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82

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Comparison of the Tax Structure in CE and EU Countries: Tax Reform Goals and the Current Situation

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Contents

Tables:

Introduction

The economic transformation process in Central European Countries (CEC)[1] has profoundly affected public finance. The process of reforming public finance (covering both tax and expenditure reforms) is a long lasting one with specific features in individual countries. This makes a comparison over relatively short time periods difficult. Nevertheless, some common, general features to the restructuring of CEC public finances can be identified.

There were at least three main aspects of the inherited tax systems which required urgent reform to facilitate the transition to a market economy:

1. the need to establish a system of parametric profit taxation that would eliminate the "soft budget constraints" and support incentive driven forces in the economy;

2. the necessity to achieve universal and equal tax treatment of different sectors, commodities, and forms of ownership to ensure that resource allocation would be driven by undistorted market forces; and

3. adequate adjustment of individual income taxation in line with the distributional objectives and the institutional changes.

The initial state of each individual CEC tax system has determined the depth and pace of reforms. The fundamental tax reform experienced in each CEC country has closely followed Western European practices with all elements similar in design to the taxes operating in EU economies. The main revenue workhorses of the CEC systems are VAT and consumer taxes (excise duties), corporate and individual income tax, and the payroll-based social security contributions. The systems are accompanied by property taxes and some other taxes of minor significance.

In general, after CEC countries overcame the initial macroeconomic stabilization period, the effort to restore fiscal potential was linked with the economic revival and overall tax reform. These efforts coincided with the advancements in public expenditure[2] reforms. The result was that CEC spending patterns converged towards the spending patterns of EU countries with mature social welfare systems. Expenditure developments were characterized by high spending ratios resulting in budget deficits (the Czech Republic ***(CR)*** being the only exception), leading to conflicting taxation and expenditure policy targets. The high taxation levels in the CEC can be viewed as counterproductive both for the desired level of economic growth, and when taking into account the international experience, for the improvement of tax compliance and the capacity to collect tax revenue .

Regarding this point, fiscal capacity seemed to be crucial in an explicit or implicit ranking of CEC tax reform priorities. The relevant goals of tax reform can be briefly described as follows:

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[1] This paper covers the 4 Vyshegrad Group countries, i.e., the Czech Republic, Hungary, Poland and Slovakia.

[2] See M. Dabrovski: Fiscal Crisis in the Transformation Period, Studies & Analyses No. 72, Warsaw, 1996

- ensure sufficient fiscal capacity to enable the development of sound public finance;
- design consumption taxes to be the main revenue workhorse;
- implement the social security contributions that will ensure the future fiscal autonomy of the social systems;
- implement universal income taxation which would unify the taxation of different sources of income into a single tax; and
- open the process of tax harmonization with the tax systems of OECD countries, and especially that of EU.

Based on comparison with the EU countries, this paper addresses two issues:

- the overall tax burden and the tax structure (measured by the tax ratios) generated by the CEC reformed tax systems; and
- the corresponding statutory and economic incidence of the tax structure both on the source and use side measured by average and marginal tax rates.

Using the neoclassical assumption that the effective tax rate affects level of savings, investment, labor supply and to the rate of unemployment, the analyses will be based on the calculations of the effective tax rates as parameters affecting economic decision on aggregate level (where the data are available) or as parameters affecting the economic behavior of „the typical worker and its employer".

As further harmonization of tax policies becomes increasingly important for economic integration of CEC with the European single market, the tax patterns of EU Member State Countries and effective rates of main taxes and the resulting tax wedge corresponding to EU patterns are used as a „norm" for evaluating the CEC tax policies.

The length of the observed period and the data pattern differs according to the availability of the individual CEC data.

1. Development of Tax Ratios

The previously described goals of tax reforms, in conjunction with restrictions on the state's role in the economy, have determined the initial level of CEC tax burdens and their structure. The resulting fiscal yield and tax structure are outcomes of the actual tax legislation, tax administration efficiency, and macroeconomic performance. To eliminate the impact of economic performance (economic cycle and inflation) on the level and structure of the tax burden, the tax burden (i.e., the tax ratio) is measured by the ratio of overall tax revenue[3] to GDP.

[3] The overall tax revenue are measured in accordance with OECD methodology as the sum of taxes, charges and tariff duties collected by the fiscal authorities in the calendar year expanded by the social security contributions, inc. mandatory pension, sick leave, unemployment and health insurance.

The tax burden and its structural developments in CEC and EU[4] countries are listed in Table 1.

Table 1: Tax Ratios in CEC and EU Countries (in % of GDP)

		of which				
Country	Tax ratio	Income tax to GDP ratio			Social contributions to GDP ratio (2000)	Consumption tax to GDP ratio (5000)
		Total (1000)	Individuals (1100)	Corporations (1200)		
Part A						
CR 1993[1]	48.1	12.2	4.3	7.9	18.3	16.3
CR 1994	47.2	11.7	5.3	6.4	18.9	15.9
CR 1995	45.8	11.3	5.7	5.6	18.7	15.2
Hungary 1993	42.0	9.6	7.1	1.7	14.9	16.5
Hungary 1994	41.0	9.3	6.5	1.9	14.1	16.5
Poland 1993	43.9	13.5	9.2	4.3	13.8	14.5
Poland 1994	42.6	13.3	9.8	3.4	12.1	15.4
Part B**						
Portugal	31.4	8.6	6.2	2.4	8.4	13.4
United Kingdom	33.6	11.8	9.4	2.4	6.0	11.9
Spain	35.1	10.5	8.4	2.1	13.4	9.4
Ireland	36.3	14.6	11.6	3.0	5.6	13.9
Germany	39.0	12.0	10.6	1.4	15.1	10.9
Greece	41.2	7.5	3.8	3.7	13.9	18.1
Austria	43.6	11.8	9.5	2.3	14.8	12.8
France	43.9	7.6	6.1	1.5	19.6	11.7
Luxembourg	44.6	16.4	9.2	7.2	12.7	12.0
Belgium	45.7	16.2	13.8	2.4	16.3	12.0
Finland	45.7	17.5	16.3	1.2	12.1	14.7
Italy	47.8	16.2	11.9	4.3	17.7	11.3
Netherlands	48.0	15.5	12.2	3.3	18.3	12.1
Denmark	49.9	29.7	26.0	3.7	1.6	15.9
Sweden	49.9	20.6	18.4	2.2	13.8	13.7

Source: OECD Revenue Statistics, MF, and own calculations.

Notes: Tax ratio includes income taxes (1000), social security contributions (incl. health insurance) (2000), payroll taxes(3000), property taxes (4000), taxes on goods and services (5000) and other(6000).

Data for Slovakia are not available.

1. The CR data for 1993 are influenced by the 1992 taxes "paid from the previous tax system" and collected in 1993

2. Data for 1993.

The CEC tax ratios were just at or above the EU average in 1993, and correspond with ratios of high spending EU countries. The highest tax country among the CEC was the CR at 48.1%, well above the EU average and comparable with Netherlands, Denmark and Sweden, i.e., with the countries with the mature welfare state systems. This is rather an outcome of a different fiscal policy goal as the CR has had a balanced budget policy over the whole of the observed period than an outcome of social system transformation. The

[4] The data for the EU countries includes only 1993. We do not expect the EU tax ratios to vary significantly in following years.

balanced budget policy resulted in fiscal surpluses[5] in CR in comparison with the budgetary deficits[6] experienced by other CEC countries.

Due to the decline in the tax/GDP ratio in following year by 0.5 - 1 percentage point, the CEC tax ratio has just narrowed (and in the case of Hungary, eliminated) the gap between CEC and average of EU countries.

As a result of continuing tax adjustments, the CEC tax patterns have been restructured in line with those of EU countries. However, the tax patterns in individual CEC countries are not uniform. The main revenue workhorse in Hungary became consumption taxes at 16.5%, as measured by the ratio of consumption tax revenue to GDP. This was followed by the CR at 16.3% and Poland with 14.5% (the EU average is 12.9%). Social security contributions are the main revenue source in the CR at 18.3% (compared with the EU average ratio of 12.6%), followed by Hungary (14.9%) and Poland (13.8%) in 1993.

The significance of income taxes decreased in each of the compared CEC countries, but by far the greatest in Hungary. Income taxation in Hungary is comparable with the three lowest taxing EU countries (France, Portugal, and Greece). This is due to taxing corporate income at an extremely low statutory rate (listed below). The income tax ratio in Poland (13.5%) is near the EU average level (14.4%). The ratio is below the EU average in the CR (12.2%) and is also presumably below average in Slovakia[7] in 1993, declining slowly in consequent periods.

2. Consumption Taxation

Taxation on consumption is made up of the VAT, specific consumption taxes (excises), and tariff duties. The main workhorse of consumption taxation is the Value Added Tax based on the destination principle, which has been in force from 1989 in Hungary, and from 1993 in the rest of the CEC. In addition to designing a robust fiscal channel, the main goal of implementing VAT was to improve the overall regressivity of consumption taxation by expanding the tax base to include services and enhance its neutrality by reducing the range of rates in comparison with the "old" system. VAT was expected to reduce tax evasion by collecting revenue on each stage of production and to gain an advantage from its applicability to actual transaction value. On the other hand, to process and enforce the VAT regulations imposes substantial demands on administrative resources. For example, the number of taxpayers to be monitored and controlled increased enormously. These administrative resources, at least at the initial stages of VAT implementation, were not available.

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[5] General Government Statistics reports the +26.6 bill CZK (or 2.9% of GDP) in 1993 and + 9.3 bill CZK (0.1% GDP) in 1994 in CR.

[6] See U. Kosterna: The State of public Finances in Post-socialist, Central European Economies - a comparison with the European Union countries, CASE, 1996. The Government Balances are figured in 1993 and 1994 as follows: Hungary -8.0,-6.5, Poland -2.3, -2.9.

[7] After the split of the former Czechoslovakia, both the Czech Republic and Slovakia have adopted nearly identical tax systems which originated in the federal draft of the tax reform with only slight difference in statutory provisions.

In the CR, Poland, and Slovakia, VAT was put into effect at the beginning of the observed period while in Hungary it was put into place earlier. In the first group, as a once-only price increase was expected followed by a demand shock after the implementation of VAT, the tax was designed with relatively broad range of commodities taxed at the reduced rate.

For example in the CR and Slovakia, commodities originally taxed at a 0% turnover tax rate, including all basic foodstuffs, services, energy, coal, construction, and other activities, are still taxed at the reduced rate. The situation in Poland is similar. These policies aimed to reduce the social cost and demand pressure. But, they also eroded the principle of neutrality and have only postponed the final solution. This is especially the case in energy where the low taxation is distorting the energy market, supporting energy intensive production, and the substitution effect from lower taxation is resulting in an ecologically unfavorable structure of energy consumption.

In comparison with the EU where the range of rates applied by Member state countries has fallen remarkably since 1987, the VAT standard rates (see Table 2) are on or near the expected upper level of 25% recently applied in Denmark and Sweden only. The reduced VAT rate is on the bottom EU level of 5% in the CR. In Hungary there is remarkable tendency to raise the reduced VAT rate without lowering the standard one.

Hungary has experienced similar problem as described above. The original reduced rate of 15% was accompanied by the 0% rate for some foods, pharmaceuticals, and public transport. In 1993, the government launched a large scale revision which lowered the reduced rate to 6% (from August 1993 10%), but the 0% rate remained for some products; it was followed by an reduced rate increase to 12% rate in 1995 with some products previously in reduced rate category were reclassified and taxed at the standard rate (e.g. telecommunication services, household energy). The higher reduced rate of 12.5% is applied in Ireland only.

Table 2.1: VAT Rates in CEC

Country	1993		1994		1995	
VAT rates	Reduced	Standard	Reduced	Standard	Reduced	Standard
CR	5	23	5	23	5	22
Hungary	0.6	25	0.10	25	12	25
Poland	7	22	7	22	7	22
Slovakia	5	23	6	25	6	25

Table 2.2: Tax rates in EU Countries (in 1996)

Country	VAT rate	
	Reduced	Standard
Luxembourg	3,6,12	15
Germany	7	15
Spain	3,6	15
Portugal	5	16
Greece	4,8	18
Italy	4,9,13	19
Netherlands	6	15.5
Austria	10	20
Belgium	1,6,12	21
Ireland	2.5,12.5	21
Finland	6,12	22
United Kingdom	0	17.5
Denmark	-	25
Sweden	12,21	25
France	2.1,5.5	20.6

Table 3: Effective Consumption Tax Rates* (in %)

Country	1990	1993	1994	1995
Spain	12,7	12.8	-	-
Italy	15.5	14.9	-	-
Germany	15.8	16.5	-	-
United Kingdom	16.4	16.6	-	-
Belgium	16.8	16.8	-	-
Netherlands	18.5	18.1	-	-
France	20.4	18.4	-	-
Portugal	18.5	19.5	-	-
Greece	17,9	20.3	-	-
Austria	22.2	21.7	-	-
Sweden	26.1	24.2	-	-
Ireland	26.8	25.2	-	-
Finland	30.5	26.5	-	-
Denmark	34.3	31.9	-	-
CR**	-	21.7	21.4	21.2

Source: OECD National Accounts, OECD Revenue Statistics, Czech Statistical Office, and own calculations. (the data for the Poland, Hungary and Slovakia are not available.)

1 . Calculated as the ratio of indirect tax on goods and services (VAT + selective consumption taxes) divided by pretax aggregate private and nonwage public consumption (private consumption + government consumption - wages and salaries paid by government + social security contributions paid by government as an employer)

2. CR data are preliminary.

On the other hand, the CR experience from the 1994 reduction in the standard VAT rate by 1 percentage point indicates that a small decrease in the VAT rate odes not result in a price reduction being offset by higher profits, with no visible demand effects.

3. Income Taxation

As was shown above, the CEC have adopted policies to shift the tax burden from income to consumption taxation which coincided with the policy of separating the revenue from payroll-based social security contributions. It has led to tax structures similar in design to those of the EU countries. However, there are some departures from this pattern (see Table 1).

The income tax ratios in Hungary and Poland have a similar structure to EU countries with individual income ratio overweighing that of corporate income. In CR and Slovakia the corporate income tax ratio is higher than that of individual income tax. Although the ratio of corporate income tax to GDP in the CR is declining, from 7.9% in 1993 to 6.4% in 1994, it is still nearly double of that in Poland and nearly a 3.5-multiple of that in Hungary. In comparison with EU countries, the Czech corporate income tax ratio corresponds to a 2.2 multiple of 1993 EU average and individual income tax is nearly 2.6 times higher than in EU.

3.1 Labor Income Taxation

The reformed taxation of labor income has two elements:

- ***individual income tax*** levied at the sources of income for individuals and unincorporated businesses for which the labor income is the main one;
- payroll-based ***social security contributions*** assign to finance the insurance funds.

The pattern of **individual income tax** differs among the CEC, making comparison difficult. In general, individual income tax in the CEC is a mixture of a comprehensive income taxation and an expenditure type of income taxation.

The income tax base covers earned income including income in-kind, self-employed income, sale from immovable assets, capital gains (with special arrangements), other capital income as from interest, dividends and other securities taxed by withholding tax. Given these similarities, there are many differences, for example:

- in general, the CR and the SR have adopted a system with a wide range of standard deductibles, the Polish and Hungarian system is based on the 0 bracket with range of non standard deduction and nonrefundable tax credit in Poland, and tax relief for children in Hungary;
- pensions from domestic mandatory pension insurance are exempt in the CR and SR, a tax credit is provided to pensioners in Hungary;
- social security contributions are deductible from the statutory base in the CR and SR, and are not deductible in Hungary, and are rated at 0% in Poland;
- there are limited work-related deductions in Poland and SR;

- tax credit on housing savings is provided in Hungary. In Poland, tax relieves are provided on new land for houses, renovation of housing estates in Poland;

- an individual can opt out of joint taxation in Poland, calculating tax liability from half of the joint taxable income using the tax schedule and then this amount is doubled.

All CEC countries have adopted an individual income tax system with the progressive structure of marginal rates. In 1994, the top marginal rate varied from 41% in CR to 45% in Poland.

Tables 4: Description of the main parameters of Individual Income Taxation in CEC

Table 4.1: The Czech Republic

Deductibles (in CZK):	1993	1994	1995
general allowance	20 400	21 600	24 000
child allowance	9 000	10 800	12 000
spouse allowance	12 000	12 000	12 000
health allowance	12 000	12 000	12 000
student allowance	6 000	6 000	6 000
travel allowance	2 400		

Tax rates in 1993 - 1995	
Taxable income (in CZK)	Marginal rate
to 60 000	15 %
60 000 - 120 000	20 %
120 000 - 180 000	25 %
180 000 - 540 000	32 %
540 000 - 1 080 000	40 %
1 080 000 and more	47 %*

* The tax rate has been lowered regularly in the highest tax bracket: in 1994 it was 44%, and in 1995 it was 43 %

Table 4.2: Hungary

1992 - 1993		1994 - 1995	
Taxable income in HUF	Marginal tax rate	Taxable income in HUF	Marginal tax rate
- 100 000	0%	- 110 000	0%
100 000 - 200 000	25%	110 000 - 150 000	20%
200 000 - 500 000	35%	150 000 - 220 000	25%
500 000 - and more	40%	220 000 - 380 000	35%
		380 000 - 550 000	40%
		550 000 and more	44%

Table 4.3: Poland

1993		1994	
Taxable income in thousands of PLZ	Marginal tax rate	Taxable income in thousands of PLZ	Marginal tax rate
- 4 320	0%	- 4 320	0%
4 320 - 64 800	20%	4 320 - 90 800	21%
64 800 - 129 600	30%	90 800 - 181 600	33%
129 000 and more	40%	181 600 and more	45%

Table 4.4: Slovakia

Deductibles (in CSK)	1993	1994
general allowance:	20 400	21 000
child allowance:	9 000	9 000*
spouse allowance:	12 000	12 000
health allowance:	12 000	12 000
work-related expenses:	2 400	3 600

Tax rates in 1993 - 1994	
Taxable income (in CSK)	Marginal rate:
to 60 000	15 %
60 000 - 120 000	20 %
120 000 - 180 000	25 %
180 000 - 540 000	32 %
540 000 - 1 080 000	40 %
1 080 000 and more	47 %**

* 18 000 CSK for disabled children
** The top rate was reduced to 42 % in 1994

All CEC countries have introduced mandatory ***social security contributions.*** These cover pension, sickness, unemployment, and health insurance in the CR and SR; pension, sickness, and unemployment insurance in Hungary; and pension and unemployment insurance in Poland. The 1993 (and following years in CR) rates for employees and employers are listed in Table 5.

The social security rates are flat in all CEC varying

- for employees from 0% in Poland, 11% in Hungary (the rates remained unchanged since 1992) to 13.5% in CR and Slovakia (with a reduction of 0.25 percentage point in CR in 1994); these rates (with exception of Poland) are about average EU level;

- for employers from 36% in CR to 48% in Poland; these rates shifting the social cost to employers are comparable with the Italy (46%) only, otherwise being well above EU level.

Table 5.1: Taxation of an Average Production Worker's* Labor Income in CEC

Country	Average income tax rate	Social security contribution rate**		Total average tax rate***		Marginal tax rate on earned income		Tax Wedge[4]
		Employees	Employers	Employees[1]	Effective[2]	Income tax	Employee total[3]	
Hungary 1992	15.5 (10.8)	11.0	47.0	26.5	50.0	25	36	71.6
Poland 1993	17.2 (15.3)	0.0	48.0	17.2	44.1	20	20	64.7
Slovakia 1993	7.8 (0.6)	12.0	38.0	19.8	42.4	15	27.0	62.5
Slovakia 1994	8.3 (2.2)	12.0	38.0	20.3	42.6	15	27.0	62.7
Slovakia 1995	8.9 (3.7)	12.0	38.0	20.9	42.8	15	27.0	63.0
CR 1993	8.2 (1.9)	13.5	36.0	22.0	41.9	15	28.5	62.3
CR 1994	9.1 (3.1)	13.25	35.25	22.6	42.2	15	28.25	62.1
CR 1995	9.4 (3.8)	13.25	35.25	22.9	42.7	20	33.25	61.8

Notes: see Table 5.2

Table 5.2: Taxation of an Average Production Workers's* Labor Income in EU Countries

Country	Social security contribution rate**		Average income tax rate***	Total average tax rate		Tax wedge
	Employee	Employer		Employee[1]	Effective[2]	
Belgium	13.1	34.2	24.1 (11.9)	37.2	53.2	67.0
Denmark	2.6	0	44.1 (36.2)	47.0	47.0	56.7
Finland	7.1	3.8	28.6 (23.3)	35.7	38.1	47.9
France	18.4	n.a.	8.5 (1.7)	26.9	n.a.	n.a.
Ireland	8.8	12.2	23.6 (15.7)	32.3	39.7	50.1
Italy	10.0	46.0	16.5 (12.9)	26.5	49,6	69.1
Luxembourg	12.5	14.9	12.7 (n.a.)	25.2	34.9	44.9
Germany	18.3	18.3	18.3 (7.9)	36.6	46.4	55.0
Netherlands	29.3	7.2	12.2 (9.5)	41.5	45.4	51.7
Portugal	11.0	24.5	6.4 (1.9)	17.4	33.7	48.0
Austria	17.5	23.6	8.9 (3.3)	26.4	40.5	55.3
Greece	15.8	27.4	1.7 (0.5)	17.5	35.3	52.7
Spain	6.1	31.6	12.3 (5.9)	18.4	38.0	52.5
Sweden	1.0	29.8	28.5 (28.5)	29.5	45.6	60.4
United Kingdom	7.6	10.4	18.0 (15.0)	25.6	32.6	42.8

Source: The tax/benefit position of production workers, OECD 1990 - 1993, and own calculations.

Notes:

* Average wage of full time production workers in the manufacturing sector (15- 33% of all employees).

** In accordance with OECD methodology, the social security contribution includes heath insurance.

*** Average rate of income tax paid by a single worker without children; the rate for a single-earner couple with two children is figured in the brackets.

1) Calculated as the sum of the social security and the effective average income tax rates for gross earned income.

2) Calculated as the ratio of (income tax + social security contributions paid by employees and employers) divided by (gross earnings + social security contributions paid by employers).

3) Calculated as the sum of marginal income tax rate and the social security rate

4) The tax wedge of a unit of income devoted to consumption before and after taxation is calculated as (1-(1-sstax)(1-inctax)/(1+vatax)); where sstax is the rate of social security contributions paid by employee and employer, inctax is the average rate of individual income tax and vatax is the standard VAT rate

Effective Tax Rates on Labor Income

Because of the limited availability of National Account data, the aggregate approach can not be used for computing the effective tax rates on labor income. Alternatively we use the point approach analyzing the tax impact on the behavior of a typical economic agent represented by the average industrial worker and his employer. The group of industrial workers represents 15 - 33% of employees in all activities in the compared countries. The results are to be interpreted with this limitation kept in mind. On the other hand, the average production worker wages are below the average wage of employees in all activities, causing the indicators to be underestimated.

To compute the average rates we opted for an approach more rigorous than the tax law treatment; i.e., we based our calculations on tax payments which do not reflect the non-standard reliefs determined by reference to the actual expenses occurred by a "typical" worker. This concept does not conform with the macroeconomic concept of effective tax rates, but can provide a useful approximation of aggregate rates.

The effective average tax rate approach provides a parameter affecting the generated tax revenue. The effective marginal rate are relevant for the supply and demand of labor and the tax structure progressivity and for the consumption/saving decision. These rates are useful approximation of to the taxes that distort economic decisions taking into account the effective tax burden resulting from each of the major taxes.

The average income tax rates (calculated as the tax to gross income rate) has varied from 17.2% (or 15.3) in Poland to 7.8% (or 0.6%) in Slovakia in the initial year and has grown during the observed period.

The change in taxes is an outcome of the growth of nominal wages and the progresivity of taxation. In general, none of CEC have adopted the automatic indexation of taxes to inflation. From the above description of the statutory provisions, it is evident that individual countries cope with inflation differently[8]. From the described relatively short period, it seems that the governments in CR and Hungary discretionary responded in an attempt to cope with the inflationary fiscal drag. The Czech government relies more on allowance-induced subsidies along the income scale than on bracket indexation, while the Hungarian government opted out of the latter approach with the lowering the marginal rates. The tax payers' protection against inflation was weaker in Poland and Slovakia.

[8] According to M. Dabrowski, op. cit., the CPI were in CEC as follows:

Country:	1993	1994	1995
Czech Republic	20.8	10.2	9.0
Hungary	22.5	19.0	29.0
Poland	35.2	33.2	29.0
Slovakia	23.0	14.0	10.0

From the CPI and individual income tax ratio developments we can assume that the average tax rate increase by 1.2 percentage points in the CR between 1993 - 1995 was mainly due to real wage growth with stable progressivity along the income scale (causing the individual tax-GDP ratio increase by 1.4 percentage points). In Hungary the individual tax-GDP ratio has fallen by 0.6 percentage point in 1994. From available information, the effective average labor income tax rate increase in Slovakia (1.1 percentage point from 1993 - 1995) was due to a very pure income tax adjustment to inflation.

The dispersion of marginal income tax rate for the "typical worker" is from 25% or 20% (corresponding to the second tax bracket in Hungary in 1992 and Poland in 1993) to 15% in relationship to the first tax bracket in the remaining CEC in 1993 (a shift to second bracket in the CR in 1995).

When comparing the average tax rate of income tax with EU countries, the CR and Slovakia fall into rank of light taxing countries, the Poland and Hungary into middle group.

In considering take-home pay, not only the income tax is relevant, but also the payroll based contributions paid by employees. For the average productive worker the social security contributions borne by employees creates a greater burden in that the income tax in SR and in CR to 1994 making governments' efforts to compensate for inflation very difficult. The total burden beard paid by employees measured by total average tax rate varied from 26.5% in Hungary to 17.2% in Poland, still comparable with the lower taxing EU countries.

To identify the labor income tax burden on the source and use side, we use the effective labor income rates combining the average tax rate with the social security contributions paid both by employees and employers, i.e., the rate which measures unit tax burden to full cost of labor.

Using the concept of effective average tax rate, these rates varied from 50% in Hungary, 44.1% in Poland, and down to 41.9% in both Slovakia and in the CR in 1993 with a slight tendency to grow in later years. All the CEC can classified as heavy labor taxing countries. Countries within the EU taxing at similar effective average tax rate are Belgium, Denmark, Germany and Italy. Out of these, only Belgium is above Hungary.

To measure the overall primary impact of taxation of labor and consumption we used the "tax wedge" indicator, referring to the difference between one unit of income devoted to consumption before and after taxation. Not having data on the structure of the VAT base for individual countries needed to calculate the weighted average VAT rate, we used the standard rate which overestimates the impact of consumption taxation. This factor is more important for the CEC as the range of commodities taxed by the reduced rate is broader here and the tax base is defined more narrowly than in the EU. This is why the results are overestimated and are to be interpreted very carefully.

The results indicated that the most heavily taxing countries in the EU are Italy and Belgium. Hungary is approximately 2.5 or 4.6 percentage points above them. The tax wedge has a slight tendency to raise in Slovakia from 62.5% in 1993 to 63% in 1995 and the slight tendency to fall in the CR from 62.3 in 1993 to 61.8 in 1995, landing near Sweden (the third

heaviest tax wedge within EU at 60.4% in 1993) other EU countries were, on average, under this level by 15 percentage points.

III. 2 Taxation on Profits

Two reasons are commonly given for taxing profits. One is simply that corporate profits are a convenient point at which to tax the income of company owners. Profits are just therefore an administrative feature of the tax system which avoids the need for all shareholders to declare their dividends. This problem can not be fully solved by a flat withholding tax which would not reflect the progressive income tax schedule.

The other is that, in theory, a tax on profit can raise revenue at lower distortional cost; a profit tax does not distort incentives to invest as long as government only taxes in excess of those profits which a company must earn in order to satisfy its financiers. In practice, the corporate tax in CEC as well as EU countries do not tax pure profits, but some mixture of profits and income.

This paper can not examine deviations from the pure profit tax base. It just needs to be mentioned that these deviations cause economic distortions and these distortions are worse in the presence of inflation as no corporate tax system can fully adjust for the effect of inflation. This is a primary problem in the CEC.

In addition, the statutory corporate income tax rates are a very weak indicator of the intensity of taxation.

CEC countries have commonly adopted the policy of reducing the statutory rates (only in Poland was the rate unchanged over the observed period), but the rates still remaining at the top of the EU countries with just Italy being above. The most radical policy was adopted in Hungary, where the rate was reduced to 36% in 1994 and the reduced rate of 18% for retained profits and a surcharge of 23% for distributed profits was introduced in 1995. This rate is far lower than the lowest in the EU (25% in Finland).

Table 6: Corporate Income Tax Rates in CEC and EU Countries (in %)

Country	1993	1994	1995	1996
Belgium		39		
Denmark		34		
Finland		25		
France		33.3		
Ireland		40		
Italy		52.2		
Luxembourg		39.4		
Germany		45/30*		
Netherlands		35		
Portugal		39.6		
Austria		34		
Greece		40		
Spain		35		
Sweden		28		
United Kingdom		33		
CR	45	43	41	39
Hungary	40	36	18	18
Poland	40	40	40	40
Slovakia	45	40	40	40

* where two rates are given, the latter is the rate on retained profits

III. 3 Taxation on Capital

In addition to the corporate income tax, all the CEC have implemented a withholding tax on post-tax profits distributed to the company owners in the form of dividends. This tax has led to the economic double taxation of capital, which is more important in the countries which are lacking the capital for privatization and further development in the corporate sector.

The combined effect of corporate income taxation and the withholding tax on dividends paid by the owner of capital can be measured as the difference between a unit of pre-tax profit devoted to distribution and its post-tax value.

The profits which will be distributed are taxed at a much heavier rate than reinvested (retained) profits in all of the CEC. The average tax on distributed profits in Hungary is the lowest one, corresponding with the corporate income tax rate before its reduction to 18%. The average rate in the CR was reduced by providing a tax credit to corporations. Poland and Slovakia do not compensate either corporations or owners for double taxation. This is somewhat balanced by these countries providing some tax reliefs, eliminating the double taxation for some forms of savings (for such as pension insurance and housing savings). It soothes over some of the distortions on the financial markets, which would otherwise need government support.

Table 7: CEC Taxation of Capital in 1995 (as %)

Country	Rate of withholding tax on dividends	Rate of corporate income tax	Average tax rate on distributed profits*
CR	25	39**	47
Hungary	23	18	36
Poland	25	40	55
Slovakia	25	40	55

* Average tax rate on distributed profits is calculated as 1- (1 - inctax)(1divtax), where inctax is corporate income tax rate and divtax is the rate of withholding tax on dividends

** The tax credit of 50% on the withholding tax on dividends for corporations was introduced in 1994

Conclusions

The fundamental tax reforms in the CEC resulted in the implementation of a tax structure similar in design to those operating in EU countries. This paper has confirmed the hypotheses that the reform was followed by the adjustment of tax revenue patterns towards those of high spending countries. In general, in all of the CEC, the efforts to adjust the tax structure and reduce the tax ratio are conflicting with the need for social system funding.

Even though within the CEC individual income taxation is low in the CR and Slovakia and quite mild in Hungary and Poland, these effects are overwhelmed by the burden of social security contributions. Taking them into account, labor taxation corresponds to EU countries with mature welfare systems. The analyses indicates that the taxation on consumption is quite heavy too. The labor and consumption taxation creates a tax wedge

much higher in the CEC than is the EU "norm". This could be a strong barrier against fast development in the CEC, restricting the achievement of high economic growth rates which are desirable for the CEC's economic integration into the EU. The CEC taxation of capital income from dividends, (with the exemption of Hungary), does not adequately integrate corporate and individual taxation. This is leading to the double taxation of some capital income, creating distortions in the taxing of different forms of savings.

On the other hand, significant departures by the individual tax policies within the CEC from EU "norm" can be identified.

The policy pattern in CR is dominated by the balanced budget policy, causing the tax ratio to be the highest among the CEC. In the Czech Republic and Slovakia, where the tax structure was originally based on the taxation of the corporate sector, the tax structure is still biased towards corporate income taxation. The corporate sector is somewhat compensated by the partial shifting of social security contributions from employers to employees. Overall, these are low in comparison to the rest of the CEC. The CR has shown a slight tendency towards increasing individual income taxation in 1994 - 1995.

In Hungary, taxation of corporate income is extremely low, even in a European context. This is being balanced by the extremely heavy taxation of labor income (both of employees and employers) and consumption.

In Poland, the paper has identified the highest individual tax ratio with the highest average labor income tax rate within the CEC. This is accompanied by the corporate sector bearing the full burden of funding the social security system.

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