STROKOVNI ČLANKI – PROFESSIONAL PAPERS

# CORPORATE TAX SYSTEM CHANGE AND GROWTH RATE OF CORPORATIONS IN SLOVENIA

# Vpliv spremembe davčne zakonodaje na stopnjo rasti dobičkov slovenskih javnih delniških družb

#### 1 Introduction

Slovenia's tax system has changed several times in the last few years. The most recent changes related to corporate taxes (taxes on corporate profits) and personal taxes (taxes on capital profits) starting in fiscal year 2007. According to the old income tax regulations, individuals' capital profits were taxed jointly with other taxable incomes; however, the new regulations tax capital profits of individuals separately from other taxable incomes as a rate of 20% (for capital profits gained in the first 5 years of ownership) that subsequently drops to 0% (for capital profits gained after 20 years of ownership). This could imply a significant reduction of effective personal tax rate for those who were previously in higher tax groups based on previous regulations. Indeed, most stockowners are those who also have relatively high incomes otherwise. Meanwhile, in regard to changes for corporations, the tax rate for corporate profits was 25% in 2006 and earlier, but is now decreasing annually until 2010 to 20% (in 2007 it was 23%, decreasing 1% each year). Thus, in the span of a few years, personal and corporate taxes have fallen significantly. Moreover, corporate taxation in Slovenia will be one of the lowest not only in Europe, but also in most developed and transitional economies throughout the world, even though corporate income tax in Slovenia was at the European average prior to the reform (see Table 1).

Country	in %	Country	in %	Country	in %
Austria	34,0	Hungary	16,0	Romania	25,0
Belgium	34,0	Iceland	18,0	Slovakia	19,0
Croatia	20,3	Ireland	12,5	Spain	35,0
Czech Rep.	28,0	Italy	37,3	Sweden	28,0
Denmark	30,0	Luxembourg	30,4	Switzerland	24,1
Finland	29,0	Netherlands	34,5	Ukraine	25,0
France	34,3	Norway	28,0	U.K.	30,0
Germany	38,3	Poland	19,0		•
Greece	35,0	Portugal	27,5		

 Table 1: Corporate Income Tax Rates in European economies, 2004

Source: Edwards (2004)

The level of corporate tax impacts the financial strength of the corporation as well as the level of its activities. A lower corporate tax aims to boost corporations' economic activity; it might also raise corporations' awareness of business opportunities while costs for lost opportunities are higher. Igor Stubelj<sup>\*</sup> Primož Dolenc<sup>\*\*</sup>

# Abstract

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The purpose of the presented research was to analyse the effect of corporate tax reform in Slovenia. We tested the hypothesis that the decrease in corporate income taxation induced higher (reported) profits in 2007 than expected from historical data. Our analysis indicated that historical data can be used to estimate growth rates of earnings until the last year before the tax reform. Regardless of the methodology used, the explanatory power of estimated growth rate was significant and very high. However, in the first year after tax reform, historical data were no longer applicable. We assumed that this shift in explanatory power of estimated growth rates can be attributed to tax reform.

Key Words: tax reform, net income, growth rate, Slovenia

## Izvleček

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Namen prispevka je analiza učinka davčne reforme v Sloveniji. Preverili smo hipotezo, da je zmanjšanje davka na kapitalske dobičke pravnih oseb vplivalo na povečanje čistih dobičkov slovenskih delniških družb v letu 2007, dobički pa so višji od pričakovanih. Analiza je pokazala, da lahko do leta 2006 relativno dobro napovedujemo pričakovane stopnje rasti dobičkov iz preteklih podatkov ne glede na uporabljeno metodologijo je bila pojasnjevalna moč statistično značilna in zelo visoka. Nasprotno je bila prvo leto po davčni reformi ocena s pomočjo zgodovinskih podatkov nezanesljiva. Predpostavili smo, da je ta premik v pojasnjevalni moči ocenjenih stopenj rasti posledica davčne reforme.

Ključne besede: davčna reforma, čisti dobiček, stopnja rasti, Slovenija

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Profits after taxes (net income) are important for corporations. Simply speaking, net income is the difference between operating profits and taxes, which is the amount freely available for shareholders. A part or the whole net income can be retained in the corporation. Retained earnings are one of the most important sources of equity financing for corporations. Higher retained earnings also allow new debt financing without changing the capital structure, which can significantly help finance new investments that serve to further the corporations' growth (and, in fact, the economy as a whole).

In light of this situation, what was the reason behind the reform? Was it to lower the excess tax burden for existing corporations or to boost Slovenian tax competitiveness (i.e., tax competition)? Klun (2006) conducted a comparative analysis of tax systems in Slovenia and neighbouring countries, discovering that recent trends have been to lower tax burdens for corporate taxation as well as personal taxes. Klun examined these trends through the perspective of tax competition and concluded that, although tax competition among economies has traditionally not been perceived as something positive, some economic externalities of such trends still exist. Yet Dietz and Keuschnigg (2002) advocate for the necessity of tax reforms in corporate taxation because the efficient tax burden for corporate profits is usually in dual form: first corporate tax and then income tax on capital gains.

Tax policy can significantly influence behaviours or economic subjects, especially for corporations. According to Desai (2006), the taxation of corporate capital gains is associated with two types of economic distortions. First, the realisation-based taxation of corporate capital gains discourages value-enhancing asset reallocation by creating a significant lock-in effect. Second, such taxation discourages corporate investments by imposing a third layer of tax on top of the corporate income tax and the personal income tax on corporate income distributed to shareholders.

Brav et al. (2008) surveyed 328 financial executives in the United States to determine the effects of the dividend tax cut on corporate payout policy. They found that the tax cut led to initiations and dividend increases at some firmsmore weakly at firms for which retail investors are particularly important. Furthermore, Kari, Karikallio and Pirttilä (2008) found that increases in dividend taxation in Finland in 2005 induced increased dividend payouts by 10 to 50%. This increase was not accompanied by a reduction in investment activities, but rather was associated with increased indebtedness in non-listed firms. The results also suggested that the timing of dividend distributions probably offset much of the potential for increased dividend tax revenue following the reform. This is important information for possible impacts of tax reduction in corporate taxation because effects could be similar as lower taxation management (or better corporation) could be more stimulated to report significant profits than before taxes or to "postpone" the profits until the next year.

The purpose of the current research is to analyse the effect of corporate tax reform in Slovenia. We test the hypothesis that the decrease in corporate income taxation induced higher (reported) profits in 2007 than expected based on historical data. We analyse the growth rate of net income for large corporations quoted on the Ljubljana Stock Exchange to establish a correlation between net incomes and the tax regime that changed in 2007. The focus of such efforts is to estimate the effect of the change in the corporate tax system at the level of the net income growth rate.

Based on the analysis, historical data can be used to estimate growth rates of earnings until the last year before a tax reform. Regardless of the methodology used, the explanatory power of estimated growth rate was significant and very high. However, in the first year after a tax reform, historical data were no longer applicable. We assumed that this shift in explanatory power of estimated growth rates can be attributed to the tax reform.

The paper is organised as follows. The next section presents the data and methodology. The third section presents and discusses results. Finally, the fourth section presents the conclusion.

#### 2 Data and methodology

We tested our hypothesis on public corporations listed on the Ljubljana Stock Exchange, which included 20 corporations (see Table 2 in Section 3). We used annual data on reported earnings for the 1996-2007 period. Data were obtained from the I-Bon database.

The methodology was based on several steps. First we calculated actual annual growths of earnings using the following equation:

$${}_{a}g_{t} = \frac{E_{t}}{E_{t-1}} - 1 , \qquad (1)$$

where:

 $_{a}g_{t}$  = actual yearly growth of earnings,

 $E_t$  = earnings in year t.

The companies demonstrated negative earnings or losses in certain years. In the years when the earnings changed from negative to positive, the use of the formula in Equation (1) was inadequate. Thus, we calculated the actual annual growths of earnings as follows:

$${}_{a}g_{t} = 1 - \frac{E_{t}}{E_{t-1}}$$
 (2)

We calculated the actual annual growths for the 1997-2007 period.

The next step was to estimate the expected growth of earnings for 2007. We used two methods. First we calculated the estimate for 2006 and 2007 based on a linear trend using least squares methodology. The estimate for 2006 and 2007 was calculated as:

$${}_{e}g_{t+1} = b_0 + b_1 \cdot (t+1) , \qquad (3)$$

where:

 $_{\rm e}$ g<sub>t</sub> = estimated yearly growth of earnings in year *t*+1,

 $b_0$  and  $b_1$  = estimated regression parameters for the trend.

However, this method has certain drawbacks that arise from anticipated linearity of trend and the least squares methodology; thus, we used a second method: kernel density estimator. The goal of the density estimation is to approximate the probability density function f(x) of the random variable X (Schoutens 2003). The outcome of this operation is a smother empirical probability density function (Meucci 2005). If we have *n* independent observations, then  $x_1$ ,  $x_2,...,x_n$  stems from the random variable X. The kernel density estimator for the estimation of the density f(x) at point x is defined in Equation (4) (Schoutens 2003):

$$\hat{f}_h(x) = \frac{1}{n \cdot h} \sum_{i=1}^n K\left(\frac{x_i - x}{h}\right), \qquad (4)$$

where:

 $K\left(\frac{x_i - x}{h}\right) =$  kernel function, x = random variable,

n = number of observations,

h = bandwidth.

The Gaussian kernel—Equation (5)—is typically used and was used in the current research as well:

$$K(x) = \frac{e^{-\frac{(x_i - x)^2}{2 \cdot h^2}}}{\sqrt{2 \cdot \pi}} .$$
 (5)

For the bandwidth (h), we used Silverman's (1986) rule of thumb value:

$$h = 1,06 \cdot \sigma \cdot n^{-\frac{1}{5}},$$
 (6)

where:

 $\sigma$  = the standard error of the random variable.

To compare estimated and actual growth rates, we again used two methods. First, we used simple paired-samples *t*-test to determine change in average growth and its variability in 2006 and 2007, respectively. Next, we used a regression analysis (least squares) to determine the prediction power of estimated growth rates on actual growth rates in 2006 and 2007, respectively.

Furthermore, we used a multivariate cluster analysis to cluster the analysed corporations into more homogeneous

groups. Based on the growth rates from 1997 to 2007 and their respected variability, we assumed that the sample was quite heterogeneous; therefore, we tried to establish more homogeneous groups on which to base the analysis. As such, cluster variables' actual growth rates from 1997 to 2007 and the Ward classification methodology were used to classify corporations.

## 3 Results and discussion

Table 2 shows the annual actual growth rates of earnings, cross-section and time series average, and coefficient of variation for selected corporations from 1997 to 2007. A relatively high diversity of growth rates exists across corporations as well as across time perspective. On average, corporations have been growing at approximately 25% each year during the 11–year timeframe. However, the arithmetic average might not be a good parameter to represent the data given the high variability of actual growth rates across time and corporations.

Table 3 presents actual and estimated growth rates for the selected sample for years 2006 and 2007, respectively. The estimated growth rates are calculated first as a linear trend and then based on the kernel density estimator.

From the raw data, no significant pattern or correlation emerges between actual and estimated data. Therefore, we used a regression analysis to determine whether any significant correlation exists between actual and estimated growth in 2006 and 2007, respectively, or if estimated growth can predict actual growth in these two years. However, the results of the analysis indicated no significant correlation between actual and estimated (with trend or kernel) growth in either 2006 or 2007 (see Table 4 for results).

We assumed that the heterogeneity of the sample might play a crucial role as well. To develop more homogeneous groups of corporations, we conducted a cluster analysis on growth rates for the entire period. Figure 1 provides a dendrogram representing the final result of the cluster analysis. We can conclude that the sample can be divided into three subgroups, although groups 2 and 3 include only one corporation (Merkator d.d. and Žito d.d., respectively). Other corporations are obviously relatively homogenous with respect to their annual growth rates of earnings.

According to these results, we repeated previous regression analyses, introducing two dummy variables:

$$D1 = \begin{cases} 1 \text{ if case is Mercator} \\ 0 \text{ otherwise} \end{cases}$$
(7)

and

$$D2 = \begin{cases} 1 \text{ if case is } \check{Z} \text{ ito} \\ 0 \text{ otherwise} \end{cases}$$
(8)

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	ag9796	ag9897	ag9998	ag0099	ag0100	ag0201	ag0302	ag0403	ag0504	ag0605	ag0706	Average	Coeffi- cient of variation
ACH, d.d.	8,4%	11,0%	7,2%	9,4%	22,0%	19,3%	5,3%	-82,6%	225,1%	141,1%	278,6%	58,6%	1,77
Aerodrom Ljubljana, d.d.	119,9%	35,6%	8,7%	7,9%	-22,1%	58,3%	14,5%	10,2%	-3,4%	7,1%	89,8%	29,7%	1,38
Delo, d.d.	84,4%	135,0%	27,9%	5,7%	2,8%	-21,6%	16,4%	-22,9%	-45,0%	19,4%	-9,3%	17,5%	2,80
Gorenje, d.d.	325,1%	41,4%	12,9%	6,7%	6,2%	17,1%	19,1%	-44,1%	9,3%	-1,8%	9,9%	36,5%	2,55
Helios, d.d.	61,4%	-5,5%	15,5%	7,1%	36,6%	35,2%	66,7%	-50,5%	-3,6%	32,9%	2,9%	18,1%	1,76
lskra avtoelektrika, d.d.	947,7%	38,2%	33,7%	17,1%	-54,4%	47,6%	26,1%	-27,9%	-5,2%	27,3%	49,6%	100,0%	2,70
Intereuropa, d.d.	2,7%	20,5%	40,8%	-20,6%	119,3%	20,2%	-43,5%	-32,1%	25,6%	-54,9%	316,0%	35,8%	2,78
Istrabenz, d.d.	-13,5%	7,8%	-41,7%	-18,4%	712,9%	-28,0%	-31,2%	182,5%	-97,8%	269,6%	4173,8%	465,1%	2,57
Krka, d.d.	60,0%	-21,3%	3,5%	47,7%	21,6%	10,3%	1,0%	28,8%	53,1%	25,5%	11,9%	22,0%	1,06
Lesnina, d.d.	309,0%	21,1%	3,3%	-13,5%	22,5%	69,1%	-7,0%	39,2%	12,3%	-6,3%	15,0%	42,3%	2,07
Luka Koper, d.d.	43,5%	11,5%	12,7%	0,9%	19,8%	18,8%	-15,9%	6,3%	0,2%	14,1%	25,6%	12,5%	1,17
Mercator, d.d.	-2540,1%	-108,8%	109,5%	31,7%	27,9%	-19,9%	82,4%	-42,3%	8,1%	4,8%	47,0%	-218,2%	-3,38
Merkur, d.d.	31,2%	33,5%	-15,0%	29,0%	6,9%	5,0%	23,7%	17,1%	-6,7%	16,7%	140,0%	25,6%	1,53
Petrol, d.d.	55,6%	1,9%	-93,8%	713,8%	103,6%	24,1%	12,0%	5,4%	6,5%	38,3%	15,4%	80,3%	2,56
Pivovarna Laško, d.d.	-4,3%	5,2%	-0,6%	3,9%	-9,2%	30,5%	2,2%	-41,4%	23,7%	-2,7%	99,4%	9,7%	3,44
Salus, d.d.	7,4%	80,4%	-30,8%	19,4%	15,6%	42,0%	2,6%	4,8%	-6,9%	-5,6%	125,5%	23,1%	1,84
Sava, d.d.	447,6%	21,1%	38,4%	-52,3%	18,5%	-4,6%	0,6%	85,6%	39,5%	33,0%	-49,4%	52,6%	2,48
Telekom Slovenije, d.d.	117,0%	24,3%	5,8%	-39,0%	-5,6%	4,0%	82,1%	-18,7%	42,9%	90,4%	-12,3%	26,4%	1,82
Terme Čatež, d.d.	12,8%	6,3%	26,5%	9,0%	-64,4%	828,4%	-56,2%	-43,9%	9,8%	25,3%	24,4%	70,7%	3,42
Žito, d.d.	-3116,0%	-26,4%	-29,6%	47,1%	-349,8%	135,9%	-108,0%	653,9%	-84,4%	1585,5%	25,7%	-115,1%	-9,32
Average	-25,1%	154,2%	0,7%	2,7%	21,6%	19,1%	9,7%	-2,9%	11,1%	32,4%	46,1%	24,5%	1,83
Coefficient of variation	-36,79	0,29	53,99	57,49	8,33	9,38	4,49	-52,12	5,52	10,61	19,52		

**Table 2:** Yearly actual growth rates of earnings for selected corporations, cross-section and time series average andcoefficient of variation for the period from 1997 to 2007

Source: Ibon (2008) and author's calculations

#### Table 3: Actual and estimated growth rates for selected sample for 2006 and 2007, respectively

	0	e <sup>g</sup>	0605	a	<sub>e</sub> g <sub>0706</sub>	
	a <sup>9</sup> 0605	trend	kernel	a <sup>9</sup> 0706	trend	kernel
ACH, d.d.	141,1%	22,5%	7,9%	278,6%	-30,4%	12,2%
Aerodrom Ljubljana, d.d.	7,1%	14,1%	11,2%	89,8%	12,1%	10,4%
Delo, d.d.	19,4%	123,8%	1,4%	-9,3%	62,7%	4,4%
Gorenje, d.d.	-1,8%	46,9%	10,0%	9,9%	40,3%	8,5%
Helios, d.d.	32,9%	53,9%	22,0%	2,9%	18,6%	24,4%
lskra avtoelektrika, d.d.	27,3%	39,9%	5,1%	49,6%	11,1%	-1,6%
Intereuropa, d.d.	-54,9%	43,7%	9,8%	316,0%	154,9%	11,8%
Istrabenz, d.d.	269,6%	2469,6%	-16,4%	4173,8%	430,3%	0,2%
Krka, d.d.	25,5%	-15,8%	23,4%	11,9%	-15,2%	23,6%
Lesnina, d.d.	-6,3%	0,1%	17,1%	15,0%	13,9%	14,1%
Luka Koper, d.d.	14,1%	16,9%	9,5%	25,6%	7,0%	10,4%
Mercator, d.d.	4,8%	93,7%	11,2%	47,0%	80,7%	10,5%
Merkur, d.d.	16,7%	11,9%	17,9%	140,0%	3,9%	17,8%
Petrol, d.d.	38,3%	1,5%	15,7%	15,4%	-11,8%	18,6%
Pivovarna Laško, d.d.	-2,7%	8,9%	2,8%	99,4%	7,3%	1,7%
Salus, d.d.	-5,6%	18,6%	8,2%	125,5%	24,8%	5,7%
Sava, d.d.	33,0%	-21,1%	18,7%	-49,4%	-21,9%	20,6%
Telekom Slovenije, d.d.	90,4%	-13,5%	10,1%	-12,3%	-32,6%	20,2%
Terme Čatež, d.d.	25,3%	71,3%	-12,2%	24,4%	30,8%	-7,9%
Žito, d.d.	1585,5%	-387,1%	8,8%	25,7%	-82,3%	56,8%

Source: Author's calculations.

CASE Label	Num	°	5	10	15	20	25
Luka Koper, d.d.	11	00					
Merkur, d.d.	1.3	Q.o.					
Salus, d.d.	16	-Q-0					
Pivovarna Laško, d.d	15	-0-e					
Krka, d.d.	9	5.0					
Intereuropa, d.d.	7	-Q-e					
Helios, d.d.	5	-8-e					
Telekom Slovenije, d	18	ą.					
Aerodrom Ljubljana,	2	-0-0					
Delo, d.d.	3	5-					
ACH, d.d.	1	0200	,				
Gorenje, d.d.	-4	30 40					
Leanina, d.d.	10	34 00					
Sava, d.d.	17	300					
Petrol, d.d.	1.4	888+					
Istrabenz, d.d.	8	5555	000000	00000000	000000000	00000	
Terme Čatež, d.d.	19	555+			+000	00000000	000660000
Iskra avtoelektrika,	6	0000			40		40
Mercator, d.d.	12	3333	888888	\$\$\$\$\$\$\$\$	\$\$\$\$\$\$\$\$\$	288880	60
Šito, d.d.	20	0000	0000000	00000000	0000000000	00000000	000000000000000000000000000000000000000

#### Figure 1: Dendrogram of cluster analysis for selected sample (Ward method)

Source: Author's calculations

**Table 4**: Results of regression analysis between actual andestimated growth rate of earnings in 2006 and 2007

Dependent variable	Explanatory variable <sup>*</sup>	Regression coefficient	Significance of regression coefficient	Determination coefficient
0	<sub>е</sub> 9 <sub>0605Т</sub>	-0,04	0,79	0,04
a <b>9</b> 0605	<sub>е</sub> 9 <sub>0605К</sub>	-3,64	0,67	0,01
0	<sub>е</sub> 9 <sub>0706Т</sub>	7,95	0,08	0,07
<sup>a</sup> 9 <sub>0706</sub>	<sub>е</sub> 9 <sub>0706К</sub>	-16,52	0,31	0,06

Note: \* T = trend estimated; K = kernel estimated Source: Author's calculations

**Table 5:** Results of regression analysis between actual andestimated growth rate of earnings in 2006 and 2007

Dependent variable	Explanatory variable <sup>*</sup>	Regression coefficient	Significance of regression coefficient	Determination coefficient
	<sub>е</sub> 9 <sub>0605Т</sub>	-0,10	0,00	
<sub>a</sub> g <sub>0605</sub>	D1	-0,27	0,57	0,99
	D2	16,03	0,00	
<sub>a</sub> g <sub>0605</sub>	<sub>е</sub> 9 <sub>0605К</sub>	3,33	0,04	
	D1	-0,25	0,71	0,97
	D2	15,48	0,00	
	<sub>е</sub> 9 <sub>0706Т</sub>	0,10	0,07	
<sub>a</sub> g <sub>0706</sub>	D1	-0,26	0,57	0,08
	D2	16,03	0,36	
<sub>a</sub> g <sub>0706</sub>	<sub>е</sub> 9 <sub>0706К</sub>	8,51	0,23	
	D1	-6,01	0,13	0,10
	D2	7,64	0,07	

Note: \* T = trend estimated; K = kernel estimated Source: Author's calculations

Table 6: Analysis	of	differences	between	actual	and
estimated growth	rates	in 2006 and	2007, resp	pectively	

Year	Difference	Standard deviation	Significance of t-test
2006/05	0,28	0,77	0.00
2007/06	2,83	9,76	0,00

Source: Author's calculations

The results of these analyses are quite interesting (see Table 5). When we considered particularities of three different subgroups of corporations, statistically significant and expected results emerged from the regression analysis. Regardless of the method of estimation (either trend or kernel), similar results occurred, according to which estimates were a good proxy of actual growth rate of earnings in 2006. Using two different estimators, we considered the analysis sufficiently robust. In addition, both determination coefficients are relatively high.

However, the introduction of specific subgroup parameters into the analysis did not help the estimates be better proxies of the actual growth rate of earnings in 2007. In neither case (trend or kernel) did a significant correlation occur between actual and estimated data.

We also analysed the differences between actual and estimated<sup>1</sup> growth rates in 2006 and 2007, respectively. As Table 6 indicates, the mean difference between actual and estimated growth rate was relatively small in 2006 (28 percentage points), with the coefficient of variation being 2,7. Meanwhile, the mean difference between actual and estimated growth rate was high in 2007 (284 percentage points), with the coefficient of variation being 3,4. This difference is statistically significant.

Here we used only kernel density estimator.

What do these results actually tell us? Naturally it is difficult to test in detail the effect of tax reform based on data from the first year of its introduction. Such analyses<sup>2</sup> are usually performed several years after the tax reform. Despite this drawback, several important points were identified that could be used to confirm our hypothesis considering the background of the analysis. First, estimates of growth rate of earnings for 2006 were statistically correct and sufficiently robust. Both estimates were a good proxy of actual data. On the other hand, estimates for 2007 show a significant failure to predict actual growth in 2007, even though the methods for estimation were exactly the same as for 2006. In addition, the difference between actual and estimated growth in 2006 exhibit a relatively low figure, especially when compared to results for 2007. The difference between actual and estimated growth (i.e., error) in 2007 was significantly higher than in 2006. Although we cannot prove the causality of tax reform and growth rate of corporate profits, we can assume that at least a significant part of the shift in growth rates is due to the tax reform in corporate taxation. No other so significant changes occurred in the Slovenian economy in 2007 that could explain such shifts; all major macroeconomic parameters remained practically the same. Therefore, we conclude that tax reform most probably significantly influenced growth rates of corporations in Slovenia and that the inability to predict the 2007 growth based on past data<sup>3</sup> is at least an introductory proof of the hypothesis.

Some additional analyses should be investigated further. In a couple of years, once the reform is complete and the adaptation of economic subjects is finished, a more detailed analysis will be possible.

#### Summary

The most recent changes in the Slovenian tax system affected corporate and personal taxes. The purpose of the presented research was to analyse the effect of corporate tax reform in Slovenia.

The level of corporate tax affects the financial strength of the corporation as well as the level of its activities. The lower corporate tax aims to boost corporations' economic activity while raising awareness about business opportunities, although costs of lost opportunities are higher as well. We tested the hypothesis that the decrease in corporate income taxation induced higher (reported) profits in 2007 than expected based on historical data.

Our analysis showed that historical data can be used to estimate growth rates of earnings until the last year before the tax reform. Regardless of the methodology used, the explanatory power of estimated growth rate was significant and very high. However, in the first year after the tax reform, historical data were no longer applicable. This shift in explanatory power is likely due to the tax reform. Unfortunately, no firm proof exists to support this conclusion, although no other major shifts in the economy occurred in Slovenia in 2007. Thus, additional analyses should be conducted in the future.

#### References

- 1. Austan, G. (2000). What Happens When You Tax the Rich? Evidence from Executive Compensation. *The Journal of Political Economy* 108 (2): 352-378.
- Brav, A., J. R Graham, C. R. Harvey, R. Michaely (1998). Managerial Response to the May 2003 Dividend Tax Cut. *Financial Management* 37 (4): 611-625
- Coxwell, T. S., M. Gritcsh and E. Ekmekjian (2002). *The Impact of Current Tax Policy in Executive Stock Option Compensation and its Influence on Reported Earnings*. New York City: National Tax Association— Tax Institute of America.
- Desai, M. A. (2006). Taxing Corporate Capital Gains. *Tax Notes* 110 (9): 1-2.
- Dietz, M. D. and C. Keuschnigg (2002). Corporate Income Tax Reform in Switzerland. Available: http:// ssrn.com/abstract=379360 [5.6.2008].
- Edwards, C. (2004). Corporate Tax Reform: Kerry, Bush, Congress Fall Short. *Tax&Budget Bulletin* 21 (9): 1-2.
- Harvey, C. R., A. Brav, J. R. Graham and R. Michaely (2007). *Managerial Response to the May 2003 Dividend Tax Cut*. Available: http://ssrn.com/abstract=954572.
- Jain, I. (2005). Some Aspects of Taxation of Income: A Comparative Study of India and Select Countries. *Finance India* 19 (4): 1425-1429.
- Kari, S., H. Karikallio and J. Pirttilä (2008). Anticipating Tax Changes: Evidence from the Finnish Corporate Income Tax Reform of 2005. *Fiscal Studies* 29 (2): 167-196.
- 10. Klun, M. (2006). Does tax competition make tax reform essential? *Uprava* 4 (2/3): 7-24.
- Long, J. E. and J. D. Gwartney (1987). Income Tax Avoidance: Evidence from Individual Tax Returns. *National Tax Journal* 40 (4): 517-531.
- 12. Meucci, A. (2005). *Risk and Asset Allocation*. New York: Springer; Berlin Heidelberg.
- Schoutens, W. (2003). Levy Processes in Finance. Chichester : John Willey & Sons, Ltd.
- 14. Silverman, B. W. (1986). *Density Estimation for Statistics and Data Analysis*. London : Chapmann and Hall.
- 15. Willner, J. and L. Granqvist (2002). The Impact on Efficiency and Distribution of a Base-Broadening and Rate-Reducing Tax Reform. *International Tax and Public Finance* 9 (3): 273-294.

<sup>&</sup>lt;sup>2</sup> E.g., Austan (2000), Coxwell, Gritcsh and Ekmekjian (2002), Jain (2005), Long and Gwartney (1987), and Willner and Granqvist (2002).

<sup>&</sup>lt;sup>3</sup> Whereas past data predict almost perfectly the actual growth in 2006.