

DOI: 10.26794/2587-5671-2019-23-1-96-105

УДК 336.221(045)=111

JEL H25, H26, O16, E21, E13, P35, K34, H24

Abolishment of Profit Tax Effects in the Republic of Armenia

E.M. Sandoyan^a, H.G. Petrosyan^b

Russian-Armenian University, Yerevan, Armenia

^a <https://orcid.org/0000-0002-2848-4946>; ^b <https://orcid.org/0000-0003-3939-8426>

ABSTRACT

Problems in tax administration, especially direct taxation, are one of the most important challenges for the taxation system of Armenia. The high level of the informal sector further affects the effective functioning of the system and the replenishment of the state budget. In this regard, there is a need for reforms in direct taxation presented in this article. The research objective is to evaluate possible effects of abolishment of profit tax in the Armenian economy. For this purpose, we approached the neoclassical dynamic general equilibrium model presented in expanded form and in discrete time. Impact assessment of the reforms in corporate taxation system in Estonia and Georgia was also based on the same model. Therefore, after the effects of the abolishment of profit tax in the Armenian economy are assessed, a comparative analysis of the results observed with those of Estonia and Georgia will be conducted. The model calculates the effect of changes in income tax rates on government revenues, capital per unit of labor, level of consumption and output in the country. The article also presents the parameterization of the model considering the specifics of the Armenian economy. The study has revealed that reforming the taxation system for organizations in Armenia will lead to an increase in the general welfare of the population, net investments and aggregate output. At the same time the tax revenues of the state budget of Armenia will decrease by 3.92%. The results of the study will allow the government of Armenia to apply a new approach to taxing the profits of organizations. It will lead to an increase in the transparency of business, a decrease in the level of corruption and the concealment of the profits.

Keywords: traditional income tax model; Estonian income tax model; income tax; tax avoidance; neoclassical dynamic general equilibrium model; taxation system of Armenia

For citation: Sandoyan E.M., Petrosyan H.G. Abolishment of profit tax effects in the Republic of Armenia. *Finansy: teoriya i praktika = Finance: Theory and Practice*. 2019;23(1):96-105. DOI: 10.26794/2587-5671-2019-23-1-96-105

ОРИГИНАЛЬНАЯ СТАТЬЯ

Последствия отмены налога на прибыль в Республике Армения

Э.М. Сандоян^а, Е.Г. Петросян^б

Российско-Армянский университет, Ереван, Армения

^а <https://orcid.org/0000-0002-2848-4946>, ^б <https://orcid.org/0000-0003-3939-8426>

АННОТАЦИЯ

Проблемы в налоговом администрировании, особенно в части прямого налогообложения, являются одним из важнейших вызовов для системы налогообложения Армении. Наличие высокого уровня неформального сектора еще больше влияет на эффективное функционирование системы и пополнение государственного бюджета. В связи с этим возникает необходимость проведения реформ в прямом налогообложении, что представлено в данной статье. Цель работы — оценка последствий отмены налога на прибыль в Армении с помощью неоклассической динамической модели общего равновесия и обложения распределенных дивидендов подоходным налогом. Представленная модель применяется и в оценках воздействия реформирования системы налогообложения организаций в Эстонии и Грузии. В связи с этим в статье проводится сравнительный анализ полученных результатов трех стран. Модель рассчитывает влияние изменения в ставках налога на прибыль на государственные доходы, капитал на единицу труда, уровень потребления и объем выпуска в стране. В статье также представлена параметризация модели с учетом специфики экономики Армении. В ходе исследования выявилось, что реформирование системы налогообложения организаций

в Армении приведет к росту общего благосостояния населения, чистых инвестиций и совокупного выпуска, однако налоговые доходы государственного бюджета Армении снизятся на 3,92%. Результаты исследования позволят правительству Армении применить новый подход к обложению прибыли организаций, что, в свою очередь, приведет к повышению транспарентности ведения бизнеса, снижению уровня коррупции и сокрытию полученных прибылей.

Ключевые слова: традиционная модель налога на прибыль; эстонская модель налога на прибыль; подоходный налог; уклонение от уплаты налогов; неоклассическая динамическая модель общего равновесия; налоговая система Армении

Для цитирования: Sandoyan E.M., Petrosyan H.G. Abolishment of profit tax effects in the Republic of Armenia. *Финансы: теория и практика*. 2019;23(1):96-105. DOI: 10.26794/2587-5671-2019-23-1-96-105

1. INTRODUCTION

Taxation system of the Republic of Armenia (here and after the RA) is sufficiently developed and adapted to a market economy. However, problems in tax administration, especially with direct taxation [1, p. 18], are one of the most important challenges for Armenia's taxation system, and a high level of the informal sector further affects the effective functioning of the system and replenishment of the state budget.

High level of the informal sector and tax evasions are confirmed by the number of violations identified on the basis of annual audits carried out by the tax authority of the RA. Annual audit is a procedure that verifies the reliability of the declarations provided by the legislation of the RA, the accounts, calculations laid down regarding taxes, baseline data, other documents submitted by an economic operator, as well as the compliance of the actual activity of an economic operator with the requirements of the laws and other legal acts. In 2015 annual tax audit covered 20 973 organizations¹. Scheduled audits were conducted in 818 legal entities and individual enterprises out of which only 9 did not have any violations, reaching 1.1% of all scheduled audits. In 610 out of total 809 audits there were violations in the profit tax² which equaled to 75% of all violations in scheduled audits. The main violations of profit tax (corporate income tax)³ legislation were as follows:

- sum of deductions from the gross income,
- sum of gross income,
- sum of difference between gross income and expenses,

- sum of expenses that are not deducted from gross income,
- sum of capital allowances,
- sum of expenses made on non-current assets acquired (built, developed) and other.

Violations of Labor Code of the RA as of 09 November 2004 and taxation legislation regarding signing of an employment contract and paying personal income tax were found in 11.1% cases or in 90 economic operators of scheduled audits.

In the inspections appointed in accordance with the Criminal Procedure Code of the RA and conducted in 697 organizations, violations were found in 680 organizations, of which 515 in terms of the income tax law, i.e. 75.7% of the total number of violations. Violations in compliance with the legislation of the Labor Code and the payment of personal income tax amounted to 50 (7.3% of the total number of violations, appointed in accordance with the Criminal Procedure Code of the RA).

It is obvious that on the basis of the inspections conducted, 75% of the violations identified are due to the enforcement of profit tax law requirements, which is evidence of an ineffective functioning of profit taxation system. Besides, the impact of profit tax on the economy is quite significant: it has a negative impact on economic growth, innovation, labor productivity, capital investment and foreign direct investment⁴ [2, p. 18, 19], [3, p. 1041], [4, p. 136], [5, p. 25–28]. The current profit taxation system of the RA is presented below.

Profit tax in Armenia is one of the main types of direct taxes. The share of it in state revenues in 2017 was 8.6% and 1.97% of the country's gross domestic product (here and after GDP). The taxation system for profit tax is traditional: after deducting all expenses from the gross income, 20% of this amount is calculated from the net profit before tax for tax purposes. According to the Tax Code of the RA from October 4,

¹ See official website of Tax Service of RA. URL: <http://www.petekamutner.am/Content.aspx?itn=tsTIY> 2015.

² According to the Law of RA "On profit tax" adopted on 30 September 1997 Tax Code of the Republic of Armenia entered into force on 01 January 2018, thus we used the previous law on profit tax.

³ According to RA legislation the tax is called profit tax. See official website of Tax Service of RA. URL: <http://www.petekamutner.am/Content.aspx?itn=tsTLProfitTax>. However, in Estonia and Georgia the tax is called corporate income tax, therefore for these countries is used "corporate income tax" definition.

⁴ OECD. Tax Effects on Foreign Direct Investment: Recent Evidence and Policy Analysis, OECD. Tax Policy Studies; 2007(17):11–12. URL: <http://www.oecd.org/ctp/tax-policy/39866155.pdf> (accessed on 10.01.2019).

2016 profit tax rate is 20%, and the dividend tax rate for residents is 5%. At the same time, the law requires quarterly advance payments, provision of annual financial statements for the calculation of profit tax.

In this article for the first time possible effects of profit tax abolishment on macroeconomic indicators of the RA have been assessed only for the first year after the taxation system was reformed. Moreover, during the long-term research, we suggested upgrading the direct taxation system in the RA, particularly, introducing mandatory system of declaration of income and assets. The suggested system of mandatory tax reporting for the entire population consists of two basic interconnected elements: first, declaring property and income as a tool for tax reporting; second, income tax as the main tool for the direct taxation of individuals. According to our estimations, this reform will lead to increase in personal income tax revenue up to 4.0%. Besides, we also suggest making the property tax progressive, for example, from 0% (a minimum non-taxable threshold for real estate with a cadastral value of up to 10 million drams should be established, now it is 3 million drams) up to 3% of real estate cadastral value (now the maximum rate is 1%). It is also necessary to reassess the cadastral valuations in the country, bringing them to the current market value as close as possible. This suggestion will increase the revenue of municipal budget to 80 billion drams.

In order to reduce the shadow sector in the taxation system and improve business taxation conditions in the RA, we propose to introduce the adopted version of the corporate income taxation (here and after CIT) system used in Estonia and Georgia.

2. CORPORATE INCOME TAX REFORMS IN ESTONIA AND GEORGIA

2.1. Estonia

Estonia has been the first country that introduced a new income taxation system since January 1, 2000. According to this system, the distributed profit is recognized as the object of profit taxation, and the undistributed profit is taxed at a zero rate. Profit distributions may be specific (i.e. dividends, share buy-backs or profit distributions via capital reductions) or deemed (which include expenditure and payments unrelated to business activities, as well as gifts and donations)⁵. The object of taxation is collected at the time of the distribution from Estonian companies

and paid by the person carrying out this withholding (payer). Thus, the dividends and other income are no longer subject to taxation for the recipient. The main purpose of Estonia's 2000 corporate tax reform was to encourage investments [6, p. 12]. However, there are two more objectives of the reform: to promote entrepreneurship and to create new jobs [7, p. 8]. As a result of the reform the following changes have been observed in the Estonian economy:

- In Estonian organizations the share of retained earnings and reserves has increased by 11 percentage points [8, p. 17].
- The main merit of the Estonian income taxation system is simple. It is easy for understanding and for implementation by the administration. This is due to its minimum number of exceptions and deferral of taxation of profits from the moment when they are earned till their distribution; the administrative burden and compliance costs are also reduced [9, p. 15].
- The surveys have shown, that the organizations were able to acquire technologically more advanced equipment [8, p. 40–43].
- The reforms have also influenced labor productivity: in Estonia it grew by 13 percentage points more than it did in Latvia and Lithuania during the four years following the reform [8, p. 42].
- The involvement of borrowed funds has sharply decreased, particularly the aggregate liquidity of firms grew from 6.6% in 1999 to 7.6% in 2000 and 10.9% in 2006 [8, p. 16–17].
- The impact of the reforms is greater for smaller organizations due to the fact that the financing for small and medium enterprises remained an issue till 2000. Consequently, they were more dependent on domestic financing compared to large organizations [10, p. 3].
- Positive changes in the capital structure have also led to the fact that it was much easier for Estonian companies to overcome the debt crisis of 2008, compared to the Latvian and Lithuanian companies [11, p. 31–32].

This taxation system is easy to understand, and also to administer due to the minimal amount of deductions and deferrals of profits taxation starting from the moment of its receipt up to the distribution. In addition, such system does not involve calculation of amortization. Besides, in case of losses for the previous reporting period, the company does not pay income tax.

Despite a number of advantages, a zero rate for retained earnings may be ineffective in terms of making investment decisions. This may happen when the main funds are invested in the projects with a positive net present value, and the company still retains

⁵ Deloitte. International Tax. Estonia Highlights 2018. Deloitte; 2018:1. URL: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-estoniahighlights-2018.pdf> (accessed on 10.01.2019).

additional cash [12, p. 323–329]. Another disadvantage is that the system demotivates dividends payment to shareholders and prevents from the free flow of capital and investment into more efficient investment projects in other industries and firms. This disturbs the redistribution of resources between sectors that is necessary for short-term recovery and sustainable growth. The next disadvantage is the reduction in government revenue. More specifically, within the first three years after the new taxation system in Estonia was introduced, the amount of direct taxes decreased and the level of 1999 was reached only by 2003. It is worth mentioning that this system has also been introduced in Georgia since January 1, 2017 and in Latvia since January 1, 2018. In case of no profit tax, the tax on distributed dividends in the RA is equal to the personal income tax on a flat scale.

2.2. Georgia

Georgian resident companies are taxed on their actual and deemed distributed profits, including the following: distributed profits, expenses incurred or other payments unrelated to economic activities, gratuitous supplies of goods/services or transfers of funds and representation expenses that exceed the maximum amount set out by legislation of Georgia⁶. As the Estonian income tax model was introduced in Georgia, since January 1, 2017, there has been a lack of information on the macroeconomic effects of these changes on the Georgian economy. However, some authors have already mentioned major positive and negative features of the Estonian tax model in Georgia. Particularly, the positive features are [16, p. 160]:

- simplification of tax administration (in terms of financial and tax accounting systems proximity),
- encouraging and stimulating of reinvestment,
- saving financial resources from profit generating till its distribution,
- annulment of current payments
- The negative features are [13, p. 160]:
- complicated tax administration (in terms of monthly declaration procedure),
- reducing of operating liquidity (monthly cash outflow in form of corporate income tax),
- growing of tax burden in some cases (Offshore dealings and others),
- cancellation of loss rescheduling mechanism.

⁶ Deloitte. International Tax. Georgia Highlights 2018. Deloitte, 2018. P. 5. URL: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-georgiahighlights-2018.pdf> (accessed on 10.01.2019).

In this study, we will present possible changes in the Armenian economy after the abolishment of profit tax. For this purpose, we approached the neoclassical dynamic general equilibrium model presented in the expanded form. The structure of the model was developed by Funke and Strulik [14, p. 11–21]. However, it was presented in discrete time according to Masso and Meriküll [15, p. 81–99]. The reforms impact assessment in the corporate taxation system in Estonia and Georgia has also been based on this model and has been referred to in the studies of Masso and Meriküll [16, p. 81–99] and the USAID⁷ respectively. Based on the model presented in these studies, the impact of the profit tax reform on the Armenian economy will be assessed and a comparative analysis of its results with those of Estonia and Georgia will be conducted. There is no need to observe and compare the development of the countries as we assess the possible results of the profit tax reform only for the first year after its implementation.

3. BASELINE MODEL

The model economy consists of a representative firm, which maximizes its profits; household, which maximizes its utility; a government, which by assumption, maintains a balanced budget in every period and allocates a fixed part of its tax income to government consumption and distributes remainder to the household as a direct transfer. The Armenian economy is open. However, to compare the results, the model has been presented for both closed and open economies.

3.1. Closed Economy Model

The closed economy model assumes that the investment or consumption is always financed internally. To find the level of consumptions per capita (c^*) and the level of efficient capital (k^*) in the closed economy we have used formulas (19) and (20) from Masso and Meriküll [16, p. 81–99]. Steady states of the model have been found by substituting the following conditions: $k_{t+1} = k_t = k^*$ and $c_{t+1} = c_t = c^*$. Formulas (19) and (20) are the following:

$$c^* = (1 - g)k^{*\alpha-1} - \delta - \gamma,$$

$$k^* = \left(\phi \alpha / \left((1 + \gamma)^\sigma (1 + \rho) - 1 + \phi \delta \right) \right)^{1/(1-\alpha)}.$$

⁷ USAID. Governing for Growth (G4G) in Georgia. Regulatory Impact Assessment on Estonian CIT model implementation in Georgia. Deloitte Consulting LLP; 2016:17–29.

Considering that in the model $A = 1$ in the described steady state and $k^* = K / A$, the level of the efficient capital is equal to the capital per effective labor. The level of consumption (C) is found by means of formula $c^* = C_t / K_t$, the level of output $Y_t = K_t^\alpha A_t^{1-\alpha}$, which is formula (1) from Masso and Meriküll [16, p. 84].

The parameter ϕ is a crucial parameter and defined by $\phi = \frac{(1-\tau)}{(1-\tau z)}$ formula⁸. After the nullification of re-

tained earnings tax, this parameter increases. If a derivative of steady state capital per effective labor with respect to ϕ is taken, the derivative is positive, implying that the increase in this parameter results in the increase of the steady state level of capital per effective labor and, therefore, in the decrease of the steady state level of consumption per unit of capital.

Reforms in the taxation system will lead to changes in the level of government revenues. The government finances its expenditures only by using taxes. It neither issues bonds or has any initial debt. The government expenditures and income are derived as in formula (14) from Masso and Meriküll [16, p. 87], where expenditures are on the left-hand side and the income is on the right-hand side:

$$G_t = m \left(w_t + rB_t + \frac{D_t}{1-\tau} \right) + \tau_c C_t + \tau (\pi_t - zI_t - D_t),$$

G_t — denotes government revenue, m — personal income tax rate, w_t — wages, B_t — bonds, issued by firms, D_t — gross dividends, τ_c — VAT rate, π_t — profit of firms, I_t — net investments⁹.

Next follows the model for the open economy which assumes some changes in estimations as well as new variables.

3.2. Open Economy Model

Removal of the closed economy assumption does not change much in the implications of the baseline model derived in the previous section. In case of a small open economy, the interest rate is exogenously determined in the world market. Assuming constant world interest rate, r^f , that is equal to the closed economy steady state equilibrium, we get the following condition, based on Euler equation $(1-m)r^f = (1+\gamma)^\sigma (1+\rho) - 1$ ¹⁰. According to this change a steady state level of efficient capital is the same in the open economy and it equals (20'):

$$k^* = (\phi\alpha / ((1-m)r^f + \phi\delta))^{1/(1-\alpha)}.$$

In the open economy model Funke and Strulik [15, p. 11–21] assume free international capital mobility, so a part of the company capital is owed by foreigners. This makes changes in the model of the level of consumption per capita that can be found by the formula (19') by Masso and Maeriküll [16, p. 88]:

$$c^* = (1-g-\alpha\beta)k^{*\alpha-1} - \delta(1-\beta) - \gamma \left(\frac{\phi-\beta}{\phi} \right).$$

The open economy model adds one more variable to the current account (CA). The current account is derived as a difference between gross national product (here and after GNP) and GDP, where $GNP = Y_t - \beta D_t$. Taking that GDP is captured by Y_t and $A = 1$, the current account can be defined by formula (23) by Masso and Meriküll [16, p. 88]:

$$CA^* = -\beta \left(\alpha k^{*\alpha} - \left(\delta + \frac{\gamma}{\phi} \right) k^* \right).$$

By means of these formulas we will identify the level of consumption, capital per effective labor, output, government revenue and current account both for 2017 and after the reform. Then these variables will be compared and the possible effects of the tax reform will be found. The detailed results of the calibration of the models are given in table 2.

4. PARAMETERIZATION OF THE MODEL

Parametrization has been based on the data provided by the Statistical Committee of the RA, although variables such as share of capital, rate of intertemporal substitution and some others are not given. Thus, these variables are estimated in the way to correspond to the current economic situation in Armenia. All indicators are taken for 2017.

Table 1 presents the parametrization used to derive the steady state values of the variables, based on which the possible macroeconomic effects of the tax reform have been studied. The profit tax rate in Armenia is flat and amounts in 20%. The personal income tax rate (m) is progressive and 28% have been taken in the model as the average salary rate in the country.

The traditional capital share (α) in formula $Y_t = K_t^\alpha A_t^{1-\alpha}$ in these types of models is assumed to be around 1/3, but the actual capital share in

⁸ See the formula from Masso J. and Meriküll J. [16, p. 86].

⁹ The calculations of these indicators have been based on formulas Masso and Meriküll [16, p. 84–88].

¹⁰ See the formula from Masso J. and Meriküll J. [16, p. 92].

Table 1

Model Parametrization

Variable	Notation	Pre-reform	Post-reform
Tax rate on retained earnings	τ	0.20	0
Personal income tax rate	m	0.28	0.28
Value added tax rate	τ_c	0.20	0.20
Fraction of domestic capital owned by foreigners	β	0.10	0.10
Share of government consumption in output	g	0.10	0.10
Part of investment written off (deducted) immediately	z	0.872	0.872
Capital share	α	0.45	0.45
Rate of economic depreciation	d	0.128	0.128
Rate of intertemporal substitution	σ	3	3
Rate of technological progress	γ	0.036	0.036
Time preference rate	ρ	0.02	0.02
Interest rate	$r(1 - m)$	0.102	0.102

Armenia as in Georgia is higher USAID¹¹. Therefore, 0.45 has been taken. The economic depreciation rate (d), according to the legislation of Armenia, is around 12.8%. According to the data of the Statistical Committee of the RA, the share of the government consumption in output (g) is 10.0%¹². The time preference rate (ρ) and the intertemporal substitution rate (σ) are standard values that are used in such models and amount in 2% and in 3% respectively. The rate of technological progress (γ) has been defined based on the average value of the GDP growth rate in Armenia in 2013–2017 and equals to 3.6%. The share of the foreign capital in the total capital is unknown, thus we have to make a reasonable assumption. It is assumed that the share of the foreign capital in total capital is 10% as it is used in Georgia USAID¹³. The proportion of

the investment is deducted immediately. Parameter z can be calculated by finding the present value of the tax depreciation and the present value of the economic depreciation of the investment. Observing the interest rate, the economic depreciation rate and due to the fact that in the Armenian legislation 100% of investments can be deducted via taxation, we can define that z amounts in 0.875¹⁴. The interest rate can be found with formula $(1-m)r^f = (1+\gamma)^\sigma(1+\rho)-1$, and equals to 10.2%.

5. THE EFFECTS OF ABOLISHMENT OF PROFIT TAX ON THE ARMENIAN ECONOMY

Entering the values of the parameters given in the formulas in *table 1* gives steady state values of economic variables, which characterizes the current economy quite well. As presented in *table 2*, the share of consumption in output for the period of 2013–2017 varied from 64.0% to 54.1%. This actual value corresponds to the share of the consumption in the model economy, i.e. 60.8% as it presented in *table 2*. The decline of this indicator means that a part of the output instead of consumption is directed to increase

¹¹ USAID. Governing for Growth (G4G) in Georgia. Regulatory Impact Assessment on Estonian CIT model implementation in Georgia. Deloitte Consulting LLP; 2016:21–22.

¹² See Statistical Committee of RA. Statistical yearbook of RA. 2017. URL: <http://armstat.am/file/doc/99504388.pdf> (accessed on 10.01.2019).

¹³ USAID. Governing for Growth (G4G) in Georgia. Regulatory Impact Assessment on Estonian CIT model implementation in Georgia. Deloitte Consulting LLP; 2016:21–22.

¹⁴ See the formula from Masso J. and Meriküll J. [18, p. 92].

Table 2

The Effects of the Tax Reform on the Armenian Macroeconomic Indicators in Different Models

	Capital per effective labor	Consumption per capita	Consumption	Output	Capital output ratio	Consumption output ratio	Current account output ratio	Government's expenditures
	k^*, K^*	c^*	C^*	y^*, Y^*	K^*/Y^*	C^*/Y^*	CA^*/Y^*	G^*
Neoclassical Model, Closed Economy								
Pre-reform value	2.665	0.365	0.972	1.554	1.715	0.625	—	0.474
Post-reform value	2.746	0.356	0.978	1.576	1.743	0.621	—	0.454
Change	3.04%	-2.35%	0.62%	1.36%	0.0285	-0.0046	—	-4.09%
Neoclassical Model, Open Economy								
Pre-reform value	2.665	0.355	0.945	1.554	1.715	0.608	-0.0174	0.459
Post-reform value	2.746	0.346	0.951	1.576	1.743	0.604	-0.0171	0.442
Change	3.04%	-2.33%	0.64%	1.36%	0.0285	-0.0043	0.0003	-3.92%

Note: Change is expressed in percentage when defined by%, and otherwise in percentage points.

gross investment by 2.3%. Thus, the reform will have a positive effect on investments in Armenia. In the steady state model, the capital will increase by 3.04%, and the output by 1.36%. These positive effects will take place at the cost of allocating resources from consumption to investments. The share of consumption to output will decrease by 0.46% in the closed economy model and by 0.43% in the open economy model, which will lead to increase in the share of gross investments in the output.

Despite the decline in the share of consumption to output, the amount of household consumption will increase both in the closed and the open economy models by 0.62% and 0.64% correspondingly. This value shows the rise in the general welfare of the country's population.

It is not reasonable to compare the actual current account value with the value in the model, since the latest does not include foreign trade, and the current account is driven by the share of foreign capital in the economy and by dividends. The share of foreign capital is exogenously given for the model, which means that the model cannot account for the potential increase in new foreign direct investments due to the tax reform. The value of the current account to GDP is around -1.7%. In the model the current account deficit drops

slightly as the dividends decrease in favor of the retained earnings.

Taxes are the main source for government revenue. Thus, changes in taxation will lead to changes in government revenues. According to the assessments in the model, the government revenues will decrease by 4.09% in the closed economy model and by 3.92% in the open economy model. In 2017, the government revenues of Armenia were 1 276 784.0 million drams. If the results of the model for 2017 are used, the government revenues would be 1 226 672.1 million drams, which is by 50 111.9 million drams less than the actual figures.

6. COMPARISON OF MODEL PREDICTIONS

As mentioned, a similar model approach has been applied to the Estonian and Georgian cases. The assessment results will be compared in this section. The results of the adoption year have only been compared in order to reveal the possible reform effects on the macroeconomic indicators. As shown in table 3, the new income tax system has had the best effect on Estonia's economy. The first reason is the previous corporate tax rate. The corporate tax rate in the pre-reform period in Estonia was 26%, in Georgia — 15%, in Armenia — 20%.

Table 3

Comparison of Model Predictions of the Reform in the Estonian, Georgian and Armenian Cases

Closed Economy			
	Estonia	Georgia	Armenia
Capital per effective labor	+10.2%	+3.23%	+3.04%
Consumption	+1.2%	+0.83%	+0.62%
Output	+4.0%	+1.44%	+1.36%
Government Tax Collection	-4.0%	-2.71%	-4.09%
Current account output ratio	—	—	—
Open Economy			
	Estonia	Georgia	Armenia
Capital per effective labor	+10.2%	+3.23%	+3.04%
Consumption	+1.4%	+0.84%	+0.64%
Output	+4.0%	+1.44%	+1.36%
Government Tax Collection	-3.0%	-2.52%	-3.92%
Current account output ratio	-0.005	+0.0002	+0.0003

After the reform, the capital per effective labor in the closed economy in all countries increases, however the lowest growth is observed in Armenia and equals to 3.04%. Compared to Armenia, in Estonia the change was much more significant and amounted in 10.2% (see *table 3*). The consumption level in all countries raises both in the open and closed economy models. Particularly, in Estonia the consumption level increased by 1.4%, in Georgia — by 0.84%, and in Armenia — by 0.64%. This variable is an indicator of the improvement of the population welfare. In fact, in both scenarios (closed and open economy) the welfare of the households in all countries after the reforms is growing. Zero rate in undistributed profits would lead to the reduction of government revenue: in Estonia the decline in revenues was 4.0% (in the closed economy) and 3.0% (in the open economy), in Georgia -2.71% and -2.52%, in Armenia -4.09% and -3.92% correspondingly. In the open economy model current account output ratio in Armenia and Georgia slightly increases. Other indicators in the open economy model do not differ significantly from the closed economy model.

Beside the assessment presented above, other positive effects of this reform on the Armenian economy should also be mentioned. First of all, it will significantly reduce corruption risks in the tax service, as there will be no need for annual audit carried out by tax authorities. This is the main way to “deal” with a tax inspector and to entrap them. Thus, the necessary mechanism will be automatically created which significantly reduces the ways for corruption in the tax system. Besides, there will be no privileges that complicate tax inspections and cut down opportunities for illegal evasion, which therefore can increase corruption [17, p. 33]. “Behavioral reactions” of taxpayers will also change: they will not conceal real incomes and exaggerate expenses in order to minimize taxable income and provide different reports for an authorized body. The expenses of the taxpayers on accounting and reporting will be sharply reduced.

7. CONCLUSION

Traditional profit tax system in Armenia is inefficient. On the one hand, it requires from business a

large amount of resources to comply. On the other hand, there is a high level of laundering and, as a result, the taxes are not paid. Based on the analysis presented in the article, 75% of the violations detected are accounted for profit tax. When submitting reports, organizations provide unreliable information about the amount of gross income, the expenses deducted from the gross income for calculating taxable profit, the amount of amortization, etc. The main way to change the current situation in Armenia is to abolish the profit tax. The distributed dividends from the profit are the object for personal income taxation. According to the calculations, the abolishment of profit tax will lead to the following changes in the economy of Armenia:

- increase in output by 1.36%,
- increase in the level of private consumption by 0.64%,
- increase in the capital stock by 3.04%,
- increase in net investments by 2.3%,
- decrease in the level of government revenue (from taxes) by 3.92%.

Decrease in the level of government revenues is expected to be filled by a mandatory system of

property and income declaration. According to our estimations, it will lead to increase in personal income tax revenue around 4.0%. Another way to neutralize decrease in the government budget due to the abolishment of profit tax is the property tax reform. It will increase the revenue of municipal budget around 80 billion drams.

This reform is expected to lead to a reduction of corruption in the tax system. Beside the abolishment of the profit tax, it will be possible to avoid the existing shortcomings of the traditional profit taxation system. For companies this reform will reduce obligations to comply with the legal requirements: advance payments, provision of financial statements, calculations of amortization and other costs. Personal income tax for distributed dividends from the organization profit and abolishing profit tax make companies activity simple and transparent. It reduces the desire to conceal profits. Compared to the traditional system, it is easy for both taxpayers and tax administrators to comply with. The article proves the demand for further study of the profit tax reform impact on the macroeconomic indicators of the RA and the evaluation of its results in long term.

REFERENCES

1. Sandoyan E. Economic stagnation in the Republic of Armenia from 2009 to 2016: Causes, consequences and prospects. *Vestnik of Russian-Armenian University: Humanitarian and Social Sciences*. 2017;(1):7–24. URL: <http://science.rau.am/uploads/blocks/0/7/701/files/Vestnik-1.2017-last-5.pdf> (In Armen.).
2. Arnold J. Do tax structures affect aggregate economic growth?: Empirical evidence from a Panel of OECD countries. OECD Economics Department Working Papers. 2008;(643). URL: <https://www.oecd-ilibrary.org/docserver/236001777843.pdf?expires=1547133612&id=id&accname=guest&checksum=4887D0F94595AB526489588E4094C864>.
3. Lee Y., Gordon R. H. Tax structure and economic growth. *Journal of Public Economics*. 2005;89(5–6):1027–1043. DOI: 10.1016/j.jpubeco.2004.07.002
4. Petrosyan H. Corporate income tax in Armenia: Problems and perspectives. In: Proc. 10th Anniver. annu. sci. conf. of Russian-Armenian University (Yerevan, 30 Nov. — 4 Dec. 2015). Pt. III. Yerevan: RAU; 2016:136–144. URL: http://science.rau.am/uploads/blocks/3/34/3481/files/Konferenciya_2016_last.pdf (In Russ.).
5. Vietska O. Modern trends in corporate income taxation: Perspectives of the withdrawn capital tax. *Economy of Industry*. 2018;(2):24–49. (In Russ.). DOI: 10.15407/econindustry2018.02.024
6. Funke M. Determining the taxation and investment impacts of Estonia's 2000 income tax reform. *Finnish Economic Papers*. 2002;15(2):102–109. URL: http://taloustieteellinenyhdistys.fi/images/stories/fep/f2002_2d.pdf.
7. Staehr K. Corporate income taxation in Estonia. Is it time to abandon dividend taxation? Department of Finance and Economics, Tallinn University of Technology. TUTECON Research Brief. 2014;(1). URL: <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKWwjvKpoojdAhWB1SwKHUGyCHUQfjAAegQIAhAC&url=http%3A%2F%2Fwww.tutecon.eu%2Findex.php%2Ftutecon%2Farticle%2Fdownload%2F9%2F27%2F&usq=AOvVaw0h86PoNLCvLRpxQFEf1RvI>.
8. Masso J., Meriküll J., Vahter P. Gross profit taxation versus distributed profit taxation and firm performance: Effects of Estonia's corporate income tax reform. *Eesti Pank. Working Paper Series*. 2011;(2):16–17, 40–43. URL: <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1>

- &cad=rja&uact=8&ved=2ahUKEwjGsvStoYjdAhXCiSwKHfj0By0QFjAAegQIBBAC&url=https%3A%2F%2Fwww.eestipank.ee%2Fsites%2Fdefault%2Ffiles%2Fpublication%2Fen%2FWorkingPapers%2F2011%2F_wp_211.pdf&usg=AOvVaw0kslwzMhOh0361zG0uFikM.
9. Lehis L., Klauson I., Pahapill H., Uustalu E. The compatibility of the Estonian corporate income tax system with community law. *Juridica International*. 2008;(XV):14–24. URL: https://www.juridicainternational.eu/public/pdf/ji_2008_2_14.pdf.
 10. Mickiewicz T., Bishop K., Varblane U. Financial constraints in investment — Foreign versus domestic firms: Panel data results from Estonia, 1995–1999. William Davidson Institute Working Paper. 2004;(649). URL: <https://deepblue.lib.umich.edu/bitstream/handle/2027.42/40034/wp648.pdf?sequence=3&isAllowed=y>.
 11. Purfield C., Rosenberg C. Adjustment under a currency peg: Estonia, Latvia and Lithuania during the global financial crisis 2008–09. IMF Working Paper. 2010;(213). URL: <https://www.imf.org/external/pubs/ft/wp/2010/wp10213.pdf>.
 12. Jensen M. Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review*. 1986;76(2):323–329. URL: <https://sfinm.files.wordpress.com/2013/10/agency-costs-of-fcf-jensen.pdf>.
 13. International Tax. Georgia Highlights 2018. London: Deloitte Touche Tohmatsu Ltd.; 2018. 5 p. URL: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-georgiahighlights-2018.pdf>.
 14. Bolkvadze B. Peculiarities of the “Estonian” tax model in taxation system of Georgia. *European Journal of Interdisciplinary Studies*. 2018;4(2):156–161. URL: http://journals.euser.org/files/articles/ejis_v4_i2_18/Besik.pdf.
 15. Funke M., Strulik H. Taxation, growth and welfare: Dynamic effects of Estonia’s 2000 income tax act. Bank of Finland. Institute for Economies in Transition. BOFIT Discussion Papers. 2003;(10):11–21. URL: <https://pdfs.semanticscholar.org/58d8/97667b7fb3034ebdf1e2d54b999f7d5cd3bd.pdf>.
 16. Masso J., Meriküll J. Macroeconomics effects of zero corporate income tax on retained earnings. *Baltic Journal of Economics*. 2011;11(2):81–99. DOI: 10.1080/1406099X.2011.10840502
 17. Sinelnikov-Murylev S., Shkrebela E. Improvement of corporate profit tax in the Russian Federation in the medium term. Gaidar Institute for Economic Policy. Scientific Works. 2011;(149R). URL: https://iep.ru/files/text/working_papers/149.pdf (In Russ.).

ABOUT THE AUTHORS

Edvard M. Sandoyan — Dr. Sci. (Econ.), professor, Director of the Institute of Economics and Business, Russian-Armenian University, Yerevan, Armenia
edward.sandoyan@rau.am

Heghine G. Petrosyan — PhD student of the Department of Economics and Finance, Russian-Armenian University, Yerevan, Armenia
heghineh18@gmail.com

ИНФОРМАЦИЯ ОБ АВТОРАХ

Эдвард Мартинович Сандоян — доктор экономических наук, профессор, директор Института экономики и бизнеса, Российско-Армянский университет, Ереван, Армения
edward.sandoyan@rau.am

Егине Гагиковна Петросян — аспирантка кафедры экономики и финансов, Российско-Армянский университет, Ереван, Армения
heghineh18@gmail.com

The article was received on 03.10.2018; accepted for publication on 12.12.2018.

The authors read and approved the final version of the manuscript.

Статья поступила 03.10.2018; принята к публикации 12.12.2018.

Авторы прочитали и одобрили окончательный вариант рукописи.