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# THE ESTIMATION OF MECHANICAL REMOVAL OF SLOPE SOIL

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*The process of interaction of working organ and the soil has been studied to investigate the mechanism of soil removal in slopes and to prevent it. A mathematical model for evaluating mechanical soil removal in the slopes has been developed to determine the dimension of the movement of the soil (drill) removal both down and up depending on the slope and the change of the technological parameters of the working organ. Such equations were obtained by the application of which the slope removal will be prevented by the regulation of structural and kinematic parameters of the working organs of cultivating machines.*

**Key words:** slope, soil erosion, furrow, spike, plowshare, drill, shift, parameter, trace.

## Introduction

Landscape agriculture has not developed yet but it has quite sufficient amount of supplies in enlarging the additional production of highly qualified agricultural products.

The slope soils are subjected to intensive erosion and if necessary steps are not taken, those soils may become useless causing significant economic damage to agriculture.

It is necessary to study the procedure of interaction of working organ and soil for investigation and prevention of soil removal mechanism in slopes especially in case of relative removal of the soil over the surface of working organ.

## Conflict setting

Many researchers have dealt with the studies of working organs of soil cultivation and soil interaction [1,2,3,4,5,6] taking into account the theories of V.P. Goryachkin and his followers about the interaction of soil and spike (two layered and three layered). However, there is still no definite consistent approach for determining the trace of soil removal over the working surface of spike. Some scientists think [3,5,6] that the soils move towards the furrow stood by the pedal of spike and some find that [8,9,10] the soil trace passes through the plowshare to the pedal.

Generally, the trace of relative movement of soil over the working surface of spike is suggested by $\eta$ angle of cutting edge of plowshare (Fig.1) which, according to L. V. Gyachev [3] is defined by the following expression

$$tg\eta = tg\gamma \cos\varepsilon, \tag{1}$$

where $\varepsilon$ is the angle of working surface of plowshare and furrow bed, $\gamma$ is the angle of cutting edge and direction of soil removal.

While projecting the working organs of cultivating machines it is not accounted that these machines should also work in the slopes. Consequently, during the cultivation of these slopes with the working organs the corresponding agro technical requirements are violated resulting the worsening of the cultivation quality.

During the action of the working organ of minimal cultivation of the soil (particularly the arrowhead paw) in the lowlands, the tillage moves to the right and left symmetrically in the direction of movement during which no general movement of the soil is noted. While working on the slopes the soil moves more downslopes than upside resulting in mechanical removal of the soil [4,11,12].

The movement of the soil downslopes is conditioned by the impact of additional forces ($Q$) on the tillage

$$Q = G sin\theta,$$

where $G$-is the weight of the tillage, $\theta$-is the angle of the slope.

Let us theoretically research on the change of soil removal on the slope depending on the slope and the parameters of working organ.

**Research results**

During the soil cultivation with $ABCO$ trihedral spike the tillage turns to the working surface of the spike by $S$ trace (Fig. 1). The same spike on the slope declines and takes $AB_1C_1O$ position thus changing horizontal and vertical platforms and technological parameters. The trace of tillage movement is also rolling with the spike as a result of which $\eta$ angle characterizing the spike gets various values in various positions.

The position of spike in space also changes under the impact of angular forces which make the trace of the tillage, declines for some more $\delta$ angle and takes $AD_1'$ position.

As we can see in Fig. 1, the movement of the tillage down the slope increses $from\ OE\text{-}\ to\ OE_1'$. Up to the slope the movement decreases.

To determine the dimension of tillage movement we need to have the parameters of the spike.

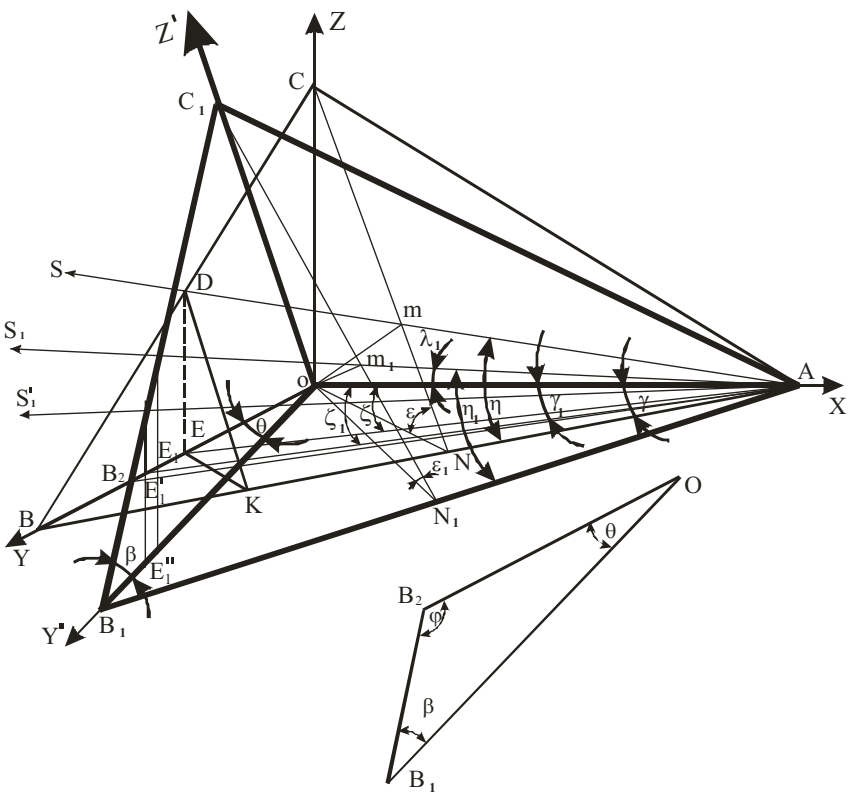


**Fig. 1 The scheme of soil removal depending on slope**

Taking into account that most working organs of cultivators of minimum cultivation of the soil are arrowhead paws, let us study the working organ with appearance of plowshare of $B$ width which represents a part of trihedral spike (Fig.2).

We can see from Fig. 2 that the tillage movement on the slope is $\Delta_1 = OE_1''$ which can be determined by the following expression

$$\Delta_1 = OE_1'' = AO \cdot \frac{tg\xi_1}{cos\theta} = AD_1' \cdot \frac{tg\xi_1 \cdot cos\lambda_1}{cos\theta},$$

or

$$\Delta_1 = B\frac{tg\xi_1 \cdot cos\lambda_1}{cos\theta \cdot sin\eta_1} \tag{2}$$

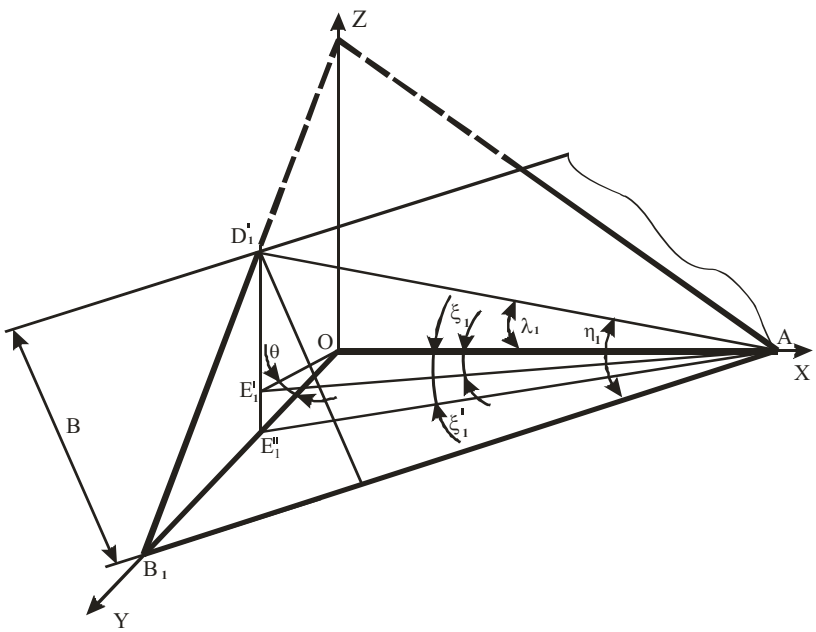


**Fig. 2 The scheme of determining the tillage removal on slopes**

If the $OABC$ spike (the part of arrowhead paw to down) declines to the width of the slope and takes $OAB_1C_1$ position, $AB_2$ line will become the trace of spike surface on $OAB$ platform and $\gamma_1$ angle of current value of the angle (the angle of pushing side) depending on slope ($\theta$). Let us determine the value of the angle. According to Figure 1 we can write

$$tg\gamma = \frac{OB}{OA'}, \qquad tg\gamma_1 = \frac{OB_2}{OA},$$

where

$$\frac{OB}{tg\gamma} = \frac{OB_2}{tg\gamma_1} \Rightarrow tg\gamma_1 = tg\gamma \cdot \frac{OB_2}{OB}$$

Taking into account that = $OB_1$, we will get

$$tg\gamma_1 = tg\gamma \cdot \frac{OB_2}{OB_1} \tag{3}$$

In

$B_1B_2O$ triangle (Fig. 1) we will use the theorem of sinus getting the following

$$\frac{OB_1}{sin\varphi} = \frac{OB_2}{sin\beta} \Rightarrow \frac{OB_2}{OB_1} = \frac{sin\beta}{sin\varphi} \tag{4}$$

Taking into account formula (4), formula (3) will get the following expression

$$tg\gamma_1 = \frac{sin\beta}{sin\varphi} tg\gamma \tag{5}$$

From $OB_1B_2$ triangle let us determine $\varphi$ angle

$$\varphi = 180° - (\beta + \theta), \quad \textit{consequently}$$

$$sin\varphi = sin(\beta + \theta) \tag{6}$$

Putting (6) formula into (5) we will get

$$tg\gamma_1 = \frac{\sin\beta}{\sin(\beta+\theta)} tg\gamma \tag{7}$$

The last expression will get the following expression for the arrowhead paw upside the slope

$$tg\gamma_1 = \frac{\sin\beta}{\sin(\beta-\theta)} tg\gamma \tag{8}$$

Let us discuss the current value of $\varepsilon$ angle according to Fig. 3

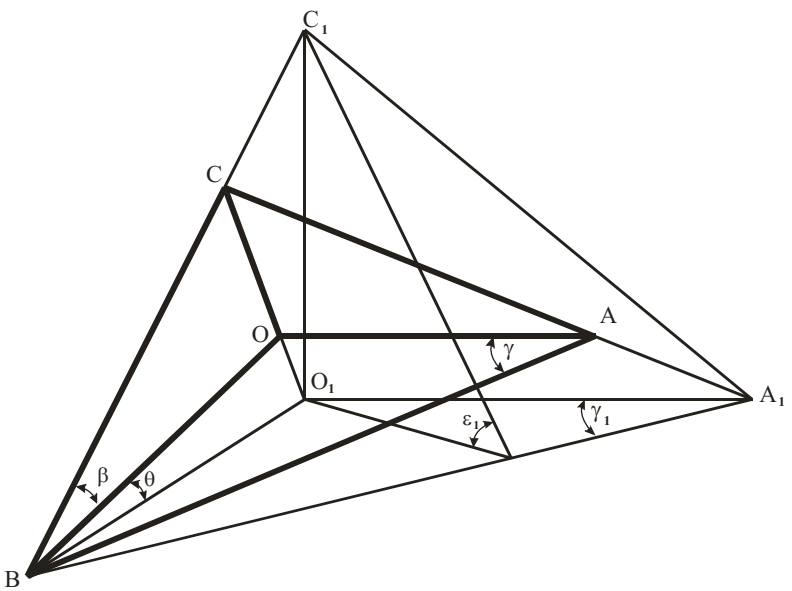


**Fig. 3 The scheme of determining $\varepsilon_1$ angle**

It is known that $tg\beta = tg\varepsilon \cdot cos\gamma$ [3]. For $A_1BC_1$ trihedral spike instead of $\beta$ angle we will put $\beta + \theta$ angle and instead of $\gamma$ angle we will put $\gamma_1$. So we can derive

$$tg(\beta + \theta) = tg\,\varepsilon_1 \cdot cos\gamma_1$$

$$tg\,\varepsilon_1 = \frac{tg(\beta+\theta)}{cos\gamma_1} \tag{9}$$

For the wing over the arrowhead paw we will have

$$tg\,\varepsilon_1 = \frac{tg(\beta-\theta)}{cos\gamma_1} \tag{10}$$

Let us use Fig. 1 to determine $\xi$ angle formed by horizontal projection and direction of tillage removal according to which we can write

$$tg\eta = \frac{DK}{AK} = \frac{KE}{AK \cdot cos\varepsilon} = \frac{tg(\gamma-\xi)}{cos\varepsilon}$$

Changing the obtained expression we will get

$$tg\eta = \frac{tg\gamma - tg\xi}{(1 + tg\gamma \cdot tg\xi)cos\varepsilon}$$

Solving to $tg\xi$ we will get

$$tg\xi = \frac{tg\gamma - cos\varepsilon \cdot tg\eta}{1 + tg\gamma \cdot tg\eta \cdot cos\varepsilon} \tag{11}$$

Using formula (1), we will write the last expression in this way

$$tg\xi = \frac{tg\gamma - cos^2\varepsilon \cdot tg\gamma}{1 + tg^2\gamma \cdot cos^2\varepsilon}, \quad \text{or}$$

$$tg\xi = \frac{tg\gamma \cdot sin^2\varepsilon}{1 + tg^2\gamma \cdot cos^2\varepsilon} \tag{12}$$

Consequently

$$tg\xi_1 = \frac{tg\gamma_1 - cos\varepsilon_1 \cdot tg\eta_1}{1 + cos\varepsilon_1 \cdot tg\gamma_1 \cdot tg\eta_1} \tag{13}$$

Using 7, 8, 9 and 10 formulas and doing some mathematical changes, we will get

$$tg\xi_1 = sin(\beta + \theta) \cdot sin\beta \cdot tg\gamma, \tag{14}$$

$$sin\eta_1 = \frac{sin\beta \cdot cos(\beta + \theta) tg\gamma}{\sqrt{sin^2(\beta + \theta) + sin^2\beta tg^2\beta}} \tag{15}$$

Let us determine $\lambda_1$ unstable according to Fig. 1

$$cos\lambda_1 = \sqrt{1 - sin^2\gamma_1 \cdot sin^2\varepsilon_1} \tag{16}$$

After appropriate placements and certain transformations we will get

$$cos\lambda_1 = \frac{1}{\sqrt{sin^2\beta tg^2\gamma + 1}} \tag{17}$$

Placing 14, 15 and 17 formulas in (2) we will get the dimension of tillage movement

- up the slope

$$\Delta_1 = B\frac{tg(\beta + \theta)}{cos\theta}\sqrt{\frac{sin^2(\beta + \theta) + sin^2\beta tg^2\gamma}{sin^2\beta tg^2\gamma + 1}}, \tag{18}$$

- down the slope

$$\Delta_1 = B\frac{tg(\beta - \theta)}{cos\theta}\sqrt{\frac{sin^2(\beta - \theta) + sin^2\beta tg^2\gamma}{sin^2\beta tg^2\gamma + 1}} \tag{19}$$

Using the last formulas the graphics of changing the dimension of the tillage movement were derived depending on slope for various values of $\gamma$ angle by plowshare and tillage movement ($\gamma = 30^o$ and $\gamma = 55^o$) (Fig.4).

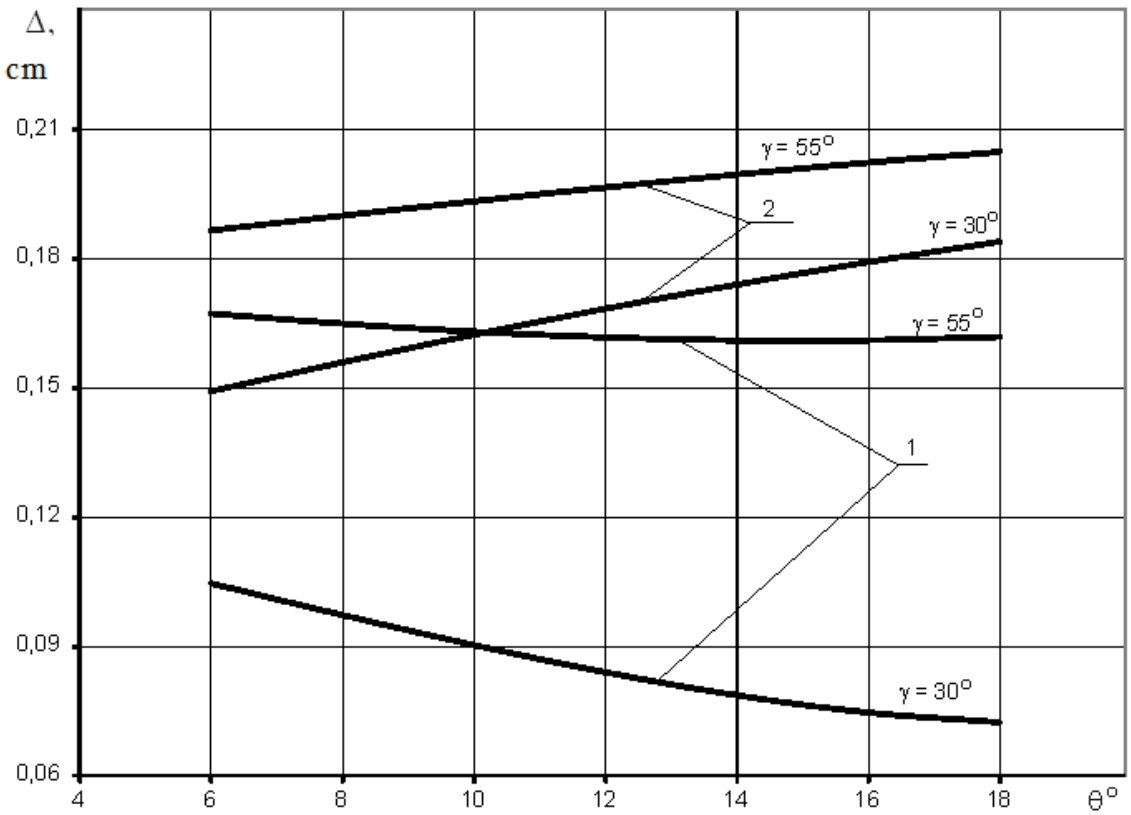


**Fig. 4 Graphics of changing tillage removal on slope depending on the slope deviation**
1- up to the slope, 2- down the slope

As we see from the graphics, parallel to the increase of deviation of the slope the size of tillage movement decreases. Therefore, the soil removal down the slope in case of big values of $\gamma$ angle is bigger and up the slope is rather small which it is conditioned by.

**Conclusion**

1. The mathematical modelling of estimating the mechanical soil removal in slopes allows to determine the dimension of soil (furrow) and the change of technological parameters of working organs.
2. The obtained equations allow us to prevent the tillage movement by regulating the structural and kinematic parameters of working organs of soil cultivation.

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Լանջերում հողատարման մեխանիզմի բացահայտման և կանխարգելման համար ուսումնասիրվել է բանող օրգանի և հողի փոխազդեցության գործընթացը: Մշակվել է լանջերում հողի մեխանիկական հողատարման գնահատման մաթեմատիկական մոդել, որը հնարավորություն է տալիս որոշելու հողի (առի) տեղաշարժի մեծությունը, ինչպես լանջով ներքև, այնպես էլ վերև, կախված լանջի թեքությունից և բանող օրգանի տեխնոլոգիական պարամետրերի փոփոխությունից: Ստացվել են հավասարումներ, որոնց կիրառմամբ հնարավոր կլինի հողամշակ մեքենաների բանող օրգանների կառուցվածքային և կինեմատիկական պարամետրերի կարգավորմամբ կանխարգելել հողատարումը լանջերում:

**Բանալի բառեր.** լանջ, հողատարում, ակոս, սեպ, խոփ, առ, տեղաշարժ, պարամետր, հետագիծ:

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## ОЦЕНКА МЕХАНИЧЕСКОЙ ЭРОЗИИ ПОЧВЫ НА СКЛОНАХ

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Для выявления и предотвращения механизма эрозии на склонах был изучен процесс взаимодействия рабочего органа и почвы. Разработана математическая модель оценки механической эрозии почвы на склонах, которая позволяет определить величину перемещения почвы (пласта земли) как по склону вниз, так и вверх, в зависимости от наклона склона и изменения технологических параметров рабочего органа. Были получены уравнения, применение которых позволит предотвратить эрозию почвы на склонах путем регулирования конструктивных и кинематических параметров рабочих органов почвообрабатывающих машин.

**Ключевые слова:** склон, эрозия почвы, борозда, кол, лемех, пласт земли, перемещение, параметр, траектория.

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# PROBLEMS OF ASSESSING THE EFFECIENCY OF TAX PRIVILEGES IN THE REPUBLIC OF ARMENIA AND ARTSAKH

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*Discussions on the methods of assessing the effectiveness of tax privileges which are the major instrument of tax policy, have recently become more frequent in domestic and foreign scientific and professional discussions. These issues have become more pressing in countries with transitional economies, including the Republic of Artsakh, where the rooting of approaches to the social, economic and budgetary benefits of tax privileges is still insufficient. These issues are more important in the context of recent tax reforms in EEU member states.*

**Key words:** tax policy tool, tax exemption, tax expense, efficiency of tax privileges, efficiency assessment, methodology of evaluation, loss of income, tax privilege.

In all modern countries, including those internationally unrecognized, various tax policy instruments, the importance of identifying the problems of ensuring the justification of the institute of tax privileges and examining the issues of developing and applying effective mechanisms for their resolution are of particular importance.

In different periods of the development of tax system in RA various and numerous tax privileges were determined for which the superpowers, priorities and challenges became the basis which were periodically reviewed.

Their provision was implemented still in the primary stage of the formation of tax systems which are preserved up to now. The privilege of tax of revenue concerns, particularly, the sphere of agriculture, resident and non resident organizations with foreign investments.

The tax privileges which are foreseen by tax legislation in RA are mainly given to with the following purposes:

a) due to the impossibility of liquidating of lack of payment or avoiding the taxes and/or impossibility of correct registration of the base and tax object (agriculture, IT)

b) the motivation of rising the economic activity to improve the business and investment atmosphere aimed at forming more favorable tax atmosphere for business entities and rising the competitiveness of economy

c) to support certain social issues as poverty, helping the poor, health care, educational, scientific and other issues of the spheres

d) field priorities such as system forming enterprises and spheres from traditional fields to high technologies and IT having appropriate inner potential to form the description of the economy. Not denying the role and significance of tax privileges to accomplish the above mentioned task, let us mention here that they also can have negative impact and consequences which are mentioned in different scientific-professional frameworks.

The following conclusions are worth attention:

Tax privileges and freedom make the tax system worse in terms of neutrality, efficiency and simplicity[1].

As a result of handling tax privileges the reduction of tax responsibilities for certain people may be the reason for corruption[2].

[1] Toder E. Tax Cuts or Spending — Does it Make a Difference?//National Tax Journal, September, 2000, Vol. 53, No. 3, Part 1, p. 362

The study of economic literature shows that there is generally negative attitude towards tax privileges.

It is worth mentioning that by solving short term tasks the tax privileges result distortions of economic mechanisms and redistribution of resources in long term period which at last liquidates all the positive gained from the investment of the privilege making negative influence on other spheres of economy and participants.

Hence, tax privileges and freedoms make the tax system worse in terms of neutrality, justice, efficiency and simplicity[3].

There are many researches which show that tax privileges, foreseen to implement this or that purpose, don't serve these purposes in many cases or generally, but very often become means to avoid many obligatory state payments for the representatives of shady field. Hence, the decision about the accuracy of providing tax privileges should be accepted taking into account such important circumstances as direct losses of state incomes, simplicity of tax administration and legal demands, market and distributive impacts and also market imperfectness and possible impacts of external factors.

It is worth mentioning that depending on the sphere of their implementation, tax privileges can have the following impacts:

- budgetary,
- social,
- economic.

Budget influence represents itself the provision of further tax incomes to the current tax expenses.

The social outcome is manifested by rising living standards, employment and other social indicators.

In case of economic result financial resources of taxpayers are increasing which can be used to expand production and create new jobs and to increase profits.

According to above mentioned, there is a need to evaluate the effectiveness of each tax privilege which will have a major role to play in its inaction and application.

In this regard, the following methods of assessing tax privileges are used in foreign practice:

- method of missed /lost/ revenues when the tax privilege is absent, the payable sums are calculated and they are considered as paid in fact,
- method of renewed revenues in case of which the sum of additional paid taxes is determined as a result of elimination of tax privileges taking into account the change in behavior of tax payers and impacts of other taxes.
- method of equivalent costs in case of which those direct costs are calculated which the state will cover when the cost will be paid to tax payer in the form of direct subsidiary transfers paying all the taxes by the latter[4].

The first method is given the priority in the world practice as in this case the calculations are made easily.

In the second method tax privileges are assessed taking into account the change in taxpayer behavior and the impact of other taxes that require factoral analysis and the application of a wide range of data.

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[2] Cavalcanti C., Li Z., Reforming Tax Expenditure Programs in Poland, World Bank Policy Research Working Paper No. 2465, October, 2000

[3] Karapetyan H., Ways of tax regulation and their main priorities, Armenia, Finance and economics, 9-10/1993-94, January, 2016, p. 65

[4] Mayburov I., A., Ivanov Yu, B., Tax privileges, Theory and practice of their application, Unity-Dana, 2014, p. 116

The third method is the simplest but it requires taking into account all budgetary costs to achieve the goal set.

It should also be noted that, despite the simplicity of the first method, it requires some methodological knowledge for statistical reporting of tax reports.

Indeed, the provision of tax privileges and release can be justified if they

1) Clarify the market failures,
2) Are directed to the solution of the hot issues,
3) Do not create additional complications in tax legislation
4) Do not distort the behaviour of economic entities,
5) By associating the principle of «cost-revenues» they are more effective than the direct budgetary expenses[5].

At the same time, the application of tax privileges should be accompanied by appropriate justifications including the answers to the following questions:

1) Why the application of new tax privilege is principally necessary,
2) What the aims of such approaches are and how the success or failure of such event will be measured,
3) What proofs can be brought to the benefit of the thing which shows that the tax approaches will enable to reach the goals set with acceptable costs,
4) Why the tax privileges are preferable than direct budgetary costs to reach the goals set[6].

The Ministry of Finance of Armenia has been assessing the size of budget expenditures as a result of tax privileges on a macro-level and sectore basis since 2015, including only three types of taxes - VAT, income tax and profit tax, the results of which are published in annual budget procedures.

It should be noted that the practice of estimating and publishing tax expenditures has not yet been embedded in the budgetary process of the AR.

The following table can be compiled from the data provided by the Ministry of Finance of Artsakh according to our oral inquiry:

**Table 1**

**Estimating the tax costs in RA in 2016-2018**

| Years | Size of tax expenses (mln AD) | Weight in tax revenues (percent) | Weight in GDP (percent) |
|---|---|---|---|
| 2016թ. | 12,934 | 39,88 | 5,63 |
| 2017թ. | 12,773 | 32,10 | 4,69 |
| 2018թ. | 13,323 | 24,89 | 4,29 |

Based on the data presented in the table, we can conclude that in 2016-2018 the share of tax expenditures in the Republic of Artsakh decreased by about 15 percentage while it decreased by 1,34 percentage in the period related to GDP.

More comprehensive and characteristic data on tax privileges in the Republic of Artsakh can be obtained if methodological approaches are introduced to assess the effectiveness of tax privileges in the country.

Let us note that tax expenditures have been assessed in the Republic of Armenia since 2015 but they are not implemented yet at the level of tax-exempt organizations, in particular their fiscal,

[5] Hungerford T. Tax Expenditures: Trends and Critiques. CRS Report for Congress. September 13, 2006. p. 11.

[6] Toder E., Wasow B., Ettlinger M., Bad Breaks All Around: The Report of the Century Foundation Working Group on Tax Expenditures. The Century Foundation Press, 2002, p. 28–29

economic and social impacts or effects are not assessed and «consequences of tax expenditures» are not matched for direct budget expenditure and the indirect impact of tax costs is not assessed.

Besides, the legislative bases for assessing «tax expense» are not adopted. Such a situation is also typical for many transitional and developing countries, but this cannot be an excuse for not taking adequate steps.

The assessment of «tax costs» implemented by the Ministry of Finance is not done legally and has no stated regulations and working procedures [7].

The importance of assessing the effectiveness of tax privileges and addressing the identified shortcomings and addressing these issues is also emphasized in the recently adopted document of the Government of the Republic of Armenia adopted on November 25, 2019, «Strategy for reform of the public finance management system of 2019-2023» where it is stated clearly that it is necessary to evaluate the effectiveness and targetability of the existing main tax privileges and then the tax privileges having low effectiveness and targetability should be abolished.

One more important circumstance also.

By the corresponding resolutions of the government of Russian Federation on 2019, April 12 and June 22 the methodological approaches and demands of estimation the efficiency of tax privileges were confirmed thus finishing the legislative and legal settlement of this urgent issue.

And just recently by the resolution of the government of one of the member countries of EEU Belarus on October 30 the regulation of assessment of the efficiency of tax privileges has been confirmed[8], [9].

According to the importance of those facts above mentioned and considering the fact that currently the issues of balancing tax policies and harmonization in EEU countries are being discussed, it is quite urgent and necessary both in Armenia and Artsakh to develop the system of estimating tax privileges taking into account the peculiarities of the social-economic tasks and the experience of the transit countries.

As currently the methodology of estimating tax privileges in the Republic of Artsakh is being on the agenda, the following requirements can be suggested for its development

1. **Methodical criteria**

- Tax privilege, identification of criteria of expected results in the end of its application and provision,
- Determination of sources of analyses of tax privileges,
- Development of monitoring and estimation of tax privileges.

2. **Mathematical (calculating) criteria**

- Identification of time log of manifesting the result after inserting corresponding privilege
- A combination of tax expenditures and related outputs at high prices
- Economietric analyses of multi vectoral impact of tax privilege

3. **Organizational criteria**

- Formation of organizational events
- Creation of specialized structures estimating the efficiency of tax privileges

4. **Criteria of experimental assessment**

- Legislative approval of tax privileges in the tax legislation, preliminary discussion of the expert group with the specialists of relevant state bodies
- Involvment of experts for analyzing the effectiveness of tax privileges
- Survey of organizations, enterprises and business entities for the application of tax privileges and demand.

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[7] Ara Qaryan, The issues of assessment of the effectiveness of the state budgetary incomes and tax costs, what to do? 2nd economic revolution, perception and implementation, scientific–practical summit

[8] Ministry of Finance of Russian Federation, the direction of budgetary, tax and custom-tariff policy on 2020 and plan period of 2021 and 2022. The document is presented in www.consultant.ru. 25.11.2019, p. 45

[9] http://www.pravo.by/novosti/novosti-pravo-by/2019/november/41911/

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# ՀԱՐԿԱՅԻՆ ԱՐՏՈՆՈՒԹՅՈՒՆՆԵՐԻ ԱՐԴՅՈՒՆԱՎԵՏՈՒԹՅԱՆ ԳՆԱՀԱՏՄԱՆ ԽՆԴԻՐՆԵՐԸ ԱՐՑԱԽՈՒՄ

**Կ.Ա.Ներսիսյան**
*Շուշիի տեխնոլոգիական համալսարան*

Վերջին տարիներին հայրենական և արտասահմանյան գիտական և մասնագիտական քննարկումներում ավելի հաճախակի են դարձել հարկային քաղաքականության կարևորագույն գործիք հանդիսացող հարկային արտոնությունների կիրառման արդյունավետության գնահատման մեթոդների հիմնախնդիրների քննարկումները:

Նշված հարցերը առավել արդիական են դարձել անցումային տնտեսությամբ երկրներում, այդ թվում՝ նաև Արցախի Հանրապետությունում, որտեղ դեռևս բավարար չափով չեն կարևորվում տրամադրված և տրամադրվող հարկային արտոնությունների սոցիալ-տնտեսական հետևանքների և բյուջետային եկամուտների վրա հարկային արտոնությունների չափելիության մոտեցումների արմատավորման հարցերը:

Նշված հիմնահարցերը ավելի են կարևորվում ԵԱՏՄ անդամ երկրներում վերջին տարիներին իրականացվող հարկային բարեփոխումների համատեքստում:

**Բանալի բառեր.** հարկային քաղաքականության գործիք, հարկային արտոնություն, հարկային ծախսեր, հարկային արտոնությունների արդյունավետություն, արտոնության գնահատման մեթոդիկա, եկամուտների կորուստ, ԵԱՏՄ, ներդաշնակեցում, հարմոնացում:

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# ПРОБЛЕМЫ ОЦЕНКИ ЭФФЕКТИВНОСТИ НАЛОГОВЫХ ЛЬГОТ В РЕСПУБЛИКЕ АРМЕНИЯ И РЕСПУБЛИКЕ АРЦАХ

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В последние годы дискуссии о методах оценки эффективности налоговых льгот, которые являются основным инструментом налоговой политики, стали более частыми в отечественных и зарубежных научных и профессиональных дискуссиях. Эти вопросы становятся все более актуальными в странах с переходной экономикой, включая Республику Арцах, в которых недостаточное внимание уделяется оценке социальных, экономических последствий представленных налоговых льгот и укоренению подходов изменяемости воздействия налоговых льгот на бюджетные доходы.

Эти вопросы обретают еще большую важность в контексте недавних налоговых реформ в государствах-членах ЕАЭС.

**Ключевые слова:** инструмент налоговой политики, освобождение от налогов, налоговые расходы, эффективность налоговых льгот, оценка эффективности, методология оценки, потерии доходов, ЕАЭС, синхронизация и гармонизация.

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