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Economic Effects of Tax Cuts in the Reagan Administration

Literature review

SUMMARY: The study presents analyses of macroeconomic data related to tax cuts in the Reagan era by different economic schools and their differing conclusions, while also describes findings of panel researches used for testing the mechanism of the tax reduction. After a description of American research findings, it gives an overview of a study conducted with similar methodology into the Russian tax reform, and of issues of the Slovakian tax reform; eventually it describes negative effects of offshore tax havens. The diversity of measurable macroeconomic indicators, and the findings of panel research studies with similar methodologies explain the different behaviour of taxpayers, depending on the financial literacy of the country under review. No budgetary or tax policy measures can be fairly assessed without regard to the institutional system of the particular country. In addition to a description of differences, the study also concludes lessons which may be learned from an international comparison with respect to the application of examination methods on tax cuts.

KEYWORDS: tax policy, tax cuts, tax reform, tax administration, offshore
JEL CODES: G38, H21, H24, H26

In many aspects, Reagan's economic policies („*reaganomics*") were based on the assumptions and theory of neoclassical and monetary economics, challenging the concepts of the Keynesian school.

THEORETICAL IMPLICATIONS

The new theoretical trend was seeking an alternative solution for stagflation (high and rising unemployment coupled with high and rising inflation), after Keynesian economic policy measures proved to be ineffective in the economy, and the generally accepted theories of the Keynesian school had been refuted (for instance, the short run Philips curve anticipating unemployment and inflation). One of the greatest freshwater economists, an advocate of the Chicago School was *Milton Friedman,* who is known to have the most influence on the economic policies of the Reagan administration as a theoretical economist. According to the analysts of the era, the four pillars of Reagan's economic policy were to reduce the growth of government spending, reduce the income tax and capital gains (dividend, foreign exchange gains) tax, reduce government regulation of the economy, and control the money supply in order to curb inflation (Bekker, 2000; Mellár, 2010;, Meyer – Solt, 2007; Niskanen, 1988).

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Supply-side economics

Supply-side economics once again emphasised market processes, and argued that the state's major role was to enhance market conditions, promote and maintain free competition through liberalisation and deregulation. Theorists developed the view that to allow for a proliferation of self-regulatory mechanisms of the market, the state should markedly refrain from the redistribution of incomes, and recommended that state redistribution be replaced by privatisation, deregulation and liberalisation. Initially, this new theoretical and economic policy approach was not widely accepted even by Republicans. In 1980, *George H. W. Bush,* the opponent of Reagan in the Republican presidential nomination derided the new economic policy concepts as „*voodoo economics*", referring to black magic in economic policies. The nineties, however, saw increasing openness and acceptance towards the proliferation of market conditions and the restricted role of the state by both conservative political forces and third way, left wing political courses. At present the economic policy prescriptions known as the Washington Consensus, encompassing policies of strengthening the influence of market forces and reducing the role of the state, have been widely challenged by both the left wing and the right wing (Stiglitz, 2003).

The restriction of roles assumed by the state is most apparent, on the one hand, by the reduction of *GDP-proportionate tax revenue indicators* (centralisation ratio). The proportion of the roles assumed by the state may be similarly described by changes in GDP-proportionate government spending (redistribution ratio), and by GDP-proportionate changes in the annual budget deficit and the accumulated public debt, as well as by other statistical indicators, and their combinations. The ratios introduced in the standard approach allow for an analysis of longer term time series of several decades as well as for international comparisons. The analysis of time series of several decades has revealed marked differences between certain country groups in terms of the centralisation and redistribution ratio.

The United States of America achieved substantially lower centralisation and redistribution during the 20th century than countries of Western and Northern Europe, or the existing socialist countries. Therefore, it is no coincidence that a demand for a further decrease of state redistribution was formulated precisely on reliance of the traditions and the culture of the United States in Reagan's election programme, with a primary focus on a considerable tax reduction. Reagan's programme assumed that a decrease of redistribution should be achieved through robust tax reductions in the state's revenue policy (Báger, 2006; Erős, 2008; Halmosi, 2008; Hetényi, 2006; Niskanen, 1988; Sivák – Vigvári, 2012).

Wagner's law

Reagan's conception fully *contradicted Wagner's Law*, a principle formulated in Europe, which suggested that a gradual increase of state redistribution and the state's role were necessary for economic development, industrial revolutions, and technological advancement. German economist, *Adolph Wagner* published his theory in response to the major industrial development of the 19th century, technological revolutions, and the emergence of welfare policy and public health care as a public duty, arguing that *the growth rate of state spending would exceed the growth rate of private sector spending*. He proposed the following explanations for this correlation (Erős, 2008; Sivák – Vigvári, 2012):

- without state interference, growing population accompanied with growing urban concentration would result in deteriorating public safety and public health;
- as opposed to failed attempts of the market, it is the public sector which can efficiently and effectively manage the complex problems of industrialisation and urbanisation (with planned urban development, regional planning, organised and extended public health care system);
- the growth of real income increasingly results in a wider demand for welfare and cultural services (income elasticity of demand for these goods is greater than one), which may be most efficiently and effectively supplied as a public duty;
- large production and industrial service systems inevitably lead to the emergence of monopolies whose regulation and control, in turn, increases public spending.

Macroeconomic data series of the past one hundred years have confirmed Wagner's Law, even in international comparison. The centralisation ratio of European and North American countries was under 10 per cent on average in the period preceding World War I, but as the difference between the growth rate of public spending and that of private spending continued to increase, by the 1950s the ratio reached 30 per cent. Increasing military expenditures had a major role in that expansion. Consumer societies of the 1960s and 1970s, together with the establishment of robust welfare and social security systems led to a stabilisation of state spending between 30 and 50 per cent (Hetényi, 2006; Sivák – Vigvári, 2012).

Criticism of Wagner's Law intensified from the seventies, partly in connection with the quality and efficient provision of public services, and partly in connection with their financeability from the central budget. The same criticism was raised by Reagan's economics which declared war on the significant role of the state and to that end, it urged the direct return of state revenues to free citizens in the form of tax reductions (Erős, 2008; Niskanen, 1988).

The Laffer curve and the Laffer effect

The theoretical justification of the tax reduction policy was created by American economist, *Arthur Laffer.* The independent variable of the Laffer Curve is the set of tax rates, while the dependent variable is the total of government revenues. While the curve is rising, the tax revenue is growing at a declining rate until the aggregate tax revenue reaches a peak (optimal taxation). If the tax rate is further increased, the potential tax revenue begins to decrease at an accelerated rate as marginal tax revenues become negative after the peak.

The theoretical explanation has been challenged in several criticisms. Due to the inelasticity of labour supply, the conditions under which the theory prevails are rarely found in an actual economy. Contrary to a greater than one labour supply elasticity indicator, necessary for the mechanism of the Laffer Curve to operate, empirical research found a 0.2 coefficient in the United States (Varian, 2001). Empirical studies which expanded their analyses of the Laffer Effect to additional variables confirmed the mechanism to operate with respect to the whole of the tax revenues (Feldstein, 1995). As for the actual extent and the triggers of the effect, several theoretical and financial professional positions emerged over the past decades (Erős, 2008).

In terms of practical applicability it is an additional problem that decision-makers are never able to tell with absolute certainty how

the current condition of the economy impacts the actual shape of the Laffer Curve. For instance in the rising phase of the curve a tax cut results in a *loss* of tax revenues. The case is further complicated by an issue related to the irregular shape of the curve, which was raised as a criticism of the model. With several local peaks, the condition of an economy is even harder to translate into certain phases of an irregular Laffer Curve when preparing a tax policy decision (Spiegel, 2008).

EVALUATIONS OF THE TAX REDUCTION POLICY OF THE REAGAN ADMINISTRATION ON THE BASIS OF MACROECONOMIC DATA

Centralisation ratios in the Reagan Era

The policy of tax cuts affected several components of the American taxation system. In response to the oil price hike, Reagan eliminated petroleum price and allocation controls and in January 1981 he repealed the oil windfall profit tax which had been imposed on large domestic oil companies to tax windfall revenues earned as a result of the sharp increase in international oil prices. He lowered the capital gains (dividends and foreign exchange gains) tax to 20 per cent, the lowest rate since the Hoover Administration. By radically lowering the rate of the progressive personal income tax for the highest-income taxpayers, and by implementing the payroll tax which burdened mainly lower earners, in terms of their *total impact* Reagan made other elements of the taxation system of the United States regressive by nature. In other words, the gap between the tax rates imposed on higher and lower earners was narrowed. The tax rate for the highest-income taxpayers was lowered from 70 per cent to 50 per cent in 1981, and to 28 per cent in 1986. Parallel to this, the burden of taxpayers with an income under USD 50 000 was raised. On the one hand, in 1983 he introduced a flat rate tax on social security and healthcare insurance *(payroll tax on Social Security and Medicare hospital insurance).* This tax was proportionally a larger burden for lower income taxpayers. Additionally, the Tax Reform Act of 1986, adopted in agreement with the Democrats, broadened the tax base and increased the amount of the tax payable. The politicians who sponsored the bill claimed that the Act was designed to be income neutral, but in fact by eliminating several items decreasing the tax base, and by curtailing tax incentives aimed at decreasing the tax payable, the proportional tax burden on lower income brackets indeed increased (Niskanen, 1988; Tempalski, 2006).

Federal revenues from personal income tax grew in nominal value from USD 0.599 thousand billion to USD 1.032 thousand billion between 1981 and 1990. In current dollar comparison, the nominal growth is an outstanding 72 per cent; with nominal budgetary revenues converted to the dollar value of 2005, the 20 per cent growth of federal revenues is also remarkable (Tempalski, 2006).

According to certain opinions, the federal revenue growth both in nominal terms and on the 2005 basis justifies the assumed mechanisms of the Laffer Curve. Other opinions suggest that there was no strong correlation between the reduction of tax rates during the Reagan Administration, their increase during the Clinton Administration and tax revenues, because tax revenues were directly and fundamentally affected by the actual rise of tax bases. Although tax bases were proportionally increased under the legislation adopted during the Reagan Administration, the quantitative growth of the tax base was the result of the income expansion and increase arising from the economic growth. Any direct

correlation between the latter process and the legislative reduction of tax rates is strongly challenged by *Krugman* (2004a).

Supporters of the theory claim that the operation of the Laffer Curve mechanism is further confirmed by the change in GDP-proportionate tax revenues during the Reagan Era, which represented 19.6 per cent of the GDP in the 1981 fiscal year, but fell 17.3 per cent in 1984, and rose to 18.4 per cent by 1989, yet never reached the level prior to the two successive presidential cycles. The reduction of the centralisation ratio, in comparison to the reduction of tax rates, clearly suggests a significant growth rate of the gross domestic product, assuming that the overall tax burden on American economy was reduced in the Reagan Era by approximately one per cent of the GDP (Tempalski, 2006).

Legislative adjustments to tax cuts

Robust tax reductions for high income earners and parallel tax base expansions for low income earners were accompanied by continuous *legislative adjustments*. In order to ensure budgetary revenues, seven acts were adopted to raise taxes on the grounds of *fiscal responsibility* in contrast with two acts on tax cuts during the period of two presidential cycles of Reagan. The first tax increases were implemented as early as in 1982. On the one hand, they raised corporate income tax, but they also increased the rate of personal income tax to a lesser extent in certain income brackets. According to some estimates, Reagan's tax increases *undid a third* of the effect of tax reductions on nominal incomes in 1981 and in 1986, while other calculations claim that these undid as much as *a half* of such effects (Krugman, 2004b). The series of tax increases concluded with the tax rise implemented by the Clinton Administration in 1993.

A summary of tax policy measures in the Reagan Era was published in a study of the United States Department of the Treasury (Tempalski, 2006). The study quantified changes in GDP-proportionate tax revenues in four years following certain legislative decisions, and gave a comparison of such changes (aggregating and averaging GDP-proportionate changes in a period of four years after certain decisions adopted at different dates). According to the findings of the study, the combined effect calculated from the four-year chronological mean accurately confirms a one percentage point decrease in the overall centralisation ratio of the Reagan Era, while it also describes the impact of certain legal acts on GDP-proportionate federal revenues (*see Table 1*).

Additionally, Reagan's tax policy is well illustrated by the change in the *GDP-proportionate tax mix*. GDP-proportionate rate of personal income taxes decreased from 9.4 per cent in 1981 to 8.3 per cent in 1989, and parallel to this the GDP-proportionate flat rate of payroll taxes increased from 6.0 per cent in 1981 to 6.7 per cent in 1989. A similar restructuring was executed in the taxes on capital gains: while the tax rate applicable to income from existing investments was substantially reduced, higher tax rates were instituted for new capital investments. (Stiglitz, 2003)

Additional economic policy effects of tax cuts

The policy of tax reduction was a key element of the economic policies of the Reagan Era. Its effects on the whole of the economy are differently perceived, and empirical data are differently assessed by each economic school.

Table 1

EFFECTS OF CERTAIN ACTS ON GDP-PROPORTIONATE FEDERAL REVENUES

	Change in Centralisation Ratio on Average During Four Years *(tax revenue/GDP, Δ%)*
Acts decreasing the centralisation ratio	
Economic Recovery Tax Act of 1981	–2,89
Interest and Dividend Tax Compliance Act of 1983	–0,05
Acts increasing the centralisation ratio	
Tax Equity and Fiscal Responsibility Act of 1982	+0,98
Highway Revenue Act of 1982	+0,09
Social Security Amendments of 1983	+0,21
Deficit Reduction Act of 1984	+0,39
Omnibus Budget Reconciliation Act of 1985	+0,05
Tax Reform Act of 1986	+0,01
Omnibus Budget Reconciliation Act of 1987	+0,26
Combined effect:	**+0,95**

Source: Own editing based on Tempalski (2006)

Milton Friedman stated that *reaganomics* had four basic principles: lower tax rates, less regulation, restrained government spending, and noninflationary monetary policy. Lower tax rates and inflation coupled with less regulation favoured improved environments for market-based funding, risk-taking by capital owners, access to labour for employees, and created a more level playing field for small and medium-sized corporations. In this approach, the winners of the expansion were the mobile and innovative "small entities". In other words, the competitive spirit and market innovation of capitalism were restored in their "original" meaning. There were opinions which suggested that the United States government must allow the entrepreneur to enjoy the rewards of success. If progressive taxes take away most of potential profits (90-70-50 per cent tax rates prior to the tax cuts), entrepreneurs will have less incentive to take risks. Therefore, tax cuts represent the core concept of the American entrepreneurial spirit, and ensure a higher reward for risk-taking for a large number of small- and medium-sized entrepreneurs who established a competitive market for exploiting the opportunities of market expansion.

Having analysed macro-economic indicators of the era, *Niskanen* and *Moore,* who were contributors to the development of the programme, found the tax reduction plan successful, even with hindsight. The authors concluded that on eight of the ten key macro-economic variables examined, the economy performed well during the Reagan years. Real median family income grew by USD 4 000 during the two presidencies of Reagan. This was an unprecedented growth of real income, and they measured a loss of USD 1 500 in median family income in the post-Reagan years. Interest rates, inflation, and unemployment fell faster under Reagan than they did immediately before or after his presidency. The only economic variable that was worse in the Reagan period than in both the pre- and post-Reagan

years was the savings rate, which fell rapidly in the eighties. Nevertheless, productivity rates were constantly characterized by negative tendencies. From high levels in the pre-Reagan years, they began to gradually fall in the eighties and continued to deteriorate well through the nineties.

According to Moore's assessment, there was not one economic policy in the last twenty-five years which had such considerable economic impact than the Reagan tax cuts of 1981 did during the eighties and nineties. He claimed that tax reductions combined with the monetary policy of the FED and deregulation while also ensuring the conditions of free trade (liberalisation) launched a long economic growth period which may be considered the longest period of prosperity of the United States of America. The American economy expanded by one third, that is by USD 15 thousand billion during this period, while consumer and investor confidence was soaring, according to several measurements. The reduction of federal taxes, cutting government spending, reducing welfare programme expenditures, scrapping certain programmes, introducing low interest rates, and a clear noninflationary policy were the key ingredients of a successful recipe for the economic recovery, as claimed by the authors who were actively involved in this economic policy turnaround as members of an advisory body to the President.

Krugman critically challenged Reagan's economic policies. He questions the stimulating effect of tax cuts, which – in his opinion – were rather brought about by enormous military spending and vast orders from the military industry (equalling those during the Vietnam War) parallel to tax reductions, which is a Keynesian recipe. According to Krugman's calculations, federal spending corresponded to 22.4 per cent of the GDP on average between 1981 and 1988. From 1971 to 2009, the chronological mean of spending was 20.6 per cent of the GDP, which was exceeded by nearly two percentage points during the Reagan years. Within the spending structure, the proportion of military spending substantially increased: calculated with dollar value of 2000, in 1980 the USD 267 billion defence budget accounted for 4.9 per cent of the GDP and 22.7 per cent of all federal spending, and the USD 393 billion spent in 1988 already represented 5.8 per cent of the GDP and 27.3 per cent of all federal spending. According to Krugman, the improving growth, tax revenue and additional macro-economic figures were the result of a *favourable cyclical upturn,* supported by a demand stimulating fiscal policy, but were independent of the tax cuts.

During the presidency of Reagan the average deficit of the federal budget considerably increased in comparison to the Carter Era. In contrast with the 2.7 per cent GDP-proportionate deficit of *Carter*, the average ratio grew to 4.2 per cent, more than one-and-a-half times that during the Reagan years. The accumulated public debt of the United States during the eight years of the Reagan Administrations rose from USD 997 billion to USD 2.85 thousand billion. While the fact that the GDP-proportionate ratio of federal debt, accumulated between 1980 and 1988, grew from 26 per cent to 41 per cent should by no means be overemphasized, it was a fateful change, resulting in the current level of federal debt outstanding, that during Reagan's terms the USA went from being a creditor state to a state which needed to raise external funding. Reagan himself referred to this fact in one of his reminiscences as his greatest disappointment. With its world power, the USA could later manage to continuously raise funding through a beneficial funding model ("turntable" role, Botos ed., 2005).

ANALYSIS OF THE MICRO LEVEL EFFECTS OF TAX CUTS WITH A TREASURY DEPARTMENT PANEL STUDY

Methodology of the American analysis

The effects of the Tax Reform Act of 1986 were analysed by a university study based on the data of a panel of nearly four thousand taxpayers, provided by the US Department of Treasury (Feldstein, 1995). The approach was different from that of macro level assessments. The microeconometric analysis allowed that instead of and/or in addition to the indicators of labour supply (employment data, change in hours worked, work intensity), the *change in the elasticity of pretax income* be examined on the individual level and broken down for groups of taxpayers in the different income brackets. The study compared tax refunds for 1985 and for 1988, including the analysis of related tax records, on an *individual* basis (for each taxpayer) to examine the change in income before and after taxation. The sample was cleansed with respect to several taxation and statistical criteria. In the next step, individual data were summarized for panel income brackets, so as to analyse how the change in gross pretax income of taxpayers classified according to 1985 marginal tax rates, and the reduction of 1986 marginal tax rates correlate in the particular income brackets.

According to the study the change in marginal tax rates did not only affect the change in labour supply, but also encouraged taxpayers to adjust their pretax income using a variety of methods. These included carefully selecting what forms and composition of salary and employee benefits (compensation package) they take for labour services, modifying their investment securities portfolio, directly reducing their taxes through tax-deductible items, and indirectly reducing their taxable income through tax incentives. *(See Table 2, Chart 1)*

The evidence found in the study suggested that aside from the increase of net income triggered by the reduction of tax rates (the rise in the proportion of net income), *pretax gross income also rose considerably.* The degree of the increase was larger in direct proportion to the

Table 2

FINDINGS OF THE PANEL STUDY BY TAXPAYER GROUPS CLASSIFIED BY 1985 INCOME BRACKETS AND MARGINAL TAX RATES

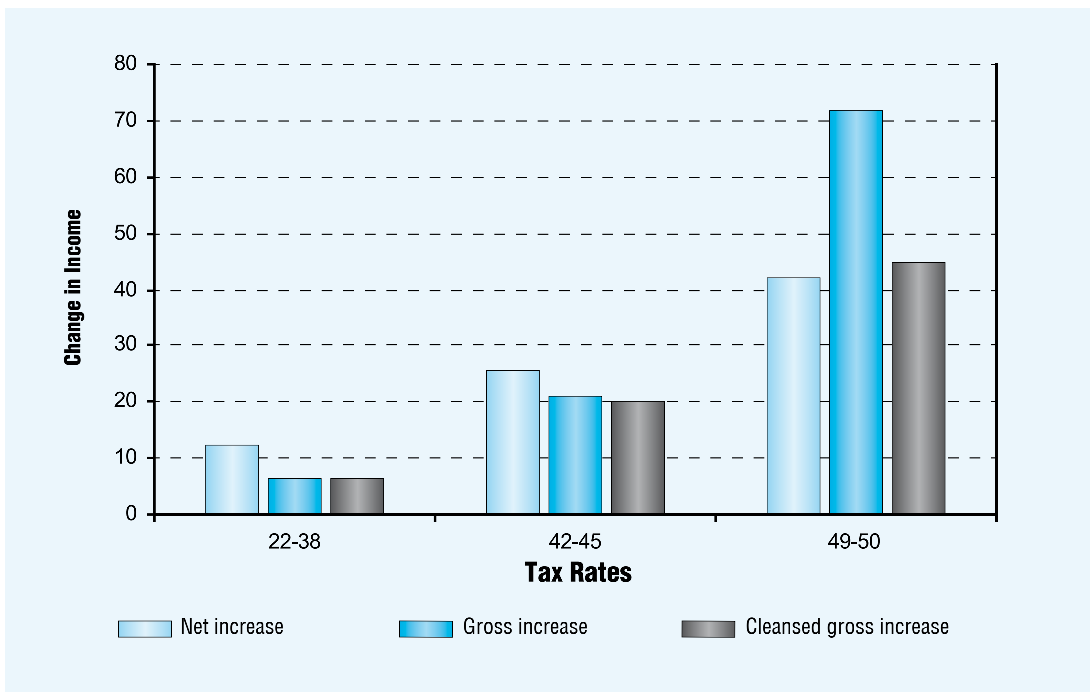
Taxpayer Groups Classified by 1985 Marginal Rate (tax rates, (%)	Observations	Increase of Net Income after the Reduction of Marginal Tax Rate (%)	Observed Increase of Gross Income (%)	Increase of Gross Income Adjusted for the Removal of Incentives Reducing Tax and Tax Base(*) (%)
22–38	3,538	12,2	6,2	6,4
42–45	197	25,6	21,0	20,3
49–50	57	42,2	71,6	44,8

(*) The tax reform of 1986 removed tax incentives from three areas. These raised pretax income by operation of law, therefore did not characterize voluntary rationalising taxpayer behaviours. The author removed this effect from the increase of gross income, thus the last column presents this adjusted pretax income. The three tax incentives which reduced the tax base were: (1) exclusion of 60 per cent of realized capital gains from the tax base; (2) a preferential tax rate on profits below USD 100,000 earned in some subchapter corporations; (3) tax base reduction option for real estate partnership investments exceeding USD 25,000.

Source: own editing based on Table 1 of Feldstein (1995)

Chart 1

FINDINGS OF PANEL RESEARCH



Source: own editing based on Table 1 of Feldstein (1995)

increase of the income. In other words, the tax rate reduction not only increased the net income of the taxpayer but also resulted in a *growing tax base* for individuals proportionally with their income level. The higher the level of income, the more income is proportionately channelled to the tax base subject to a lower tax rate, the source of which may have included the rise in work intensity or taxpayers' actions to rationalise their taxable income. The institutions of advanced American financial literacy allowed that instead of the legally available, yet complicated and expensive procedures, taxpayers could choose personal income taxation, an institution *made reasonable* for taxpayers, to fulfil their obligations.

For these reasons, the effect on income could only be assessed if the *total pretax income* (the taxpayer's total income before tax reductions and tax base reductions) was examined. Total pretax income may be divided into taxable labour income and capital gains.

Change in taxable labour income

The effect of tax rate changes on labour supply is not of the same nature as the effect on *taxable labour income*. A progressive tax rate imposed on the high level of income encourages taxpayers to take the compensation for labour services in such forms which are tax exempt or subject to lower tax rates instead of wages which are subject to higher tax rates. Under U.S. regulation, contributions of employer-paid health insurance, the use of company cars, the use of sports facilities, company catering, nursery and day-care, transportation benefits, including first class trips, and low-interest loans granted (with the related interest rate difference) were qualified

as income items excluded from taxation. Contributions of employer-paid retirement plans, life insurance as well as stock option plans were subject to a lower tax rate. High-income taxpayers, typically private entrepreneurs, self-employed individuals, and senior or middle managers of corporations had the obvious opportunity to flexibly shape their remuneration package in order to rationalise and optimise their tax burden. Corporations, too, normally offered their employees remuneration packages which were designed to optimise tax burdens in accordance with the interests of the company as well as its employees (Feldstein, 1995).

Change in capital gains

Compensation for labour services was not the only source of the total pretax income. *Income from investments* provided further opportunities for taxpayers to adjust to changes in marginal tax rates by shaping the composition of their pretax income. In the representative sample examined, the proportion of labour income and capital gains significantly changed with the increase of the income. Labour income accounted for three quarters of adjusted gross income, and the remaining part was made up from capital gains from several sources for taxpayers with adjusted gross income under USD 200 000. For taxpayers over AGIs over USD 200 000, labour income constituted only 45 per cent of all income, one third of the remaining part was made up from interests and dividends, the second third represented foreign exchange gains, and the last one third was income from real estate rents, agency and other types of service contracts. A change in marginal tax rates encouraged individual taxpayers to invest their assets in ways that reduce the portion of the return that is included in taxable income to optimise tax burdens. (Feldstein, 1995).

In addition to changing the rates of profit tax and corporation income tax in the Reagan years, the modification of *personal income tax incentives and exclusions* also triggered a reshaping of investment portfolios. New investments in bonds and high-dividend stocks were subject to higher capital gains tax from 1986. At the same time, municipal bonds and their interest income were tax free, similarly to stocks with low dividends and higher potential capital gains held in portfolios, life insurance policies and investment products in which funds accumulate in the value if investment certificates, which were also excluded from taxation. Real estate investments and other operating businesses in which cash flow is subject to personal income tax were also tax exempt. These 1986 measures fundamentally aimed at imposing tax on the sales of assets, but not on accumulating or reinvested capital gains. A critical analysis of the long term effects of the above measures on financial markets is given by *Stiglitz* in his book (Stiglitz, 2003). The long term indirect effects of Reagan's tax policies could be linked to the subsequent emergence of financial innovations which ultimately led to increasingly risky operations undertaken by American banks by the end of the nineties (Rajan, 2005).

Correlations between changes in pretax income and changes in tax rates

Overall, the exercise of options for tax base adjustments, together with the shaping of the composition of labour income and portfolio investments *jointly changed in the opposite direction* than the change in marginal tax rates. The reduction of tax rates resulted in a rise of pretax income in all tax brackets, but to an increasing degree in proportion to the increase of the income. Citing the findings of former panel studies (Lindsey, 1987, Feenberg and Poterba, 1993 in: Feldstein, 1995), and relying on the growth rate differences identified, the

study concludes that higher-income taxpayers appear to have higher elasticities than lower-income individuals. *(See Table 3)*

The adjusted elasticity values of 1.04–1.48 determined in the study with respect to pretax income are quite similar to the elasticity estimates obtained in former empirical examinations. Researchers came to the conclusion that the reduction of marginal tax rates had a favourable impact, and as a result, the increase of tax rates and accelerated progression, the increase of tax revenues would not deliver the expected results, as there was good reason to assume that elasticity coefficients operated in an identical manner for both the reduction and the rise of tax rates (Feldstein, 1995). Neither the assumption nor the problem raised may be accurately answered from a theoretical or tax accounting perspective. The issues are still debated, and economists researching the subject matter have been publishing irreconcilable conclusions in theoretical and empirical studies.[1]

OUTLOOK: THE RUSSIAN TAX REFORM OF 2001 AND THE SLOVAKIAN TAX REFORM OF 2004; THE TAX JUSTICE NETWORK REPORT OF 2012

The IMF Working Paper on the Russian Tax Reform of 2001

In addition to an analysis of macro-economic data, the IMF impact study also applied a panel study, similar to the one in our American example, to examine microeconomic processes related to the adoption of a flat rate tax in

Table 3

ELASTICITY OF THE RESPONSE OF TAXPAYERS IN HIGHER INCOME BRACKETS IN COMPARISON TO TAXPAYERS IN LOWER INCOME BRACKETS

Taxpayer Groups Classified by 1985 Marginal Rate(tax rates, %)	Increase of Net Income after the Reduction of Marginal Tax Rate(%)	Observed Increase of Gross Income (%)	Increase of Gross Income Adjusted for the Removal of Incentives Reducing Tax and Tax Base (%)
		Change in per cent, 1985–1988	
1. Low (22–38)	12,2	6,2	6,4
2. Medium (42–45)	25,6	21,0	20,3
3. High (49–50)	42,2	71,6	44,8
		Difference in the pace of change in the taxpayer groups (percentage point)	
4. Medium–Low (2–1)	13,4	14,8	13,9
5. High–Medium (3–2)	16,6	50,6	24,5
6. High–Low (3–1)	30,0	65,4	38,4
		Estimated elasticity coefficients	
7. Medium–Low (2–1)	–	1,10	**1,04**
8. High–Medium (3–2)	–	3,05	**1,48**
9. High–Low (3–1)	–	2,14	**1,25**

Source: Table 2, Feldstein (1995)

Russia. With respect to the evaluation of the American panel research, it should be noted that the Russian sample-based research which was conducted with similar methodology *has not identified* the microlevel response elasticity of taxpayers in any of the income brackets (Ivanova et al., 2005). Taxable income has not risen on the individual taxpayer's level, it was only the proportion of net income which researchers found to have increased. Due to certain unique Russian features, or more generally speaking, due to certain unique Eastern-European features, I would like to give a brief summary of the assumptions the Monetary Fund Paper made in the subject matter.

In 2001, Russia dramatically reduced its marginal tax rates of personal income taxation. The previous rates of 30, 20, 12 per cent had been unified at a flat rate of 13 per cent, thus adopting a flat rate taxation *(flat tax)* model. The adoption of the model was also accompanied by a curtailment of tax allowances and a significant expansion of the legal tax base. In the following year tax revenues of the Russian Federation from personal income tax grew by 26 per cent in real terms. In 2000, a year before the tax reform, nominal personal income tax revenues totalled RUB 175 billion, which increased to as much as RUB 358 billion by 2003. Revenue from personal income tax increased at a rate higher than the GDP, and its growth relative to GDP improved from 2.4 per cent in 2000 to 2.9 per cent in 2001, 3.3 per cent in 2002 and 3.4 per cent in 2003. In the years under review GDP also started rising considerably due to the growth of oil and natural gas production and processing, which accounted for one fifth of the Russian GDP. GDP growth was also substantially triggered by price increases of oil and natural gas in the global market, starting from the end of 2000 and peaking in 2001. When assessing the years of the tax reform it is important to note that there was a temporary price drop in the world market in 2002, followed by a recovery of global market prices in 2003 and a permanent price increase ever since (Ivanova et al., 2005, Hetényi, 2006).

Rising global prices of hydrocarbons induced GDP growth as a result of increased consumption and export values, although they did not automatically improve the budget. Experts of the subject matter all agree that a rise of taxable income and a spectacular growth of federal tax revenues were not triggered by parametric reforms, but rather and primarily by *improved effectiveness and efficiency of the tax administration*, relying on favourable real economic processes. Within the framework of the reform, budget conditions were stabilized primarily from the different taxes imposed on hydrocarbon products and their consistent collection. As a part of the budgetary reform, the transformation of the tax administration was accompanied by a reform of wages and a pension reform, thus the unfavourable effects of the adoption of the flat rate tax for low-income taxpayers were offset by a major rise of gross wages. In 2000 RUB 2937 billion, in 2003 as much as RUB 4995 billion were paid in gross wages, in the public and private sectors jointly (Ivanova et al., 2005).

In light of the above macro-economic data, it may seem contradictory that the IMF analysis of the Russian *micro panel data* found that the behaviour of Russian taxpayers was fundamentally different from the Americans. American tax culture relied on two parallel systems institutionalised by law. One of them was the public institutional system which protected taxable incomes after exclusions; the other one was the advanced financial institutional system which allowed for a legal rationalisation/optimisation of taxable incomes and tax payments for higher-income taxpayers. Micro level data published

in the American panel study suggest that the *diverting effect* of parametric reforms operated between the two institutional spheres. In other words, high-income taxpayers were given the opportunity to choose from among a range of financial instruments, taking account of their impact on the tax base and the tax payable, as well as their real return and underlying risk. Russia saw no such income diverting effect.

During the years of the 2001 tax reform, only three years after the Russian financial crisis, the country had neither an advanced financial system, nor *confidence in the existing financial system*. In comparison to the American research, the different findings of the Russian panel study are merely indicative of such unique features of the Easter European conditions. The comparison of the two panel studies emphasises the paramount importance of the analysis of financial systems which underlie any taxation system. No budgetary or tax policy measures can be fairly assessed without regard to the unique features of the institutional system of the particular country (Hetényi, 2006; Stiglitz, 2003; Vigvári, 2008a; Vigvári, 2008b).

Slovakia's 2004 tax reform and its adjustment in 2013

The flat rate income tax was adopted by the Dzurinda Government in 2004. In addition to personal income tax, the rate of corporate income tax and the rate of the VAT were all unified at 19 per cent. The measure represented a tax increase in terms of turnover taxation, and a tax reduction in terms of corporate and personal income taxation. The unified tax rate was so selected that the implementation of the new taxation system would not expectedly cause a drop in tax revenues. This key consideration was prevailing in Slovakia's tax policy until the onset of the financial crisis in 2008. In addition to the adoption of a flat tax rate, the base of taxable personal income was substantially expanded, and basically all allowances were abolished while tax payment obligation was extended to employee benefits as well as benefits in-kind. Nevertheless, low-income taxpayers continued to be exempt from taxation, as the pre-reform tax-free income threshold was not modified. Following the adoption of the tax reform in 2004, the tax exemption ceiling was annually adjusted in relation to economic growth and inflation. It is important to note that in addition to the system of personal income taxation, the Slovakian State disburses family allowances (Erdős, 2012).

The average growth rate of the GDP was 3.9 per cent between 2000–2004, which increased to 7.8 per cent after the tax reform between 2004–2008. There was a considerable expansion in investments in the Slovakian economy, particularly in the processing industry. The change is said to be triggered by automobile manufacturing where massive amounts of operating capital were invested in the industry, analysts say. The output of automobile manufacturing has increased significantly, for instance doubled in 2007 relative to the previous year, and Slovakia's machinery and automobile export accounted for 50 per cent of all its exports in the period under review. This is the reason why analysts do not consider GDP growth to be induced by the tax reform but by an accelerating capital import starting from 2002, with the highest growth effect on output in the engineering industry (Erdős, 2012). The role of the flat rate taxation system is most apparent in the *acceleration of growth*. In other words, the *behaviour* of economic operators, decision-makers may have been influenced by the proportionately increasing net income during a growth phase generated by the inflow of operating capital into the country.

The low PIT rate, however, began to cause increasingly severe problems in Slovakia's budget after 2008, under the circumstances shaped by the prolonged economic crisis. When *Fico* formed government in 2012, he immediately announced the abolishment of the flat rate taxation scheme, and adopted a new personal income taxation plan, effective from 1 January 2013, which – while preserving both the tax-free threshold and the former 19 per cent tax rate – introduced a second, 25 per cent tax rate above a relatively low income bracket.

We are eager to see which calculation method will prevail in the planned Slovakian micro panel in 2013. If Slovakia's new regulatory and financial environment will favour *Feldstein's* calculation model, we can anticipate a *reduction of taxable income* (legal and/or illegal fleeing), which implies a decrease in government tax revenues despite the rise of marginal tax rates. If, however, the calculation patterns established by *Ivanova's* expert group prevail, and the average Slovakian taxpayer's response elasticity to rising tax rates is low, the Fico Government may actually succeed in resolving the severe problem of budget financing. Assuming the usual Eastern-European financial literacy and economic behaviour, and relying on American and Western-European experiences about tax increases, the latter scenario has higher probability.

Illegally moved taxable income

Illegally moved taxable income: a potential effect of offshore tax havens on tax rate decisions, a report of the Tax Justice Network.

Within the American system, taxable personal income is surrounded by legal instruments offered in the financial system, which taxpayers may use to rationalise the composition of their income, and to include assets which may be excluded from the tax base. The government can intervene to change the playing field, influence taxpayer behaviour, and divert incomes in accordance with macroeconomic demands. This complex financial system has already emerged in the countries of Eastern Europe after the proliferation of market economy, and the range of legal instruments suitable for tax rationalisation has been gradually expanding. Nevertheless, expanding tax evasion in increasingly advanced forms has become a global issue, and by capitalizing on the appearance of global financial systems, professional innovation, technological development and deregulated international capital flow it ultimately led to the emergence of offshore tax havens.

According to the report of Tax Justice Network, the size of private financial wealth evading taxation in the world ranges between USD 21 and 32 thousand billion (calculated with dollar value of 2002). To compile its estimates about the size of accumulated offshore wealth, the non-governmental institution which operates a global network of observers and is led by a former banker who used to specialise in offshore transactions, used data from a sample of 139 countries. The sample was analysed by comparing data series, received from central banks and taken from balance of payments statistics of source countries, with data disclosed by 50 prominent, globally operating private banks which also pursue offshore transactions. The analysis also relied on data made available by the UN, the World Bank and IMF, as well as by the Bank for International Settlements (BIS). From the data sources they created three parallel models to estimate the change in global offshore wealth.

Since 1970, it appears that private individuals in the 139 countries examined in the sample had accumulated USD 7.3 to USD 9.3 thousand billion of offshore financial wealth, which had been moved

from the financial system of source countries by private individuals who did not comply with their tax payment obligations. The sample reveals a very high concentration: of the offshore wealth accumulated, the top ten countries account for 61 per cent and the top twenty for 81 per cent. Of the Eastern European countries, Russia is in the lead with a total of USD 640 billion of offshore loss since 1970. Hungary is in the top twenty countries with an estimated accumulated loss of 180-242 billion since 1970 (Henry, 2012).

Both panel studies referred to herein has taken account of *tax base erosion*. In Feldstein's model, however, the use of illegal instruments was not quantified despite that fact that they mentioned taxation discipline and the possibility of hiding taxable income several times in the written analysis. The calculations of *Ivanova's* working group contained assumptions of hidden income of taxpayers and measured their change relative to the change of marginal tax rates. The expert opinion, however, did not confirm any correlation between tax rate reductions and the decrease of the proportion of latent income; they rather explained the favourable data series indicative of a proportionate decrease of untaxed income by the *improved efficiency of tax administration*.

The two panel studies described different taxpayer behaviour patterns in connection with tax rate reductions. It may be assumed that in the case of decreasing tax rates the response elasticity of taxpayers who infringe regulations and commit illegal actions is similarly low as the response elasticity of compliant taxpayers with *different behavioural patterns* which arise from their different values, habits, financial traditions unknown in western financial culture. This is the reason why it cannot be concluded that a tax reduction measure in itself may improve the trend of taxation morale. Instead, a general development of tax administration, improved efficiency of record-keeping are the factors which may be fundamental for the betterment of taxation morale, as is suggested in the example of Russia. Further progress may be driven by the role the state assumes in educating larger audiences about financial and taxation literacy, and by the measures it takes to *strengthen the confidence* of taxpayers who are willing to let go of irregular or illegal practices (Báger, 2006; Botos, 2008; Hetényi, 2006).

Note

[1] The study of Erdős gives a detailed description of the changes and differences of theoretical positions, while Hetényi's paper summarizes the conclusions which may be drawn for the Hungarian practice (Erős, 2008; Hetényi, 2006).

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