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ŁUKASZ WOJCIECHOWSKI
WSEI University in Lublin, Poland
ORCID iD: 0000-0002-9403-6412

SYLWIA SKRZYPEK-AHMED
WSEI University in Lublin, Poland
ORCID iD: 0000-0002-1211-0683

TOMASZ WOŁOWIEC
WSEI University in Lublin, Poland
ORCID iD: 0000-0002-7688-4231

SYLWESTER BOGACKI
WSEI University in Lublin, Poland
ORCID iD: 0000-0002-8330-4573

ALINA PAKLERSKA
Alcide De Gasperi University
of Euroregional Economy
in Józefów, Poland
ORCID iD: 0000-0001-7251-9520

KINGA OCIESA
Lublin University of Technology, Poland
ORCID iD: 0000-0003-4973-1990

TAX ECONOMICS AND TAX POLICY AND THE MARKET REACTIONS OF TAXPAYERS

EKONOMIKA OPODATKOWANIA I POLITYKA PODATKOWA A RYNKOWE REAKCJE PODATNIKÓW

Abstract

In a market economy, allocation decisions are more or less visibly related to the monetary savings of entities. The tendency of entities to save depends on both the interest rate on deposits and inflation, as well as the tax rate on income from capital (monetary savings). Also, the willingness of business entities to invest depends on the income from invested capital. Tax policy, its nature, implemented solutions, instruments in the form of reliefs and exemptions, and, above all, stability and predictability are an important element of effectively influencing taxpayers' behavior.

Keywords: *allocation of resources, taxation of capital, tax reliefs and exemptions, tax policy*

Streszczenie

W gospodarce rynkowej decyzje alokacyjne związane są mniej lub bardziej widocznie z oszczędnościami pieniężnymi podmiotów. Skłonność podmiotów do oszczędzania uzależniona jest zarówno od stopy oprocentowania depozytów i inflacji, jak i od stopy opodatkowania dochodów z kapitału (oszczędności pieniężnych). Również skłonność do inwestowania przez podmioty gospodarcze jest uzależniona od dochodów z zainwestowanego kapitału. Polityka podatkowa, jej charakter, implementowane rozwiązania, instrumenty w formie ulg i zwolnień, a przede wszystkim stabilność i przewidywalność stanowią istotny element efektywnego odziaływania na zachowania podatników.

Słowa kluczowe*: alokacja zasobów, opodatkowanie kapitału, ulg i zwolnienia podatkowe, polityka podatkowa*

Introduction

In a market economy, allocation decisions are more or less visibly related to the monetary savings of entities. The tendency of entities to save depends on both the interest rate on deposits and inflation, as well as the tax rate on income from capital (monetary savings). Also, the willingness of business entities to invest depends on the income from invested capital. High burdens on capital income may limit its marginal efficiency, causing investments to be allocated to preferentially taxed sectors, but with lower efficiency, which

at the same time leads to distortion of investment decisions (Rybiński 2021, Hall 1993, Judd 1987, p. 675-709).

Some researchers suggest that there is a statistically significant impact of taxes on investment. The elasticity of investment in relation to the cost of capital is from 0.25-1.0. In the USA, the decrease in tax revenues by every billion dollars was accompanied by an increase in R&D spending by approximately USD 2 billion. There are suggestions in the literature that abandoning the capital tax and introducing a consumption tax means that investment decisions are not distorted by tax policy. With inflation at 3%, investment financing half with debt and half with shares, and the transition from taxing capital to a consumption tax, investment increases by 10%, and the increase in social wealth due to a permanent reduction in taxes on capital ranges from 25 cents to one dollar, for one dollar off. Low inflation is the best means of supporting investments because it reduces the cost of capital (high inflation translates into a growing interest rate, also reduces profits on the stock market and discourages investing in companies increasing capital). The combination of anti-inflation monetary policy and the transition from income tax to consumption tax significantly stimulates investment. Research suggests high elasticity of the capital resource in relation to its cost in the long term (Wołowiec 2021).

Undoubtedly, high (progressive) income taxation limits private investment by reducing the part of income potentially earmarked for investment, leaving taxpayers with only sufficient funds for consumption. Some researchers (Ypoung 1994, p. 112) are of a different opinion, arguing that a progressive income tax does not reduce the attractiveness of risky investments compared to riskless investments for two main reasons (Wołowiec, Białek 2020, p. 199-223) . Firstly, taxation reduces the taxpayer's overall level of income, which may change his attitude to risk. This effect occurs regardless of the form and method of income taxation, and depends only on the size of the tax, i.e. the scale of the reduction in after-tax income. Whether an income tax reduces or increases risk-taking depends on the shape of the utility function. Secondly – as Young claims – high effective taxation of income with a smaller range of expected after-tax income, which encourages entities to take risks (Grądalski 2004). Of course, Young's assumptions may seem somewhat controversial, because high effective income tax rates, by reducing the taxpayer's income, do not necessarily

have to encourage him to increase risk. Moreover, Young makes the simplifying assumption that all taxpayers do not differ in their degree of risk aversion, thereby concluding that a non-negative tax scale is risk neutral if and only if it compensates for either absolute or proportional sacrifice (Grądalski 2006).

If U(x) represents the utility for income x in the absence of taxation, and t = f(x) is the tax scale, then V(x) = U(x – t) is the taxpayer's utility for income after tax. The tax scale is risk-neutral if the taxpayer makes the same choices with and without taxation. Due to the fact that the von Neumann-Morgenstern utility is defined for a positive linear transformation, this is equivalent to the statement that: V(x) = U(x – t) = AU(x) – B dla A > 0. Jeśli A = 1, to U(x) – U(x – t) = B, this means that t equalizes the absolute sacrifice. In a situation where A ≠ 1, oraz b = B(1 – A), so [U(x – t) + b] / [U(x) + b] = A. Becourse t ≥ 0, a U is growing, so A < 1.Thus, the tax offsets the victim's rate at the rate of 1 – A (Young 1994, p. 112).

Therefore, the issues of tax optimization can be written in the following equation (Grądalski 2004, Grądalski 2006):

Where: $$maxtV[p, y(p, \bar{u})]przy \sum_i tixi - T = 0$$

V – average utility function of the taxpayer, taking into account the prices of consumed goods p and the impact of taxes on income y with constant utility ū and maximized by the structure of tax rates t;

t – taxes imposed on consumed goods x;

T – the sum of taxes obtained from subsequent goods xi at the rates ti.

When solving such an optimizing condition, important for the purposes of fiscal (tax) policy, we apply the Ramsey rule and use Lagrange multipliers.

Lagrange multipliers – calculation scheme. Conditional extremum of the function z=f(x,y) with the condition g(x,y)=0.

First: we create the function $L(\lambda,x,y)=f(x,y)+\lambda g(x,y)$.

Secondly: we count the partial derivatives of L'_x, L'_y, L'_λ. We solve the system of equations (necessary condition): $\begin{cases} L'_x = 0 \\ L'_y = 0 \\ L'_\lambda = 0 \end{cases}$

Third: after solving, we get the so-called stationary points, λ_0.
Fourth: We calculate partial derivatives: g'_x, g'_y, L''_{xx}, L''_{xy}, L''_{yx} , L''_{yy}.
Fifth: We calculate the values of the above derivatives at stationary points. We are examining the so-called Hessian edged at each stationary point:

$$\left|\overline{H}\right| = \begin{vmatrix} 0 & g'_x & g'_y \\ g'_x & L''_{xx} & L''_{xy} \\ g'_x & L''_{yx} & L''_{yy} \end{vmatrix}$$

If:

$|\overline{H}|(x_0, y_0, \lambda_0) < 0$, then at the point (x_0,y_0) we have a conditional minimum,
$|\overline{H}|(x_0, y_0, \lambda_0) < 0$, then at the point (x_0,y_0) we have a conditional maximum.

Using Ramsey's rule, we need to determine the necessary condition for maximizing V, we integrate the maximized function V and the limiting condition in the form of the Lagrange function L: $L_a = V(p, y) + \lambda$, λ – Lagrange multiplier. Utility is maximized for each ti when the partial derivatives of the Langrange function at prices j (j = 1, 2, .., n) are equal to zero.

We will calculate the derivative after tax t and we have:

$$\frac{\delta L_a}{\delta p_j} = \frac{\delta V}{\delta p_j} + \lambda x_j + \lambda \sum_i ti \left(\frac{\delta x_i}{\delta p_j}\right) = 0 dla j = 1 \ldots n$$

Expression: $\frac{\delta V}{\delta p_j}$ we expand to Roy's identity and obtain the equation:

$$\frac{\delta V}{\delta p_i} = -x_j \frac{\delta V}{\delta y}$$

After substituting the equation $\frac{\delta V}{\delta p_j} = -x_j \frac{\delta V}{\delta y}$ to equation
We have:

$$\lambda \left[x_j + \sum_i ti \left(\frac{\delta x_i}{\delta p_j}\right)\right] = \frac{\delta V}{\delta y} x_j$$

$\frac{\delta V}{\delta y}$ we mark as σ => $\sum_i ti \left(\frac{\delta x_i}{\delta p_j}\right) = -\left(1 - \frac{\sigma}{\lambda}\left|ti\right.\right) x_j$.

Realtion we can split by two effects:

$$\frac{\delta x_i}{\delta p_j} = \frac{\delta_i^S}{\delta p_j} - \frac{\delta x_i}{\delta y} x_{jd}$$

The Ramsey rule describes the optimal (minimizing efficiency distortions) goods tax system. According to the rule, taxes should be proportional to the inverse of the compensated elasticity of demand. Assuming perfect supply elasticity, the highest tax rate should apply to goods with the lowest demand elasticity. The rule is based on the basic assumptions of neoclassical models (competitiveness of the economy, work as the only factor of production, constant returns to scale), and also assumes a lack of differentiation between units in the human population. Applying the Ramsey rule in practice would result in inappropriate redistribution of income, because goods with low elasticity of demand, such as food, constitute the basis for subsistence of poor households. It was developed by the English mathematician and economist, Frank P. Ramsey.

Reaserch methodology

Induction was used as the main research method. It involves drawing general conclusions or establishing regularities based on the analysis of empirically identified phenomena and processes. This is a type of inference based on details about the general properties of a phenomenon or object. The use of this method requires the assumption that only facts can constitute the basis for scientific inference. These facts are actually occurring situations (social, legal or organizational). Inductive methods include various types of analyses, expert opinions, statistical data and scientific documents used in social research.

Moreover, the work uses two general research methods, i.e. analytical and synthetic methods, characterized by a specific approach to the study of reality. The analysis treats reality as a set of individual, specific features and events. This research method involves breaking down the research object into parts and examining each of them separately or detecting the components of the object. A negative feature of the analytical method is the excessive emphasis on details, which sometimes causes us to lose sight of the whole

subject of research. This makes it difficult to fully and objectively understand reality, which is indeed a collection of independent partial elements, but at the same time a set of parts closely related to each other to form a limited whole.

The synthetic method treats reality as a set of features, its implementation involves searching for common features of various phenomena and events and then combining them into a unified whole. Therefore, the synthetic method examines and determines the entire subject of research

Market reactions of entities to taxation

From a microeconomic perspective, taxes influence the development of demand, supply, balance in the market for a given good, and the decisions of producers, consumers and investors. Imposing or increasing a tax on a given good will result in a decrease in revenues from its sale as a result of a decrease in demand for it and a decrease in its net price. The increased gross price is partially covered by the seller and partially by the buyer. The proportions of their share in covering the increased price depend on economic factors such as price demand and supply, and the seller's (producer's) ability to influence the level and structure of own costs. In conditions of rigid elasticity of demand, the entire burden of imposing (increasing) income tax will be borne by the buyer. If the elasticity of supply is rigid, imposing or increasing taxation in these conditions will not cause a change in the gross price of a given good, but its net price will decrease by the amount of the imposed (increased) tax. In such a case, the entire tax burden will be borne by the seller. If the demand for a given good were infinitely elastic, the consequence of imposing or increasing a tax would be to limit the supply while the gross price increases, until the equilibrium price determined by the willingness of buyers to pay a higher price is reached. Therefore, the less flexible supply and demand are, the smaller is the impact of income tax on a given type of economic activity, because imposing (increasing) taxation does not cause major changes in the allocation of resources. The greater this flexibility, the greater the impact on resource allocation (Owsiak 2000, p. 172-175).

The tax affects the price of the taxed good, and the price increase affects the market situation. Increasing tax rates may result in a situation in which

the taxpayer's gross taxable income remains unchanged – then his or her net income after tax decreases, or the taxpayer manages to increase gross income without decreasing his or her net income after tax. In the first case, increasing taxation may translate into either a reduction in direct consumption or a decline in savings. Reducing consumption translates into reducing revenues from indirect taxation, unless increasing income tax rates is accompanied by an increase in indirect tax rates. However, this may result in either a further decline in consumption or a decline in savings and capital supply.

The impact of income on savings and investments. In a market economy, allocation decisions are more or less visibly related to the monetary savings of entities. The tendency of entities to save depends on both the interest rate on deposits and inflation, as well as the tax rate on income from capital (monetary savings). Also, the willingness of business entities to invest depends on the income from invested capital.

High burdens on capital income may limit its marginal efficiency, causing investments to be allocated to preferentially taxed sectors, but with lower efficiency, which also leads to distortion of investment decisions. Undoubtedly, high (progressive) income taxation limits private investment by reducing the part of income potentially earmarked for investment, leaving taxpayers with only sufficient funds for consumption. Some researchers have a different opinion, arguing that a progressive income tax does not reduce the attractiveness of risky investments compared to riskless investments for two main reasons. Firstly, taxation reduces the taxpayer's overall level of income, which may change his attitude to risk. This effect occurs regardless of the form and method of income taxation, and depends only on the size of the tax, i.e. the scale of the reduction in after-tax income. Whether an income tax reduces or increases risk-taking depends on the shape of the utility function. Secondly – as Young claims – high effective taxation of income with a smaller range of expected after-tax income, which encourages entities to take risks (Wołowiec 2019, p. 237-247).

Substitution and income effect – real rate of return on savings after tax and the supply of savings. In the light of classical economic theory, the amount of household savings is influenced by the rate of return on savings, which constitute *unconsumed* income. Savings are the result of selecting a specific consumption structure by households over time by comparing the subjective

value of current consumption relative to future consumption (discount rate) with the market interest rate determining the degree of increase in future consumption as a result of giving up current consumption (interest rate). Taxation of capital income (interest on bank deposits, bonds, participation units in investment funds, dividends on shares in companies) reduces the effective rate of return, thereby reducing the remuneration of savings. As a consequence, one should expect a decrease in the level of savings (substitution effect), but there is also an income effect – a decrease in the effective rate of return on savings translates into a decrease in the level of household wealth. This may limit current and future consumption. Reducing current consumption may result in an increase in savings levels. The effect of the decline in the net real rate as a result of taxation of savings income is not clearly defined due to the existence of substitution and income effects. Economic research shows that in the long run the substitution effect is stronger than the income effect and the decline in the rate of net return coincides with the decline in the supply of savings (Tanzi, Zee 1998).

In the conditions of open economies, the relatively low and decreasing propensity to save does not have to be a factor limiting the amount of investment and the rate of economic growth, due to the ongoing process of export and import of capital between various socio-economic systems. Therefore, personal income tax (in conditions of high openness of economies and free movement of capital) does not have to stimulate the tendency to save and invest (unless the legislator applies various tax reliefs and exemptions). Perhaps not taxation of income of natural persons, but the so-called The behavioral hypothesis, emphasizing limited rationality and self-control of borrowers, may partly explain the declining tendency to save in most OECD countries. The statistical analysis carried out on a group of 20 OECD countries for the period 1970-1994 confirms the negative relationship between the household savings rate not only with the amount of budget deficit, unemployment rate, current account deficit, demographic structure, but also with the amount of personal income tax. The econometric equations have the form: $x = 1.13\ r - 0.44\ a65 - 0.17\ db + 0.74\ ob$ and $x = -0.32\ PIT - 0.19\ ur$

Where:

x – household savings rate in %;

r – GDP growth rate;
a65 – share of people over 64 in the total population of the country;
db – share of budget deficit in GDP;
ob – share of the current balance of foreign trade surplus in GDP;
ur – unemployment rate.

All variable coefficients are statistically significant at the usual level. The negative impact of high personal income taxes on the level (rate) of household savings was also confirmed by research by Martin Feldstein, who showed that the marginal propensity to consume from retained corporate income is approximately 2/3 of the marginal propensity to consume from personal income. This means that legal entities generate higher savings than households (Wołowiec 2017, p. 173-196).

Disposable income and the amount of savings. If, in the long term, a reduction in taxation of income from work and savings leads to an increase in the budget deficit, households (taxpayers) expect an increase in income taxes in future periods. Taxpayers will save part of the additional disposable income obtained as a result of the income tax reduction, striving to equalize the distribution of consumption expenses over time. Assuming intergenerational altruism, we achieve the same effect regardless of whether income taxes will increase during the lifetime of the household or whether the increase in taxes will affect its descendants. We are therefore dealing with a substitution between public and private sector savings, but research on the economies of EU countries and the American economy has not confirmed the full substitution of public savings with private savings.

Income taxation, the social security system and the supply of savings (Nojszewska, Rojek 2003, p. 153). Progressive taxation of income may lead to a decline in savings. The life cycle hypothesis assumes that households, striving to equalize the level of expenses over the course of their lives, increase their debt in the initial periods in order to increase current consumption, expecting higher income in the future, allowing them to repay the debt incurred in the past. Households also expect their income to decline at the end of their life cycle, which causes them to save part of their income to consume it only after retirement. Therefore, it can be noted that the lowest propensity to save is

characteristic of professionally inactive households (retirees), slightly higher propensity for households in the initial phase of the life cycle, and the highest – the most affluent households, which are in the mature life cycle. Progressive income taxation burdens the incomes of households with the greatest marginal propensity to save the most. At the same time, these households transfer part of their income to households in the initial and early stages of the life cycle (support for children and parents with transfers). This creates a conflict between egalitarian tax policy and solutions aimed at stimulating the level of household savings. An important role in the analysis of this process is played by the state's guarantee of social and pension benefits (financed by quasi-income taxes – work-related contributions), because the existence of such a guarantee system eliminates the uncertainty related to the effects of unfavorable events for the household and limits to some extent the tendency (need) saving. In a situation where social transfers come from current public sector revenues, we may experience a decline in aggregate savings and a weakening of the ability to finance investments. Therefore, it seems important to limit the financing of pension benefits from current public revenues. Research conducted by Feldstein and Samwick (Feldsetein, Samwick 1996) indicates that changing the social security system to a system financed by funds may increase the US national income by 5% in the long run. Taking into account the differences in the marginal propensity to save between households with different incomes, it can be noted that low-income households have limited access to capital (credit), which means that they have to finance the purchase of durable goods with funds to a much greater extent. own. Restrictions on access to credit combined with high levels of income taxation limit household consumption expenditure and, at the same time, may increase their savings for a given income distribution.

Taxation and substitution between household savings and corporate savings. If households treat the retained profits of the companies they own as their own savings, the level of taxation on corporate income may significantly affect household savings. Households may save more when companies retain less of their profits and save less when companies retain more of their profits. In a situation where the marginal propensity to save of households with significant shares in company profits is higher than the average in the population,

an increase in the tax burden on corporate profits (income) combined with a reduction in personal income tax may result in a reduction in the amount of aggregate private sector savings. . To sum up, it can be stated that the increasing taxation of savings income may lead to a decline in aggregate savings stimulating investment purposes, mainly by reducing disposable income, lower rates of return on savings and transfer of income between households with different saving propensities. (Genrtry, Hubbard 2002).

The impact of income taxes on the labor market and labor mobility. The level of tax rates and the nature of the income tax rate table may be a factor influencing labor mobility. This issue was dealt with by two economists: W.M. Gentry and R.G. Hubbard, who wrote a paper on this topic. The authors examined the relationship between tax rates, tax convexity (Gentry, Hubbard 2002) and employment mobility based on the TAXISM model used by the National Bureau of Economic Research. As the authors showed, employee mobility responds to both changes in rates and the convexity of the tax table (measures of progressivity). *We estimate that a five percent cut in the marginal tax (…) increases the probability of moving to a better job by 0.79%, while a 3.12% reduction in the measure of the convexity of the tax system (the value of one standard deviation) increases the probability of moving to a better job by 0.86% (…). For married men, these results are slightly higher.* This means that tax cuts encourage people to look for better jobs because they believe that any additional pay they receive will not be subject to a higher tax rate. These results indicate that tax cuts have a motivating effect on employees, and this impact is statistically significant. It can also be concluded that the less progressive the tax system is, the greater the tendency to look for a better job. The authors also found, citing their other research, that the convexity (progressiveness) of the tax system has a relatively large negative impact on decisions in the field of entrepreneurship, e.g. entering the market.

Payment options and fair distribution of tax burdens

According to the ability to pay rule, every citizen should participate in the general tax burden and pay taxes adequate to their ability to bear the tax burden. The practical application of the principle of ability to pay requires answers to two questions (Wołowiec, Skrzypek-Ahmed 2016, p. 130-136):

1. how to measure payment capacity?
2. according to what criteria should they be differentiated?

In terms of measuring ability to pay, the theory proposes income, consumption and wealth, each of which has its advantages and disadvantages. The most commonly used measure is current market yield. With regard to the criteria for differentiating ability to pay, attention should be paid to the fact that in order for the distribution of tax burdens to be considered socially fair, it requires simultaneous fulfillment of basic standards of horizontal and vertical justice.

The classic attempt to solve the problem of vertical justice refers to the one formulated by J.S. Mill's idea of the equal sacrifice of everyone for the benefit of all. The idea itself has universal value and is not controversial. The problem arises when you want to translate a general idea into a specific tax scale. The operationalization process comes down to establishing a fair tax scale corresponding to a specific type of sacrifice (tax) recognized by society and the legislator as a norm of justice. Determining the individual tax burden in accordance with the equal sacrifice theory and defining the tax scale on this basis requires the fulfillment of two conditions:

1. Individual utility functions of nominal income must be known and described. This is necessary in order to be able to quantify the individual sacrifice (tax burden) of each taxpayer as the scale of taxation increases.
2. A standard of fair distribution of the tax burden should be adopted, i.e. the type of sacrifice (tax) that is to be compensated during taxation should be determined (whether it is to be an absolute relative sacrifice or a marginal sacrifice).

If both conditions are met, then determining a tax scale that meets the value of justice comes down to solving a mathematical problem. In practice, the first condition is unlikely to be met. In further analyses, it is necessary to simplify the reality and adopt a hypothesis regarding the shape of the utility function. Further analyzes must be based on the assumption of identical utility functions and the assumption that the utility of all goods – in accordance with Gossen's first law – decreases. As for the second condition, the theory distinguishes three types of sacrifice: absolute, relative and extreme. Fulfilling the condition of absolute sacrifice means a situation in which each taxpayer, as a result of taxation, makes the same sacrifice in the absolute sense. This means that a fair tax scale is one at which the tax reduces the utility of nominal income for each taxpayer by the same number of utility units. The condition of relative sacrifice states that the tax scale will be fair if the absolute loss of utility resulting from taxation related to the initial resource of utility before taxation is the same for each taxpayer. Taking compensation for the marginal sacrifice as a norm of justice means that the tax scale will be fair when it allows each taxpayer to equalize the marginal utility of nominal income after tax (Grądalski 2004, p. 127-135, Grądalski 2006, p. 50-56). Fulfilling subsequent norms of justice, from the compensation of absolute sacrifice, through relative sacrifice, to marginal sacrifice, is each time associated with a different distribution of after-tax income in the sense of the uniformity of the Lorenz distribution. The most diversified income after taxation remains if we accept the compensation of absolute sacrifice as the norm of justice. Equalizing the relative sacrifice gives a more even distribution of income than equalizing the absolute sacrifice. Equality of marginal sacrifice leads to a situation in which differentiation disappears and the after-tax income of each taxpayer becomes identical (egalitarianism). Of course, full egalitarianism is a utopian proposition, so the concept of equal sacrifice should be excluded from the set of real solutions. The other two concepts are considered socially attractive and justify a fair tax scale.

Conclusions

To ensure economic growth and development, it is necessary to develop favorable tax solutions. Taxes should not affect the taxpayer's assets to an extent that prevents their further development. Therefore, it is important to balance the amount of tax collected from the company. These funds come from the business activity created surplus. It should be emphasized that the favorable results of economic entities create premises for the development of both themselves and, through contributions to the budget of taxes and quasi-taxes, premises for an effective economic policy of the state. For this reason, a positive fiscal consequence for entrepreneurs is a significant reduction in tax rates, which may affect on the investment opportunities of profitable enterprises.

A simple consequence of the fiscal function of income taxes is a direct impact on the allocation of resources in the economy, because when the tax is paid, there is a final flow of income between the taxpayer and the state. The fiscal function of income taxes is always related to the allocation of resources, as it reduces the incomes of households and businesses, which limits their ability to invest, consume and save. The allocation effects of income taxes may be various and depend on factors such as: the level of tax rates, the capacity of tax scales, the subject and basis of taxation, the scope and scale of tax reliefs and exemptions, the method of distributing the tax burden and the method and mode of tax collection. Income tax is also an important social category, and due to its directness and individualization of taxation, some economic goals pursued through income taxes may encounter social barriers, expressed in social unrest accompanying, for example, increasing the level of burdens or changing some elements of the structure of an income gift. In the conditions of a market economy, the reaction of entities to imposed taxes (or increased or reduced tax burdens) is important. Each reaction depends on the strength and direction of the impact of taxes on changes in demand and supply on the market for a specific factor of production, as well as on the length of the period in which the impact of the tax on the market becomes visible and on changes in the structure of individual markets.

Bibliography

Feldstein M.S., Samwick A. (1996). The Transition Path in Provatizing Social Security, NBER Working Paper Series, nr 5761, Cambridge, Mass.

Gentry W.M., Hubbard R.G. (2002). Tax Policy and Entry into Entrepreneurship, Mimeograph, Columbia University, July 2002

Gentry W.M., Hubbard R.G. (2002). The Effects of Progressive Income Taxation on Job Turnover, NBER, Working Paper 9226, September 2002.

Grądalski F. (2004). Wstęp do teorii opodatkowania, SGH, Warszawa.

Grądalski F. (2006) System podatkowy w świetle teorii optymalnego opodatkowania, SGH, Warszawa.

Hall B. (1993). R&D Policy During 1980s: Success or Failure [w:] Tax Policy and the Economy, MIT Press.

Judd K. (1987). The Welfare Cost of Factor Taxation in a Perfect-Foresight Model, *Journal of Political Economy*, Vol 95(4).

Nojszewska E., Rojek M. (2003). Rozważania na temat konsekwencji wprowadzenia reformy podatkowej w Polsce – inwestycje z uwzględnieniem oszczędności oraz rynek pracy z uwzględnieniem kapitału ludzkiego, [w:] Kierunki reformy polskiego systemu podatkowego, pod red. A. Pomorskiej, UMCS, Lublin.

Owsiak S.(2000). Finanse publiczne. Teoria i praktyka, PWN, Warszawa.

Tanzi V., Zee H.H. (1998). Taxation and the Household Saving Rate: evidence from OECD countries, IMF Working Paper, March 1998.

Wołowiec T. (2017). Ekonomiczne skutki opodatkowania podatkiem dochodowym podmiotów gospodarczych. Kilka uwag o reformie polskiego systemu podatkowego. / in/ Mechanizmy wspomagania sektora MŚP, red. M.Stefański, Monografie Wydziału Administracji i Ekonomii WSEI, Wyższa Szkoła Ekonomii i Innowacji, Lublin.

Wołowiec T. (2019). Income taxation versus fiscal Policy (sellected problems). /in:/ Bezpieczeństwo prawne i bezpieczeństwo obrotu prawnego w Polsce. Red. Jan Mojak, Agnieszka Żywicka, Leszek Bielecki. Innovatio Press Wydawnictwo Naukowe Wyższej Szkoły Ekonomii i Innowacji, Lublin.

Wołowiec T.(2021). Finanse publiczne. Podręcznik, Innovatio Press, Lublin.

Wołowiec T., Ahmed-Skrzypek S. (2016). Justice of taxation as a factor of social security. / in./ Współczesne uwarunkowania bezpieczeństwa Rzeczypospolitej Polskiej. Wymiar polityczno-prawny i społeczny. (ed.) Gąska M. Paździor M. WSEI, Lublin.

Wołowiec T., Białek R. (2020). Bezpieczeństwo konkurencji ekonomicznej a luka podatkowa w podatku VAT i CIT [w:] Kształtowanie bezpieczeństwa wewnętrznego w wymiarze administracyjno-prawnym jako zadanie wybranych podmiotów administracji publicznej i sektora prywatnego, monografia, Innovatio Press.

Young P. (1994). Eguity. In Theory and Practice, Princeton.