the market or the lack of it. If there is commodity over the realistic requirements then competition increases so the goods can be sold more efficiently only at lowered prices, which can be obtained by excluding the related dues. If some goods are deficient, then their lack is compensated by import from abroad. It is logical to use under such conditions both the illegal and legal means in order to buy and sell goods under the most favourable conditions. As for the illegal means, it is most efficient to apply the diminishing of tax liabilities.

At times of strong economic instability, there is a great and sudden rise of prices and hyperinflation, which leads to the increase of the costs of life. Under such circumstances, there is also a fast rise of unemployment and uncertainty,

[5] H. Schölten, *Die Steuermentalitöt der Völer im Spiegel ihrer Sprache*, Köln, 1952, p. 148.

which creates a conflict atmosphere. Some people start engaging in economic activities without an approval and thus earn income to which they do not pay taxes. Poor people who are pushed aside and degraded are forced to avoid paying taxes, since they do not see a reason to conduct their business activities within legal framework.

High dues are the next cause of tax evasion. The greater the dues are, the taxpayers are more determined to avoid their payment, since they expect not to be discovered, and that the economic gain earned in such a way would compensate for possible consequences if they are discovered.

Participation of total tax, customs and other burdens in domestic product of many countries has been rising in recent years. As the rates of public income increase, the motives to avoid tax paying also increase. As the rate of public income increases, many taxpayers who used to pay taxes regularly start concealing their income and turnover.

The amount of burden by public revenue up to a certain level has rather a small influence on evasion. When the burden exceeds certain limit, the evasion increases progressively. In 1728, English writer Jonathan Swift showed on the example of customs duty on silk and wine that by raising customs rates the amount of collected duties under those circumstances would rather diminish, i.e. the effect of collected customs duties is lower than it could be expected. This principle is known as Swift's effect ("one multiplied by one").[6] Swift was the first to warn that two multiplied by two does not equal four as far as taxes are concerned. It equals less than four, since the growth of tax rate increases the resistance of taxpayers, which leads to slower growth of tax income, whereas after a certain level further growth of tax rates even leads to the drop of tax income.[7]

The limit of tax burden according to Günter Schmölders is determined by domestic product. There is a "tax optimum" within this limit as a psychologically determined limit, which depends on "tax mentality", which differs from nation to nation and from one tax collection system to the other.[8] The limit of fiscal burden is a relative notion, and it is marked by that amount of dues that would provide maximum growth of national product through public expenditure. Fiscal burdens should be such as to provide the highest rate of growth of national income. As for the developing economy, the limit of fiscal burden is determined by the condition of national income. If fiscal burden rises, and national income with it as well, the level is not reached. However, if fiscal burden is increased and the national income decreased, the limit has been exceeded.[9]

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6 J. Swift, *An answer to a paper called a memorial of the poor inhabitants, tradesmen and labourers of the Kingdom of Ireland*, T. X., London, 1728, p. 215.

7 D. Popović, ibid., p. 451.

8 G. Schmölders, *Grundlage einer effizienten Finanzpolitik: Empirische analyse der Steuermentalitöt*, Mainz, 1969, p. 80.

9 J. Lovčević, *Institucije javnih finansija*, Beograd, 1975, pp. 77-78.

It should take into account that fiscal policy in Serbia has been quite well balanced recently and that there has not been any significant changes of tax rates. Keeping the same rates for a longer period makes taxpayers "accustomed" to a certain amount of taxes, which creates certain trust in the fisc. State measures of fiscal policy were directed at creating more favourable conditions of business operations for economic subjects. There were cases when tax rates were lowered in order to diminish tax evasion. However, such a change of tax rates did not influence tax evasion, which leads to the conclusion that tax rates are objectively high.

Treating taxpayers variously as far as the weight of tax burden is concerned can represent a reason to taxpayers to engage in activities by which they would evade their obligations fully or partially. In the earlier decentralized fiscal system in Serbia, there were several possibilities to evade taxes due to the difference that existed in the weight of tax burden between different territories, which was done by bogus change of residence of a taxpayer.

Taxpayers do not receive any direct counter-compensation for the paid taxes, and they do not have right to ask for it. However, this does not mean that taxpayers do not have any benefit from it. The benefit is indirect. If the benefit is closer to the taxpayer, than the tax is accepted much better, which decreases the resistance towards tax paying. Some taxpayers feel less resistance towards taxpaying than others. The resistance is much greater for payment of direct taxes (income tax), than for indirect taxes (turnover tax, customs fees), where the tax amount is included in product price, and taxpayer often does not know that he is paying tax on the occasion of buying some product, or he does not know the amount of tax burden.[10] This is why a witty remark by Popović can be applied for indirect taxes that they are "paid under an anesthetic", which means that many final taxpayers are not aware of the scope of turnover tax or excise, that are incorporated in the price of the product they paid.[11]

Taxpayers are not always ready to admit the obligatoriness of paying public revenues, explaining it by their belief that collected public revenues are irrationally spent or that they are not fairly distributed. It is understandable that taxpayers are interested in spending of collected income. If taxpayers do not approve of the way the assets are spent, this may increase the evasion of public revenues paying. If these assets are used to finance public good in which a taxpayer is personally interested (for instance the construction of schools or roads), there will be less resistance towards payment of obligations. However, if the purpose of assets is unknown or a taxpayer opposes to that purpose, there will be more resistance towards payment of obligations. For instance, if the state spends a part of collected assets as subsidies for the production in rival companies, taxpayers can evade taxes due to their dissatisfaction. The purpose of collected public revenues from the general point of view can be justified and acceptable, but at the

[10] B. Jelčić, ibid., p. 179.

[11] D. Popović, ibid., p. 451.

same time, the taxpayer can have negative attitude towards it. We have reason to believe this because taxpayer cannot see either direct or indirect benefit from such expenditure.

It is a widespread belief that tax evasion spreads and become more powerful as an indirect result of inefficiency of public – uncovered and recorded economy, which makes more and more space for so-called shadow economy. In a widest sense, shadow economy represents every illegal economic activity directed at gaining economic benefit for a person involved in it, and at the expense of the fisc and, as a rule, of other people, who do their business legally.[12] Activities in the field of shadow economy are aimed at diminishing or avoiding tax paying. The factor of suitability represents a basis for calculation of taxes and not the rate at which tax is calculated, and this is why the degree of coverage of taxes is more important than any high tax rates.

Expanding the scope of shadow economy, not knowing the form and scope of its manifestation, as well as not knowing the factors determining it all attract attention of not only business people but also the expert public. Huge amount of monetary assets and goods follow autochthonous flows, almost fully without the possibility of direct influence of state organs, regardless of the fact that the state strives to get control over all those flows. Shadow economy has highly destructive effect in its reach, among other things by influencing non-reality of total measures and instruments and distorting the concepts of economic policy by its functioning beyond or at the periphery of the current economic system.

Estimates of the scope of shadow economy show that it represents a significant segment of national economies. Many data point to the fact that shadow economy is not only proportionally big in some countries, but that dynamics of its growth are faster than the growth of national economies. Shadow economy represents a field in which it is difficult to collect information that could be processed systematically and analytically. Its participation in gross national product is estimated at a rate from one to 40%. This phenomenon is increasingly present and remains to be clarified.

3.2. Subjective causes

The group of subjective factors of tax evasion includes egoism and aspiration to gain profit, tax morality, inexistence of consciousness of justifiability of tax and conception of fairness of fiscal system.

Subjective factors, observed as a whole, offer true image of motivation of taxpayers to avoid either a part or the total amount of tax obligation. This issue was much considered by financial psychology, which does researches on the consciousness of population, tax mentality and tax morality and their reverse influence on financial and tax policy.[13]

[12] D. Popović, ibid., p. 456.

[13] G. Schmölders, ibid., p. 49.

Basically, tax evasion can be explained by human egoism. By tax evasion, one tries to avoid obligatorily payment for which there is not a certain counter service.[14] As a basis of tax evasion, there is an aspiration to gain profit and get wealthy. A frequent case of tax evasion involves the persons who make efforts to enlarge their wealth above the level unavoidably necessary. This means that they have profiteering motives of enlarging their income, accumulating their wealth and other motives to get rich, as an expression of individual aspirations and interests. Aspiration to become rich is without limits. It drives an individual to perform various jobs and activities, often socially dangerous and incriminating in character, such as avoiding paying tax.

A considerable number of persons avoiding tax paying are materially well-off, which leads to the conclusion that tax evasion is not often done in order to keep the necessary resources of existence for oneself, but to fulfill the aspiration to become rich. Human egoism should be channeled by fiscal policy measures in such a way as to achieve the interests of both the state and taxpayers, as much as possible.

Tax morality also has certain influence on tax evasion. Ethical relation towards the obligation of paying public revenues is different in different states. Tax morality of one nation depends on historical circumstances in which it has originated, including tradition and mentality, as other characteristics of that nation. It makes a part of complete morality of each individual taxpayer and it is determined by the relation of a taxpayer towards his tax obligation. Tax morality is also a part of total morality of one society, and it reflects in the relation of social environment towards taxpayers committing tax-related crimes.

Some authors quote that tax morality is relatively high in Scandinavian states, in the Great Britain, USA, Germany and Switzerland, while high tax morality is not common in France, Italy and Spain. Efforts to avoid tax paying are especially expressed in the Near and Far East, in South America and some African countries.[15] Such claims are supported by statistical data. However, it is difficult to draw some general conclusions from these data on inclination or non-inclination toward paying of public revenues, since this also varies within one country when compared by regions.[16] In addition, starting from incrimination of tax evasion that exists in countries with high tax morality and from very severe penalties prescribed by the law, these claims are doubted.

In Serbia, the degree of tax morality is unsatisfactory. To break a regulation according to which tax, customs duty or some other public revenues should be paid is not considered a big crime from the aspect of morality, both individual and collective. On the contrary, a taxpayer who manages to avoid paying pub-

[14] W. Honemann, *Das verhältnis znjischen der defraudation der Zölle und Verbrauchssteuern und dem Betruge, nach deutschem Reichsrecht*, Berlin, 1894, p. 334.

[15] B. Jelčić, ibid., p. 181.

[16] A. Perić, *Finansijska teorija i politika*, Beograd, 1971, p. 209.

lic revenues considers he is much more successful, very often he is considered successful by the society as well. Public attitude towards breaking regulations is much more lenient in cases of tax-related regulations than considering many other regulations. Tax evasion is often regarded with sympathies. The public does not condemn tax evasion adequately severely due to widespread opinion that no one is directly damaged by it. In some cases, tax evasion is not even considered an obstacle for political and social promotion and advancement.

One of the causes of tax evasion lies in the fact that certain taxpayers do not have sufficiently formed consciousness on that their expenditures on behalf of taxes are justified, since this is how budget costs of general character are financed, from which they also have indirect benefit. The sense of a taxpayer that he would suffer uncompensated damage in his business activity through non-payment of tax without the right to counter-service is of greater influence on his behaviour than the consciousness about the necessity of functioning of state.

The attitude on fair distribution of taxes among various taxpayers also influences tax evasion. Taxes must be fair. It was Thomas Aquinas who mentioned "fair basis" as obligatory assumption of every taxation, and if it is not fulfilled according to the principle of natural law, a taxpayer is given right to refuse to pay tax.[17] It is impossible to lay taxes on someone and to have him satisfied, but feeling that tax is unfairly distributed contributes to the increase of resistance towards its payment.[18]

3.3. Favourable conditions for tax evasion

The following appear as conditions for tax evasion: poorly organized prevention against this manifestation, insufficient expertise and quality of equipment of tax administration, insufficiently worked out and developed economic and legal systems, lack of mobilization and activation of public opinion to suppress this manifestation, vague and insufficiently worked out tax regulations, inadequate punishment of individuals who avoid tax paying. These are the factors of efficient prevention and suppression of this manifestation, so the lack of their effect represents a favourable condition for its performance.

Tax evasion is influenced by the expertise of tax administration officers, as well as by the efficiency of control, determination and collection of taxes. If these factors represent more serious obstacle in taxpayer's efforts to evade tax, there will be less tax evasion of course. When the attitude towards tax administration is negative and when the administration is in hard financial circumstances, then, as a rule, there is an increase of tax evasion.

The expertise and efficiency of work in its discovering have considerable influence on tax evasion. The efficiency of penal policy considerably contrib-

[17] G. Schmölders, ibid., p. 85.

[18] D. Popović, ibid., p. 451.

utes to decrease of this manifestation. When a taxpayer is presented unpleasant experiences of his colleagues because of sanctions for tax evasion, this can make an influence on him to recede from the intention to evade tax.

Tax evasion is also influenced by frequent amendments of regulations in the field of public income, as well as by the economic activity as a whole. If the regulations are not clear, if they are mutually opposing each other, with many legal gaps, economic subjects would not accept them since they interfere with the development of their business activities.

4. Manifesting forms of tax evasion

There are various manners to evade tax. Competent authorities should be very well acquainted with them in order to take efficient measures to suppress them. These manners are quickly changing and are very difficult to discover.

Tax evasion is not planned. Business people plan illicit business deals in order to gain more profit. Illicit business deals represent a source of quick accumulation of capital, which is later on invested into legal business deals. Persons involved in tax evasion often enjoy the support of state administration, police and politicians, which enables them to do their activities without being disturbed, since they are protected. These persons use falsified documentation, present false financial statement, false annual balance sheets, and fictitious stocks.

4.1. Tax evasion in Serbia

The most various forms of tax evasion can be found in practice. In Serbia, the field of tax evasion is rather wide and includes all moments that can be determined as opportunities to avoid paying taxes, and they are present in all forms of economic activities. It is hard to determine which kind of public income is evaded most frequently. There is an evasion wherever there is an opportunity for it. It can be stated that non-payment of payroll taxes is rather widespread among private employers.

There are huge possibilities for tax evasion when cash payments are made, especially among physical persons. There is a considerable tax evasion on this basis in Serbia in the field of entertainment. The entertainers are often paid for their services "in private", since they collect the proceeds from their concerts and other manifestations in cash both in the country and abroad, and thus avoid registering that income on their business accounts.

The possibility for tax evasion in Serbia exists also for the income gained from some property. These include income from renting rooms, flats, business premises. Considering that a considerable number of people do not own flats, they are forced to rent them and pay high rents. However, their property owners rarely report such

income for taxation. This is characteristic for cities where there is a concentration of workers and students, as well as in tourist places. Tenants are forced to make common cause with their property owners regarding tax paying, since they could be faced with one-sided termination of renting contract.

Property tax does not cover a considerable number of taxpayers. Tax administration does not have neat records on the owners of taxed property. This is particularly the case with rest and recreation facilities. There are estimates that one quarter of property in Serbia is not covered by taxation.

The field of transfer of absolute rights also offers particular opportunities for tax evasion. When concluding a contract on the transfer of absolute rights, the lower amount of price is often stated. There are also cases that the contract is concluded and transfer of absolute rights to the buyer completed actually, but the transfer is not reported to tax administration for taxation.

Huge scope of tax evasion is also noted in the field of construction services. In the few recent years, there has been a considerable number of family buildings and weekend houses built. The completely new housing projects have been made. The income earned by their construction has not been covered by taxes.

The evasion of taxes on turnover and excises is made in that taxpayers hide the quantity of manufactured or sold goods, or the scope of performed services, while the evasion of taxes on enterprise profit and income of physical persons is frequently made by increasing material costs by false invoices, which decreases the tax bases.

4.2. Tax evasion in the European Union

The countries of the European Union are also facing tax evasion, especially concerning value-added tax (VAT). Tax evasion is possible in case when purchase of products from other member-countries is not reported, or when a purchaser does not record purchase of products from other member-countries. In this case, the products are sold at the black market, avoiding paying not only the value-added tax but also the corporation tax.

When VAT in one member-country is lower than in the other, the product is purchased at the lower tax rate, and the purchase is reported as if it was made from the domestic seller. In this way the taxpayer – buyer gets the right to lower his tax obligations to the amount of reported, allegedly paid VAT at the higher rate.

One of the ways to avoid paying VAT within the EU is present when the return of the allegedly paid tax according to higher rates for false delivery of products into another member-country is required.

Discovery of the stated forms of VAT evasion is especially made more difficult when a tax payer – buyer from another member-country – presents that the products were delivered into a third country outside the EU, or when the delivery is presented as chain-like, including several countries.

4.3. Smuggling

New forms of distribution of goods and new business connections are constantly appearing, all with the ultimate aim to avoid paying taxes. In the recent decades, there was a considerably widened possibility to smuggle goods by massive use of airplanes, helicopters, submarines, motor boats, cars and other technical devices. Speed and maneuvering capabilities of these devices are increasing every day. Improvised airfields and ports are often used to transport goods from one place to another or from one country to another, even from one continent to another, avoiding paying taxes at that. Great mobility of people makes it impossible, or at least makes it considerably difficult to have thorough control at borders. In addition to this, and with the aim to develop tourism, many countries have made their customs control easy to the maximum, creating thus greater opportunities for tax evasion.[19] The possibility for smuggling goods is greater as the size of the taxable goods is smaller and their value greater. The same refers to the products that are less susceptible to damaging and more suitable for transport. The most frequently smuggled goods are objects made of precious metals and stones, coffee, tobacco products, narcotics, weapons, perfumes, various decorative objects and clothes…

5. Consequences of tax evasion

Consequences of tax evasion are both the unfavourable fiscal effects and repercussions on economic-political and social-political level. The existence of a considerably large scope of tax evasion and non-payment of other public revenues causes consequences that can be very serious in their significance for the given national economy. Spreading of this phenomenon raises questions regarding economic justice and equality, economic policy and economic efficiency.

The problem of economic justice and equality, or the problem of social differences, is especially important in the policy of dividing the burden of tax paying. The fact that some individuals make profit for which they do not pay taxes influences the level of public revenues, because of which the rates of taxes for legal activities must be higher than it would be the case if all the individuals making profit by production of goods or rendering of services were covered by taxation. The individuals who avoid paying taxes and other public revenues use the services of public administration, educational, health and other institutions, which are financed from the budget and funds for social insurance. If the public revenues decrease, the difficulties considering realization of planned level of public revenues increase and the financial condition of the state becomes worse.[20]

[19] B. Jelčić, ibid., p. 182.

[20] M. Kulić, *Poreska utaja i krijumčarenje*, Beograd, 1999, p. 227.

Tax evasion disturbs division of income in relation to goals that the society wishes to achieve. This phenomenon, furthermore, creates difficulties regarding exact definition of values necessary to determine economic policy or in other words to carry out appropriate economic measures and instruments. It diminishes, in some cases even drastically, the income of the state fisc. In addition to this, since this phenomenon penetrates the overall economy, it prevents the bearers of economic policy to have the exact image of what is going on in the given national economy, which leads to impossibility to achieve certain tasks and measures in the jurisdiction of the state within the planned scope.

It is impossible to determine with certainty the scope of tax evasion. Due to the fact that considerable quantities of goods are manufactured and services rendered that are not included statistically, it is quite certain that gross domestic product of a country is much higher than presented by the official data.

Under the conditions of increased tax evasion, there is a wrong picture when determining the official unemployment rate. The persons who are employed in hidden economy are registered as unemployed, while they actually earn revenue, which means that the unemployment rate is lower. In addition, this phenomenon may lead to distorted image when measuring the inflation rate since the goods, which are not officially included by taxes, are sold at lower prices, so that the measured inflation rate can be higher than the realistic rate is.

When there is a lack of certain kinds of goods at the market, the state introduces control prices and rationalizes consumption by the measures of economic policy. However, it is unavoidable in such a situation for smuggling of such goods to appear, which is sold at higher prices, so that the official price index is considerably lower than the real one. Under such conditions, the economic policy measures based on official statistic data can be wrong or inappropriate to the actual condition of national economy.

The increased trade in goods that is not included in payment of public revenues can lead to disturbances in monetary policy if the increase of the money supply would be adjusted only to officially determined growth of domestic product. The level of money supply would then be low so and could not meet the requirements of the overall national economy.

Tax evasion influences considerably the weakening of economic basis of a society, which further causes social differences that lead to great discontent of citizens, social tensions and disturbs interpersonal relations. A new class of the so-called 'newly-created' businesspersons is being created in Serbia today. They are growing rich often through tax evasion.

6. Discovering and suppressing tax evasion in Serbia

Activities on discovering and suppressing tax evasion can be efficient only if they are permanent, planned and based on scientific achievements. The ways of fighting tax evasion so far have not given satisfactory results because they were not sufficient for more radical suppression of this negative phenomenon. This battle must be conducted on a wider plan and with the engagement of all social factors, primarily to remove those factors that cause and condition its existence.

6.1. Preventive measures

Tax evasion causes economic and social damage to a society, and the state must respond in the appropriate manner. The state must rationally plan the measures to be taken at a certain point of time. Operational level, technical equipment, expertise and specific qualities in organization and method of operation of institutions working on detecting this phenomenon must be shown at that. The efficient detection and publishing of serious cases of tax evasion would give positive effects at the level of general prevention.

The fight against this phenomenon must be led at the field where material basis of a society should be raised to the level that would enable satisfaction of material and spiritual needs of citizens and improvement of all living conditions. It is necessary to work on rising of consciousness and building of general culture.

Social moment also influences tax evasion suppression. Due to the overall economic situation in Serbia, there is a part of population forced to engage in trade in goods and services in an illicit manner in order to provide minimum existence to their families. This includes refugees, the unemployed, workers on forced leave of absence and other persons who do not have permanent income. These are the reasons why the state is sometimes benevolent towards this phenomenon.

As far as preventive measures are concerned, it is most important to improve fiscal system in the direction of its being adapted to the measures of tax policy and system of collection of public revenues to the economic capabilities of taxpayers. In addition, the resistance towards the obligation of paying public taxes should be alleviated by reducing the burden into more reasonable framework. This can be achieved by expanding the basis to which public revenues are calculated and collected and by lowering their rates.

In Serbia the level of tax discipline is not still sufficiently built, because of which the state cannot objectively provide the efficient control of earning income by taxpayers. This is why it determines high tax rates in order to get as much as possible from taxed income, while a considerable part of income remains untaxed. Prescribing high rates has a negative influence on taxpayers because

the high rates force them to hide a part of their income. The tendency should be to make them moderate, and to find such a system of control that would make it impossible for the citizens to hide their income. In time, this would contribute to create a required level of tax-related discipline among the citizens of Serbia.

Many circumstances influence taxpayers not to pay public dues. The degree of possibility whether such a taxpayer would be discovered or not also influence this. The conduct of a taxpayer who does not pay taxes depends also on the conduct of tax authorities. The relation between them may be based on conflict or cooperation. Talking about tax evasion, Frank Cowell states that he sees the game of cheating on tax authorities as a "game of cat and mouse" or as a chess game between tax authorities and taxpayers. If a taxpayer would make a move "I do not cheat", tax authorities would play "We do not investigate". However, if it were known that tax authorities will not make a move "We do not investigate", taxpayers would like to cross on the cheating side. The government has the role of a "leader" through its instrument – tax authorities – and taxpayers are set as disobedient followers. Cunning taxpayers monitor watchfully the conduct of tax authorities and respond accordingly.[21]

It is necessary to put an obligation to taxpayers to register all transactions in their business books and to do their transactions through banks and other institutions of payment operations, which would make it possible for tax authorities to have an insight into the data important to determine public revenues. A taxpayer will not register his income if he estimates that he would not be discovered.

In addition to this, the regulation according to which taxpayers are obliged to register all income from products sold or services rendered in their fiscal cash registers should be fully carried out. The analysis of developments of advance payment of turnover tax in the period before and from the beginning of registering turnover by fiscal cash registers there can be noted a slight tendency towards the increase of advance payments of turnover tax. Before the turnover was registered by fiscal cash registers the lowest amount of paid turnover tax, which is calculated and paid once in two weeks, in the period from April 06, 2004 to June 20, 2004, was 3.044.771.121 Dinars (for the accounting period from April 21, 2004, to June 05, 2004), and the highest amount was 3.845.976.778 Dinars (for the accounting period from May 21, 2004, to June 05, 2004). After the beginning of registering turnover by fiscal cash registers, the lowest amount of paid turnover tax was 3.465.486.383 Dinars for the period from June 21, 2004, to November 05, 2004, (for the accounting period from June 21, 2004, to July 05, 2004), and the highest amount was 4.528.085.117 Dinars (for the accounting period from October 06, 2004, to October 21, 2004).[22]

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[21] F. Cowell, *Cheating the government: the economics of evasion*, London, 1990, pp. 122-123.

[22] The data have been given based on the records of the Treasury Department of the Republic of Serbia – Tax administration.

Introduction of VAT has created more possibilities for more efficient prevention of tax evasion when taxing trade of goods and services than it used to be the case with turnover tax in end-user consumption. As far as VAT is concerned, tax authorities can monitor the stages of trade in goods by invoices. The seller and the buyer of goods have confronting interests. The seller's interest is to show in the invoice as low selling prices as possible in order to lower his tax basis. The buyer's interest is to show in the invoice as high a price as possible in order to have as high a tax deduction as possible. In this way taxpayers control each other, so there is less probability for false invoices. This also increases the possibility to control corporation tax.

6.2. Repressive measures

In the effort to prevent tax evasion, the states undertake various preventive measures. However, in spite of these measures, the states are forced to undertake repressive measures also. Illicit conduct of taxpayers is qualified as economic offences and violations, while the most serious cases are incriminated as crimes. The legislator in Serbia has given contribution to suppression of this negative phenomenon by criminal law protection of public revenues. The Law of tax procedure and tax administration[23] states the crimes protecting public revenues. Articles 172 through 176a include six tax-related crimes, as follows: avoiding to pay tax (Article 172), non-payment of tax after deduction (Article 173), making or submitting counterfeited document important for taxation (Article 174), endangering tax collection and tax control (Article 175), illicit trade in excise-covered products (Article 176) and illicit storage of goods (Article 176a).

In the period from January to September 2004, tax police brought 557 criminal charges against 614 persons who committed 688 tax-related crimes to competent district attorney's offices. According to these charges, tax obligations to the total amount of 2.384.859.424 Dinars were evaded. Excises were evaded to the amount of 23.945.793 Dinars, turnover tax to the amount of 1.452.612.981 Dinars, corporation taxes to the amount of 18.958.272 Dinars, while the tax after deduction was evaded to the amount of 889.344.376 Dinars.[24]

It should be pointed out that causes of tax evasion are beyond real power of institutions dealing with its detection and suppression, and it cannot be expected from these institutions to solve this social problem. It is necessary to create such a state of consciousness of taxpayers that they must fulfill their obligations completely, not because of the threat of sanctions, or referring to patriotism, but because of the belief that the only right way is to fulfill one's obligations fully. Tax

[23] Law of tax procedure and tax administration was published in "The Official Gazette of the Republic of Serbia", no. 80/02, 84/02, 23/03, 70/03 and 55/04.

[24] The data are quoted based on the records of the Treasury Department of the Republic of Serbia – Tax administration.

morality cannot improve in an isolated manner or independently from the general state of morality, regardless of the society in question. The society in Serbia shows passivity regarding education of taxpayers and creation of appropriate tax morality.

As a rule, those committing tax evasion are experts or have expert advisors. Due to this, officers dealing with detection of these cases must constantly improve their knowledge by reading new regulations, studying the ways of tax evasion and in all other ways. The cooperation between all agencies involved in suppression of this phenomenon must be established. Stricter penal policy measures would also contribute to suppression that is more efficient. The judicial practice of mild penalties for illegal tax evasion should be changed. There is an opinion that stricter control opposes the principle that control authorities should not disturb taxpayers. However, there is an argument against this remark that "honourable people should not be afraid of gendarmes".[25] However, no matter how much criminal legislation is rigorous, it cannot suppress tax evasion alone. The policy of fighting this phenomenon must include preventive dimension as well.[26] Synchronized preventive and punishing measures, complete with appropriate stimulating measures of fiscal policy, can give much better results in prevention of tax evasion.

7. Conclusion

Taxpayers in all countries have negative attitude towards their obligation to pay taxes. Such an attitude results from the very nature of taxes. Contrary to the stated attitude, the aim of the state is to provide that taxpayers fulfill their obligations to the state budget, which is also provided by coercive measures of the state power. Tax paying objectively means deprivation of a part of income or property, which diminishes the economic power of taxpayers and can lead to changes in their social position. Unfavourable economic impact that taxpaying has on a taxpayer creates also certain resistance towards this obligation. This creates also the effort to annul the undesired effects, or to decrease their intensity.

Taxpayers make efforts to decrease the basis used for calculation of their tax obligation in the desire to keep larger part of income and to increase their capital more quickly and more easily. In practice, they find weak points in regulations, which enable avoiding tax paying. Taxpayers find ways to minimize their tax obligations. First, they tend to avoid tax paying using legal gaps. In this way, they diminish income to the budget in an allowed manner. This way of avoiding tax paying can be prevented by upgrading fiscal regulations. In addition to the stated

[25] A. Perić, ibid., p. 209.

[26] D. Popović, ibid., p. 464.

manner, taxpayers avoid paying taxes in an illicit manner, which is carried out by breaking the rules according to which the tax is introduced.

Tax evasion represents a serious social problem. It corrodes economic basis of a society and causes disturbances within the economic system, which became prominent especially in former socialist counties that created economic chaos under the disguise of quick economic reforms, creating at the same time favourable conditions for tax evasion. This further unavoidably led to corruption and other crimes at a large scale.

Payment of public revenues in Serbia was largely avoided, which was connected with complex social processes and transformations that manifested in changing of social structure, system of values, and way of life, opinions and demenaour. This process of social transformation was especially obvious after the disintegration of the Yugoslav state. The consequences of these changes reflected in the manifestation of new institutions and authorities. The conditions were created for greater freedom in enterprising activities. Many of these changes led to social progress and they had to be accelerated. Unfortunately, these changes also deepened some negative phenomena, tax evasion being one among them.

Tax evasion is present in all fields of economic activities. This phenomenon represents one of the main causes of great economic stratification among citizens of Serbia, with all social and political consequences accompanying it. However, tax evasion is not specific for Serbia only, but it exists to some extent in all contemporary states, regardless of the differences in economic development and arrangement of economic and political system.

Every state incriminates in its positive legislation certain activities people engage in to avoid paying public dues. They are ascribed the character of socially dangerous activities, the commitment of which entails sanctions. The states form special institutions, which undertake various preventive and repressive measures in their fight against tax evasion. These institutions are authorized to discover tax evasion and those committing it and to bring criminal and other charges against them, as well as to undertake other prescribed measures. However, contrary to legal regulations, not enough attention is paid in practice to detection, prosecution and punishment of perpetrators of this negative phenomenon, because of which a considerable number of tax evasion cases remains undisclosed and unpunished.

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Expert article

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ECONOMIC INSTRUMENTS IN ENVIRONMENTAL POLICY AND LAW WITH A SHORT REVIEW OF SERBIA AND MONTENEGRO

Abstract: *In implementation of contemporary environmental policy, the pollution costs are considered a part of production costs and services of polluters. It has been an internationally accepted rule that the pollution costs are to be borne by the polluters and the income gathered in such a way should be used for environmental protection. As for Serbia and Montenegro, there is a legal basis to follow the contemporary trends in applying the economic instruments in environmental policy and law. However, the application of these instruments in practice has been limited by a relative economic and technological underdevelopment.*

Key words*: environment, environmental policy, pollution costs.*

1. Introduction

A traditional approach to classification and interpretation of contemporary management instruments in the environmental field according to which they are categorized into two relatively firmly polarized groups – those of primarily economic character and those of primarily 'command-control' and administrative character – has not been firmly based in contemporary environmental policy and law for long. Such a classification can be considered outdated not only because of methodological reasons but also (and primarily) because of essential reasons. These essential reasons result mostly from prevailing conceptual attitudes on causes and consequences of environmental problems, as well as from possibilities to solve them under the circumstances of the existing economic surroundings.

The knowledge and practice that showed definite and absolute inter-dependence of economic and social aspects of environmental problems had a consequence at the political level in the form of orientation towards integral approach

to environmental policy and law as the only possible response to contemporary challenges in this field. This is why the implementation of any environmental policy instruments is inconceivable today, even those that belong to the category of economic instruments, without considering social, technical and technological and other dimensions or the environment-related problems. This refers also to legal aspects of system functioning in the field of environmental policy as a sub-system of legal and political system of each state, or sub-system of international legal system of the global international community.

The application of economic instruments in environmental policy is not possible without their appropriate legal foundation in the same way as the application of appropriate purely administrative instruments (in the form of prohibitions, limitations, licenses) is impossible without the application of the entire set of other instruments among which economic instruments take a special place. An integral approach to the achievement of the goals in the environmental field means a synchronized and almost simultaneous application of various and mutually supportive instruments. This is particularly important if we start from the fact that general goals of contemporary environmental policy and law can be considered the goals referring to viable development, regardless of all problems regarding how to determine certain elements of such a widely defined concept in more detail. The basic guidelines of this concept are the integration of goals of environmental policy into all relevant sector policies and so-called inter-generation equality with the focus on the rights of future generations.

The similar situation is with the realization of the right on healthy, appropriate, pleasant and adequate environment. From purely legal aspect, this right is most often taken as a basis for understanding of the environmental policy goals within the context of universal values and human rights.[1]

2. Basic conceptual postulations

Since the time in the early 1970s when economic instruments in the environmental field[2] were used sporadically and only in a few cases, there has been

[1] T. Tietenberg sees the basis of so-called 'full-cost' principle in the postulation that humankind "is entitled to reasonably safe and healthy environment." T. Tietenberg, *Environmental economics and policy*, Colby College, 2004, p. 450.

[2] In the contemporary literature dealing with economic instruments in the environmental field, economic instruments are classified variously. For instance, they can be as follows: ecological tax instruments in a narrow sense (taxes on emission, taxes on products and taxes on inputs, where differentiated taxation is particularly underlined), ecological tax instruments in a wider sense (charges for the use of commonweal, charges for pollution of air, water, soil, waste, high noise, unpleasant smells, charges for products such as mineral oils, plastic bottles, tax alleviations), subsidies (Pigovian subsidies, indirect subsidies, production subsidies and non-ecological subsidies), deposit return system, transferable license market, taxes

an important shift in conceptual elaboration and understanding of their essence and character. The role of economic instruments has risen considerably at several levels. Although we should be careful when drawing final conclusions, the estimate is that the use of economic instruments in order to protect the environment has been growing considerably in the OECD countries[3] in the last decade of the 20th century. As for user taxes of 1970s, through taxes and charges for the emission of harmful gases of 1980s and stimulating taxes of 1990s, the OECD and EU countries have today approached the concept of integrated instruments and reform of the entire eco-tax system.

The growing role of license trading in the ecological field has also been noted. The ultimate goal is for the environmental policy and management in this field to achieve more efficient and more cost-effective results,[4] both at macro and micro level.

In contemporary literature the discussion on economic instruments in ecology are often simply reduced to financing of improving its quality. Although these are very important issues, the application of economic instruments in the field of ecology represents a more complex system and it certainly cannot be reduced only to the matter of financing in this field. The application of economic instruments penetrates partially the very essence of the economic system of a country and the relation towards these issues is of a wider system importance. This comes from both the versatility of economic instruments and their connection

on disrespect of ecological standards and ecological taxes, administration taxes. G. Popov Ilić, *Ekološki porezi*, Centar za publikacije Pravnog fakulteta, Beograd, 2000, pp. 77-219. Similar reasoning is present in: S. Stec, J. McNicholas, M. Marković, *Environmental Taxes in an Enlarged Europe – An Analysis and Database of Environmental Taxes and Charges in Central and Eastern Europe*, Szentendre, The Regional Environmental Center for Central and Eastern Europe, 2001, p. 27.

[3] There are some data that might also be interesting to this respect. For instance, the following among the OECD member-countries had the greatest share of environment-related tax income in GDP in the period from 1994 to 2001: Denmark, Greece, Portugal, Turkey, the Netherlands and Italy. The greatest increase in environment-related tax income in the mentioned period was registered in Korea, Turkey, Denmark, the Netherlands, Austria and Switzerland, while Greece, Ireland, Slovakia and Portugal recorded a considerable drop of their share. The greatest per capita raise of environment-related tax income in the period from 1994-2001 was recorded by Denmark, Norway, the Great Britain, Luxembourg, Finland, Austria and Korea. The data indicating the share of certain types of environment-related tax income are also interesting. Thus, the share of taxes on motor fuel and motor vehicles in income is the greatest, while the share of taxes on fuels used in heavy industry (as a big polluter) is relatively small. Also, a certain rise of income from charges related to waste management has been recorded. *Environmentally Related Taxes Database*, OECD, www.oecd.org.

[4] Starting from the criteria that it is possible to measure the efficiency of economic instruments, it is possible to make a separate classification: taxes aimed at covering ecological costs (for instance user taxes in case of water supply), stimulating taxes (shaped in order to influence contemporary manufacturers, consumers, etc.) and fiscal ecological taxes (shaped primarily in order to increase income). *Environmental taxes*, Copenhagen, EEA, 1996, p. 6.

with other economic measures within the economic policy and from the wider connection of goals of environmental policy with the goals of economic policy. It starts from the attitude that a wise use of economic instruments in the environmental field can improve the changes in resource allocation in the direction of the behaviour that is closer to the requirements of viable development and closer to enable the cost-effective achievement of environmental policy goals.

Several other system issues also influence the issue of relations and mutual conditional quality of economic instruments and wider economic policy. The issue of property rights can be considered crucial, especially the issue of property rights over natural resources.[5] Related to this are also the issue of responsibility for environmental damages and the condition of capacities that should provide for the respect of legal principles referring to responsibility. The issue of the existence of public monopolies as circumstances that can considerably influence certain economic instrument mechanisms in environmental field is also important.

Economic instruments, as the most important devices of contemporary environmental policy, are aimed at influencing the change in behaviour of companies. This is why one of the major differences between economic instruments and traditional regulatory instruments is that economic instruments are aimed at initiating marketing approach in achieving the environmental policy goals. Two basic functions of economic instruments in the contemporary environmental policy are considered undisputable: the function of stimulating the company behaviour that is in accordance with the environmental requirements and the function of increasing income in order to concentrate financial resources for investments that are aimed at solving priority environmental problems and improving the environmental quality in general.

From the conceptual point of view, the use of economic instruments increases the state budget income, which creates the conditions to increase investments in the environmental field. This creates assumptions of certain changes in allocation of resources required for achieving the goals of viable development in the direction of activities that are economically attractive and environment-friendly at the same time. For instance, the income from taxes on emission may be used as subsidies for manufacturers who use the alternative energy sources in their production. In addition, the application of economic instruments may have positive effects on innovative and competitive qualities of some companies and the society as a whole, by raising the price for pollution and use of natural resources. This contributes further to the development and introduction of new technologies that are more environment-friendly, as well as to decrease of diffuse

[5] This issue, as far as the countries in transition are concerned, is identified within the recommendations of the UN Economic Committee for Europe as the first systemic issue important for the application of economic instruments in the environmental field. *Recommendations to governments of ECE Countries in transition on the application of instruments for better integrating environmental policy with sectoral policy*, ECE/CEP/45, 16 May, 1998.

sources of pollution. However, in connection with the application of economic instruments, in addition to purely ideological or quasi-ideological disputes, certain more specific questions are often asked. One of them that is probably of the deepest economic and generally philosophic sense and foundation is the question of the influence of economic instruments on market pattern 'disturbing', or the objections to non-existence of market neutrality of economic instruments in environmental policy and law. Here we also have the issue of total efficiency of application of economic instruments, especially the influence of economic instruments of environmental policy and law on the market competitiveness.[6]

Regarded generally, economic instruments in environmental policy should be considered within the context of basic principle of contemporary environmental policy and law. Some of the principles are especially important: the polluter-pays principle, the user-pays principle, the principle of integrality, the principle of viable development, the principle of prevention, the principle of precaution, the principle of polluter's responsibility and the principle of common but different responsibility.

The application of polluter-pays principle should provide for the conditions for allocation of costs of prevention and environmental control measures. The goal of its application also is to instigate the rational use of resources and contribute to avoiding of disturbances in the international trade and investments. It has been determined that the polluter should bear expenses of implementation of measures (prevention and control of pollution) that were determined by the authorities in order to provide for the living environment to be in an acceptable condition. In other words, the costs of undertaking such measures should find their place in the costs of products and services that pollute in the course of their production or consumption.[7] The first document that explicitly referred to the polluter-pays principle was the OECD Council Recommendation on guiding principles that refer to the international economic aspects of environmental policy of 1972. The EC included the polluter-pays principle in one of their documents in 1973 for the first time ("The First Action Program in Environmental Policy"), and two years later the appropriate recommendation to member-countries was adopted to undertake certain measures at the national level related to this principle. This principle, as one of the basic principles of the EC policy, found its place in the EU Agreement from Amsterdam (1997). The Article 174 of this Contract states that the basic principle of the EU environmental policy is the principle of precaution, the principle of preventive action, the principle that environmental damage should be corrected at the pollution source and the principle that polluter pays.

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6 For more details, see OECD study: Environmental taxes and competitiveness: and overview of issues, policy options and research needs, COM/ENV/EPOC/DAFFE/CFA (2001) 90/ FINAL, 11 June 2003.

7 J. P. Barbe, "Economic instruments in environmental policy: Lessons from OECD Experience and their relevance to developing economies", OECD, *Technical Paper No. 92*, January 1994, p. 5.

It is clear that the polluter-pays principle is aimed at leading to situation when costs of production and services would reflect their complete costs (production costs and environmental costs). The fact that industry releases pollutants into the environment means that environmental resources are used as production inputs or factors. In case that the environmental resources are not valued adequately, it is clear that it would lead to their long-term degradation, destruction and loss. The lack of adequate environmental resource price is economically the cause of environmental pollution and degradation. In other words, the main purpose of the polluter-pays principle is to provide for the economic system to express also the price signals referring to environmental costs. It should take into account at that, that polluter-pays principle is not the only principle enabling the internalization of costs. It is possible that polluter uses certain subsidies for undertaking control measures and under these circumstances the environmental costs are borne by all taxpayers collectively. In addition, it is possible to have a situation where the victims of pollution pay the polluter directly in order not to be polluted. In both cases certain (or all) environmental costs are made internal, but not at the level of polluter but according to the principle that is often called victim-pays principle.

The described situation referring to understanding of the essence of the polluter-pays principle, as well as the practice of its application, opened certain issues the clarification of which should contribute to further precise the place and role of economic instruments in the environmental policy. One of these issues refers to the scope of costs of pollution control that should be borne by a polluter, especially as far as the relations between countries regarding the environmental damage are concerned. The opinion is that countries in practice do not support fully and without reserve the attitude that the polluter is liable for all pollution costs, especially concerning the damage to the environment of another country (Chernobyl accident, Convention on the Rhine of 1976, etc.), where this principle overlaps with the principle of limited liability for the environmental damage as one of the principles of the international environmental law. Within national boundaries, the polluter-pays principle includes the costs of measurement performed by public authorities in order to prevent and control pollution, but it is unclear whether it includes the costs of decontamination, cleaning and re-establishing of the original condition in cases of pollution.[8] The other question related to the polluter-pays principle that can be posed refers to exceptions to the principle, especially regarding the provision of subsidies.

In addition to the documents passed within certain international regional organizations (such as the OECD, the EU), many international documents of global character appeal explicitly and in various manners to the need of adequate introduction, monitoring and improvement of application of economic instruments in the environmental policy and law, including the provisions refer-

[8] P. Sands, *Principles of international environmental law*, Cambridge University Press, 2003, p. 285.

ring to the polluter-pays principle. The Rio declaration on the environment and development (1992) in its 16th principle elaborates the obligation of states related to the polluter-pays principle in the following manner: "National institutions should make efforts to improve including the environmental protection costs in the system of calculation of costs and use of economic instruments, taking into account that in general the polluter should bear the costs of pollution consequences with due respect of public interest and without disturbing the international trade and investments."[9]

As for the international conventions in the environmental field, it can be said that all concluded in the last fifteen years contain certain provisions that refer to the place and role of economic instruments in achieving the set goals in certain areas and the environmental policy. Within this context, some of them explicitly refer to the polluter-pays principle or point to it indirectly (Convention of readiness in case of oil pollution of 1990, Alpine convention of 1991, The Convention on trans-border effects of industrial accidents of 1991), The Convention on protection of the Baltic Sea of 1992, The Convention on protection and use of trans-border water streams and international lakes of 1992, Convention on cooperation in protection and viable use of the Danube river of 1994, Energy Charter – Agreement from 1994). Some international conventions qualify the polluter pays principle as "the general principle of the international environmental law", with all implications that such a place a principle may take within inter-state relations regarding the environmental issues.

Economic instruments in the environmental policy and law take a special place in the part of the international conventions that regulate the issues of exploitation and protection of some natural resources, especially biodiversity. Accordingly, those with probably the widest range are the following: Convention on swamps of the international importance, especially as residence of swamp birds (1971), Convention on protection of world cultural and natural inheritance (1972), Convention on the international trade of endangered species of wild flora and fauna (1973), Convention on preservation of migratory wildlife (1979), Convention on preservation of European wildlife and natural residences (1979), Convention on biodiversity (1992).[10]

Also, it should take care of many other international multilateral environmental agreements where the exploitation of certain resources appears as somewhat more complex forms of exploitation, degradation and protection of air, ozone, climate, water resources, sea or as waste management: Convention on trans-border pollution of air at large distances (1979) with eight protocols, Convention on the sea law (1982), Viennese Convention on protection of ozone

[9] D. Todić, V. Vukasović, ed., *Ekonomska kriza u svetu i odgovor međunarodne zajednice*, Institut za međunarodnu politiku i privredu, Beograd, 2003, p. 134.

[10] For the condition of some of the mentioned conventions, see: Economic instruments in Biodiversity-related *Multilateral Environmental Agreements*, UNEP, 2004.

layer (1986), Basel convention on the control of trans-border movement of dangerous waste and its disposal (1989), Convention on climatic changes (1992), Convention on the protection and use of trans-border water flows and international lakes (1992). The said international multilateral agreements most often contain general provisions and further elaboration is established either within the signatory states or within the documents adopted by the highest bodies and institutions of signatories of certain international agreements (conference of parties to the agreement, work groups, managing councils, etc.).

3. Economic instruments in the environmental law of Serbia and Montenegro

In order to be able to fully consider the state of application of economic instruments in environmental field or related to it in Serbia and Montenegro, many various factors influencing the current social, economic, technical, technological, and legal situation should be analyzed. The circumstances of many years of international isolation of the country during the civil war of 1990s, with all consequences on the condition of the environment, can be considered the most important general determinant. The existing condition and characteristics of the development of economic instruments in environmental field in Serbia and Montenegro are the reflection of the overall imppossibility to create the policy in this field adequately and set it on rational foundation. The influence of the international processes and taking over of international experiences is considerably limited by certain transition-related specific characteristics of the development of economic and legal system of Serbia and Montenegro.

The analysis of economic instruments in the environmental law of a country represents a complex undertaking that should include a wide range of relevant legal sources. Under the notion legal sources[11], which are relevant for the issues of economic instruments in the environmental field, it should consider a very wide range of laws and legal regulations in various fields, among which are those referring to various general aspects of economic system functioning (taxes, custom tariffs, foreign trade, investments, concessions, free trade zones, banking, insurance, etc.). In a somewhat narrower sense, the analysis of legal aspects of economic instruments in the environmental field would be sensible to limit to the most important legal sources

[11] This paper does not analyze the practice of application of economic instruments from both the point of view of conditions and assumptions and the point of view of potential or already existing consequences and results of application of certain economic instruments. Such analysis would require much different approach and consideration of more various circumstances existing in the practice of economic and legal system of the country. For one cross section of condition and evaluation of application of economic instruments, see: *Prikaz stanja životne sredine u Srbiji 2002. godine*, Ministarstvo za zaštitu prirodnih bogatstava i životne sredine, Beograd, 2003, pp. 23-30.

that directly regulate the issues of certain so-called sector policies, which are directly important for the environment, such as mining industry, water management, agriculture, forestry, hunting, fishing, traffic, waste management and energy supply. In each of these fields certain managing mechanisms have been determined (taxes, charges, penalties), which have financial and economic character and meaning regardless of their overall effects in the sphere of their application, even referring to the goals of the environmental protection or environmental policy. A more complex analysis of economic instruments would have to include the analysis of conditions in each of these fields respectively.

In the narrowest sense, the examination of the condition of economic instruments may be carried out only in relation to the main regulations in the environmental field, taking into account primarily the operative jurisdiction of bodies and institutions dealing with environmental issues, or their direct responsibility and possibility to create and realize the goals in this field.

3.1. Serbia

Until recently, the main legal source relevant for economic instruments in the environmental field in the Republic of Serbia was the Law on environmental protection[12] (Official Gazette of the Republic of Serbia No. 66/91, 83/92, 53/93, 67/93, 48/94, 53/95). At first sight, it could be said that this Law is based on relatively simplified conceptual assumption that the issue of financing is the central issue of the environmental policy in connection with economic instruments. This is why this Law basically determines the ways of provision of funds for financing the activities in the environmental field and the manners and conditions for their spending. Article 11 of the Law states that the funds for financing of works and tasks of environmental protection and improvement within the rights and responsibilities of the Republic, cities and municipalities,[13] are provided for in two manners: from the budget and from the charges for the use of natural wealth or common weal in general use and urban construction land.

Much detailed provisions on these issues are contained in the fourth part of the Law. It has been determined that "material and other conditions for stimulating environmental prevention and restoration measures in the Republic are provided for from the assets determined by this Law", from the following sources: charges for the pollution of national resources;[14] the assets in the budget of the Republic collected

[12] The new Law on environmental protection was adopted by the National Assembly of the Republic of Serbia (Official Gazette of the Republic of Serbia No. 135/04), but here is referred to previous law as well because of the need and possibility to compare and consider the differences and similarities.

[13] Cities and municipalities may provide for separate funds for the protection and improvement of the environment within their rights and responsibilities.

[14] The Government determines the amount and manner of calculation and payment of these charges.

from taxes on trade of pesticides, detergents, plastic packaging and cigarettes to the amount of 5% and from taxes on trade of coal, oil and petroleum products and motor vehicles to the amount of 1%; a part of assets of preliminary calculated value of facilities and works for which there is an obligation to make an analysis of influence of these facilities and works on the environment, to the amount of 1%; interests on loans; fines collected based on this Law; and other sources (Article 88).

It has been provided for that the assets collected may be joined in accordance with common requirements in the environmental field. They are paid on a separate account of the Ministry for the protection of natural resources and environment. Article 89 determines the allotment of such collected assets. These provisions are formulated widely and include monitoring of the quality condition of the environment; co-financing of equipping of expert and scientific institutions that would be given the charge of expertise in the environmental protection for the requirements of the Republic; co-financing of expert training of personnel in expert, scientific, economic and managing organizations in the environmental field that are of interest for the Republic; financing of investments that would contribute to considerable decrease of environmental pollution; as stimulation, for the elaboration of preliminary designs, applicable scientific and research projects, studies, development plans and final designs; financing of programs of protection and development of protected natural resources; financing of organized activities in prevention and restoration of environmental protection (Young Conservationists, Young Researchers of Serbia, Association of Anglers, Hunting Association, Association of Inventors, Red Cross); co-financing of publications, magazines and advertising activities in environmental protection and improvement.

The assets are allocated by the Ministry in accordance with middle-term program and annual plans. The middle-term program is made by the Government and annual plans for the implementation of the middle-term program are made by the Ministry, which determines criteria and more detailed conditions for directing and allocation of assets.

Financing of protected natural resources is subject to special regulations of the Law. The assets for this purpose are provided for in one of the following manners: from the budget; from the income collected by enterprises in charge of management of protected natural resources; from charges for the use of protected natural resources;[15] from other sources in accordance with the Law. Special

[15] For the use of protected natural resources the enterprises, other legal entities and citizens (users) pay charges to the enterprise, or the organization that is in charge of management of protected natural resources. The charges are paid for the following types of activities: 1) exploitation of natural resources; 2) use of protected natural resource for tourism, catering industry, trade, movie making, and similar; 3) use of specially arranged or suitable areas for certain purposes (parking lots, recreation, sport, advertising panels, and similar); 4) use of name and trademark of a protected natural resource; 5) use of services of the enterprise or organization that is in charge of protected natural resource. Such collected assets are used for "the protection and development of the protected natural resource."

place in this system belongs to the enterprise that is in charge of management of protected natural resource. This enterprise may collect assets in other ways: by leasing construction soil, from credits, loans and other sources. The law entitles the enterprise accordingly to determine the amount of charges and manner of their calculation.[16] It should take into account at that the following criteria: the degree of utilization of natural resources, the degree of damage done to the protected natural resources, the degree or kind of privileges offered by the use of protected natural resources for the activities or for other purposes. The enterprise managing the protected natural resource may calculate charges to citizens in the form of tickets when entering the protected natural resource, or certain facilities or parts of the area of the protected natural resource.[17]

3.1.1. New Law on environmental protection of the Republic of Serbia

It is interesting that the new Law on environmental protection of the Republic of Serbia, which has been in the procedure of adoption by the National Assembly of the Republic of Serbia in various forms and for several years, and which was finally adopted on December 21, 2004 (Official Gazette of the Republic of Serbia No. 135/04), starts from a somewhat different approach to the issue of economic instruments in the environmental field. It might be said that the main conceptual difference if compared with the previous Law is that the new one attempts to place the economic instruments in the environmental field in the very foundation of the environmental policy. More specifically, when compared with the solutions of the previous Law, there are several obvious differences. First, Article 9 of the Law explicitly proclaimed several principles of environmental protection, among which the polluter-pays principle (clause 6), the user-pays principle (clause 7) and the principle of application of stimulating measures (clause 9) had a particular place. One whole part of the Law (Part VI, Articles 83 through 102) was dedicated to economic instruments.

The Law elaborates particularly the issues related to certain forms of charges: charges for the use of natural resources (Article 84) and charges for the environmental pollution (Article 85). It is prescribed generally that the user of natural resources should pay the charge for it and bear expenses of restoration and re-cultivation of degraded area, in accordance with a separate law and depending on the kind of natural resource it refers to. The allocation of assets collected from charges for the use of natural resources is made in such a way that 60% of all assets are considered the income to the budget of the Republic and 40% the income to the

[16] The by-laws of the enterprise or organization that manages the protected natural resource referring to the amount and manner of calculation of charges is approved by the Ministry.

[17] It should mention regarding the status of the enterprise that manages the protected natural wealth that the Law provides for such an enterprise to have the right of pre-emption of the land, forest or any other property that is privately-owned in the national park.

budget of the local government. However, the charge for environmental pollution is paid by polluters,[18] based on the following criteria: kind, quantity or characteristics of emission from certain sources; kind, quantity or characteristics of emission of produced or disposed waste; and content of environmentally harmful matter contained in raw materials, semi-finals and products.

A more radical novelty in comparison with the previous solutions are also the provisions concerning the formation of the Environmental Protection Fund (Articles 90 through 99). In order to provide financial means to support the protection and improvement of the environment, the Environmental Protection Fund is established with the characteristics of a legal person. It is provided for that the Fund performs activities related to financing of preparation of implementation and development of programs, projects and other activities in the field of preservation, viable exploitation, protection and improvement of the environment as well as in the field of energetic efficiency and use of the renewed energy resources. More specifically speaking, the Fund should perform various activities related to the environment, such as provision, management and use of the Fund assets; mediation related to financing of environmental protection and energetic efficiency from the assets of foreign states, international organizations, financial institutions and bodies, as well as domestic and foreign legal and natural persons; keeping data base on programs, projects and other activities in the field of environmental protection and energetic efficiency, as well as required and available financial assets for their realization. Also, it is prescribed that the Fund would work on support, establishing and accomplishing cooperation with the international and domestic financial institutions and other legal and natural persons in order to finance the environmental protection and energetic efficiency in accordance with the national program and other strategic plans and programs, as well as concluded international agreements for the purposes determined by the Law.

In order to understand the basic ideas regarding the place and role of the Fund, it is especially important to take into account the solutions contained in the Law referring to the issues of the Fund assets use. It results from the provisions of Article 93 of the Law that the Fund assets are used to finance action and restoration plans in accordance with the National program of the environmental protection,[19] and especially for regulation of certain problems such as protection, preservation and improvement of the quality of air, water, soil and forests, as well as mitigation of climatic changes and protection of the ozone layer; restoration of waste disposals, stimulation to reduce waste, recycling and re-use of waste; stimulation of cleaner production and application of the best available techniques for

[18] The persons liable to pay charges for environmental pollution have been defined rather widely as "any person causing environmental pollution by the emission or waste or producing, using or trading in raw materials, semi-finals or products containing environmentally harmful matters."

[19] Which is actually brought by the National Assembly for the period not shorter than ten years (Article 64 of the Law).

work of facilities and performance of activities; protection and preservation of biodiversity; stimulation of viable use of protected natural resources; stimulation of viable development of rural areas; stimulation of use of restorable sources of energy and increased energetic efficiency; stimulation of cleaner transportation; stimulation of viable economic activities, i.e. viable economic development; improvement of system of informing on condition of the environment, monitoring and evaluation of the environmental condition, as well as introducing the systems of environmental management; stimulation of educational, research and developmental studies, programs, projects and other activities, including demonstration activities; co-financing of preventive and intervening measures in case of extraordinary environmental pollution and training for response in case of accidents; co-financing of the Republican obligations regarding subsidiary measures, etc. Also, it is provided for that the Fund can participate in co-financing of programs, projects and other activities for the mentioned purposes, if they are organized and financed by the international organizations, financial institutions and bodies or other foreign legal entities.

The law determines certain issues relevant for the position of local government related to the application of economic instruments. It is provided for that local governments can, within their rights and duties, prescribe the charge for protection and improvement of the environment in accordance with their needs and specific characteristics (Article 87). Also, an autonomous region, a local government or one or two local governments may establish the Fund, which would be financed from the income collected at their territory (Article 100).

It might be considered particularly important that a special provision of Article 101 of the new Law on environmental protection determines the rules related to economic stimulating measures. Various forms of these measures are determined. Tax, tariff and other benefits may be determined for certain legal and natural persons or tax exemptions if they use technologies, products or trade in products the influence of which is more favourable than other similar to them, or if they use restorable energy sources (the sun, wind, biogas, and similar), equipment and devices that directly serve to the purpose of environmental protection. It is provided for in the similar manner to stimulate the appropriate behaviour of consumers - when they return used or unused devices or parts, products or packaging thereof in an organized manner. Stimulating measures include the producers who provide for the recycling of used or unused devices or parts, products or packaging thereof, or their disposal, or when they reduce the negative influence of their activities on the environment in some other organized manner. Special stimulating measures include subsidies, deposits and refund of deposits.

3.2. Montenegro

The most important source of law referring to economic instruments in the environmental field of Montenegro is the Law on the environment (Official Gazette of the Republic of Montenegro No. 12/96). There are several places in it suggesting certain instruments of economic character. For instance, in the part dealing with general principles (Article 7) it proclaims some of the basic principles of contemporary environmental policy and law, such as the polluter- pays principle, user-pays principle and the principle of obligatory insurance. It has been determined that the polluter, or its legal successor is responsible for pollution and damage caused to the environment (Article 8), or that everyone using the natural resources must pay real price for their use and re-cultivation of that area (Article 9). Also, everyone causing pollution by his work or everyone who may cause the environmental pollution is obliged to accept responsibility for the possible pollution (Article 10). It should take into account at that that many other principles in this Law are relevant for understanding of the concept of economic instruments in the environmental field, such as the principle of preservation of natural wealth, estimates of influence on the environment, alternative solutions, chemical substitutes, re-use and recycling, etc.

The application of so-called stimulating measures is the subject to separate regulations and the Law on the environment (Article 24) contains only reference provisions that the conditions for application of these measures will be prescribed by separate regulations. There are three categories of stimulating measures: a) privileges and exemptions from taxes and other public revenues, b) privileges and reductions of taxes and other public revenues, c) privileges and stimulations for all legal persons. Privileges and exemptions from paying taxes and other public revenues are provided for the use of technologies, production and trade in products the influence of which on the environment is more favourable than the influence of other similar technologies, production and products, use of restorable energy resources (the sun, wind, sea waves, biogas), as well as equipment and devices used for the environmental protection and monitoring of its condition.

Privileges and reductions of taxes and other public revenues refer to producers who organize the replacement of used or unused devices, facilities or parts, products or packages thereof, use of deposit or reduce negative influence of their work on the environment in any other organized manner. When speaking of privileges and stimulations for all legal persons, it is referred to legal persons dealing with collection of secondary raw materials or production based on secondary raw materials (recycling), as well as to all those who dispose of secondary raw materials and waste from the environment in any other manner contributing to the improvement of its quality.

According to the provisions of Article 35 of the Law on the environment, environmental protection is financed from five difference sources: budget assets; eco-charges assets; fines collected according to the Law; assets from separate sources prescribed by local government with the approval of the Government and assets from other sources. So-called eco-charges are elaborated separately. They include charges on investments, charges for environmental pollution (polluter-pays principle). It has been determined that charges on investments are paid by the investors for capital works according to the following rates: 2% of the investment value at the area of national park, which are not directly in the function of the protection of national resources, and 1% of the investment value for which the estimate must be made according to the Law (Article 37).[20] As for the pollution charges, it is provided that they are paid by both legal and natural persons. There are six kinds of charges: charges on emission of polluting matters into the air; charges for the use of fossil fuels; charges for the use of ozone layer destroying substances; charges for the use of lubricating oils; charges for creation and depositing of dangerous waste and charges for the user of motor vehicles, airplanes and vessels. The amount of charges, manner of calculation and payment are all determined by the Government.

The use of assets collected from eco-charges represent a separate issue. They are paid to the budget of the Republic on a special account called "ecological account" and used for nine following purposes: realization of ecological program; co-financing of programs of protection and development of protected natural resources; financing of elaboration and realization of restoration program in case the polluter is unknown; co-financing of intervention measures in states of emergency environmental pollution; co-financing of other investment programs that contribute to considerable reduction of the environmental pollution; working out of preliminary designs, applicable scientific and research programs, studies and final designs; co-financing of expert training of the personnel in expert, scientific, economic and administrative organizations in the environmental field that are of interest for the Republic; co-financing of organized activities in prevention and restoration of the environment within ecological NGOs; co-financing of publications, magazines, expert and scientific conferences and information and advertising activities in the field of environment and improvement of the environment quality (Article 41).

The Act on the amount of charges, manner of calculation and payment of charges on the environmental pollution (Official Gazette of the Republic of Montenegro No. 26/97, 9/00, 52/00) determines the amount of charges and how they are calculated and

[20] The basis for calculation of assets that should be paid is the pre-calculated value of investment and determined exceeding. The calculation and payment of assets on the pre-calculated value of investment is paid by the investor from the investment assets in the following manner: 10% at the moment of giving approval on the estimate and the remaining amount successively per calculation situations. The payment of assets is the condition to obtain the license for use.

paid by both natural and legal persons. According to the regulations of the Act, legal persons using firing plants that exceed 1 MW of rated power pay monthly charges for the environmental pollution, depending on the type of fuel and kind of emitted harmful and dangerous matter into the air per ton for the following emitted harmful and dangerous matters: benzo(a)pyren, carbon monoxide CO, sulphur oxides expressed as SO2, nitrogen oxides expressed as NO2, gas inorganic compounds of fluor expressed as NF, gas inorganic compounds of chlorine expressed as HCl, organic matter expressed as total carbon, lead, nickel, chromium, cadmium and mercury, manganese and copper pyrene, fenanthrene, antracene and total powder matter.

Separate Article 3 determines the charges for the use of fossil fuels. These charges are calculated according to the quantity of fuel put into circulation for heavy oils, light oils, coal, liquid petroleum gas, diesel fuel and petrol. The charges for the use of lubricating oils (machine oil, motor oil, petroleum jelly) are calculated according to the quantity of lubricating oil put into circulation.[21] These kinds of charges (for the use of fossil fuels and lubricating oils) are collected from legal persons dealing with trade of fossil fuels and lubricating oils. The charges are paid on the accounts of public revenues within the time dates prescribed for the payment of turnover tax, whereas the control of calculation and payment of charges is made by the competent tax authorities. Legal persons using chlorofluorcarbonates (CFC) and legal persons creating and depositing the waste containing one or more ingredients of certain toxic matters and substances,[22] also pay special charges. In the first case legal persons pay charges per kilogramme of spent CFC, and in case of legal persons creating and depositing dangerous waste that contains one or more ingredients of toxic matters and substances, pay monthly charges according to prescribed amounts per ton of waste.

The calculation of charges paid by legal persons for the use of firing plants exceeding 1 MW of rated power (Article 2), then for the use of CFC (Article 4) and for creation and depositing of dangerous waste (Article 5) is determined by the decision of the Ministry for the Environment. The charges are paid on the accounts of public revenues until the 20th day of the month for the previous month, and the control of payment is carried out by the competent tax authority.[23]

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[21] Persons putting fossil fuels and lubricating oils into circulation are obliged to keep records on the quantity and kind of sold or let out fossil fuels or lubricating oils.

[22] For instance: arsenic, mercury, cadmium, thallium, beryllium, chromium, lead, antimony, phenol, cyanides, organo-halogen compounds, chlorine thinners, biocides and phyto-pharmaceutical substances, residual waste from refining, distillation and any other pyrolytic treatment, pharmaceutical compounds, peroxides, chlorine compounds, fluorides, asbestos (dust and fibres), selenium, tellurium, polycyclic aromatic compounds (with cancerogenous effect), metal carbonyls, compounds of copper, acids and bases that are used in metal surface treatment, etc.

[23] It is interesting that the Act provides for the fines for the violations referring to payments of charges for legal persons for the use of fire-boxes exceeding 1 MW of rated power, for the use of CFC and for creation and depositing of certain kinds of dangerous waste.

4. Conclusion

The analyzed state of application of economic instruments in the environmental field shows clearly the increase of their importance in the contemporary environmental policy and law. Conceptually observed, there are more questions that can be posed regarding the place and role of economic instruments in the environmental policy and law, especially within the context of relations with wider economic and developmental problems and economic policy in general. Numerous international agreements in the environmental field contain appropriate general provisions on economic instruments and their role in achieving defining goals in certain fields. The issue of economic instruments has to be defined clearly within the group of international agreements that regulate exploitation and protection of certain resources and within the context of protection of some of them (biodiversity, water, climate, air, ozone, waste management, etc.).

The polluter-pays principle represents one of the most important principle of the environmental policy and law, originated on clearer and clearer requirements for more precise determination of responsibilities for environmental damages under the market-oriented economic conditions. International environmental law starts from the attitude that some principles, such as the polluter-pays principle, user-pays principle, the principle of prevention, the principle of precaution, may be considered the general principals of the international environmental law. Formal confirmation of such an attitude may be found in a number of the international environment-related agreements. However, some issues related to the polluter-pays principle and other principles are not fully precised and remain the subject of further discussions, analyses and disputes.

The analysis of regulations regulating the field of economic instruments in the environmental policy in Serbia and Montenegro shows that there are certain outstanding issues. The outstanding issues are basically more or less only the extension of the basic conceptual dilemmas that appear in disputes on justifiability and efficiency of application of economic instruments, while some have predominant characteristics of transition economic conditions. The crucial is the issue of real price of the environment as a resource, or pollution and endangerment of the environment and consequences produced by it. Related to it is also the issue of possibility to determine costs of pollution and restoration of the consequences of endangering the environment.

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GLOBAL AND EUROPEAN TENDENCIES IN THE IMPROVEMENT OF BUSINESS PROCESS THROUGH STP

***Abstract**: The subject of analysis in this article is consideration of possibilities, problems and effects of full integration of financial and trade information flows in business cycle based on direct Straight-Through-Processing (STP), as a higher level of integration within the electronic operations of an enterprise. The first part of the article deals with conceptual and evolutionary analysis of Electronic Data Interchange (EDI) implementation and Electronic Fund Transfer (EFT) Financial Electronic Data Interchange (FEDI). Further analysis is devoted first to notional and essential identification of Financial Value Chain Management (FVCM) and STP, and then to the presentation of some important solutions of their application globally. The approach developed in the EU is analyzed separately, because of its importance for the future activities in banking sector in Serbia.*

***Key words**: FVCM, STP, Bolero.Net, Identrus-Eleonor.*

1. Integration of e-technologies in commercial transactions

Evolutionary development of electronic commerce shows a high degree of dependence on the general technological development and the possibility of integration of various elements that in the beginning develop in an isolated manner in heterogeneous fields. As they progress, they start integrating on several bases and worldwide (full integration). This, of course, leads to the evolution of the very concept of electronic commerce and technologies it is based on. The traditional electronic commerce characteristic of 1990s boiled down essentially to business practice that developed under EDI application conditions.[1] With the use of the Internet since the beginning of 1993, there has come an era of new electronic commerce. Two stages may be differentiated in its development: the first stage that lasted from 1993 to 2000, and the second that has started in 2001.

[1] E. Turban, et al., *Electronic commerce: A managerial perspective*, 1999.

The Internet-based EDI and Internet-based EFT become the main technological concepts of traditional electronic commerce – EDI and EFT.

Electronic commerce as a crucial element of successful business practice under the contemporary conditions becomes a synonym of reengineering commercial business process based on computing and standardization of procedures and documents (applying EDI and EFT technologies). The reengineering of business process can influence the improvement of business process on two bases: first, based on raising the individual efficiency and economy by improving the business practice manner (intra-organizational effect) and second, based on catalyst influence raising the quality of mutual relations of the participants in the business process chain (inter-organizational effect).

It is considered that the basis of electronic commerce was established by the emergence of EDI technology back in 1980s. Proliferation of new forms of EDI systems leads to evolving of definitions and requirements to introduce new classifications. In the first stage of application, EDI technology based on package processing, in the second on real-time processing (interactive EDI), in the third stage on global applicability (open EDI) and in the fourth on the use of the Internet (Internet EDI). Within that context, as a starting and main (although not the only one) benefit in this domain there is a possibility to transfer information in standardized format in all directions (back and forward) among participants and without re-entering. The differences in achieving the positive effects are the result of differences in the degree of intensity, functionality, scope and integration of its application.[2]

As key elements of electronic commerce, EDI and EFT are implemented in various forms and various business functions, whereas EFT pushed aside more and more the elements of paper systems of payment in financial sector and EDI the elements of paper systems in commerce.[3] EDI is one of the first technologies that provided for the accuracy and timely information (documentation) flow that follows the physical flow of goods and represents an integral part of the transaction. With respect to the function of solving the information requirements of business transactions, EDI could replace in principle any of paper documents (enquiry, order form, dispatch note, invoice, bill of lading, etc.) that are exchanged by the buyer and the supplier.

As a mechanism used to send 'digital money' by means of the network from one account to the other, EFT represents an essence of electronic payments between enterprises, the state and other institutions, and finally electronic commerce in general. Its function in electronic commerce is to provide for the exchange of information required for transfer of a monetary value by electronic means from one account to the other, either by direct inter-bank communication or by intermediary. A specific characteristic of this mechanism is that it requires an exceptionally

[2] J. L. Boockholdt, *Accounting Information Systems*, 1996.

[3] M. Greinstain, T. Feinman, *Electronic commerce: Security, Risk Management and Control*, 2000.

high level of accuracy and security in processes of verification of authenticity and approval of authorization. However, the application of these mechanisms provide for only authorization for transfer of funds from the buyer's account to the supplier's account, or in other words only the mutual settlement between buyers and suppliers. As payments are made as compensations or remunerations for the acceptance of goods or services, and based on information from appropriate documents, in practice this problem of separation of these fields has for long appeared as a 'dead knot' in further improvement of commercial processes.

In early stages, direct communication between commercial partners was practically possible and acceptable.[4] This way required the partners to have similar communication protocols, the same transfer speed, simultaneous availability of lines and compatibility of computer systems. As these conditions were more and more difficult to achieve as the number of partners multiplied, the solution was found in introducing separate information networks (VANs), which usually offered some additional services. In early stages the data were presented in private formats based on the agreement of a small number of partners and later when the number of participants capable of electronic business practice multiplied these were replaced by national and international standardized formats.

At the same time, banking systems start using EFT technology for electronic payments, whereas the integration of these two segments of business process was established neither conceptually nor practically. Independent application of two segments in electronic business practice means that it was possible to make electronic payments while business communication between partners could be made at the same time in a traditional way and vice versa. As partial application meant separate transfer flows of commercial information from financial information required for the transfer of funds from the buyer's account to the supplier's account, the business process still required subsequent verification of information that were received electronically in one segment with the information that were received on paper in another segment. This is why many potential benefits were lacking and in many cases, the conclusion was that there was not any important reduction of costs of paper and work.

Many companies used EDI for processing of their transactions, but it did not lead to sufficient improvement considering business economy and efficiency. This is why with the expansion of the scope of EDI technology application there is an increasing need for electronic networking of commercial and financial flows, and this networking has a special term – financial EDI (FEDI). Naturally, it originates because of the increasing number of functional fields and relations that are covered by inter-organizational information systems and a fact that potential possibilities of its application surpass the replacement of paper documents by electronic equivalents.

4 H. Krcmar, et al., *EDI in Europe – How it Works in Practice*, 1995.

As opposed to EDI, which was used for the communication between partners directly or via VANs, FEDI often includes operations that are more complex and requires a considerably wider infrastructural network. As a rule, at least 4 to 5 participants are included, commercial partners and banks. Essentially, it establishes the connection of segments that are connected functionally although they are not identical. Because of the fact that it includes banking system as well, it is the most complex but it contributes to the utmost reduction of paper and work. It becomes more and more important as the electronic commerce develops hurriedly. However, in order for FEDI to be useful to both the buyer and the supplier, it is necessary for each of them as well as for their banks to be fully capable for this function.

2. Managing financial value chains

The topic issue within the e-business sector of economy (B2B) is to provide seamless integration of business processes. Although the technology-led integration enables the development of numerous solutions with cross use of instruments and channels in the sector of clients (EBPP – Electronic Bill Presentment and Payment), it is the special challenge in the sector of economy (EIPP – Electronic Invoice Presentment and Payment). Namely, the B2B requirements are more complex than the B2C requirements because of the size of the market, complexity and size of transactions.

B2B technology is considered important because in addition to quickening transfer flow of commercial and financial information required for the completion of a payment process, it offers the possibilities for the so-called end-to-end processing and connecting with many auxiliary administration activities (managing money flows, crediting, and similar). This refers to not only saving of costs and raising of operational efficiency in the back office but to the fundamentally new way of doing business. This is why this field is expected to be one of the most important investing priorities for financial institutions in the next few years.

Within these activities, the Global Straight Through Processing Association (GSTPA) introduces a concept of direct processing or Straight-Through-Processing (STP).[5] It bases on the idea that data are entered into a certain base only once and that they are used from it by direct transfer for the requirements of processing of all stages and by various participants in the process of electronic commerce. The goal is to enable the additional increase of efficiency, decrease of errors and risks on the bases of the decreased number of data entry and automation. Based on this approach also, the aspiration is first to achieve benefits in bank-bank or bank-client relations, although the achieved improvements show insufficient later. In order to raise the degree of achieving the additional benefits,

[5] R. Naatsaari, *How banks enable Straight Processing in business processes*, (a lecture), Bled, 2004.

it is transferred to the so-called end-to-end integration in enterprise (B2) networking through banks. This concept creates the need for a unique accessibility of banking networks to enterprises worldwide, so that they could easily make payments globally via one platform, which would be connected with internal auditing and other systems.

Under such conditions, the completion of an entire commercial transaction requires good and integrated coordination of all functions and processes among various interested business entities, buyers, suppliers and their banks. It turned out that a precise determining of a role and responsibility of each individual participant (buyers, suppliers, banks, governing institution and providers of services and logistics) was needed to make the STP approach operative. Accordingly, the Aberdeen Group set the frame of Financial Value Chain Management (FVCM), which offers system access to the role and responsibility of individual participants in the financial value chain. According to the concept set in 2001, financial value chains (FCV) are defined as functions and processes on which B-to-B intra- and inter-company transactions are based, which mean that they include also the information related to trading of goods and services.[6]

According to the concept, FCV consists of sub-processes that connect various components and functions with their executors. Two main segments are the segment of transaction creation and the settlement segment. Four components are relevant for the first segment (contact, financing, price, provision), and five components are relevant for the second segment (invoices, checks, complaints, payments and analysis). As this analysis deals with the payment problems, the following components are of crucial importance: financing and payment. The first component refers to the bank financing of buyers for making payments and is largely related to the problem of credit risk. Typical instruments for implementation of this function are commercial loans, commercial credit line, factoring, letter of credit and leasing. The second component that covers payment operations includes the function of depositing funds on the bank account and the use of various methods to make payments based on these funds (money/credit cards, GIRO, electronic transfer).

Killen & Associates research shows interesting and probably unexpected results considering the time required for implementation of payment in 2000 compared with 1960. According to this research, in the mentioned period there was not an absolute improvement of payment components, while it can be noted in all other FCV components (order, delivery, invoicing). It result therefore that automation processes have helped reduce the costs and increase the efficiency, but have not led to the improvement of elements that are the most significant for enterprise solvency.[7]

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6 E. Vuksanović, *Finansijski EDI u funkciji integracije informacionih tokova elektronske trgovine*, Peta YEDI konferencija "Elektronsko poslovanje, mogućnosti, izazovi", Subotica, 1998.

7 M. Tan, *E-payment: The Digital Exchange*, 2004.

Table 1. *Transaction processing time in 1960 and in 2000.*

Payment activities	1960	2000
Order	4-7 days	The same day
Delivery	14-21 days	The next day
Invoice	4-7 days	The same day
Payment	45-60 days	45-60 days

Izvor: *M. Tan, e-payment: The Digital Exchange, Ridge Books, 2004.*

The enterprises today require more sophisticated financial analyses and additional services that go beyond simple acceptance of payments or making payments to the entire financial management. They require understanding of cashier's business activities, management of solvency and money flows that are related to clearing and balancing, electronic banking, netting and pooling, as well as the problems of currency and interest risk. Many multinational corporations have been seeking the ways to automate invoice payment by means of systems of clearing and balancing and by means of the Internet. They have also felt the need to improve the standards in this field.

The international trade has traditionally been very expensive and extensive. It was characterized by logistic and time inefficiency as well as by high expenses. For instance, typical financing of trading with letter of credit that requires 15 days for processing and includes 12 documents can be reduced to a few days with considerable reduction of direct and indirect costs. The banks observe that they can provide for the shortening of time and lowering of costs by electronic distribution of these documents to various market participants.

However, automatic business processing can solve only a part of the problem. If the commerce and payment is made incompletely or untimely or there exists inconsistency between the data in the enterprise and externally – at commercial partners or users, the benefits of automation process will not be achieved completely. This means that the enterprise will need more time and effort for coordination that requires completion of transaction, as well as that an error in commerce cannot be identified and automatically corrected. This is why the simple networking is considered insufficient, and achieving a higher degree of integration through STP is a set imperative.

3. Solutions of seamless integrations in B2B e-payment

Traditional financial participants such as ACH, SWIFT and associations of debit cards were directed primarily to one segment of commercial cycle – payment. Because of this, considering the benefits of integration of the entire cycle

of commercial transaction, including payments, new non-banking participants start to appear with special solutions independently or within consortium with banks. The already present *Bolero.Net*, *Rosseta Net* and *Trade Card* and the newer ones such as *Eleanor* and *TWIST*, point out their own propositions of integrated approach for commercial and financial trade transactions. Big international banks also start to develop new financial solutions in order to provide for a higher level of automation of payment flows and trade financing processes to corporations.

In Asia, many banks launch to the market new products of financing commerce and processing payment through Internet. *ABN AMRO's* solution provides for the complete paperless processing of digital documents, monitoring of physical documents, lowering of risks, financing, execution and balancing in the international trade by means of *blueprint*. Buyers, suppliers and their providers can use this service for on-line coordination of all aspects of transaction. *AllTrade* simplifies the very essence of commercial process through consolidation of commercial activities, making easier the incorporation of additional facts and values such as the calculation of shipping costs, identification of export/import licenses, automatic verification and acceleration of customs processing by creation and verification of adequate documentation. *ABN* offers special models of these services for small, middle-size and big banks. Regional middle-size banks in the USA have used the mentioned *ABN AMRO* services for international transactions since 2002, eliminating thus the need to make their own investments in this field.[8]

Citibank, which is known as a technological innovator, created for its clients a special solution for integrated export management, that helps preparing export documentation and by modernizing processing of this documentation influences reversely on the acceleration of payment process. Using this solution (known as *Electronic Documents*) the users are enabled to have an insight into a wide range of data that refer to their commercial transactions, which can be important for consideration of potential risky fields, especially documentary L/C. In this way, for instance, while the documents are being prepared for sending, the participants are aware of the status of preparation process, and when they are being completed they can be viewed by portal.

Bolero.Net is financial service with a special logistics and infrastructure, which was established in 1998 at the initiative of SWIFT and with the aim to enable simplification and improvement of the process of monitoring the physical movement of goods in the international trade. Some 35 member-banks participate in it today, and over 88 various Bolero XML standards have been outlined for the functioning of the system of message transfer. Legalization of message structure enables improvement through STP in banks and all enterprises included in these commercial transactions.

[8] R. Naatsaari, *How banks enable Straight Processing in business processes*, 2004.

Crucial components of the system are technical components, applications, legal components, standards and protocols. Technical components cover the problems of message transfer process and its security, and they are conceived in such a way as to provide for prevention of possibility of subsequent canceling, authentication and discretion coding. Application components provide for the registration system that is required for adequate transfer of bill of lading. It makes it possible to create, transfer and add data to the bill of lading, but in such a way that only authorized institutions can order the register to complete the transaction. Protocols specify the balancing process using XML standard, which banks use for the implementation of *Bolero* system with the clients who still use traditional flows. Legal regulations accepted by appropriate legal authorities should provide for the legal safety of the system. The practical problem is that many countries do not have their own legal regulations and are unwilling to apply this mechanism globally.

In order to improve *Bolero.net* solutions, *BoleroSURF* system has been developed, which offers rules for standardizing inter-banking services.[9] Systems of documentary Internet-based balancing simplify the process of managing flows that monitor the movement of the goods so much that they enable commercial transaction according to DvP principles (*Delivery versus Payment*). In addition to improving the functioning of banks as distribution channels, incorporation of special additional services such as UCP (*Uniform Customs and Practice*) is also enabled. The system also proved to be applicable in various industrial branches and various geographic relations (for instance, import of copper ore by Asian countries from Brazil and Australia, of tobacco products by Taiwan and China from Japan, computer toners by Singapore from Japan, etc.).

Eleanor has been made at the initiative of *Identrus*, a leading international bank consortium, in order to bridge a gap existing in e-payments in economy, by making specifications that are required for legal global inter-operations in this area. It bases on XML, MIME and PKI and is adapted to various environments, including e-purchase, commercial web servers and e-markets. Inter-operational network of banks and their business clients is created to that effect so that payments initiated by enterprises-buyers in favour of suppliers can be made regardless of location of partners and their banks.

As opposed to the system of inter-bank clearing and balancing, *Eleanor* is directed at primary settlement of payment initiation segment, and further clearing and balancing of initiated transactions is made via existing inter-bank networks and their platforms (ACH, RTGS, SWIFT). In order to provide support for the efficient and economic performance of commercial transactions, technical and business inter-operational quality is provided for all participants. Functional specifications offer descriptions of particular manners of payment and their attributes; technical specifications provide for the standards and protocols for the

[9] A. Fight, *E-Finance*, 2002.

transfer of electronic messages, and operational specifications elaborate the issue of rights and obligations per individual levels and participants.

The final aim when using *Eleanor* electronic payment instrument is to achieve STP which offers benefits for every participant (buyer, supplier, their banks), that are more underlined as the relations are more complex, with more documents and open obligations.[10]

Table 2. *Basic* ***Eleanor*** *instruments of payment*

Kind of instrument	Description	Analogy	Possibility to cancel	Transferability
Payment order	Buyer's order to the bank to make payment by e-bank	Giro payments, transfer, electronic transfer, ACH approvals	Yes	No
Mandatory obligations	Buyer's obligation that he will pay holder on a certain day	Bills of exchange, commercial acceptances	No	Yes
Confirmed mandatory obligations	Obligations of payment confirmed by buyer's bank	Bills of exchange with bank acceptance, bonds	No	Yes
Conditional payment obligations	Obligations to make payment according to fulfillment of conditions	Conditional payments, documentary payments	No	Yes

Source: M. Tan, *E-payment: The Digital Exchange*, Ridge Books, 2004, p. 116.

Eleanor B2B system for electronic commerce is based on three-level model where the first two levels are formed on the relations of cooperation among participants, and the third level is formed on the principles of competition. Such an approach enables to establish necessary technical cooperation through the first level (global inter-operative system based on PKI and standards), and through the second level to establish functional cooperation (through common standards and rules of functioning). On such common bases, every member-bank can develop (within the third level) a range of its own products and services with which (based on joint technical and functional basis) it can compete with other participants.

[10] The examples of functioning of individual instruments may be seen in: M. Tan, *ibid.*, pp. 117-118.

4. The role of banks in the improvement of business process through STP in the European Union

The general characteristics of current state in the European Union are the current lagging of integration activities when compared with the USA and some Asian countries with simultaneous expression of a strong need to introduce appropriate e-integration solutions on one hand. On the other hand, the central role is given to banks in general approach to the mentioned problem and specific activities that are carried out. Fast and economic transfer to integrated business processes within value chains is considered impossible without such a participation of banks because they have already established relations with clients, they have an important selling power, already built trust, funds and high degree of readiness to adapt to the already established habits and practices of their clients.

Banking services are required as a part of integrated financial value chains in order to provide for the following: security (through identification and elimination of commercial risk); lower costs (by the use of funds they already have at their disposal and can provide the additional influence of economy of scale) and maximum speed of implementation (by re-using the existing components). By such a position of theirs, the banks are considered to become unavoidable and crucial participants in the improvement of business process automation in Europe.[11]

The experience of the European market shows that the demand for the use of access to financial value chain management (FVCM) is growing very fast in B2B because of extensive savings and improvements in service quality. At the same time, the following reasons are quoted as arguments beneficial to the chosen model: 1. Many relevant corporate clients already use e-banking; 2. The means of e-banking that bank clients are already familiar with are used for wider e-business also; 3. There is an already provided high level of security, trust and protection from money laundering, and 4. There is a possibility to use the same networks that are used for payments for creation and sending of e-invoices.

ECBS (European Committee for Banking Standards) initiated certain steps in order to provide for the conditions to use the same elements in both domestic and international standards (XML – envelope for invoice transfer and getting it into SWIFT C2BXML). By connecting business process of payment (not only banks) and avoiding fragmentation, the basis for the development of SEPA (Single European Payment Area) towards end-to-end STP is created. The costs for investments into scanning of invoices would also be avoided and possible re-use of safe network of global payment for invoices started from Europe would be provided for.

The estimates made at the example of Nordic countries show that the implementation of e-invoicing using ePI (Electronic Payment Initiator) is very simple to include into the existing system, and the market response to the existing offer is very encouraging. In the Finnish practice (*Nordea*), the banks were first to start using

[11] R. Naatsaari, *How banks enable Straight Processing in business processes*, 2004.

the agreed standard for e-invoices (*Finvoice*) using ePI, and Swedish and Norwegian banks followed the same path. It is important for the enterprises that transfer to the new system does not require additional investments since the invoices are sent into banks as files (created by enterprises or ERP operators) or they are individually entered into bank networks by small enterprises. The concrete solution is based on the use of XML format (for their own clients, other banks, EBPP operators) or printing for those who are not electronically enabled for.

In order to accelerate development and stimulate acceptance of this system in Finland, the state has participated actively in the promoting process. The Treasury Department supported the adoption of e-invoicing and Finvoice standard in order to achieve 50% higher use of system by the year of 2005. ERP-integrators, software suppliers and invoice operators have already adapted their products, policy and procedures for migration support to the new system to a high degree. The estimate was that only banks with their selling power, safe network and prepared solutions could be carriers of these services. Big invoice receivers responded voluntarily to bank offers and at the same time invited their business partners to join the new system (70-80 participants joined weekly, on an average).

Such a conceived system is considered as a means to create errorless payment order, which can be used for payment of e-invoices, e-payments, direct loans, payment of salaries. It is easily integrated into payment process in systems used by enterprises and banks, it has adequate package to include all relevant information (references of buyers, suppliers, complete accounting information, and when necessary the possibility of implementation of direct loans mechanisms). Electronic initiation of payment (ePI) and e-invoice together provide for the high level of automation in logistics and processing of orders, in accounting and auxiliary business activities.

The estimate is that in order to accelerate the process or make the entire system operative the application of common standards is required as well as the existence of free competition. Starting results shown by the practice of countries participating in the presented project (in national and international relations) show several important facts: 1. Integrated systems can be formed by taking over and adapting the already existing elements from the range of payment services; 2. It is possible to achieve very high cost savings (specially through e-invoicing); 3. Solving of secure transaction requirements would contribute to the prevention of misuse of invoicing and improve the mechanisms of defense against money laundering; and 4. There is a space for improvement of individual bank services.

The lack of pan-European implementation does not diminish the progress, but the joint approach would make the European enterprises more competitive generally, whereas small enterprises would get an additional chance in comparison with the big ones without the significant additional investments. This is why the mentioned integration processes are treated as critical element in the activities carried out in the EU in order to form a single European electronic market

(SEEM). Accordingly, the acceleration of development in all countries, both the current and potential member-countries, is suggested. E-chain within this context is observed as a key to more productive business operation in national and European relations. The need of fast progress in this area is stressed, and the banks are seen as participants of crucial importance within that chain.

5. Conclusion

At the time being, Banks in Serbia do not show interest in these activities, most probably because they are burdened with other urging problems. However, it is very important that at least regarding information they become acquainted with the activities carried out in this field in the region and the possibilities resulting from them. The activities carried out in the European Union appear as a part of Activity Plan of the European Commission and are closely related to the development of a single European electronic market (SEEM). First steps to that effect have been made within Finish-Slovenian cooperation, and the Slovenian expert team participating in this project is willing to include the interested banks from Serbia in this project. They invited the experts from Serbia to participate at the Eighth Executive Business, Government and University Meeting on Cross-border e-Invoicing in eRegion, which was held on October 22, 2004, in Slovenia, within the so-called Merkur Day. The intentions of the organizers were to arouse consciousness of the importance of eI (eInvoicing) in the region, to exchange ideas with participating countries about the joint activities, as well as to consider the advantages of joint research and development projects.

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TOWARDS AN INTEGRAL INFORMATION SYSTEM AT THE EXAMPLE OF MEGATREND UNIVERSITY

***Abstract**: The only way towards an integral information system of Megatrend University is to use a special tool named CASE (Computer Aided System Engineering). CASE system represents a tool used as assistance to information system designers. The quality of the final product (information system) depends on the efficiency of this tool.*

***Key words**: CASE, BPwin, ERwin, process model, data model.*

1. Introduction

The development and improvement of software systems, computer capabilities and user's expectations require a lot of many-sided work related to realization of information system (IS). Since manual development of software from the lowest level is rather expensive and long-lasting and does not always have predictable results, there is a need to make the development of software easier. This is why software engineering originated as a discipline over twenty years ago.

CASE tools in the development of information system of Megatrend University should provide for the following:

- Further work on Megatrend University IS should not depend on the previous contractor;
- Independence from the future system for data base management (SUBP), which is defined by the execution design, whereas the decision-making on the type of the future database is not a priority;
- It is not necessary to purchase hardware for design elaboration, since this is a prototype manner of work.

2. Misconceptions and limitations of IS development

The first misconception related to IS development refers to the standpoint that Megatrend University IS can be obtained by purchasing a ready-made product according to turn-key principle. Buying ready-made software is buying someone else's bad solution. The solution is to form a mixed team of consultants in the field of IS design, and to design a software for specific requirements using CASE tools. Such a solution is necessary because the maintenance of designed software is related to permanent installation within the Megatrend University computer center. The second misconception refers to the opinion that copying the existing applications into the new hardware and software surroundings can create a new system. All problems that have existed will continue to exist. The solution for this misconception will be explained in detail further in the text.

When we part with misconceptions, limitations appear at the next step, which can also slow down the development of information systems. The first limitation is the degree of organization of Megatrend University system that is analyzed and that depends on the elaboration of standard documents and procedures for their processing and distribution. The second limitation is related to users of Megatrend University IS, who express resistance towards the idea of introduction of a new system. The third limitation can be the knowledge of a design team, methodology of work and insufficient experience in designing similar systems.

3. Assumptions of IS development

Taking into account the limitations, three basic assumptions should be fulfilled in order to approach the IS development. The first assumption is related to the *uniform system of marking* and most frequently it implies defining of so-called parallel system of marking. The parallel system of marking defines a unique identification number, standardized name and appropriate classification number. The second assumption refers to *uniqueness of process and data models*, which usually implies the application of unique methodology related to IS designing using CASE (Computer Aided Software Engineering) tools. The third assumption is related to the *uniqueness of database management* (SUBP) *system*.

General procedures that should be required when developing Megatrend University IS are the following:

- each individual job should be discussed with competent experts;
- appropriate documentation and samples of filled-in forms should be collected;
- the analysis of user software should be made;

- detailed functional de-composition should be defined, i.e. making of detailed decomposition diagrams;
- logical data model should be defined for each individual job (between 400 and 500 entities are anticipated);
- physical data model should be defined for each individual job (between 400 and 500 tables are anticipated with minimum 10 columns, which makes the total of 5000 columns);
- the procedure for take over of data from the existing IS should be suggested;
- implementation time schedule and priorities of sub-system development should be defined;
- authorizations, responsibilities and updating protocols and dissemination of data and documents should be defined;
- the manner of protection of IS should be defined;
- the structure, scope and time schedule of training should be defined and suggested;
- priorities, time schedule of implementation and costs should be defined.

4. IS development procedure

The appropriate CASE tools based on IDEF0 (***I**ntegration **DEF**inition*) standard realized through BPwin (*Business Process windows*), CASE tool for functional modeling and IE (*Information Engineering*) standard realized through ERwin (*Entity Relationships for windows*), CASE tool for IS information modeling will be used for the development of Megatrend University IS.

The development of Megatrend University IS should serve as documentation and instructions for the description of complex activities, the procedures and instructions required by ISO 9000 standard among other things. It should also provide for the faster organizational changes since IS modeling documents important activities and provides for the insight into critical activities that should be carried out by the appropriate resources.

The most important benefit from the development of the Megatrend University IS is the prototype approach, where the alternative ideas are checked in a quick and simple manner. It is much cheaper to draw process and data models by IS modeling than to develop a new information system. This is very important feature since fast development of information technologies and the application of the Internet services makes it conditional for the requirement of re-engineering, and it requires radical re-designing that needs to be described and checked by prototype before realization.

IDEF0 (Integration DEFinition) and IE (Information Engineering) are the techniques for process and data modeling based on combination of graphics and

text that are represented in an organized and systematic manner in order to increase understanding and provide for the logic of potential changes, specified requests or in other words to support the system analysis per levels. The established concept of process and data modeling is accepted by the government of the USA, Pentagon and NATO, for instance, and none document can be defined until it is described using this methodology. The task fulfilled by this methodology is that it has to include problems related to client/server architecture, i.e. to connect many various computers.

The development of the Megatrend University IS is carried out through the following stages:

- functional modeling using IDEF0 standard (preliminary design),
- information modeling using IE standard (main design), and
- applicative modeling by generating client/server architecture (executive design).

4.1. Functional modeling using IDEF0 standard

Functional modeling of the Megatrend University IS defines dynamics, so it is necessary to determine:

- contextual diagram, i.e. system margins;
- activity tree, i.e. to establish vertical connections among activities;
- decomposition diagram, i.e. to establish horizontal connections among activities.

4.1.1. Defining contextual diagram

Defining the Megatrend University business system margins is related to defining of contextual diagram primarily in order to know where to stop modeling.

Contextual diagram is defined by a rectangle (of activities) and arrows (information bearers) as shown in Figure 1.

The arrows on the left side of rectangle are defined as Inputs. The arrows entering the rectangle from the above are defined as Controls. The arrows going out from the rectangle on the right side represent Outputs. The outputs are data or objects produced by activities.

Input arrow represents a material or information that is used or transformed in order to define output. There is a possibility that certain activities do not necessarily have to have input arrows.

Control arrows regulate, i.e. they are responsible how, when and if the activities will be carried out, or what outputs will be like. Every activity must have at least one control arrow.

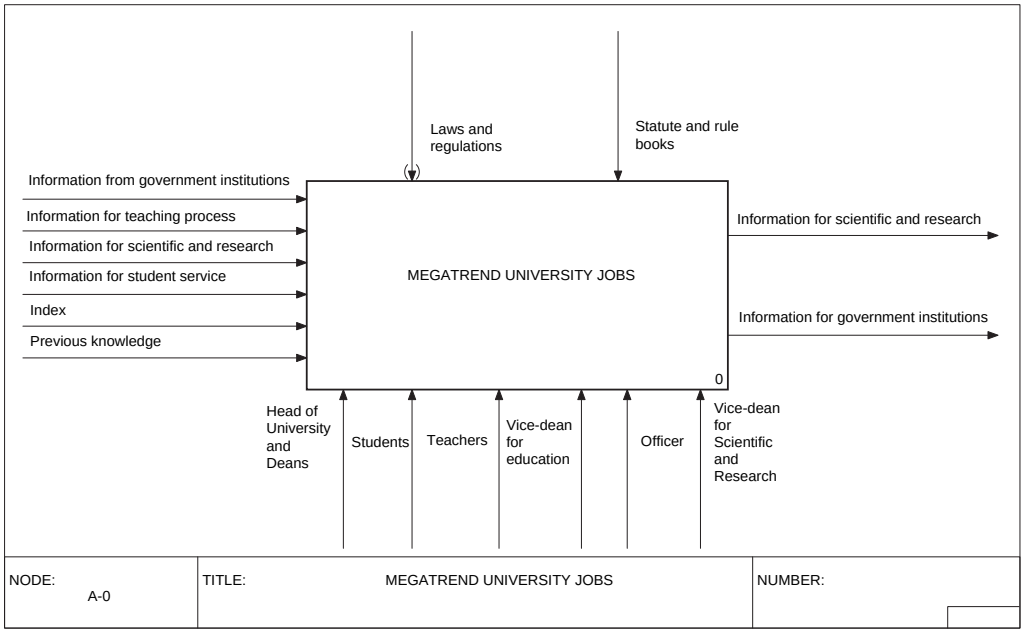

Figure 1. Contextual diagram of Megatrend University IS

Controls are often in the form of rules, regulations, policies, procedures or standards. They influence activities without the possibility to be transformed or used. There will be cases when the goal of activity will be to change a rule, regulation, policy, procedure or standard. In that case, it should be expected that the arrows containing that information would actually represent input.

Output arrows are materials or information created by activities. Every activity must have at least one output arrow. The activity which does not create output should not be modeled.

Mechanism arrows are the sources carrying out the activities and they are not "spent". The mechanisms may be people, machines and/or equipment, i.e. facilities providing energy required for carrying out activities. The responsibilities for certain functions are most often defined by these arrows.

4.1.2. Defining activity tree

Vertical (hierarchical) connections among activities are established by defining a tree of activities of the Megatrend University (Figure 2). The activity tree is defined applying the method of top-down problem solving when a complex activity is separated into several subordinate activities and then simple subordinate activities are solved. In other words, basic starting activity is developed into a hierarchy of subordinate activities having the tree-type structure. The root of the tree (which is the highest knot of the tree) contains a starting activity, while

the leaves, i.e. knots that do not have successors contain activities the solving of which is relatively simple. The starting complex activity is solved when these subordinate activities from the leaves are solved. Therefore, the activity tree represents a hierarchy of defined activities relieved from arrows and enables functional decomposition and insight into the depth of connections between activities. Vertical hierarchy established by the activity tree connects strategic management (vision, policy, set goals) with the level of monitoring and evaluation of established processes.

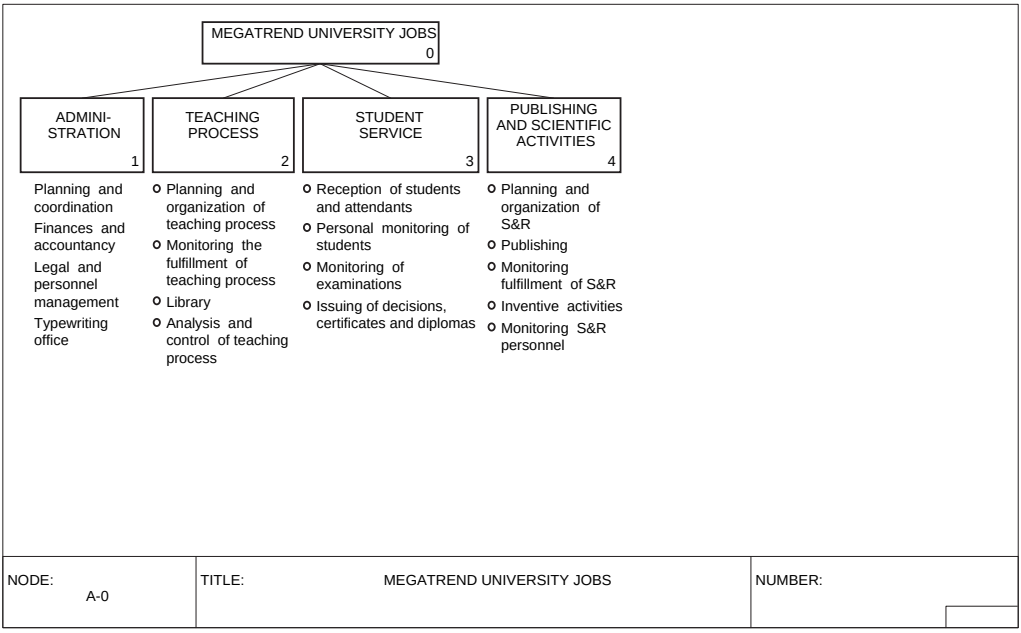

Figure 2. Activity tree of the Megatrend University IS

4.1.3. Defining decomposition diagram

When the activity tree is defined, vertical connections among jobs are established, while making of decomposition diagram establishes horizontal connections among the jobs at the same level. The functions are, as it has already been said, placed into rectangles which are drawn diagonally from the top left corner towards the bottom right corner. Every function must be assigned a name in the form of a verb phrase, and it must have at least one control and one output arrow.

As it can be seen on Figure 3, the arrows defined on contextual diagram are transferred into subordinate decomposition diagram. Therefore, the arrows defined in the function that precedes (parent) appear on subordinate decomposition diagram as boundary arrows, i.e. as arrows originating beyond the bound-

aries of the observed diagram. So-called explicit or internal arrows that connect jobs are defined within decomposition diagram. Decomposition diagram without internal arrows points to organizational and not functional approach to decomposition.

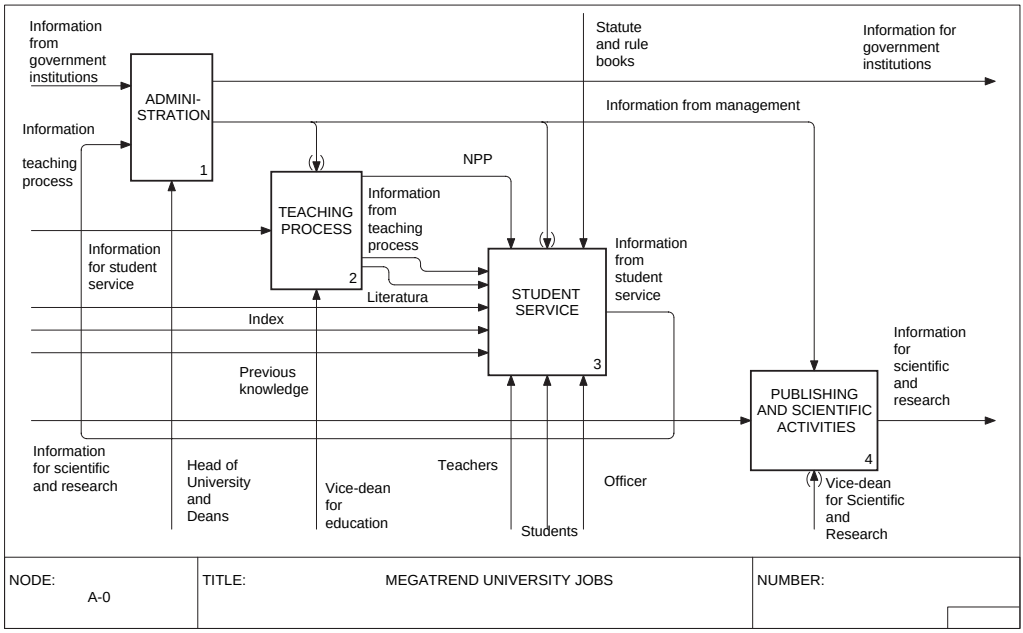

Figure 3. Decomposition structure of IDEF0 methodology

4.2. Information modeling using IE standard

Information modeling of Megatrend University IS, i.e. data modeling is our abstract view of the condition of real system, i.e. defining the structure of data. Data model is a simplified representation of real system via set of objects (entities), connections between entities and entity attributes. Data model (in literature defined as Entity-Relationship model or Entity Diagram), through a set of data and their mutual connections represents a state of the system at one moment of time and contains a set of information on the past and present of the system, which is required to determine its future outputs under the influence of the future known inputs.

The choice of the appropriate CASE tool is more or less formal, while the procedure of modeling the real system depends on the capability, knowledge and experience of the analyst. Data model is an intellectual device which shows the mutual relations of data within a real system, as shown at Figure 4, on the example of data model for monitoring of examinations.

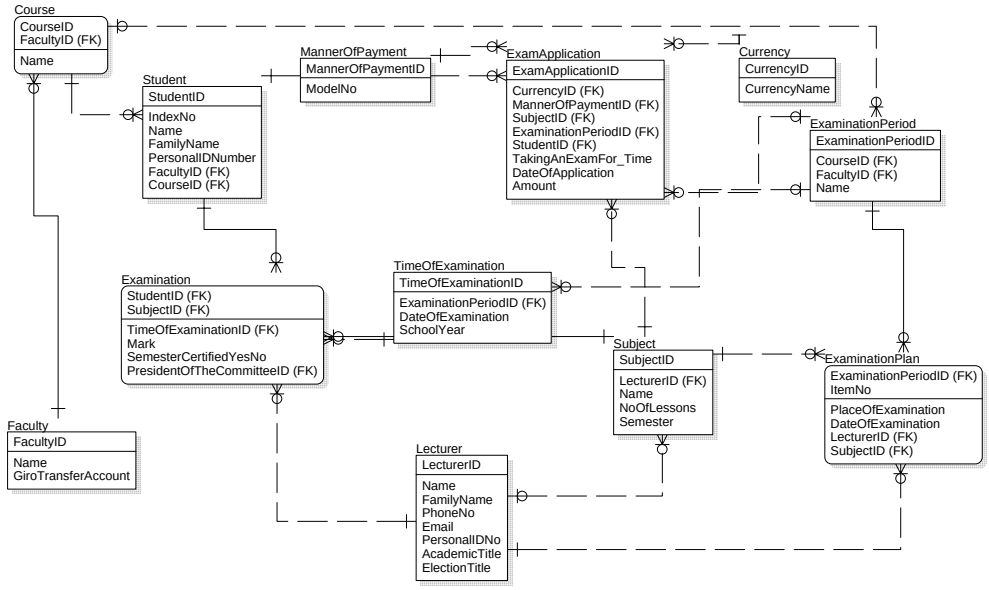

Figure 4. Logical data model for monitoring of examinations

4.3. Applicative modeling

Applicative modeling is related to defining of physical data model, generation of data scheme and making of user application.

Defining physical data model, i.e. implementation of entities and their attributes into tables and columns of some system for database management (SUBP) is carried out by using ERwin CASE tool. ERwin program module for construction of physical model reads the description of entities and their attributes and forms tables and fields of a physical model. When translating a logical model into physical one there are following conversions:

- entities become tables;
- attributes are defined as columns;
- instances or examples become rows;
- the cross-section of rows and columns defines fields.

There are also some limitations depending on the system chosen for database management.

Therefore, ERwin program module defines tables and columns automatically, i.e. the tables are named after the names of entities, and the names of attributes become the names of columns. Other characteristics are also assigned values that would be inserted into columns. Logic database scheme includes a

special set of data (appropriate data glossary) with the appropriate semantics and ties between elements of database. Physically, these ties are placed in the database for subsequent use.

Generating database scheme is carried out based on the previously made physical data model. Database scheme consists of physical table, column and relations that are automatically generated from logical model by the application of CASE tools. Generating database scheme is defined for the chosen target platform where physical tables, columns and relations are defined.

Elaboration of application enables a user to have an insight into data in order to define menus, forms, enquiries and reports. The elaboration of application is carried out based on previously elaborated database scheme, as well as based on specific requirements of future users. The specification of form is carried out for the following:

- defining of menu;
- defining of enquiry;
- defining how a form will look like, and
- defining of report.

Figure 5 shows the physical model of data for the process of examination monitoring.

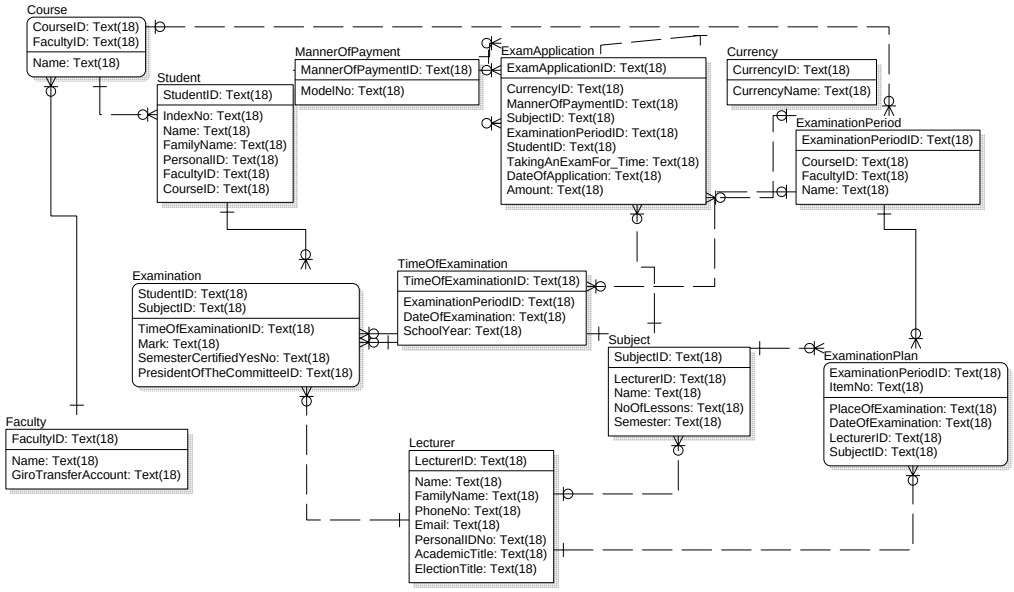

Figure 5. Physical data model for examination monitoring

5. Technical IS prerequisites

Technical prerequisites of the Megatrend University information system are considered through the following groups of prerequisites: personnel resources required for realization; training of personnel for the requirements of IS design and use; defining IS architecture; computer networks.

Personnel requirements mean the number of personnel required for realization of project and training required for the use of information technologies. Personnel resources are of special importance in addition to provision of necessary computer equipment, communication and other accompanying equipment, in other words quality and sufficient personnel support. Taking into account the preliminary analysis, the required information personnel is defined (Figure 6).

Item no.	Job description	Number of persons required
1.	Head of section for electronic data processing	1
2.	Independent expert for development of applicative software	1
3.	Expert system administrator	1
4.	Expert in information technologies	1
5.	WEB administrator	1
6.	Database administrator	1
7.	System engineer	1
8.	Senior executive for the development of applicative software	1

Figure 6. Required information personnel

Continuous activity on education of personnel, automation of their work, as well as adequate forms of functional organization have particularly important role in the IS realization. Work team should have passed the following courses: use of CASE tools in IS design; courses related to BP server, courses related to the development of client application.

Architectural framework according to which the IS architecture is defined bases on the following parameters: user requirements; planned IS development; future development, administration, maintenance, stability and safety of IS; technical support by manufacturer; personnel that will be assigned various tasks of administration and maintenance of the information system; time required for education of users and world trends in the development of information industry.

Based on the above mentioned parameters, the suggestion is to carry out the development of the entire information system using Microsoft products (Figure 7).

	Component	Type	Version
1.	Operative system	Server	Microsoft Windows 2000 Server + Service Pack 3
2.	Operative system	Client	Microsoft Windows 2000 Professional + Service Pack 3
3.	Web	Server	Internet Information System (within MS Windows 2000 Server) with configured FrontPage Server Extension
4.	Web	Client	Microsoft Internet Explorer 5.0 and later
5.	Relation system for database management	RDBMS	Microsoft SQL Server 2000 Enterprise Edition
6.	Service for management of components and transactions	Service	Microsoft COM+ (within MS Windows 2000 Server) for work with configured components
7.	Service for asynchronous communication	Service	Microsoft Message Queue (within MS Windows 2000 Server)
8.	Component for PDF file creation	DLL	PDFLib 4.0.2

Figure 7. Information structure

Technical aspect of network infrastructure design requires detailed planning. Without a thorough analysis of business needs, which would be carried out by network infrastructure, there might come to the situation that the network does not fulfill the set requirements or that the network is too complex.

6. Conclusion

Main conclusions relate to the benefits of such a manner of work. A defined process model and data model as a glossary of data at the level of IS project provide for a very fast and efficient elaboration of prototype client applications.

Extraordinary efficiency is achieved using wizard, which provides for the user what he needs and makes the idea of purchase of someone else's finished application absurd.

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COMPOSITE INDEX OF ECONOMIC ACTIVITY OF NATIONAL BANK OF SERBIA

***Abstract**: Composite index of the National Bank of Serbia is the first official synthetic macroeconomic indicator published in Serbia. The novelty is also the approach to the analysis and prediction of economic activities by means of a synthetic indicator, which is rather a frequent practice of the developed market economies nowadays. The composite index includes only the changes in real sector of economy. It omits the results of econometric researches, which is the common practice regarding composite indexes. However, although modest in methodology and possibilities of application in relation to other known composite indexes, it has given relatively satisfying results in this kind of analysis and prediction of economic activities in Serbia for the short time since its construction.*

***Key words**: indicators of economic activity, time series, composite indexes.*

1. Introduction

Serbia does not have a developed system of macroeconomic indicators, as is the case with contemporary market economies. However, the interest in this area certainly exists, both in the country and abroad. In the course of the last four years positive results in the process of transition have been made, economic activities become more dynamic and more complex and the openness towards the world increases. All this imposes the need to raise the analytical instruments of macroeconomic analysis to a higher level. More efficient, more comprehensive and more complex indicators, coordinated with the international standards and requirements, would additionally contribute to the development of positive expectations and creation of a favourable business environment, and make the hard task of managing economy in transition easier for the economic policy creators.

The building of a comprehensive system of macroeconomic indicators based on which more complex indicators of economic activity would develop also is a complex process that requires certain conditions. First of all, the efficient and

widespread statistic system is required, which should provide for the relevant databases. It is necessary to solve many theoretical and methodological problems concerning defining and division of macroeconomic indicators. The support of academic and expert public in the form of statistic and econometric researches that would study the connection between the indicators and economic trends and more complex indicators develop is also important. Not all these conditions have been provided in Serbia until recently. Therefore, the macroeconomic analysis remained within the scope of the possible and available.

The composite index of the National Bank of Serbia represents an important shift to this respect. It is the first official synthetic macroeconomic indicator published in Serbia. The approach to the analysis and prediction of economic activity by means of a synthetic indicator on the model of the developed market economies is also a novelty. Although modest in methodology and possibilities of application in relation to other composite indexes used in the world nowadays, it has produced relatively satisfying results in the analysis and prediction of economic activity in Serbia for the short time since its creation. However, before we present it, we shall say something more about the concept of composite indexes and the way they are used in the analysis of economic activity.

2. Composite indices of economic activity – short survey of the history and methodology

As the most general expression of economic activity at the national level for the realistic GDP, only the annual data are published. Therefore, the current macroeconomic analysis uses economic indicators such as industrial production, employment, inflation rate, which are available on a monthly basis. However, for the requirements of a thorough macroeconomic analysis and monitoring of trends of the economic activity as a whole, it is necessary to take into account many various indicators, the changes and importance of which are not easy to consider simultaneously. This is why grouping of related indexes is considered a good solution, so that they jointly describe certain wider aspects of economic activity.

The composite indexes of economic activity essentially represent weighted aggregate indexes calculated for groups of economic activities indicator data series. The aggregate indexes show the changes of a complex series in which simple series are included. The role of weight is to assign importance to each constituent series that it has in a complex series. The general formula to calculate aggregate indices by method of weighted arithmetic mean, which is most frequently used for composite indexes of economic activity, is:

$$I = \square I * \square / \square \square$$

where I stands for individual indexes (in case of composite indexes of economic activities for indicator indexes), and for weights of individual indexes.

Composite indexes of economic activity do not have to represent related groups of indicators in the narrowest sense, such as production of only certain products or prices, but can include indicators from various sectors of economy – real, monetary, fiscal relations with other countries. In addition, they contain the known characteristics of aggregate indexes: to level the variability of constituent data series, and then to point out the relative importance of constituent series within the structure of considered aggregates by weighing of individual indices. All these make them particularly convenient for consideration of such a complex entity such as macroeconomic activity.

The application of composite indexes in the analysis of economic activities is based on the division of economic indicators into the leading (the changes of which precede the changes of economic activity), coincident (which describe the current economic activity) and lagging indicators (they fall behind the changes of economic activity). This system of division of indicators was established in 1930s by the researchers of the National Bureau of Economic Research (NBER), Wesley C. Mitchell and Arthur F. Burns.[1] Later in the course of 1950s and 1960s, Geoffrey H. Moor and Julius Shiskhin[2], the NBER researchers as well, developed the methodology for making of leading, coincident and lagging composite indexes based on the appropriate indicators. At the beginning of 1960s, calculation of composite indexes for the American economy was taken over from NBER by the Department of Commerce (DOC), and since 1995, it has been done by The Conference Board.[3] At the end of 1980s, James Stock and Mark Watson,[4] the NBER researchers also, suggested methodological changes more significant with respect to the traditional NBER-DOC approach, introducing new statistic and econometric solutions into the procedure.

We shall briefly present how the procedure of construction of composite indexes looks like.[5] First, it is necessary to identify the indicators of coincident

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1 Their work *Measuring Business Cycles* from 1946 is the basic literature in this field.

2 G. H. Moor, J. Shiskhin, "Indicators of Business Expansions and Contractions", *NBER Occasional Papers*, New York, 1967.

3 The Conference Board is an American non-profit organization dealing with macroeconomic analyses, prognoses and market researches with the aim of improvement of American economy and management. The notices on composite indices and all other activities are published at www.conference-board.org.

4 J. Stock, M. Watson, "New Indexes of Coincident and Leading Economic Indicators", *Macroeconomics Annual NBER*, eds. O. Balanchard, S. Fischer, Mass.: MIT Press, Cambridge, 1989.

5 Based on: A. Simone, "In Search of Coincident and Lading Indicators of Economic Activity in Argentina", *IMF Working Paper* 01/30, International Monetary Fund, 2001; T. Jagrič, *Leading Indicators of Aggregate Economic Activity of Slovenia*, Department for quantitative economic analysis, Faculty of Economics and Business, University of Maribor, Slovenia, 2003, and OECD: Cyclical Indicators and Business Tendency Surveys, Paris, 1997, www.oecd.org.

economic activity – time series, which best reflect the GDP trends on a monthly basis, therefore the current economic activity. The choice of coincident indicators can be made based on various criteria, such as the participation in GDP formation, the importance for the national economy, availability of data and possibilities of statistical system. Some OECD countries use only the index of industrial production as the indicator of their current economic activity, or quarterly/monthly estimates of GDP or GNP, while some other countries use several indicators, such as non-agricultural employment, unemployment rate (inverse), and available income, turnover in processing industry and trade and other.[6] As for the American economy, the coincident indicators of the Conference Board are the population employed in non-agricultural sector, the available income reduced for transfer payments, industrial production and turnover in processing industry and trade.

By identification of indicators of current economic activity, we obtain reference series in relation to which trends of other time series – indicators are examined statistically and econometrically and they are then classified into leading or lagging indicators. The following indicators are most frequently identified as leading: orders and stocks in production, average working week, money stock, interest rates, prices of some products, etc. In countries that are heavily dependent on import, the indicators of foreign economic activity are often identified as leading indicators, for instance the indicators of the country with which they have the largest scope of foreign trade. Some of the leading indicators for the American economy are: average working hours per week in processing industry, average weekly requirements for unemployment insurance, the prices of shares (500 most important joint stock companies), M2 money stock, while some of lagging indicators are the average duration of unemployment, costs of labour power per product unit in processing industry, consumer and business loans.

After the division of indicators, it is necessary to choose those that will take part in the appropriate composite index. NBER-DOC methodology, based on the work by Moor and Shiskhin, defines some desirable characteristics that the indicators should have in order to take part in composite index, such as economic significance, data availability and coordination with previous economic cycles. The indicators are point rated in relation to how well they fulfill each characteristic, whereas the final score of all characteristics represents orientation for choice of indicators. Stock and Watson method (SW method) consists of a detailed examination of the connection between series – candidates and indicators of current economic activity by statistic-econometric methods such as regression analysis and Granger test of causality, in order to determine those with the best performances.

[6] If the economic activity is analyzed within the context of cyclical trends research, it is important to study whether the series – candidates are of the same cyclical characteristics as GDP. Besides, this is the most frequent approach to economic activity analysis today.

Finally, composite index will represent a weighted average of chosen data series. NBER-DOC methodology prescribes equal weights for all chosen series, while according to SW methodology weights are determined by econometric techniques. Depending on the kind of component series – indicators, composite indexes can also be leading, coincident or lagging, and will range analogue to the kind of indicators they consist of. Some countries use composite index of coincident indicators as reference series in relation to which leading and lagging indicators are determined.

The methodology for calculation of composite indexes has been developed further and adapted to their own requirements and specific characteristics by some other countries, international organizations and research institutions also. In the course of 1980s, the OECD developed its own system of indicators: the *International System of Leading Indicators*. Their Composite Leading Indicator is well known and it is calculated for its 22 member countries.[7] Some of well-known composite indexes of economic activity for the European territory are also €COIN, Composite index of current economic activity of the Centre for Economic Policy Research (CEPR), as well as Economic Sentiment Indicator (ESIN) of the European Commission.[8] The methodologies differ more or less in relation to those two presented, as regarding the general approach and purpose (trend analysis or business cycles analysis) as in the details of the procedure itself.[9]

3. Composite index of economic activity of the National Bank of Serbia

The composite index of economic activity of the National Bank of Serbia has been constructed in the Research Center of the National Bank of Serbia and was presented to the public in October of 2003, in the publication of the National Bank of Serbia "Economic Review". According to their authors, "…the purpose of introduction of the composite index is:

- To show changes of total economic activity in an integrated manner by means of one indicator;
- To obtain a synthesized indicator for short time periods (three-month periods and one-month periods), and
- To serve as a basis for short-term predictions of economic activity."[10]

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7 *OECD Composite Leading Indicators – a tool for short-term analysis*, OECD Statistics Directorate, 1998, www.oecd.org.

8 A. Rua, "Composite Indicators for the Euro Area Economic Activity", *Economic Bulletin*, Banco de Portugal, September 2002.

9 About the similarities and differences in methodology, see: "Cyclical Indicators and Business Tendency Surveys", Paris, 1997, www.oecd.org.

10 Narodna banka Srbije: *Ekonomski pregled*, October 2003, p. 32.

- The composite index integrates the changes of the following "components of economic activity":
- Industrial production;[11]
- Agricultural production (on the basis of changes of real scope of the purchase of agricultural products);
- Trade (on the basis of changes of real scope of turnover in retail trade);
- Construction (in working hours completed);
- Tourism and hotel business (on the basis of changes of number of tourist arrivals).[12]

These components of economic activity, as the Index authors call them, include together eight out of twelve branches of economic activity that take over 90% of the structure of GDP in Serbia. Industry includes three branches: extraction of ore and stone; processing industry; production and supply with electric energy, gas and water. Tourism and hotel business are entered as hotels and restaurants in the official classification of branches; agriculture as agriculture, hunting, forestry and management of water resources; traffic as traffic, warehousing and communications; trade as retail and wholesale trade, repair. The remaining branches are activities related to real estates, renting, health and social work, other utility, social and personal services.

The National Bank of Serbia has decided in favour of a somewhat simpler approach to the construction of composite index when compared with the presented ones. "Series of de-seasoned data in real expression have been used in calculation of the composite index. De-seasoning has been made by X12 method of the USA Bureau of Inventory. The share of the stated branches of economic activity within the GDP was used as relative share of certain variables (weights), according to the last available data of the Bureau of Statistics of the Republic of Serbia."[13] Methodology has not been described and explained in more details either in this or other issues of Economic Review or in some other publications of the National Bank.

When the Composite index was first presented, its changes were given from the beginning of 2000, with the estimates for the last quarter of 2003. The Index values were not given however, but only the graphic representation that we quote here.[14]

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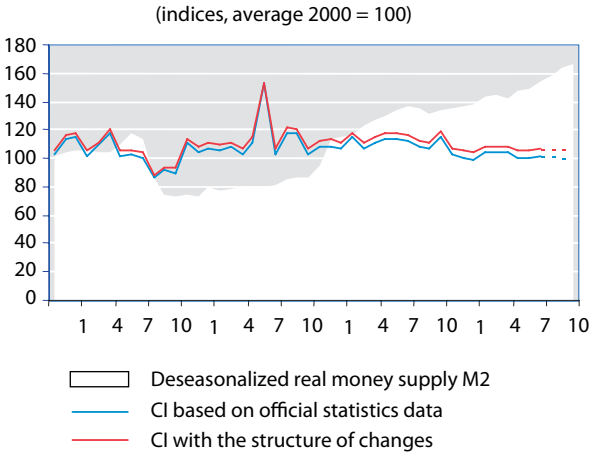
[11] Although it has not been stated explicitely, we assume that index of physical scope of industrial production was used for industrial production.

[12] All these data series are available monthly in publications of the Republic Bureau of Statistics.

[13] Narodna banka Srbije: *Ekonomski pregled*, October 2003, p. 32.

[14] The upper line at the graph represents the influence of "estimated structural changes" on the composite index. It has not been stated, however, what are these structural changes.

Composite index of economic activity
(CI)



The rise of CI in August 2001, is the result of the increased agricultural production and the buy-off of agricultural products. The data for the period October-November 2003, are the estimates.

The estimates by the National Bank analysts based on the index trends were that there would be a certain improvement of economic activity in the course of the last quarter of 2003.

Since October 2003, the National Bank of Serbia has used this Index regularly in their analyses, although the Index values are still not published, even its change with reference to the previous month, as is the common practice with composite indexes and other similar indicators abroad.

4. The characteristics of the Composite Index of the National Bank of Serbia and possibilities of application in analysis

Considering that only the annual data on GDP are published in Serbia,[15] the indicators of economic activity monitored by the statistic system on a monthly basis are used for the requirements of the current analysis. However, the following example illustrates well that individual indicators are not sufficient to have a better insight into the actual trend of economic activity. In the course of 2003, until the end of the third quarter, there was a fall of industrial production

[15] The GDP calculation in Serbia is made according to production method, based on determination of value of production and services of production units. The calculation is based on the concept of material production, according to which Gross domestic (material) product equals the sum total of depreciation and national income.

in Serbia recorded, and the agricultural trends were rather unfavourable. For two consecutive years already, since the beginning of transition in 2001, Serbia recorded lower and lower rates of GDP growth, and the estimates for 2003 were unfavourable considering the fact that only 1.5% GDP growth was expected. It turned out however, that the achieved growth of GDP was a somewhat higher than expected (3%), which was significantly contributed by the construction activities (which recorded the growth of 10.5% more than the previous year), telecommunications within the branch of traffic, warehousing and communications (24.8%) and retail trade (12%). The dynamic growth in these branches continued in the first half of 2004, also.

The unfavourable trends in agriculture and industry in the course of 2003, led the majority analysts in Serbia into pessimistic prognoses for 2004 as well. At that moment, every piece of information that represented positive indication and supported the creators of economic policy was of great significance. The National Bank, however, indicated that there would be a growth of total economic activity in the first half of the year already,[16] and by the end of the year, even 8% of GDP growth was achieved. Its prognoses based largely on the Composite Index.

According to its characteristics and scope, the Composite Index of the National Bank of Serbia belongs to composite indexes of current economic activity, although it aspires to be the leading indicator. It can be assumed that the estimated data for component series are obtained by trend extrapolation. In any case, the methodology of index calculation is modest, since a thorough composite index that should represent the national economy requires a much more complex approach and wider scope. For instance, for the requirements of calculation of the composite index of the leading indicators of Slovenia, first the index of industrial production was identified as the indicator of the current economic activity (reference series). Then, for the requirements of identification of leading indicators the combination of NBER-DOC and SW methods was used. Three hundred and sixty five time series from all sectors of economy were examined and scored econometrically. Thirty-nine of them were identified as potential leading indicators and ten entered the structure of the composite index.[17]

The possibilities of the Index use in analyses are very limited for the users out of the National Bank, which is largely conditioned by the manner of its presentation. Neither the index values nor its components are given. Based on the graphical presentation, it can only be concluded that the level of economic activity is higher than at the beginning of 2000, that economic activity continues to grow and that the oscillations of economic activity alleviate over time. This shows that since the end of 2000, when the process of transition began, certain macroeconomic stability has been achieved. Based on the graphic presentation only, nothing can be concluded about the trend of constituent series, what is the

[16] Narodna banka Srbije: *Ekonomski pregled*, January 2004.

[17] T. Jagrič, *ibidem*

contribution of certain braches to the growth of economic activity (social product), which is rather a significant issue for macroeconomic analysis.

"Composite indexes represent the national economy to the extent to which the data series on which these indexes are based are representative."[18] However, it is not known to what extent the data series chosen by the National Bank of Serbia are representative for the branches they represent. For instance, as for the traffic, warehousing and communications in the last three years, the traffic (expressed in passenger kilometers) records the falling trend, while telecommunications (expressed by physical scope of services) record very high growth rates.[19] The question may be asked which of these two series better reflects the trends in this branch.

Let us now see what the share of branches included by the composite index in the structure of gross domestic product was. This would also give the weight from the basic period (year of 2000). However, as the methodology has not been explained in detail, we do not know for certain what weighing method was used.

Table 1. The structure of social product per branches in Serbia for 2000 (in %).

Branches	Share in %
1. Extraction of ores and stone	1.8
2. Processing industry	33.8
3. Production and supply with el. energy, gas and water	1.8
4. Agriculture, hunting, forestry and management of water resources	23.8
5. Construction	6.1
6. Retail and wholesale trade, repairs	17.6
7. Traffic, warehousing and communications	9.2
8. Hotels and restaurants	1.9
□ 1 - 8	96.0
9. Fishing industry	0.1
10. Activities related to real estate, renting	3.5
11. Health and social services	0.3
12. Other utility, social and personal services	0.1
□ 1-12	100.0

The data for Kosovo and Metohija are not included.

Sources: The Official Gazette of Yugoslavia, 2001; Bureau of Statistics of the Republic of Serbia, *Social and economic trends in 2003.*

[18] G. Harkenrider, *Kentucky Composite Economic Indicators*, Center for Business and Economic Research, University of Kentucky, 1999.

[19] Republika Srbija, Republički zavod za statistiku: *Društveno-ekonomska kretanja u 2003. godini*, Saopštenje 22, p. 7.

The branches included in the Composite Index participated with 96% in the structure of the domestic product in 2000. It can be noted that the branch related to the real estate and renting was not included by the composite index, and it had larger share within the structure of domestic product that year than tourism and hotel business (hotels and restaurants).

The composite index included only the changes in the real sector of economy, i.e. in production. It is possible that such an approach is the consequence of the calculation of social product of Serbia according to the production method, and it was considered that the changes in the real sector, i.e. in the production would best reflect the trend of the economic activity as a whole. However, the statistics in Serbia monitors many other indicators, both in real and other sectors, which can be used for the construction of the composite indexes. The Bureau of Statistics of the Republic of Serbia identifies the following "basic indicators of economic activity": retail price index, cost of living index, price index of the manufacturers of industrial products, price index of the agricultural and fishery producers, price index of catering industry, index of industrial production, index of average nominal salaries, the unemployed persons, persons looking for a job for the first time, number of the retired persons, average retirement fee paid monthly. As "more important indexes of economic trends", foreign trade and industrial work productivity are added.[20] The behaviour of monetary aggregates should also be examined. All these are potential candidates that could make part of a more complex and more comprehensive Composite index.

5. Conclusion

The National Bank of Serbia, as a monetary institution of the greatest importance in the country, must follow the events in the real sector in the function of achieving its main tasks of keeping the monetary stability and creation of monetary policy. These tasks at the current historical and economic moment are not at all easy considering that the effects of transition on certain branches have been uneven and have had contradictory trends as their consequence. By means of the composite index, the National Bank has achieved relatively satisfying results in the analysis and prediction of economic activity. The approach to analysis itself is a shift with respect to the approach that has been common so far, which consisted of the isolated observation of individual indicators and their synthesis based on either experience or intuition. Therefore, the National Bank of Serbia indicated the way in which macroeconomic analysis and its instruments in Serbia will develop further.

[20] See: Republika Srbija, Republički zavod za statistiku: *Društveno-ekonomska kretanja u 2003. godini*, Saopštenje 22.

In January 2004, the Bureau of Statistics of the Republic of Serbia formed a Basis of time series of economic indicators for Serbia.[21] The reform of the statistic system of Serbia in accordance with the UN System of National Accounts[22] and IMF General Data Dissemination system[23] is also on the threshold. This would provide for the first condition to create the system of macroeconomic indicators discussed in the Introduction. However, hard work is still to be done by the analysts of the National Bank of Serbia and all scientists in this field.

[21] Republika Srbija, Republički zavod za statistiku: *Trendovi*, December 2004, Beograd, *xi*.

[22] SNA is the internationally accepted system of statistic standards in the field of national accounts. See: www.un.org.

[23] GDDS is aimed at improving the statistic system of member countries considering the quality of data, manner of their presentation and achievement of the international comparability of data. The considerable part of the system is devoted to defining and classification of macroeconomic indicators. See: www.imf.org.

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Book review UDK 911.3:33(100)

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DILLEMA OF CONTEMPORARY GLOBAL WORLD ECONOMY: NATIONAL VS. TRANSNATIONAL

Essay on the book "Economy of world regions" by Professor Oskar Kovač Megatrend University of Applied Sciences, 2004

When a book appears dealing with such a complex and wide-reaching problems such is economy of world regions in such an easy, simple and precise manner, then it is a true honour of the Megatrend University to have Professor Oskar Kovač, the author of the textbook published under the title "Economy of world regions" in their ranks.

Professor Kovač is known to the public as one of the leading experts in the field of foreign trade, or better to say of geoeconomics in general. This eminent expert has for years worked as a full professor and the Dean of Economic Faculty of the University in Belgrade, and in recent years he has been a full professor at Geoeconomics Faculty of Megatrend University of Applied Sciences. At the end of 2004 he delighted us with his new book "Economy of world regions." Without exaggeration, it can be said that the author establishes new standards in writing such a type of book, which requires the knowledge of macroeconomics, foreign trade, political geography, as well as perhaps the most important knowledge of concise writing so that the readers can easily understand the content.

Although the book contains eleven chapters, we could divide it into two parts. In the first part, which includes chapters one, two, three and four, Professor Oskar Kovač leads readers into the world of globalization and transnational companies, showing us a wonderful TNC world for which we know that it exists but somehow always wonder how far the power of transnational companies reaches and what is their influence. The author offers us possibility to consider and discover that "brave new world", i.e. the world of new economic order that imposes new standards of business conduct and life in general in the spirit of globalization. The facts however show that TNCs are not as powerful as it is usually thought. The book states that the total value of production

and services of TNCs makes only 6.9% of the world GDP, which is less than it could be expected. The question is then asked: if transnational companies are not really the main level of new economic order power, who is the real bearer of that power? Professor Kovač offers the answer to this question as well: these are the International Monetary Fund (IMF), the World Bank (WB) and the World Trade Organization (WTO). Together and headed by the USA, they make the rowing fours that have determined all possible trends at the markets worldwide. Fortunately, as Professor Kovač suggests, there are still both countries and regions that manage to avoid this 'invisible hand' thanks to their own good development policy. By their own assets, natural resources and labour power, they manage to achieve amazing results that scare the leaders of the stated four and become the subject of their study. The examples of the development of Asian-Pacific region, China and Russia give us hope that the economy of our country may get back on its feet as well.

In addition, it is necessary to pay particular attention to the explanation of market fundamentalism in the second chapter of the book, i.e. to the part dealing with the Washington Consensus. Although created with the intention to suggest to the underdeveloped countries how to formulate their macroeconomic policy, this Consensus failed in this intention absolutely so that even the World Bank headed by the then Vice-President Stiglitz (1996) acknowledged the defeat of the Washington Consensus and proposed the *new paradigm of development*.

Based on this chapter, everyone and even someone who has never dealt with geoeconomics or international economic relations can get clear insight into how the economic policy at the world level is created and how the gap between the rich and the poor deepens further with the help of this policy although the main intention was quite opposite. In addition to this, it can be noted how restrictive policies and coercive privatizations remove the nations of less developed countries farther from their goal, which is better life. Further, the author insists that every country, including Serbia and Montenegro, must have its own development strategy, which – if set on a sound foundation – offers the possibility for progress of every society. Otherwise, in accordance with world standards of immersion of domestic developing strategies into the world one, we would find ourselves in trouble; as Professor Kovač says with humor: "Serbia would produce only raspberries and import everything else." At the end of this part of the book, the author concludes: "Market fundamentalists are against the government influence on economic flows, considering that market automatism is sufficient. Human society, however, does not consist of the market only. The activity of the state in the development of a society is not an intervention from abroad, but an integral part of the overall process of system auto-regulation. This is why the activities of the state are not undesired for the interests of the majority of population."

The next chapter of the book leads us into the world of the international capital flow. This chapter explains how the international capital flows take place

and what forms of the international capital flow exist. Real importance of this chapter can be considered only after having read the second part of the book, where the particular examples of some regions make us realize that the powerful countries of contemporary world, supported by the international economic institutions, have directed the flows of the international capital towards the highly developed countries and not towards those who are in real need of that capital.

Having read the first four chapters of the book in one breath, the reader comes to the second part of the book, which consists of chapters five through eleven. This part of the book deals with the world regions, elaborated and presented in the following order: North America, Latin America and the Caribbean, the Union of Independent States and Russian Federation, Asian-Pacific region, the Near East and North Africa and the rest of Africa.

When speaking about the second part of the book, we have to mention that it contains the total of 44 tables, 24 maps and 27 pictures that help reader follow the story in an appropriate manner. In addition to this, considering that the author has a long-term experience in the mentioned field, perhaps one of the greatest achievements of this book is in that it gives the prediction of economic and political trends in every of analyzed regions.

North America is offered as a logical choice for the beginning of elaboration of the world regions, with a special review of the world greatest power – the USA. When we consider economic and demographic data for this country, it is clear where the power of this country comes from. However, a more detailed analysis of macro-economic flows in the USA shows that the economy of this power is vulnerable. The author proves that by the following words: "Growing budget deficit lately, the lack of savings in relations to the investments and the deficit of current transactions of balance of payments, are only the various indicators of macroeconomic imbalance that is financed by transactions in the capital account of the balance of payments. Only a small part of the current account deficit is financed by the usual capital transactions, and the majority of it is covered by the increase of net debtor's position in the balance of the international investment position of the USA." It must be admitted that the USA, like a great illusionist, still attract capital into their country, dictate the conditions under which they will indebt, and in addition to all this, the creditors still see them as a state with the most developed economy. One must really ask how they manage that! The answer to that question is really rather simple if we read the pages that follow carefully. Namely, it can be said that the USA occupied in a certain way the international economic institutions and that without their consent nothing is approved unfortunately. It would be interesting in the years to come to monitor how the USA will deal with new rising powers such as China and renovated Russia. Until that happens, it is important to mention that America does not keep their arms crossed but increases its market, forming the integration called North American Free Trade Association (NAFTA), first with Canada and then

with Mexico. In this way, they try at least spatially and numerously (in terms of population) to parry the EU and the supervening powers – China and Russia.

Latin America and the Caribbean are the topic of the next chapter in this book. The development of this region has oscillated frequently in the course of previous decades. Indebting of the countries in this region with the international financial institutions brought prosperity to it in the beginning but later the wheel of progress started to turn in the opposite direction. Professor Kovač explains us this phenomenon and how the policy imposed to these countries by the Washington Consensus was completely wrong. Argentina was representative to that effect. Namely, it followed literally the conclusions and suggestions of the Washington Consensus and the results seemed promising at the beginning. The IMF celebrated Argentina as its greatest success and recommended to others to take after it. However, the practice denied this in the worst possible manner – in the end Argentina practically went bankrupt. The policy of trade liberalization, restrictive fiscal and monetary policies could not yield results since such a model of state administration represents *Pareto optimum*, which cannot exist under the conditions of imperfect market.

Next chapter, which deals with the Union of Independent States and Russia, is extremely interesting and shows to what extent the disintegration of the USSR was devastating for the majority of the UIS members. Poverty and economic and social stratification of population are only some of the "achievements" of the newly created states. Russia, as a logic leader of these states, has started to return to old "tracks of glory" and has managed to some extent to regain position that it held at the international scene. Long is the way ahead of it and hard too, and the final goal is far but not unreachable, as Professor Kovač suggests. Russian government will succeed if they remain consistent to their reforms, whereas the monetary sector of its economy will remain its sore spot.

In the course of 1970s, and especially during 1980s, the Asian economic miracle or "economic boom" drew great attention of both expert and wide world public. Japan and other Asian tigers (as some used to call them), appeared from nowhere and left us wondering. Their miraculous recipe for success of the development of industry consisted of the following ingredients, as Professor Kovač says:

"In the East-Asian model (on the example of Japan) changing of import substitution and export orientation did not occur in the entire economy but successively in certain industries. Every new industry had five stages of its life cycle:

1. Starting stage: new product comes from the import and its consumption in the country increases gradually. Domestic production starts by means of imitation and loaned technologies, but it is not competitive in comparison with the imported program because of poor quality and high production costs.

2. Domestic consumption increases rapidly, but production increases even faster replacing a part of import: as quality of products improves, the prices fall.
3. Export stage: domestic consumption slows down and production increases; product is placed to export.
4. Mature stage: production reaches maximum and begins to fall because both domestic demand and export fall. The product is not competitive any more in comparison with similar products from new developing countries.
5. Reverse import stage: fast fall of domestic production under the influence of cheap production of newly industrialized countries. The import of the product starts again."

Therefore, it is clear that the best solution to some problem does not always have to be the most complicated one at the same time, but on the contrary – the one that is the simplest.

Next two chapters, dealing with the Near East, North Africa and the rest of Africa, are particularly precious because of the generally known political situation in these regions, and because of the unavailability of data due to many wars, political revolutions and inexistence of any kind of statistic records. The author reminds us of following current issues of these regions: the Near East faces dilemma whether to continue insisting on the export of petroleum and petroleum products in its development policy or to diversify production; North Africa, as the most developed part of African continent, faces the problem of heavy indebtedness and seeks ways to service the existing debts successfully; the rest of Africa unfortunately, faces the worst problem of all – how to feed hungry population.

The book "Economy of world regions" by Professor Oskar Kovač is the first book dealing with macroeconomic flows per individual regions, which is the foundation of the concept of studies at Geoeconomics Faculty of Megatrend University of Applied Sciences.

Using rather convincing examples, the author explained throughout the book what are the problems encountered by the economy of regions or, better to say, countries of the world at the beginning of 21st century. At the height of the struggle between proponents and opponents of globalization, it is necessary to admit to ourselves whether we wish to accept Huxley's "brave new world" and whether the price of accepting globalization (of transnational) is too high. This dilemma when choosing transnational or national is solved by Professor Kovač in favour of the national, i.e. he recommends the national developing strategy that must be adapted to world economic flows. He convinces us that the faith in ourselves and our own qualities is actually half the way to success.

Book review UDK 91.1(100)

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GEOGRAPHY, HISTORY, GLOBAL CHANGES & WE

Essay on the book "Global geography" by Professor Verka Jovanović
Megatrend University of Applied Sciences, 2005

Professor Verka Jovanović is a full professor at Geoeconomics Faculty, a Vice-Chancellor for scientific and research work of Megatrend University of Applied Sciences in Belgrade, an initiator of application of new technologies in geography, a reviewer of the first electronic map of Belgrade made in GIS environment, an organizer of the First Yugoslav conference on geographic information systems, a participant of many other international conferences and programs. The public also knows her as an originator and member of the Association of cartographers of Yugoslavia, a member of Serbian Geographic Society, Balkan Association for the environmental protection and the editor of IQ Scientific Magazine in the field of geo-science. Finally, Professor Jovanović is the author of *Global Geography*, a textbook intended for the students of the first year of studies at Geoeconomics Faculty. However, this publication will certainly meet the interest of a wider audience since the quality and thoroughness of the content deserves it. Every reader will find the content easy to understand and clear, interesting because of its scope and valuable because of data and explanations that would enable easier approach to geography. It is obvious that the author did not have any difficulty how to present her conclusions on a certain topic, its importance for the modern world as well as how it was influenced by certain stages of mankind development. It follows the development of geography from first civilizations very successfully, and it is even more successful in confirming the fact that the constant development of mankind influenced the development of geography. It is easy to notice the inclination towards the opinion that world today is ready to accept collected gifts of its past, to understand itself at the sources of its spirit at time that destroyed many values but also opened the paths of rise and created the world as we know it today.

The author wished to open the pages of her work and convince the reader as easy as possible in the necessity to know complex topic of global expansion of

changes in nature and economy, the problems originating due to the change of number of population, then in the advantages resulting from finding new devices for gathering, analysis, modeling and presentation of data, and of course, in the importance of the role of geoeconomics today, in other words the knowledge of geographic area and economic systems of various level of development and complexity.

After an insight into such a work, we get the picture of the whole genesis of a science. Geography has for long represented a "science about the Earth", a complex synthetic material about its surface where human societies live and work. However, an increasing complexity of relations in natural and social environments brought to the development of new disciplines and to complete transformation of the subject of study of geography. In order to bring this long-lasting process to the interested public closer, Professor Jovanović decides to establish a specific relation between cartography and history, demography and political science, statistics and economy. Facing such a huge challenge, the past and the present intertwine, as well as religions and nations or economy and culture. Image and words complement each other, maps and descriptions, statistics and chronology. The textbook shows how geography and cartography illuminate history, keep cultural and spiritual past from oblivion, and at the same time create necessary foundation for successful analysis of today's complex geo-historical areas where various levels of communication and interaction act, as well as various understanding of the notion of national and regional identity formed within the framework of special geo-political and developmental processes.

Global Geography elaborates topics through twelve chapters with many graphic images such as maps, drawings, pictures, graphs and tables, which represent special wealth and contribute to easier understanding of the content, but also to understanding of its meaning for the contemporary society. More precisely, the textbook is divided into following fields:

- Geography of early epochs
- First scientists, researchers and their work
- The subject of geographic disciplines and their development
- Geographic regions of the world – continents
- Geographic data and methods
- Data on the condition and changes in natural, economic and human resources within global proportions
- Contemporary phenomena and processes in geographic space
- Era of computers and use of geographic information

In the introductory chapter the author offers the required information rather concisely in order to understand the text that follows easier and better. Defining an increasingly complex subject of geographical researches as "intertwining of

functional relations between physical and social elements in real spatial system" and precise definition of geography as "a science studying laws of complex relations between nature, man and activities", represent necessary foundation for further dealing with complex topics.

On the pages that follow we meet first civilizations and their contribution to establishing of geography as scientific discipline, as well as achievements that paved the way to a complex geographic science of today. Sumerians, Egyptians, Assyrian Babylonians, Phoenicians, Greeks and other progressive cultures of the early period helped unselfishly through the first lettering, first descriptions of the planet, first names of continents, first calendars, and eventually through great mathematic, astronomic and geometric knowledge. The earliest development of science, including geography, was fulfilled by picturesque background made of biographies of researchers, philosophers and geographers of various epochs. Then follows the encounter with not only great and important discoveries and development of exact sciences, but also how they took place. Simply the names of Herodotus, Eratosthenes, Strabo, Columbus, Vespucci, Magellan, Copernicus, Kant, Humboldt and others on the pages of this textbook are not only the symbols for the most important geographic discoveries and development of the scientific thought, but Professor Jovanović manages to make them alive with all their virtues, imperfections, aspirations and fears because of which they would always remain what they are and show us that every day and every time had and has its famous persons and its remarkable events.

The important place in the following chapter belongs to one of the most important tools in geography – the map, the content of which offers thorough information and indications for the use of symbols. Here we can get information on types of maps, their main elements, their proportion and projection, geographic network and cartographic production. We further substantiate our knowledge through the contact with specific and clear division of geography, since the development of science and a great number of data led to the division into separate fields of specialization:

- Physical geography (geo-morphology, climatology, mathematical geography, bio-geography, hydro-geography, oceanography, limnology, geography of soil);
- Social geography (anthropogeography, demography, ethnography, geography of language, geography of religion, political geography, medicine geography, economic geography, agricultural geography, industrial geography, traffic geography, tourist geography, regional geography).

The important elements of several the most important geographical disciplines have been additionally separated and analyzed in addition to the presented division. In the part of the book that has just been described, the map as a

foundation of visual comparison between areas of various locations and characteristics and divisions of geography into disciplines represents an excellent introduction for a reader to meet the world geographic regions (Africa, Asia, Europe – the European Union, North America, South America, Australia), which have mostly been dealt with from the point of view of natural characteristics, mineral resources, population, language, culture, religion, agriculture, industry, traffic and commerce. It should mention that the middle part of the book, which presents such content, is of ever increasing importance today, identified in frequent researches in order to make comparative analysis. Mentioned researches most often include two or more states or regions, and starting point is exactly geographical location and the analysis of natural potentials. Current delicate political, economic and social situation of Serbia and maturing of the consciousness on the necessity of careful study of transition policies of other countries, i.e. positive and negative consequences of measures applied in structural reforms, economic stabilization, foreign trade growth, foreign investments getting more dynamic, fiscal policy, but also safety and sub-regional, regional and interregional cooperation, only additionally makes the analyzed part of the book more topical. This is particularly important because of the latest political turmoil that slows down the rhythm of transition and imposes the need for the new wave of reform. The knowledge of other economic programs, as well as other integrative experiences, could contribute to some solutions in our complex reality and to represent undoubted advantage in comparison with other European countries passing trough the same process.

Four chapters of the final part of the book that complement successfully with the previously mentioned ones, since they deal with the fields of geographic data, statistics, geographic methods, geographic information systems and changes in geographic space, close the circle definitely and finally confirm the importance of the efforts invested in this book. It would be hard to imagine today a serious analytic procedure and study of mass phenomena and processes without the assistance of statistics, which gathers, publishes and distributes an unbelievably large number of data through inventories, enquiries, reports and records. Clear examples of statistic calculations (measuring of central tendency, measuring variability, correlations, and indexes) provide for the easier understanding of this matter. Remote sensing has also found its place as a source of geographic information, which owes it obviously to the comprehension that it has become an independent scientific discipline and naturally to satellites that have had crucial role in its development. Our author confirms that and defines it as a "process of gathering information on the land, water and facilities without physical contact between sensors and objects." Reading the book further, we come to the detailed explanation of the notion of scientific method, which both in other

sciences and geography represents the main issue of research procedure. Most generally, scientific method is classified into three groups:

- Normative method
- Experimental method
- Historical method.

The segment of geographic data and accompanying activities ends with geographic information system, which is defined as a "computer system for packing, managing, integration, handling and presentation of data that are spatially related to land and is used as a model for precise analysis by means of computer." In short, GIS offers the possibility of visual placement of a large number of information about objects, their characteristics and mutual relations on one place, and its main advantage results from it. As basic elements of geographic information system with which it makes a complete technological entity, the following are quoted:

- Hardware
- Software
- Databases
- Educated experts.

It should mention here the statement that "introduction of GIS technology requires establishing of clear procedures and legal regulations at government and institutional level." The need to use spatial information grows and it is directly connected with better knowledge of space and economic development.

Finally, we come to the twelfth, last chapter, but at the same time to the part with the most topical subject. There is a warning at the beginning of this chapter that "global changes in geographic space lead to changes of the environment that manifest in large consumption of fossil fuels and emission of carbon-dioxide, destruction of ozone layer, raising of the level of world seas and that the growth of towns and water supply will present the greatest problems and challenges in 21st century." Further in the text, the author states reason for concern presented in the introduction, but underlines first the terms such as geo-economics, which is defined as "acting of economic policies in global space," where the role of space is considered insignificant since conquering of markets is a strategic element of geo-economy. The author finds "that in new millennium every country aspires to find larger market and that idea determines both home and foreign policy." The important part of the book is dedicated to notions such as globalization, regionalization, to more and more frequently asked question whether these two phenomena oppose each other and finally, to currently the most expensive economic resource – information, since to be educated today means to be well informed.

Scientific foundation, full content, or in other words undoubted quality is contributed by the accompanying material that offers many resources of geographic data (maps, pictures, drawings, graphs, tables, statistics), then the detailed description of the most important national and international associations to which one whole part is dedicated to, and comprehensive bibliography of works on this topic, as well as the list of the most important web addresses, which would be very useful to all those dealing with the mentioned fields. In the majority of the stated chapters the analysis of every subject is followed by many implicit and explicit explanations, so that through its statistic good layout the described textbook gives indirect suggestions very important for better understanding of our complex reality and turbulent time we live in. Obvious is the desire to stimulate primarily the susceptible student population to think and to motivate them to consider the problems from many angles, using at that geographic-spatial and causal-effective way of thinking. Current changes in geographic area are particularly highlighted and they have their long-lasting and often turbulent pre-history. Why the world is the way it is, what attitudes, dogmas, inventions, discoveries, what truths or false beliefs made us shape the world in such a way and why we perceive and understand it in such a way are the questions to which Professor Jovanović tries to lead us into and then helps us find the answers.

What makes *Global Geography* different from other books on geography is the way the extremely huge scientific material has been treated. In short, it represents a real small encyclopedia and it is a true treasury of mankind heritage since in this book practically the history of human kind, human thought, arts and knowledge has been presented in the concrete geographic space so that under the hand of our writer even the familiar things begin to look different. We get acquainted with a number of new contemporary achievements the perception of which creates a completely new view on geography today.

Finally, it is needless to mention the value of the effort of the author who set sail through waters where it is difficult to sail independently today at times of huge accumulation of knowledge. We should praise that courage without which we would be poorer for an exquisite piece of work.

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