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István Hetényi

# Tax system development trends in the OECD countries; lessons learnt

Written on the basis of a study prepared within the framework of the “Reform of economic and financial institutions” program of the “Hungary 2015” project launched by Hungarian Academy of Sciences

The study examines whether or not the Euro-Atlantic region is characterised by specific taxation features, and if yes, what lessons they may provide for Hungary. The paper presents the tax systems and the development trends thereof, and evaluates the tax reforms based on international and Hungarian statistics. The author presents the arising problems and his own relevant opinion, as well as the conclusions that can be drawn.

## DATA CHARACTERISING THE DEVELOPMENT TRENDS

### The tax burden (tax rate)

#### *The past*

The past has been studied by many authors (László Szabó, 2004 and Zoltán Pitti Zoltán, 2004), wherefore I present data only about the period under review (See Table 1, OECD Revenue Statistics 2005).

In 1965, the *tax rate* [total taxes and social security contributions (hereinafter: SS contributions) as a percentage of the GDP] equalled 25.8% in the entire OECD, which grew to 36.3% by 2003. The growth rate was 4.3% in the period between 1965 and 1975, 3.2%

between 1976 and 1985, 2.2% in the period between 1986 and 1995, and has been 1.1% since 1995. Contentwise, the first period reflected the expansion of the welfare policy, the second one showed the impacts of the supply economics and those of the budgetary deficit. Since 1995, changes in the tax burden have been influenced both by the status of the economy and the intention to curb taxes.

Within the general trend, we must make a sharp distinction between the EU-15 countries, the so called off-shoot countries, as well as Japan and the US. (See Table 2)

What conclusions can be drawn about the tax burden?

- since 1965, the tax burden in Europe has grown, albeit at a slackening pace, while it has remained at a constant low level in the US and Japan.

- A slight growth could be observed in Western European countries with a great tax burden even after 1980, while the increase was significant in the Mediterranean countries.

- in 5 of the 20 Western European OECD countries the tax burden decreased between 1990 and 2004.

- Growth was a typical trend until 2000, after which the EU-15 countries experienced a total fall of 1.2 percentage point. In the period

Table 1

### THE TAX BURDEN IN THE OECD COUNTRIES

(as a percentage of the GDP)

Country	Tax and SS contributions		Taxes without SS contribution
	1990	2003	2003
OECD	34.8	36.3	26.8
EU 19	39.3	39.4	27.4
EU 15	39.3	40.5	28.9
Hungary	–	38.8	26.8
Austria	39.6	43.1	28.6
Slovakia		31.1	18.7
Spain	32.1	34.9	22.5
Portugal	29.2	37.1	25.3
Greece	29.3	35.7	22.8
Denmark	47.7	48.3	47.1
France	42.2	43.4	27.0
US	27.3	25.6	18.8
Canada	35.9	33.8	28.6

*Selection criteria: Austria, Slovakia – small neighbouring countries; Portugal, Greece – Mediterranean countries of a similar size; Spain – large Mediterranean country; Denmark – “innovator”, small, developed country; France – Rhenish, non federal country; Canada – Anglo-Saxon off-shoot country influenced by European culture, US; EU-19: EU-15 + 4 Visegrád countries.*

between 2000 and 2004, from among the 25 countries that provided data, the tax burden increased by over 1% in four countries, and decreased in 13 countries in four years.

■ It is known from other sources that the tax burden has also decreased in the Visegrád countries since the change of the regime (since 1990 by nearly 7% in Hungary).

■ It cannot be stated definitely to what extent the decrease Western Europe experienced after 2000 can be attributed to a delib-

erate tax policy, and to what extent it is the consequence of an economic slump. According to an article published in *The Economist*, in 2005 the negative GDP gap was still over 2% in the euro zone. (August 29, 2005)

What can we expect? In relation to the tax processes expected to take place in the EU we can rely on the convergence programs submitted by the individual countries (See Table 3).

Table 2

### TAX BURDENS IN THE DIFFERENT GROUPS OF COUNTRIES

(as a percentage of the GDP)

Country	1965	1995	2003
EU 15	27.9	40.1	40.5
Off-shoot countries (Canada, New Zealand, Australia)	23.8	34.1	33.3
US	24.7	27.9	25.6
Japan	27.4	26.7	25.3
Mediterranean countries (Portugal, Spain)	16.8	32.6	35.9

Note: unweighted averages

Table 3

**TAX RATE PROJECTIONS IN THE STABILITY AND CONVERGENCE PROGRAMS**

(as a percentage of the GDP)

Country	Date of the document	Common charges					
		2003	2004	2005	2007	2008	2010
Hungary	December 2005	39.1		39.0	36.5	35.5	
Austria	November 2004		44.3			41.2	
Slovakia	November 2004	32.1			30.7		
Denmark	November 2004	48.9	48.9				47.3
France	latest			43.7		43.7	
Germany	December 2005	45.0				42.5	
Greece	March 2005	39.5			42.0		
Portugal	January 2005			37.2		39.7	
Spain	latest		36.3			36.6	
Sweden	November 2004	50.5			48.7		
Finland	latest				44.1		44.3

As it can be seen, some countries envisage slightly decreasing, while others plan stagnant tax burdens, however, the Mediterranean countries would further increase the tax rate.

**THE TAX STRUCTURE**

**Changes in the shares of income, turnover and SS contributions in Europe**

In 2003, income taxes accounted for 31% of the total tax revenue in the EU-19, however, the extreme values are 23 and 60%. Only four countries fall in the 26 to 36% range. A 40% plus value is typical for Denmark, and below 26% values are typical for seven countries.

Variance is significant in the case of product taxes, too. In the EU-19 such taxes account for 31% of the revenues on average. The extreme values in Europe are 24 and 50%, respectively. The statistics of 9 countries of the 23 deviate from the average by more than 5%.

The average SS contribution rate in the EU-19 countries equals 31%. The statistics of 11

countries of the 23 deviate from the average by over 5%.

If we look at the time series – of which no table is provided -, we find that in the EU-19 the 31% income tax ratio in 2003 was identical with the ratio of 1965. SS contributions have been on the rise ever since. Taxes on labour [personal income tax (hereinafter: PIT) + SS contribution] grew from 16% to 22% of the GDP in the EU in the period between 1970 and 2003. This means that three quarters of the total tax burden growth in this period were attributed to this tax type. In the US and Japan the tax burden growth was only 14 to 15% (*Martinez-Mongay, 2003*). Product taxes have shown a stable ratio since 1975. (*See Table 4*)

The picture compared to the GDP is slightly different, but this difference is only due to changes in the weight of the total tax burden, and no new quality statement can be made. However, it is worth examining whether there are perceptible differences in the tax structures of countries with different cultural background. This is shown in the following *Table 5*.

Table 4

**THE STRUCTURE OF TAX REVENUES, 2003\***

(as a percentage of all taxes)

Description	Income taxes	Product taxes	SS contribution**
EU 19	31.0	31.4	30.9
EU 15	33.2	30.4	28.8
Scandinavian countries (Sweden, Norway, Finland))	39.4	29.8	26.2
Rhenish countries (France, Germany, Austria)	26.8	27.7	37.3
Mediterranean (Greece, Spain, Portugal)	25.3	33.6	34.4
Visegrád countries (3) (Hungary, Czech Republic, Slovakia)	21.9	33.9	41.5
Off-shoot countries (3)	53.6	30.3	5.1
USA	43.3	18.2	26.4
Hungary	24.8	39.4	30.5
Slovakia	22.3	36.2	39.6
Austria	29.7	28.2	33.7

\* Unweighted averages

\*\* Including wage taxes

Note: we have not focused on other tax types, wherefore the sum of the three columns is not 100%.

There are perceptible differences in the different groups of countries. The high level of turnover taxes in Hungary is influenced by the turnover type local business tax and the customs duty, i.e. it includes not only the consumption tax. Without these taxes the figure would resemble that of the Mediterranean

countries. Due to this similarity it is worth taking a look at the dynamism of the tax structure of the Mediterranean countries. (See Table 6)

It can be seen that in the three Mediterranean countries the growth of the tax burden was basically triggered by taxes on labour (and the SS contribution).

Table 5

**TAX LEVEL AND TAX STRUCTURE IN THE DIFFERENT GROUPS OF COUNTRIES, 2003\***

(as a percentage of the GDP)

Description	Total	Income	Product tax	SS contribution**
EU 19	37.4	12.5	12.2	12.4
EU 15	40.5	13.7	12.2	12.0
Scandinavian countries	46.3	18.1	13.7	13.1
Rhenish countries	40.7	10.9	11.2	16.4
Mediterranean countries	35.9	9.1	12.1	12.3
Visegrád countries 3	34.3	7.6	11.5	14.3
Off-shoot countries	33.3	17.9	10.2	1.7
US	25.6	11.1	4.6	6.7
Hungary	38.5	9.5	15.2***	12.7

\* Unweighted averages

\*\* Including wage taxes

\*\*\* Hungary without the local business tax and customs duty: around 12.6%

Table 6

**THE TAX STRUCTURE  
OF THE MEDITERRANEAN COINTRIS**  
(as a percentage)

Description	1965	1990	2003
Income	16.3	25.4	25.3
SS contribution	27.3	29.9	34.4
VAT	44.6	38.9	33.6
Total	88.2	94.2	93.3

**THE ECONOMIC EVALUATION OF THE  
TAX BURDENS**

**Functional tax burden**

For the efficient allocation of resources it is not indifferent what direct taxes are directly imposed on the employees, the capital (the employers) and consumption, since this may influence employment, the willingness to invest capital, as well as changes in consumption and accumulation. Naturally, the tax payment obligation and the burden thereof due to the tax shift are far from being identical. The relevant calculations performed in the EU (EU-15) raise a lot of methodological questions, (the different tax revenues must be divided for the three groups),<sup>1</sup> and the computation methodology is often modified, which heavily affects, first of all, the tax burden on capital.

According to an EU analysis of year 2002, around half of the total tax burden is made up of direct taxes levied on the employees' earnings (including the SS contribution). The tax burden on *employee income* in relation to the total labour costs accounts to 36%, however variance is considerable. The indicators of six countries are below the average, the indicators of another six countries fall in the 37 to 43% range, while three countries have an even greater burden. This value has been more or

less constant since 1995. According to my computations performed for Hungary, this ratio was 41%, two thirds of which was made up by SS contributions. (With this value we occupy the 11th place among the 15+1 countries.)

Two things must be taken into account when calculating the tax burden on capital:

- the so called mixed (entrepreneurial) income is regarded as capital gain,
- the indicator is calculated for capital gain from business activities, but also separately for capital gain plus property.

The total tax burden on *capital* equals 29%. This value ranges from 18 to 37% in the EU. Without the taxes levied on wealth and property, and the distribution thereof, i.e. taxes levied on *operational income* are of course smaller than the above value: 16% and 23% in 1995 and 2002, respectively. Data for Hungary could not be calculated, but according to a rough estimate, the tax burden on capital is smaller than the average burden in the EU-15. The corporate income tax is lower, and self-employed people indicate lower incomes on their tax returns. Taxes imposed on physical property are also of a lesser scale.

The tax burden on consumption (VAT and consumption taxes amount to 23% in the EU-15) has only slightly grown since 1995. The Hungarian figure is 22 or 26%, depending on whether or not the VAT on services provided by public institutions is taken into account or not, or if the local business tax listed under the turnover taxes, and the customs duty are not regarded as consumption taxes.

**Tax wedge**

Tax wedge is a tax burden expressed as a percentage of employee labour costs (wages, benefits, SS contribution). Since the value of the tax wedge differs depending on one's life con-

ditions, the OECD gives various calculations for the tax wedge. Hence, it is calculated for the industrial average wage, single employees and families with two children. In addition, calculations are presented for values other than the average wage for 2002. The following table demonstrates how the differences in common public charges arising from the different life conditions affect the tax wedge. (See Table 7)

*Summary:*

■ In the developed countries the tax structure calculated on the basis of the tax types is very much different, there exists no such thing as “normal” tax structure tied to the level of development.

■ The differences in the tax structure reflect constitutional and social traditions, and are not adjusted to tax theory statements.

■ The rise in employment related taxes has been a general, long-term tendency.

■ In Hungary the total tax burden on labour is not strikingly high compared to the GDP, however, due to the low level of employment and the significant tax exemption granted to

low income citizens, the employment of people on average wage goes with an extremely high burden, mainly SS contribution. Tax allowances to families with children significantly reduced the burden on the employees.

*It must be noted though that in Hungary the typical wage is not the “average” wage. According to the personal income tax returns for 2004, the average PIT base of private individuals was over HUF 1.3, but the medium tax base remained under HUF 900,000.*

All in all, it is worth citing the conclusions of a newer OECD study on European competitiveness:

“Empirical research on the relationship between the overall tax ratio (total tax to GDP) and GDP growth has not yielded conclusive results. Barro (1991) analyses the relation between the growth rate of GDP per capita and the tax ratio. His findings suggest that the tax burden has a negative impact on a country's growth performance. This result has been contested by subsequent studies that show a slight-

Table 7

**THE TAX WEDGE IN 2002**

(as a percentage of the total labour cost)

Description	Single on average wage		Family with 2 children	
	167%	wage level	100%	100+67%
EU 15 (unweighted average)	41	49	29	37
– lowest	24	34	9	15
– highest	55	61	40	49
Hungary	46	55	30	35
Austria	45	50	30	34
Slovakia	41	45	30	36
Denmark	43	51	31	38
Spain	38	42	31	35
Portugal	33	38	23	27
Greece	35	40	35	35
France	48	51	39	40
US	30	35	18	25

ly positive or insignificant correlation (e.g. *Easterly and Rebelo, 1993*).

Not only the overall tax burden, but also the composition of the tax mix is considered as relevant for the growth performance, as the size of the incentive effects varies from one type of tax to another. *Easterly and Rebelo (1993)* suggest that there is a relationship between the level of national income and the composition of overall taxes. *Kneller, Bleaney and Gemmell (1999)* find a growth-reducing impact of distortionary taxes. In contrast, *Mendoza, Milesi-Ferretti and Asea (1997)* show that the growth effects of changes in the tax structure (implicit tax rates on capital, labour and consumption) are negligible. [OECD, 2004 a) page 27]”

Hence, the global figures are of limited value, but the issue will be studied below from another aspect, too.

## TAX SYSTEM AND COMPETITIVENESS

As an introduction it must be noted that we are not talking about the relationship between public finance and competitiveness. We will not evaluate the expenditure policy of public finance, although according to the literature, this is what mostly affects competitiveness.

### The IMD (International Institute for Management Development, Lausanne) Report

Let us assume that the essence of the IMD methodology is well known: it evaluates the indicators of 51 countries plus 9 regions (over 300 indicators for each!), and ranks the countries based on the summary of these indicators. There are many references to this rank, although you will see from the details that several of the indicators and the weighting method applied are rather subjective.

The following *Table 8* demonstrates the overall ranking, the qualification of government activities and the major tax indicators within that framework. The lower the tax the higher a country ranks.

It can be seen that the assessment of taxation and the overall rank are often very far from each other (Canada, US, Austria, Denmark), which indicates that taxation does not have a major role in a country's competitiveness. Here we can note what important role the general conditions of the economy and the so called metaeconomic conditions (e.g. law abidance, legal security) may play in the decisions of investors, and especially in the international capital flow. It is striking that countries (Scandinavian countries) with a high tax burden – countries that spend tax revenues in a sensible way, enjoying the trust of the voters – may rank high among the competitive economies,

If we focus on the Hungarian indicators we may state that:

- The overall indicator, the evaluation of the government as a whole and the ranks by the tax level or tax avoidance are close to one another. In Austria, Denmark and Canada these indicators strongly differ in favour of the indicators of general evaluation (civilised character?).

- The tax burden on the business sector is relatively favourable in Hungary (tax on profit, tax on property). This indicator would presumably worsen if the local business tax was included here, but some advantage would remain.

- Social security contribution on the whole receives poorer scores, but if we do not count with the favourable qualification of Denmark and Canada, we are in the pack.

- The effective personal income tax burden ranks very low. However, it must be known that this indicator is measured at the level of per capita GDP, i.e. at incomes much higher than the average income. In 2002 this meant an income of HUF 1.65 million/year, while

Table 8

**COMPETITIVENESS RANKING**  
(according to IMD's World Competitiveness Yearbook 2005)

Description of criteria	Hungary	Austria	Slovakia	Spain	France	Denmark	Portugal	Greece	Canada	US
Overall ranking	37	17	40	38	30	7	45	50	5	1
Same without regions*	32	17	35	33	28	7	37	42	5	1
Total governance	38	20	17	30	45	4	41	52	9	16
Total tax burden	45	50	34	38	54	59	36	40	35	21
PIT/GDP % (not including regions)	35	43	18	30	34	55	26	23	49	40
Effective PIT**	58	53	22	20	44	56	30	32	35	26
Tax burden on profit (companies)	3	41	7	47	43	24	17	47	57	47
Corporate tax/GDP	16	11	26	36	22	28	41	45	44	10
SS contr./GDP										
• employer's	45	37	40	42	50	9	38	32	21	26
• employee's	30	48	33	25	42	20	39	45	27	36
Capital & property taxes/GDP	17	8	9	43	55	38	29	6	56	51
Indirect tax/GDP	57	44	39	26	33	58	54	53	20	7
Tax avoidance	39	10	15	26	23	11	53	46	14	24

Note:

\* IMD ranks 51 countries and 9 regions (mostly developed regions) within the countries collectively.

\*\* Effective: percentage of an income equal to per capita GDP.

In addition it must be noted that the countries under survey are beyond the countries of Southeast Asia and Oceania in terms of the tax burden. In relation to the global tax burden/PIT indicator Ireland is the number one country in Europe, yet it ranks only the 19th globally.

according to the PIT statistics, the average tax base of those who filed tax returns was HUF 1.1 million, while the average income was only HUF 777,000. More than 80% of the taxpayers have less than HUF 1.65 million in income.

■ Hungary's low ranking in the field of indirect taxes can partially be attributed to the local business tax, which is included in the category being discussed. (Otherwise, in terms of competitiveness the high ratio of indirect taxes to direct taxes is a beneficial feature.).

### Tax burden, wage quota, wage wedge

In relation to competitiveness, experts often argue with the above categories simplifying the correlations, without analysing the relationship between them. Let us see these values for the countries under review, and one more indicator, i.e. that of the personal income tax + social security contribution, since they represent the major direct tax burdens on employment.

I am aware of the fact that the absolute values of the indicators have no economic content. Yet, I present the *Table 9*, because politicians tend to argue with such figures (if they makers perform calculations at all), and assume that there is great coherence between these indicators in people's minds. However, the difference of the deviations highlights that drawing a close relationship between them would be an erroneous simplification. For instance, in the US and Japan, where the tax burden is low, the wage/output ratio is similar to that in Sweden, and higher than in Finland (59, 55, as well as 57 and 49% in 2001). However, the wage/output ratio is much lower in Greece (33%), although the tax burden is higher there than in Canada or the US. It seems that the indicator is more influenced by the employment structure correlating with the level of economic development.

If the indicators of the individual countries are categorised as *low – medium – high*, the matching of the indicators will partially yield the logically calculated, and partially a different

Table 9

**TAX BURDENS AND WAGE/OUTPUT RATIOS IN 2001**  
(per cent)

Country	1 Tax/GD	2 PIT+SSc/GDP	3 Wages	4 Wage/ output*	5 Employed population	6 4-1	7 4-2	8 4-3
Austria	44.6	24.8	44.8	52.1	35.8	7.5	27.3	7.3
Canada	34.9	18.3	30.8	54.1	50.1	19.2	35.8	23.3
Denmark	49.1	27.9	43.4	54.3	38.4	5.2	26.4	10.9
Greece	36.6	16.8	34.7	33.3	36.4	-3.3	16.5	-1.4
Finland	46.1	26.9	45.4	48.9	46.1	2.8	22.1	3.5
France	44.1	24.1	47.9	52.5	40.2	8.4	28.4	4.6
Hungary	39.1	18.2	46.3	45.6	38.7	6.5	27.4	-0.7
Ireland	30.1	13.1	24.5	40.9	44.6	10.8	27.8	16.4
Japan	26.8	21.9	24.2	55.4	49.5	28.6	33.5	31.2
Portugal	35.7	17.1	32.5	49.6	49.2	13.9	32.5	17.1
Slovakia	32.9	17.5	41.1	41.1	40.2	8.2	23.6	-0.3
Spain	34.4	18.9	38.2	50.1	40.8	16.7	31.2	11.9
Sweden	51.0	31.5	47.5	57.6	48.6	6.5	26.1	11.1
US	28.8	19.2	29.6	58.7	46.9	29.9	39.5	29.1

\* Compensation of employees/GDP!

result. Thus, for instance in 9 of the 14 countries high tax burden goes together with a high wage wedge, and the situation is similar in the case of high personal income tax + social security contribution and high wage/output ratio. However, high *wage tax wedge* and *low employment* (or vice versa) go together in only 7 of the 14 countries, while *low tax rate – high employment* (and vice versa) goes together in only 5 countries.

### The tax rate and the tax burden

Tax rates, if studied by themselves, can be rather misleading, because the calculation of the tax base differs from country to country. (In France, for instance, the marginal tax rate of PIT is currently 48%, and it is planned to be reduced to 40% from 2007. At the same time, however, the French would repeal the rule according to which 20% of the wage is not considered as part of the tax base. Therefore, the reduction of the marginal tax rate would affect high income people neutrally “in the worst scenario”. Otherwise, the tax rate is 5.5% up to EUR 5,500, and the 40% tax rate would be introduced at an income of EUR 65.6 thousand. There are of course other taxes and dues, wherefore the upper limit of the total tax bur-

den is 60% of the income. (Economist, September 29, 2005.)

The corporate tax rate does not tell much about the effective tax burden either. This is indicated by *Table 10*, which contains figures for medium-sized and large companies for 2005.

### CENTRAL AND LOCAL TAXES

Data pertaining to local tax revenues may reflect two approaches:

- local tax is a tax the base and/or rate of which is determined by the local government,
- local tax revenues come from local taxes and assigned (split) taxes collectively.

Although in theory the EU prefers the first approach, the tax statistics of the OECD applies the second one (except for Hungary<sup>2</sup>), wherefore regular data supply is only available about the latter. We may reach different conclusions depending on whether the provincial (state) taxes of the federal states are included or not in the local taxes. Evidently, the trends of non federal states are of primary importance for Hungary.<sup>3</sup> I hereby enclose a *Table 11* to demonstrate the above written.

As it can be seen, the picture is rather mixed in terms of both the levels and dynamism.

Table 10

#### THE TAX RATE AND THE TAX BURDEN

Country	Legal tax rate	Effective tax burden
US	39	38
Canada	34	39
Japan	42	34
United Kingdom	30	21
Germany	38	37
Sweden	28	12 (!)
China	24	46 (!)

Source: Economist September 24, 2005. in reference to C. D. Howe Institute (The concrete method of calculations is not included in the article.)  
 China imposes VAT on investments, but the 46% rate can be reduced to as low as 18% with the allowances. In other countries local taxes add to the tax burden.

Table 11

### TAX REVENUES BROKEN DOWN BY GOVERNANCE LEVELS IN OECD COUNTRIES

(total public finance tax revenues = 100)

Description	Local revenues	
	1975	2003
Federal states (unweighted average)		
• local	10.6	8.1
• provincial + local	28.4	27.3
Non federal states unweighted average	12.3	13.7
• lowest value	0.0	2.1
• highest value	29.2	35.7
Hungary	.	5.8*
Slovakia	.	5.1
Denmark	29.8	35.7
France	7.6	10.3
Portugal	0.0	5.8
Greece	3.4	0.9
Spain	4.3	28.2

\* According to the IMF GFS statistics it exceeds 10%, because in Hungary the OECD lists the split PIT not under this category, but under subsidies. However IMF does not pursue this practice.

Sources: OECD Revenue Statistics 2005

Relying primarily on 1999 figures, OECD prepared a special analysis, too (OECD, 2002). This analysis concludes that

- the strengthening of regional governments is a general tendency (by local governments or without them);
- in the new EU member states fiscal decentralisation is of a smaller scale than in the EU-15;
- Decentralisation is relatively stronger in Hungary than in the other new member states (especially in comparison to countries with a single decentralised level) despite the fact that most local governments are very small; the level of decentralisation in Hungary is comparable to that in several Western European countries;
- the role of taxes levied locally is negligible in all new member states but Hungary, but even Hungarian local taxes lag behind the local taxes of the seven, similarly structured Western European countries;
- as far as the future is concerned, it is worth remembering that according to the rule of thumb, the local government of a settlement with fewer than 6,000 to 8,000 residents cannot efficiently perform institution maintenance tasks. (In 2000, 91% of the Hungarian settlements had a population of less than 5,000, and 31% of the country's population lived in such settlements);
- the structure of local governmental taxes largely differs from country to country; from among all local taxes (including assigned taxes, too)
  - in Sweden and Denmark income taxes account for over 90%, while this ratio is 0 in France and the United Kingdom,
  - property taxes range from 0% (Sweden) to 100% (United Kingdom),
  - “other” taxes are usually negligible, but are very significant in Hungary and Italy (local business tax).

## TAX REFORMS

According to *Ivanova*, permanent tax reforms can be attributed to three causes: the voters require them, the former reforms failed, or the social and economic conditions are changing. (Ivanova, 2005) I do not challenge these statements, however I believe that they need to be supplemented. In relation to the permanent requirement of the voters I would add that the requirement is induced by the politicians whose election programs always lure people with nicer and better conditions. The demands are rarely satisfied due to the conflicts of interest, since it is also true that reforms are usually required only as long as they are actually launched...

The biggest mistakes of the former reforms were that there were many unexpected (unrecognised or ignored) side effects, and that politicians tend to overestimate the significance of their reforms. Finally, it is also true that the circumstances change. Such reform was, for instance, the Hungarian tax reform of 1988, and a similar effect is triggered today by globalisation and possibly the need for decentralisation.

The most significant, clear trends of new age tax reforms until the end of the 20<sup>th</sup> century:

- introduction of the VAT (in 1954),
- expansion of the social security system,
- reduction of the marginal rates of the personal income tax and the corporate tax rate in the last one or two decades,
- reduction of the progressive tax brackets,
- strengthening of the pay-as-you-earn system,
- counterbalancing the reduction of the income rate by the frequent broadening of the tax base and by increasing the tax burden on consumption,<sup>4</sup>
- another frequent characteristic feature is that measures aimed at tax reduction are not linked to radical cuts in expenditures.

All this is typical for Hungary, too.

Tax reforms have also been accompanied by ups and downs and failures. Let me show a few examples for the latter:

- the impact of tax cuts on growth and savings falls short of the expectations (US 1980s, Japan 1990s),
- unemployment in Europe has rather grown than decreased,
- the tax systems have not simplified, actually they have become more complicated,
- the tax systems have been only partially adjusted to globalisation; the need to combat the “harmful tax competition” has appeared as a new problem and challenge, just like the “European Company” form, which limits the governments' possibilities to act.

There are fluctuations in subjecting the various capital gains to taxation.

There are many reasons behind the frequent and only partially successful reforms:

- often the reforms intend to assume too many tasks, which include trade-offs,
- although taxation theory has become sophisticated, its operationability is deficient, it is not really able to apply the general theses to the concrete conditions. The very specific “laws” are rather assailable (for example the Phillips curve), because they are linked to specific situations and the taxpayers' behaviours tend to change,
- the reforms must be harmonised with the revenue conditions, therefore the reforms are often lopsided and their economic impacts are overestimated,
- in the political bargains the reform proposals often lose their internal coherence.

During the tax reforms it is always greatly emphasised that it is inevitable to reduce the benefits built into the tax system. We have problems with evaluating the benefits: there are no long time series and internationally comparable data. The concept of benefit is not

defined. Certain benefits may not be benefits at all, but the attributes of the system. For instance the “discounted” VAT rate, the personal income tax credit in Hungary, or deductions aimed at the avoidance of double taxation. A major part of the differentiations is linked to the calculation of the tax base. For instance, the calculation of tax exempt pensions or non-realised income ...

My general impression is that there is no tendentious reduction of benefits in countries where the tax rates have reached a reasonable level (10 to 40%).

Today in Europe the high wage wedge is sought to be reduced and the tax system is sought to be made more neutral (reduction of sectoral differentiations, influencing accumulated consumption), in which competitiveness and employment come to the forefront. The “growth and jobs” view is dominant, while the redistribution and stabilisation objectives are put on the back burner. On one hand, they have lost priority, and on the other these functions are thought to be more efficiently performed through budgetary expenditures.

A new feature is the strengthening of international regulation. For instance, the EU is currently most involved in the following tax issues:

- VAT harmonisation, electronic commerce, tax issues of downloads and taxation according to the country of origin,
- energy tax,
- avoidance of the double taxation of pensions,
- harmonisation of the tax base of multinational companies,
- approximation of the different tax burdens on capital gains,
- possible introduction of EU level taxation (air traffic?),
- tax measures in favour of employment,
- driving back the harmful tax competition.

## PROBLEMS AND CHOICES

### Social changes – frameworks for the tax policy

It is usually taken for granted that the frameworks of the tax policy are determined by the social and economic changes. Eventually, there is no doubt about that. In the 1930s, Lóránt Hegedűs wrote the following while explaining society and taxation: “Taxes are never the brainchild of an abstract notion, but are always and everywhere the mysterious indicators of the strange movements of the society.”

The most important word in this quote is “mysterious”. It means that social movements become clear often after a long time, and that due to the conflicts of interests there is no mechanical concurrence between the social processes and the changes of the tax system within the same period. This means that we can outline a theory, but it will not be implemented clearly, because the taxation policy is more likely to be influenced by the interest and power relations, as well as the traditions.<sup>5</sup>

As a model it is customary to cite the model of the liberal and social market economy<sup>6</sup> and that of the welfare state (I will not discuss the Eastern Asian conditions.) However, this traditional break-down says less about the new ecological challenges, it does not count with the “treatment” of globalisation, and competitiveness, an issue becoming a major point of state responsibility.

What can all this mean for tax policy? We may risk concluding that the tax system should undertake a smaller share from the three main functions of public finance, since those may be provided for more efficiently through the expenditure policy. Let's take a closer look at the issue:

- It is a well-know fact that sustained economic booms can be best ensured by high tax rates and strong progression. However,

these elements can be criticised from the aspect of competitiveness. Lower tax rates and prolonged progression weaken the stabilisation effect. However, unemployment benefits, other more flexible social measures, i.e. those that keep the need for such benefits in mind, may counterbalance these factors, all the more because such benefits are provided for those layers of the society that are ready to increase their consumption.

- Redistribution can be better served with subsidies targeted at low income people. Naturally, this would require greater self-support from middle-class people, wherefore it does not really suit pre-election tax politicking.
- Allocations can be somewhat cut back by slightly reducing the scope of tasks and by the gradual introduction of fees for services that mostly and directly serve the welfare of the individual (exemptions from payment must be ensured for those in need). At the same time, a specific egalitarianism must be maintained.

### Tax reform trends

“Forecasts are always uncertain, especially if they pertain to the future.” This wisdom holds true even today. Theoretical statements have weakened. From among the growth factors increasing value is attributed to the institutional factors, in contrast with the flow regulation measures.

Finally, it has become more and more evident that the general practice, i.e. the separation of tax reduction from the restructuring of expenditures, cannot be continued.

I have already referred to the trends of the coming years in the first chapter. It can be seen from the convergence programs that the different countries generally do not rush head-

long to the radical reduction of the tax burden.

This conclusion is contradicted by the major tax reduction tendency that has recently unfolded in the US. How can this impact the EU member states? Is it possible that they will need to reconsider their modest tax cut policies earmarked in the current convergence programs? It is possible, but I find it rather improbable, since the strengthening of the fiscal discipline is a general task today.

*Although we have all rights to consider social security contribution as a type of tax, I will not discuss that here, since the problems of the social security system must be discussed separately due to the fact that it originates certain rights.*

### Tax burden and competitiveness

Since the 1990s, the tax reforms have primarily emphasised the enhancement of efficiency. This approach gives preference to the reduction of the tax burden and the alleviation of distorted allocations.

Direction of the tax burden reduction:

- Reduction of the tax burden on capital gains and operational income. The main argument is that guarantee must be provided for capital, which has become very mobile due to the sweeping globalisation, since capital tries to escape from the large tax burden. The theory projects the “racing to the bottom” vision.
- In the EU unemployment and lower employment than in the US have reinforced intentions to reduce the wage burdens, primarily in the case of unskilled workforce.

However, many more in-depth studies (Caterano, 2003; Martinez-Mongay, 2003) indicate that the destructive tax competition and high taxes have not been fought off, and the correlation between the tax burden and the

growth rate has become rather uncertain. Until 2003, tax rate cuts did not really result in the reduction of the tax burden.

Is there any national convergence in the tax burdens? There is some convergence within Europe. One of the clear signs of this is the progress of the Mediterranean countries that formerly had lower tax rates, and the other is the convergence of the tax burden on labour in the period between 1980 and 1995. However, the researchers are not sure whether this is the concomitant of the tax competition, or other structural changes that influence taxes. (Martinez-Mongay, 2003)

### Tax harmonisation, tax coordination?

Let us confine the topic of discussion to the EU. It is a well known fact that there is no tax harmonisation between the EU and the US. However, harmonisation of turnover taxes within the EU is well known. But in the case of direct taxes that account for two thirds of the revenues there is no conscious harmonisation, except for in the case of the corporate tax, the volume of which is not very significant. It may crop up as part of the Lisbon process with the help of the so called “open coordination”, which is still a soft tool.

More significant measures than that of open coordination can be expected (for example after the introduction of the “European Company” form of enterprise) if the corporate tax bases are standardised and the systems of benefits are approximated. The need for standardisation will strengthen in the case of other forms of capital gains.

*In compliance with the single market concept (the four freedoms and competition under equal terms), the European Union has been the engine of tax harmonisation since the beginnings, which has primarily aimed at the customs union and the*

*regulation of price taxes, and was then extended to cross-border operations (parent companies and subsidiaries, sites, affiliated enterprises, acquisitions). This includes the handling of transfer prices, royalties and interests. The benefits from this harmonisation may include greater transparency, smaller performance costs, and the improvement of allocations within the EU. The concept of tax competition has been promoted recently. The advocates of tax competition believe that a competitive edge can be achieved by reducing the tax rates, by strengthening the financial discipline, and by maintaining the “equilibrium” between the tax burden and the state services. (These advocates basically oppose the harmonisation of direct taxes, because they believe that the bargaining of Leviathan governments does not serve the citizens' interests.)*

### Governmental levels in taxation – local governmental taxes

We could see that the system and level of local governmental tax revenues (including transferred taxes) is rather varied. This is mainly due to the fact that the local governmental system is different in each OECD country. The difference is due to the fact that

- there are federal and non federal states, (the latter either have medium level administration or not),
- the size and functions of the local governments are historically different, and
- due to the centralisation philosophies of the central power.

It is obvious that fractured and centralised local governmental structures require different tasks. The more fractured the structure, the greater the differences are between settlements of the same size and functions. This reinforces the trend that in a tax system inseparated from the tax force, the taxes will become of subordinate significance in the case of 3,100 settle-

ments. With such a structure a higher ratio could only be reached if the tasks of the local governments would be significantly restricted (centralisation), i.e. the denominator would reduce.

Despite all these things, certain types of local funding can be observed. *Iván Illés* (2005) writes:

- “we will hardly be able to take over the traditional economic system of the Anglo-Saxon countries and their neighbours (Great Britain, Ireland, the Netherlands), which are almost entirely based on property taxes;
- the strongly centralised systems of the southern Mediterranean countries (Greece, Portugal) that provide minimum competencies and resources for the local governments are probably not exemplary for Hungary, either;
- for the time being we cannot follow the example of the Scandinavian countries, where the implementation of developed welfare policies is mostly the task of the local governments, which binds the overwhelming majority of the otherwise abundant local governmental resources;
- Austria, Switzerland and Germany – countries located not far from Hungary – are federally structured countries. Such a structure cannot be implemented in Hungary in the foreseeable future, and it might not even be reasonable to implement.”

The author supplements these statements with the fact that Hungary may learn the most from the situation of the Visegrád countries. But the lessons to be learnt are not plentiful. Our system of local taxes is undeveloped in the sense that there are only a few taxes imposed by the local governments – as far as I know. Most of the tax revenues of local governments (as shown by the OECD) come from assigned personal income tax.

In the following we take the broadening of institution maintenance in the small regions and the emergence of the regions as a fact. However, here we must consider other assumptions, too.

■ Will the system based on associations be transformed into a real, more concentrated local governmental system? This would be required by a sensible tax policy.

■ Will the current local governmental concept sustain, which regards assigned taxes too much separated from local taxes? Yes, if the current practice of tax assignment will remain in effect. But we believe that a more sensible system can be developed, if the local governments are granted constitutional guarantee for an entire election, or an entire EU budgetary cycle against the arbitrary annual changes, and if the rule of assignment can be harmonised with the principle of service supply desirable to be applied to local governmental taxes.

■ What financing can be expected at the level of the regions? In theory there could be regular local governments that impose taxes independently, by themselves. But this is not likely to happen until 2015. In Hungary no link has been formed in the people's minds to the regions. Under such circumstances, assigned taxes, as well as the above mentioned constitutional guarantees can serve as “own resources”.

The constitutional regulation could be two-directional:

- before local governmental elections, the system and rate of assignment for the entire cycle (or the EU planning period) could be determined in a law requiring two thirds of the votes,
- the institutional and decision-making systems aimed at the reduction of differences in development could be reinforced.

In the case of local governmental taxes the governing principle is that service related taxation should be given preference. Local govern-

mental budgets can be associated neither with a growth stabilising function, nor with a basically independent redistribution policy. For this reason it is not advisable to use taxes that heavily depend on economic growth, because current local governmental expenses are incurred on a regular basis. Another principle: the use of petty taxes shall be avoided as much as possible, because they are financially unreasonable and the proliferation thereof will make finances more obscure.

### *Tax assignment, tax splitting*

At small regional level the personal income tax is suitable for tax assignment, if the rate of the global share is fixed for several years, and if the assignment is adjusted to a service scope, (for instance weighting linked to staff depending on the age structure, or possibly to different functions). If the entrepreneurs or companies pay significant tax on property, such tax could function as split tax or tax assigned to the regions – occasionally in order to dampen unjustified differences.

### *Income tax*

For the time being tax assignment seems to be more feasible than levying taxes independently. A system of supplements can be considered, however prudential behaviour is justified in this respect. On one hand, it would possibly lead to increased taxes, on the other it requires complicated administration. The introduction of local personal income tax is possible in theory only in the case of a more concentrated local governmental system, but only in the longer run.

### *Taxes on property*

Local taxes on residential real property could become general, but only in a very gradual manner. The duty payable for the sale and purchase of real property could be fully assigned. It is inevitable to analyse the structure of very

different property taxes: taxes on real property are significant in the Anglo-Saxon countries among the developed countries. In other countries considerable revenues are yielded from turnover (non-recurrent tax). Therefore the two taxes – and the inheritance tax – can only be examined together.

## A few other challenges

In the following I will discuss a few specific issues of the European tax policy:

### *The flat rate personal income tax*

Flat rate personal income taxes were introduced in the past years, primarily in Eastern Europe. Occasionally such ideas emerge in the west, too (recently in the United Kingdom), but have no colossal success. The introduction of a single rate tax is not on the agenda in the US. The pioneers of the flat rate tax are the Baltic states, which introduced 26 to 33% tax rates. Certain Eastern and Central European and the post Soviet states have recently introduced 13 to 19% rates. This may greatly influence the tax policy of Hungary.

The problems of the flat rate income tax – from the Hungarian perspective – are the following:

- a low rate would lead to a great loss of tax revenues, while a high rate would heavily penalise the middle classes,<sup>7</sup>
- so that it would really bring about simplification, the complicated system of tax credits should be abandoned in favour of the introduction of a tax free income bracket. If that bracket is low (lower than the minimum wage), it penalises low income people, if high, a high tax rate is required. (By the way, according to the statistics for 2004, 4.3 million people filed tax returns, but only 2.9 million paid personal income tax.),

- the burden of introducing a single rate may be eased if the payment of subsidies would be more linked to employment and the principle of indigence,
- all in all, the introduction of the single tax rate would also affect broad middle class layers and/or would go with a great loss of tax revenues. In the latter case consumption taxes would need to be raised.

*In 2001, Russia introduced a flat rate (13%) personal income tax (applying 30% for certain capital gains) instead of the former 0, 10, 20 and 30%. The 13% rate is payable above the tax exempt income, which is 20% of the average wage. At the same time, the social security contribution was reduced from 38.5% to an average contribution of 30%, with declining degression from 35% to 5%. Tax revenues have significantly increased, although revenues from personal income tax equalled only 3.4% of the GDP. However, according to the IMF's analysis, it cannot be determined whether this is the result of the reform, or not. The supply effect was not strong. Tax-paying discipline has improved, however it is not clear, how the tax reform and the new measures improving tax administration contributed to this improvement. According to a panel survey, the 30% marginal tax rate affected only 0.5% of taxpayers and the 20% tax rate affects only 7%. (Ivanova, 2005)*

### **Ecotax**

Can we expect a break-through in the significance of this type of tax? The ecological tax burden relative to the GDP was either stagnant, or somewhat reduced in the EU between 1995 and 2002. A change of paradigm may take place here, but because the imposition of special taxes on energy and transport may become a factor of competitiveness – this is only possible through international harmonisation, which is very time consuming. (See the debate on interest taxation in the EU.)

### **Corporate taxation and international direct investments**

The tax burden on companies evidently influences international direct investments generated by multinational companies. (Individual investments are of smaller scale.) However, this impact cannot be simply attributed to the differences in the profit tax rates, because:

- other taxes, benefits and externalities (e.g. risks) also play a role,
- the computation of the tax base is different (amortisation rules, accounting of R+D),
- the achievable profit may significantly vary among the different countries,
- the system for the taxation of foreign income is rather distinct in the individual capital exporting countries (possibility and rules of accounting),
- the possibilities and conditions for investment funding are different (including the accounting of interests and royalties),
- transfer prices allow for the relocation of profit.

According to the surveys, the taxation rules play a greater role in the reinvestment of the profit than in new investments. This means that impacts exists, although the joint impact of the multiple factors can be clearly understood only in the case of the concrete decisions of the individual companies. (Hines, 1996)

## CONCLUSIONS

*“The virtue of our ancestors was that they did neither less, nor more than needed in anything.”*

*G. E. Lessing: Laocoon*

The conclusions are based not only on the study, but also on a range of experiences.

The tax policies of the OECD countries have been undoubtedly strongly influenced by the development of the tax theory, which has

revealed the impact of increased taxes on incomes, deviation and the GDP. However, it is typical for all countries that the intensity of this impact depends on several accompanying conditions, wherefore it provides little help for the development of tax policies and tax planning. In addition, the new theory of community decisions throws new light upon the driving forces behind the decisions, highlighting the major role of the enforcement of interests in business and politics.

Despite this fact several general tendencies can be mentioned.

- In the past decades the tax rate has increased everywhere but in a few non European Anglo-Saxon countries and Japan, but this growth has recently slowed down or has become stagnant.

- The latter was also due to reforms the objectives of which included tax reduction. This move was triggered by increasing tax evasion and tax avoidance, globalisation and liberal views.

- The most general trend is the reduction of the number of tax brackets and the marginal tax rate in the personal income tax, the harmonisation of the corporate income tax with the personal income tax and the application of the VAT system.

- The reforms have lately placed a great emphasis on the improvement of competitiveness, however the connection between taxation and competitiveness is not as direct as many people think. It seems that labour market behaviours and the regulation thereof – which includes taxation, of course – may have a much greater role.

- Changes of the tax burden and that of the tax structure are dominantly influenced by the changes in the state's role, and other traditions that judge the relationship between the individual and the state differently.

- The timing of the tax reforms largely depends on the election cycles. The programs

are usually disconnected from the expenditure policy, and are typically characterised by extremely great intentions, however, the concrete measures and impacts fall short of the original expectations.

- The tax reforms wish to achieve their goals by changing the proportions of taxes, and by reaching a more neutral tax impact. These proportions have led to a greater tax burden on employment (which is a less mobile factor); increased employment has recently become a direct objective, and so has the reduction of the related taxes. Since the introduction of higher taxes on capital gains is hardly possible, it is a key issue to adjust expenditures. In addition, there is a theoretical possibility to increase service related taxes and fees, consumption taxes as well as ecological taxes.

- The concept of ecotaxation has been introduced to the tax policy, but it has not reached a grand scale in practice.

- The standardisation of the tax burden on capital gains aims at the improvement of capital allocation, however this has been hindered by the different lobbies for a long time.

- Having realised the negative impact of consistent income taxes on savings, the different consumption taxes are often increased, however, the overall tax burden on consumption has not grown much.

- In the EU nearly one third of the tax burden is made up by social security contributions. (In the non European Anglo-Saxon countries this ratio is significantly lower.) Therefore, the general aim is to place these systems partially outside the system of public finances and to promote self-support. This issue is becoming even more topical due to the aging population.

- The taxation policy is seldom based on long-term awareness that keeps in mind the interactions of the different taxes, as well as the equilibrium between tax reduction and expenditure cuts.

■ The international impacts of the recent major tax cuts introduced in the US cannot be assessed yet, partly because the European countries cannot allow themselves to finance enormous budget deficits from external sources, even though the Maastrich criteria are interpreted in a more flexible manner.

■ The use of a flat personal income tax rate is a relatively new phenomenon. Following the Eastern European practice, such ideas have come up, for instance, in the United Kingdom and Germany, but only with little success so far. The introduction of such a flat rate is not on the agenda in the US. In countries where a low rate was applied, the reform was accompanied by a VAT rise.

### *Conclusions for Hungary*

The Hungarian tax system – including the changes announced for the coming years – more or less fits into the picture formed about the Rhenish and Mediterranean countries. Compared to these countries, the appropriate level of consumption taxes can be judged favourably, while the high tax wedge imposed on employees with low or medium incomes can be judged unfavourably. Local governmental taxation and funding must be radically re-evaluated. The future of the taxation systems of the countries taken as a basis for comparison large-

ly depends on how the traditional values will change under the influence of neoliberal tendencies. One can expect:

- the slight reduction of the tax burden, the expansion of privatisation, corporatisation and fee-paying,
- the decline in social policy involvement in taxation, the partial transfer thereof to the expenditure policy (smaller tax progression – increasingly targeted welfare policy),
- the reinforcement of the neutrality of taxation, the reduction of allowances and exemptions – but it is not clear, which of those may remain (for instance: US: charity, home owners; Europe: family), the introduction of a more uniform tax on capital gains,
- the promotion of employment as a top priority, in which factors other than taxation also play an important role,
- the radical transformation of local governmental funding. In the medium run the role of tax assignment is more likely to grow than that of independently leviable taxes.

All this will have an impact on the taxation policy of Hungary, too. As soon as a social and economic model – or the alternatives thereof – reflecting the Hungarian conditions takes shape as the research progresses, more detailed concepts can be developed.<sup>8</sup>

## NOTES

<sup>1</sup> The break-down is not simple. It turns out, for example that in the EU-15 only 55 to 70% of the personal income tax is paid after employment. There may be methodological uncertainties in the grouping of taxes. This is indicated by the fact that the EU analyses are often corrected, especially when calculating the tax burden on capital. (For example: profit on share option undoubtedly constitutes capital gain - which is not reflected in the GDP - but the taxation system considers it as part of employee income.)

<sup>2</sup> In the case of assigned or split taxes the central government assigns a fixed portion of the collec-

ted tax to a subnational unit. Therefore, the central and the local governments are together “through thick and thin”. The assignment of personal income tax in Hungary is not accepted as local governmental tax, because only a fraction of it is linked to the place of origin.

<sup>3</sup> In non-federal states only regions with specific historic features have taxation tasks (e.g. in Spain and recently and partially in the UK).

<sup>4</sup> Tax rate cut in Australia: in 1955 29 brackets, a marginal tax rate of 67%, tax free bracket up to

12% of the average wage. The marginal tax rate was payable on incomes equalling at least 18 times the average income. In contrast with this, in 1985: 5 brackets, a marginal tax rate of 60%, tax free bracket up to 22% of the average income, and the marginal tax rate was payable on incomes equalling at least 1.7 times the average income. (In 1989: the marginal tax rate was 49%, but was introduced for incomes equalling at least 1.3 times the average income.) United Kingdom 1985-1995: the marginal tax rate decreased from 60% to 40%, but only 4% of the tax-payers fell into the 40% plus bracket even before the reform. On the other hand however, the VAT rate grew from 15% to 17.5%.

<sup>5</sup> One of the best course books on public finance closes the chapter on taxation theory with the following: “considering the complexity of the subject,

the Reader has all rights to doubt whether these problems are raised at all during the decision-making process.” *Cullis*, 2003)

<sup>6</sup> Today the social market economy is most frequently misinterpreted and is seen as a sort of a welfare state. Its original meaning – to which it would be better to adhere to – is a liberal concept supplemented with social guarantees, which is against the Keynesist system and supports agreement (participation).

<sup>7</sup> According to a survey carried out in the UK, a 30% flat rate tax would increase the burden on those falling into the fourth to seventh income bracket.

<sup>8</sup> I expressed my thoughts in a former study. (*Hetényi*, 2004)

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# *Marking time, and what to do instead*

*Possible ways ahead of the Hungarian R&D and innovation strategy from a competitiveness point of view*

Government programmes and communication often – almost always – refer to the Hungarian R&D sector, and the national innovation system as an area whose rapid development is of key significance from the point of view of the country's convergence. The same has been increasingly often heard from the moment the country's EU accession was agreed, and the EU devised its own convergence programme in 2000, called the Lisbon strategy (Rodrigues, 2003, Kok, 2004).

The programme, setting the target of catching up with the US underlines the creation of a competitive, knowledge based economy in Europe, and sees R&D as a key player in this scenario. The key to improved R&D and innovation output in the EU is, so the programme says, raising the GERD/GDP indicator to 3% of the EU average by 2010<sup>2</sup>. Today it seems that the conditions of achieving an innovation system successful even by American standards on the basis of that objective are in place on the expenditure side only. The situation, however, is by far not as simple as that. We are going to try and scrutinize the Hungarian case from even closer to help the reader understand that even in this sector of the economy just as in all others, it is impossible to find quick and easy solutions for problems piling up for several decades. Especially when proposed solutions have usually been of the routine kind, based on

normal distribution principles or governed by the rules of the given institution without digging deeper into the structural deficiencies or the economic background.

Even the present paper is not in a position to bring to light all the underlying reasons of the failures of previous attempted solutions. It is, however, in a position to redirect the debates concerning Hungarian R&D and innovation. It will aim at handling the two areas under one heading as we have rare examples where R&D should not, directly or indirectly, constitute the basis of innovation, or where serious and successful innovation takes place without a significant R&D background.

Our paper will not focus special attention to R&D statistics either in Hungary or abroad, but will make abundant references to publications including such facts. However, statistical facts are widely known e.g. on the EU's GDP ratio spent on R&D (the GERD/GDP index) presently at 1.8%. That is about two thirds of the corresponding US statistic. The corresponding Hungarian figure has in some of the years since the early 90s risen close to 1%, so e.g. in 2004 it was at 0.89%.

Hungarian R&D, however, does not, or not primarily suffer simply from relatively scarce public funding and non-financial resources. In addition to conceptual uncertainties, and an unapparent institution system, and numerous

actors misunderstanding their roles, the reason may be partly that the Hungarian political elite has long failed to properly understand the role of R&D and innovation in economic development. They certainly know the first lesson in the textbook: the main point of these tasks is the creation and launching of new products for later manufacturing and export. But there are other important functions as well, which, however, are truly needed only by an economy that is trying to grow not only in the quantitative, but also in the qualitative sense, and at the same time, wishes to integrate in the world economy.

The benefit of so-called knowledge creation is not only bringing about innovation that may be immediately applied in practice in the economy, but also the operation of research and development capacities that may keep a country's research sector and higher education system as close as possible to the leading edge of the world. And this can only yield tangible economic benefit besides intellectual export, and operating capital import through participation in international research networks, but not before a longer period of development takes place.<sup>3</sup>

The paper will first browse through the literature of the problems of Hungarian R&D and innovation, or more accurately, its core elements. Based on our own research into the competitiveness of the Hungarian R&D and innovation sector, it will attempt a snapshot of the present positions of the sector in international competition. It will devote extra attention to the institution system, and go on to scrutinize the real role of R&D and innovation in the economy. The final part of the paper will provide a list of possible strategic options.

## DIAGNOSES OF HUNGARIAN R&D

Numerous diagnoses have been offered on the operation of Hungarian R&D and the national innovation system over the last 10–15 years.<sup>4</sup>

These reflect many common features, and reach mostly similar conclusions. The majority of authors attribute the neglected situation of Hungarian R&D along with the scarce interest – financial and intellectual – of most of the economy in innovation to dwindling public funding and missing capital, weak risk-taking potential, and lack of information concerning international matters on the side of the business sector, especially Hungarian owned, and smaller companies.

A number of sources refer to the low efficiency, and the organisational problems of the Hungarian R&D diffusion system (most recently Viszt, 2005), although the theoretical background of investigating the diffusion system is presently subject to debates as the very notion of the diffusion system supposes the linear nature of the innovation system. In the linear model there is a straight line from R&D to innovation sold in the marketplace, the individual actors operate distinctly, and the entire process is made up of research sites following up on each other as discrete points. Recent research, however, regards that approach mere theoretical fiction, and recommends the application of more complex models (circular, random, and three-spiral models) that are also closer to reality (cf. Lundvall, 1992, Nelson, 1993; Leydesdorff, 2000; Török, Borsi and Telcs, 2005).

The earlier (Török, 1996), and later (Viszt, 2005) diagnoses of the Hungarian diffusion system, however, come to identical conclusions. The main point of these concerns the chaotic and fragmented nature of the institution system meant to bring R&D achievements from the research sites to the developing and manufacturing companies. There was hardly any change between the mid 90s and around 2005 in the sense that a significant part of the quasi-diffusion organisations established formerly through public or foreign funding through applications survived, but gave up

managing and mediating technology a long time ago.

The structure left over from before the 1990s creates confusion and unnecessary duplications especially in basic research, where there is no clear division of labour between universities and academic research institutions. Such structures are not unique internationally (similar ones operate e.g. in France, and in most former COMECON countries) with the difference that they usually harmonise their tasks appropriately. The general view in the profession explains duplication in Hungary mainly by the fact that universities in the previous system had the primarily role of teaching, but in many places they included research in their profile after 1990 even though their staff remained below the required quality.

There is no denying that in the 70s and 80s universities had relatively low enrolment levels besides a strict admission system, and since there was little funding to apply for, leading teaching personnel could concentrate on teaching, but further scientific training (today called PhD) was not provided at universities at the time. After 1990 universities were given back their autonomy, and academic institutes also broke free from direct state control. Basic funding was rapidly running out in both areas. In higher education they have been trying to supplement the per capita quota system paid by the state with so-called cost-reimbursement arrangements, while both universities and academic institutions use applications for funding as their primary means of survival.

Mutually competitive applications are a sign of significant duplication between research sites of similar profile, however, really competitive research capacities tend to supplement each other in identical technical areas. One needs to realise also that the ultimate quality control is mostly present in the network of academic institutions, while several higher education institutions were established or upgraded

that only have the required relevant intellectual resources on paper. The Hungarian higher education accreditation system finds the formal measurement of researcher status (i.e. the number of scientific grades) much more important than real scientific achievement.

Most diagnostic reports fail to give details on the direction and the manner in which and the structure by which the Hungarian R&D and innovation system should develop if regularly reiterated political promises were ever complied with, and funding levels in the entire sector were to rise in accordance with requirements, perhaps to a point where it would come close the EU average. The overwhelming majority of diagnoses fail to engage in serious comparisons of Hungary to European countries of comparable level of development such as Greece, Portugal, Poland, the Czech Republic, Slovakia, or Slovenia.

Those comparisons, if ever conducted would highlight GERD/GDP ratios and economic development rates (Török, 2005) indicating that in most economies of the world there is a strong correlation between the per capita GDP, and the GERD/GDP index, and that in the majority of countries with levels of development similar to Hungary (except the Czech Republic, and Slovenia), the GERD/GDP index actually remains below 1%. That strong relationship could, of course be interpreted suggesting that larger R&D expenses promote the country's economic development. That correlation, however, only holds on a longer term. On a shorter term, the opposite seems much more true: more developed countries can spend more on objectives such as R&D and innovation, which have favourable financial return, but it takes some time before the investment returns.

That is because in richer countries the distribution of the GDP is less dependent on – long unmet – welfare and development requirements than in countries with lower levels of development. At the same time, there is another

er strong correlation at work, namely the one between economic development and the GERD/GDP index on the one hand, and its components on the other. The BERD/GDP index (i.e. the GDP ratio of the R&D expenditure of the business sector) also increases in direct proportion to economic development (Török, 2005). It would seem simple to account for that by saying 'in a developed country even the enterprises are more developed', and truth is not far from that – apparently tautological – statement.

It would take further analysis to corroborate the probably justified hypothesis whereby more developed countries' companies have better endowment with capital, more powerful protection of intellectual property, a wider network of international relations, greater risk bearing capacity, and more significant market standing, while the internal and the international innovation networks of developed countries are also multi-layered, and are composed of several elements. And these bring about network effects (cf. Pyka-Küppers, 2002; Barabási, 2003) that powerfully increase the effectiveness of R&D expenditures.

All these point in the same direction: it seems that rendering the R&D sector and the innovation system in Hungary more successful requires the delivery of many tasks in the entire economy, that is, even outside the encouragement and funding of R&D and innovation. We could even expect a scenario whereby a steadily growing economy frees up increasing amounts of public and corporate resources in order to reinforce the growth-accelerating role of R&D and innovation. This is how a classic self-induction and feed-back activated R&D and innovation-oriented development process could unfold.

However, the Hungarian case can still not be properly described in the context of a sterile growth model because strategy creation here is increasingly affected by institutions' interests,

and these institutions are in open conflict of a type apparently unique in Europe. Such conflict is partly between institutions, and partly between *policy* priorities.

The fact remains that the Lisbon strategy of the European Union advocates the need for successful innovation built upon effective R&D more openly than any EU document before (Rodrigues, 2003), meaning that it sees increasing R&D expenditure a deficient instrument to meeting convergence criteria unless it results in significantly more successful innovation projects. In the European Union R&D belongs under the Research Directorate General and Innovation under the Enterprise DG, and that separation sometimes amounts to serious difficulties of coordination. However, open confrontation between R&D and innovation is unprecedented even there.

In Hungary, the Hungarian Academy of Sciences (hereinafter MTA) is statutorily empowered to be responsible for R&D policy otherwise in line with professional traditions, and innovation policy is based on the same authority under the National Agency for Research and Technology (hereinafter the NKTH, the organisation assuming the functions of the former OMFB [National Committee for Technological Development] after four years of non-operation), thus the two profiles are truly separated from each other. The two institutions represent markedly different views concerning Hungarian R&D and innovation policy<sup>5</sup>, and the NKTH, a government backer along with the Ministry of Economic Affairs sometimes voice their views openly in public.<sup>6</sup>

The MTA acknowledges the mutual dependence of basic research and applied research on the one hand, and innovation on the other, while the NKTH tends to advocate the concept of exclusion. It fails to accept the claim of basic research for significant public funding, and primarily intends to use more corporate resources

in R&D. The MTA's ideal scenario would be distributing one third of the funding to basic research, applied research, and experimental development each, while the NKTH is of the view that only those research projects deserve public funding that directly promote innovation and increased competitiveness in the business sector.

According to one interpretation of the 'European paradox' R&D in the European Union develops chiefly in the area of basic research, and so providing extra funding to R&D does not improve the conditions of innovation and competitiveness as expected (Papanek, 2003). The author quoted considers that the Hungarian system of R&D and innovation suffers from the same paradoxical problem at a lower level. It is likely that the recent popularity of the 'European paradox' in technical literature helped form the truly sharp views of the NKTH referred to above. In all diagnoses of the Hungarian R&D and innovation system (cf. e.g. Báger–Goldperger–Varga, 2005. 11–12) the effect of the 'European paradox' is increasingly strongly felt<sup>7</sup>, and so several authors regard that problem the major weakness of R&D in Hungary.

The mere fact of the 'paradox' (i.e. the results of European R&D are seen increasingly in publications, and less and less in patents) is statistically unquestionable, while a clear statistical picture is conducive to excessive simplification. That statement is justified because *another* possible interpretation would be that in the European Union there is too much basic research, and too little R&D really directly serving corporate needs.

The reducing number of registered patents, however, is not necessarily indicative of slackening innovation, but is equally the result of the threat whereby patenting is too costly compared to the decreasing levels of legal protection (against e.g. counterfeiting in the Far-East) that it provides.<sup>8</sup> To be quite accurate,

legal protection gradually loses its status as the most effective instrument of protecting intellectual property. Innovation may perhaps remain better hidden within a company if unpatented prior to marketing, thus fending off malicious interest.

The unwelcome effect of statistical 'paradox' is that it creates an unfavourable mood for basic research among the public, and even among some policy makers suggesting that such research is unnecessary, and is only the livelihood of an unproductive group of researchers. Another fact, namely that the internationally recognised achievements of Hungarian R&D in natural sciences are primarily in basic research in mathematics, life sciences, and chemistry helps bring about a situation similar to the 'European paradox' in Hungary.

To keep the basic research base in operation is important for at least three reasons in a country otherwise prepared to do such research, and these three reasons are regularly left out of consideration by professional or political statements made against basic research<sup>9</sup>. The three reasons are as follows:

- ① It is a particularly difficult task from a technical and organisational point of view to separate strictly basic and applied research as even with areas of research apparently remote from everyday reality it becomes clear that they have major practical utility;<sup>10</sup>
- ② With basic research one may easily experience the fare dodger problem if several countries decide they would only engage in applied research, and experimental development, and take the results of basic research from other countries. As basic research results are more rarely under industrial patent than R&D stages closer to marketing, most of them may be easily taken over at low cost from technical literature. So the public property developed by basic research countries land in the possession of fare dodgers, thus ultimately undermining the interest of countries that still fund basic research. But

even the fare dodgers do not necessarily get a free ride as they will have less and less say in basic research, and will have to adjust their applied research to already existing basic research results;

③ Higher education of countries aiming to build their own top standard R&D may not be steadily excellent if it takes over basic research results playing a key role in education and scientific further training from abroad in the absence of domestic basic research. That may result in the deterioration of the overall standards of the teaching staff because teachers of basic subjects may hardly deliver the research results required for their professional progress without the appropriate basic research conditions in place.

Oposing basic research to applied research is, unfortunately, not surprising in a country where actors in the R&D and innovation system are in the habit of fighting each other to lay hands on the scarce resources. The fight is practically a zero sum game i.e. extra resources may only be obtained to the detriment of each other. Basic research teams of no apparent economic benefit, lacking any financial support or relations with the business sector and thus also unable to represent their political interest have too little power. In their present position they have great difficulty competing against applied research and development lobby groups intent on monopolising the argument of economic rationality who often have the backing of large corporations, and thus represent significant lobbying potential.

Oposing the two types of research to each other is artificial, and professionally unjustified, exactly because the two can only progress relying on each other. The arbitrary interpretation of the 'European paradox' may offer a seemingly tempting solution to the long-awaited reform of the Hungarian innovation system. The elimination of basic research from the Hungarian national innovation system may, however, eradicate the professional roots of applied research in Hungary without any seri-

ous guarantees that the surplus resources thus left over will be used to the benefit of applied research to improve its competitiveness.

The bad funding, and the structural disturbances, or numerous operational problems of the Hungarian R&D and innovation system are not denied by a single source of technical literature. The system did not undergo dramatic deterioration in the 90s by international standards, although some slow lowering of its profile took place unquestionably. However, such relative setback also characterised most EU countries when some countries, for decades on the periphery of international R&D shot ahead suddenly. Mostly countries of large areas and populations belong here such as China, India, Brazil, South African Republic, but some others e.g. Vietnam, Thailand, and the Philippines are also increasingly good examples.

Hungary is still positioned right behind the vanguard of international R&D and innovation. That of course should not lead to complacency: maintaining our 2003–2004 international positions would be a major achievement in itself in the light of the anti-competitive effect of the funding, operational, and organisational problems discussed above.

## HUNGARIAN R&D IN THE INTERNATIONAL RACE

The performance and competitiveness of Hungarian R&D assessed by international standards have been the subject of several studies. These surveys using different methodologies yielded similar results in spite of the fact that the individual surveys usually had a different background of terminology and theory. Another shared feature is that their strategic conclusions go no further than making recommendations concerning increasing certain indicators, even though individual indicators alone can only describe the performance and the

competitiveness of the entire R&D and innovation system at a very low rate of efficiency (Török, Borsi and Telcs, 2005).

*Török* (2002, 2002) was the first to introduce the notion of competitiveness in international R&D comparisons. His analyses use two input indicators (GERD+GDP, and R&D-employment rate), and two output indicators (international publication ratios without a breakdown to field of science, and stake in patents registered in the US) in trying to verify the statement made in the EU document called Agenda 2000 concerning whether Hungary belongs among the first 20 countries of the world based on its scientific performance.<sup>11</sup>

Tamás Balogh (2002, 2004) comes to similar conclusions discussing not so much the theoretical background of the issue than indicators suitable for characterising Hungarian R&D in an international context. In an article written in 2004 he based his work on the EU Innovation Scoreboard. However, he did not regard his task either the interpretation of R&D competitiveness nor an attempt at construing an integrated indicator to identify the international position of the competitiveness of Hungarian R&D. His results corroborate that Hungary in the international R&D competition comes in the top middle field (i.e. the group right after leading industrial nations), but with deficient funding, and the weak operating efficiency of the national innovation system there is a real threat of lagging further and further behind.

*Ferenc Hohl, Márton Holczer and Attila Pái* (2004) used more recent data, and more indicators than the indices referred to so far, and applied the technique of *benchmarking* also expressly recommended by the European Union<sup>12</sup>. Their study is based on surveys by the OECD, and the EU, and include indicators of R&D funding, and employment rates well known for the reader.

At the same time, the authors rarely refer to the methodological problems of the frequently

used indicators. Thus they regard the number of references in a paper as a quality indicator without any serious reservation. Meanwhile they, too, mention criticism in technical literature concerning the limitations of applying the indicator (Papp, 2004). Similarly, they recognise patent indicators as the measure of technological developments (Hohl, Holczer and Pái, 2004, 1017), and remark only later that companies can protect their intellectual property created through R&D not exclusively by patenting.

The group of authors list among the measures of international R&D performance the success rate in applications for funding that are equally open for countries listed in the comparison (such application systems include e.g. the framework programmes of the EU, and the European Research Region if it is about R&D comparison among European countries). The study provides a list of 32 indicators regarded partly quality indicators without any reference to similar attempts at systemisation (first of all Godin, 2003). The summary conclusions of the researchers concern less the Hungarian positions than deficient statistics rendering comparison of R&D performance within the European Research Region difficult.

Balázs Borsi, and András Telcs prepared analyses between 2001 and 2004 within the framework of the National Research and Development Programme attempting a quantitative presentation based on several indicators of the international competitive position of Hungarian R&D.<sup>13</sup>

Borsi and Telcs (2004) take the major methodological problems of international R&D comparisons one by one. Using their phrasing – as accurate as it could be – the absolute country-comparisons represent the individual players on the R&D world map as 'weighted points', while the specific (per capita) indicators are used to represent efficiency. Thus the two R&D comparisons made using two different approaches result in markedly different pictures, but in

really high standard analyses the two methods are worthwhile integrating.

The authors sought the solution to the problem of matching up the different indicators of R&D performance and competitiveness through two methods, i.e. principal component analysis, and genetic algorithm<sup>14</sup>. The two researchers illustrate this by the spectacular fact that in the individual rankings of different absolute indicators Hungary's positions spread around the 24<sup>th</sup>–43<sup>rd</sup> place, while in the specific rankings we are between the 6<sup>th</sup> and the 40<sup>th</sup> place.<sup>15</sup>

Analyses conducted with absolute indicators rank Hungary 35–36<sup>th</sup>, and specific analyses 27–28<sup>th</sup> in the international R&D race (based on 2000 statistics), which suggests an efficiency rate for the Hungarian innovation system somewhat higher than the international average<sup>16</sup>. That, however, is no more than a suggestion as the relatively small dimensions of the country are a disadvantage in themselves in absolute comparison, and the rankings of specific indicators reflect a significant spread.

Based on the difference of the two places and the rankings established by the Borsi–Telcs author team we may, somewhat inaccurately, arrive at the conclusion that in the international R&D race Hungary<sup>17</sup> is the immediate competitor of the following countries:

- from among developed countries: countries with a population 2–3 times smaller than Hungary (Ireland, New-Zealand, and perhaps Norway), but Denmark, Finland, and Switzerland are not among the examples;
- from among medium developed countries: Poland, Czech Republic, and, from among older EU member countries of similar populations Greece, and Portugal;
- from among developing countries: much larger countries, rapidly industrialising countries such as Brazil, Argentina, Mexico and Turkey, but most of these are working off their lag against the new Central European member countries.<sup>18</sup>

The international comparisons referred to

above highlight some structural anomalies in the operation of the Hungarian R&D sector and the national innovation system. One of these is the relatively high funding rate, and good output indicators of basic research besides applied research and experimental development are off the limelight (see in particular Hohl, Holczer, and Páí, 2004, 986), which is a characteristic incarnation of the 'European paradox'. The other is the surprisingly favourable standing of output indicators vis-a-vis meagre financial and labour investment. The third is the little weight of corporate R&D expenses (BERD) within GERD, which is a traditional problem of the Hungarian R&D and innovation system (touched upon earlier in the present paper).

From a competitiveness point of view, all this means that the Hungarian R&D sector, and the innovation system operate under an ever greater international pressure of competitiveness while its results continue to attract little market interest, its resources continue to shrink in a relative sense (compared to the major competitors), and it is increasingly forced to fight for its resources and the sale of its achievements in an international competition. Even though in accordance with the computations referred to above we see deteriorating competitiveness, too, in fact it is primarily the deterioration of the competitiveness factors that are the main cause for concern. The question now is whether in the Hungarian R&D policy (or indeed economic policy) there is a strategic answer to this challenge.

### Does Hungary have an R&D and innovation strategy of its own?

The comprehensive government strategy of the Hungarian R&D sector and innovation system does not have a dedicated document. There was an innovation strategy prepared in late 1999,

however, it was taken off the agenda due to the government reshuffle undertaken at the time prior to the final debate (so-called public administration discussion), and even references could not be made to it later.

In early 2006 we have no knowledge of any similar document. Strategic concepts transpiring from the regular reports by the Hungarian Academy of Sciences presented to Parliament, as well as the Academy's science policy concept published in 2005 refer to the development of Hungarian science as a whole, which does not overlap with the R&D sector, and even less with the national innovation system. The strategic aim of the concepts phrased in the different versions of the National Development Plan are unambiguous, but that strategy serves to provide a basis to Hungary's resource requirements within the EU rather than to restructure the individual sectors, or to render these sectors more competitive by a better use of domestic resources. Meanwhile the 2005 programme document by the NKTH titled Knowledge, creation, value is specifically aimed at improving the conditions of innovation through an exclusive approach referred to above.

The Lisbon Strategy of the European Union – and the Spring Report investigating its rate of implementation (European Commission, 2004), and then the Kok report (Kok et al., 2004) attributes a key role at a theoretical level to R&D, and innovation in helping the EU catch up internationally, but attaches an unjustified level of significance to funding to accelerate growth in the sector. That mentality has been reflected by Hungarian political standpoints concerning R&D – not necessarily at EU inspiration – over the last 10 years or more, i.e. since at least 1995. The cornerstone of political promises and objectives was the raising of the GERD/GDP indicator: in Hungary to 1%, and then to 1.5% already on a short term, and in the EU to 3% on a medium term

on average from the 1.8% value measured in the early 2000s (Rodrigues, 2003).

We cannot consider an R&D strategy as either any pressure upward to raise the GERD/GDP indicator or any promises given downward. Not even if – just as in Hungary in 2005 – doubtlessly and obviously the sector is critically underfunded. The main part of the government's role in developing the R&D sector and the national innovation system is of course funding, especially in the countries in which the BERD/GERD ratio is low, i.e. the government has to take a larger share of funding R&D and innovation than the business sector.

### DIFFERENT LEVELS OF R&D STRATEGICAL THINKING

The GERD issue is the uppermost, politically quite spectacular, easily understandable level of R&D strategy, whose content, however, is of low standards. The GERD issue refers to the ratio of the GDP that must or may be spent on R&D, but it does not contain performance criteria of any accuracy. The second, already less visual level is the contribution of the business sector to funding and to R&D, called the BERD issue, although it has more than just statistical content and significance. The third, and lowest level is the one where the detailed knowledge of the R&D sector, and the national innovation system and its players are required to understand strategic options. That is sometimes referred to as the diffusion problem.

*The GERD issue:* This is where R&D and innovation strategy primarily touch the world of political deals. When the BERD issue is unresolved, i.e. the R&D sector requires more funding, but the business sector is unwilling to grant it, then universities, academies of science, and further actors of the supply side of the national innovation system usually ask the government for further raising the GERD. And

when they do, they must at any rate join in the game of political relationships and communication to some extent.

Hungarian experience has, ever since the early nineties supplied copious examples for what may happen in such situations. The interest representative power of the R&D sector is apparently strong, i.e. Hungarian scientific life can usually achieve a promise from the government at the time to increase R&D support. R&D institutions, and scientific life, however, lack the power to ensure effective delivery of these promises, thus these promises will either not materialise, or government only delivers on them seemingly. Over no more than the 5 years since 1999 there were three different examples for techniques when government, while apparently keeping its promise of raising the GERD/GDP ratio above 1% gave in fact nothing or much less than promised to the R&D sector, and also failed at achieving a more serious raising of corporate R&D expenses.

■ Changing the internal proportions of university financing. The Hungarian government used that method in 1999 when it raised the per capita research quota in higher education to the debit of the education quota. In simple terms, universities and colleges were given the same amount of public funding as before (of course including the increasing nominal subsidy meant to offset inflation), but spent nominally more of this on R&D than before. But that did not mean a real raising of the GERD.

■ Raising the value added tax on R&D. The Hungarian government raised the value added tax of R&D services twice, first in 2003, then in 2004, first from 0% to the lowered rate, then to the normal level of 25%. The Hungarian national innovation system, and the main actors of the R&D sector, universities, and the academic research institutions, however, are statutorily prohibited from reclaiming VAT, thus by raising the VAT government reduced R&D funding to the same extent. Meanwhile

in governmental communication the public was only informed of higher levels of R&D funding – a misstatement only politically justifiable – without the fact of the VAT increase (i.e. VAT reclassification of R&D). What is more is that increasing the VAT only reduces Hungarian GERD in terms of substance, but not statistically. This way pre- and post-2002 Hungarian GERD statistics are no longer comparable.

■ The Hungarian government introduced an innovation contribution in early 2004 payable by each company exceeding a certain size, and could only be lowered by the same company placing R&D orders with public research units, or spending on R&D internally. That amount appears to be part of the BERD on the liability side, while regarding its essence it does not increase the GERD on the basis of corporate decisions. True, its GERD-increasing effect is double, because government – in accordance with its promise, but only from 2007 as we know in early 2006 – is going to raise R&D funding to be allocated through application by the amount of the contribution coming in from companies.<sup>19</sup>

The politically motivated promises, and communicational rather than strategic objectives of raising the GERD have been met in Hungary only partially since the mid 90s.<sup>20</sup> It never became integrated in public thinking (and apparently never surfaced in governmental strategic thinking either) that the GERD/GDP index cannot be regarded the comprehensive and reliable status indicator of R&D and the innovation system. The improvement of that indicator may only mean the improvement of the conditions of R&D from a single (even if important) point of view.

A chronically underfinanced system may catch its breath, and its processes of deterioration or disintegration may slow down if there are more financial resources available. That, however, does not necessarily mean that the system's efficiency or performance potential

will immediately improve, as that would require change in its internal structure, and its players would have to be rendered more interested in achieving results. That improvement, however, does not happen overnight, and this is not only due to the internal inertia and resistance of the system. One of the real reasons is that the performance criteria of R&D are not obvious even in international technical literature (see Török, Borsi and Telcs, 2005). They are of especially little use if the strategic objective itself is not the improvement of the R&D performance, but a significant unfolding of the innovation process.

The popular slogan of increasing the GERD is not missing from among the main objectives of the Lisbon Strategy. But that slogan will only be filled with real content beyond the similarly important aspect of domestic scientific capacities, and values as soon as it is complemented by an increasing rate of R&D funding by the business sector, and it becomes clear how much the rise of the GERD/GDP ratio can strengthen the competitiveness-increasing potential of the economy. So increasing the GERD may have as one of its important effects that it eventually creates closer linkages between the competitiveness of R&D (whose measurement may be done by several methods), and the competitiveness of the economy (the measurement of which is likewise possible by different methods).

The *BERD issue*: in most countries in the world the ratio of corporate R&D expenditures within GERD is in direct relationship with the development rate of the economy, and it is likewise true in general that in countries of higher BERD/GERD ratios there is a higher rate of R&D competitiveness. There are, however, no internationally comparable statistics available concerning the R&D intensity of the corporate sector. Thus we lack information for most countries on how R&D intensive or how innovative the activity of their companies is on average. The technology intensiveness of a coun-

try's exports and the technological balance of payment are usually interpreted as relevant indicators, but these indicators cannot distinguish between innovation and technologies created within and outside the national economy. Thus in many countries, including Hungary one sees a technology intensive foreign trade structure where otherwise the willingness of domestic enterprises to finance R&D is very low.

The word *willingness*, however, is not accurate here as it is suggestive of the appearance that most companies have a choice between an R&D intensive strategy, and one without R&D. Several corporate surveys<sup>21</sup> indicate that there are at best a few thousand companies with a real R&D profile in the Hungarian economy, and companies qualifying for the word innovative remain below 20% of all companies.<sup>22</sup>

Hungarian enterprises, and especially the majority of small enterprises perform such service type activities or simple ones of traditional technology that do not require R&D or innovation. Therefore one must interpret the issue of raising R&D expenditure in a wider structural policy framework, and the solution, i.e. the major increase of R&D expenditure and so the BERD/GERD ratio may not be expected from better or stronger incentives.

The structural policy interpretation of the BERD/GERD ratio must not be based on the traditionally interpreted sector structure of the economy. It emerged in conjunction with several foreign owned major, apparently technology intensive plants in Hungary – with some of them only after their closure – that all they did was assemble a part in some state-of-the-art product, requiring no more than routine skilled work. The conclusion is that even in apparently top technology sectors or branches of industry there is not always a high rate of value added. Although sector statistics may accurately reflect the high manufacturing or export ratio of industries considered high-tech, it does not necessarily mean the presence of a proportion-

ate weight of R&D intensive activities in the entire economy.

When implementing concepts of raising the BERD/GERD ratio (i.e. the increased contribution of the corporate sector to R&D) it would be important to take note of the size of the workforce in the Hungarian R&D sector and national innovation system available for modern R&D work. That information is necessary as we currently lack any results of surveys reflecting the rate of higher level research skills.<sup>23</sup>

Statistics on scientific grades fail to reflect a realistic picture of research skills. One reason is that a significant part of researchers with higher qualifications belong to the elderly generation.<sup>24</sup> The statistical size of the research staff, however, includes many experts with irrelevant experience, obsolete education or workplaces with deficient infrastructure rendering them less than capable of conducting research of international standards.

The Hungarian network of researchers consists not only of internationally renowned Centres of Excellence, but also of smaller research units (e.g. non-metropolitan colleges) lacking technology worth the name, and maybe even the capacities of the available research staff remain below international standards. And all that sets the limits of strategic endeavours, not yet even fully crystallised, aiming at increasing the BERD.

Thus the BERD issue is in close relationship with the GERD issue, and raises the fundamental issue of how much capital the R&D sector is in fact capable of absorbing, i.e. what limitations of researcher-developer capacities could arise in the course of more intensive funding, and especially funding of enterprises that require tangible results turned out rapidly.

*The diffusion issue:* it is a repeatedly confirmed experience in the Hungarian R&D sector and innovation system<sup>25</sup> that Hungarian research and development results take a long

time to become established innovation in the market. The traditional explanation is the weakness of the Hungarian diffusion system, but the review of the BERD issue has shown that even the demand side of the innovation system is underdeveloped. Thus the issue is not only that R&D results created in Hungary undergo a tedious process to reach the users, but also that there are few serious users to reach.

However, the diffusion issue is broader than the problem of the diffusion system as such. It also includes the issue of the relationships among all players of the national innovation system. The Hungarian R&D or innovation strategy should set the objective of reviewing these relationships, and rendering them transparent.

An analysis should be prepared on what players of the Hungarian innovation system have proved to be successful domestic and international applicants in the 90s and the last few years, and what role their relationships with the users had in that success. At the same time, regularly unsuccessful applicants' failure may be ascribable to their deficient skills of writing applications (including the low quality applications) same as the isolation of such applicants within the international innovation system, and their missing relationships with users. There may be, however, occasionally successful applicants who are granted funding not because of a good track record or doing something that is in great demand, but because their institutional funding cannot be resolved in any other way, and because that particular R&D organisation must be kept afloat not for its R&D merits, but for some other (e.g. regional) interest.

So from a strategic point of view, the diffusion issue primarily means that the players of the Hungarian national innovation system are only nominally known; how competitive they are, and how interesting R&D potential they offer for the users is only known about only

some of them. A significant part of players known, and so far proved successful, participate in diffusion themselves, and have a wide network of relationships, too. A number of other players, however, fail to relate to the diffusion system in any way, and it is not known for the time being how much they could become competitive players of a modern national innovation system.

Handling the diffusion issue must not miss from the Hungarian R&D and innovation strategy, because upon reviewing funding issues one cannot plan on the fiction of a homogenous, and well planned national innovation system. It is possible (but needs still to be corroborated by detailed organisational analyses) that in the Hungarian innovation system in the developed countries there is an unusual coexistence of internationally competitive high standard capacities, and those only kept alive 'artificially', which, however, do not deserve that a formally homogenous set of support regulations containing also some discretionary elements be maintained exclusively for them. It would be certainly simple to concentrate support on capacities proven to be competitive, but that would render regional equalisation, an objective also set in the Lisbon Strategy more difficult in the area of R&D.

## THE ELEMENTS OF HUNGARIAN R&D AND INNOVATION STRATEGY IMPROVING COMPETITIVENESS

We can still consider the international competitiveness of Hungarian R&D relatively good, and favourable compared to the country's economic development rate. In accordance with per capita GDP adjusted by purchasing power parity Hungary belongs only to the first 50 countries of the world. The 2004 international competitiveness list of the IMD (not containing a number of less developed countries, but

containing some west European regions separately) ranks Hungary as 42nd (which would be 38th without the regions in the individual countries), while on the basis of the different interpretations and indicators of R&D competitiveness we are definitely among the first 35. However, we have begun to slide down the international rank scale, and so the elaboration of the Hungarian R&D and innovation strategy must be undertaken without delay if that strategic branch is to be saved.

The Hungarian R&D and innovation system requires adjustments at several points, many of which may be implemented through changes in regulation that need no or hardly any additional financial resources. The domestic performance standards of Hungarian R&D do not fully correspond to the internationally accepted standards. Using those 'distorted incentives' results in a picture of Hungarian R&D performance and competitiveness less favourable than what it could show up even with its current financial status.

## THE RESEARCH FUNCTION OF UNIVERSITIES

The role of universities is still unclear and dysfunctional in the organisational context of the Hungarian national innovation system<sup>26</sup>. Modern American and European universities have research functions established in their statutes, and research is usually of equal rank with their educational function. Such stipulations exist also in the statutes of Hungarian universities, however, the quota (per capita funding) system of state universities gives priority to educational performance measured on an exclusively quantitative basis rather than relying on quality considerations.

A fact in conflict with the above is that the promotion of university teachers depends greatly on their scientific grading, a system

which is disadvantageous for university staff with a good teaching record but tabling weaker research performance. The category of 'research university' recognised also by higher levels of funding still awaits introduction in Hungary. That notion implies the assumption that other universities do not do research.

Education and R&D policy makers should finally agree on the exact role of universities in the Hungarian R&D strategy, and the full recognition of research careers within a university is also a duty still undelivered. It is established practice in several Hungarian universities that professors of high scientific grade, with outstanding research results teach large numbers of students early in their studies, frequently forced to teach rudimentary knowledge that the students should have been taught back at grammar school. That greatly weakens the utilisation efficiency of universities' research capacities.

## RESEARCH CAREERS AND NETWORKING

International research performance standards are clear even if some of their weaknesses (e.g. disproportionately high appreciation of co-authorship) are not likely to be eliminated. Careers of development specialists relate less to the kind of performance one expects on the basis of scientometric indicators. Such careers are pursued much more characteristically by promotion within a company, thus remaining unseen for the public. Such promotion is partly due to the growth of the company's intellectual property, i.e. the larger number of patents, even though corporate patents are usually not regarded as individual development achievements.

The difference between the two standards of success is not clear in Hungary, and government fails to grant any support to research and development careers other than the general funding of R&D. Such support would be nec-

essary, though, because standing the race of international R&D, i.e. improving the indices of publication, quotations, and individual patents also require specific forms of support. It would be necessary for instance to launch an easily operated application system to support the top standard English translations of articles authored in Hungarian as in lack of such some otherwise competitive results do not reach the international publication market on time.

Supporting researchers of outstanding performance with the appropriate intellectual infrastructure could also repay for Hungarian R&D through helping it move faster up the rank scale. It is long-standing practice with many leading American researchers that a number of assistants work for them, and so they themselves will not have to spend time on finalising or even technically editing their articles, or preparing the excerpts of their conference presentations. The work contract of such leading researchers includes not only their salaries, their IT and travel budgets, but also the sum with which they can pay research assistants or younger researchers to work with them. Supporting leading researchers repays for their employers when they see a better publication output, which in turn works a beneficial effect on application success rates, and the ranking of universities as well.

In certain universities leading researchers are supported by employing PhD students to help them, which brings about great staff turnover, and may even result in problems of compatibility. Only very few members of the secretarial staff of Hungarian universities, and academic research institutes are capable of acting as research assistants, and they mostly lack the necessary time, too.

Participation in international research networks always yields a complex set of benefits, and that benefit is immediately reflected in researchers' publication output as well. Regularly published American R&D analyses

(e.g. NSF 2002; 2004) include the indicators characterising the network relationships of individual countries, e.g. the frequency of co-authored articles. It seems obvious that R&D performance and competitiveness indicators are better in institutions where researchers participate more intensively in international R&D networks. A main reason of that relationship is probably that members of research networks publish a relatively large number of co-authored articles (and thereby improve their publication output more than their research efforts), which is in fact a statistical proof of the existence of the given network.

So a Hungarian R&D strategy would need tools/methods that help researchers improve not only their actual, but also their apparent performance. For example supporting international networking would probably spectacularly improve the international scientometric indicators of Hungarian researchers besides identical research efforts. Similarly, enabling the provision of administrative/clerical support to leading researchers, or researchers generally capable of good performance would result in the better utilisation of their research capacities.

## SCIENCE AND R&D IN HUNGARIAN SOCIETY

Science enjoys great prestige in Hungarian society, and the Hungarian Academy of Sciences has similar prestige among our institutions. A representative survey conducted in 2003–2004 suggested that scientists are the second most recognised (after doctors) among all branches of occupations, and among the institutions of society the Academy takes the first place with over 80% popularity (Fábri, 2004. 1257–1259).

That suggests that a special public, namely Hungarian society has a very favourable impression of the competitiveness of Hungarian science, so partly also of R&D. One can only

properly appreciate that impression knowing that several occupations<sup>27</sup>, and several political, and social institutions are victims of a massive crisis of confidence in Hungarian society in the last few years. This is why the favourable assessment of science, and the Hungarian Academy of Sciences has been deserved not only by the latter's professional output, but also by its integrity, and its distance from daily politics.

However, the favourable judgement of Hungarian science and scientific life by society does not necessarily translate into a strong bargaining position of representatives of science, and leading officials of scientific life vis-a-vis the government, or politics in general. The changes of GERD, and the public funding of R&D since 1990 indicates that the GERD/GDP ratio declined until 1997, and from 2003 onward it went steadily down again, while the 1% GERD/GDP ratio was only approached or reached in few of these years despite promises, and apparent even enthusiasm by several governments.

Even though that ratio is similar to south European and central European countries with an economy comparable to Hungary's in their rate of development, it in itself is not enough for a breakout or even a little improvement in our positions. Besides such funding ratio the social support of Hungarian science and R&D may be great, it does not surface in the political behaviour vis-a-vis the sector, and that funding rate fails to reflect the heavily quoted strategic status of the sector. Even the business sector's behaviour does not reflect the apparently significant social acceptance rate of Hungarian science as suggested by the BERD/GERD index, steadily very low even in international comparison.

Society may like and be supportive of Hungarian science, however the survey referred to does not say what tax rise Hungarian society would find tolerable to offset the increased public approval to R&D. It is quite likely that the same acceptance rate without any possible

financial consequence would be much greater than in an acceptance survey where respondents are also asked if they are prepared to contribute financially.

The result of investigations concerning the international competitiveness of Hungarian R&D may of course be used by government and politics to judge how justified the sector's support requirements are. One has to see, though, that performance and competitiveness in a given year or during a shorter period is always the result of expenditure in earlier years. It is sufficient to consider the fact that a research project, or an innovation process usually takes several years, while the time until any article is published in a leading scientific paper takes 1, but could take up to 2–3 years. For example, if Hungarian R&D is to come into full swing in 2007 or 2008, its foundations should have been laid as early as 2004 and 2005.

The rate of the GERD, and the GERD/GDP index may only be a limited measure of the resource supply and performance potential of R&D. There is no denying, nevertheless that with a low GERD/GDP ratio the strategic sector status of R&D and innovation remain a promise, and increasing competitiveness in such a position is *ab ovo* impossible. One experiences the interesting situation in Hungary whereby the popularity and acceptance of science and R&D, and the Hungarian Academy of Sciences go back to historical reasons, namely their traditional independence from politics in addition to their achievements. And their status as a national branch, or institution is more apparent and easier to prove than their role in the development of the economy, and in the improvement of competitiveness.

Meanwhile it is quite hard to prove for government its economic (and thus the political) utility, so the sector's (the Academy, higher education, and the research-development funds) situation at the budget negotiations is somewhat similar to its social assessment.

Government, and politics in general verbally regularly acknowledge the importance of the R&D sector, but when it comes to funding negotiations with a great deal at stake, only the maintenance of previous positions is possible.

The strategic importance of the R&D and innovation sector should be established also in higher level legislation. It would not be sufficient, naturally, if only the preamble of a law contained such a commitment. It would provide emphasis to such a statement if tangible and lasting government commitment would appear in the background.

Such commitment could come in the form of legislation guaranteeing for every year the minimum value of the GERD/GDP index, and the same legislation could also provide the required annual increase of the planned funding. Such a statutory provision could also create an indirect incentive for the government to aim at a more extensive involvement of the private sector in funding R&D and innovation, because a BERD increasing in accordance with the proposed legislation would automatically reduce the R&D funding share to be contributed by the central budget.

The GDP of the given year and the expected value of the GERD cannot be predicted accurately, but both problems are easily resolvable technical issues. Similarly, the value of the BERD can only be ascertained after the end of the year in question, and yet even a forecast is never attempted. One could, however, rely on the GDP forecast of the Central Statistical Office, and reserve the option of later adjustment, and in the budget appropriation one could approach the expected value of the BERD by the average of the last 5 years' BERD. With a constantly rising BERD that would somewhat increase the government's R&D funding responsibilities, but that extra budget expenditure would be indirectly compensated by the continuous lowering of the BERD/GERD ratio.

NOTES

- <sup>1</sup> An associate member of the Hungarian Academy of Sciences (MTA), professor at the Budapest University of Technical Sciences, and leader of the MTA-BDF (Berzsenyi Dániel College) Regional Developmental and Microintegration Research Team. The research enjoyed the financial support of the NKFP 5/089/2004 programme (Theoretical problems and economic policy instruments of the dual convergence process).
- <sup>2</sup> The Kok report, however, has recently been stressing the requirement that the raising of the GERD/GDP ratio should be accompanied by the raising of the BERD/GERD ratio as well (Kok, 2004).
- <sup>3</sup> The same construction/development process is exemplified by post-war Finnish economic policy. Cf. Steinbock, 1998
- <sup>4</sup> Comprehensive ones include Papanek et al., 1999; Biegelbauer, 2000; Balogh, 2002, 2004; Báger, Goldperger and Varga, 2005; On similar R&D problems of EU countries and Hungary Papanek, 2003; Papanek and Török, 2004; On the deficiencies of the diffusion system see Török, 1996; On the weaknesses of the R&D and innovation system of the new EU member states, similar in many ways see Gorzelak et al., 2001; Aide a la Décision Économique, 2001
- <sup>5</sup> For the concise summary of the two concepts see: Fábri, 2006
- <sup>6</sup> One of the proof readers required an assessment or at least a superficial description of the role and the performance of the NKTH since early 2004. We will, however, decline the request as even the narrowest circles of the profession are greatly divided over that issue, and detailed and authoritative information needed for such an objective and proficient assessment e.g. information regarding the transparency of the application system, the departure of a great part of the technical staff, and the use of the funds handled by the NKHT was kept by the Hungarian Government until February 2006.
- <sup>7</sup> At the same time, the authors referred to also criticise the arguments for the existence of the 'European paradox' as most recent research suggests the Europe is losing ground even in the global arena of basic research (Báger-Goldperger-Varga, 2005. 12).
- <sup>8</sup> To understand this one needs to know that the infringement of patent rights has to be stated with legal effect by a court of justice. However, giving effect to a judgement by the courts may be a lengthy and complex process today in the enlarged EU. And outside Europe it is even much more difficult.
- <sup>9</sup> For a theoretical analysis of the *raison d'être* of basic research see Pavitt, 1991
- <sup>10</sup> The same happened e.g. in number theory. Nearly all of the research achievements there were considered never to have any practical benefit. In the early 80s, however, demand for mathematicians experienced in number theory ('number theoreticians') suddenly rose as it was recognized that number theory may play a major role in cryptography with long and complex IT applications (Devlin, 1990. 21–22).
- <sup>11</sup> The measurement was made difficult by the fact that, when making the statement, the EU gave no index or definition. The investigation suggested that several indicators place Hungary among the 25-30th place internationally. Thus the analysis concludes by saying that based on 1996-1997 statistics, Hungary used to belong to the 30 leading competitors of the international R&D race, but seems unable to maintain its positions even on a short term due to the rapid emergence of industrialized developing countries.
- <sup>12</sup> For the application of the method for measuring the competitiveness of converging countries see Zinner, Eilat and Sachs, 2001
- <sup>13</sup> The results of the first stage of their research (Borsi-Telcs, 2004) is included in the present article, and the further elaboration of these results is found in chapter 4 of the book (Török, Borsi és Telcs, 2005).
- <sup>14</sup> In the relevant chapter of their book they already applied the DEA (data envelopment analysis) method (Borsi-Telcs, 2005). However, the results of this did not, unlike the article (Borsi-Telcs, 2004) serve specifically the identification of the Hungarian position.
- <sup>15</sup> One can see that spread is much larger in the specific ranking. An analysis of scientometric data, however, shows that specific international 'championship tables' sometimes rank in very high posi-

tions some international R&D players that are simply a country with hardly a handful of outstanding researchers probably working abroad, but without an operational national innovation system, (Török, Borsi és Telcs, 2005).

<sup>16</sup> The authors make no reference to this.

<sup>17</sup> As a country, which is only indirectly linked to the competitive chances of the individual Hungarian research sites in winning applications and seeking partners.

<sup>18</sup> The Data Envelopment Analysis by Borsi and Telcs indicate that in the second part of the 90s all new Central European EU member countries lost positions in the R&D race (Borsi-Telcs, 2005).

<sup>19</sup> That, however, is a sort of forced measure that will not increase companies' interest in supporting R&D, and may create the impression for them that they have to make increasing contributions to the survival of Hungarian R&D that generates little direct profit to them. Recouring to that method, the Hungarian government must be very cautious to avoid a political effect contrary to the objectives of the Lisbon Strategy as the EU convergence programme sets as an objective the mutual approach of R&D and the business sector rather than creating strategic opposition between them.

<sup>20</sup> Most recent CSO statistics indicate that the Hungarian GERD/GDP ratio declined between 2002 and 2004, approaching 0.8% of the GDP (CSO, 2005a, 5).

<sup>21</sup> See e.g. OMF (National Committee for Technological Development), 1999; Papanek-Török, 2004; at the same time the competitiveness survey by Chikán et al. indicates that the majority

of the companies surveyed are aware of the lag they have in spending on R&D, but the same majority fail to express any intention of changing that situation in the upcoming years (Chikán, Czákó and Zoltayné, 2004, 20.).

<sup>22</sup> Source: CSO, 2005b. 8. In accordance with the representative survey the ratio of innovative enterprises was 21.4% in industry, and 15.8% in services. Actual ratios were probably lower, however, because only those companies responded to the representative survey that considered themselves innovative. And there are no objective criteria to whether an enterprise that finds itself innovative has actually introduced products to the market that the market, too, found innovative.

<sup>23</sup> All we know is that the ratio of the Hungarian R&D workforce is definitely low among the entire workforce. In 2002 that constituted 10.2 per mill of the average of the 15-member EU. In the Hungarian context it was 6.1 per mill, i.e. one of the lowest among the European countries surveyed (CSO, 2005a. 65).

<sup>24</sup> 60% of those with a scientific qualification are in excess of 60 years of age, and the ratio of the 49+ age group is 87.8% (CSO, 2005a. 50)

<sup>25</sup> See: Török, 1996; Inzelt, 1998, 71; OMF (National Committee for Technological Development ), 1999

<sup>26</sup> For formal reasons one should list colleges as well, but their research capacities and performance usually remain far below those of universities except for some larger colleges operating in larger cities with several faculties.

<sup>27</sup> The survey in question refers to judges, prosecutors, and journalists in particular.

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Attila Chikán

# *Measuring the competitiveness of companies*

## *A competitiveness index and its application*

Competitiveness is one of the most frequently used terms in economics today. Among the most significant changes seen in global economy in the past decade is the sharpening of competition (Ohmae, 1995), which poses increasingly tougher requirements for the participants of the economy (Chikán–Czakó, 2002). Meeting these requirements and coping with competition are requisite to survival at all levels of the economy. Everyone is likely to agree on this general statement; this agreement, however, would soon be over if a precise definition of competitiveness and, in particular, the degree or the measurement of it were addressed.

In this study, I will first outline a concept of competitiveness under which we have carried out research since 1995, and which the activity of the Institute of Competitiveness Research relies on. Then, I will articulate and interpret the main subject of this paper, namely the “Company Competitiveness Index” (hereinafter referred to as CCI), touching on the mathematical and statistical analyses that were used as the basis of finalising this index. Using CCI, we have conducted analyses on the extensive company database owned by the Institute of Research on Competitiveness, and I will also present any conclusions that can be drawn. Finally, I will put forward further potentials for the utilisation of this index.

### THE CONCEPT AND LEVELS OF COMPETITIVENESS

The concept of competitiveness is the subject of extensive debates in the literature of both economics and business. In this article, I do not aim at a detailed analysis of this subject (Chikán–Czakó, 2006), I only address it as much as necessary to elaborate on the index.

In the international literature, four levels of economic competitiveness are generally distinguished: national, sectoral, company and product levels. Naturally, this is not without any debate: some attribute high importance to the competitiveness of regions, and, in addition to that, in two senses. Some of the experts mention the competitiveness of the USA, the EU, China, Japan (or South East Asia) in terms of macro-regions (Buckley, 1998; Mirza, 1998), while others focus on analysing the competitiveness of smaller geographical regions (North Italy, the English Midlands, etc.) (see the IMD reports or Porter, 1998). Another group denies the point of referring to competitiveness at any level above companies, stating that the forum for competition is the market, where the participants are companies with their products (Krugman, 1994). These debates are not detailed any further in this article; we only address company competitiveness. A particular-

ity of this circumstance is that the notion and measurement of company competitiveness are rather neglected subjects in the literature, compared to other levels of competitiveness. (Let me note here that I myself do not agree with the arguments of Krugman, hence I believe that there is a point in speaking of competitiveness at the national, regional or sectoral levels.)

We have not encountered a definition of company competitiveness that would comply with our research objectives in the literature, but found a great deal of important and useful additions. *Ádám Török* is right in his study focussing on a macro level competitiveness stating “*economics and international economics take hardly any or no notice of this notion, while management studies take it very seriously, and address it abundantly*” (Török, 2002). Unfortunately, this does not change the fact that the definition and measurement of company-level competitiveness cannot be considered a resolved problem. A good review of multiple concepts is provided by *McFetridge* (1995), and a study by *Kumar and Chadee* (2002) bears references also relying on the resource-based theory. *Hoványi's* (1999) fairly interesting structural model is thought provoking, but we did not find it operationalisable (applicable) in the theoretical framework of our own research. The otherwise instructive empirical analysis published by *Molina et al.* (2004) does not substantially address the definition of competitiveness, while handling external factors going along *Porter*, and, although it provides a number of references to internal factors, these factors are not systematised. *Klein* (2002) criticises on the incomplete definition of competitive edge and its realization, and the mistaking of the latter one for strategy; in fact, however, he also fails to offer a definition, although his description of rivalry and strategy implementation is indisputably interesting. For this reason, I provided my own definition back at the time when we started our research into competitiveness (*Chikán*, 1995),

which I slightly elaborated on and distilled for the current research phases, also relying on the opinions of fellow researchers. This reads “*company competitiveness is an ability of the company to provide, on a permanent basis and in compliance with the standards of social responsibility, products and services that consumers are more willing to pay for compared to rivals' products, under conditions that ensure profit for the company. A condition to this competitiveness is for the company to be able to detect and adapt to changes in the environment and within the company by way of meeting competitive market criteria permanently more favourable than those of rivals.*” (*Chikán–Czakó*, 2005)

I have no intention to give a detailed analysis of this definition here, I only remark that the construal of the word 'competitiveness' suggests an ability of the company to participate in competition in the hope of success. This refinement is very important from the aspect of distinguishing between systems of terminology and measurement related to competitiveness and performance. [The two notions are sometimes handled as identical, for example, *Arora and Gambardella* (1997) often simply assume in an implicit way that better performance is a concomitant of higher competitiveness as stated by *Andersen et al*, 2006]. The definition provided by me relies on the resource-based company theory most widely used today in business theories [*Wernerfelt* (1984) is considered to be the fundamental work on this theory, but the much more widely known conception of *Hamel and Prahalad* (1994) on the substantial abilities of the company also belongs here], which states that the company's success depends on its own resources, which can hardly be copied, if at all. These resources mean potential success, but realization is only possible using an appropriately selected and implemented strategy. This requires the company to re-produce qualities and resources that ensure competitive edge on

a continuous basis, proactively adapting to (i.e. predicting and preparing for) any changes in the environment. A prerequisite to competitiveness is a permanent upkeep of an ability to change (proactive adaptiveness) in addition to operability these together may lead to a performance recognised by the environment. [Kornai (1971) distinguishes between operability and the ability to change as two distinct stages of adaptation: primary adaptation is aimed at upkeeping the mere existence of the organisation, while secondary adaptation is used to ensure that certain expectations are met in the process.]

The above theoretical basics were accompanied by my belief in that the company's fundamental objective is to meet consumer demands, while making profits (Chikán, 2003), and, consequently, the company pursues a process of dual value creation: it has to create consumer value and ownership value in the same process. I believe this principle is fundamental to measuring company performance, and I also rely on it when developing the index.

## SETTING UP THE COMPANY COMPETITIVENESS INDEX (CCI)

I set up the index following the definition of competitiveness specified here and organised in the logical order of operability/ability to change/performance. On elaborating on the final version, in addition to theoretical considerations, an important role was assigned to the mathematical and statistical analyses seeking answers to whether the index developed is actually suitable for measuring, and which of the logically possible versions exhibits the best measuring characteristics.

*University lecturer Kovács Erzsébet assisted me in performing and evaluating calculations, for which I hereby express my appreciation to her.*

The index was set up to be realistically quantifiable, and to be made utilisable for both scientific research and practical use. The international literature was of no practical help in creating a company index. At the same time, multiple indices are available, as everyone knows [the most widely known ones are the indices of the World Economic Forum ([www.weforum.org](http://www.weforum.org)) and the IMD (<http://www01.imd.ch/wcc>); for an assessment, see Czakó (2004)], which measure the competitiveness of a national economy. The logic underlying this index was used on developing our own index. These national economic indices, similarly to our research carried out so far, mainly fell back on opinion poll questionnaires. In theory, quantification of the CCI can be performed based on both itemised company details and opinions. This version of the index presented in this paper relies on the latter one – this facilitated the use of abundant databases of questionnaire surveys mentioned in the introduction on analysing and developing a final format to it.

Founded on the information presented so far, the basic structure of the index was set up as shown in *Figure 1*.

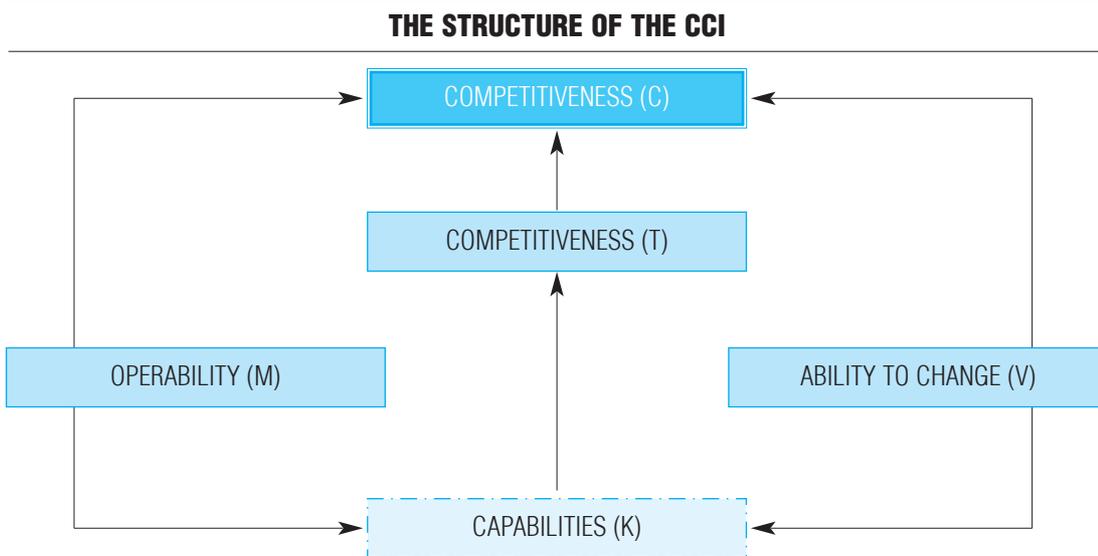
In this figure, C (an abbreviation of 'competitiveness') denotes the CCI calculated. M, V and T are the variables (or groups of variables) measured, a summary impact of which is measured by the index, and K is an interim working variable.

Expressed in a formula, those stated above result in

$$C = (M + V)T$$

being used to measure competitiveness. Contents-wise, it means that *the measure of competitiveness is a portion of operability and ability to change combined, as recognised by the market.*

This formula complies with the criteria set by the theory of resource-based companies, inasmuch as variables M and V are capable of expressing the substantial abilities. Using the



appropriate performance measures, this model can also be construed in the conceptual system of dual value creation.

M, V and T are all compositions of variable groups; multiple index numbers generated from opinions evaluating company activity were used to measure these, as you will see below. It is also important to mention as early as at this point that originally multiple versions of this index were considered, and the form described here has been developed through a number of analytic steps. The data from a company survey conducted by the Institute for Research on Competitiveness were used to select and finalise index numbers, the method of which will be explained in the next chapter.

### THE QUESTIONNAIRE SURVEY AND THE MEASURING OF INDICATORS

The Competitiveness Research Centre operating alongside of the Institute for Corporate Economics at Corvinus University, Budapest, conducted a survey of company competitiveness, using practically identical questionnaires in April and May 2004. First in 1996, 1300 man-

agers of 325 companies, then in 1999, 1264 managers of 316 companies, and, finally, this time 1204 managers of 301 companies participated in the survey. A summary of earlier surveys and a programme for the research conducted between 2004 and 2006 are provided in Chikán-Czakó (2005). [For a detailed description of the last survey's database and the representativeness of the sample, see Lesi (2005).] This extensive survey founded on management opinions provided a very versatile database; consequently, we had a high degree of freedom to select from eligible information.

After a number of considerations, we arrived at the conclusion that the index was to be reasonably built around a certain block of questions of the “CEO” questionnaire. (For each company, separate questionnaires were completed by the No. 1 leader, mostly the Chief Executive Officer, and the heads of production, business and finance, or, in certain cases, their representatives.) This group of questions sought answers to the following major question: “What standard did your company reach in the following areas describing company activity in the past 2 to 3 years, compared to your strongest rival?” The question was fol-

lowed by a list of 42 fields to be evaluated on a five-point scale, where 1 denoted an assessment of “much weaker”, 3 “basically equal”, and 5 “much better”. The data from these scales were relied on when calculating variables M and V; this is where I selected the final 22 variables from as a result of a line of thought to be described below.

We used the variables from another group of questions directly following the previous one. The question read: “Please evaluate the performance of your company or (in case of multiple sectors involved) your key business line compared to the sectoral average (in domestic comparison) using the following criteria”. 1 in the five-point scale was taken to mean: “deep under the average sectoral standard”, 2 “slight-

ly lagging behind the average sectoral standard”, 3 “similar to the average sectoral standard”, 4 “slightly exceeding the average sectoral standard”, and 5 “representing the sectoral lead”. Here seven questions were asked in the questionnaire, of which we used two to make up the index.

I reached out for the literature of operations management to measure operability, which maintains and uses a number of indices that, in theory, could be used here. Relying on our earlier research (Chikán-Demeter, 2005), I chose the group of variables I considered the most complete, for which the first definition was provided by Miller et al, (1992). This definition stated that the operating efficiency of a company can be described using parameters measuring

Table 1

**CALCULATING OPERABILITY**

<p><b>Cost/price (m<sup>1</sup>)</b>                      Cost effectiveness (a)                      Competitive prices (f)</p>	$m_1 = \frac{a + f}{2}$
<p><b>Quality (m<sup>2</sup>)</b>                      Product quality (d)                      Manufacturing standard (m)                      Standard of raw materials (aa)</p>	$m_2 = \frac{d + m + aa}{3}$
<p><b>Time (m<sup>3</sup>)</b>                      Delivery deadline (k)                      Punctuality of delivery (g)</p>	$m_3 = \frac{k + g}{2}$
<p><b>Flexibility (m<sup>4</sup>)</b>                      Flexible response to consumer requirements (l)                      Flexibility of the production system (i)                      Flexibility of the logistical system (j)</p>	$m_4 = \frac{l + i + j}{3}$
<p><b>Service (m<sup>5</sup>)</b>                      Product choice (e)                      Standard of consumer service (t)                      Organisation of distribution channels (p)                      Ethical behaviour (γ)</p>	$m_5 = \frac{e + t + p + \gamma}{4}$

cost/price, quality, time, flexibility and the standard if service. Accordingly, elements shown in *Table 1* were used to calculate M, relying on the questions posed in our questionnaire. (Next to each factor, the letter code used for the subsections of question V16 of the questionnaire was displayed for identification. This bears no further significance.)

Based on the table:

$$M = \frac{1}{5} \sum m_i$$

i.e. the average of sub-indices were used for measuring operability in a comprehensive way.

Similar logic was applied to calculate the index for the ability to change. Relying on the literature for adaptiveness, three main groups of factors have been defined:

- market relations: prediction of and adaptation to consumer demands,
- availability of the resource considered to be the primary resource, human resources and
- organisational responsiveness.

The variables shown in *Table 2* have been used to measure these (references are made again to certain points of the questionnaire).

As a result, the index for the ability to change is

$$V = \frac{1}{3} \sum_{V=1}^3 V_i$$

All these reveal that all partial data of M and V were measured on a five-point scale, and the two indices were produced as an average of these. Accordingly, the values of both M and V were between 1 and 5 for all companies.

We used the logic of dual value creation to measure company performance. The two variables used are the proportions of return on sales ( $t_1$ ) and market share ( $t_2$ ) compared to the sectoral average the former denoting profitability, the latter consumer orientation. Both indices compare company performance to the relevant sectoral average, i.e. indicate how much more the market recognises it compared to that of other companies (how much more willing the market is to pay for the products offered by the company – is measured by profitability, and, how much more the market prefers to buy these compared to the products of others is measured by market share).

Table 2

**CALCULATING THE INDEX OF THE ABILITY TO CHANGE**

<p><b>Market relations (v1)</b>                      Consumer relations as close as possible (nn)                      Ability to predict market changes (w)                      Use of innovative sales incentive methods (ee)</p>	$v_1 = \frac{nn + w + ee}{3}$
<p><b>Human skills (v2)</b>                      Qualification of employees (dd)                      High-standard, knowledgeable management (ff)</p>	$v_2 = \frac{dd + ff}{2}$
<p><b>Organisational responsiveness (v3)</b>                      Up-to-date nature of decision making/operating methods (qq)                      Technological standard (c)                      Level of R+D expenditures (hh)</p>	$v_3 = \frac{qq + c + hh}{3}$

Consequently, the formula is

$$T^* = \frac{t_1 + t_2}{2}$$

This suggests that the value of  $T^*$  is also between 1 and 5. In order for  $T$  to be able to fill in the role intended for it in the CCI on compiling the formula (i.e. adjusting the standard of basic abilities expressed in  $M$  and  $V$  and compared to rivals, to an extent recognised by the market), the value of  $T$  was normalized to be within the range (0,1); this was used in calculations to represent  $T$ .

### QUANTITATIVE ANALYSIS

In order to develop a final index version, and interpret the results correctly, extensive mathematical and statistical analyses were carried out. First, we examined what relations to assume among variables  $M$ ,  $V$  and  $T$  in order to decide on the final form of the index. In addition to the chosen index described here, we have also examined the following versions:

- $C = \frac{MT + V}{2}$ , on the one hand,
- $C = (\alpha M + \beta V)\gamma T$ , on the other hand,
- $C = \alpha M\gamma T + \beta V(1-\gamma)T$  and, finally,

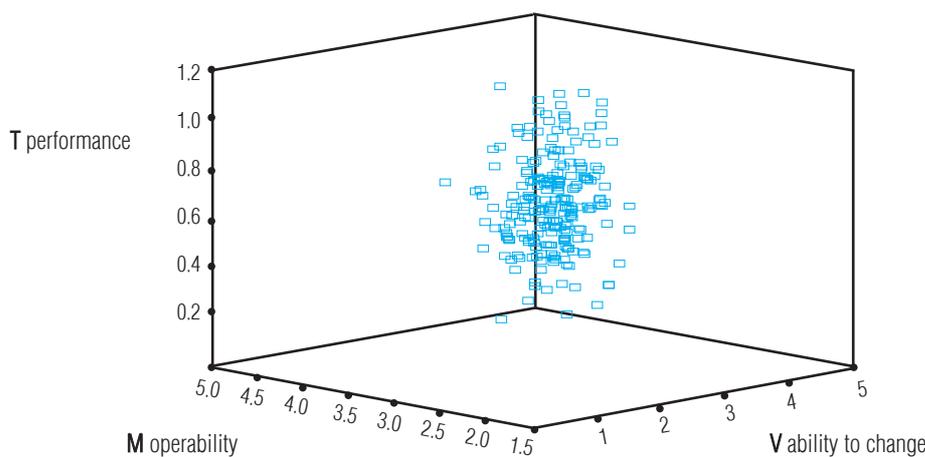
301 questionnaires of the survey conducted in 2004 were used for the investigation; however, we could only rely on data from 207 companies due to some basic data missing or mistaken. Calculating a rank correlation, we revealed that the versions described above practically resulted in identical rank orders among the companies used as a sample, considering a wide scale of parameters, and; at the same time, the interpretation of results can be, in theory, less substantiated and more intricate than for the formula  $C = (M+V)T$ .

Analyses also revealed that  $M$  and  $V$  played a basically equal role in determining a rank order of companies, which justifies presenting specific figures not only on the grounds of theoretical economic considerations, but also for statistical reasons. Over the full sample, the linear correlation coefficient of  $C$  with the values of  $M$ ,  $V$  and  $T$  was 0.57, 0.66 and 0.91, respectively; these refer to a highly significant relation. [As the correlation coefficient of  $M$  and  $V$  on  $T$  are practically equal, we found it reasonable to apply the latter of the two formulas,  $C = (MT+V)$  and  $C = (M+V)T$ . The explanatory power of  $M$  and  $V$  are practically equal, and that of  $T$  is slightly higher.]

In order to discover relations among  $M$ ,  $V$  and  $T$ , a factor analysis was conducted relying on an

Figure 2

#### POSITION OF COMPANIES IN THE SPACE OF M, V AND T



analysis of the key component, and this supported the significance of the three variables in determining the rank order of competitiveness. The factor analysis yielded a relation of  $F=0.45M+0.47V+0.32V$ . *Figure 2* shows a distribution of dots representing companies in the space of the three variables. It is easy to see that these dots neatly cluster around an imaginary axis. This means that the data justify the production of a factor and a one-dimensional rank order.

The congruence of the factor and the index C (CCI) is monotonic and consistent, with a correlation of 0.864, and a rank correlation of 0.867. This represents very good congruence from this point of view, the question whether it is more acceptable to apply the original index C or factor F to rank companies mostly depends on whether the relation of factor T to M and V is, in economic terms, more additive or multiplicative in nature. As explained on introducing the index, T measures how much the market recognises the company abilities expressed in M and V. This justifies assuming a multiplicative effect. In addition, it is remarkable that the factor model is only able to preserve 62% of the original contents of the three indices, which also serves as an argument in favour of the index C. The factor analysis also revealed that the paired correlation coefficients of  $m_i$  and  $v_i$  and the communalities obtained through factor analysis are nearly equal in size, which gave rise to the conclusion that all bear considerable significance on producing the CCI.

The results summarised here have reassuringly supported the assumption that the index  $C=(M+V)T$  ultimately chosen is statistically suitable to measure and rank companies for company competitiveness.

## USING CCI TO RANK COMPANIES

The primary aim of creating this index is to be able to use it for evaluating and analysing the competitiveness of companies. In order to dis-

cover the intrinsic possibilities, we ranked 217 companies that supplied all the necessary data, based on the available company data, and we also evaluated the rank order. In addition to observing the rules of questionnaire surveys, certainly, no data can be published on individual companies, but I suppose some interesting conclusions may still be drawn.

For the evaluation, we used the system of company attributes set up on processing the questionnaire survey (Wimmer, Á-Csesznák, A. 2005). The questionnaire contains hundreds of data for each company, of which ten were selected as the most important ones in terms of research conducted in previous years and for the purposes of the current research phase. This means that each company is characterised using a ten-component vector, based on the value of each selected variable shown in the questionnaire. The ten selected variables with the possible values are shown in the appendix.

*Table 3* shows the parameter values of companies ranking as the first and last ten.

Characteristics of the ten most and least competitive companies

The figures marked in bold in the table represent the most typical values (mode) in the first and last ten items. Commas denote missing values. This reveals that a “typical” company in the most competitive group holds the following attributes:

- is a large corporation
- is of foreign majority ownership
- belongs to the processing industry
- its activity diversification is not distinctive
- mainly produces for the domestic market
- has neutral expectations of accession to the EU
- exhibits proactive behaviour, attempts to influence changes
- grades its own performance to the sector leaders
- sets a moderate market growth as an objective
- operates on a concentrated market.

Table 3

**CHARACTERISTICS OF THE TEN MOST AND LEAST COMPETITIVE COMPANIES**

Rank	Company code	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	B <sub>4</sub>	B <sub>5</sub>	B <sub>6</sub>	B <sub>7</sub>	B <sub>8</sub>	B <sub>9</sub>	B <sub>10</sub>
1	97	3	3	3	1	3	1	4	3	2	2
2	301	2	1	3	2	1	1	2	3	2	1
3	209	3	3	1	1	1	2	3	3	1	2
4	28	3	1	4	3	,	1	4	3	1	3
5	88	3	3	3	2	1	2	3	3	2	1
6	228	3	1	2	2	1	2	4	3	2	1
7	193	2	1	1	2	1	,	3	3	3	2
8	31	3	3	3	1	1	2	4	3	2	1
9	291	3	3	4	3	,	2	4	3	2	1
10	253	3	3	3	1	1	2	4	3	2	2
201	245	3	1	2	1	1	3	1	1	1	1
202	210	3	1	3	3	3	2	3	1	2	1
203	194	1	2	1	2	1	1	1	1	1	3
204	156	1	1	4	2	1	1	3	1	2	2
205	23	3	2	2	2	1	2	3	1	2	2
206	25	3	1	3	3	2	3	1	1	2	2
207	1	2	1	3	1	3	,	3	3	3	3
208	8	2	,	4	1	1	3	3	2	2	1
209	13	2	1	2	1	1	,	3	3	1	1
210	14	2	2	4	2	1	,	2	,	2	,

As opposed to this, a company “typically” belonging to the worst group in terms of competitiveness exhibits significantly different attributes:

- may belong to any size group
- the state is the majority owner
- sectoral classification is not distinctive
- may belong to any group in terms of diversification of activity
- mainly produces for the domestic market
- expects difficulties on accession to the EU
- tries to exhibit adaptive behaviour (preparing for changes)
- grades itself as a lagger in terms of performance
- aims at a moderate market growth
- operates on a concentrated market.

It is to be seen that the difference between the two groups primarily lies in the owner, the attitude to accession to the EU, preparation for changes, and company performance. It is interest-

ing that three factors – export orientation, market objectives and market concentration –, the most typical value of both groups are identical.

For a more thorough analysis, the results of another test were used for help. The 217 companies in the population (more precisely, the first 210) were classified in groups of 30 to see the tendencies shown on generating a rank order.

Each group was examined for

- the most frequent types of companies (types were determined using the ten criteria specified earlier)
- the extent of difference between the distribution of companies in sub-samples and in the entire population, from various aspects.

According to *Table 4*, the most competitive companies are typically large corporations, with foreign majority ownership. Sectoral distribution and export orientation does not play important roles in setting up the group. They are companies diversified to a medium extent,

Table 4

**THE MODE OF KEY VARIABLES IN DIFFERENT COMPETITIVENESS GROUPS\***

Attribute	Group						
	1-30	31-60	61-90	91-120	121-150	151-180	181-210
Size	3	2	3	2	1/2	2/3	2/3
Owner	3	2/3	3	2	-	2	1
Sector 1	3	3	3	3	3	3	3
Diversification	2	2	2	-	2	2	2
Export orientation	1	1	1	1	1	1	1
Expectations concerning the EU	1	1	1	1	1	1	3
Attitude to changes	3	3	3	2	2	2	1
Performance	-	3	2	-	-	1	-
Market objectives	-	-	-	2	2	2	1/2
Concentration	1	2	1	1	1	3	2

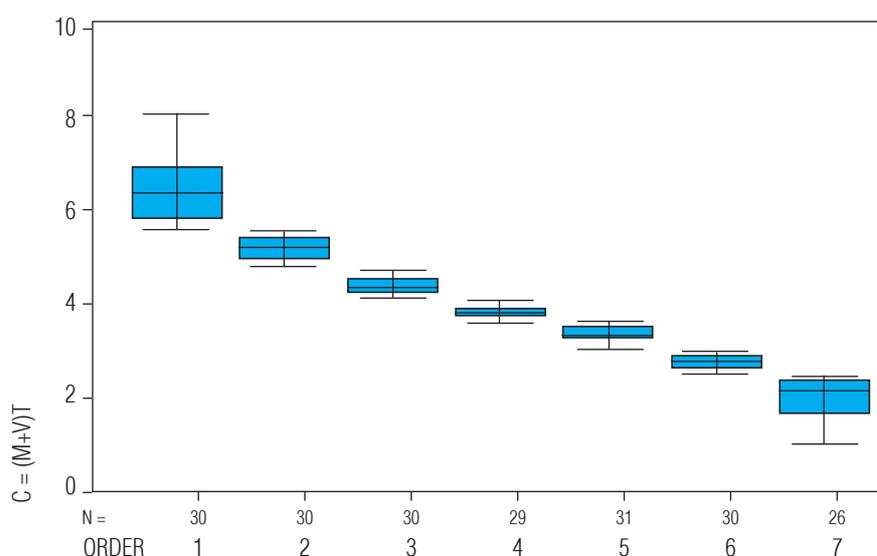
\* No mode is calculated in some groups; in such cases, a dash is displayed in the table (1/2 or 2/3 means two modes).

which have optimistic expectations concerning the accession to the EU. They prepare for changes in advance, and consider their own performance significantly better than the sectoral average. They typically operate on a concentrated market, and aim at a moderate market growth. The companies of weakest competitiveness are mostly among medium-sized companies, and the state has majority owner-

ship in them. No typical sectoral orientation is observed. They are diversified to a medium extent, and mainly produce for the domestic market. They expect difficulties in coping with the EU, and they believe they are slow to follow changes. Their performance is weak in their judgement, and they operate in a moderately concentrated market, with various market objectives.

Figure 3

**A COMPARISON OF COMPETITIVENESS GROUPS**



Naturally, their competitiveness index decreases monotonically, but variances in the first and last group are greater than in the five groups in between.

In *Figure 3*, the extension of vertical lines indicates the maximum and minimum values in each cluster, and the rectangle shows the range where 50% of the data are, while the horizontal line inside each rectangle represents the median.

A cluster analysis of the 217 companies was carried out in the space of the ten key variables, with the companies grouped in 9, 7 and 5 clusters, respectively. For comparison, the solution with 7 clusters is presented here. Variances significant in terms of all variables were found between clusters, which confirms that these variables may lead to revealing substantial differences between companies. Regarding the seven clusters, we examined the influence of ten key variables on clustering. The seven clusters were independent of the level of diversification alone, all the other nine aspects showed close or semi-close association with clustering. The average CCIs of companies grouped in the seven clusters show significant differences. These results indicate that the variables considered actually play a decisive role in determining the ranking of competitiveness.

At the same time, no definite relation could be

revealed between the clusters set up and the composition of groups of 30 generated based on the rank order of competitiveness. (Independence between the two classifications can only be rejected at a significance level of 6.6%, which is considered a borderline case.)

*Table 5* also shows that the overlap between the groups determined based on the rank order of competitiveness and the clusters set up based on 10 criteria is insufficient for the two groupings to be handled as identical. This suggests that each criterion covers important differences, but not even a combination of 10 criteria determines ranking. The criteria include nominal ones, where the terms better or worse are not applicable. Clustering companies together is only determined by similar values; similarity means no hierarchical sorting, clusters cannot be ranked, and, therefore, cannot truly be compared to a rank order.

### A SUMMARY OF USING THE INDEX

As shown by the analyses presented here, the CCI stands the test of both economic theories and statistical analyses, and is suitable to measure company competitiveness. I certainly do not assert that this is the only or even the best

Table 5

#### SHARED ELEMENTS OF CLUSTERS AND GROUPS FORMED BY RANKING IN TERMS OF COMPETITIVENESS

Clusters	Groups generated using CCI							Total
	1	2	3	4	5	6	7	
1	6	4	4	4	6	8	3	35
2	5	2	4	4	3	4		22
3	6	4	4	3	3		1	21
4	1	3		2	2	4	7	19
5						2	2	4
6	1	4	5	2		1	2	15
7	1	1	2	2	3	1	1	11
Total	20	18	19	17	17	20	16	127

method available; it is certainly the first of such attempts in the international literature, and, according to analyses performed so far, has yielded substantial results.

As proved many times on measuring the proceeding and results of complicated processes, an index that is intuitively clear and simple in structure proved to be the most utilisable. It can be used to conclude substantial findings for the entire population and certain subsets of companies. Our plans include using the CCI to enrich findings for other investigations carried out under our research programme, and analyse impacts of competitiveness.

In addition to tasks of comprehensive analy-

sis, the CCI, to our judgement, is also suitable for performing benchmarking type assessments of company operation. The opinions required for the CCI can be obtained from a senior company manager in a short time in the form of a closed interview. The CCI and any partial indices calculated from these can be compared to the data of the whole sample or certain sub-samples (for example, companies that belong to the same sector or set identical objectives). In addition to helping the company in positioning itself among similar companies in terms of competitiveness, it also explains the reasons leading to reaching the particular level.

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APPENDIX NO 1

V16.

a) What standard did your company reach in the following areas describing company activity in the past 2 to 3 years, compared to your strongest rival?

	<b>much weaker</b>		<b>basically identical</b>		<b>much better</b>
a) Cost effectiveness	1	2	3	4	5
c) Technological standard	1	2	3	4	5
d) Product quality	1	2	3	4	5
e) Width of product range	1	2	3	4	5
f) Competitive prices	1	2	3	4	5
g) Punctuality of delivery	1	2	3	4	5
i) Flexibility of the production system	1	2	3	4	5
j) Efficiency of the logistical system	1	2	3	4	5
k) Shortness of delivery deadlines	1	2	3	4	5
l) Flexible response to changing consumer requirements	1	2	3	4	5
m) Manufacturing standard	1	2	3	4	5
p) Organisation of distribution channels	1	2	3	4	5
t) Standard of consumer services	1	2	3	4	5
w) Ability to predict market changes	1	2	3	4	5
y) Ethical behaviour	1	2	3	4	5
aa) Introduction of raw materials of appropriate quality	1	2	3	4	5
dd) Qualification of employees	1	2	3	4	5
ee) Application of innovative sales incentive methods	1	2	3	4	5
ff) High-standard, knowledgeable management	1	2	3	4	5
gg) Modernisation of decision making / operating methods	1	2	3	4	5
hh) Level of R+D expenditures	1	2	3	4	5
nn) Consumer relations as close as possible	1	2	3	4	5

V17.

Please evaluate the performance of your company or (in case of multiple sectors involved) your key business line compared to the sectoral average (in domestic comparison) using the following criteria:

- 1 – deep under the average sectoral standard
- 2 – slightly lagging behind the average sectoral standard
- 3 – similar to the average sectoral standard
- 4 – slightly exceeding the average sectoral standard
- 5 – representing the sectoral lead

a) Return on sales	1	2	3	4	5
c) Market share (based on sales revenue)	1	2	3	4	5

APPENDIX NO 2

Variable name	Variable code	Valuable values
1. Company size	B1	1 – Small company, 2 – Medium-sized company 3 – Large corporation
2. Type of owners	B2	1 – Majority ownership of the state 2 – Domestic majority (non-state) ownership 3 – Foreign majority ownership
3. Core activity	B3	1 – Agriculture and food processing industry 2 – Extractive and construction industries, power supply 3 – Processing industry 4 – Commerce and services
4. Diversification of activity	B4	1 – Company operating in a single business line 2 – Diversified company 3 – Highly diversified company
5. Export orientation	B5	1 – Mainly for the domestic market 2 – Medium level of export activity 3 – Export is overwhelming
6. Expectations concerning the accession to the EU	B6	1 – Optimistic 2 – Neutral 3 – Expecting difficulties
7. Attitude to changes	B7	1 – Hard to follow changes 2 – Late to respond to changes 3 – Preparing for changes 4 – Influencing changes
8. Company performance	B8	1 – Laggards 2 – Average performers 3 – Leaders
9. Market objectives	B9	1 – The objective is to retain market positions 2 – The objective is to achieve a moderate growth 3 – The objective is to achieve aggressive growth
10. Market concentration	B10	1 – Concentrated market 2 – Moderately concentrated market 3 – Shared market

Gusztáv Báger

# *Public-private partnerships and audits*

*International overview and domestic experience*

As a result of aging societies, during the last fifteen years the scope of government responsibilities and public services has been reconsidered especially in Europe. Governments face similar problems nearly everywhere: while there is an increasing social demand for public health, education etc. services, the workforce is decreasing. At the same time, unemployment figures are high: the number of those out of work exceeds 5 million in Germany, for example. Due to the demographic trends and the high unemployment rate, the revenues that can be centralised are continuously shrinking, but more and more expenditure is generated. Therefore, governments should seek to answer questions such as how to provide services at the highest possible standards when less and less sources are available, how to make services more efficient when the available funds are decreasing and how to involve external sources to supplement the poor state funds in order to provide public services.

One of the possible solutions is using various forms of market type mechanisms as recently discussed by the OECD<sup>1</sup>. The meeting identified four areas of the coordination of the public and the private sectors and the market type mechanisms: outsourcing, public private partnership (hereinafter: PPP), vouchers and user charging.

As this article is focusing on the situation in Hungary, we are going to discuss primarily the first two methods. Vouchers and user charging are used infrequently, and do not fall in the scope of the Hungarian coordination practice<sup>2</sup>. Of the two methods described here in detail, we would like to focus primarily on PPP, which was introduced in its classic form approximately two years ago, and has been rapidly expanding since, while the outsourcing process, which started in the mid-1990s, has been completed.

This article has been written with the aim of reviewing experience gained abroad and in Hungary and summarising the relevant conclusions. We are going to discuss these processes from the point of view of the State Audit Office (SAO), i.e. we are going to rely on the SAO's experience, if such exists (in the field of outsourcing), and in areas where no experience has been gained so far (classic PPP projects), we would like to identify the SAO's tasks. These tasks currently include calling attention to the relevant issues, transferring international experience and recommendations and revealing alarming deficiencies in control and other areas, which may lead to the inefficient use or the disappearance of public funds in the long term. Accordingly, this essay is concluded with a summary of the basic standards and the recommendations of the SAO.

## OUTSOURCING

Outsourcing is the most wide-spread market type mechanism in the area of government services<sup>3</sup>. Its primary goal is to boost efficiency. In order to reach goals, the public sector should flexibly adapt to business approaches and opportunities in the market. Another important target is to make the expertise, which has been lacked in certain institutions, available.

In developed countries the range of services outsourced is very wide and can be divided into three distinct groups. The first consists of various “blue collar” support services. These are generally the first activities that governments outsource and are common in a number of countries. The first group includes services such as the cleaning and maintenance of public buildings, waste management and the provision of guard services. The second group consists of generally high value services, which are considered ancillary to the core mission of the given ministry or institution. The leading example of the second group is the outsourcing of information technology functions, as well as legal and financial activities and the outsourcing of human resources management. Another characteristic of this group is that the functions outsourced are often complex in nature and involve rapid change in their operating environment. The third group includes activities that many would view as inherently governmental. Such activities include outsourcing of prisons (Australia, Canada and the United States). Other interesting functions that have been outsourced include fire services (Denmark) and food inspection (Iceland). The use of outsourcing in health, education, and welfare services has made important inroads in certain countries. This includes specialised hospital care, diagnostic services, care centres for children and long-term care institutions for the elderly and the handicapped.

It is difficult to quantify the use of outsourcing and consequently countries cannot be com-

pared as no standardised, comparable databases are available. According to a survey carried out by the OECD, outsourcing is applied to a greater extent in the English-speaking and the Scandinavian countries, and much less so in the continental European countries.

In Hungary there have been attempts to reduce government services and make them more efficient through the establishment of business and public interest companies and foundations by the institutions under the chapters of the budget. Such attempts have been supported by changes in the legislative environment: from 1994 a part of these services could be rendered by public foundations and public interest companies. Such entities have been set up to reduce the workload of the state and carry out the task at less cost, while private funds are involved to reach public goals.

In its report on the review of the system rendering government tasks outside the scope of public finance<sup>4</sup>, the State Audit Office assessed *the organisations established by the Parliament, the government or the chapters*, the public property, the scale of subsidies and the efficiency of the 35 public foundations. In 2002 and 2003, a review was carried out based on data supplied by 42 foundations, 100 public interest companies and 147 business entities. These organisations<sup>5</sup> received significant subsidies from the central budget: more than HUF 600 billion (primarily from the appropriations managed under the chapters) for operation, accumulation in the form of capital grant and capital formation. As far as the scope of activities is concerned, public interest companies were set up primarily for technical research and development purposes. Business entities were principally involved in flood and inundation protection, agriculture and forestry and water supply. Public foundations were set up for the support of those living abroad, sports and cultural tasks; however, these were only involved in the redistribution of the central funding.

Earlier audits carried out by the SAO<sup>6</sup> and the latest comprehensive assessment have clearly proved that the operation of these organisations *do not meet the expectations*. Such organisations were often established solely to implement the streamlining objectives (both for the number of staff and tasks) set by the government, which means that no useful function and task analysis or efficiency assessment were made. According to the findings of the comprehensive reviews, no demonstrable savings were made and a third of the organisations under review made losses or no sufficient funds were available, although these were established in order to provide public services in a more efficient manner. When outsourcing decisions were made, decision-makers failed to have an appropriate system approach, to elaborate requirements and uniform organising principles or to prepare an impact assessment. No uniform organising principles were defined for financing these organisations: in most cases funding was provided based on individual decisions. The experience gained so far does not confirm that the provision of public services has become more efficient by introducing market type mechanisms.

The classic outsourcing process resulted in the establishment of an excessive number of new organisations, which were set up practically for all new public tasks outside the scope of public finance, making significant amounts get out of the state control. The network of background institutions set up by the ministries and other central bodies are typically oversized or often concealed as public or business companies; ministry organisations (central, office etc.) are often enlarged indirectly through business entities with permanent assignments with the introduction of consultancy networks etc., public bodies and public foundations are set up as semi-government organisations in excessive numbers and consequently, such organisations are devaluated<sup>7</sup>.

In addition to the results of the previously mentioned reviews carried out by the SAO, the

assessment launched by the government in the framework of the so-called 'Glass Pocket' programme and the survey of the affected organisations<sup>8</sup> have contributed to the identification of the problems.

However, only 17 central budgetary institutions, 5 public companies and 1 public foundation were dissolved by 2004<sup>9</sup>. For those wishing to reform the public administration system, it has become clear (and it is supported by the financial administration, too) that such measures are not sufficient any more: 'the traditional as well as the outsourced coat should be buttoned up again'.

This means that appropriate organisational forms, which fit best the provision of public services should be identified and rules should be established for these<sup>10</sup>.

## PUBLIC-PRIVATE PARTNERSHIP (PPP)

Public services may be rendered in two forms: through a state-owned company set up for this specific purpose or through a private company contracted by the government for a long term period. However, the outcome, i.e. the service is the same, the organisational and the financing structure is different. The idea of concession emerged for this purpose and has been in use in Hungary for at least 100 years. PPP is a modern-age version of concession, first deployed in the English-speaking countries. These countries are still by far the largest users of PPP's. This is why we have adopted the definitions from these countries. The most experience has also been gained in these countries since they pay much attention to ex-post evaluations on the implemented projects.

Having regard to the large number of relevant publications available in Hungarian<sup>11</sup>, which describe the concepts, objectives, advantages and disadvantages of PPP in detail, we are going to give only a brief summary of these issues.

## Typical features of PPP

PPP refers to the partnership of the public and the private sectors (primarily development), where the design, building, operational and financing functions traditionally provided by the public sector are carried out by the private sector to a greater extent than usual or entirely in certain cases and in a more complex manner. PPP's are generally long-term assignments (20 to 30 years), where the private partner is responsible not only for the implementation of the project, but also for the provision of the public service in question: it sells its services to the government or – when state guarantee exists – to third (user) partners. The analysis of such projects shows that it is a good idea to have the same company build and maintain a facility providing public services.

As far as its extensive use is concerned, in general, *the benefits provided by PPP's are similar to those of privatisation*. In the public sector privatisation, however has gained ground primarily in areas, where production and services were traditionally rendered by private businesses, and more competition was needed. Privatisation in the infrastructure sector, for the well-known reasons of economy, has been less dynamic similarly to other countries. While a robust wave of privatisation took place in Hungary in the 1980s and 1990s in trade, in the key areas of the public sectors (gas and oil industry, water management, air travel, culture, education and public health) privatisation was less significant due to the monopoly and strategic importance of certain companies/institutions.

The question in countries implementing privatisation projects (especially in countries in transition) was how to finance the operation and the further development of the 'remaining infrastructure' when central funding was constantly unavailable. PPP, which is increasingly significant in the global economy and in countries on the way of catching up, could be a possible answer.

Due to the similarity of PPP and privatisation as well as the continuity in time we can consider the partnership of the public and the private sectors as a new stage of privatisation in Hungary having started in 1999<sup>12</sup>. In terms of economic policies *this stage is characterised by a new way of providing public services* instead of government undertakings and selling the 'remaining' assets. The history of transferring public services to the private sector and concession projects is only about to start – followed by debates motivated by welfare related issues. There is no agreement among experts to what extent the privatisation of bigger public supply systems is going to be similar to the sale of manufacturing companies as far as techniques and methods are concerned. The 'continuation of privatisation' approach of the authors of this document can be disputed, nonetheless *in such cases the starting point is (or should be) the principle that the transfer of assets to the private sector (joint public or private ownership) is not the ultimate goal: it is only an instrument of the efficient provision of public services*.

## International models and rules

In addition to the English model of PPP applied all over the world, we should mention – among others – *the French or continental model*<sup>13</sup>, too. In the French model the chief co-operators are the local government bodies (and their various associations) and private entrepreneurs (under the control of the state and the legislation), while the English model is much more based on the operation of competing markets and the principle of maximum use. Another difference is that the French model is more flexible (institutionally and technically), while the English is characterised by detailed contracting practice and monitoring organisations set up for this particular purpose.

The classical forms of PPP's and the related

terminology may be learnt from the directives of the Commission of the European Union<sup>14</sup>; however, these terms and definitions cannot be interpreted globally. The development of PPP is very dynamic. It seems that countries with substantial experience in this field, apply various new solutions and contractual structures as the interpretation of these principles is increasingly flexible. At the same time, individual project types are getting crystallised, which is again a result of the leading countries' intention to deploy *model contracts*. The most typical form of PPP's is probably the DBFO (design, build, finance and operate) solution, where the private partner is responsible not only for planning, building and operating the infrastructure, but also for providing funds for the project. The combined responsibility of the private sector guarantees increasing efficiency and appropriate quality for the entire period.

A private operator may get involved directly with the enduser in cases such as toll paying motorways or railways. A typical form of such projects is *the concessions*, where the concessionaire pays a set amount or a certain percentage of its profits to the state and upon the termination of the contract the ownership of the assets is transferred back to the state usually under the actual market value.

Compared to PPP's, *in the traditional model or other forms of the co-operation of the private and public sectors the assets remain in state ownership and the private company takes only a limited responsibility for certain well-defined tasks. In contrast, in PPP's the individual stages (design, build, finance and operate) of the project are managed in an integrated manner, and the financial and operational risks, which are substantial, are transferred to the private sector.*

Briefly, the most important benefits of the PPP solutions are high quality, cheaper, i.e. more efficient services and less reliance on the budget: the burdens of an investment may be distributed to a number of years in the form of future pay-

ments. We should also note that *an implemented investment has a positive effect* on macroeconomic indicators: it boosts growth and as a result of the decreasing deficit of the central budget, more funds are available to the private sector.

These benefits are, however, not automatically available; there is a need for circumspect preparation and control in order to realise such benefits through the implementation of the appropriate contracts.

In connection with the benefits of PPP's, we must highlight *the issues of the budgetary accounting*. The only related international methodological guide so far was published by the Statistical Office of the European Communities (Eurostat)<sup>15</sup>, which was outlined in the Public Finance Quarterly<sup>16</sup>. The rules laid down by the EU, which are detailed by the referenced sources, consider *risk analysis* as a key element of classification: *a PPP instrument is not regarded as a public instrument (i.e. it should be recorded as cost for the budget at the time of the investment) if most of the risks are demonstrably transferred to the private partner.*

Taking into account that the Hungarian budget has got little room for manoeuvre in the long term, the selected solutions should not burden the budget, which is a prerequisite for the implemented project to be classified as a private investment. If, for example, the state is providing 50 per cent of the funding of the investment, the entire project is considered as a government investment increasing the budget expenditure and the Maastricht deficit for the year in question, which means that one of the main benefits of the PPP projects cannot be realised.

## Scope

Nowadays the use of PPP's is so wide-spread, that we can speak about a global tendency. In order to bridge the 'infrastructural gap' the European Union recommends that the new

Member States<sup>17</sup> should exploit PPP's and other solutions. Catching up in terms of infrastructure offers great opportunities by creating a 'market' for PPP projects in these countries. Government investments amounted approximately to 3 per cent of the GDP in the EU-8 countries with the exception of Latvia, where it reached only 1.5 per cent. As a result of the catching up phase this number could be as high as 3.5 per cent in the EU-8, while the share of state investments in the EU-15 is not more than 2 per cent of the GDP, which clearly reflects the discrepancies in development of the infrastructure within the EU. As far as the future is concerned, according to EU projections, investments of euro 10 billion is required for transport infrastructures<sup>18</sup>. According to another estimate, euro 47-49 billion is needed for environmental investments, out of which 10 billion is to be used in Hungary<sup>19</sup>.

Since the scope of fiscal instruments is limited, an increasing demand for PPP projects, through which many could exploit the creative use of the public finance accounting, is expected. This is to be understood in a wider context, in the framework of the priorities of the government investment programme: regardless of the field of the PPP projects, in the short run they release funds that are available for the development of other areas, such as the development of the infrastructure. According to a survey carried out by Eurostat, PPP programmes are implemented in the old EU Member States mainly in the following areas: infrastructure (railway, road and utility investments), health investments (hospitals) educational, cultural and social investments (residences, museums and social housing schemes), prisons, defence investments (logistics centres) and sports facilities (stadiums)<sup>20</sup>.

As for *the educational investments*, the first educational investment (school construction) PPP contract was concluded in Ireland, in 2001. In a model contract a private company undertakes to build, finance, operate and maintain the

school, however the school remains the property of the state, and listed as government assets in the system of national accounts. However, it is the private company, which should provide for the school devices, and it receives a monthly fee from the state in return to cover the operational costs, i.e. the investment costs become current costs. In the Netherlands, there are plans to build halls of residences in PPP's.

Although the main source of funding in the developed countries of Western Europe is still the central budget, various types of PPP solutions are increasingly popular especially *in the field of motorway construction*. Solutions for the construction and long term maintenance of the motorways are grouped as follows: toll motorways and free motorways, where the state pays an availability fee (shadow toll DBFO model)<sup>21</sup>. Since the introduction of PPP's in the United Kingdom, 10 motorway and other road building/construction projects have been launched mainly in the latter format, but similar solutions may be found in Finland, Portugal or Norway.

There are good examples in *the prison and hospital constructions sectors*, too. In the pioneering United Kingdom, PPP's were first introduced in the prison building and maintenance area and now experience is available in connection with seven prisons. A report prepared by the British National Audit Office (NAO)<sup>22</sup> indicates that prisons operated by the private sector – after certain initial difficulties – after three years of operation become more cost efficient than their state run counterparts. In the first wave of PPP's 15 hospitals are built with private funding to be operated by private companies in the United Kingdom. These investments amount to HUF 40 billion on average. It is interesting to note that the hospital staff members remain employed by the National Health Service (NHS)<sup>23</sup>. In spite of the fears of the public, that the number of hospital beds will be determined by the local private management, the British government still believes that PPP's will enhance the quality and

cost efficiency of hospital services.<sup>24</sup>

PPP is spreading fast not only in Europe, but also in Latin America. It has got a significant role in Brazil, where such projects are supported by long-term integrated planning with set development policy objectives. In Brazil PPP projects are primarily introduced in railway and motorway construction, education and training and foreign relations related developments.

## PPP'S AND AUDITS

We are going to identify the audit related tasks arising in connection with the such spending of public funds, the challenges for the audit offices in general and based this we are going to discuss how the SAO could prepare for such tasks. For this reason we are going to summarise the opinion and guidelines of the International Organization of Supreme Audit Institutions (INTOSAI), which contain useful warnings and tips for the participant of PPP's and the control bodies. As you have seen, the United Kingdom is today by far the largest user of PPP's; private funds were first involved here and so far most extensive PPP's are found in the UK. The most important findings and recommendations of the British National Audit Office (NAO) are summarised in the end of this document.

### Theoretical model for the control of PPP programs

Financial control is developing with changes taking place in the institutional environment. Such environmental changes include the spread of PPP projects in the modern economy. Therefore, it is not surprising that circumspect financial control and audit, in particular, have proved to be integral elements of PPP projects. Let's consider briefly how this important institutional change is getting integrated in the pos-

sible scenarios of financial control.

The researchers of the State Audit Office have outlined a theoretical model for the assessment of the impacts of the institutional changes based on the pioneering works of the late 1990s. The model is based on various scenarios for the socio-economic environment of such control.<sup>25</sup> Among the scenarios reviewed, the spread of PPP programmes is related to the 'high probability growth of competition' scenarios.

The importance of environmental forecasts is quite obvious. *These scenarios include the conditionality and the mutual impact of three factors: economic performance, institutional changes and public administration (control)*. In this framework four coordinating elements determine the participants' behaviour.

- The first coordination mechanism is the market itself (market coordination). Factors: freedom of prices, liberal trade, privatisation and efficient and stable financial system.

- The second coordination mechanism is the government control, the most essential elements of which are control based on legal certainty and efficient administration. Control has got an increasingly important role in the enforcement of such requirements.

- The third mechanism is *the voluntary adherence to the common values and norms* of various economic groups and the self-controlling impact based on this.

- The fourth mechanism is the partnership of various groups of stakeholders, the coordination of values, which is similarly self-controlling.

The so-called *change generating organisations* play a key role in these mechanisms. On a local level, these organisations are the manufacturing and service provider companies, political and civil organisations, state institutions and the jurisdiction. On a global level, transnational corporations, supranational organisations, international professional organisations and associations could generate changes. As far as

PPP's are concerned, *change generating organisations also include contracting state institutions, private entrepreneurs and banks providing funds.*

In connection with PPP programmes, two requirements may be defined for the practical adaptation of the results of the theoretical research related to audits, which determined the principle to be followed.

■ In the developed world, in addition to the enforcement of the qualification of the accounting in the framework of the traditional financial control and transparency, control activities supporting economic assessment and decision making, which focus on performance and efficiency, have come to the fore. A minimum requirement of the operation of the public finances is the adherence to the rules. Without this, performance and efficiency cannot be interpreted. Consequently, the control for transparency and accountability is the primary condition of competitiveness.

■ In public finance control performance review has become a basic value. Since the turn of the millennium the audit offices have been paying more attention to areas, such as the examination of the ethical and human political connections of the economy or the professional support of programmes against corruption and money laundering.

■ Based on the above, the principle to be followed is clear: there is a need for audits, which promote the transparency and accountability of public funds and public assets.

The above have been described from the point of view of *the external supreme control organisation of the institutions of the governance and public administration in its capacity of supporting the Parliament.* In order to make the whole system competitive a strategy for the government and the internal control had to be prepared. This strategy was completed and it is in line with the audit principles. In order to implement this, attention, resources and funding are required and the focus from the classical methods and

areas of internal control should be shifted towards a profound and comprehensive review of PPP projects.

### International guidelines for PPP's

In order to be well-prepared and spread the good practice in Hungary, we shall consider the advice of INTOSAI, the international organisation of supreme audit institutions (SAI's). In their view, SAI's play an important part, primarily in determining and examining whether partners deal with the risks of PPP projects adequately and efficiently. INTOSAI<sup>26</sup> draws attention to the fact that while auditing modern relations, *SAI's themselves face several risk factors.*

■ SAI's may lack the commercial expertise needed to evaluate either how well the public sector partner is protecting the state's interests or whether the public sector has taken unreasonable risks in the projects.

■ In many cases SAI's do not have sufficient access to information because the private sector partner is reluctant to provide it, focussing on their commercial interest.

■ Existing methodologies do not always equip the auditor to assess the performance of new types of PPP adequately. Benchmarking the quality, efficiency, and cost efficiency of services is difficult when there are few comparable projects. This in itself makes it hard to judge what a reasonable return on investment for the public and private sector partners is.

■ Finally, it is necessary to take into consideration that the state incurs liabilities through a PPP. It makes it necessary for the state to include a risk register in its accounts which includes an estimated value for the liability. The register is to be audited by the SAI, with a special view to the reasonableness of the estimates.

Several risk factors can be detected concerning the relation of the private sector and the

state as a partner. INTOSAI draws attention to the risks which primarily *the state is to face* prior to forming such partnerships and in the course of concluding the contract.

- The state has a range of objectives, some of which may be competing. Therefore, it is necessary to accurately assess and prioritise these objectives, in order to be able to create an accurate picture of the (expected) advantages originating from the partnership.

- Several of the objectives deemed important by the state may be regarded as especially attractive by the private sector partner. Therefore, the state ought to ensure that the private sector partner is unable to pick only the areas yielding the highest profits.

- In the course of the selection process, higher efficiency and/or the more considerate solution for the budget may clash, in other words it may be necessary to prioritise and select. By focussing on the budgetary considerations at all costs, one may risk not selecting the most suitable offer considering efficiency, which entails losing the long-term advantages and yields of the other solution.

- In the course of the public procurement process, employing specialist financial and legal advisers is necessary, but it is crucial to prevent the state from becoming dependent on them and paying them more than the market rate. There is also a risk of corruption both on the part of advisers and public employees. It is necessary that a third party review the selection process and the agreed terms and conditions before the partnership is finalised.

- The state's payment of the contractual fees should be suitably scheduled, preventing the private partner from failing to deliver or delivering services of inadequate quality. Similarly, contractual guarantees (payment of penalty, damages, etc.) should ensure the uncompromisingly thorough delivery of the services undertaken.

- Prior to the conclusion of the contracts, it

is advisable to ascertain that the necessary statutory basis is in place for the partners to enter into the desired form of partnership.

- The need to comply with the requirements of the Public Procurement Act deters competition; therefore it is necessary to have preliminary communication with potential partners.

- Concerning assets of national importance, it is necessary to take into consideration that once assets have been transferred to the private sector, the public sector will lose control over them. In such cases, leasing may be a more expedient form. Thus the state retains its “step-in” rights in the partnership even if by doing so it reduces the private sector's interest.

- The guarantees and indemnities given by the state often fail to appear in the assessment of a contract. During the audit, the SAI should consider what risks these guarantees entail, price the risks, and compare them to the share and yield of the public sector.

- To find solutions which are considerate towards the budget, i.e. to prevent the partnership from being classified as a public undertaking, the public sector may have to participate in the project as a minority stakeholder. In such cases the contract should include adequate protection and a system of guarantees for governance and management. It is a real risk that the state may lose the value of its share. To avoid it, it is necessary to obtain regular information as to whether the majority stakeholder fulfils its obligations.

The state as a partner does not always have adequate financial, legal, or technical expertise to successfully participate in the execution of the project, and thus it is not able to fully exercise its rights in each case. The state is often not provided with adequate information on the performance of the private partner. Therefore, the partnership contract needs to contain the project elements necessary for the execution and operation in depth and in detail. Taking all

this into consideration, the SAI's audits are to facilitate that the projects be adequately consolidated with both the state and the parent company of the private partner.

Besides the PPP guidelines, exchanges of expertise on program audits in the INTOSAI Working Group dealing with the auditing of privatisation are useful for the different countries, thus for Hungary, too. For instance, in 2004, at the annual meeting of the Working Group (in Sofia), the representatives of Estonia, the UK, Norway and Brazil gave an account of their own experience, providing useful information on the public finance and economy of their countries, and also spoke of such relevant relating issues as the regulatory legal problems, the transparency of the programmes, and the selection of expediently employable audit types in detail. Their approaches were consistent in stating that such programmes were not to serve to provide the opportunity for the public finance of a country to be granted (invisible, hidden) loans, and that it was necessary to have guidelines to serve as a basis to assess the expediency of each programme. Finding the continuation of auditor training programmes dealing with privatisation, based on the best practices of audit and procedures, useful, the participants suggested that the extension of training programmes relating to PPP's be a new key area.

In 2005, at the annual meeting of the Working Group (in Brasilia), the representatives of Norway, the UK, and Hungary gave an account of their audit experience concerning PPP programmes. The Norwegian presentation focussed on the huge challenge which these programmes represent concerning the professional preparedness of the auditors and the necessary audit capacity, pointing out that no official guidance concerning PPP programmes existed in Norway. The British presentation dealt with the new features of performance audits of PPP programmes which better impose the requirement of providing a

comprehensive account of performance, especially in the operational phase. After outlining the main principles of PPP programmes and the role of the government, the presentation of the representative of SAO<sup>27</sup> reviewed the experience gained by Hungarian auditors during the audits of Budapest Sports Hall, the National Theatre, and motorway M5. Among the main conclusions, the Working Group recommends the completion of the guidelines by stating the expediency of the creation of an interministerial PPP committee, specifically referring to the Hungarian experience presented. The importance of that was underlined by *Sir John Bourn*, Chairman of the Working Group and Comptroller and Auditor General of the UK, through his questions and comments.

### The warnings of the British National Audit Office (NAO)

As we have mentioned before, it is the Anglo-Saxon countries that employ PPP structures the most widely, and among them it is Great Britain that lays the greatest emphasis on the assessment of the operation of projects, and on comparing them to traditional models. After reviewing the INTOSAI guidelines, we shall summarise the recommendations of the British National Audit Office, based on the audits of the nearly 50 PPP projects and the experience that they have gained.

The English sister organisation, which has a close working relationship with the SAO, is definitely top-ranking, considering not only project auditing, but also the passing on of their experience through consulting. Their data bank, established last year, also aptly illustrates the aspiration of the NAO, which has made over 200 – audit-based – recommendations available for organisers of PPP projects.<sup>28</sup> We wish to present only a few pieces of their advice<sup>29</sup>, recommending them to government organisations dealing with this issue and to project organisers.

■ Managements of private sector companies can often better assess the risks of a given business venture. Also, they can usually audit and record performance data more efficiently than the public sector. For this reason, it is necessary that the public sector make use of the information systems utilised by private companies and continuously train the participants. It is necessary to establish more intensive co-operation and organise regular exchanges of expertise between privately and publicly run institutions providing similar services, and it is also expedient to swap staff between the two types of institutions, especially at senior level.

■ It is necessary to clearly define the way to quit PPP contracts in case the supplier proves unable to continue providing the service in the desired manner. It is important that both the tenderee and the winning tenderer have identical rights concerning quitting the project. (It is often not so; e.g. we have already referred to the concession contract of the first section of motorway M5.)

■ The method of providing aid (support) for PPP projects that have been jeopardised in any way has to be contractually clarified. For instance, the participant in trouble may be granted a loan, based on necessary circumspection, and the accurate assessment of the expected situation.

■ SAI's need to have the right to audit both the prime contractor and the subcontractor, and trace the way of state funds.

The foregoing, including the above recommendations, suggests that the most important prerequisite of a successful project – as we have amply emphasised it – is the good, careful preparation of the contract, as experience shows that most problems originate from contractual mistakes and shortcomings. This is the reason why we find it of great importance that standardised contracts<sup>30</sup> have been outlined and published in Britain, using which it is possible to avoid repeating fatal errors.

## EXPERIENCE IN HUNGARY

Among the different new forms of performing tasks by the state, those involving private equity are gaining more and more ground in Hungary. At the same time, some attempts to make institutional forms which are implemented through the utilisation of public money appear as non-state-related are also being made.

### Assessment of the early attempts

We shall present *the first instances of gaining real experience* of the co-operation of the state and the private sector in Hungary through the processes of decision making and implementation of some large-scale investments, which have already been completed. In his article quoted above<sup>31</sup>, Mr Mibály Varga presented two case studies. Firstly, we wish to make some comments on them.

As far as the assessment of the first section of *motorway M5* is concerned, we may conclude that this investment is a thoroughly negative example of private equity involvement – on the part of the state. Here, even though the resources necessary for the implementation of the investment were provided by a private partner, who also undertook the task of operation, the risks of the operation and of ensuring a – relatively high – profit were fully borne by the state, together with all the financial burdens that they presented. The most important lessons of this badly drawn contract and the obvious losses that originated from it may be summarised as follows.

■ *Bearing all risk*: the private party only bore the risk relating to the construction project, and shifted all operational risk to the state in the course of their long-term co-operation.

■ *Providing unilateral profit guarantee for the investor, making misuse possible*: keeping the toll high meant that drivers were not drawn to

but deterred from using the motorway, causing serious environmental damage etc. to the settlements along the parallel road and to the whole area.

■ *Conditions of quitting missing from contract:* frequent changes concerning who the minister was and other changes concerning the persons in charge appointed by the government weakened the Hungarians' position, and even though the Hungarian party tried to back out of the dead end street of AKA Alföld Koncessziós Autópálya Rt. (AKA), negotiate more favourable conditions, and perhaps find a new conessor, AKA insisted on keeping the market share it had obtained. Due to their more favourable position than that of their potential competitors, they have been granted the right to construct the second as well as the third sections of the motorway.

The second case study in the article by Mihály Varga, quoted above, deals with *Budapest Sports Arena* (BSA), and definitely needs some further comments.

In the original concept, BSA was to be built within the framework of a classic PPP project on the location where another sports hall had previously burnt down. The facilities were to be constructed, and at least half financed and operated by the private partner company, in return of which the state promised to pay a service fee for twenty years, following which the state was to gain full ownership of all the facilities, and their further utilisation was to be decided upon then. However, the government was not able to make the commitment concerning a period of twenty years then, so – upon reviewing the different compromise solutions – the project was implemented in a different form.

The winning foreign project company was able to contribute less than 10 per cent to the financing using its own capital, the rest was covered by the state (the Ministry of Children, Youth and Sports), basically through a long-term – 12-year maturity – credit, which evident-

ly increased the national debt, and the future national debt burden. Since then the facilities have become the property of the nearly 100 per cent state-owned Rendezvénycsarnok Rt. – through a state buy-out of foreign ownership – and they have been operated by Aréna Üzemeltető Rt., owned by the limited company. The operator of the facilities pays the owner a rental fee and a so-called asset replacement contribution.

In the autumn of 2003, the SAO audited the whole project<sup>32</sup> and although it rated it basically in order professionally, it disapproved of the fact that at the beginning, when essential investment decisions were made, and the most important contracts were drawn, the foreign partner had a 75 per cent, while the Hungarian state a 25 per cent share in the joint venture established for the implementation of the investment, and, accordingly, in the decision making rights. According to the SAO, this failed to ensure the adequate promotion of the state interest concerning essential decisions, and especially, was not proportionate to the rather scarce final proportion of private equity, which only accounted for 6 per cent of the cost of the whole investment, while 90 per cent was provided through a bank loan (with a 100 per cent state guarantee), and 4 per cent from budget resources.

Thus, it can be concluded that although this investment looks like a typical, classic PPP solution, due to different circumstances – scarcity of time, expectations concerning the high professional standards of the implementation of the project, etc. –, but especially *the lack of practical experience and the professional unpreparedness* in the application phase, *the attempt to exploit its advantages for the benefit of the state and the public failed*. Private equity may have supported fast implementation. On the other hand, the considerations of efficiency and the cost saving utilisation of public money failed to assert themselves.

Another PPP-type project that can be classified as an already implemented “early attempt” is

*The Palace of Arts*. In the beginning, in 2001, the government wished to implement it as a PPP-type investment in view of the already little budgetary latitude. Pursuant the original contract, the full risk of the investment – from obtaining all permissions to financing – was to be borne by the investor. However, the state undertook to repay the investor the costs in instalments within ten years of the opening. In actual fact, this is financial leasing, i.e. a sort of loan; in other words, the private investor gave a loan for the investment with full state guarantee. *The model failed to fulfil the triple principle of PPP-investments, i.e. that the implementation (construction), availability, and operational risks should be undertaken by the investor.* Only in such cases can the investment expenditure relieve the state budget, or rather, only provided that at least two thirds of the risk is borne by the private investor. For this reason, the contract needed to be renegotiated, in the course of which approximately 99 per cent of the operational risk was successfully transferred to the investor. As a result, the investor is to operate the institution, and finance all repair, maintenance and refurbishment activities relating to the operation, while the state is to pay availability payment for thirty years<sup>33</sup>. In spite of this, Eurostat qualified the model as a government investment. Consequently, the investment cost of the facilities of HUF 32bn was to be recorded as government expenditure with the simultaneous increase of the national debt in the investment period, i.e. between 2002–2004.

In summary, as far as the first initiatives are concerned, PPP was hardly ever applied unless exigencies or the lack of funds made it necessary for the performance of a given task. Unfortunately, in none of the cases was the criterion of private equity involvement, which would have been vital for Hungary so that the investment cost should not burden the budget of the given year or influence the debt indicators, satisfied. Previous the SAO audits have also

made it clear that neither could efficiency or cost efficiency be detected in these cases, whereas the state granted private equity absolute profit guarantee.

### Assessment of ongoing PPP projects

In Hungary, Government Decision No. 2098/2003 (V.29.) made way for the conscious, more circumspect application of PPP, a modern form of co-operation between the state and the private sector relating to development and services, wishing to enhance the general acceptance of this modern solution by creating an interministerial committee<sup>34</sup>. Then, the *legislative background*, which has been presented in several publications<sup>35</sup> in detail, began to be outlined. It is typical that the statutory amendments first guaranteed safety for the private sector (through the relevant amendments of the Public Finance Act and the Civil Code), and only later did the provisions to serve to assert and defend state interests begin to be outlined. Another typical feature of the process of outlining the regulatory background and procedures is that due to the motivation to be considerate about the ongoing budget, it is paramount that the project meet the criteria established by Eurostat, i.e. the investment expenditure should not burden the expenditure side of the ongoing budget. In other words, it should not increase public finance deficit. At the same time, the hope of more efficient and cheaper implementation of projects seems to be pushed in the background.

We find the first instance of its conscious application by the government in the proposal of the budget of the year 2005, based on several Government Decisions and Parliamentary Decisions in 2003 and 2004. In accordance with those plans, the estimated net present value of the developments to be implemented in the PPP format was to exceed HUF 460bn, the bulk of

which was to account for the continuation of motorway M5 and the first section of motorway M6, while the government planned to allocate a HUF 71bn investment to build prisons and HUF 50bn to build students' halls of residence. In its opinion on the plan, the SAO urged the completion of the outline of the regulatory background, the organisation of the treasury registration of state liabilities, and the numerical financial analysis of the budgetary effect of the projects launched in the PPP format. Also, in order to ensure future budgetary latitude, the SAO found it necessary for an upper limit of state liabilities to be stated in the Budget Act. Accordingly, the budget for the year 2006 provides more detailed and more accurate information on the PPP projects that have been decided upon (see *Table below*). The adequate amendment of the Public Finance Act can also be deemed as an important step forward, setting an upper limit for budgetary expenditures relating to the so-called PPP investments and for other liabilities. It maximises the nominal total value of such liabilities within a budgetary year as 2 per cent of the sum of the expenditure total of the central budget, which equals approximately HUF 120-130bn annually.

Nonetheless, the outline of the regulatory background and procedures has not been completed as yet even though – as it can be seen in the table below – investments have been launched and contracts have been concluded. Unfortunately, a suitable methodology to calculate cost effectiveness is still unavailable; procedures of statutory force, indispensable for cost effective and efficient project implementation, are still non-existent; and often, so is an organisation responsible for the tasks of co-ordination, assessment and audit. Specific the SAO audits have pointed out that the lack of these entails great risk for the state in the case of launched projects. It is also true that the European Commission has only recently published a communication concerning certain reg-

ulatory issues, such as the community law of public procurement, concessions and PPP solutions, which can serve as a starting point to lay a better foundation for the competition-driven conclusion of PPP agreements.<sup>37</sup>

The data in the Table below shows that the estimated present value of the PPP projects launched and decided upon so far approximates HUF 700bn, which is the approximate equivalent of 3 per cent of the 2006 GDP, and 9 per cent of the sum of the expenditure total of the budget. This already represents a significant accumulative burden and liability for the budgets of the years to come. Still, according to the forecast figures until 2008, albeit with an annually increasing burden, this will stay below the 2 per cent limit.

Now, we wish to assess some significant projects listed in accordance with the criteria established for the SAO audits, focussing on the ones that the SAO has already had the opportunity to audit. Such projects include the investment of motorway M5 and the prison construction project of the Ministry of Justice.

The Table shows that the motorway construction projects account for the largest sum and constitute the most significant state liability. As we have already mentioned, the construction and early operation of the *first section of motorway M5* was implemented through an early attempt to involve private equity, which can be assessed as an absolutely negative example concerning the performance of the state. It is especially worrying that – for several reasons – the participants' responsibility was either non-existent, or responsibility as such cannot be attributed to anyone.

Within the audit of the execution of the budget of the year 2004<sup>38</sup>, the SAO separately dealt with the issue of the motorway M5 contracts. Concerning the original contract, the audit confirmed the legal opinion that the real consequences of any legal act on behalf of the Hungarian State aiming to terminate the conces-

## MAIN DATA OF PPP-PROJECTS

Ministry	Project	Short description	Gov./Parl. Decision	(Expected) launch	Expected length of project (yrs)	Estimated present value of project (HUF m) Total	Budgetary expenditures (HUF m)			
							2006	2007	2008	
Ministry of Economy and Transport	M5 1st section	Operation and maintenance	2336/2003. (XII. 23.)*	March 2004	27	246 000	23 125	28 188	28 188	
	M5 2st section		2036/2004. (II. 19.)*	July 2004	27					
	M5 3st section		90/2004. (X. 23.)**	February 2005	26					
	M6 1st section		1124/2004. (XI. 27.)*	October 2004	22					
		Design, build, finance, operate (DBFO)	2336/2003. (XII. 23.)*				9 564	12 284	12 583	
		operate (DBFO)	92/2004. (X. 28.)**							
Ministry of Justice	Prisons	Create 2 penal institutions in DBFO format	2126/2004. (VI. 28.)*	From November 2005 to January 2006	18	71 732	731	4 020	5 848	
Prime Minister's Office	MTV headquarters	Design, build, finance, operate (DBFO)	Act XXVI. of 2005	2005	20	78 000	393	516	699	
National Sports Office	"Sport 21st Facility Development Program"	Design, build, finance, operate (DBFO); leaners' swimming pool, gymnasium	1055/2004. (VI. 8.)*	From 2006	15-17	n. a.	0	6 268	6 400	
Ministry of Education	Accommodation in residential halls or educational infra-structures	Design, build, finance, operate (DBFO)	2207/2004. (VII. 27.)*	From 2004	construction + 20 years of operation	155 788	1 116	6 500	10 000	
<b>Total</b>	<i>as a percentage of GDP</i>						<b>668 755</b>	<b>34 939</b>	<b>57 776</b>	<b>63 717</b>
							2.9	0.1	0.2	0.2
<i>as a percentage of the expenditure total of the 2006 annual central budget</i>							8.9	0.5	0.8	0.8

Source: state budget of the year 2006

\* Gov.

\*\*\* parl. Decision

sion contract would only be discovered subsequent to receiving the legally binding court verdict. It also means that it is impossible to expose all genuine interests and protection of interests, as the position of the same group of private equity remained unchallenged.

As it is known, on February 11, 2004, an agreement with AKA Rt. was concluded, in accordance with which, from March 12 on, the system of using motorway stickers was extended to motorway M5, too, and further constructions would be (and have been) implemented within the framework of a “real” PPP project, pursuant the contract. These, i.e. the state's gaining ownership together with the modification of the PPP model and the introduction of the sticker system, represent a new stage in the history of motorway M5, now characterised by the classic PPP project characteristics:

- further sections are to be constructed from credit, and the state is to pay availability payment, to be determined based on the ownership structure, for the sections that have been completed,
- risk is to be jointly borne by the investor and the state (primarily, the risk of AKA relates to the unexpected hardships of the technological implementation, and maintenance and repairs to be carried out above what was originally allowed for).

Also according to the SAO, the model outlined to include motorway M5 in the sticker system accomplished the objectives that had been set: in 2004, the volume of traffic on the motorway was over twice as big as in the previous year, and the shares purchased (39.48%) adequately enable the Hungarian State to assert its interests in the future. Since then, the second section of motorway M5 has been completed and opened pursuant the amended contract.

Pursuant Parliamentary Decision No. 92/2004 (IX.28.), the construction of the first section of *motorway M6* also happens within the framework of a concession contract, which, in

accordance with private equity involvement, i.e. the so-called DBFO-format, includes design, building, repair, operation and maintenance, as well as the financing of these activities. According to the orientating data available, the estimated present value of the project is HUF 117.2bn. The beginning of the concession period is October 2004, the whole-of-life of the project is 22 years, and opening is planned in 2006 (making 2007 the first full operational year). The sums of the availability payment are calculated accordingly.

The SAO dealt with the preparation of the *prison building construction projects* to be implemented as a PPP<sup>39</sup> within the framework of the comprehensive audit of the Ministry of Justice chapter in 2001–2004. The report states that the overcrowdedness of penal institutions, as well as the efforts to comply with the EU requirements demanded financial resources which exceeded the opportunities of public finance, which diverted the attention to the application of the modern forms of co-operation between the state and the private sector concerning developmental and service projects. In 2004, the government decided on the establishment of two penal institutions utilising the PPP solution.<sup>40</sup> Preparation started when the regulatory phase had not been completed yet. For this reason, the SAO report deemed the project risky in several respects.

■ It pointed out that the procedures to constitute the theoretical and legislative basis of PPP solutions were missing, and not even an organisational background suitable for carrying out the co-ordinational, assessment and audit tasks had been established, which together represented a high risk for the state as a participant in the first so-called pilot project, and, consequently, in the prison construction PPP project, too.

■ Among the regulatory shortcomings that increase the risk of the preparation, the report also mentions that the Government Decree on the methodology of the calculation of the net

present value of liabilities that entail a commitment over several years has only recently<sup>41</sup> been published. This can jeopardise its correct application, not to mention the lack of compliance based on content.

■ One of the most difficult elements of project planning is to prove the cost efficiency of the PPP model, and to substantiate that its application is more advantageous and useful than state investment. The calculations concerning the prison construction projects, i.e. the calculation of the so-called PSC (Public Sector Comparator) value contained several uncertainties, which also increases project risk.

■ Finally, it is an essential project element whether the investment, i.e. the fixed asset created, becomes the property of the investor or the state at the end of the whole-of-life of the project. This aspect may influence the future statistical status of the project, in other words it may jeopardise the positive budgetary effect, which, because of the need to comply with the convergence programme, is an issue of cardinal importance in Hungary.

The SAO report directs attention to the necessity of the urgent elimination of the regulatory shortcomings, as well as to the fact that in a contrary case significant surplus risks may be created, to be borne by the state side, as early as in the preparatory stage. In this respect, experience abroad, especially in Britain have also mostly proved positive concerning the efficiency of services, which arouses hope that – applying the positive experience gathered there – we will also be able to label and actually find these project successful in this country.

The table shows that significant efforts to implement a certain proportion of the developments necessary to provide *residential hall accommodation* from private equity resources have also been made in the Ministry of Education chapter. This area – due to its characteristics – is nearer to the competitive sector, so the efficiency requirements can be more easily

seized and analysed. Since we can give an account of the completion of its implementation, we shall assess this area through the Debrecen University residential hall investment<sup>42</sup>. After the two-round negotiation for the procurement of the residential hall service, the selection of the winner took place utilising PSC-calculations. The calculations were preceded by detailed risk assessment. The service risk is mostly borne by the private sector, while the university bears the demand risk for 10 months a year. The Students' Hotel was implemented based on the classic DBFO-model. One half of the investment opened in the summer of 2005 is to function as a residential hall, while the other half as a market-based hotel (hostel). 55 per cent of the residential hall fees are covered by the university, 45 per cent by the students. The profit generated through the operation of the hotel is to be shared by the private and the state partners. The private partner bears the burdens and avails of the profit of the operation, incomes and risks of the service units of the building, as well as of the profit of refinancing.

## CONCLUSIONS AND PROPOSALS

The above paragraphs make it clear that market mechanisms appear in various forms in the performance of public functions. All of these have been created to provide and promote more efficient and cheaper public service of a higher standard. Why does the SAO worry then and why does it sometimes seem to object to their spreading? Is that caution justifiable?

We can establish that the co-operation described above, its potential usefulness, or even necessity cannot be questioned. At the same time, we ought to take into consideration what has actually been happening. Before the so-called Glass Pocket Act<sup>43</sup>, the SAO was not authorised to audit the utilisation of public money outside public finance, i.e. by non-budg-

etary organs. It was at that time that *outsourcing* happened on a large scale, and public interest companies, public foundations, and businesses mushroomed. They have been managing significant financial assets of the state, concerning the correct utilisation of which – often for want of internal audits – and, especially, concerning the result of their financial asset management, very little is known. The situation is further aggravated by the treatment of business secrets in a manner equivalent to that applied in the private sector, which may have grave consequences concerning both corruption and other misuse. It is an especially important risk generating factor because – theoretically – it cannot even be detected. Later, increased statutory austerity enabled the SAO to extend the scope of its audits, so by now we have learnt that the application of the market forms did happen in a “typically Hungarian”, i.e. expensive and often wasteful manner.

The topicality of the application of PPP solutions in Hungary is especially heightened, on the one hand by the significant state development demand to comply with EU requirements, and on the other hand by the scarcity of budget resources and the deficit of the ongoing budget. The organisation of such projects is vigorously supported by the government because it has become clear that in a number of areas (education, health care, prisons, and last but not least, motorway construction) we have significant backlogs in the infrastructure, while our budget resources are rather scarce. At the same time, the private sector is seeking market opportunities, and it “readily” privatises public service functions, thus there is an opportunity for them to meet. The quickest possible, efficient implementation of the necessary investments constitutes the most important advantage expected for the national economy. However, achieving this goal is only viable through successful projects.

But what ensures that the project will turn out to be successful, and for example will not

have a negative effect on employment figures? What can the SAO do for this? PPP's, as we have already pointed out, characteristically entail *the danger of waste and corruption*, which, primarily, derives from the short-term interests represented in government decisions, and from the unpreparedness of the public sector<sup>44</sup>. It is also well-known that the SAO conducts posterior audits, so it can assess the project upon its completion at the earliest. Moreover, it will only be able to audit and assess the adequate standards of the service some years later, during operation, when these decisions have already become irreversible, i.e. repairable only by making considerable sacrifices. This is the reason why the SAO is a protective partner. Currently it cannot do anything but make its – albeit rather initial – experience public, together with much ampler international experience, focussing on the audits that have been conducted, and the analysis of the negative phenomena exposed by them at as many forums as possible. This – as we have seen – is greatly helped by the guidelines published by the international organisation of SAI's (INTOSAI), as well as the recommendations put forward by the National Audit Office (NAO) in the course of its project audits.

On the basis of these, we recommend that the Hungarian legislators and decision-makers primarily consider the following.<sup>45</sup>

■ In planning and assessing programmes, it is a fundamental requirement to *harmonise short-term opportunities to save state funds with the considerations of long-term return (efficiency)*. A solution that creates a real identity of interests between the parties in this respect, and provides appropriate advantages and profit for both sides is to be formulated.

■ Concerning *projects*, it is a crucial requirement to *regularly monitor, analyse and assess* the changes affecting them. Among these, special attention is to be paid to the consequences of the changes in the government development policy. The importance of this is highlighted by

the findings of NAO, i.e. that in the course of the execution of the contracts concluded, as many as 55 per cent of them were affected by different changes. Another key requirement is to *increase the efficiency gain of projects*. For this reason, it is advisable to determine the lower limit of the expected yield of projects; it is an important objective to enhance the public procurement process through better training provided for the experts and consultants participating in it, and it is also important to employ framework financing far more extensively among the different forms of financing.

■ Regarding that changes also abound in the private sector, in order to make PPP projects successful it is crucial to *establish relationships of real strategic partnership* and to form different partnership alliances which may function well e.g. in the fields of education and health care.

■ The different risks and uncertainties relating to PPP projects necessitate that – in the preparatory stage – *alternative concepts be prepared* to enable participants to select the mutually best solution – especially, with respect to the method of financing.

■ It is a task of primary importance to provide those participating in the preparation of projects and contracts with continuous, *high level training*, especially in the public sector.

■ Use of *standardised contracts*: as it is made clear both by the INTOSAI guidelines and the NAO recommendations, firstly, the most important prerequisite of a successful project is the adequate preparation of the contract, as most problems derive from contractual shortcomings. For this reason, we wish to repeatedly draw attention to the standardised contract samples utilised in the United Kingdom. In our opinion, the preparation of a similar standardised contract, and making its use obligatory statutorily could significantly lower the risks of the implementation of PPP projects, and would help to prevent mistakes which can otherwise only be detected through a posterior audit, and

which may even be fatal and corrigible only by making major sacrifices in certain cases.

■ The preparation of *comparative analyses*: it is necessary that the acceptance of the project be preceded by a feasibility study containing details of the difference between the proposed PPP project and the traditional (state development) solution concerning costs and the standards of the services. The application of the new solution is justified if and only if it is unambiguously verifiable that the discounted present value of all sums to be paid by the state are lower than the discounted present value of the up-front and continuous expenditures of the development to be implemented as a classical budget investment – including the proportionate part of the interest burden of the state debt. It is expedient to extend this to the multiplying, indirect effects (e.g. environmental protection, employment figures, the income generating capacity of the whole national economy, etc.). The projects that have been decided upon and implemented are to be regularly audited and analysed. Certain circles of experts find it necessary to establish a *separate institution*, where the preparation of projects, the efficiency analyses and the regulatory issues would be concentrated in one hand.<sup>46</sup> It would also be important to ensure that not only budgetary considerations, but efficiency and better service standards be regarded as important aspects of the decisions, too.

■ The objective is to *create long-term financial planning* by strengthening the right institutions, which may be the basis of transparency and accountability.

■ The application of PPP in the future would be largely enhanced if *information relating to it, or rather all information was made public*. It would enable decision makers to gain awareness of the long-term costs and risks at all levels. Today, only a certain part of the information concerning the risks relating to PPP's is available in Hungary and the other Central European countries. Modern standards of financial report-

ing require the publication of liabilities, unforeseeable obligations, and other financial risks. These considerations require a different treatment of business secrets, identically to the purely private sector.

■ To enhance risk management, the government needs to *establish a comprehensive database* of the contracts concluded, the projects implemented and their operation, containing all major risk factors. Further important typical conditions of adequate risk management: clarified strategy, a centralised risk management institution, and an independent audit organisation. The task of the main audit institution is to examine all aspects of the government's risk management.

Finally, the future application of the PPP solution would be largely enhanced by *a shift in attitudes* concerning the mutual perception of

the private and public sectors. Today, due to the prejudices prevailing, the private sector regards those employed by the state as bureaucratic and inflexible partners, and consequently considers each action of the state to be ineffective and unprofitable. The state-employed players, on the other hand, often only notice the exaggerated assertion of the profit-making interest of the market with regard to the private partners. As we have already emphasised, the basis of a good PPP is not only the conclusion of a good contract, but also the establishment of a long-term partnership, and continuous communication. Through this, it is possible to answer new challenges during the whole-of-life of the project together, successfully. This is especially true in Hungary, so it is necessary to encourage the creation of trust among the parties in order to foster a fruitful relationship.

## NOTES

<sup>1</sup> The role of market-type mechanism in the provision of public services, *OECD Symposium, Paris, 2005*

<sup>2</sup> In the voucher system the provision of services and funds are separated. Funding remains the government's responsibility and the citizens may use vouchers after selecting the most suitable provider. Competition enhances the quality of the service and reduces costs; however, the fact that in a number of cases vouchers are received by the citizens automatically, saving is not appropriately encouraged. This method is widely used in primary education and care for children and the elderly. If users are required to pay a certain fee, the users of public services pay a part or the full price of the service. One of the latest examples is the payment obligation of those driving in the centre of London.

<sup>3</sup> The primary types of outsourcing are the following:

- Servicing agreements: The state concludes an agreement for the provision of services with one or more private companies through tendering. The investment and the government services are managed solely by the state.
- In case of operating agreements the given private company is liable for the operation and the man-

agement of the assets, while investment related decisions are still made by the state.

- In case of leases, the beneficiary private company is responsible for the operation and maintenance of the state owned assets. Lease agreements are entered into for a period of 5–15 years, and are typically applied in transport and water utility services, where revenue is generated.

<sup>4</sup> Report on the review of the performance of government tasks outside the public finance, State Audit Office, 2005.

<sup>5</sup> These include the public media.

<sup>6</sup> Report on the review of the use of non-normative contribution received from the central budget between 1998 and 2001, *State Audit Office, 2002*; Report on the review of budgetary subsidies received by social organisations and public bodies, *State Audit Office, 2002*

<sup>7</sup> A similar tendency in the growth of the state organisations is seen in the more developed OECD countries; the funds received by the ministries from the government spending is only 25–50 per cent and the figures are similar in the

education sector. The fact that this 'divided identity' is gaining ground is explained by two things: this control model is more efficient and effective, and it avoids or at least decreases direct political intervention in decision-making.

- <sup>8</sup> Government decree nr. 2396/2002 and Act XXIV of 2003.
- <sup>9</sup> Hungary's updated convergence programme for 2004–2008, *Ministry of Finance, December 2004, pages 27–28*
- <sup>10</sup> Such proposals were presented by Prof. Tamás Sárközy, for example at the meeting of the Hungarian Economic Association in Miskolc, 3–5 July 2005.
- <sup>11</sup> This is the third article in the *Pénzügyi Szemle* (Public Finance Quarterly) in this area. See: M. VARGA (2005): PPP in Hungary: is it harmful or beneficial?, *Public Finance Quarterly*, (comprehensive edition) and Z. AGG–G. CSONKA (2003): The public sector – with a new approach (section XXVII), The partnership of the public sector and the private businesses, *Public Finance Quarterly, March*
- <sup>12</sup> G. BÁGER–Á. KOVÁCS (2004): Privatisation in Hungary, Volume 1, *the SAO Research and Development Institute, Budapest, June*
- <sup>13</sup> D. LORRAIN (1995): Urban Services, the Market and Politics, In: *Private Financing of Public Infrastructure, The French Experience, DAEI. Paris*
- <sup>14</sup> European Commission: *Guidelines for successful Public-Private Partnerships, 2003*
- <sup>15</sup> Eurostat: *PPP-related issues, 2003*
- <sup>16</sup> See: footnote 11
- <sup>17</sup> Among the Member States in the Czech Republic, Poland, Latvia and Hungary central co-ordination institutions are promoting it.
- <sup>18</sup> European Commission (2001), "European Transport Policy for 2010, Time to Decide"
- <sup>19</sup> CASE (2005), "Background Paper on Fiscal Risks from PPP's" Mimeo, Warsaw, Poland
- <sup>20</sup> For details, see: Z. AGG–G. CSONKA (2003): The government sector – a new approach (Part XXVII), The partnership of the government and

the corporate sector, *Financial Review*

- <sup>21</sup> Successful co-operation of the public and the private sector, PPP Handbook, *Ministry of Economy and Transport, Budapest, 2004*
- <sup>22</sup> The Operational Performance of PFI Prisons, *NAO, 2003*
- <sup>23</sup> Centre for Public Services: The Private Finance Initiative in the NHS – 2002, via Internet
- <sup>24</sup> NHS Executive Public Private Partnerships in the National Health Service: The Private Finance Initiative Good Practice
- <sup>25</sup> Á. KOVÁCS (2003): Financial control and audit in a changing environment, *Perfekt, pages 350–371*, and Á. KOVÁCS (2005): Competitiveness and public finance, *Public Finance Quarterly, double issue, pages 25–47*
- <sup>26</sup> INTOSAI: Guidelines on Best Practice for the Audit of Risk in Public/Private Partnerships (PPP), 2004
- <sup>27</sup> G. BÁGER–ZS. BIHARY (2005): Hungarian Audit Experience of Investments Implemented with Private Equity Involvement, *Brasilia, September 27*
- <sup>28</sup> <http://www.nao.org.uk/Recommendation/>
- <sup>29</sup> For more details, see Transformation of Higher Education, Modernisation of Financing, Research and Methodological Institute for the *Hungarian State Audit Office, December, 2004*
- <sup>30</sup> Standardisation of PFI Contracts, HM Treasury, 2004
- <sup>31</sup> See Footnote 11
- <sup>32</sup> Report on the Audit of the Operation of the Chapter of the Ministry of Children, Youth and Sports, *Hungarian State Audit Office, 2003*
- <sup>33</sup> See Is PPP the cure-all? *Audit Observer, 2/2005*
- <sup>34</sup> The main force behind these decisions was the recognition that the EU accession and the demand to comply with the EU requirements as quickly as possible imposed significant and urgent developmental and investment tasks on the state in several areas, for which – even provided that the future EU resources was granted – there were scarce state funds available. The situation is fur-

ther aggravated by other circumstances burdening the budget, the high national debt, the high public finance deficit, which is to be significantly decreased in accordance with the Convergence Programme, and the constraint to decrease taxes in order to become more competitive. Thus it is self-evident that the state should seek the opportunity for private equity involvement, especially when willingness is shown, and the required capital is available.

- <sup>35</sup> E.g. see Report on the Audit of the Operation of the Chapter of the Ministry of Justice, *Hungarian State Audit Office, 2005*
- <sup>36</sup> Report on the Audit of the Operation of the Chapter of the Ministry of Justice, Hungarian State Audit Office, 2005
- <sup>37</sup> See [http://europa.eu.int/comm/internal\\_market/publicprocurement/ppp\\_en.htm](http://europa.eu.int/comm/internal_market/publicprocurement/ppp_en.htm)
- <sup>38</sup> Report on the Audit of the Execution of the 2004 Budget of the Republic of Hungary, *Hungarian State Audit Office, 2005*
- <sup>39</sup> Report on the Audit of the Operation of the Chapter of the Ministry of Justice, *Hungarian State Audit Office, 2005*
- <sup>40</sup> Government Decision No. 2126/2004 (VI. 28.)
- <sup>41</sup> Government Decree No. 161/2005 (VIII. 16.) on the methodology of the calculation of the net present value of liabilities that entail a commitment over several years and the discount factor to be applied
- <sup>42</sup> R. KOVÁCS (2005): The Investment of the Students' Hall of Residence of the Debrecen University in the Framework of a PPP Solution, *Seminar to explain NAO audit practice for PPP/PFI, Budapest, April*
- <sup>43</sup> Act XXIV of 2003
- <sup>44</sup> Á. KOVÁCS (2004): The Efficiency of Public Finance as a Factor of National Competitiveness, *PPP Conference, Győr, January*
- <sup>45</sup> See in more detail: International and Hungarian Experience relating to the Co-operation of the Public and Private Sectors, by: G. BÁGER, L.-NÉ HAMZA, R. KOVÁCS (2006), Research and Methodological Institute for the *Hungarian State Audit Office, April*
- <sup>46</sup> Currently, this task is performed by the PPP Secretariat, a division of the Ministry of Economy and Transport. The drafts are submitted to the government by the Ministry of Economy and Transport based on the opinion of the Interministerial Committee.

István Farkas

## *Supervision of the financial markets: Quo vadis domine?*

The development of societies entails that the communities try to control and supervise larger groups, or simply activities that significantly influence the lives and status of a great number of people. Even this very general approach reflects the difference between the mitigation of actual damage, and activities aimed at the reduction of the risk of future damage. This difference is of special importance for the subject of this paper.

*From this point of view, religious leaders and church organizations guarding commands containing meal requirements intend to pro-actively reduce the risks arising from non-compliance with the requirements, while actions taken after the outbreak of epidemics – no matter how brutal they are – can only mitigate the damage. The activity of the fire watchers of mediaeval towns who called the population to “watch out for fire and water” was very similar to the current supervisory activity, therefore they shall not be confused with firemen.*

Naturally, development has entailed the establishment of plenty of supervisory institutions – ranging from epidemiology supervision to the nuclear energy agency – that monitor risks and try to prevent them from posing threats. However, institutions supervising the financial markets receive enhanced attention.

What explains this increased interest? In what do these risks differ from the other types

of risks, and how should they be supervised? Do these general correlations hold true for the Hungarian financial sector, too? If we want to understand the challenges before the financial supervisory authorities, we must first of all understand the characteristic features of the market.

Modern financial markets are characterised by being unrestricted (unlimited) and general in nature, therefore they dynamically expand and closely follow technological advancements. We are often under the delusion that all this has been characteristic only for the last 50 years of our globalising world. It is true that we are just beginning to face the dramatic impacts. In order to prove that this is not a new phenomenon, let us recall a favourite novel we all read when we were young, *A. Dumas's The Count of Monte Christo*. In the novel, Danglars bank went bankrupt because it undertook too much risk by purchasing Spanish bonds based on wire news. Of course we know that market disruption and insider information also played a role.

The Hungarian financial market is connected to the international economy and the international financial sector with a thousand threads. One of the (evident) reasons behind this is the international nature of financial activities. If we merely look at the clearing traffic, a small, open, foreign trade based economy, such as the Hungarian economy, cannot exist without the international relations of its financial institu-

tions. (This premise is justified if we look at the simplest correspondence banking connections.) The other feature – which is especially characteristic for the Hungarian financial sector, and very characteristic for the Eastern European financial markets – is the dominance of international professional investors in the ownership structure of the financial sector. The importance of foreign owners is indicated by the fact that at the end of June 2005 over 82% of the registered capital of the financial sector was directly owned by such owners. Together with the indirectly owned portion, the share owned by foreigners reached 89%.

The international embeddedness of the Hungarian financial sector received a new quality dimension after Hungary's accession to the EU. The specific concomitant of the internationalisation of financial services is the unification of the internal market of the European Union. There is now a free, administratively unrestricted flow of financial services between the EU member states. It must be admitted though that the ratio of services provided across internal borders is still relatively low. However, this ratio is expected to grow significantly due to the increased standardisation of European regulatory practices, the concentration of wholesale services in a decreasing number of financial centres, the rapid proliferation of electronic services, and the strong capital and service imports of the new member states. This trend is indicated by the fact that by the end of 2005 over 120 credit institutions with registered offices in the EEA member states,<sup>1</sup> over 180 investment companies and more than 250 insurance companies declared their intention to perform activities on the territory of Hungary, too. It is not surprising that much fewer market players with registered offices in Hungary (5 credit institutions, 7 insurance companies and 2 investment companies) declared their intention to provide cross-border services in the EEA member states.

(However, it is extremely important that such institutions exist at all.)

This means that the Hungarian financial sector is no longer present on a market of 10 million only, and no longer competes only with those service providers that are registered in Hungary. Since May 1, 2004, we have all been the full members of a unifying financial market of 450 million, even if this is sometimes overlooked by the market players, regulators and supervisors. Due to the international correlations, interdependence and mutual determination of the financial markets – including the Hungarian financial sector – it is of fundamental importance to assess and analyse the key elements of the characteristic features of the financial sector and the elements of their changes.

## THE CHARACTERISTIC FEATURES OF THE FINANCIAL MARKETS

### Increased volume of financial intermediation

The elements of wealth intermediated by the system of financial institutions (e.g. bank deposits, capital market savings, insurance reserves, collective savings, etc.) are rapidly growing. This is due to the fact that one of the main consequences of economic growth is the continuous and high-speed augmentation of accumulated financial wealth, which broadens the possibilities of financial institutions. The number one contributor to the expansion of financial intermediation is the relatively high level of the gross savings ratio. The pace of expansion of intermediated capital is accelerated by – among other things – demographic changes and extended life expectancy, which entail the growth of collective investment schemes and insurance reserves. Financial wealth is growing faster – in the form of capital intermediated by financial service providers –

than is the total income of an economy. For example, in the period between 1991 and 2002 the GDP of OECD countries grew by 30%, while the volume of international trade increased significantly faster, by over 78%. However, the greatest expansion of nearly 133% was demonstrated by the financial savings of institutional investors. (Their assets more than doubled during the period under review!) According to the IMF report for 2003,<sup>2</sup> at the end of 2001 the total GDP of the world's countries was exceeded by the capitalisation of the money and capital markets (balance-sheet footing of the banks, share and bond markets, foreign exchange reserves) by nearly five times.

### A shift between the intermediary channels

Due to the process of wealth accumulation and the extended life expectancy, investment type services (primarily the management of assets in funds and similar arrangements) have gained space at the expense of commercial banking services. Within the investment products the weight of securities has continued to grow due to their flexibility and increasing security. The growth of institutional investments at a rate exceeding that of the GDP and trade also indicates that financial activity is less and less performed through the banks, and more often directly, via the capital markets. This, of course, does not mean that classic financial intermediation, the deposit collecting and lending activity of the banks would decline, but the difference in the growth dynamics show a characteristic shift. Thus, for instance, according to the figures of the European Banking Federation, in the period between 1998 and 2003 the balance-sheet footing of the banks of the EU member states, the member states of the European Economic Area and Switzerland doubled (in euros, to 211.3%), while the

growth rate of credits totalled “only” 88.7%. Apart from these general tendencies, Hungary may also find the example of Portugal (which joined the EU before Hungary) useful. The ratio of credit instruments in Portugal was nearly 90% in 1990, while the proportion of international and other investments did not even exceed 9%. Ten years later the ratios changed to 57% and 42%, respectively.

### Technological progress

The incredible growth of intermediated capital made the entire financial system strongly dependent on the computer technology. In addition to the economy of scale, the extended nature of international connections, the need for the demolition of the boundaries of time and space, etc. have all called for the elimination of the speed, reliability and capacity restrictions of the data transmission systems. The customers and the expansion of the markets do not only require that the system should be able to handle several transactions at a *time*, but also that this real time could be practically any hour of the day.

The emergence of extremely high capacity new IT systems has had two other consequences. On one hand, the almost immeasurable speed of computations and the (practically) unlimited number of data to be handled have made very complicated risk management methods and techniques feasible. Risk management is based on probability calculation, the reliability of which is closely related to the number of elements processed. The probability of risks seems to be reduced in the increasingly sophisticated models compared to the former methods and by themselves, too, because the impacts of innumerable factors can be examined on a very large sample and at a very high speed. And this possibility allows for the creation of newer and newer products.

The other impact of technological advancement is that the new channels devised to take the products to their destinations are constantly changing. While the above-mentioned elements of IT development served operational, back-office tasks within the financial institutions, the electronic, mobile and remote data transmission tools will open up new possibilities in sales, too.

In the forthcoming years the most important technological achievement – as far as it can now be foreseen – may be the mass proliferation of broad band telephone and Internet connections. This would allow for the real time transmission of a large amount of data between different geographical locations, as well as for the widespread use of international financial transactions, even on a retail level. By 2005, the number of mobile phone subscribers exceeded 1.5 billion worldwide, which means that every fourth or fifth resident of the Globe has a mobile phone! As a result of similarly drastic growth, the number of Internet subscribers also exceeded 800 million. The numbers are fascinating by themselves, but the real challenge was the underlying dynamism: by the middle of 2004 the number of mobile phone and internet subscribers doubled compared to year 2000, i.e. within merely 3.5 years.

These telecommunication possibilities are integrated into the activity of credit institutions to an increasing rate and at a growing speed. (We already tend to forget that the widespread use of banking cards – and most account holders take the use of plastic money for granted all over the world – was basically the result of the development of telecommunications: no card system can exist without the possibility of massive data transfer!) A similar boom can be expected in the field of financial transactions via mobile phones and the Internet. (I deliberately *avoid using the terms Internet banking, bank card, mobile bank, etc.* With this I would like to point out that these data transmission

tools can be and are more and more often used in the case of any financial product, e.g. in the banking, investment or insurance fields. This means that their impact is not confined to the banking sector.)

### The combination of products and services

Accelerated decision-making, expanded space and time – in relation to the enormous sizes – have strengthened risk awareness, and consequently, the need for risk sharing and transfer. This has significantly encouraged product development, the dismantling of products to elementary particles and the selling thereof in new risk packages. There is a large number of newly available products based on the sharing, separation, transfer or assumption of the risks varying in type and size, and it can be taken for granted that several new schemes will appear. The number of available financial products is substantially increased by to the process of internationalisation, too. An almost unlimited range of financial products can be generated on the basis of the investment opportunities created by the various national currencies, the markets of bonds and shares, yield curves etc.

This is why it is not surprising that the sale of derivative products used for hedging risks and for speculative purposes grows faster than the sale of financial services on average. Apart from the classic derivative products, the inclusion of the different types of risks “in one package” has already crossed the classic sectoral boundaries. The merger of bank guarantees and the traditional insurance products can be regarded almost as a classic example, but the collective sale of capital market (investment), well as bank and credit market products is on the rise, too.

The combinations of financial and non-financial products are more and more widely used, such as fidelity retail cards offering

favourable conditions for buying products and services, or credit facilities combined with retail discount campaigns. What is more, financial service providers are increasingly involved in supplementary, non-financial activities such as lending banks having titles of ownership of real estates registered at land registry offices or health services organised by life insurers, etc. At the same time, non financial institutions also render financial type services, such as such as the issuance of certain cash substitutes (e.g. telephone and fidelity cards etc.).

### Institutional restructuring

All these factors have significantly influenced and will significantly influence the institutional structure of the financial market, too. One of the main orientations in the development of financial services is an increasing institutional concentration, driven by the over-supply of services in the market and by diminishing profitability. However, large volumes require an extensive operational technique, which can be cost-efficiently utilized only in case of large traffic. If the growth of size occurred only at one or two companies, the oversupply would reduce revenues to the impossible. The response to this challenge is comprehensive and general concentration according to previous experience, and fusion according to the service providers. In the past years we could witness extensive bank mergers such as the merger of Bankers Trust and JP Morgan in the United States, or the merger of large residential banks, i.e. that of NationsBank and First Union. In Europe, where there is a relatively significant capital crunch, this process started earlier, at the beginning of the 1990s: for instance at ING Bank, which was established upon the merger of the Dutch Postbank and NMB Bank, or later the merger of the Greek Alpha Bank and the National Bank of Greece, just to mention a

transaction carried out in a country that is closer to Hungary in terms of development.

The engine of these bank mergers was the above mentioned requirement of reaching an economy of scale. However, in the case of some mergers – for instance the mergers of residential banks – the really important factor was the alleviation of the supplementary nature of the branch units, or the reduction of IT development costs. However, there is no doubt that mergers in the commercial banking sector have been primarily and generally carried out for the sake of reaching an economy of scale and/or to reduce development costs.

This process is fostered and accelerated by liberalisation and the international harmonisation of regulation. In the past 10 years a major transformation of the system of financial institutions has started e.g. due to the fact that the Supreme Court of the United States did not bar the fusion of the Citibank and Travelers' groups. As a result, the merger occurred not simply between two commercial banks, but between a commercial bank and a financial group engaged also in the insurance and the security businesses. As a result, opportunities in the US opened up for what the above-mentioned ING group commenced in Europe: a multifunctional financial group was created by the fusion of a bank and an insurance company. (The term bancassurance service was introduced specifically for this couple, the “marriage” between a bank and an insurance company”.)

However, institutional consolidation does not necessarily trigger a drop in the number of institutions. It rather means increased capital and management concentration. Therefore, we have all rights to assume that the lead actors of institutional development to be realized in the coming years will be large financial groups involving a number of institutions.

Finally it can be concluded that the products and institutions of the financial market can be less and less linked to individual sectors, and

that the boundaries between them have become and will become increasingly blurred. This process has required the increased integration of the supervisory authorities, and it has necessarily extended to areas that are located at or beyond the boundaries of the classic areas of supervision, since non registered institutions can have a major or adverse impact on the supervised financial markets, irrespective of their legal status.

### The international interlacement of services

The emergence of groups also indicates that in addition to the classic corporate models the role of new and alternative solutions has increased on the financial markets, too (e.g. management cooperation instead of capital fusion).

The mass production of international financial services first of all required real time connections, an international IT and telecommunication system capable of handling a large data traffic and capable of unlimited connections, as well as globally harmonised (compatible) national regulations and standardised institutions that allow for the cross-border flow of persons, information, income and revenue. Said technological tools and the institutional conditions of regulation have undergone rapid development, wherefore substantial technological and institutional integration has occurred globally.

A special concomitant of this process is that as a result of the European aims for integration the multiplication of branch units, the provision of cross-border services and the establishment of European share companies seem to be a process with a considerable proliferation potential. Technological development makes it possible to conclude deals without being physically present, and the

intention of the regulators to establish a single financial market in the European Union also calls for such activity.

For the time being it also seems sure that the interregional centres (primarily London, New York, Hong Kong and Tokyo) will preserve their significance despite the fact that major steps will be taken for geographical diversification as a result of the development of the IT technology. For this reason, the national and regional financial centres, as well as the concentrated institutionalised markets that serve as a core of the activities of such centres, the money capital and the commercial exchanges will continue to play a significant role. The “wholesale” and “retail” trade of financial services will be increasingly carried out in the centres and at local levels, respectively.

### DO THESE STATEMENTS ALSO HOLD TRUE FOR THE HUNGARIAN FINANCIAL MARKET?

Due to the size of the Hungarian market and the nature of financial intermediation it cannot be argued that the Hungarian market is fundamentally influenced by the changes in the characteristic features of international financial intermediation. This can be supported by logical correlations, as well as facts.

*As far as the size is concerned:* the ratio of Hungarian financial intermediation – although it considerably falls short of the international level equalling a multiple of the GDP – has significantly increased in the past few years. The volume of the Hungarian financial sector will most probably grow very rapidly, at a rate exceeding the annual nominal GDP growth by 5 to 10%, on a path designed to catch up with more developed countries. As a result, the size of the intermediated capital may double in five years (measured at current prices), or may more than quadruple in ten years. As a straight-

forward concomitant, the so called penetration rate (calculated with the IFM's method) may grow from 156% at the end of 2003 to 310 to 330% in a decade.<sup>3</sup>

Let us now look whether there is any sign of a *shift of gravity between the mediation channels* in Hungary. This question is all the more exciting, since in the past years the “credit hunger” of Hungarian consumers has rapidly grown, and there is much talk about the fact that the Hungarian population demonstrates weak saving performance. The fact that the Hungarian population has invested a significant portion of their savings in real property (real estate, flat, etc.) – which is almost unique by international standards – can be explained with historic processes. (If we accept that, the structure of residential savings typically changed according to the international trends after the year of change: collective savings (pension fund assets, investment funds, insurance reserves, i.e. collectively: institutional savings) have risen much more rapidly than deposits. As a result, the ratio of residential savings to Forint deposits grew to 70 to 75% in 2004, and exceeded 90% by mid 2005. Naturally, this shift in proportions can only be interpreted with extreme prudence in the short run, since the value of the investment market can quickly change, therefore only the trends of longer terms can be regarded as standard. However, based on the data of the Association of Investment Fund and Asset Management Companies in Hungary (BAMOSZ) it can be stated that the ratio of all institutional savings to all deposits – residential deposits, Forint savings and classic bank deposits, as well as the amount of repo transactions – was around 37% at the beginning of 2002, but exceeded 50% by mid 2005 – with smaller or larger fluctuations.

Similar trends are indicated by the data series of the National Bank of Hungary, too. In the past ten years the indebtedness of the Hungarian population has drastically increased;

the volume of credits has grown by over eleven times. Within the population's net financial wealth the ratio of deposits dropped from nearly 50% to 43% between 1995 and 2005. The picture is even clearer if we look at the gross savings (i.e. the financial assets only) of the past ten years: the 42% deposit ratio of 1995 fell to 31% by the end of 2004. Thus, we may risk saying that the shift in the point of gravity of the financial intermediary channels – typical for international markets – can be observed in Hungary, too.

In terms of *technological advancement* relevant for the development of the financial market, the Hungarian market can be characterized with processes identical with the international trends. The number of mobile phone subscriptions has grown from 1.6 million to 9.3 million in the past five years<sup>5</sup>, while the number of personal computers in household use has increased from 1.1 million to 3.3 million. In 2002, only one per cent of the computers had live Internet connection. By early 2005 this ratio grew to 14%, and within the same period the number of Internet subscriptions also increased significantly, from 320 thousand to 741 thousand. All these figures indicate that technological development in Hungary keeps pace with – or in certain segments exceeds (e.g. popularity of mobile phones) – the average international trends.

*It is worth noting that in Hungary it is actually on the financial markets where one can observe a specific feature of countries striving to catch up with their more developed counterparts, i.e. that such countries skip those stages of development that are regarded as dead-ends. A classic example is skipping payment by check, i.e. the transition from payment by cash to the use of plastic cards. A similar example could be the shortening or skipping of the transitional phase from Hungary's underdeveloped wire telephone network to the widespread use of mobile phones.*

The *combination of products* is also an everyday experience in Hungary. The combination of investment coupons and deposits has been a typical example of the past years. The wide range of examples also includes the payment of parking fees via mobile phones, the appearance of fidelity cards issued by the different department store chains, the combination of insurance and credit products.

Naturally, product combination is not separate from the *institutional concentration*, which is typical for the Hungarian market, too. From this aspect the data are rather assuring. At the end of last year over 80 per cent of the market was dominated by 20 groups of financial institutions. On average, over ten financial institutions belonged to each group, wherefore a total of 224 institutions were affected. (Naturally, these institutions included banks, investment service providers, insurance companies, pension funds, leasing companies, factoring companies, etc.) The list can be continued with the Hungarian agreement between ABN Amro and the Belgian KBC, the acquisition of Postabank by Erste Bank, up to Allianz Insurance Company's current intention to establish a bank. However, these figures and facts represent only such events that are initiated in Hungary or that concentrate on the Hungarian market. However, we are well aware of the fact that due to the *international embeddedness*, Hungary is also influenced by fusions of regional importance such as the merger of HVB and Bank Austria, which later extended to Unicredito, too.

## SUPERVISORY CHALLENGES

It can be laid down without a doubt: significant changes have occurred on the financial markets of the world in terms of size, products, technology, institutions and international cooperation. Therefore, it does not take much courage

to say that all these processes are typical for the Hungarian market, too.

The financial supervisory authorities must keep an eye on the transforming market everywhere. This is why it is necessary to review what these changes mean for supervisory tasks and for the responsibility of risk management in general. Every supervisory authority – and naturally every financial authority, including the Hungarian one – sets its tasks so that they would foster the transparent, reliable, socially acceptable and safe operation of the area (part of the market or the market) assigned to it. This is reflected in the duties of the Hungarian Financial Supervisory Authority, too that were revised in 2005.

“... as a member of the supervisory community of the European Union and in an integrating financial market, the Supervision shall:

- ensure reliable, continuous and transparent operation of the financial markets;
- strengthen confidence in the financial markets;
- promote the development of financial markets based on fair competition;
- protect the legitimate interests of market participants;
- support the reduction of consumers' risks by providing access to adequate information;
- actively participate in eliminating financial crime.”

It goes without saying that this is not a static task description; this is why the adjective “integrating” – meaning a process – is used already in the introductory phrase. Therefore, in the future the tasks of the supervisory authority can be surely and exclusively determined on the basis of the market changes. From this aspect it is worth asking what the difference is between the *supervision* and *control* of financial institutions. Control is a static concept, because it always compares a situation that has evolved against a (formerly fixed) set of requirements.

(This holds true for the authorization activities of the controlling organizations too, since they compare the written facts to previously formulated requirements.) The length of control can of course vary significantly, it may stretch from the formal requirement of legal requisites to the inspection of the regularity of concrete contracts.

On the other hand, supervision is a more dynamic concept. Its subject is the *future* instead of the *past*, or the *possible* instead of the *present*. As a result, the fundamental task of supervisory authorities (including the Hungarian authority) is to assess and manage the risks of the future by responding to the real processes. From this perspective it is especially worth examining what tasks the Hungarian supervisory authority faces as a result of the market processes described in the above sections. (Let us now focus on Hungary only.)

The growth of intermediated capital entails that on one hand the mass of assets guarded by financial supervisory authorities are greatly increasing, i.e. the stakes, the responsibilities of supervisory authorities are growing. Secondly, the income coverage of financial liabilities decreases, and the risk of lending (intermediation) increases in general. Thirdly, due to the growing number of chain-like connections between the financial markets and institutions, there is a growing systemic risk of non-performance of liabilities and of all other kinds of operational disorders. This means that due to the size of the financial wealth both the risk of individual lending transactions and the systemic risk of accumulated disorders are growing.

Rapid development complicates adjustment to the new technological conditions, and the speed of change makes it more difficult to identify new risks and to introduce procedures that are suitable for the elimination of such risks. Disorders of the IT and telecommunication systems, as well as new types of criminal acts (money laundering through electronic

means, Internet fraud, data theft and terrorism) also have to be taken into to a greater extent. In addition, the expansion of the available information and the range of possible courses of action are, in some cases, prompting financial decision-makers to assume new, greater risks.

The expansion of the product range, as well as the various combination of products, services and service providers are increasing the information gaps between service providers and customers (information imbalance), eroding the transparency of the market, which makes it difficult to raise risk awareness. The increased concentration of capital and management, the geographical concentration of certain financial transactions make risk distribution and sharing, and the analysis thereof complicated. This enhances the need for a more thorough analysis and more efficient management of the correlations.

In the forthcoming years – due to the rapid development of technological and institutional conditions, as well as the still strong driving forces behind globalisation – one can expect an exponential growth in international financial activities. And this requires the reinforcement of the international activities of supervisory authorities working within national frameworks.

These phenomena themselves represent new threats and serious tasks for the supervisory authority. In addition, one must take into account that in May 2004 Hungary became part of a unified (unifying) market. Therefore, we must harmonise the rules and standards, since different regulations would make a dent in the competitiveness of the European market. This is why we can realistically count with the gradual elimination of regulatory differences. In the long run a standard community regulation can be expected in the European financial sector, and in line with this, we can expect the development of a supervisory network based on uniform standards.

## RESPONSES OF THE HUNGARIAN FINANCIAL SUPERVISORY AUTHORITY

### Transformation of the management structure

The first question that we need to ask ourselves is whether it is possible at all to complete these new tasks in the current Hungarian or classic public administration management structure? Is it possible that task-setting adjusted to the changing environment, the implementation of the concrete actions of the authorities, the comprehensive evaluation thereof, etc. be concentrated in one hand?

The answer is quite evident: no. In the controlling organisations one level management does not necessarily pose a problem, since the task is to meet the set rules. However, if we need to and want to give efficient (adequate) answers in a constantly changing environment, we need to have a two-level management system: on one hand we need a level that sets the strategies and the requirements, and performs the evaluation, on the other we need a separate level that manages implementation.

*Although the management system in effect at the Hungarian Financial Supervisory Authority since May 2004 is novel in the Hungarian public administration system (with the exception of the Communications Supervisory Authority, perhaps), most financial supervisory authorities of the world already operate in this two-level system.*

However, the classic internal division of the management system (between the directorate and the management) now used worldwide due to the needs of our time, cannot only enhance the efficiency of operation. It is equally important that two further basic requirements are becoming stronger: independence and accountability.

The supervisory authorities – including, naturally, the Hungarian Supervision – are funded by a community so that major financial market problems could be avoided. (Funding is independent of the method of financing, since this is a community service that is ultimately always paid by the society.) If accounts of task performance were given at the level of implementation, and of each action carried out by the authority, the Supervision would practically be paralysed. Or all new challenges and changes would be (totally) banned – which would hinder development (as several Hungarian examples show) – or the responsibility for the decisions would be typically passed on to others.

The establishment of the new level of strategic development, i.e. that of the supervisory board, created the possibility for the clear separation of responsibilities. Supervisory tasks became accountable in a manner that during the evaluation of concrete supervisory decisions, actions, etc. only the concrete facts can play a role. In the concrete cases decision-making and evaluation are carried out by different people. This makes it possible that in addition to the independence from the other authorities, as stipulated by the law, independence from the market (from the market players) can be ensured, too. And this is the often cited supervisory independence. This is the most important factor, since real independence can only be created with professional expertise and competent and substantive behaviour. The fact that the market and the public administration institutions are linked to the Supervisory Office not directly, or not primarily, but only through the Supervisory Board, did strengthen this independence based on professional competence and responsibility. The separation of the strategic and implementation levels naturally made it necessary and unavoidable that the Supervision – and both levels thereof – should be transparent for the decision-makers, the market and the general public alike. This

requires that the decisions, reports, etc. should always be given real and not only formal publicity.

### Establishment of a really integrated supervision

The advancement of integrated supervisory authorities was triggered by the size of the market and the diversity of products. The increased integration of the markets and the service providers, the general concentration of the capital and management require the strengthening of similar processes now and in the future, too.

Due to the interdependence of the market processes, the financial supervisory authorities increasingly aim at closer cooperation among themselves. Although they represent a major step forward, many of these solutions remain at the level of consolidation of formerly separate supervisory authorities.

The Hungarian supervisory authority was one of the authorities that embarked on this road. The supervisions were channelled in this direction – i.e. towards a system operating under a single “umbrella organisation” – already by the operation of Hungary's universal banks, in which capital market products and credit products are offered by one institution. Although governmental intentions have always exceeded the formal integration of the supervisory authorities, it was this transformation of the management that made it possible to move one step higher on the ladder of integration.

According to the traditional supervisory – or, more precisely, auditing – concept, the scope of the supervisory authority focuses on the individual players of the regulated market (authorization of entry into the market, ensuring compliance with the rules in each institution, etc.). However, the appearance of universal banks in Hungary and then the changes arising from the emergence of market groups made

it clear that this approach (institution specific authorization and controlling methods) cannot be maintained any more. (What is more, the group supervisory authority does not only inspect the regularity of the supervised institution, but also that of organizations that may influence such institutions, even though they are not under the jurisdiction of said supervisory authority.)

A consolidated supervisory authority becomes really integrated if the supervisory aspects and methods, as well as the principles and methods behind the approaches become similar. This requires that the supervisory authorities should find the elementary particle that is common in all activities carried out by the different financial institutions, and which could be directly compared already in the first round, irrespective of the category to which the institution or the product belongs to. This common elementary particle is risk.

The fundamental obligation of the participants of the financial intermediary system, i.e. that they must be able to timely and fully pay their liabilities, is becoming an especially complex task in the case of integrated activities – due to the increased sizes, the combination of products and service providers, the increased significance of the groups and the transferability of certain risks. For example, the risk of a financial group is not necessarily equal to the sum of the risks borne by the group members. A customer's risk may be relatively low in one of the group members, but if the same customer is linked to all other group members, this could pose a significant risk. These connections can only be realised and handled by a really integrated supervisory authority.

Technical progress further increases the significance of operational risks: i.e. there should be no such event or situation in which something – even a technical problem – would hinder the financial service providers from meeting their obligations. Personal risks also belong

to this series of logic: the size and complexity of financial intermediation does not grow by themselves; the responsibility of each employee grows, too. This means that the flawless operation of the management and the internal control system is a key issue because of the personal risks, too.

These risks no longer belong spectacularly to a specific product or institution. However, the status of each service provider or service can be rebuilt from the elementary risks. And this is the essence of integrated supervision: each institution or activity is first dismantled into elementary risks, and then reassembled with newer and newer methods. The former, one-sided institution centeredness is also questioned by the fact that in many cases financial innovations appear in non financial institutions. However, if the supervisory authority is responsible for the safe operation of the entire financial market, it must be able to recognise and handle these external phenomena in time.

The market of financial services is purposefully strictly regulated: it is evident that supervised institutions (those subject to authorisation) must be evidently in the focus of supervisory activities. However, the real market is a broader category: it includes the consumers, the customers in general, those who collect funds directly on the capital market (issuers) and market institutions such as stock markets or clearing houses. The fair and transparent cooperation of all these actors provides the background with which a relatively developed financial market can function and further develop.

However, it cannot be denied that there are actors that “influence” the financial market by providing financial services without a permit. The early discovery and harsh punishment of unauthorised (often illegal) activities naturally do not mean that the supervisory authority would make such activities legal with this extension. However, the security of legal market players requires that the supervisory

authorities should focus attention on this illegal segment, too, since these “disrupters” cause unfair competition and disturbances for financial institutions that operate with a permit.

The market practice according to which the products and institutions can be less and less linked to the different sectors, and that the boundaries between them are becoming increasingly blurred, required the reinforcement of the so called market conduct activities of the supervisory authorities. Necessarily, this had to be extended to areas located at the boundary or beyond the boundaries of the classic categories under supervision, which can significantly influence the financial markets irrespective of their legal status. The stable, transparent and prudent operation thereof has always been the responsibility of the financial supervisory authority.

### Organisational restructuring

The difference between the really integrated or simply consolidated supervisory authorities obviously manifests in the organisational structures, too. The new supervisory organisation replacing the former organisational frameworks – which were designed to meet the controlling and right enforcement tasks tied to the different sectors – fundamentally reflects that the intermediary activities of the players of the financial markets is shifting. Furthermore it reflects that the registered financial institutions and other non financial market factors may equally influence the operation of the markets. This is why the Hungarian supervisory authority developed already in 2004 the new organisational structure based on two pillars, where the *market surveillance* function has been elevated to the same rank as that of the traditionally prudential *institution supervision*.

Another major organisational concomitant of integrated supervision is that due to the com-

combination of the market processes, the traditional structure of super- and subordination is becoming less and less efficient. The role of horizontal cooperation is increasing since similar risks must be handled in a similar manner. This requires a matrix type organisational structure: within the supervisory authority in compliance with the activities and institutions, and partly in compliance with the various financial and operational, market, etc. requirements. This is the other major supervisory trend which can already be observed in the work of HFSA. This goal is served by, among other things, the establishment of permanent professional committees within the Supervision, as well as by the projects launched for the solution of major issues.

The basic concept of integrated supervision, which is based on the collective and comprehensive realisation of the combinations of elementary risks, and the related organisational solutions make it necessary to create the conditions for risk based supervision as soon as possible. Realisation of the risks requires well-considered, organised and thorough analysis, which also necessitates the existence of high level expertise. At the same time however, the fact that the supervisory authority uses the resources of the community – i.e. its possibilities are far from being indefinite – made it inevitable to quantify not only the probability of the risks, but also the impacts and consequences thereof. This means that today we must give up the automatic and mechanical application of the classic reference books on supervision in methodological questions, too. Instead, the focus must be shifted to ongoing supervision.

Finally, we must discuss another organisational element representing the increased social responsibility of integrated supervisory authorities. This element led to the establishment of the controlling department (which ensures the accountability of the supervision, i.e. systematically monitors the use of resources) and the

creation of the independence of efficient internal controlling. Both organisational elements can operate efficiently only where the two-level management provides the environment in which these organisational units may perform their tasks smoothly and fully, i.e. unrestricted by the day-to-day operation.

### Creation of a new supervisory concept

The risks arising from the emergence of increasingly complex products, the combination of service providers and services require changing regulations and more complex supervisory procedures. The latter could be developed based on the revolution in IT solutions, which allowed for the more detailed and precise description, assessment and modelling of the products and the risks they carry. The main examples for this are the new capital agreements (Basel II and Solvency II) which were concluded in the banking and the insurance sectors, and the details, the prospective application and operation of which will radically transform the work of financial supervisory authorities during the forthcoming years.

The essence of the new approach can be best described by the term “ongoing and substantive supervision”. As the market processes become more and more complicated, the evaluation of individual money, capital or insurance market phenomena becomes impossible and also insufficient. Naturally, ensuring the legal operation of the institutions remains an important task, however this in itself is surely not sufficient any more. The first element of *ongoing substantive* supervision can be thus characterised by the fact that while all available information is gathered, the real task is the ongoing analysis, evaluation of such information including the exploration of the correlations, the regrouping of such information according to the new aspects, and the systemic re-evaluation

thereof. This is what we call a *360 degree approach*: we must be able to understand and judge all phenomena of the financial institutions from every aspect. The second element of ongoing and substantive supervision is that the collection and evaluation of the large volume of information make it possible to use supervisory resources in a more rational way, since the size of the different risks and their respective negative impact on the market can be assessed collectively.

In this approach a new and important element is the considerable growth of the responsibility of the staff of the supervisory authority. The “supervisor of the institution” must be able to decide whether a phenomenon related to a certain institution requires further analysis, or maybe the launch of an investigation – and if yes, what kind of and how thorough this analysis should be. This increased responsibility can only be assumed (borne) if a new approach evolves in addition to the above-mentioned modifications in organisational management. Instead of auditors looking for flaws, the mentality of supervisors who want to and are able to mitigate the possible risks of the financial institutions in a proactive manner shall become prevailing.

As part of this new approach, non-mandatory elements of market influence will also strengthen. The rapid market changes make it nearly impossible for legislators to respond with the required high level rules of law. It is often doubted whether it is justified to respond to the new phenomena immediately with rigid rules. It must be understood that – even if the development of new rules of law is justified – the preparation and approval thereof is usually a long and tedious process, and the market has all rights to expect some orientation during this transitional period. The supervisory recommendations are designed to resolve this contradiction. The recommendations are not mandatory, but they contribute to the transparency of

the market. So that the level of acceptance of a non-mandatory rule would be high, and that the professional standards of communication between the market players and the supervisory authority would be well-founded, in 2005 HFSA introduced a consultation mechanism via the Internet (which had already proved to be working in the EU practice). Compared to the traditional short conciliatory talks, this seems to be a procedural system capable of exploring the broader, professional and content related correlations and details.

There is no doubt that the safe operation of the financial market has been and will be the responsibility of the financial supervisory authorities in the first place. However, we must know that we can rely on many allies in performing this task. On one hand, there is no doubt that the overwhelming majority of the market players also have an interest in having no market disruptions, since such disruptions make the conditions of the competition unrealistic, and hinder the expansion of the activity and naturally that of income generation. On the other hand, especially based on *the concept of substantive supervision*, the controlling and influencing functions and actual activities of other authorities and institutions could assist the financial supervisory authority in completing its tasks. As a result, the better utilisation of the often cited cooperation needs and intentions is the fundamental interest of all of us.

In the current practice of the Hungarian supervisory authority regular meetings are held with the professional associations of the different sectors for this purpose, too. Meetings provide an opportunity for the supervisory authority to get acquainted with the new phenomena of the financial markets more rapidly and thoroughly. Furthermore, meetings offer a platform for launching free discussions between the market players and the supervisory authority about the conditions for the undisrupted operation of the market. However,

apart from the market players, the supervisory authority maintains regular connections with all organisations that have a certain obligation in relation to the transparency of market processes and the safe operation of the financial institutions, or at least are interested in that. So for example, auditors and internal controllers are actually the allies of the supervisory authority, since their representatives are the first ones to meet the risks at the earliest time during their daily tasks. The importance of this cooperation, or more precisely, the consequences of not taking the necessary steps were well demonstrated by the infamous Enron and then Parmalat cases, in which significant damage was sustained – partially – because the “first filter” did not move properly, to put it mildly.

The third group of HFSA's allies is made up of all those authorities and organisations that are not authority affiliated that have their own control profile, and may greatly contribute to the work of the prudential supervisory authority by analysing the activities of the same market players from a different perspective. Such organisations include the Hungarian State Audit Office, the Economic Competition Office, the State Tax Authority, the Customs and Excise Office, and the Governmental Control Office. These institutions may draw attention to the new market trend through their respective cooperation agreements, with regular consultations. (Obviously, the protection of individual data is of utmost importance. However, the knowledge of the typical and common tax avoidance techniques may be helpful in the development of methods for the investigation of money laundering, and anomalies found at the financial institutions may also be thought provoking for other fields.)

For the regular operation of the system of financial institutions, and similarly to the majority of the EU member states, there is a so called tripartite stability agreement in force in Hungary, too, among the Ministry of Finance,

the central bank and the supervisory authority. This special agreement was brought about by the common responsibility assumed for the balanced operation of the financial system, and the diverse tasks. The Ministry of Finance, which is responsible for the budget and for regulation in general, the National Bank of Hungary, which is responsible for the monetary policy, and HFSA, which supervises the transparent and reliable operation of the financial markets regularly review the status of the entire financial system and the necessary tasks.

### Integration into the European supervisory network

The supervisory responses to the market challenges have so far mostly focused on the issues of internal integration. At the same time, however, one of the major elements of integration is the European integration of financial markets – and as a result, the supervision thereof. Therefore, the requirements of the unifying European market have been unduly neglected for a long time. However, the globalisation of the economy and the resulting globalisation of the financial shed a new light on the international integration of the supervisory authorities. The traditional cooperation, experience and information exchange between the supervisory authorities, which was fundamentally based on bilateral ties, was only the first step, because these relationships centred around the individual financial institutions. (When the owner of a financial institution of a country owned a financial institution in another country, but those were run in compliance with separate, independent regulations, more extensive supervisory relationship was not really needed.)

However, since the boundaries between the products and the institutions have become blurred, and the elementary risks may appear in any other European country at the discretion

of the financial institutions, the supervisory authorities must face a new situation. And this means that without actual, really comprehensive cooperation no European supervisory authority can be sure that it can fulfil its main function: to ensure the smooth and transparent operation of the markets. Within this process, the versatile cooperation of the EU member states, as well as the harmonisation and standardisation of the regulation and supervision of the financial sector are becoming more and more intense.

Of the *principles of freedom* of the European Union (the free flow of capital, goods, services and labour) especially two, the free flow of capital and services influence considerably the market of financial services, and naturally the supervision thereof. As a result, it is an inevitable desire to have an internal market in legal terms, too, and thus to reduce the national separation of the financial service providers and usually that of financial activities. And if the financial markets are unified, the regulation and supervision thereof must follow the same direction.

The free flow of services and the harmonisation of the rules created the possibility that the single European financial market can be entered from any member state. This fact is important from two aspects. On one hand, each supervisory authority will have increased responsibility. If service providers supervised by a certain country cross the border, they take the responsibility of their supervisory authority with them. Their original, home supervisory authority will become responsible for the reliable and fair operation of an institution (service provider or product) on a market of 400 million people. The other side of this issue is the trust between the countries and the inspectors. Namely, since the host countries must accept the decision of the supervisory authorities of other countries, the countries need to build trust in one another. One token for this

can be the so called *Lámfalussy-process*, which provides a framework for cooperation among the supervisory authorities. The fact that in addition to the political forums that make the most serious decisions (European Parliament, EU committees, etc.) the EU member states established the so called third level, independent supervisory committees indicates how serious the EU is about creating a single financial market.

Supervisory cooperation, mutually accepted recommendations, the standard interpretation of rules, etc. are – for the time being – aimed at the harmonisation of the supervisory boards of the parent company and its subsidiaries (home host supervisory authorities). This is especially important for the Basel II and Solvency II processes, since in these processes the aim is the mutual acceptance of the methods and models applied or to be applied by the institutions. From the aspect of ownership logic it is evident that the parent institution sets the rules. The problem with this is that in many cases the subsidiary operates in another environment and under the jurisdiction of another supervisory authority. In today's Europe this so called home-host problem seems to be very serious, wherefore a significant part of the discussions is aimed at the resolution of this problem.

This means that the above-mentioned phenomena also require the enhanced international integration of supervision. The EU legislations (the directives) are introduced through the internal legislative acts of the individual countries. However, for the time being, standard interpretation is ensured and served only by the cooperation network of the supervisory authorities. It is not yet clear at what pace this cooperation between the supervisory authorities will change, and will make way for a more coordinated, European supervisory concept. However, as long as the internal borders remain in place – and real cross-border activity remains modest partly due to this fact –, this

type of supervisory cooperation network based on trust will work, albeit with more or less hitches and more or less tensions. However, there is no doubt that if the actual flow of services will pick up, the need for the operability of the market, and the supervisory authorities' responsibility to ensure such markets will force the establishment of a (more) standard supervisory system, in addition to the further strengthening of trust.

### The strengthening of consumer protection

The expansion of the financial markets and the increasingly complicated product schemes have widened the information gap that has always existed between the professional service providers and the lay consumers. In the new logic of supervision the reinforcement of consumer protection is based on the fact that the tension between the financial service providers (the supply side) and the consumers (demand side) – primarily retail customers and not the institutional consumers – is primarily attributed to the inequality of information available to them. Consumers have had little information about the increasingly complicated products and the inherent risks even before. On one hand, this relative ignorance may temporarily increase the marketability of these products. On the other, this significantly increases the risk of the entire financial system, since the concentrated outbreak of unrealised, yet massively undertaken risks may jeopardise the service providers, too. The consumer protection activity of HFSA – partly as a result of the aforesaid – is of course not primarily aimed at remedying the complaints of individual consumers. Instead, HFSA regards such complaints as important and general information affecting system risks, too. Therefore, complaints lodged against several institutions require a general need or require-

ment for information, maybe immediate market protection measures. On the other hand, institution specific complaints provide fundamental information that may later influence security for those *in charge of the given institutions*.

### THE PRESENT

If it is more or less clear and acceptable which way the global financial markets are heading, and it is also evident that these directions are typical for the Hungarian market, too, it is worth asking ourselves the following question: how far have we got in the development of the new, *integrated, ongoing, substantive and proactive supervision*?

The market processes described in the first section made it necessary, while the restructuring of the management system outlined above (to separate the Supervisory Board and the Office) made it possible for the Supervision to develop its strategy up to 2010. After long and thorough debates the Supervisory Board determined eight new lines of action in the new strategy of HFSA. Several of these lines of action have already been discussed:

- ongoing and substantive supervision,
- the analysis of professional contexts,
- reinforcement of the international character of the supervisory authority,
- the need for implementing EU regulations,
- the requirement of active market influence,
- the elevation of prudential supervision and market surveillance to the same rank,
- the efficiency of the use of resources.

The *most comprehensive line of action*, which is probably the most characteristic feature of the new strategy, is clearly the enhancement of the responsiveness of the supervisory authority. If the financial world around us is in constant change, we must establish a supervisory author-

ity that is able to fulfil its function in such a world. This means that the ability to respond to the changes quickly and firmly must be developed and enhanced in each employee of the supervisory authority. We must make ourselves and our environment understand that something that was good before is not necessarily good today, and the sustained application thereof under the new conditions may not be effective any longer. From this perspective, the most general formulation of the strategy shall govern: “By elaborating the strategy of 'Efficient Supervision' we aim to prepare the supervisory authority prepared for the foreseeable changes and to ensure that the Supervision has the capacity to respond to unexpected changes.”

It may seem contradictory, but to the question in the title we must answer that the implementation of the strategy started with the preparation of the strategy. Already the formulation of the strategy required us to systematically review where global finances are heading, and where the Hungarian market is heading? We also had (have) to regularly assess the strengths and weaknesses of the current supervisory authority in a (self-)critical manner, and

must determine whether the former and current organisational forms or structures suit the new tasks outlined above. By being able to define these principles we actually set the most important direction of implementation.

Apart from the formulation of the strategy, the most spectacular result was achieved by starting the unification of the act pertaining to the procedures of the supervisory authority. With this we do not want underscore a range of other, equally significant initiatives, such as the commencement of the consultation mechanism or the work of the supervisory committees. Since the act on HFSA amended in the autumn of 2005 – and which entered into force concurrently with Act CXL of 2004 on the rules of public administration procedures and services – implemented the first stage of the unification of the former, sectorally fractured procedural rules, and thus the development of integrated supervision in the framework of laws, we are continuing this path. And we can already see the next stage, which can be the enactment of the Act on the payment of standard, risk based supervisory fee – hopefully already in 2006.

## NOTES

<sup>1</sup> European Economic Area, member states of the European Union, as well as Iceland, Norway and Lichtenstein

<sup>2</sup> Global Financial Stability Report (IMF, Washington D. C., March 2003)

<sup>3</sup> István Rácz: Long-term forecast about the expected changes in the international and national macroeco-

omic processes, the development of the global money and capital markets and the requirements set for the system of financial institutions and the financial supervisory authority. HFSA workshop studies, manuscript, January 2006, page 3

<sup>4</sup> quarterly reports of BAMOSZ

<sup>5</sup> National Communications Office, quarterly reports

*From time to time our editorial staff makes it possible for noted economic experts, the well-known representatives of the profession, to disclose their thoughts, speculations, opinions and standpoints in the form of pamphlets or essays practically in a free, out-of-the-ordinary manner, without complying with the content and presentation standards and requirements set for professional publications. This time the respected Readers may get acquainted with an opinion written by professor Dr. József Veress, university head of department, dean of the Faculty of Economic and Social Sciences of the Budapest University of Technology and Economics, member of the editorial staff of the Financial Quarterly.*

József Veress

## *Subjective diagnosis on the relationship of economic policy and globalisation*

**H**alf of the first decade of the 21st century has passed. The years “two thousand and...” have become a natural part of our everyday life. The global economic, technical and technological, environmental and infrastructural changes that affect almost all aspects of human life continue to be fast, and are even accelerating in certain respect. The political potent field of force is becoming increasingly entangled, while it seems that we are more and more, and at the same time less and less aware of the visible key phenomena.

### FROM THE TOTALITY OF GLOBALISATION TO THE LOSS OF DOMINANCE OF ECONOMIC THEORIES

If we include the last five years of the past century in our survey, we are doing more than simply providing the symmetry. I think that the

totalisation of globalisation started in the second half of the 1990s. At the beginning of the new five-year period starting in year 2006 there are clear signs that indicate that economic theories directly tied to the economic policy are being pushed aside. Along a time axis one can define the past ten years as a period leading from the totalisation of globalisation to the – presumably not too long – period of the recess of economic theories.

I consider globalisation a process that is fundamentally about power and economics. In the course of this process the actors of the world economy that are becoming the most powerful standardise and generalise the rules of the economic and political games via the most significant international institutions, within the existing legal frameworks and within those being formed by them, as well as on the basis of their own interests. This interpretation excludes or

evades the debate that is/may be under way about the starting date of this extremely weighty phenomenon, and does not get involved in the rather fruitless jungle combat about whether – for example – the 19th century can be regarded as the age of globalisation. Obviously, it cannot.

The signs of fully fledged globalisation can be divided into four groups. The symptoms and the most important events of the ten years' period under survey can be summarised as follows (J. Veress, 2004/a).

① **THE WORLD HAS BECOME SINGLE-CENTRED.** After the global setback of socialism (Marxist anti-capitalism), the United States assumed a hegemony in the arena of world politics. The 2001 terrorist attack on the US, the war in Iraq and the deepening Palestine-Israeli conflict in the Middle East have made this leadership extremely complicated, delicate and questionable. More and more signs indicate that the self-declared leadership of the Western civilisation is strongly debatable, too. China, which has become an increasingly determining actor of the global economic area, is step-by-step becoming the pendant of the US.

② **THE NEW ACHIEVEMENTS OF THE INFORMATION SOCIETY THAT ARE SPREADING IN AN EXPLOSION-LIKE MANNER – SPECIFICALLY THE INTERNET – TRIGGER A FORMERLY UNTHINKABLE COMMUNICATION REVOLUTION.** The achievements of the information technology are really fascinating, the everyday life of the “man of the street” changes in front of our eyes. However, we must also point to the hazard implied in the acquisition of the vast information within the shortest possible time and at the smallest relative costs: the development process also implies the technical possibilities of the abuse of information, too. Those occupying powerful positions obtain more plentiful and confident information – even about us – with less and less efforts and within less and less time. If we can see the typical streets and houses of our home

towns “free” on [www.earth.google.com](http://www.earth.google.com), and with adequate knowledge of the locality we may even estimate the season and year in which the tomograms were taken, and knowing that items that have been deleted several times from our computers can be easily retrieved, we may easily imagine how much else is known about us without our knowledge.

③ **THE REAL ECONOMY IS MORE AND MORE DOMINATED BY THE FINANCIAL ECONOMY.** This is the point of the sharpest tensions between the various economic and social views. It is a fact that the total turnover of three working days on the world's stock exchanges equals the annual value of worldwide exports, which is an astounding fact in itself. The turnover of goods equals merely two per cent of the turnover of the financial markets. Daily foreign currency exchanges and interest payments total USD 1,900 billion and USD 1,200 billion respectively. There is enormous free capital awaiting investments worldwide, and in the case of companies with the largest capital only the management is known, the real owners are not. More and more signs indicate that the stock exchange processes cannot be used, or can only be used prudently for the evaluation of the companies.

④ **THE COUNTRY CATEGORY WHICH ONCE USED TO BE ONE OF THE MOST SIGNIFICANT FEATURES FOR THE CHARACTERISATION OF THE STRUCTURE AND OPERATION OF THE WORLD, IS BECOMING MORE AND MORE MARGINALISED AND INSIGNIFICANT.** (To illustrate the situation let me cite a case which may look extreme compared to the entire economy. According to a draft version of the Hungarian Film Act of 1996, some of the profits yielded by the mighty film distributors in Hungary could have been reinvested in Hungarian film-making. The draft was not finalised because the representative of the “mighty” told the Government: in case the draft is approved, Hungary will not receive the “mostly favoured nation” status.) This symptom, too, shows a general trend. The exceptions or partial

exceptions depend on the level of development, size, unavoidability or patriotism of a given country. The United States of America and – in reference to the first section – increasingly China stand out among the not many exceptions.

It is justified to speak about the totality of globalisation since the beginning of the coexistence of the four conditions, irrespective of the current state of the – often meaningless – debates about the beginning of the phenomenon.

The representatives of mainstream economics and the international financial institutions regard globalisation as a fully positive process. In the so called Washington Consensus they have elaborated they recommend developing and moderately developed countries to pursue a healthy economic policy aimed at maintaining the strict equilibrium of the macroeconomic parameters, offering broad opportunities for the influx of foreign capital. The opinions of the representatives of the basically conservative standpoint, who voice both the positive and negative effects of globalisation, are still predominantly based on the works of the German sociologist, *R. Dabrendorf*. According to this standpoint, globalisation is useful because within the frameworks of the single global market – even in an underdeveloped country – new fashionable needs (mobile phones, fashion clothing, etc.) can be satisfied with an unprecedented speed. They believe that it is also a positive yield that in the business world the reduction of costs or specific costs has become an absolutely top priority category.

The representatives of this standpoint regard the enhancement of regional inequalities, the fact that the boundaries between the rich, the middle class and the poor solidify, and the lack of possible trade-offs as negative effects. Furthermore, they are resentful about the clearly diminishing solidarity in our globalised world. They believe that the process is rather aggressive and local resistance shall be expected. (One can really witness such resistance at the time of key events

held by forces advocating globalisation.) The members of the third group clearly reject globalisation. *D. C. Korten* and his followers start out from the fact that a globalised world is no longer a market economy, but “turbo-capitalism”, where the market and competition rules are made by the most influential actors at their own discretion. Both the economic and non-economic worlds are practically directed by the largest financial investors and the special hedge-funds (speculative investment funds). Competition may be fierce even among them, but the smaller actors stand no chance at all. They believe that stock exchange processes cannot provide adequate signals for the real economy, because amongst the extremely complicated financial technical operations, in the world of derivative transactions, the time horizons of investments become unrealistically short.

It is not easy to demonstrate the loss of credibility of economic theories that are directly related to the economic policy. First of all I must emphasise that many times the problem is inherent not in the theory itself, but in its representatives who act on its behalf and emphasise such theory beyond any criticism from economically dominant positions – and who reject other views *ab ovo*. Theories are based on premises and presuppositions the relevance of which tends to change with time.

At the beginning of the period under review there was a heterodox stabilisation programme under way in Hungary, which became the main direction of the economic policy of that time, and was even “named after” then finance minister Lajos Bokros. The opinions that have accumulated by the tenth anniversary of the program can be divided surprisingly similarly as the views aired on globalisation.

The overwhelming majority of opinion holders believe that the program was a series of economic policy steps taken in the very last moment and implemented practically flawlessly, and which helped in regaining the trust of

foreign investors (first concept). Views according to which the program was basically right, yet the savings from the radical cuts in public finance expenditure, and privatisation revenues should have had to be invested into the Hungarian economy instead of the reduction of state debts, belong to the second group. The third group includes the opinions of those who believe that the introduction of the program, including the long speculated, significant devaluation of the Hungarian currency – which meant conscious import accumulation and export reduction by the affected manufacturing companies – triggered a significant change in incomes in favour of global actors who had interests in Hungary, too. For the sake of simplicity let us pin down that no meaningful or real debate was carried out about these views.

With the expansion of globalisation, liberal economic policy, which challenged the dominance of the Keynesian economic policy in the 1980s, reach a specific stage of maturity. It is obvious that with a few exceptions only those global organisations that actually lead the world economy and the US – which is currently the strongest economy of the world – can function with the exclusive use of this economic policy. (Among the exceptions Singapore is worth mentioning. Due to its well-known authoritarian system, this country has never applied a liberal economic policy as a mainstream policy. Yet, being perhaps the most open economy of the globe, it does not apply any regulation to restrict competition.)

However, the situation is much more complicated at the beginning of this century. Economics itself, more precisely, economic science has turned out to be in a subtle situation with due cause (I do not mean the business field, and especially not mean the fields of organisation and marketing logistics). Has economics given up economic policy? – asks *B. S. Frey*, the co-author of the basic books on European economic policy (Frey-Kirchgässner

(Frey, 2002). In his analysis he points out that economists, and consequently, economics, play a diminishing role in the formation of the economic policies. In parallel with this, we have experienced it for decades that the leading representatives of economics accept only the result of the mathematical school, often from the compulsion to prove themselves, and to demonstrate the scientific nature of this discipline. [“Economics has become increasingly formal” – writes Frey (Frey, 2002).] Economics is becoming an autistic discipline, with an increasing number of unrealistic, or even foreign problems raised.

In Hungary, for several reasons – some of which I will touch upon later – the involvement of economic professionals in determining the frameworks of the economic policy has strikingly dropped. (It is another issue that since late 2001 we cannot talk about an economic policy, or we can do so only with much compromise.) In Hungary, the Ministry of Finance lost its leading position in the late 1990s. Since then the Ministries of Finance and Economy have been nearly equal in weight, and this situation was not changed by the subsequent government either. Presumably, the reasons were different, but the end result was the same. The fluctuation in staff, which is said to be continuous, has led to the fact that for the time being (beginning of 2006) there are only two persons in the Government with degrees in economics (the Prime Minister and the Minister of Finance, both of whom had earned other diplomas before). The other important ministry is headed by a medical school graduate.

## CHANGES IN HUNGARY'S ECONOMIC POLICY ENVIRONMENT

Without striving for special accuracy, yet applying specific aspects, economic policy activities can be divided into four groups. The first group

includes everyday routine tasks, such as the management of various issues delegated to different authorities, tax management, the fine-tuning of the economic regulatory system at national and regional level. The second group of activities focuses on strategy formation, the setting of the next relevant “final goal” based on the tasks to be performed in the period of globalisation, as outlined above. The third group contains those regulatory and deregulatory elements that are designed to channel business units functioning within the given country (too), as well as companies maintaining any economic ties with said country in the desired direction. Naturally, these regulatory measures have a limited scope, which scope greatly varies, primarily due to hierarchical structure of globalisation. The most important driving force of the activities in the fourth group is the provision, sometimes forced provision of a humane life for preferably all citizens of the given country. If the completion of economic policy tasks of the second and third groups is unsuccessful for a longer period of time, decision-makers are sooner or later compelled to introduce an economic policy of stabilisation. If the management of tasks belonging to the first and the fourth groups turns out to be unsuccessful, or not adequately efficient, one has a good chance of losing the elections.

However, I believe that there are certain minimum requirements, which I believe are the following (J. Veress, 2004/b):

- there must be an at least medium-term, dynamic, vision based strategy;
- the sequential parameters of the economic regulatory system must show at least trend-like compliance with the tasks set in the strategy;
- the legal and competition frameworks must be stable, transparent and safely predictable by the economic actors;
- in the government-business relation rent-seeking lobbies shall not be decisive in any

sector or profile, or if they already enjoy such a position, their role shall be diminished;

- its internal sovereignty, i.e. sovereignty independent of globalisation to the greatest possible extent, shall enable the economic policy to surmount the usually entangled needs of day-to-day politics.

It is true for all eight post-communist countries that joined the European Union in 2004 individually and as a bloc, too that their economic development and growth depends more on the economic situation of the EU than before. Naturally, their own internal growth components cannot be neglected, either. The European Union – similarly to the new members – is not an independent variable either: its growth potentials are determined by the economic situations of other, strong players of the world economy, first of all those of the United States of America. However, we must refine this statement in the sense that the generated business cycles that are also influenced by the global companies cannot be adequately predicted. [It is another argument why debates on “when Hungary will become par with the developed EU member states” should be handled with due care. The only meaning *ceteris paribus* computations and models have is that they make us realise: we still need plenty of changes, serious and responsible strategic thinking and luck. It is practically nonsense to believe that during the time that Hungary needs to catch up there will occur no technological (innovation), market and political changes that would fundamentally change the field of real economy that was taken for granted before.]

According to different authentic analyses, in early 2006 the world economy is developing at a moderate rate, it is rather in the state of prosperity than recess. The situation is almost never ordinary, but it is especially complex now. The stage of conjuncture, which was generated by

the US, and lasted from the second half of the 1990s to the beginning of this century entailed enormous changes, especially in the field of information technology. Compared to that boom, the conjuncture following the last period of depression, is more modest and contradictory. Uncertainty can be revealed in the words used by the expert research institutions. In its document titled "Economic development, adaptation" (2005), ECOSTAT states the following: "The conjuncture of the world economy reached its peak at the end of 2003, beginning of 2004. Development has continued at a slower pace since the second half of last year. The growth rate significantly varies region by region, especially in the developed countries." (J. Veress, 2005)

In today's processes one of the most typical parameters is the parallelism of high oil and raw material prices – the increase of which has been obviously triggered by the military and terrorist tension points –, and moderate, practically standard inflation. The other distinct feature is that the European Union can only hardly join the current positive business cycles processes, while Asia – not including Japan – especially China and the US are the main engines of development.

In the European Union, the structural and social crisis in the key member states is not over yet, and it is surely impossible to forestall it in the short run. This is justified by the prolonged constitutional process and the recent serious bargaining on the budgetary period of 2007 through 2013.

In my papers I have written on economic policy in the past years I have had the opportunity to explain that in parallel with the strengthening of economic globalisation, state level sovereignty diminishes, but the responsibility of economic policy grows. The feedback to this statement, which is far from being unanimous, has somewhat settled by today. In the tangle of critical global situations, for the

European Union the current, less successful years generate different, but almost equally weighty (significant) responses from the French, British, Danish and Italian leadership, just to mention the most striking examples. For the time being, the new EU member states cannot deal with this situation yet. Actually, they are not yet in the position to be able to deal with it. It requires no special expertise to forecast: the large provision systems of public finances, primarily the healthcare and the pension systems, as well as education will be the next theatre of war for the actors of the globalised world. In the case of the first two systems, for countries that have lived with a market economy for a long time, the current processes can be interpreted either as a second stage, or as the crisis of the welfare state. This does not change the gist a bit.

The coming years will be very important for the European Union: they will be the years of overcoming the crisis. The conflicts related to the approval of the new constitution, the internal problems of the leading countries, the low support provided to the new members compared to the old ones, the probable US-UK proposal, which currently exists only at the level of declarations – according to which the US and the EU shall abandon agricultural subsidies simultaneously in the foreseeable future, the deep conflicts related to the key figures of the next budgetary period, and the sure failure of the so called Lisbon objective (according to which the EU must catch up with the US by 2010) clearly imply the signs of a crisis, despite any declarations.

One can only hope that the intellectual products of the European way of thinking, the new technological and market solutions of the EU, the future common economic strategic measures, the favourable changes of processes in world politics and world economics, the synergic effects of the single market of the Community can change the unfolding trend.

As *Hawking, S. W.* writes in his book titled *The Theory of Everything* (2003): “Quantum mechanics allows the universe to have a beginning that is not a singularity. This means that the laws of physics need not break down at the origin of the universe.” (page 85). The most outstanding physicists of the world worked and pondered a lot before they got to this statement. One can only hope that the current events that occur in the European Union are not foredoomed, and the efforts of the best social scientists and politicians will make the EU achieve an efficiency that was customary before the “great” enlargement.

*The community of authors of the Euromemorandum put forward an interesting proposal in the autumn of 2005. In their opinion, the most important thing for the European Union is to reach an equilibrium between social life and the economic, social and ecological dimensions of European integration.*

*Their major concrete proposals were the following: full employment (state investment program, expansion of public services, working time reduction). The consolidation of social policy (expansion of tools and resources to combat poverty and social exclusion, differentiated minimum standards for social welfare, reinforcement of the public pay-as-you-go pension system). Promotion of a new energy regime (solar energy, renewable energy sources). Significant expansion of the European budget.*

The Hungarian economic policy – if we can use this term at all since the end of 2001, which I very much doubt – still fails to deal with the issue of what sort of Hungary – a new member state – the European Union should face? The Community knew the answer well in advance in the case of Austria, Great Britain and Sweden. And the answer unfolded with time in the case of Portugal, Ireland, Spain and Greece, since the markedly unique strategies of these

countries yielded more and more tangible results as the years went by. In terms of strategy design, I believe, Hungary is among the least efficient countries, at least on the basis of accessible information, documents and professional analyses.

What sort of Hungary should the European Union face, albeit with some delay? One that strives to achieve higher levels of capital assets on the basis of a solid strategy within the shortest possible time? One that does its best to organically integrate into the technical and technological level represented by the developed world? One which aims at reducing the regional inequalities? One which is interested in loosening the dual economic structure? One which can harmonise competition and wage growth interests on the basis of efficiency? One which gives priority clearly to the development of infrastructure? We get no information about any of these issues from the documents prepared dutifully on a continuous basis, mandatorily submitted to the EU organisations, and endorsed by the Government, and which are practically nothing more than general documents. In non-professional terms, the Hungarian economic policy lacks endurance, and if one examines the minimum criteria outlined above, he can easily understand that we cannot really speak about an economic policy, since this policy meets none of these criteria.

When searching for the underlying causes it is easy to formulate those additional and construed factors that reduce the chances of a relevant economic policy to the minimum. Such factors are, for example:

- the system of parameters of Hungarian internal affairs evolved by the turn of the millennium, and has remained unchanged ever since. This system can be characterised by incessant conflicts and disagreements, and enjoys the limelight of the media that claims to be independent with impossible subjectivity;

- the self-liquidation of the economic policy, the subordination of its own interest to the day-to-day objectives of politics;
- the political “elite”, which creates and operates the economy of politics under the aegis of the economic policy (J. Veress, 2004/b. and J. Veress, 2005).

Obviously, the lack of an economic policy shall be interpreted on a reduced base. The past one and a half decades changed the foundations of the Hungarian economy. Corporate structures were fundamentally changed by privatisation, and the emergence of multinational, transnational and global companies. At the current level of liberalisation, the economic policy may use only indirect tools to influence non-Hungarian owned large companies that provide 70% of the Hungarian export performance. The Hungarian economic policy must be given

a new profile. Neither liberal, nor conservative professionals can delude themselves with the hope that the European Union will become a political union in the foreseeable future, similarly to the United States of America. No matter how logical it would be from certain aspects, one cannot even see trends in this direction. The Hungarian economy is very vulnerable. Its immunity to any new crisis on any level is low: the performance of Hungarian owned business organisations has been stagnant for ten years, their productivity and assets constitute a mere fraction of the values typical for the developed world. We are very sensitive about dilemmas related to the reform of the system of public finance. We must set to solve the pressing tasks. First of all, the economic policy must once and for all break away from everyday politics.

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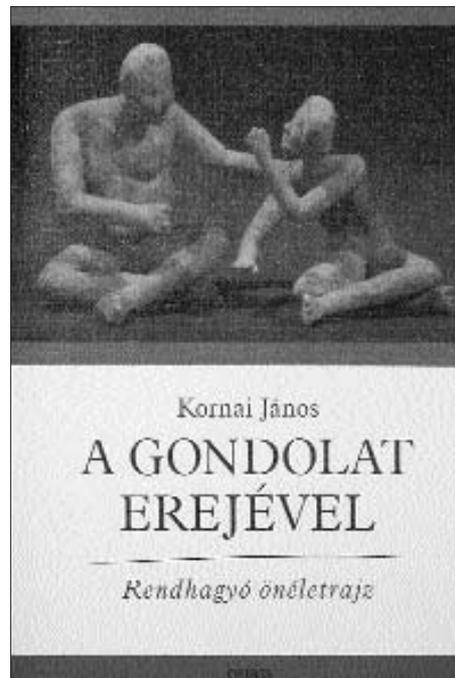
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János Kornai

# *With the Power of Thought*

*An Irregular Autobiography*

OSIRIS PUBLISHING HOUSE, Budapest, 2005



This book is not a traditional professional autobiography. It is not (more precisely, not only) about works and the conditions in which they were born – wherefore writings responding to the book were either not (or were not only) published in professional journals. In this sense of the word this writing is not a regular book review. Since *With the Power of Thought* is not (only) about the life-work of János Kornai, the reviewer permits herself some subjective digression.

This book did touch my contemporary peers: for our generation (the members of which were born in the fifties and awakened intellectually in the seventies) it is intellectually unavoidable. As it was compulsory to write this book, so was it compulsory to read and take it further. This book means something different for us than for Kornai's generation – whose members have seen and known a lot, maybe even too much. (And I would be really interested in the “grandchild-

dren's interpretation of the book” – if such exists at all).

It is rewarding to write autobiographies, since it is undeniable that we read autobiographies more often than anything else, because we are strongly attracted by intimacies. However, we put down the book with sadness and anger if the author wants to satisfy this attraction of ours with empty phrases and superficial gossips. Naturally, Kornai's irregular autobiography is not like this. Superficial anecdotes and empty phrases are very far from the author. The intimacies of this book are exciting because they reveal the personal details of intellectual, mature and individual responses to the eternal big questions. *With the Power of Thought* attracts me not because it is an autobiography, but because it is about us, about our doubts, speculations, failures and successes. Because finally we had a Hungarian economist, a Nobel Prize nominee, who is acknowledged at Harvard University,

too, whose words count both at home and abroad. (The questions why exactly he reached such heights from among the many outstanding intellectuals of his talented generation, and why the prize was eventually awarded to someone else are not as significant.) His questions, speculations and answers provoke further thinking and often discussions.

However, before I go on to the questions I subjectively selected I must first make a very important statement: the author of this book is a tolerant thinker. One of the most important messages of the book is that we have a choice. “If used for the purposes of positive analysis, it must be determined retroactively, even contrafactually, what possible alternatives we had in the past that were finally rejected. In the case of normative use, we must precisely identify the restrictions that limit our choices definitely independent of us. We have a free choice within the group of the possible alternatives so limited.” (pp. 143–144) But the author moves on: he also states that we could choose different paths depending on our personalities and capabilities, and there is no such thing as a definitely superior life path. There exist several optima, and the different algorithms may converge towards several solutions. The acceptance of being different, the understanding of a different life philosophy, the first hand experience of conflicts and the management thereof in a non-violent manner, i.e. behavioural tolerance have become the author's fellow traveller for life after he got over his own fifties.

■ **THOSE INFAMOUS FIFTIES.** One quarter of the book is devoted to “those infamous fifties” Those who knew, and those who did not about Kornai's past at *Szabad Nép*<sup>1</sup>, are equally eager to learn: how one of today's greatest thinkers reflects on his own intellectual emptiness fifty years ago? He does it credibly. I believe this is the greatest acknowledgement János Kornai can receive for telling about the star journalist work-

ing for *Szabad Nép* in the 1950s: the story he is telling us is credible. He did experience those years like that, with unbound confidence typical in sleep-walkers, then uncertainty and finally with the bitter awakening of a somewhat ignorant and uneducated eighteen-year-old young man. He portrays himself as ignorant and uneducated despite the family culture he brought from home – he depicts himself as an intolerant young man who did not think and who was pleased with freedom and life in an irresponsible manner. It is difficult to face a child's question: “Father, you are a sensible man. How could you have been such an idiot?”, asked his son, András a decade later, and Kornai tries to answer it throughout more than one hundred pages. We receive an accurate and authentic description about the power of faith, from the stages of becoming a communist to losing faith. Kornai himself acknowledges: he was lucky in a certain sense of the word. He was lucky that it was not his intellect that made him serve faith, but vice versa. Kornai considers himself “lucky” that he is able to declare of his early essays – when he says he still had “faith” – that “their intellectual rigourlessness is striking.”

János Kornai's “awakening” is credible. The description of his conversation with *Sándor Haraszti* is soul-stirring. It was this conversation which made him realize that certain moral boundaries cannot be transgressed and humiliation of a man by another man cannot be justified by any ideology. “The thought that in the 20th century people were tortured on purpose for any reason was almost unbearable for me.” (page 74) In Kornai's moral system faith can in no conditions be superior to man. However, this phrase, which seems moral in the first reading is a well-considered, clear, final and compromise-free decision that obviously counts with the consequences: in himself the author “attaches zero value” to Marxism, which he considers the number one cause of his blindness. János Kornai had no other choice: he realizes his own low standards (he

writes about his essays from that time with cruel honesty) and chooses a new path, which could only be something totally different from the one he had followed “with faith and in dream”.

This choice is respectfully brave and consistent, but at this point he also depicts all those thinkers – *Ervin Sinkó's Optimists*<sup>2</sup>, including *George Lukacs* (who cannot be accused of intellectual emptiness at all) and many unsurpassable 20th century thinkers, who built faith from their intellect, and who did not attach “zero value” to Marxism later either, and who became and perhaps remained (up to now) Marxists in a more enlightened manner.

■ **ABOUT SCIENCE AS A FORM OF LIFE.** The central thought of the second part of the book is whether or not science exists as an “active” form of life. Already in his young adulthood, the author got fed up with activist journalism, and through this, with active intervention into people's lives, which he later considered intolerant. As a conclusion of his deliberations between 1954 and 1959, he decided that in the greater part of his life he would work as a non-politicking researcher scientist, and would try to be loyal to this decision to the end of his life. “My profession would be scientific research instead of politics. I do not undertake the heroic and illegal forms of combat against the communist system. I wish to contribute to renewal with my scientific activity.” (page 144) This statement contains a double rejection: saying no to the attraction by the existing power and saying no to the explicit opponents of this power. No matter how strange it may sound: both denials require courage, since moral exclusion (“you are a coward if you are not with us”) is not easier to bear than a possible repression for saying no to power. It is difficult to remain loyal to this crystal clear behavioural model. It is difficult to remain local due to the double grip of power – to reach the always blurred boundary between support and prohibition, and it is also difficult to

remain loyal in Kossuth's country due to the feverish moral pressure of the barricade fighters. In this country you must always go to the barricades, and always flaunt banners. If you do not meddle into politics or resist power means that you are a coward. I hope that one day we cease to be the country of ten million Lajos Kossuths, and we realize that we need not always flaunt banners to be morally consistent. The author faces the difficulty of absence and of being an outsider several times. Actually, he was several times tempted to give up the voluntarily undertaken ostracism, but according to the book, finally he always decided not to join the bandwagon – he said no to power and the opponents of power, too. I would like to believe that this life strategy, which is not necessarily about winning and fighting, can be a positive example, too.

This type of exclusion does not mean that we need to renounce the obligation to stand up for the principles. If we look at Kornai's life, we can find two major moves in his recent past which support this idea. His support of the Bokros package<sup>3</sup> undertaken explicitly at each platform, and his resignation from his membership in the monetary council in 2001 prove that one does not need to go to the barricades to remain loyal to his principles. (Yet, his contemporary peers may judge him differently, possible because they know a lot, or maybe too much).

■ **ABOUT SCIENTIFIC RIGOUR AND ORIGINALITY.** Probably I am not the only reader to be astounded by the rejection of a paper that János Kornai sent to the *American Economic Review* for publication. Firstly, because he is one of the most often published and cited author in foreign journals (apart from *András Bródy*, but I will not discuss Bródy's genius here). Secondly, because in response to his rejection he writes about the requirements set for scientific papers. According to him, original thoughts often go unpublished because the editors and referees are the slaves of shapes and prejudices, and they

often fail to notice original thought, the thought that can be taken onwards in the disorderly and scruffy piece of writing. It is not the statement that strikes us, since we see the basic principles of editing in a similar way (“materials to be published should be already somewhat part of canonized science”), but because Kornai is typically known for always being able to write in a way that his writings would fit into the canon. As a disciplined scientist he has always paid special attention to the fact that any piece of work he releases should not only be original, but also disciplined, well structured and accurately precise<sup>1</sup>.

Kornai is a synthetizing writer. He “walks around” his subject meticulously and without compassion, and he thoroughly analyzes every detail. He complies with totally different scientific requirements than the so called reform economists popular at that time. Reform economics is always normative, while Kornai is much more descriptive and reflective. The two basic standpoints can be well compared in two basic works that were written at around the same time: the description of the Hungarian reform economy by Kornai was published at the end of 1986 under the title *Visions, Hopes and Reality*<sup>2</sup>, when the Hungarian manuscript of the almost revolutionary, generation awakening *Fordulat és reform* was completed by László Antal et al<sup>3</sup>. The topic of the two writings are almost the same – yet different. Some of us feel to be closer to the former, while others to the latter. At that time I nearly paid with my human relationships for claiming that although *Fordulat és reform* was politically much more important, it was not a really good piece of work, while *Visions* was a masterpiece. (Well, we are still on different sides with my old partners in debate, but I hope that we have become tolerant enough to forgive one another for our different tastes.)

One more note about the rejection of the paper: Lucas's fantastic *Neutrality of Money*, which was written in a different framework of thoughts than the then dominant trend, was out

of the “canon” (friction markets were uncomprehended then), and was also rejected by the American Economic Review, and was published in the *Journal of Economic Theory* without any feedback. Yet, twenty years later everybody said how fantastic they had considered it already at that time. I believe that rejected “great papers” outnumber those accepted.

■ THE “CLASSICS”: OVERCENTRALIZATION, HARMONIC GROWTH, TWO-LEVEL PLANNING, ANTI-EQUILIBRIUM, ECONOMICS OF SHORTAGE.

It was a strange experience to see the past, the genesis of these books, the focal points that the author found important, and it was strange to get to know these books in his own interpretation. And something else was also strange: to realize that our generation grew up partly on these books. Despite the fact that Kornai was not admitted to the university, we read his above-mentioned books during our university years, and all of these books influenced our way of thinking. Every book by Kornai was “mandatory literature” in the “Rajk”<sup>4</sup>, where the students were given not the “mandatory literature prescribed by the university”, but also Bródy, *Augusztinovics, Antal, Bauer, “Sóska”, Liska and Tardos*<sup>5</sup>, as well as Bibó, Edgár Balogh and Petri in addition. It was a matter of fact for us that the command economy was a malfunctioning system. We wanted neither to reform it, nor improve it; we accepted the fact that it existed, and wanted to understand it. Kornai helped us a lot in this aspect. It does not mean that all of us joined the Kornai school. What is more, it happened several times that we made mincemeat of the empirical analyses of the disciples of Kornai with the confident conceit of young economists.

We became familiar with the book *Harmonic Growth*<sup>6</sup> in the second year. We still had vivid memories of the intellectual emptiness of the political economics of communism we had just gone through. At that time, when the impacts of the oil price explosion had just reached Hungary

(although great efforts were made to hold them back at the borders, and the same is recommended to our present prime minister by some know-alls), and simultaneously, terms like “indebtedness”, “inflation”, the law of “proportional and planned development” – which were unbeknown to us before – seemed to be nothing but mere imagery. *Rush versus Harmonic Growth* was in line with this new experience; it stated that the restoration of proportionality and the equilibrium was not an innate attribute of the communist economy, but a state to which this economy did not converge. Instead, rush growth triggers newer and newer inequalities.

■ **KORNAI-LIPTÁK MODEL.** At the same time – while we were getting familiar with the input-output methods (and simultaneously with Lange, Bródy and Augusztinovics), the ÁKM (sectoral relationship balance) models and the plan models – we became aware of the Kornai-Lipták model of two-level planning. Although at that time we were still unaware of the background and the failures of the practical implementation thereof, the model's mathematical ingenuity was fascinating. No wonder that the writing that served as a basis for the model was published by *Econometrica* in 1965 without any modifications<sup>7</sup>! Eventually, due to the algorithm's convergence to more than one optimum, the two-level planning model failed, however the lessons learnt were useful for the subsequent steps.

In the third year we had to read *Anti-Equilibrium*<sup>8</sup> (published in 1971) in parallel with the principle of equilibrium which was discovered within a subject then called “mathematical economics”. After the emptiness of the political economics of communism the *Arrow-Debreu* model was an intellectual pleasure for us, wherefore the work Kornai still considers one of most significant ones did not prove to be a colossal success. It could not suggest the same “completeness” as the general principle of equilibrium it meant to knock out from its unchallenged

position. Finally, the general principle of equilibrium renewed not along the counter-arguments formulated in *Anti-Equilibrium*, but it was able to integrate the “friction” within its own, confined framework of thoughts. Asymmetric information theory was able to explain several empirical “frictions” – the automatic adjustment of wages in line with inflation, the apparent effectiveness of economic policies – without discarding the framework of analysis. *Anti-Equilibrium* made a major impact on several of our peers of ours, as its after-shocks could be felt for years in the form of scientific student papers and theses.

■ **ECONOMICS OF SHORTAGE.**<sup>9</sup> In our last year at university – at the dawn of our repeated intellectual awakening – we were able to believe that this system could also be judged with scientific rigor. The book was unanimously a sweeping success. In the fall of 1980, the then-largest auditorium (Auditorium I) was packed with hundreds of students, graduates, alumni, economists, lawyers and engineers who listened to Kornai's lecture. This was his debut at the university – the *Economics of Shortage* could no longer be kept outside the walls of the university.

A major part of the audience was far beyond the question regarding whether or not communism could be reformed. It was obvious for them that it could not. This rejection is described distinctly in the *Economics of Shortage*. “The shortage economy is the inevitable, system specific feature of the communist system. The reforms may alleviate the problems but cannot eliminate them.” (page 251) While reading the irregular autobiography it was strange to see that this denial, i.e. the irreparability of the system was not explicitly stated in the book. For many of us, *Economics of Shortage* intellectually put an end to communism once and for all. It was completely obvious that this system was bad and wasteful as it was. The book proved this with the use of plenty of terms and scientific rigour. *Economics of Shortage* also made it clear that the system

would live on because there was a political will to keep it alive (which seemed evident in 1980, in the year when the book was published), but this was an inherently malfunctioning system impossible to reform. In this respect *Economics of Shortage* was in debate with reform economics pursued in those days – no wonder that it became mandatory literature at all “open universities” that were held at several places already.

The life-work of Kornai was far from being complete after the publication of *Economics of Shortage* – and similarly, the irregular autobiography tracks the birth and reception of the “heated pamphlet” the “description of the socialist system” or the “healthcare reform”. Yet, now we treat these works as stepchildren and stop at the major turning point in our lives, the “change of fortune” in 1990.



Unwittingly, this review is about the “subject” of the book, János Kornai. And what is the book like? It is a “classic” Kornai work: on one hand it is a sweeping and fascinating essay (many of us have read it in one sitting), on the other it is

a scientific analysis about János Kornai written in an almost dry, analytical style with meticulous footnotes and precise references. It is an irregular autobiography.

Júlia Király

## NOTES

<sup>1</sup> For many years János Kornai's paper (Adjustment without recession (Kiigazítás recesszió nélkül), *Közgazdasági Szemle*, vol. 43 No. 7–8 pp. 585–613) published in 1996 was mandatory literature for my last year students so that they would learn about the requirements of publication, the meanings of scientific rigour, the formulation of the question, arguments against ourselves, the consistence of exposition, support with arguments and empirical support.

<sup>2</sup> The Hungarian Reform Process: Visions, Hopes and Reality, *Journal of Economic Literature*, vol. 24 No. 4 pp. 1687–1737

<sup>3</sup> ANTAL et al. (1987): Fordulat és reform (Change and Reform), *Közgazdasági Szemle*

<sup>4</sup> L. RAJK College: a college of Karl Marx University of Economics established in 1975, whose first and only director was Attila Chikán.

<sup>5</sup> M. AUGUSZTINOVICS AND A. BRÓDY were the most significant economist researchers of that time, while László Antal, Tamás Bauer, Attila Károly Sós, Tibor Liska and Márton Tardos were the outstanding, most often published authors of reform economics.

<sup>6</sup> J. KORNAI (1972): Forced versus Harmonic Growth, *Akadémiai Kiadó*, (Hungarian version)

<sup>7</sup> J. KORNAI–T., LIPTÁK (1965): Two-Level Planning, *Econometrica*, vol. 33 No. 1 pp. 141–169

<sup>8</sup> J. KORNAI (1971): Anti-Equilibrium, *Közgazdasági és Jogi Könyvkiadó*, (Hungarian version)

<sup>9</sup> J. KORNAI (1980, 1989): *Economics of Shortage*, *Közgazdasági és Jogi Könyvkiadó* (Hungarian version)

Tibor Palánkai

## *Economics of European Integration*

AULA PUBLISHING HUOSE, 2004



Since the end of the 1980s and the beginning of the '90s, one of the cardinal issues for the Hungarian economy on changing into a market economy has been modernisation, i.e. convergence with the developed world. Few debate that the way (in both senses) leading there is accession to and membership of the European Union, this integrative formation that got the farthest along the way of becoming international. Numerous books, publications and brochures have been published on the union, but scarce are the papers, especially in Hungarian, that examine this particular and influential formation of our age, placed in the theoretical context of international division of labour and its developmental process. Perhaps this is why it particularly pleases readers to handle the work of *Tibor Palánkai*, co-authored by

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English version: *Economics of Enlarging European Union. Akadémiai Kiadó, Budapest, 2004.*

*Ákos Kengyel* in some chapters. This book is a comprehensive work that volunteers to give a scholarly description of the economics of European integration, and of its most advanced form, the European Union. Research into integration and the foundations of the theory of international economic integration can be traced back to *Adam Smith* and *David Ricardo*, who attempted to show and quantify profits potentially gained from the international division of labour and trade. Since the 1950s, the theory of a customs union has been considered the basis of economic literature on international integration; it is no coincidence that this study also commences analysis by explaining this. The author defines integration as an intensive, stable and complex division of labour that is organised and institutionalised in the long term, and embraces the whole process of reproduction in economic terms, lending itself to be implemented in the forms of commercial and economic

arrangements (page 30). But Palánkai also points out that the assessment (and, the reviewer adds, evaluation) of the benefits and drawbacks derived from the international division of labour also constitutes a political issue. International economic arrangements can be the following – according to a categorisation devised by *Béla Balassa* (page 36): free trade zones, a customs union, a common market, a single market and an economic and monetary union.

After detailing theories of integration, the first part of this book basically explains the static and dynamic versions of the classic customs theory under the title 'Economics of market integration', also presenting numerical examples to illustrate benefits and drawbacks. A customs union, however, only removes obstacles to the mutual trade of goods but not to production factors; consequently, the actual form of market integration is common market. It is particularly true if coupled with free flow as in a single market, i.e. of goods and services, capital and labour force.

Following the theoretical basics, the most substantial chapter of this book describes the historical process of European integration, from the customs union to the uniform European market, along the lines of creating the four freedoms. However, the internal conditions in the single market, which are parallel to the national market, have not ended up entirely in line with the original definitions, what is more, the process slowed down after 2000. The sluggish lifting of restrictions on public procurement and public markets, services and the free flow of labour force, the different tax systems and business environments, and a lack of a uniform system of patenting in Europe all represent obstacles to deepening integration. Presenting it as a stage in the development of the integration process, the author elaborates on the formation of an economic union that goes beyond the single internal market. This represents a qualitative addition to a single market – and means new

institutions, regulations and economic policies. Among others, the reader gets a detailed picture of the community economic policies. Until the beginning of the 1970s, the community did not assume a definite role of determining structures, and the Treaty of Rome also emphasised competition policy, which meant that the change in structures was expected to be a result of trade liberalisation and competition on the common market. However, in some areas, the state assumed an active role, for example in the iron and steel industry and coal mining. In the wake of the 1973 oil crisis, traditional sectors experienced a deep crisis, too, and this gave rise to a deficit-funding negative structural policy that subsidised these sectors. Then, in the '80s, state intervention was increasingly replaced with an economic policy that facilitated structural renewal and technical development, and scaled down sectors lagging behind, even at a community level. A material part of the European integration process is, particularly with the accession of new and less developed South European countries, a regional policy that aims at reducing the differences within countries and regions. An unhindered emergence of market forces is not sure to bring about the expected resolution of these differences. It serves the purposes of the cohesion policy, economic and social cohesion, and elimination of any negative impacts of the internal market.

The development of integration climaxes, if you like, in monetary union. The European Commission committed itself to an economic and monetary union as early as in 1962, and the programme that was aimed at implementing it started in 1971. However, due to the 1973 oil crisis and adverse developments in global economy, the programme was revived only in 1979. Monetary union was also a logical consequence of the 1992 programme of a single European market, given that the benefits derived from it can hardly be realized without the single currency. Explicating the conditions of accession to the

monetary union, the Maastricht criteria, the author arrives at the conclusion that the monetary union in countries struggling with structural problems would, due to problems in competitiveness, result in increasing regional differences, which means a higher value attached to budgetary transfers. While monetary policy rises to a union level, budget policy belongs to the national competence beyond the – widely debated – conditions defined in the Stability and Growth Pact.

The European Union's budget lends itself as a logical continuation. After describing the budget, the author examines the main principles of the budgetary reform, which has been in the pipeline for years. Palánkai argues, the reform has been necessary because the earlier system of the common budget did not facilitate cohesion, and the most developed countries were also net beneficiaries. The agricultural policy (CAP) is mentioned as an example of impacts weakening cohesion: higher food prices affect precisely the households with lower income, which consume larger quantities of these. The purpose of the budgetary reform implemented in waves has been to strengthen the functions of cohesion and redistribution. A remarkable statement reveals net transfers falling short of accurate representation of the fact that e.g. a considerable portion of monies flows back from the supported countries to the donor countries through various programmes of the Union, by virtue of deliveries from companies of the donor countries. Although the budget for 2007–2013 shows certain signs of improving cohesion, competitiveness and employment and of decreasing agricultural support, it still does not seem sufficient.

The author refers to the relationship presumed between the economic performance of member countries and the impact of integration as a chicken and egg problem. The authors opine that it is next to impossible to isolate the impacts of integration from other impacts. The debate traces back to the '60s, when it could not

be distinguished whether a rapid growth of economy induced an enhancement of international trade, or vice versa. Starting from the '80s, the growth rate of the economies in countries of the European Union dropped to roughly half of the rate seen earlier, i.e. in the '60s, for which mainly the structural problems of the particular economies were to blame. Another manifestation of structural problems was a high unemployment rate, which represented a weak relationship between growth and job creation. The study refers to the role of the monetary union in slowing growth down: “Due to the survival of structural problems and the Maastricht decisions made in favour of a monetary integration, ... the macro-economic performance of the EU continues to be moderate” (page 308). This is the price to be paid for a diminishing inflation and improving budgetary positions. Monetary integration may bring about significant regional differences, and may intensify revenue variations between social strata, which needs to be considered by policy. It is particularly true in newly acceded countries, where a high growth rate of the economy is imperative because of the convergence pressure. Owing to lower standards of living, differences of income may easily lead to social explosions.

How will the integration of Central East Europe with the European Union develop? The final part of the book seeks answers to this particular question. A relatively new field of integration research is the examination of integration maturity. The Treaty of Rome stipulated only two conditions to participation in the European Community, namely, that the country in question be European and democratic. Integration maturity was not assigned particular importance earlier because the economic development and structure of all acceding countries were similar. On the subsequent enlargement – in case of the three Mediterranean countries – political considerations were given priority. Although political considerations also surfaced

on the admission of Central East European countries, these, with their market economies just in the early stages of formation, acceded to an economic and monetary union that had a full-fledged single internal market. The paper makes a distinction between meeting the accession or membership criteria and reaching integration maturity. The former stipulates the conditions of becoming a member and the proper behaviour within the integration zone, while integration maturity represents a capability of a particular country to get maximum benefit from the integration. The author hereinafter discusses integration maturity from economic, social, political and institutional aspects.

From the aspect of new member countries, whether and how fast they converge with the developed countries of the Union is of paramount importance. The status of convergence is presented in the book using multiple sources, and (on page 416) citing the statement published in *Világgazdaság* and in a review produced by ICEG: “In the past 4 to 5 years, Hungary has not been able to produce any results in terms of convergence with the EU” (*Világgazdaság*, 24 June 2004). We can also go along with the authors' account stating “however, the Laeken decisions of 2003 (“large enlargement”) proved that, similarly to previous enlargements, the new members were selected upon political considerations...” (page 416).

The chapter discussing accession to the economic and monetary union may bear a current economic and political message. “A crucial question for the future is – the book concludes – how a rapid accession to the Euro zone influ-

ences sustainability of economic growth and structural modernisation ...” (page 489). At this point, an earlier wording is somewhat conflicted (page 320: “While compliance with the EMU convergence criteria is presumed to curb on the rate of economic growth...”; page 490: “Monetary and fiscal stabilisation are not opposed to a rapid and stable growth...”), but the ultimate conclusion may generate agreement: “On assessing the costs and benefits, arguments in favour of a rapid accession gain ground.” (page 490)

What kind of a European Union to expect, and how to determine the nature of it, Palánkai Tibor poses the questions at the beginning of his book (page 60). A large number of theories were also characteristic of the past period, and no uniform concept or position has been formulated on the nature and development of European integration. It is to be feared that this is all the more true for the future. “Since 2001, debates have been set off on “the future of Europe”, related to the convent and the interstate conference discussing the future constitution. Although a number of issues have been clarified, the critical issue regarding the future of a “narrow union” have lingered on.” (page 61)

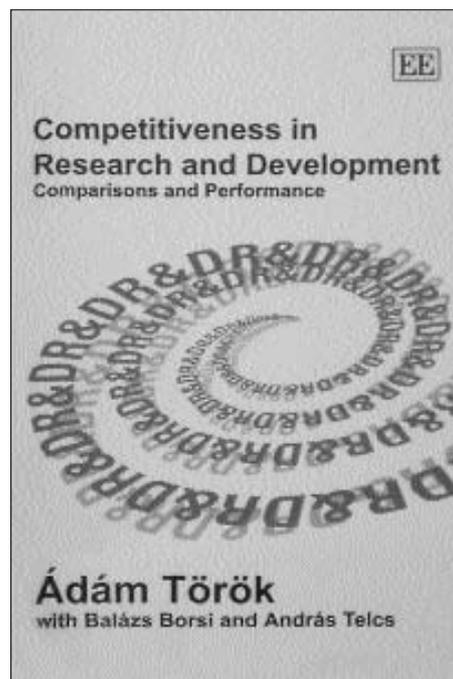
Let the reviewer add a remark to a possibly pessimistic ending, stating that this study is a pioneer. This work, also used as a textbook, was written relying on a very wide range of literature, and represents a gain and an addition to the extensive literature discussing the issues of integration and international division of labour.

*Róbert Becsky*

Ádám Török–Balázs Borsi–András Telcs

# Competitiveness in Research and Development

Comparisons and Performance  
EDWARD ELGAR PUBLISHING, UK, USA, (2005) 251 oldal



The idea of the book comes from a practical experience. Professor *Ádám Török*, being the author of four chapters out of five, was been the president of the National Office for Technology some years ago. He perceived some essential financial and operational problems of the Hungarian R&D sector, and then he met the polite opinion of the European Commission (Agenda 2000), saying, Hungary's S&T output places the country among the first twenty in the world, and the accession brings mutual benefits for the EU and Hungary in this field. This contradiction gave him an impetus for research, and he experienced that there are very few published results on the competitiveness based R&D benchmarks.

During the research work, the mixing of two phenomena: R&D and innovation caused a continuous methodological problem for the authors. Based on the Hungarian experience, we cannot be surprised, since *innovative* companies enjoy R&D tax benefits, and the due

innovation contribution may be lowered by the proven R&D expenditures of the company.

■ The *first chapter* clarifies the theoretical and methodological questions of the issue, with special attention to the applicability of the competitiveness phenomena on R&D. The authors analyse the models for imperfect competition, the role of entry barriers, and the application potential of the Porter diamond for the analysis of competitiveness. The role of competitiveness at the supply and the demand sides and the role of R&D and innovation are analysed. National innovation policies are scrutinised in the frames of the modern National Innovation System model.

■ *Chapter two* focuses on the measurement of competitiveness. It gives an overview on the methods and data to be found in the literature. Starting with the productivity of labour, and analysing the indicators of international trade, the authors conclude with the analysis of high-tech sectors. It is stated that high-tech trade, accord-

ing to all perceptions and qualitative experiences, is related to R&D, but the exact deduction of this relation is not easy.

Hungary has a remarkable international position in the ratio of high-tech exports, mainly due to the activity of foreign direct investments. The technology balance of payments (TBP) shows a strong deficit, but, as the authors argue, it is not necessarily a problem. A deficit of the TBP can be closely related with the rapid technology inflow, and with the improving IPR awareness of the companies. There is an interesting calculation based on the ratio of TBP deficit to the gross domestic expenditure on R&D. This indicator shows that Hungary is the closest to the Irish model.

The authors analyse the literature sources on the R&D expenditures, especially the ones concerning the corporate R&D expenditures. The roles of the different indicators are also compared. There is a very interesting analysis on the not recommended indicators. The authors point out: all analyses based on any individual indicator can be misleading. It is also not clear whether absolute or relative indicators are more characteristic of the R&D performance of a country better. Based on the R&D expenditures, the authors create four categories for the countries: 'Leaders', 'Followers', 'Midfielders' and 'Marginals'. Hungary belongs to the 'Midfielders' group, based on both the total and the corporate R&D expenditures.

If there are several indicators under scrutiny in parallel, there is always a methodological question: how to compact them into one indicator? The European Commission has had a successful attempt with the Summary Innovation Index (SII) within the European Innovation Scoreboard. The United Nations also use a successful composite indicator, ranking Hungary as #34 in the world in 1999.

The authors state that the global R&D position of a country can be well described by two input and two output indicators: the number of researchers and the gross expenditure on R&D (GERD) on the one hand, and the number of

scientific publications and patents on the other hand.

■ *Chapter three*, focusing on the quantitative analysis of R&D competitiveness, is a real delicacy for professionals dealing with science and innovation policy. The authors create different international rankings: first more simple and intuitive ones, then more refined and complex ones, relying on advanced mathematical tools. Statistical data are not always fresh (the latest ones are related to year 2000), but from a methodological point of view, the reader gets an excellent and innovative analysis.

The comparative analysis of absolute and relative indicators is of great value. It demonstrates that the different economic and historical conditions created surprisingly high differences in these indicators, and sometimes in reverse directions. It is especially interesting that the comparison covers many more countries than usual. The authors compare the European countries to some Asian and South American countries, and these results are novel and often astonishing.

In my opinion, the main strength of this chapter is the *application of the Data Envelopment Analysis (DEA)*. This method makes extensive use of the fact that variables are grouped as input indicators (number of researchers, GERD) and output indicators (publications and patents). The DEA method is used to analyse how efficient a country is compared with another? This is a very plastic way for the understanding of complex phenomena described by several parameters. The rankings after the graphs are also worthwhile, showing the actual values and the trends simultaneously.

“The range around the optimum is always flat”. Therefore, it is a pleasant surprise that the rankings created by different methods and very different efforts are similar, and show a considerable overlap. Of course, the most complex information can be obtained from the different rankings together, taking also their assumptions and methodologies in account. I think these rankings and conclusions will give ideas and motivation for many people for further analyses and research.

The authors state that European countries and especially the new member states will lose even their present position in the global knowledge competition if they do not change their attitude radically. The challenge is not only Northern America and Japan any more, but more and more Eastern Asia as a whole. It is not widely known that the Central and Eastern European countries are already outpaced by some newly industrialized countries, being typically neglected as competitors in R&D up to now: China, Korea, India, Brazil, Republic of South Africa, Argentina or Mexico. Other promising countries such as Turkey, Singapore, Indonesia and Portugal are also on a good track. The relatively high number of Hungarian-born Nobel Laureates educated in Hungary may hide the threat for the decision makers, that stagnation in an accelerating international environment leads to a guaranteed loss of position.

■ The next two chapters analyse the policy consequences of the above analyses. *Chapter four* focuses on country groups where losing position in the international R&D rankings needs a policy answer. The related countries are especially some Central and Eastern European countries being already members of OECD and EU, but their national innovation system still shows some (common) features that are missing in the most successful countries. Newly industrialised countries also obtain special attention. Some of them have already achieved remarkable results in R&D. These countries are not simple receivers of technology (for this phenomenon, there is a good example in the book: a nuclear power plant in an underdeveloped area). By now, however, the earlier gap that existed for centuries in R&D between advanced and lagging countries tends to disappear. This catching-up is probably related to the cultural impact of globalisation: if a country has motivation and resources for R&D in some priority areas, it is possible to employ excellent research teams. If the country does not have a well trained researcher society by its own, but

has an engagement and financial sources, it is possible to recruit even the best experts from abroad with attractive financial and R&D infrastructural conditions.

■ *Chapter five* summarises the conclusions, with special respect to the global issues of R&D competitiveness, to the “big picture”. The policy ideas are mainly focused on the developing countries, in accordance with the EU Lisbon strategy. The authors point out that less than a hundred countries play any role in R&D and less than fifty among them can be considered as serious players. On the top of the list there are the G-7 countries and South Korea, producing 80–90% of the global R&D results. These countries represent the centre of the map shown in the book. A further considerable group of countries is still shown on the “main board”, partly by virtue of their absolute, partly their relative indicators. Based on its good relative indicators, Hungary belongs to this group. Some newly industrialised countries also deserved this position, for example Malaysia, Kuwait, Venezuela). Of course, all “small” and successful countries (e.g. Switzerland, Denmark, Finland, and Sweden) belong here, and by their size and their absolute indicators, the “big” countries: China, India. The authors state: the new EU member countries may contribute to the fulfilment of the joint Lisbon targets, but their actual national innovation system does not provide good background to that. The authors think the solution of this problem needs structural and political means.

The book provides interesting, well formulated information and many new thoughts. It can convince the reader that there are still plenty of unexploited research areas at the borderline of R&D, innovation and economic competitiveness. The research in these fields can contribute to the development of the science and innovation policies. It would be useful if the knowledge included in this book could be utilised by the policy opinion-shapers and by the university tutors and instructors as well.

*Tamás Balogh*

## *Conference on corruption at the Academy of Sciences*

The tangly issues of corruption – which is the enemy of public life both domestically and globally – were studied by a team of expert speakers at a conference organised by the Industry Economics Committee of the Hungarian Academy of Sciences on 22 March 2006. The speakers included outstanding figures such as deputy speaker of the National Assembly *Ibolya Dávid*, president of the National Judicial Council and the chairman of the Supreme Court *Zoltán Lomniczi*, minister of justice *József Petrétei* and president of the Hungarian State Audit Office *Árpád Kovács*.

The speakers first of all spoke about the significance and importance of the fight against corruption. *Ibolya Dávid* pointed out that social justice disappears due to this public bad, the people lose their sense of justice, the trust between the people diminishes, fair competition is given no chance. *József Petrétei* emphasised that this dangerous phenomenon undermines the institutions of democracy, jeopardises sustainable development and our core ethical values.

The speakers also dedicated considerable attention to the causes of corruption. *Zoltán Lomniczi* outlined a strange historical background, citing, for instance, *Aristotle*, according to whom man is weak and prone to corruption. Apart from man's nature and emotions *Árpád Kovács* attributed corruption mostly to the low level of development and income (which can be

well supported with the statistical correlation between the level of development and corruption), the deficiencies of democratic social functions and the approval of corruption related phenomena by the society and people's scale of values. According to *Ádám Angyal*, Professor at Corvinus University, the underlying cause is basically the greed for money or power. The consumer society, and more broadly, the spirit of the market economy suggest that you can get everything for money or by palling up. Therefore it is hardly surprising that influence is a commodity in the eyes of many. All this is strengthened by overregulation, the unilateral overvaluation of rule abidance, the laxity of control and the administration of justice, the intertwining of the political and public fund managing powers, as well as red tape. In relation to the role of the general social conditions, *Ibolya Dávid* pointed out: the trust in the free market was so immaculate at the time of the change of the regime that any limitation thereof seemed unacceptable for us. Naturally, this also contributes to the fact that the Central and Eastern European countries are much more infected by corruption than the Northern European states.

As far as Hungary's affectedness is concerned, according to the corruption perception index (CPI) of Transparency International, Hungary is ranked among the least affected countries (one third of all countries); for exam-

ple, in 2005, it was ranked 40th among the 159 countries. In relation to the index, *Miklós Marschall*, director for Europe of Transparency International, an international civil organisation established in 1993, remarked that the index is not a hard, but a so called soft index, since it expresses the opinions of the experts of the member organisations operating in different countries. He agreed with Árpád Kovács's opinion, according to which despite the afore-said, the index is becoming more and more objective, and therefore it plays an orienting role in judging the relative status of the different countries in terms of corruption.

Although the level of corruption in Hungary is acceptable by international standards, each speaker paid utmost attention to the practical tasks and urgent measures related to the fight against corruption. Zoltán Lomniczi urged that the moral aptitude should also be a yardstick for the selection of leaders; officials should climb the ladder of rank exclusively on the basis of merits; the adequate remuneration of employees should reduce the inclination to corruption; the screenability and continuous monitoring of the institutions should be implemented. Furthermore, he found it important to draw up a code of ethics for judges, to reduce the length of court procedures, to make it possible to provide proper remuneration to the hired independent experts, and to eliminate the anomalous situation, in which the freedom of speech is generally accepted, yet in the case of court rulings the courts are required to ensure secrecy.

József Petrétai explained that the scope of power related to the fight against corruption and the management of the Advisory Body for Corruption-Free Public Life was transferred from the Prime Minister's Office to the Ministry of Justice in November 2004. The organisation updated the draft action plan and concluded that the implementation of long awaited comprehensive measures became a real

opportunity to be used in the near future. He also pointed out that this phenomenon could be successfully combated only through close international cooperation and the exchange of experiences.

According to Ibolya Dávid, it would be necessary to make it possible to approve parliamentary anti-corruption programs spanning several election terms. In order to eliminate the infringement of the competition law by corruption, the controlling role of the Hungarian Competition Authority and the State Audit Office needs be strengthened, and the public procurement act needs to be amended and considerably tightened.

Árpád Kovács pointed out that the State Audit Office evaluates the transparency of operation and the accountability of economic management, indicates the possible risks of corruption, and – using the new authorisation granted by Act XXIV of 2003, the so called “glass pocket act” – it tracks budgetary payments right to the endusers. In case the Office reveals cases of corruption, or criminal acts that are often connected to corruption (misappropriation of funds, infringement of the accounting discipline) – in justified cases – initiates criminal sanctions or disciplinary actions.

*János Nagy*, the Commissioner of the Hungarian Customs and Finance Guard presented the tasks based on the anti-corruption experiences of an organisation, which is not only a controlling organisation, but also one where corruption exists at institutional level, since due to the work conditions, control is complicated and holding someone accountable is cumbersome. He suggested that in this fragmented, but important field the most important anti-corruption tasks include the enforcement of compliance with the code of ethics, the reinforcement of managerial reliability; the improvement of transparency through the application of standardised and simplified rules, and international standards; the develop-

ment of automatization and IT systems in order to diminish subjective decisions; the reinforcement of internal and external audits; the elaboration of codes of conduct; as well as the development of adequate human policy management, including the appropriate remuneration to the employees.

Starting out from the relationship between corruption and the fight against money laundering, *Erika Marsi*, the general director of the Hungarian Financial Supervisory Authority emphasised that the banks should pay greater attention to politically affected persons, and should maintain prudent customer handling procedures. In connection with this, an important task is to compile a list of the affected persons – both foreign and Hungarian citizens –, to create connections between the banking groups and databases with respect to the data protection provisions, and to determine which authority is competent in this issue. Although the Hungarian Financial Supervisory Authority strictly monitors compliance with the rules, it is not an investigative authority.

Miklós Marschall recommended the improvement of transparency – for instance in healthcare – and the establishment of powerful anti-corruption civil organisations. The latter is all the more topical because the Hungarian section of Transparency International ceased to exist in 2005, and it is desirable to be re-established. The role of civil organisations is underlined and evaluated by the mere fact that according to one of the recent opinion polls conducted by Transparency International in 50

countries, the institutions that are perceived as the most corrupt institutions are – in ranking order – political parties, parliaments, the police, courts, tax authorities, the business sector, and the customs offices, while the most corrupt fields are the construction industry and state orders.

Based on the conference of high professional standards it seems reasonable to follow five major lines of action in the fight against corruption. Instead of political campaigns we need comprehensive reforms and modernisation in order to eliminate the white spots that strengthen corruption in the operation of the social and economic system. As a second line of action, preventive measures shall be reinforced by improving the standards of management and human policy, and through tighter control. As a third line of action, corruption can be contained by the simplification of legislation, the elaboration of protocols related to incompatibility and the procedures to be followed, the better-coordinated cooperation of law enforcement agencies, as well as by the education and training of the members of such agencies. As a fourth line, one can emphasise the importance of the expansion of close cooperation with the international organisations and the European Union. Finally – and also as a result of the aforementioned – such social, political and economic conditions must be created in which integrity prevails over corruption in terms of value and standard.

*Gusztáv Báger*

## *Conference on fiscal responsibility*

For over a decade and a half, Hungary has been facing a significant public sector imbalance. Since the beginning of post-socialist transition, fiscal performance has been dominated by the political cycle, as compared with most other countries where the fiscal position reflects largely the economic cycle. The deficit bias has been particularly pronounced during electoral campaigns. The ensuing buildup of public debt has by now reached an unsustainable path. As a result, Hungary has been subject to the excess deficit procedure under the Stability and Growth Pact since accession to the European Union, and has failed to meet the Maastricht criteria for admission in the euro area.<sup>1</sup> More important, however, the public sector imbalance may lead to a currency crisis, especially in the event of a sudden shift in the currently prevailing favorable investment sentiment and abundant global liquidity conditions.

Arguably, Hungary's endemic fiscal problems is characterized by both time inconsistency and common pool problems. Typically, following some rhetorical commitments to fiscal discipline at the beginning of their mandate, successive governments have engaged in fiscal expansion in the run-up to each election. Similarly, interest group pressures bear irresistibly on each government, without regard to the overall budget constraint. Moreover, contrary to earlier expectations, neither EU accession, nor market forces have exerted a disciplining influence over the conduct of fiscal policy.

On the contrary, EU membership, coupled with a predictable and prudent domestic monetary stance, seems to encourage the Hungarian authorities to indulge in moral hazard, partly under the cover of opaque accounting practices – at least insofar as permitted by EU institutions.<sup>2</sup>

In all, given the well-known weaknesses in the enforcement of the Pact and the low credibility of Hungary's fiscal policy, the time has arrived for exploring various institutional arrangements to bring about genuine fiscal responsibility in this country. This task, entails a thorough review of public spending programs, including the administration and design of major transfer schemes, with a view to formulating reform measures. In the same vein, accounting and planning practices in the public sector need to be made more efficient and transparent. In addition, budgetary guidelines must be enhanced in both legal and technical terms – with the support of detailed cost-benefit analyses.

Inspired by New Zealand's Fiscal Responsibility Act of 1994, an increasing number of advanced and emerging-market economies have adopted permanent constraints on fiscal policy. Fiscal responsibility statutes (consisting of guidelines, legislation, or constitutional amendment) serve in essence as a rules-based policy framework. Major elements of this framework are: permanent policy rules (numerical limits on

government deficit, expenditures, debt); procedural rules (e.g., accrual accounting, medium-term budgetary planning); transparency standards (e.g., timely publication and comprehensive coverage of government accounts); and a monitoring and enforcement mechanism (possibly by an independent authority).<sup>3</sup> Either as cure for, or as prevention of, financial crises, or simply to restore sustainability of public finances, countries as diverse as Estonia, Brazil, Bulgaria, Chile, Peru and Sweden have adopted such a rules-based fiscal framework. The latter was often accompanied by major reform steps, such as in the case of Sweden's overhaul of the welfare system. The experience of these countries suggests that compliance with the framework has contributed significantly to building credibility, reducing risk premia, and securing sustained growth.

Against this background, a conference will be held in Budapest, May 19, 2006, under the joint auspices of the State Audit Office and the

National Bank of Hungary, and with the support of the Ministry of Finance. The principal objective of the conference is to review the international experience with rules-based fiscal policies and to draw relevant lessons for Hungary. The suitability of various rules, along with associated procedural, accountability, and transparency standards, will be brought under scrutiny. The conference will commence with a broad overview of country practices, followed by presentations on the experience of Chile and Sweden by senior officials from these countries. Subsequently, at a panel session, four public personalities with background in policy-making will be invited to discuss the potential usefulness of enacting a fiscal responsibility framework in Hungary and the possible design features of the framework. Participants at the conference will include political leaders, senior government officials, and members of the financial and academic community.

Gy. K.

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## NOTES

<sup>1</sup> For a recent analysis of Hungary's convergence program, see Magyar Nemzeti Bank, Report on Convergence (November 2005).

<sup>2</sup> See G. Kopits, „Magyar költségvetési politika: politikai-gazdaságtani megközelítés,” [„Hungarian fiscal policy: a political economy perspective”] *Élet és Irodalom* (February 17, 2006), p. 4.

<sup>3</sup> For a basic discussion of the issues and practices in advanced economies, see G. Kopits and S. Symansky, Fiscal Policy Rules, Occasional Paper 162 (International Monetary Fund, 1998), and Banca d'Italia, Fiscal Rules (2001). On practices in selected emerging-market economies, see G. Kopits, ed., *Rules-Based Fiscal Policy in Emerging Markets: Analysis, Background and Prospects* (Macmillan, 2004)

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