

## THE ANALYSIS OF INDICATORS OF THE PERSONAL INCOME TAX FISCAL EFFICIENCY

*O. Zyma*  
*O. Preobrazhenska*

The indicators that can be used for evaluation of the fiscal efficiency of the personal income tax have been examined. The tax revenue to Ukraine's consolidated and local budgets including the regional one has been analyzed. The share of the personal income tax (PIT) in the tax revenue has been calculated in the regional context. Tax and personal income tax elasticity ratios have been calculated.

It has been proved that reducing costs of collecting the personal income tax may be connected with the necessity of introduction of the nontaxable income indicator in the amount of the subsistence level for the able-bodied population. It has been validated that increasing the state revenue and reducing the tax collection expenditures should be based on the monitoring and evaluation of such expenditures.

*Keywords:* fiscal efficiency, personal income tax, tax elasticity ratio, tax revenue.

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### АНАЛІЗ ПОКАЗНИКІВ ФІСКАЛЬНОЇ ЕФЕКТИВНОСТІ ПОДАТКУ НА ДОХОДИ ФІЗИЧНИХ ОСІБ

*Зима О. Г.*  
*Преображенська О. С.*

Проаналізовано показники, стосовно яких можна здійснювати оцінювання фіскальної ефективності податку на доходи фізичних осіб. Здійснено аналіз податкових надходжень до зведеного та місцевого бюджетів України, у тому числі в регіональному аспекті. Розраховано частку податку на доходи фізичних осіб у податкових надходженнях у регіональному аспекті. Розраховано коефіцієнти еластичності податків та податку на доходи фізичних осіб.

Обґрунтовано, що зменшення витрат на стягнення податку на доходи фізичних осіб може бути пов'язане з необхідністю введення показника неоподаткованого доходу в розмірі прожиткового мінімуму для працездатної особи. Доведено, що для збільшення доходів бюджетів країни та зменшення витрат на стягнення податку необхідно здійснювати моніторинг та оцінювання таких витрат.

*Ключові слова:* фіскальна ефективність, податок на доходи фізичних осіб, коефіцієнт еластичності податків, податкові надходження.

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### АНАЛИЗ ПОКАЗАТЕЛЕЙ ФИСКАЛЬНОЙ ЭФФЕКТИВНОСТИ НАЛОГА НА ДОХОДЫ ФИЗИЧЕСКИХ ЛИЦ

*Зима О. Г.*  
*Преображенская Е. С.*

Проанализированы показатели, по которым можно осуществлять оценку фискальной эффективности налога на доходы физических лиц. Осуществлен анализ налоговых поступлений в сводный и местный бюджеты Украины, в том числе в региональном аспекте. Рассчитана доля налога на доходы физических

лиц в налоговых поступлениях в региональном аспекте. Рассчитаны коэффициенты эластичности налогов и налога на доходы физических лиц.

Обосновано, что уменьшение расходов на взимание налога на доходы физических лиц может быть связано с необходимостью введения показателя необлагаемого дохода в размере прожиточного минимума для трудоспособного населения. Доказано, что для увеличения доходов бюджетов страны и уменьшения расходов на взимание налога необходимо осуществлять мониторинг и оценку таких расходов.

**Ключевые слова:** фискальная эффективность, налог на доходы физических лиц, коэффициент эластичности налогов, налоговые поступления.

Different taxes in the tax system may have different fiscal efficiency, because they have different fiscal capacity and can be compared based on the value of on-going administration costs. Taxes with a high fiscal capacity and opportunities of administering through the use of computer technologies are of the highest fiscal efficiency.

The development of the market system in Ukraine requires studying tax revenues to budgets of different levels, in particular the analysis of the personal income tax revenue on both the state and regional levels. Such analysis affords an opportunity for introducing changes in the tax and budget legislation. Unlike foreign countries, in Ukraine there are disagreements over the performance of fiscal process in terms of exemption of the share of personal income, and the social equity principium is infringed in the process of taxation.

Implementation of the fiscal function must be based on the principle of fiscal performance with the key features: income adequacy, minimization of administrative costs, prevention of tax evasion, tax elasticity, equal balance among different social groups of taxpayers (population) and others [1].

Problems concerning personal income tax have been studied by national scientists: O. Vasylyk, V. Vishnevskiy, M. Demianenko, Yu. Ivanov, S. Kalambet, P. Laik, V. Melnyk, A. Podderohin, A. Sokolovska, L. Shablysta, K. Schvabii and others. However, taking into consideration the reforms in the system of personal income taxation, evaluation of the fiscal efficiency of the personal income

tax is still the matter of importance in the up-to-date Ukrainian context.

The aim of the study is to analyze the indicators which may be used for evaluation of the fiscal efficiency of the personal income tax for increasing the state revenue and reducing the tax collection expenditures.

In a majority countries the personal income tax is a budget revenue generating tax. Its importance in the tax system is determined by several factors [1, p. 137]:

the revenue of an individual, a taxpayer, is an object of taxation;

all the able-bodied citizens who provide stable and periodic revenue receipts to the budget are taxpayers;

the personal income tax corresponds to the fundamental principles of taxation: compulsory sustainability, social equity, fiscal efficiency for the state;

collection of tax at the sources of revenue payments simplifies the control over promptitude and completeness of payments by the tax authorities.

It should be also noted that the personal income tax is one of the most influential forms of relationships among the state, local governments and citizens concerning deduction of the income share of the latter for creation of funds of national and local importance. This is mainly by means of the personal income tax that the state and local authorities are able to fulfill their functions. The dynamics of tax revenue from the personal income tax in the consolidated and local budgets of Ukraine is presented in the Table 1 [2].

Table 1

**Tax revenue to the consolidated and local budgets of Ukraine**

Indexes	Periods						
	2007	2008	2009	2010	2011	2012	2013
Tax revenue receipts to the consolidated budget of Ukraine, m UAH	161 254.2	227 164.8	208 073.2	234 447.7	334 691.9	360 567.3	353 968.1
Revenue receipts to the consolidated budget of Ukraine from the personal income tax, m UAH	34 782.1	45 895.8	44 485.3	51 029.3	60 224.5	68 092.4	72 151.1
Tax revenue receipts to the local budget of Ukraine, m UAH	44 593.4	59 281.4	59 157.6	67 575.6	73 086.9	85 852.0	91 191.1
Revenue receipts to the local budget of Ukraine from the personal income tax, m UAH	34 782.1	45 895.8	44 485.3	51 029.3	54 065.1	61 066.0	64 586.0
The income share in the tax revenue receipts to the local budgets of Ukraine, %	77.9	77.4	75.2	75.5	73.9	71.1	70.8

As presented in Table 1, the share of tax in the tax revenue to the local budgets of Ukraine is 74.4 % on average, almost two-thirds of the local budgets is formed by the personal income tax.

As for the revenue from the personal income tax in the regions, the dynamics of such revenue is presented in Table 2.

Table 2

## Revenue receipts of the personal income tax in the regions [3]

No.	Region of Ukraine	Personal income tax			Tax revenue receipts		
		Period			Period		
		2011	2012	2013	2011	2012	2013
1	AR of Crimea	2 031 825	2 253 608	2 330 610	6 125 117	7 618 272	6 571 468
2	Vinnitsia region	1 451 429	1 644 538	1 747 676	3 918 767	4 227 741	3 981 490
3	Volyn region	761 634	851 874	887 930	1 448 744	1 763 057	1 666 191
4	Dnipropetrovsk region	5 196 140	5 890 603	5 083 257	22 545 168	17 960 500	12 320 447
5	Donetsk region	6 937 515	7 937 530	7 538 987	10 257 168	12 899 250	14 833 741
6	Zhytomyr region	1 117 315	1 250 227	1 321 303	2 363 532	2 780 546	2 856 369
7	Zakarpattia region	820 097	895 923	943 458	1 461 057	1 571 776	1 641 648
8	Zaporizhzhia region	2 456 694	2 700 375	2 097 195	5 581 639	5 679 712	4 376 284
9	Ivano-Frankivsk region	991 636	1 108 641	1 162 806	3 672 909	3 215 692	1 995 419
10	Kyiv region	2 467 676	2 809 321	2 966 120	6 367 855	7 326 460	7 495 475
11	Kirovohrad region	950 091	1 115 846	1 190 196	1 392 321	1 797 925	1 363 632
12	Luhansk region	2 726 113	2 984 890	2 904 766	7 473 911	7 769 333	4 938 692
13	Lviv region	2 522 531	2 829 865	2 823 967	7 570 642	8 383 260	5 873 648
14	Mykolaiv region	1 245 774	1 399 387	1 468 939	2 147 959	3 188 419	2 687 999
15	Odesa region	2 819 680	3 040 589	2 905 529	7 403 939	9 816 733	7 322 232
16	Poltava region	1 991 850	2 299 060	2 411 863	15 666 195	16 822 489	16 181 623
17	Rivne region	946 633	1 081 968	1 146 505	2 067 544	2 309 742	2 681 959
18	Sumy region	1 124 640	1 303 677	1 373 805	6 507 513	5 413 106	5 124 790
19	Ternopil region	740 222	816 548	854 576	1 475 673	1 790 892	2 252 572
20	Kharkiv region	3 321 284	3 787 337	3 298 426	17 838 272	19 523 430	9 690 218
21	Kherson region	848 937	952 556	988 793	1 777 381	2 022 402	1 932 036
22	Khmelnytsk region	1 110 220	1 248 132	1 334 535	2 292 512	2 625 756	2 616 698
23	Cherkasy region	1 242 613	1 416 517	1 487 485	3 909 252	4 389 156	5 028 904
24	Chernivtsi region	571 027	624 612	648 475	1 277 517	1 451 811	1 481 395
25	Chernihiv region	954 544	1 098 245	1 152 300	6 676 357	6 939 543	3 092 428
26	Kyiv city	12 325 239	14 052 787	11 471 072	67 674 506	76 298 522	31 130 655
27	Sevastopol city	587 164	687 735	758 399	1 305 585	1 568 415	1 806 685
	Total	60 224 521	68 092 390	72 151 062	218 199 037	237 153 939	23 6490 128

For the analysis of changes in the tax revenue from the personal income tax in the regions, it is necessary to calculate the

index, which gives an opportunity to evaluate the share of the personal income tax (Table 3).

Table 3

## The PIT share in the tax revenue receipts of the regions [3]

No.	Region of Ukraine	The income share in the tax revenue receipts to the local budgets of Ukraine, %			No.	Region of Ukraine	The income share in the tax revenue receipts to the local budgets of Ukraine, %		
		Period					Period		
		2011	2012	2013			2011	2012	2013
1	2	3	4	5	6	7	8	9	10
1	AR of Crimea	33.2	29.6	35.5	15	Odesa region	38.1	30.9	39.7
2	Vinnitsia region	37.0	38.9	43.9	16	Poltava region	12.7	13.7	14.9
3	Volyn region	52.6	48.3	53.3	17	Rivne region	45.8	46.8	42.7

Table 3 (the end)

1	2	3	4	5	6	7	8	9	10
4	Dnipropetrovsk region	23.1	32.8	41.3	18	Sumy region	17.3	24.1	26.8
5	Donetsk region	67.6	61.5	50.8	19	Ternopil region	50.2	45.6	37.9
6	Zhytomyr region	47.3	44.9	46.3	20	Kharkiv region	18.6	19.4	34.0
7	Zakarpattia region	56.1	57.0	57.5	21	Kherson region	47.8	47.1	51.2
8	Zaporizhzhia region	44.0	47.5	47.9	22	Khmelnysk region	48.4	47.5	51.0
9	Ivano-Frankivsk region	26.0	34.5	58.3	23	Cherkasy region	31.8	47.5	29.6
10	Kyiv region	38.8	38.3	39.6	24	Chernivtsi region	44.7	43.0	43.8
11	Kirovohrad region	68.2	62.1	87.3	25	Chernihiv region	14.3	15.8	37.3
12	Luhansk region	36.5	38.4	58.8	26	Kyiv city	18.2	18.4	36.8
13	Lviv region	33.3	33.8	48.1	27	Sevastopol city	44.9	43.8	41.9
14	Mykolaiv region	57.9	43.9	54.6		Average	39.1	39.1	44.9

As presented in Table 3, in Kirovohrad region the level of the PIT relative share in the tax revenue receipts is the highest of all the regions. In most regions the tax share is less than average.

Tax elasticity is the main macroeconomic indicator which reveals the dependence of taxation in the economy on substantial macroeconomic factors [4, p. 15]. It is used to distinguish changes in the tax revenue under the influence of the gross domestic product, the income in the personal sector, the level of retail prices, etc., and it is a measure of the efficiency of tax regulation.

The value of the tax elasticity ratio should be close to 1, i.e. the dynamics of the tax revenue (the share of taxes), including the PIT, remains constant despite the increase (decrease) in the GDP. This value is considered optimal, demonstrating a minimal distortion level, which is usually caused by taxation. The low value of this indicator or, conversely, its high value (much less or more than 1) indicates the need to reduce the distortion effects of the tax system [5, p. 232–236].

For illustration purposes the calculated values of the tax elasticity ratios are presented (Figure).

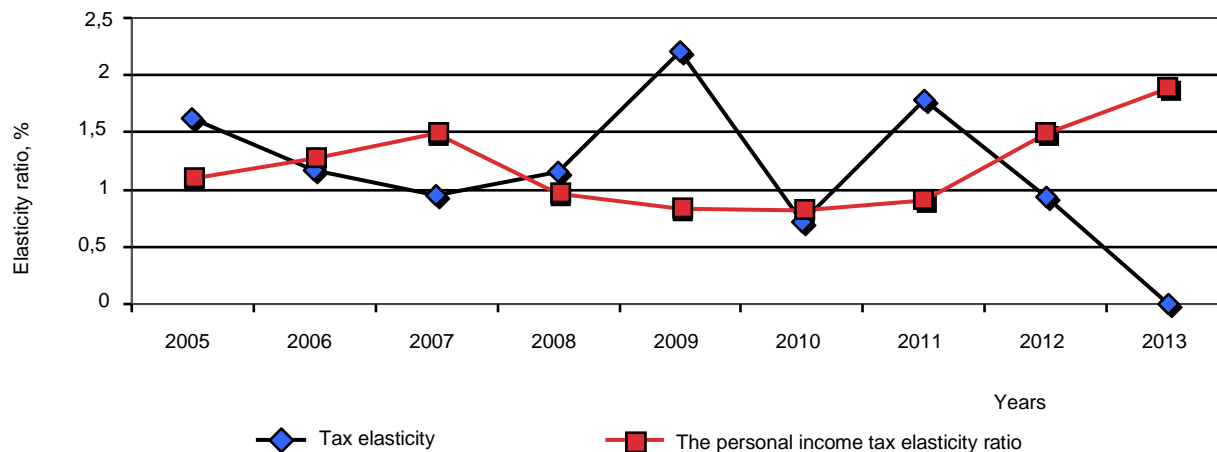


Figure. Changes in the tax elasticity ratios during the period of 2005 – 2013

As shown in Figure, the PIT elasticity ratios are close to 1, that is considered optimal and is an evidence of minimal distortion, which is usually caused by taxation in the GDP generation.

Analysis of the tax revenue from the personal income tax, calculation of the tax share in the tax revenue to local budgets, and the elasticity ratio doesn't make it possible to evaluate the fiscal efficiency of the personal income tax to the full extent. It is confirmed by studies of K. Proskura [6], who considered the tax fiscal efficiency to be the ratio of the absolute amount of taxes and its absolute administrative expenses (during the same period). The fiscal efficiency is of direct dependence on the fiscal performance (revenue) and of inverse dependence on administrative expenses [7, p. 223].

The fiscal efficiency of the tax system or a specific tax, the personal income tax in particular, can be quantitatively evaluated as the ratio of the absolute amount of the tax revenue (or a revenue from a specific tax (the personal income tax)) to the tax administrative expenses (specific tax (personal income tax) administrative

expenses). That is, the fiscal efficiency FE can be calculated according to the formula:

$$FE = ATR / AE, \quad (1)$$

where ATR is the amount of the tax revenue (the fiscal efficiency); AE is the administrative expenses (in the total system or a definite tax (the PIT)).

The fiscal efficiency index demonstrates the amount of the fiscal revenue (in the total system or a separate tax (the PIT)) the state derives from a unit of financial resources.

Moreover, it is necessary to consider the viewpoint of V. Melnik [8, p. 7], who demonstrated the complexity of measuring the impact of tax administration on the tax system efficiency. The main reason is an extreme complexity of economic relations generated by the tax system. These relations can often be neither a cause nor a consequence of the outcome of actions of the individual elements of the tax system.

In addition, there is a lack of practical base for the calculation. Thus, in Ukraine the state statistical services and regulatory authorities in the sphere of taxation do not monitor expenses, which can be used to administer certain taxes. Therefore, calculation of the fiscal efficiency of certain taxes can only be based on the use of indirect methods of analysis and techniques of abstraction.

Reducing the cost of the revenue collection is the consequence of the fact that taxes are collected not just to cover corresponding costs [9]. Thus, maximum reduction of expenses on the system which provides prompt and correct revenue from taxes is one of the essential elements of the fiscal efficiency of the tax revenue from the personal income tax. This cost reduction may be a result of simplification of the personal income tax calculation, in particular, the reduction of expenses on the personal income tax collection may be caused by the introduction of the nontaxable income indicator in the amount of the subsistence level for the able-bodied population instead of the tax social privilege in the Tax Code of Ukraine. By using this indicator a large number of payers with low income may be exempted from taxation, as the revenue from such taxpayers is often less than the state administrative expenses. And these actions are committed to the principle of social equity as well.

A promising area for further research is the evaluation of the method of using the nontaxable income indicator for personal income tax calculation as well as the method of calculation of administrative expenses.

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#### Information about the authors

**O. Zyma** – PhD in Economics, Associate Professor of the Department of Taxation of Simon Kuznets Kharkiv National University of Economics (9-A Lenin Ave., 61166, Kharkiv, Ukraine, e-mail: [olyazyma@ukr.net](mailto:olyazyma@ukr.net)).

**O. Preobrazhenska** – PhD in Economics, Associate Professor of the Economic Analysis Department of Simon Kuznets Kharkiv National University of Economics (9-A Lenin Ave., 61166, Kharkiv, Ukraine, e-mail: [kvaso4ka@rambler.ru](mailto:kvaso4ka@rambler.ru)).

#### Інформація про авторів

**Зима Ольга Григорівна** – канд. екон. наук, доцент кафедри оподаткування Харківського національного економічного університету імені Семена Кузнеця (61166, Україна, м. Харків, пр. Леніна, 9-А, e-mail: [olyazyma@ukr.net](mailto:olyazyma@ukr.net)).

**Преображенська Олена Сергіївна** – канд. екон. наук, доцент кафедри економічного аналізу Харківського національного економічного університету імені Семена Кузнеця (61166, Україна, м. Харків, пр. Леніна, 9-А, e-mail: [kvaso4ka@rambler.ru](mailto:kvaso4ka@rambler.ru)).

#### Інформація об авторах

**Зима Ольга Григорьевна** – канд. екон. наук, доцент кафедры налогообложения Харьковского национального экономического университета имени Семена Кузнеця (61166, Украина, г. Харьков, пр. Ленина, 9-А, e-mail: [olyazyma@ukr.net](mailto:olyazyma@ukr.net)).

**Преображенская Елена Сергеевна** – канд. екон. наук, доцент кафедры экономического анализа Харьковского национального экономического университета имени Семена Кузнеця (61166, Украина, г. Харьков, пр. Ленина, 9-А, e-mail: [kvaso4ka@rambler.ru](mailto:kvaso4ka@rambler.ru)).

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