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Center for Socio-economic Indicators
Ljubljana, Slovenia

**THE INDICATOR MODEL FOR DESIGN OF DEVELOPMENT POLICY AND
FOR MONITORING THE IMPLEMENTATION OF THE STRATEGY OF
ECONOMIC DEVELOPMENT OF THE REPUBLIC OF SLOVENIA
(Summary)**

**PART I
THE PROTOTYPE OF THE INDICATOR MODEL AND THE ASSESSMENT OF
THE INITIAL POSITION OF SLOVENIA**

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**1. The development and a proposal of the methodology for the use of indicators in
development planning**

Results of the project are presented in two parts. In the first part we deal with two main topics. The first topic is the prototype model of the use of indicators in development planning which will have to be elaborated over the next few years. The main goal of this model is to improve the quality of decision-making with respect to the use of development resources, particularly as related to the government budget, to achieve greater effectiveness, efficiency and competitiveness. Furthermore, its aims are to harmonize the decision-making with the EU practice, achievement of greater transparency and democratization of decision-making, and presentation of Slovenia to foreign partners and public. The purpose of development planning is to maximize social welfare. Since welfare cannot be measured directly it is measured by a multitude of indicators. The methodology of development planning should determine the way the indicators are selected and the way to achieve the desired values of indicators. The proposed indicator system is conceived as a matrix in which the welfare elements and areas of economic policy are presented in rows, while columns contain systematic steps for goal setting, assessing the goal achievement, and setting of new goals for the next period. The main benchmark for setting and achievement of goals are international comparisons of Slovenia.

In addition to macroeconomic models and projections it is necessary to set up a broader system of quantitative indicators (economic, social, environmental, spacial, regional, technological, etc.), in order to ensure an integral view of sustainable development and the link with the budget and economic policy. In the period of implementation of strategy this would enable quantitatively supported evaluation of achievement of strategic goals and monitoring their achievement. This process has two sides: the professional side where one should ensure high international standards in the development of the indicator system, and the political part where one should ensure the transparency with regard to determination of priorities and public control in the evaluation of the achieved results. The long-term goal is to define a system of indicators for the key areas of economic policy and with the help of scenarios the time sequence of targets for the achievement of specific values of these indicators. It is necessary to set up standard procedures for the collection of information about the values of indicators for Slovenia and for international comparisons in order to facilitate the establishment of quantitative goals and the monitoring of the achievement of these goals.

Unfortunately the public opinion in Slovenia still to a great extent considers that even indicative planning of social and economic development is a characteristic of the former system and something which is not quite suitable for the market economy and political democracy. Consequently such state of mind in decisions on development policy underestimates the importance of professional know-how and objective elements and stretches of the role of political decision-making also to areas where this is not optimal. By doing this it introduces arbitrariness and inefficiency in the short run as well as long run decisions. Inappropriateness of such views can best be illustrated with the example of the USA which can hardly be accused of being a remnant of socialist system or economy that is not based on the market. For this purpose the national goals for the achievement of sustainable development are cited, as defined by the council appointed by the President Clinton in the publication entitled *Sustainable America: a new consensus for the future*.

Given the scarce natural resources Slovenia can achieve better results only with better use of human potential and better coordination in the economy and society. The proposed indicator system will serve as a link between work carried out in research organizations, government institutions, and organizations of civil society by enabling the transparency of scenarios in individual areas, facilitating of setting the priorities and enabling evaluation of the achieved results. The indicator system is necessary both for better decision-making and efficiency of our economy and society as well as for the next step in the pre-accession strategy. In order to obtain the resources from EU it will be necessary to follow all the procedures which in EU are prescribed for the planning, acquisition of resources, implementation, monitoring, and accounting of the used up resources. The most important types of indicators in this respect are social and economic indicators, target group indicators, implementation indicators, and the indicators showing the effects of individual measures.

The thick books of statistical tables, the piles of computer printouts, or databases in governments computers are not the forms in which information is best accessible and fully utilized. Therefore, in our case too it is necessary to further develop simplified formats for presentation and information which would help all segments of society in decision-making on the basis of complete information. Such indicators showing the results can be a powerful tool for the measurement of progress given the social goals. To the public as well to the responsible decision-makers they would enable immediate evaluation whether the policies are effective and whether the society is moving in the desired direction. Furthermore, such presentation should be designed according to international benchmarks and criteria and not according to the ideas of our political parties. The creation of such image of Slovenia is a lengthy process which in the first place is necessary for the solution of our development problems. If the model of indicators would be successful in this respect then it will, on the assumption that it will be linked to the global economic and social process according to international standards, serve as an important tool for the presentation of Slovenia to foreign partners and international public.

In economic science it has been known all the time that the use of gross domestic product per capita as the main or even the only indicator of the standard of living of a country's population is not an adequate solution. In the welfare theory it is also clear that the free market and competition alone do not lead to economic efficiency because of monopolies and public goods. Because of all these reasons the presence of the state in the decision-making about the resource use is necessary. It is not a question whether the state should be involved or not, but the question of the optimal

involvement of the state. The main condition for well functioning state is that it reacts to the needs of the population in a democratic way. That can be achieved only by ensuring the transparency of the overall process of decision-making concerning the allocation of resources and by evaluation of the results of government intervention. The problem arises how to implement this on the assumption that the political will exists to do that. The proposed system of indicators in this project is directly related to the mentioned theoretical considerations and represents an attempt to operationalize such system for Slovenia.

If the strategy of economic development of Slovenia should be a useful tool for decision-making in the sense of long-term indicative programming it will be necessary to find an operational combination of various approaches which will more or less in concrete terms take into account all key elements of the so-called sustainable development and interdependence of development processes in economy and society. In this area, i.e. in integration and comprehensiveness lies in our opinion the greatest problem of the coordination of social and economic processes in Slovenia. It is important to determine common goals and views as the basis for the recommendations on development strategy. This is a critical point if we want to achieve a consensus on policy which would try to ensure realization of these goals. While individual problems in certain areas are specific and require specific knowledge and specific solutions, it is nevertheless true that the strategy of economic development of Slovenia will not be successful if it will not be based on comprehensiveness and synergy.

Aside from the fact that the welfare in society is not dependent only on economic growth it is also necessary to take into account the fact that the relationship between institutions and effects is very complex. Even the countries with a long run membership in EU differ in many respects. First, the selection of goals and priorities in Slovenia remain our sovereign decision, while exogenous factors such as the position in the world and our present and future position in EU define the framework within which we have both increased and reduced possibilities of choice. Second, it is unclear to what extent will in individual topics in the strategy of economic development of Slovenia also the goals and development visions be explored and not only the instruments and institutions with the evaluation of possibilities of when and how can we as a member of EU obtain some additional resources. What is needed is the overall vision of the development of Slovenia and a set of alternative scenarios concerning the choice among more variants which would differ particularly with respect to various priorities for different activities linked to welfare increases. If in Slovenia we want to achieve a more efficient and more just economic and social development it is necessary that, in addition to knowledge, the social consensus with the emphasis on comprehensiveness and synergy is attained as the basic pre-condition for the success of future development. In the elaboration of the strategy of economic development of Slovenia it is thus necessary to include as broad a circle of people as possible, from the government institutions, science, enterprises and associations, as well as from non-government institutions, civil society and general public.

In Slovenia the share of budget revenues/expenditures in GDP is about 45 percent. This represents an enormous discretionary power of the state since through taxes and contributions of various kinds the state decisively influences economic activity and directly welfare. Since the majority of government expenditures is channeled through

the ministries, it is the ministries which are responsible in a key manner for the effects of government expenditures on welfare. Therefore, the indicator system should be conceived in the first place as a part of the information systems of ministries which would enable the government, Parliament and the public to determine in a simple and transparent way which goals are followed by a particular ministry, to what extent are these goals achieved and how much the achievement of the goal will cost. This would also enable the inter-ministry comparison of cost and benefits of a particular use of resources which would then iteratively lead to optimal resource use.

The indicator system should be constructed in such a way that the indicators from the general set of indicators, which follows the logic of welfare theory, will be distributed through the ministries which by using resources influence the value of a particular indicator. For the achievement of certain goals more ministries may be responsible which means that the indicator can be present at more ministries. At the level of ministries it would be necessary to determine for each item or a group of items towards which goal the item is aimed at and how it will be determined whether and how successfully the goal was achieved. In the creation of evaluation criteria it is crucial that we establish objective norms.

Schematically we can view the indicator system as a matrix in which welfare elements and economic policy areas are presented in rows, while columns show systematic steps needed for the determination of goals, evaluation of the degree of their achievement, and setting the new goals for the next period. For each welfare element or economic policy area the process for indicator selection will be proposed. For each indicators or a group of indicators the sequence of steps is foreseen (about 20 steps), from setting the indicators, the determination of benchmark, definition of the initial position of Slovenia relative to a benchmark in time and space, determination of instruments and evaluation of cost of of the achievement of targeted decrease of the gap, selecting the professional group to study the issue and establish communication with professional groups at home and abroad, with users and relevant ministries, organizational and financial preparation of programs and projects. The publishing of goals and indicators in media makes it easier for the public to carry out political discussion on goals and indicators. In a similar way one can determine in the achievement of the goals and possible corrections in the realization of the strategy of economic development of Slovenia. This cycle of steps is repeated every year.

Such matrix will represent the basis for the illustration of the approach proposed for the long run research project 'The indicator model for design of development policy and monitoring the implementation of the strategy of economic development of Slovenia'. In the study an illustrative sequence of the above-mentioned possible steps is presented. It is necessary to set up a new framework for development planning which will be to a much smaller extent than at present based on macroeconomics, since Slovenia will not be any more sovereign in these areas, and will be much more oriented towards regional development and individual programs. Therefore, it is necessary to develop a transparent framework for the analysis, comparisons and control both at the preparation of the projects as well as in their implementation. The cost/benefit analyses will have to be carried out not only for the individual projects but also for the different combinations of projects. It will be necessary to build the knowledge in these areas. For the elaboration of analytical base it is necessary to start developing the knowledge by identifying individuals, groups, or institutions which

will start specializing for individual areas. It will also be necessary to secure the resources for these groups to enable them to follow the literature and to maintain professional links with similar groups from other countries. At the administrative level and at the implementation level it is necessary to ensure close linkages between Slovenian administration and relevant institutions in European countries. It is necessary to ensure systematic training of employees in the sister European institutions. This must be one of the key parts of the strategy to ensure professionalization of administration and professional bodies. The strategy must set up also the foundations for the allocation of budgetary resources and for obtaining the European resources for program implementation. It is necessary to ensure transparency and public evaluation for acquisition and use of resources.

2.1. The preparation and analysis of quantitative assessments of selected indicators and international comparisons

In this part of the study we present certain technical requirements in the process of preparation and analysis of indicators. Particular emphasis is on the need for data about data, i.e., the required elements for the standard description of indicators, the level of processing and the meaning of soft and hard indicators.

The discussion of indicators and international comparisons is subdivided into two parts. One part of selected indicators is discussed in section 2.2.1 of the part I, while another part of indicators is discussed in part II of this report in the form of contributions by co-authors, specialists on selected areas. In the future work on the strategy of economic development of Slovenia new contributions will be available for other areas.

2.2. Evaluation of the initial position of Slovenia

2.2.1. Evaluation of the position of Slovenia from international comparisons

The analysis of GDP and GDP per capita is discussed in two steps. In the first step dynamics of these two variables is shown, and later the differences in the level of these indicators relative to other countries are analyzed. The first finding which is important for a more realistic evaluation of the position of Slovenia is the fact that Slovenia reached only in 1999 the same level of GDP as it was achieved in 1986. The achieved rate of growth was lower than the expected scenario (+) in the strategy of economic development of Slovenia published in 1995, as well as in the historic experience of developed capitalist countries in their recovery from depressions in the past. A more detailed analysis is presented in the contribution of P. Sicherl in the second part of the study. The Slovenia was not capable of achieving the social consensus for the effective and efficient development strategy. The problems with coordination and co-operation are not being solved, and as a consequence the rate of growth of Slovenia when recovering from the transitional depression has not been lower only than the historical experience of developed countries but also lower than the rate of growth of Poland and Slovakia.

According to Eurostat in 1997 the level of GDP per capita in Slovenia reached 68 percent of EU15 average which represents the highest value of the candidate countries from Eastern and Central Europe. This value is close to the value for Portugal and

Greece and is about 10 percentage points lower than the value for Spain. If the GDP per capita for Slovenia for 1997 is 100, then the average for EU15 is 147. In other words, for twelve countries of EU 15 the GDP per capita is at least 50 percent higher than that of Slovenia. If in addition we measure the difference using time distance, Slovenia is lagging behind the EU15 average by about 19 years. This means that the level of indicator for Slovenia in 1997 was reached by the EU average already in 1978, i.e., 19 years ago. In 1997 the time lag behind 11 countries of EU15 was at least 16 years. If we assume the scenario that in the future Slovenia would have the growth of the indicator GDP per capita of four percent annually, the time distance to EU15 would be reduced by the year 2007 to about 10 years. If according to this scenario we would like to achieve the full equalization with the EU15 average, we would need twenty-five years. In the second part of the study the development gap between Slovenia and EU15 average is illustrated also by pointing to differences with individual EU countries and other candidate countries for the indicator GDP per capita according to purchasing power parity.

The largest part of the differences in GDP per capita between EU15 and Slovenia should be attributed to the differences in productivity. The value of GDP per capita the EU15 is greater by 47 percent, while GDP per employee is greater by 41 percent. However, from the economic and other points of view it is very important to analyze also the employment and demographic component. The analysis of demographic component shows that Slovenia despite of the big problem with the aging of its population has still an advantage compared to the average of EU15. Slovenia has about four percent greater share of population in the potential working age in total population than EU15. In other words, if Slovenia had the same percentage of employed in the working age population and the same productivity per employee as EU15 Slovenia would have four percent higher value of GDP per capita than EU15. The advantage in demographic component Slovenia loses in the employment component, where the share of working active population in population of working age is almost nine percent lower than the average of EU15. In other words, even compared to Europe Slovenia significantly differs in the negative direction as far as successful inclusion of its population in the work processes is concerned. This gap is much greater if the comparison were made with USA and some other countries outside EU15 where the activity rates of population are significantly higher than in EU15.

The analysis of of GDP per capita components has already shown the importance of quantity and quality of employment and work opportunities. Here two additional aspects should be mentioned. The first one is the social aspect which is important for social cohesion. A high unemployment rates is certainly one of the most important if not the most important problem of Slovenian economy and society. Second, the problem of productivity is also closely connected with the quality of labor force and the quality of entrepreneurs and of the state, and consequently with new ideas, new technologies, new products, and introduction of better conditions for operating and coordination, which should increase the level of productivity in Slovenia relative to that of EU and the world.

For the analysis of the unemployment problems in Slovenia the comprehensive overview of the employment structures over the period from 1985 (before transition) up till now is presented. In the graphs and tables the employed are subdivided into

three large groups: independent entrepreneurs (including farmers, professionals), employed in the nonmarket sector (states, education, health...), and employed in the market sector. The last group is further subdivided into employed in enterprises that lost labor force (old large enterprises) and employed in enterprises which increased employment.

The actual labor force was growing till 1988, when it reached 960 thousand people. Later on it started to decline and in 1996 it was only 858 thousand people. In this short period of time labor force diminished by 100 thousand people. The decline is a consequence of the emigration of non-Slovene population, voluntary dropouts from the labor force, and above all of early retirement. Despite the fact that the labor force was reduced by so much, the number of unemployed increased from 15 thousand in 1988 to 120 thousand in the 1996. Approximately as many are still unemployed in 1999. As a result of these movements the total employment fell from the peak in 1987 when it reached 940 thousand to 738 thousand in 1996. It fell by approximately 200 thousand. The former large enterprises lost 300 thousand jobs while new jobs were created primarily in new small enterprises, and in a smaller number of enterprises which originated from the old enterprises.

After the large decline in investment in the transition depression the share of fixed investment in GDP in Slovenia started to increase and reached 24 percent. In comparison with the data for the EU15 countries this value is greater than the average for EU15 which is 20 percent. However, this should be taken in perspective. Since the value of our GDP per capita is significantly lower than in the majority of EU15 countries even larger share of fixed investment in GDP does not mean that investment per capita in Slovenia is greater. Since in less developed countries the cost of investment is greater than in more developed countries the actual share of fixed investment in GDP at purchasing power parity is also smaller (in more developed countries larger).

The acceleration of the rate of growth in Slovenia as a small country is necessarily dependent on the success in foreign markets. Therefore, one of the key engines of economic development, directly and indirectly, is successful competition on the world markets of goods and services. Important for our development is the value of export per capita and the dynamics and quality of the export. If we compare export per capita with some smaller countries within EU15, which have lower export per capita as Slovenia, we find that these countries are Spain, Portugal and Greece. However, other countries are ahead of Slovenia. The time distance of Slovenia for this indicator shows that it lags behind Luxembourg at least 40 years, Belgium and Netherlands 25 years, Denmark, Sweden and Austria around 15 years, Ireland more than 10 years, etc.. Also worrisome is the dynamics of exports and its role in the development strategy. It is obvious that our export goals and results should be significantly higher than the present ones.

While macroeconomic stability is an important achievement and had a positive influence on the situation of Slovenia, it is also necessary to emphasize that all our governments have been making the mistake by a taking macroeconomic stability as a necessary and sufficient condition for economic development. Macroeconomic stability is a necessary but not sufficient condition for economic development. If we

want to catch up with Europe the decisive factors will be qualitative changes in society and business and not only the preservation of macroeconomic stability.

Table 2.3 Magnitude of development gaps between Slovenia and EU15, Austria, Ireland and Finland for selected indicators in time distance and in percentage (Slovenia=0, for time distance: – time lag, + time lead of Slovenia)

Indicator	Time distance (years)				Percentage differences (%)			
	EU15	AUT	IRL	FIN	EU15	AUT	IRL	FIN
GDP per capita (ppp)	-18.6	-20	-6.1	-17	47	65	45	44
Life expectancy (female)	-10.8	-9	-1.3	-13	2.4	2.4	0.1	2.2
Infant survival rate	2	-1.3	2.7	-5	-0.03	0.05	-0.1	0.1
Telephones per capita	-11.9	-11.8	-2	-17	41	35	13	53
Inter. calls per subscriber	3	-7.8	-11	3.7	-22	52	195	-17
Internet hosts per capita	-1.8	-2.3	-1.4	-4.8	71	103	56	700
Cars per capita	-5.6	-7	8	0.3	18	22	-26	-1.6
Exports per capita	-4	-14.5	-11	-7.4	29	112	239	96
Imports per capita	-2.1	-11.9	-10	-5.2	15	95	142	43
Emissions CO2 per capita	9	26.3	19.1	28.7	-21	-12	-47	-43
GDP per employed	-16.9	-14.6	-8.3	-9	38	48	43	38

Source: own calculation

For the evaluation of the starting position of Slovenia it is not only important to compare the indicators for individual areas but also to assess the magnitudes of differences and development gaps relative to EU between various areas. In the study this is done in two ways. First, we compare the gaps for a number of indicators which have been discussed individually. Second, some of the most important conclusions of results of other research institutions and international organizations have been utilised. One of such studies is the World Competitiveness Yearbook published by the IMD from Lausanne.

For 11 selected indicators from various areas we present relative differences between Slovenia and the EU15. These differences are graphically presented in two dimensions: percentage differences at a certain point of time and time distance between Slovenia and the average of EU15, on one side, and Slovenia and selected EU countries (Austria, Ireland, and Portugal), on the other side. Table 2.3 summarizes the differences. When the magnitude of differences between EU15 average and Slovenia for different indicators is compared in time distance, Slovenia lags most in GDP per capita (19 years), GDP per active population (17 years), telephones per capita (12 years) and life expectancy for women (11 years). If we compare in terms of percentage differences, then the greatest difference is in the number of Internet hosts per capita where the value for EU15 is higher by 71 percent.

If we compare Slovenia with smaller successful countries from EU15 which is a more suitable target comparison for us the picture changes significantly. In

comparison with these countries the highest values in percentage differences are observed in the export per capita which in these countries is two to three times higher than in Slovenia while the comparison in time shows that the present value of export per capita for Slovenia was attained by Austria already 15 years ago. The exceptionally large is the advantage of Finland concerning the Internet hosts per capita where the value is seven times higher than in Slovenia. In the case of Ireland the time distance is the greatest for export per capita, and for Austria the time distance is greater than that only for GDP per capita.

The World Competitiveness Yearbook in 1999 for the first time includes also Slovenia which is introduced to the international public in spite of its small size. For Slovenia aside from the greater visibility in the world it is also important to get an insight into factors which reduce the competitiveness of Slovenia when this comparison is done according to international criteria and standards. A more detailed analysis is presented in the contributions by P. Gmeiner in the part II. One of the presentation tools in the publication of IMD is also a special page where for each country two lists are presented: on one side there are indicators which present the strengths of a country relative to the average, on the other side there are indicators showing the greatest weaknesses. Slovenia ranked overall 40th among 47 countries. Table 2.4 in the text of the study shows the number of indicators for each of the 8 thematic groups for Slovenia. It can be seen at the first sight that for Slovenia the largest negative difference is in the group 'government'.

2. 2. 2. The summary of the main differences and the development gaps between Slovenia and EU

Since the initial state concerning the material and human resources in Slovenia is lower than the EU15 average, it is clear that increasing the dynamics of development and closing the gap with EU depends mainly on the efficiency of the resource use, i.e., on the so-called qualitative aspects. The chosen priorities in EU are as follows: the importance of employment or unemployment as the long-term problem, importance of economic and social cohesion, and importance of institutional changes and in particular administrative reforms in the European Commission, which should improve the efficiency and transparency. These are at the same time probably the most important strategic directions for Slovenia as well even if we were not joining the EU.

1. The achievement of social consensus for the strategy of development

It is estimated that the most important problem in directing the social and economic processes **in Slovenia is how to achieve significantly higher coordination for the achievement of synergy, how to introduce certain elements of holistic view and sustainability of development from the point of view of society as a whole as well as the preparation of conditions for the achievement of social consensus for the strategy of development.** This problem is characteristic for all governments in the independent Slovenia, and in the present government the problem is even higher because of the coalition relationship.

It is necessary to increase the quality of entrepreneurship in the broadest sense of the word, i.e., the changes in the criteria and in the process of decision-making and

behavior at all levels (from government and public administration, decision-making at the enterprise level, in various communities, all the way to households and individuals). In other words, if our goals are greater efficiency and higher satisfaction the changes must start in our heads, i.e., with the changes in the way of thinking and behavior. The absence of a more ambitious and coherent vision and the development strategy prevents the achievement of better results. On the basis of the analysis we believe that looking for ways for better coordination and the achievement of social consensus is our first development priority.

2. Reorganization of public administration

Revitalization and rationalization of public administration in Slovenia is one of the conditions for acceleration of development and approaching Europe. To achieve consensus on development goals is not sufficient. Public administration must be capable of operationalizing these goals and ensure the conditions for their achievement. One part of information system in the ministries and other administrative bodies should be linked into publicly accessible indicator system. The ministries have started reorganizations in this direction because of the EU requests. It will be necessary to monitor the use of resources and the achievement of results much more precisely. The key role in this process should be played by the civil society and media which can ensure unbiased public debates on goals and the achievement of goals.

3. The legal environment, security, freedom of enterprise and creativity

Neither consensus nor transparent public administration cannot in themselves ensure an efficient implementation of legal environment unless the judicial system enables a fast and cheap decision-making in conflict situations. Slovenia is far from optimal concerning the speed of decision-making in the judicial system which puts in doubt the assumption of legal order and security. In the process of giving directions from the side of public administration it is necessary to introduce simultaneously more order and more freedom of enterprise and creativity. On one hand, in certain cases the public administration does not ensure the necessary regulations and so knowingly or unknowingly allows disorder and activities which are not in public interest. On the other hand, it frequently happens that with the regulation, intended to prevent the possibility of corruption and disorder, public administration drifts into other extreme which blocks freedom of enterprise and creativity. An indirect indication which follows from the IMD study shows that also in this aspect Slovenia does not rank highly.

4. Employment and unemployment as the main long run problem

Economic welfare can be achieved only with the creation of more and better jobs. The situation in Slovenia in this respect during the period of transition has changed even more than in production. A high degree of unemployment is primarily a result of poor entrepreneurial performance of managers and of the state and the consequences of the situation in the former Yugoslavia. At that time Slovenia as the most developed republic had a lower skill structure in the social sector than Yugoslavia on the average. Slovenia eliminated a substantial part of working age population from the labor force with corresponding long run consequences for social

cohesion. The greatest difference from the average of 47 countries in the IMD study is found in the indicator 'the share of employment in the government sector'. Not only is the rate of employment in Slovenia lower than in EU15 even this employment is too much concentrated in the government sector.

Educational level in Slovenia is on average lower than in EU. The strategic orientation should therefore be that we train and motivate for work as high a share of population as possible, including the older generation. In spite of that we can foresee that in the case of accelerated rate of growth some types of labor force will have to be imported, both unskilled as well as highly specialized professionals for various areas. For the majority of people in Slovenia, with the exception of difficult to employ older people and less skilled workers, with a successful implementation of development strategy the main question will become the quality of jobs. This means that the key question will become the question of development of production with a high value added in industry particularly in service and export activities. The increase in the level of knowledge of employees is at the same time the condition for their greater employability and for the introduction of new ideas, new technologies and new products.

5. Productivity and competitiveness

In international comparisons Slovenia is lagging significantly in productivity and competitiveness. However, only with increased resources without increased absorption capacity Slovenia will not be able to substantially reduce these lags. Therefore, we believe that the key condition for the increase of productivity are those elements which were stated in the items above (greater coordination for achievement of synergy, comprehensiveness of the view and sustainability of development, preparation of conditions for the achievement of social consensus for the development strategy, reorganization of public administration, legal order and security and freedom of enterprise and creativity, as well as more comprehensive high-quality utilization of human potential).

It is necessary to improve numerous aspects which increase productive capacity of the enterprise sector. In the same way as we compare Slovenia as a whole with more developed countries of EU, it is also necessary at the level of enterprises and sectors with the programs of internal and external benchmarking to evaluate the gaps between Slovenian enterprises and the respective benchmarks, and initiate the programs which will reduce the differences. On the basis of this knowledge the programs of technological and organizational modernization should follow including the establishment of modern information systems. For the increase in productivity it is important to link our enterprises with foreign enterprises both through the effect of foreign investment in Slovenia as well as that of our enterprises abroad. All these types of linkages set up relationships of higher quality in the global chains of value added and increase the quality level of businesses in Slovenia.

6. Export orientation

Considering the small size of Slovenia the acceleration of economic growth and increased competitiveness depend on the success in foreign markets. It is obvious that the fast growing EU15 countries increased the share of exports in GDP. Ireland has

three times greater, and Finland and Austria about two times greater value of export per capita than Slovenia. The necessary changes cannot be brought about by macroeconomic stimulation with exchange rate policy, but only as a result of a broad action of qualitative changes in the economy and society. Substantially greater rates of growth of exports require faster linking of our enterprises with foreign enterprises which in turn requires investment in knowledge and provision of conditions which enable such linkages. Slovenian businessmen have weak presence abroad and the linkages with our foreign representatives and the government administration rarely reach the minimum necessary threshold.

7. The linkage between learning, science and the state, innovation and technological development

Slovenia has a developed education system and relatively high value of the number of researchers per capita and resources, but it lags significantly in the commercialization of science and technology. The co-operation between universities and business is not well established, and there is a lack of qualified engineers and some other profiles in information technology. Slovenia in comparison with other transition economies was more successful in the preservation of the system of scientific institutes but it was not successful in the preservation of R&D departments in enterprises which is a big hurdle for faster qualitative change. The new growing enterprises in most cases are still too weak to invest more in research and development. At the universities the researchers were used to work on large projects for big enterprises and are getting only slowly used to cooperation in R&D with smaller enterprises.

The development of information science in schools is a positive activity, but otherwise there is an absence of active policy in these as well as in many other areas. This is a typical example of a necessary defensive investment: we have to invest in order to prevent falling behind the world; only later we will be able to discuss how much faster we should run to acquire a comparative advantage. The trend in the world is clearly reflected in the slogan used at an Intel Conference: 'every business= E-business, every home= E-home'. This will not be achieved tomorrow, but it is obviously one of great threats and opportunities of which the government and business are not fully aware of. From the point of view of the development strategy of Slovenia relying on the spontaneous development in this field cannot be an acceptable scenario.

8. Globalization and the principle of customer orientation

In transition economies the most difficult transition is in the way of thinking from the orientation on producer protection to the orientation on consumer needs which is the main condition for survival in the conditions of globalization. This means, that in the competitive battle in the long run those enterprises will survive which can ensure quality, price and service. This criterion should be adopted both in domestic sectors as well as in the foreign trade sectors; in commercial sectors as well as social activities.

Given the resources at the disposal of the government for economic interventions it means a significantly reduced volume of subsidies to the enterprises for the preservation of jobs, and increased stimulation to the enterprises, institutions and

individuals which are developing customer orientation and therefore create the basis for long-term survival. This is related also to incorporating market and nonmarket producers in the programs for total quality management, and in the nonmarket sector also to the development of evaluation systems. These elements will be present also in the proposed model of the indicator system.

9. Nonmarket sector as an important element of welfare

In addition to welfare elements which can be provided by the market there are increasingly important elements that cannot be efficiently ensured through the market or not at all. Those are, for example, health, improvement of the environment, knowledge, culture, justice, social security, social cohesion etc. Therefore, it is necessary to find new innovative ways for the increase of welfare in these elements. For optimization also the processes through which we arrive at solutions are important. Here we should note that the setting up of the process of democratic society is also a public good which should be financed.

The effect of environment on sustainable development and welfare should also be treated in a similar way. The indicator system which would be developed shall serve primarily the decision-making and actions. As far as the environment is concerned Slovenia is much closer to other transition countries than to EU and therefore the resources needed to correct for that will be large. If the strategy of economic development of Slovenia will succeed to ensure that comprehensiveness of view and coordinated programs then the nonmarket sectors and aspects will be organically included in the overall considerations and will acquire the proper weight in the achievement of welfare.

The model of development indicators which should be developed as the infrastructural base for the analysis, preparation of strategy of economic development of Slovenia and for the monitoring of its implementation, will in the long run, with the participation of ministries, researchers, interest groups of suppliers and customers and the civil society, provide the framework for the comprehensive debate on development policy and its link with the state budget.

PART II SELECTED TOPICS

Pavle Sicherl and Aleš Vahčič (editors)

Social, cultural and political aspects and indicators of socio-economic development by Frane Adam, with Matevž Tomšič and Borut Rončević

The authors first summarize the results of the annual report of the Freedom House foundation on political and civil liberties covering most of the United Nations member countries. Slovenia scores highly in the area of political and civil liberties, i.e. 1 and 2 on a 7-point scale, and belongs to the group of free countries. In the second part of the report covering in detail the transition economies the countries are subdivided into three categories: consolidated democracies and consolidated market economies, transition democracies and transition market economies, and consolidated autocracies and etatist economies. Slovenia belongs to the first group together with Czech Republic, Hungary, Poland, and the Baltic states. Within this group it takes the fourth place concerning democracy behind Hungary, Poland, and the Czech Republic. Concerning consolidated market economies Slovenia is in the fifth place primarily because of the low share of private sector in GDP.

Concerning the question of **nongovernment organizations and social capital** the following results are presented: Slovenia belongs to a group of countries with the prevalence of organizations in the area of culture and recreation among the nongovernment organizations. Slovenia is lagging in the area of voluntary organizations both in terms of money and qualified people. It also lacks research and educational organizations. Slovenia shows low level of social capital reflected in the low degree of trust.

Concerning **cognitive competence** the following results were presented: From the World Competitiveness Yearbook data we see that in the area of **human resource development** Slovenia takes 28th place among 47 countries behind Hungary but ahead of Czech Republic and Poland. Slovenia has advantages in terms of private property of households, female labor force, youth unemployment, literacy, pupil - teacher ratio, length of working time, employment rate, equal opportunity, health care, social values, and brain drain. Disadvantages of Slovenia are alcohol and drug abuse, population, absolute size of labor force, workplace harassment and violence, trained labor force, and flexibility and adaptability of people. The high rank of Slovenia in the area of human resources is primarily due to quality of life indicator and unemployment. In the area of **science and technology** Slovenia is in the 36th place behind Hungary, but ahead of Czech Republic and Poland. It lags way behind some small European countries such as Finland and Ireland. In terms of **education and knowledge** Slovenia ranks low in terms of proportion of population with university and college education. It lags behind OECD countries but also behind Baltic states and some Latin American countries. In terms of average years of schooling Slovenia shows two years less schooling than average of OECD countries but is ahead of medium developed small countries. Measured by the index of educational capital stock Slovenia lags behind countries such as Denmark, Sweden and Finland but also behind Poland. The main reason is that Slovenia has a small overall enrollment ratio.

Slovenia also lags in the adult education and in the enrollment of students in technical universities.

Social inequality in Slovenia in the light of statistical data and opinion polls by Frane Adam

The question of social inequality is one of the key areas of sociological research. Social inequality is not only moral question but social inequality particularly economic inequality is correlated with the quality of life and the quality of human resources which affects the development capability of a social system. There are two ways to measure inequality. The first is to measure inequality through statistical data on inequality in the second is to measure perception of inequality through opinion polls.

Statistical indicators of inequality show the following picture. In the World Competitiveness Yearbook to indicators on inequality are used: the share of income of 20 percent of the richest households and the share of income of the 20 percent of the poorest households. In Slovenia the percentage of income for the richest 20 percent of households was 38.6 percent which is more than in all post communist countries. The Scandinavian countries have a lower share while Ireland has a higher share. The lowest 20 percent of households have 9.3 percent of income which is less than the Scandinavian countries and more than in Ireland and Portugal. Another measure of inequality is Ginni coefficient which for Slovenia is higher than for the post communist countries that is still significantly lower than that of Ireland. The inequality in European Union measured by the Ginni coefficient is significantly higher than the coefficient for Slovenia.

An important indicator of social inequality is the degree of poverty. In Slovenia there were about 15 percent of households living in poverty which is below the European Union where about 19 percent of households live below poverty line. Another measure of inequality is the gender inequality. In the human Development Report the gender Development index was developed for 163 countries. Slovenia ranked 24th which is significantly higher than the overall rank the human Development. Slovenia ranked higher than all other post communist countries to and is between Greece and Portugal.

Generally that is a high correlation between social inequality and trust among people. The higher the inequality the lower the trust. This relationship does not hold in Slovenia. Slovenia has a relatively low level of inequality but also a low-level of trust. Only about 16 percent of respondents answered that people can be trusted while in the Scandinavian countries about 55 percent of respondents answered positively to the question.

The opinion polls measure the subjective perception of people on inequality. In 1998 almost 90 percent of people in Slovenia believed that the inequality is too high. This percentage is increasing over time. Also in the world value report Slovenes showed one of the highest preferences for low inequality. Only Finland showed a higher preference.

Slovenes also show a highly negative attitudes towards becoming rich. They also believe in a very high percentage that poverty is a result of unjust society and not a result of laziness and lack of willpower. Most of the interviewed also believe that poverty increased over the past 10 years. This is similar to the results obtained in other transition countries. In Slovenia people also believe in a high percentage that there is very little possibility the those who are poor will be able to get out of poverty. Most of other countries are more optimistic about this. Slovenes have an average rate of approval of competitiveness and a high degree of belief that the state is responsible for the welfare of people rather than people themselves. Slovenes approve the private ownership of enterprises for larger degree than transition economies but to lower degree than in Western countries.

**The diagnosis of the working of Slovene government and public administration
as the institutional factor for the improvement of national competitiveness
by Pavle Gmeiner**

Slovenia was for the first time included in them IMD system of indicators on national competitiveness. The 1999 edition of the includes 47 countries and 288 indicators. The author analyzes the results for the group of indicators which measures the effect of the government and compares Slovenia and 12 reference countries according to this group of indicators. The reference countries are Finland, Denmark, Austria, Netherlands, Belgium, Ireland, Spain, Greece, Portugal, Czech Republic, Hungary, and Poland. The indicators measuring government are subdivided into five subgroups which include 48 indicators. Of a total of of 8 groups of indicators the group government shows the lowest score for Slovenia. Therefore, Slovenia would improve its overall ranking from the 40th place to the 33rd place if it improved the score of the group government from the present last place to the average of 47 countries. It is therefore important to analyze which of the 48 indicators have contributed to the bad result most and to see whether they could be quickly improved.

The first subgroup of indicators measuring government, and which is most responsible for the overall low ranking of Slovenia, is government efficiency. This subgroup consists of aid indicators: adaptability of government economic policies, legal framework, legislative activity of the parliament, consensus about policy direction inside the cabinet, transparency, government efficiency, political system, public service, bureaucracy, Customs administration, bribing and corruption. Among the 12 reference countries Slovenia scored last in almost all of these indicators and was last also in the overall ranking. It is clear that Slovenia in the opinion of enterprise managers has a government which is hindering the competitiveness of enterprises.

The second subgroup of indicators the first to justice and security. The subgroup consists of the following indicators: justice, personal security and private property, social cohesion, risk of political instability, serious crime. Again Slovenia scored very low among the 12 reference countries in all indicators except serious crime where it ranked second. In spite of that the overall ranking in this subgroup is still 12. Obviously Slovenia would have to do a lot in order to improve in this area.

The third group of indicators refers to fiscal policy. Slovenia has low rankings in most of these indicators with the exception of average corporate tax rate, employers social

security contribution rate, and collected capital and property taxes. The overall ranking of Slovenia is still only 12. The fourth group of indicators refers to government expenditures. The subgroup consists of the following indicators: government employment, general government expenditure, military spending. Although Slovenia ranks first among the 12 reference countries in general government expenditure, the overall ranking in these group is still only 11. In all four groups discussed above there is significant scope for improvement if the Slovene government takes appropriate steps to improve performance in the stated indicators. Most of these indicators are under direct influence of the government. The last group of indicators refers to national debt. In this category Slovenia ranks much better than in the previous categories. The overall ranking for this subgroup is 5. Slovenia ranks No. 1 in foreign debt and No. 5 in government surplus/deficit. Although this result is encouraging, there is a probability that these rankings may deteriorate in future.

Looking at the rankings of all groups of indicators referring to government both for the 12 reference countries and for the 47 countries included in the report Slovenia ranks No. 14 of the 47 countries and No. 11 of the 12 reference countries. The projections for all eight aggregate groups of national competitiveness on the assumption that Slovenia would improve the ranking of the group government to the average of the 47 countries show that Slovenia could improve its overall ranking by seven places. This could be achieved by the year 2001.

**Slovenia and international comparisons of competitiveness of national economies
with a special reference to technological development
by Pavle Gmeiner**

In 1999 Slovenia was for the first time included in the World Competitiveness Yearbook published by Institute of Management Development (IMD) from Lausanne. Slovenia is not included in the other similar publication the Global Competitiveness Report produced by World Economic Forum (WEF) from Geneva. However, the author of this contribution has estimated the ranking of Slovenia according to WEF methodology for the period 1995-98 and also produced the forecast for the period 1999-2002. The results from both studies are presented with a special reference to technology. The main question explored here is to what extent is technological development the key critical area for the development of national competitiveness. The comparison of Slovenia was made with the reference to 12 reference countries: Denmark, Finland, Netherlands, Austria, Ireland, Spain, Portugal, Czech Republic, Greece, Poland, and Hungary.

According to the IMD methodology Slovenia ranked 40th among 47 countries in overall ranking. From the reference countries the European Union countries ranked ahead of Slovenia while the Czech Republic, Poland and Hungary ranked behind Slovenia. In the 8 groups of indicators Slovenia showed the highest-ranking in human resource development (28), and the lowest ranking in government (47).

The importance of international comparisons of competitiveness is that it is possible to determine which specific factors described by the indicators are responsible for the lagging in competitiveness and therefore it is possible to devise the correction of economic policies in significant detail. The ranking of Slovenia in these comparisons is lower than the rankings infor example country risk according to Euromoney and the

rankings according to GDP per capita according to purchasing power parity. The reason is that Slovenia has relatively good results when measured by hard indicators such as GDP level and growth but shows important weaknesses when more soft indicators are introduced. In the group of indicators on science and technology Slovenia ranks 36th among all countries and 10th among the reference countries. The weak points are the transfer of knowledge between university and enterprises, the support of legal environment for technology application, and handling of R&D by the state.

The experimental evaluation of the ranking of Slovenia according to WEF methodology produced the following results: the overall ranking of Slovenia among 50 countries for 1998 was 35. The three transition economies within the reference group of countries ranked behind Slovenia while among the European Union countries only Greece lagged behind. Among the eight subgroups of indicators (openness of the economy, government intervention, financial markets, infrastructure, technology, management, labor market, civil institutions) Slovenia had the highest ranking in labor market (3 among reference countries) and the lowest ranking in civil institutions (10 among reference countries). The ranking in technology was 6. Within this category the highest rankings of Slovenia were in spending on R&D, basic research and secondary and technical training. The weakest points correlated with technology were the lack of venture capital, the lagging behind in the production of new technologies, lagging in the introduction of TQM, and the lack of international experience of current managers.

The comparison of competitiveness over time shows that Slovenia has been improving its competitive position. Among the reference countries it increased its ranking from 10 in 1995 to 8 in 1998. The projections based on the assumption of active government policy to influence the indicators showing the greatest weaknesses reveal that Slovenia could improve its ranking among the reference countries to the sixth position by the year 2002. In order to achieve that the instruments for the elimination of weak points should be a part of the annual budget memorandum and should be incorporated in all sectoral strategy documents prepared by the government.

What does GDP tell about the position of Slovenia by Pavle Sicherl

The analysis of GDP and GDP per capita has been done in two stages. First, the movements of these variables for Slovenia over time are analysed, in the second stage the achieved level in Slovenia is compared with other countries. As far as the overall level of economic activity as measured by GDP is concerned, the peak level was achieved in 1986. This level of GDP has not been achieved until 1999, which means that in Slovenia the overall level of economic activity is now approximately at the level which was already achieved 12 years ago. While Slovenia has endured the simultaneous and superimposed shocks of socio-economic and political transitions and disintegration of the former Yugoslavia rather well, the effectiveness and efficiency of the recovery has a lot to be desired.

First, the actual implementation is below the so-called scenario (+) and above scenario (-). This is an indication that the actual performance has been below expectations and policy proclamations. Second, it is possible to compare Slovenia's

performance with the recovery period from past severe depressions in the developed countries as well as with recovery in other CEE countries in 1990's. The speed of recovery from trough in depressions, however, was considerably faster in the developed countries in the past than in the CEE transition economies. Not only do the results show slower recovery of production in transition countries; they have been accompanied by several other negative developments. The question is why have the positive effects of introducing a new system with greater freedom of expression and a much greater choice and opportunities to exploit the latent potential not been able to overshadow decisively and more immediately the consequences of dismantling the old system. It is possible to suppose that there are no compelling reasons for praising the governments and the new elite in these countries, or the relevant international organisations, for providing the optimal environment for outstanding overall performance in economic and social fields, though there are substantial differences in results achieved among transition countries.

Comparing the levels, Eurostat issued the comparison of GDP per capita at current prices and exchange rates and current prices and purchasing power standards for the European Union and ten CEE Candidate Countries for the period 1993-1997. The difference between the two series is substantial: GDP per capita at current prices and exchange rate in 1997 Slovenia attained only 43 per cent of EU15, while for GDP per capita at current prices and purchasing power standards it reached 68 per cent of EU15 (an increase from 62 per cent in 1993). A new view in comparative analysis, combining the conventional relative static measures of disparity with time distance as an additional dimension of disparity, is elaborated.

Two interesting conclusions can be drawn. First, for three EU countries the time lag behind the EU15 average is more than 10 years: Spain 11 years, Portugal 15 years, and Greece 18 years. Slovenia and Czech Republic with time distance of 19 and 21 years are close to the least developed EU countries, for Slovak Republic and Hungary the time distance is 29 years, for Poland 33 years and for Estonia 35 years. For the other four candidate countries their level of GDP per capita was in 1997 lower than the respective value for EU15 average in 1960. Second, between 1993 and 1997 all below the average countries in the EU shortened their time lag behind the EU15 average. The convergence has taken place both in static ratios and in time. Especially successful were Ireland and Finland. Also for the candidate countries, except for Hungary and Bulgaria, time distance decreased. The analysis also provides results for time distance of Slovenia compared with all EU15 countries for 1997, and results for scenario A, under which the future rate of growth of GDP per capita in Slovenia would be 4%, and that of EU countries 2.5%. To establish full equalisation with 12 EU countries, it would take more than 25 years under this scenario.

A selection of environment indicators by Bojan Radej

In Slovenia in development documents sustainable development has not yet been elaborated although it accepted the obligation to define such development model in the international meetings. As synthetic indicator of sustainability has not been developed yet in Slovenia which is true also for most other countries. In comparing Slovenia's position with respect to the Human Development Index (HDI) the

conclusion is suggested that the welfare increase will depend primarily on the improvement of quality of growth.

One of the important indicators of the environmental problems is the price of oil derivatives if compared to the EU average. Lower energy prices than the prices on the world market are one of the most characteristic inherited features of the countries in transition. The Slovenian lag in this area was smaller than elsewhere, but it seems that the removal of the disproportion will also be slower. Environmental evaluation of the tax treatment of oil derivatives is suitable for the identification of the environmental ambitions of economic policy.

The strategy of economic development of Slovenia (Potočnik et al., 1995) set as its goal the lowering of energy intensity in the overall energy cycle in all uses of energy, but it has not defined the target values nor the desired direction of change of the energy use structure. The energy intensity in Slovenia is at a similar level as in the countries where the GDP per capita is approximately equal to the Slovenian level: Portugal, Greece, Cyprus (but of Spain!). Similarly as in these countries also in Slovenia the trend of energy intensity in the past ten year period does not decline. The transition to market economic system has not improved the Slovenian energy intensity. The transition to sustainable development will have to implement such change. Therefore, we believe that the indicator is relevant for the monitoring of environment and economic integration required by this transition.

The intensity of exports of goods relative to the natural resources is also an important indicator for the development strategy of Slovenia. According to the analysts of the World Bank the dynamics of change of this indicator for Slovenia is acceptable while the intensity of natural resources in exports of goods of Slovenia to EU is still too high given the fact that Slovenia is not rich in natural resources. Slovenia has also not defined any development goal by which it would explicitly want to lower the contents of dirty industries in exports.

The key feature of the environmental protection in Slovenia from the development standpoint is the increase of expenditure for environment protection too slow - they increase only with the express efforts of the state: by increasing the environmental protection requirements, the increase of availability of attractive financial sources for financing of environmental protection projects or realization of some of the 'government' environmental protection projects, etc. The environmental protection expenditures in some comparable Central and Eastern European countries (CEEC) show that for the environment protection they spend relatively significantly more than Slovenia at present. CEEC typically spend more for the environment protection than EU countries. Since the environment protection problems in Slovenia are closer to that of CEEC it is necessary to compare the environment protection expenditures to these countries.

Monitoring information society
by Vasja Vehovar.

This is one of the two papers that deal with the problem of some elements of information society in Slovenia. It deals, in addition to the quantitative data, also with the problem that in the time when the reality of information society became everyday companion there exists also a set of disagreements about data collection and interpretation of indicators in this area which also makes it difficult to understand the actual situation. In the paper an analysis of quantitative measurements for selected important quantitative indicators of information society is presented, e.g. the number of Internet users, the number of Internet hosts, the share of enterprises with the access to Internet, etc. The need for coordinated methodology is emphasized and the precision of definitions and the data collection is stressed. If this is not achieved it is possible that in international statistics of influential corporations the differences occur which do not reflect the actual situation in this area.

Very interesting examples discussed in the paper refer to the data on e-commerce, the number of Internet users, the number in structure of computer use, the complexity of estimation of the number of Internet hosts and the differences between the organizations RIPE and Network Wizard in this respect. All this is particularly critical for Slovenia when the number of hosts over the past two years shows a 10 percent annual growth, while all other indicators in this period clearly show more than 50 percent growth. This is particularly true for the number of registered domains and the number of Internet users but also for the number of enterprises linked to the Internet and the number of households with the access to the Internet.

If even the indicators which are precisely measurable on numerical scales are beset with problems, then there will be even more problems with the indicators relating to the position and attitudes towards information society. On the other hand, the position of the diverse users towards various aspects of information society is extremely important, everything from the attitudes toward security and privacy up to the attitudes towards misuse, monopolies and the role of the state.

The interest for the use of the stated information services as expressed in surveys is in Slovenia without exception greater than on average in European Union. The detailed review shows that in this respect Slovenia is comparable to the Scandinavian countries. These results will be checked in additional surveys. It is probable that in Slovenia there is a real climate open for the phenomena of information society and is therefore useful to study it further.

With fast technological progress the question of detecting the developments in the society is shown in a different light. To assess the reality it is necessary to absorb more information and at frequently intervals. It is therefore necessary to carry out the measurements of reality more frequently, and it is necessary ever more precisely to deal with the question of the meaning of these measurements. In the transition to a millennium we find ourselves in a certain temporary and transitory information vacuum where we do not have at our disposal enough in depth information for a more accurate diagnosis where precisely is Slovenia in terms of the development of information society.

**Internet expansion slowed: what does it mean for position of Slovenia in Europe?
(Time distance as a presentation and communication tool)
by Pavle Sicherl**

The slowdown of growth of Internet hosts per 10000 inhabitants in Slovenia after mid-1997 increased the time lag of Slovenia behind leading Finland from 3 years at the end of 1996 to nearly 5 years by August 1999. Time distance methodology is used as a presentation and communication tool to raise awareness of the problem and its consequences in simple understandable terms and to signal the need for an in-depth analysis and action.

In the first part of the article the time distance concept and a novel statistical measure S-distance are presented. The time perspective, which no doubt exists in human perception when comparing different situations, is systematically introduced both as a concept and as a quantifiable measure. Amendments to the present state-of-the-art are needed on two levels: conceptual and analytical. The aim is to provide new insights from existing data due to an added dimension of analysis and thus to complement conventional statistical measures. A special category of time distance is defined that is related to the level of the analysed indicator. The suggested statistical measure S-distance measures the distance (proximity) in time between the points in time when the two compared series reach a specified level of the indicator X.

In 1996 Slovenia was occupying a comfortable comparative position in terms of Internet hosts per capita: it was lagging less than 3 years behind Finland as the leading country, and was ahead of several EU countries, i.e. Belgium, France, Italy, Spain, Portugal and Greece. The slowdown of growth rate for this indicator in Slovenia after mid-1997 led to a quick deterioration of the comparative situation of Slovenia. By August 1999 the lag behind Finland increased to nearly 5 years. Time distance seems to be an excellent way of presenting the danger of a rapidly deteriorating situation, which everybody can understand, and to signal that an in-depth analysis and corresponding actions are necessary. Some other conventional measures may not provide such warning. E. g., static comparison showed that in 1996 Finland had 8.8 times the number of Internet host per capita in Slovenia, and in 2000 it would be 6.6 times. It would look that Slovenia was doing well. But time distance analysis adds a qualitatively different conclusion.

