

# economic

p e r i o d i c a l

Policy and Poverty

June/July

2003

Nº 2

economic development and research center

## About EDRC

Economic Development and Research Center is a non-profit and politically unaffiliated organization established in 2001 in Yerevan, Armenia. It is dedicated to addressing the economic and social challenges that Armenia faces. The mission of EDRC is to promote economic and social development, to influence policymaking and to raise public awareness of economic, social and demographic issues. EDRC focuses on supporting economic freedom and democracy as decisive conditions for the successful development of the Armenian economy. Believing that the future growth of Armenia requires transparent processes in government and society, EDRC promotes these ideas as well as fosters mutual understanding between Armenia and other countries.

EDRC believes that poverty is one of the main obstacles on the way of successful transition and sustainable growth in Armenia and this is the reason why EDRC is actively engaged in the development of poverty reduction national strategy. One of the recent accomplishments of EDRC in this area is its "Policy Choice for Poverty Reduction" (PCPR) project, which aimed at assisting Armenian authorities and Civil Society through developments of policy recommendations for poverty reduction. The project was supported by Oxfam GB and served as a contribution of EDRC and Oxfam GB in development of PRSP in Armenia. Within the framework of PCPR "Growth with Equity" research paper was published in May 2002, where the main findings of EDRC in pro-poor growth targeting and policy-making were presented. The contribution of EDRC is also recognized in the use of its economic forecasting models in the PRSP draft. In particular two models of EDRC were presented: "MAGMA" (Macroeconomic Adjustment and Growth Model for Armenia) for medium and long-term forecasts of macroeconomic indicators, which allows to assess the impact of various scenarios of economic policy on economic growth; and "Growth and Distribution Model" for assessment of impact of various policies on income distribution and on the incidence poverty.

With cooperation of Oxfam GB and DFID, EDRC is implementing "Armenian Budget Analyses" Project (ABA Project). The project goal is poverty reduction in Armenia through improvement of governance and institutional developments of the society. The objective of ABA Project is the evaluation of the Central and Local Government's fiscal activities and the checking of their consistency with the main logic of poverty reduction general strategy. Budgets are being tested to identify the current degree of authority's pro-poor policies.

The outcome of the ABA Project is a set of analytical and informational materials, prepared by EDRC, which will serve as guides for large groups of population in their better and more comprehensive understandings of current policies of the state and communities. These materials will include also professional analyses of budgets and policies. In the scope of the project seminars, roundtables and workshops will be organized, enabling to create public demand for social and economic policies in communities.

# economic

## Policy and Poverty

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- The real growth of gross domestic product (GDP) remains at a quite high level during 2003, growing by 11.4 percent in real terms during the first quarter of 2003 compared to the same period of the previous year. It grew by 15.7 percent in nominal terms and 11.7 percent in dollar terms. According to the Budget Message, the program of GDP growth for 2003 is 6 percent. Per capita GDP equaled 59 thousand AMD or 100.7 USD, thus increasing by 10.1 percent. GDP produced during the last 12 months, compared to the previous 12 months, grew by 12 percent in real, and by 16.4 percent in nominal terms.
- GDP growth primarily resulted from the growth in industrial and construction sectors. Industrial output grew by 10.6 percent in the first quarter of 2003, thus, providing for 3.02 percentage point of the GDP growth. It is the first time that an increase of (1 percent) the number of employed in industry occurred under a rise (9.4 percent) in productivity. Simultaneously, it is worth mentioning the geographic concentration of industry. In Yerevan, 32.6 percent of industrial output was produced last year; this year it constituted 35.9 percent of the total. Construction remains one of the major sectors contributing to the real GDP growth. Having a modest share of total GDP – 5.6 percent, it provided 1.83 percentage points (or 16.9 percent) of the GDP growth. Agriculture contributed only 0.77 percentage points to the GDP growth. That was conditioned by the weather: field works in spring totaled only 21.5 percent of those in the previous year.
- Average monthly inflation was 0.7 percent during January-March, cumulative indicator for the same period was 2.1 percent, reflecting 3.4 percent increase as compared to the same period of 2002 or 3.2 percent for previous 12 months. The budget program for inflation is 3 percent, so inflation is now roughly at program level. The US dollar exchange rate was 589.5 AMD per 1 US dollar at the end of March 2003, resulting in the average for the quarter of 586.6. The March exchange rate and the quarter average grew in nominal terms by 2.2 and 3.4 percent respectively compared to the previous year.
- For the first quarter of 2003 total budget revenues and grants amounted to 53.9 bln AMD, and total expenditures to 51.8 bln AMD, reflecting changes compared to the same period of the previous year of 14.8 and -3.2 percent respectively. These amounts comprise 18.8 and 15.5 percent of the annual budget respectively. As a result, the cash surplus equaled 2.2 bln AMD or 1.1 percent of the GDP, meanwhile the primary surplus equaled 5.5 bln AMD or 2.9 percent of the GDP.
- Foreign trade turnover grew by 20.1 percent. Unlike the previous years, during the first quarter of 2003 the import growth rate (25.6 percent) was higher than the export growth rate (10.6 percent). 15.6 percentage points of import growth was contributed by the growth of imports of precious and semi-precious stones and metals.
- By April 1, the permanent population registered at 3211.2 thousand, average life expectancy equaled 73.5 years, infant mortality rate per 1000 live births – 11.3, mortality rate for children under 5 - 14.2, and average duration of education – 10 years.

According to official data, unemployment by March 2003 constituted 9.1 percent. The number of unemployed per one vacancy equaled 190. Average unemployment benefit equaled 3127 AMD.

## Tax Policy proposal of PRSP final draft<sup>1</sup>

1. As mentioned in Chapter Poverty and Inequality Reduction Strategy, the increase of financial capacities of the state is one of the major strategic priorities. Developments in tax (customs) policies and administration will create grounds for ensuring 0.3-0.4% of GDP growth per annum. Thus, potential for sustainable high economic growth may not be hampered because growth of tax revenues will be ensured through improvement of administration and simplification of the tax system.

2. According to the World Bank<sup>2</sup>, tax policies efficient from the poverty reduction perspective should be guided through establishment of simplified administration, wider tax base and low-rates taxes. In a transition country like Armenia it is difficult to create a tax system, that would be efficient and at the same time have redistribution impact on incomes of the population. Consequently, selection of tax policy in the coming years should be between (a) a tax system, that is simplified and efficient but with low distribution impact, or (b) a tax system, that is progressive and having high distribution impact but low efficiency, with complicated application and monitoring rules.

3. It may be stated that as a result of reformations taken place during the several recent years a tax system with wide tax base and minimum privileges, basically low-rated taxes has been established in Armenia. However, collection rates of existing taxes is yet low, as a consequence of which total tax and social contributions in 2002 was only 19% of GDP. Laws on some taxes still contain complicated, sometime even contradictory provisions for assessment and payment.

4. The need of enhancing financial capacity of the state to be used for implementation of coordinated social and economic policies targeting poverty reduction dictates that growth of tax revenues becomes the priority for the medium term period. This should be implemented primarily through diminishing shadow segment of the economy. Simplification of tax laws should be continued, contradictions removed, and tax assessment and payment procedures and mechanisms made simple and understandable for predominant majority of the taxpayers. Tax administration efficiency should be increased embodied in reduced public expenses for indirect payments related to performance of tax obligations (accounting and statements) and for oversight of tax payments by tax authorities.

5. Wide tax base for value added tax has been established in Armenia with unified 20% rate, which not substantially higher than the rate established in the region. Existing privileges are of extremely limited application (mainly financial services, charity, local agricultural produce). The same procedures apply to taxation of indigenous and imported products. The only exception is the sales of local agricultural produce with defined privileges to be in force until 2009.

Poverty reduction objective require that value added taxation procedures did not impede the economy and maintain neutrality towards output in this sector. A number of principal issues await resolution. First of all, this pertains to the problem of assessment and accounting of tax obligations. Tax authorities should conduct tax records for small agricultural farms and the assessment procedure can essentially be approximated to that applied to land tax, the major type of tax payable by agricultural farms. At the same time an alternative taxation procedure should exist for those subjects, who export their own produce or sell it to processing industry, in order to preclude downsizing the competitiveness of the produce of small agricultural farms.

6. Excise tax is applied only to tobacco, alcoholic beverages and oil-products. The tax rate is predominantly presumptive. Excise tax is paid only in the stage of production or importation. Same rates apply to products of domestic origin and imported goods. With the objec-

<sup>1</sup> Source: *The English version of final draft of PRSP by Steering Committee.*

<sup>2</sup> PRSP Sourcebook. Overview, WB, 2001.

tive to enhance administration efficiency excise stamps are applied to alcoholic beverages and tobacco. Excise tax should continue to be simple and very restricted in scope of application.

7. The unified rate of profit tax (20%), as well as absence of material differences in tax and accounting is predominantly neutral in terms of investment decisions.

Depreciation periods for tangible and intangible assets are predominantly unified for all the sectors. Very limited is the scope of application of few existing exemptions and these are envisaged for attraction of foreign investments within limited time frame. The tax discount procedure is applicable during the first 5 years against losses from economic activities. Application of profit tax should be simplified. To the utmost degree possible discrepancies between tax assessment and accounting systems should be lifted. Approaches should be instituted and enforced, which will simplify interrelations between tax authorities and taxpayers. Tax evasion should be minimized if necessary with application of alternative methods of profit tax evaluation (including minimum tax collection on the basis of judgments on profitability).

8. Low rates of income taxes and social contributions (the sum of the two taxes is 28% at all the levels of income) are to ensure neutrality of these taxed towards expansion of employment. Existence of exemption from income tax at the minimum of consumer expenditures serves the interests of people with extremely low level of income. Both taxes have only two-layer scale. Tax collection and payments in case of the both taxes are made by tax agents. Tax amount paid in this way is considered final and not subject to later reassessment. Assessment procedure for income tax and social contribution should be further simplified. Progressive scale of income tax and regressive scale of social contributions should be replaced by fixed rates, maintaining the aggregate sum of the two at the current level. In addition to simplification, changes in rates is equally important from the perspective of poverty reduction; namely individual numbers will be instituted effective 2004 for social insurance contributions, which will enable consideration of actual social contributions in addition to years of employment when defining pensions at later stages. Replacement of regressive scale of social contributions with the linear one (fixed rates) will promote fairness of the system laying grounds for higher pensions all other conditions equal.

9. Property taxes are restricted in application. Property tax is applicable only to buildings and vehicles. Rates are not high (building related rates are progressive with the maximum of 1%), exempt benchmark is three million drams, which essentially means tax exemption in cases of minimum residential needs. Limitation of the scope of property tax application has minimized impact of this tax on investment decisions. Land tax rates are low, and people involved in agricultural activities are exempt from other income taxes.

From the point of view of poverty reduction an important issue is the fairness in application of property tax. The major challenge will be removal of internal conflict. Currently progressive scale is applied, but separate pieces of property belonging to one person are not consolidated for taxation purposes. It is necessary to consolidate total value of property belonging to one person or replace the progressive scale with linear (fixed rates).

10. In addition to main types of taxes, simplified methods of tax assessment and collection are enforced for small businesses. Agents with annual turnover of below dram 50 million are entitled to pay tax on sales turnover instead of profit and value added taxes. There are types of economic activities where presumptive tax is applied. In such cases particular objective is simplification of the tax accounting/assessment procedures, and reduction of tax expenses for relevant economic agents.

Targeting of simplified tax assessment mechanisms should be enhanced. It is absolutely mandatory to preclude cases whereby application of simplified or presumptive taxes is means for economic agents to avoid performance of tax obligations. The tax assessment/accounting of people with restricted economic potential should be extremely simplified thus reducing business risks preconditioned by existence of taxes.

11. In general, the tax base of Armenia has huge unused potential in terms of increasing tax revenues through inclusion in the tax framework, including the possibility to avoid raising tax rates or instituting new taxes. In the framework of poverty reduction strategy, particularly the following issues are to be resolved:

- Increase of the share of taxes in GDP;
- Development of tax systems promoting investment activities and employment and maintaining maximum neutrality towards sustainable economic growth;

- Refrain, to the utmost extent possible, from raising tax rates;
- Improvement of tax administration, qualitative improvement of interrelations between tax and customs authorities and taxpayers;
- Further simplification of tax systems.

12. Taking into consideration the above goals, priorities of the state in tax policy in the medium term will be as follows:

- Simplification of tax (customs) legislation and development of effective mechanisms for supervision of compliance with the legislative requirements;
- Improvement of tax administration efficiency and tax oversight system;
- Institution of equality in tax payments;
- Minimization of the tax redistribution role;
- Stability of principles stipulated by tax policies and continuity in improvement of tax payment mechanisms.

*Final draft of PRSP was adopted by PRSP Steering Committee on May 21.*

## Armenia's Public Finance System

**Robert W. McGee**

### Introduction

All countries need revenue to finance their governments. But not all systems of public finance are the same. Some are better than others. These are some basic principles and rules.

- Low tax rates are better than high tax rates because high tax rates destroy incentives to work and invest and drain the economy of investment capital. High rates also provide incentives for evasion.
- The rules must be clear and transparent. Individuals and businesses must know what the rules are. Obscure rules or rules that are enforced only occasionally greatly weaken the public finance system.
- Simple tax systems are better than complex tax systems. The tax law in some countries runs to many thousands of pages and some tax systems are so complex that it is difficult or impossible to know what the law is with any degree of certainty. Such complexity leads to inefficiencies and consumes resources that can better be used to enhance economic growth.

For example, the largest corporations in the USA employ hundreds of people just to compute their tax liabilities. Many of these people are university educated and are attorneys or certified public accountants. If their talents could be used to make better products or create economic wealth rather than minimize tax liability, both their companies and the United States would be better off. But because the tax law in the United States is so complex, they must use their brain power to keep the existing wealth their company already has rather than create new wealth. Developed countries can afford the cost of hundreds of administrators but developing countries cannot afford this luxury.

One of the most important factors that determine a country's economic growth is investment. The more investment a country has, the faster will be its economic growth, all other things being equal. One of the problems that transition economies face is the fact that there usually is not enough domestic capital to fuel the growth needed to make a strong market economy. Foreign capital is also needed.

There are a number of factors that attract foreign capital. One factor is a strong rule of law, where everyone knows what the law is and where the laws are deemed to be fair. International investors prefer to invest in countries where the rules of the game are clear and fair.

Another factor that attracts — or repels — foreign investment is the system of public finance. Countries that have good systems of public finance are more attractive to investors than countries that have poor public finance systems. What kind of public finance system does Armenia have, compared to those of other countries?

### A Comparison

How does Armenia's fiscal burden compare to the rest of the world? It is possible to make some comparisons. The Wall Street Journal and the Heritage Foundation publish an Index of Economic Freedom each year [[www.heritage.org](http://www.heritage.org)]. This study examines a number of factors that contribute most directly to economic freedom and prosperity. One of the factors their study looks at is the fiscal burden of government, which includes individual and corporate tax rates and government expenditures as a percentage of output. The more money the government takes from the private sector and spends, the higher the fiscal burden. The 2003 study examined the fiscal burden of 161 countries and gave them scores ranging from 1 (best)

to 5 (worst), based on a number of economic factors. Space does not permit a discussion of the fiscal burden of all 161 countries examined, but the score for Armenia can be compared to the scores of some other countries to get some idea of where Armenia stands, in relative terms.

No country received a perfect score of 1.0. The top two countries — the Bahamas and the Dominican Republic — earned scores of 1.5. Armenia’s score was 2.5. Only 16 countries out of 161 examined in the study did better. Here is a summary of the scores received in the category of fiscal burden.

**Fiscal Burden: Scores for 161 Countries (Armenia’s Score = 2.5)**

Score	Number of Countries	Cumulative
1.5	2	2
2.0	14	16
2.5	22	38
3.0	26	64
3.5	30	94
4.0	37	131
4.5	20	151
5.0	5	156
unranked	5	161

As can be seen, when compared to most other countries of the world, Armenia does rather well in terms of fiscal burden. The fiscal burden in the five worst countries was so bad that the study could not even assign a score.

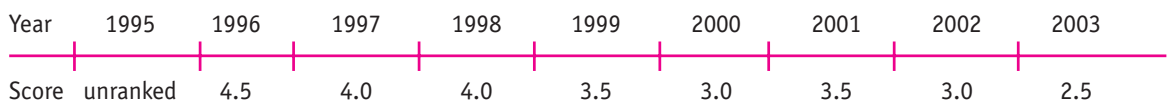
Another comparison that might be of interest is the relative score of Armenia compared to the other countries of the former Soviet Union. Here are the scores.

**Fiscal Burden: Scores of Countries of the Former Soviet Union**

Country	Score
Georgia	2.0
Armenia	2.5
Kyrgyz Republic	2.5
Tajikistan	2.5
Turkmenistan	2.5
Azerbaijan	3.0
Kazakhstan	3.0
Estonia	3.5
Lithuania	3.5
Moldova	3.5
Russia	3.5
Uzbekistan	3.5
Latvia	4.0
Belarus	4.0
Ukraine	4.5

Armenia received a score of 2.5 because its tax rates and government expenditures are relatively low compared to other countries. The overall score of 2.5 is a composite score. Its score for income and corporate taxation was 1.5 while its score for government expenditures was 3.0. Another interesting point is the trend. In the 2002 study, Armenia’s score for fiscal burden was 3.0, so it improved its score by 0.5 points since last year. Here is the trend of Armenia’s scores for fiscal burden.

**Fiscal Burden: Trend**



A look at the trend shows that there has been remarkable progress in the last decade. In 1995 Armenia's score was so poor that it was not even ranked. The most recent score of 2.5 is the best score yet. The overall score would be even better were it not for the fact that government expenditures are relatively high. Its relatively good score is due to low tax rates, a factor that tends to attract international capital.

### Concluding Comments

Armenia's public finance system, as measured by the amount of fiscal burden, while not perfect, is better than average by world standards. Tax rates are relatively low, which should attract international investors, all other things being equal. However, international investors look at more than just tax rates when they are looking for places to invest. Stability, the rule of law, trade policy, and the extent of government intervention and regulation also play a part in investment decisions. Armenia's scores in some of these other areas are also good, but other scores are not so good. But one thing that can be said for certain is that Armenia's public finance system is more likely to attract investment capital than to repel it.

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## Empirical Analyses of Tax Burden

**Annette N. Brown**

### The Burden of Income Tax and Social Insurance Fund Contributions on Households in Armenia

*This article is an adapted excerpt from a longer paper written for and presented at the Armenian International Policy Research Group conference "Armenia: Recent Economic Trends and Growth Prospects" in January 2003. The full version of the paper in English may be found at <http://www.arpolicyresearch.org/>. Dr. Annette Brown is the former Resident Economic Advisor for the USAID/Armenia Tax, Fiscal and Customs Reform Project and continues to serve as the Executive Editor for "Economic Policy and Poverty."*

Two of the important challenges facing Armenia today are to increase tax revenues as a share of GDP and to decrease poverty. The two are of course inter-related. Greater tax revenues can enable the Government to

better implement programs designed to reduce poverty, both directly through transfers and indirectly through health and education. But tax revenues ultimately come from the pockets of the people, and so increasing revenues can negatively affect poverty as well. During the process of developing Armenia's Poverty Reduction Strategy Paper, there were many discussions about the tax system as it relates to poverty. In the beginning there were several proposals to make significant changes to tax policy, especially the income tax. Fortunately, these were eventually dropped. However, a translation of the October draft still refers to the "unfair tax system" and proposes that poverty strategies involve "ensuring fair and substantiated [sic] distribution of the tax load."<sup>1</sup> The final draft of PRSP recommends replacing the rate scales in both the income tax and the social insurance contribution with fixed rates. This article examines the tax burden from the income tax and social insurance contribution on individuals and households based on the law in 2002.

The article uses household survey data from the Integrated Survey of Living Standards for 2001 from the National Statistical Service. Please see the full paper for details on the data and other caveats. Tax burden generally is defined as taxes as a share of income. There are many specific measures within this definition. Here I calculate statutory tax burden. Statutory tax burden measures tax as the tax liability calculated according to the tax law based on available information. Statutory tax burden reflects the intended impact of the law. Analysis of tax burden often focuses on whether a tax is "progressive" or "regressive" as income or wealth increases. Measurements of these concepts can differ, but here I say that a tax is progressive if the tax burden increases as income increases and regressive if the tax burden decreases as income increases. Tax burden is flat if the share remains the same as income increases.

Tables 1 and 2 report tax burden as reflected in the household survey. The survey itself does not collect information on taxes. Using the information on wage income, I estimate both the income tax payment and the employee's contribution to the social insurance fund as should be withheld by the employer. I also report statistics related to the employer's contribution to the social insurance fund. In Armenia, the incidence of the employer's contribution is considered to fall on the employer. That is, most people think of the employer's contribution as a tax on business. But it is a tax that depends directly on the employment in

<sup>1</sup> "Poverty Reduction Strategy Paper," Republic of Armenia, draft, October 2002, p. 96.

the firm and thus is part of the price of labor just as the wage is part of the price of labor. If the rates for the employers' contribution to the social insurance fund were changed, the changes would affect the firm's decisions about labor. For example, a decrease in rates decreases the price of labor and thus would likely lead to an increase in employment and possibly an increase in wages. The structure of the rates in the law, however, clearly differentiates between low-wage and high-wage labor, meaning that the tax not only affects employers' overall employment decisions but also decisions about low-wage vs. high-wage labor. Thus, it places different burdens on employees earning different incomes. It is useful to assign the employer's contributions to employees in order to see how the full tax burden on labor differs across the income distribution.

The first two tables present three sets of statistics. First is the tax burden of the income tax alone, and second is the tax burden of the income tax plus the employee's social insurance contribution. The final columns add the employer's social insurance liability to the income tax and employee's contribution for each observation. The denominator is also increased by the amount of the employer's contribution.

**Table 1. Individual income tax and SIC burden as share of total income for full sample, ISLS Survey**

Deciles	N	Total Income	PIT Burden		Employee Tax Burden		Total Payroll Burden	
		Mean	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
Avg.	6211	28,972	0.009	0.022	0.021	0.031	0.127	0.161
1	640	3,075	0.000	0.000	0.004	0.010	0.100	0.247
2	621	4,203	0.000	0.000	0.001	0.005	0.019	0.102
3	604	5,193	0.000	0.000	0.006	0.012	0.098	0.197
4	618	8,602	0.000	0.000	0.009	0.013	0.126	0.192
5	622	11,970	0.000	0.004	0.017	0.015	0.193	0.163
6	623	16,105	0.000	0.000	0.019	0.014	0.172	0.125
7	610	21,801	0.003	0.005	0.019	0.017	0.136	0.117
8	630	29,980	0.020	0.016	0.042	0.028	0.171	0.100
9	622	47,472	0.030	0.027	0.048	0.040	0.145	0.112
10	621	141,258	0.035	0.044	0.048	0.056	0.107	0.110

Table 1 presents tax burdens for individuals where the income variable used in the denominator is the individual's total income, including income from sources other than wage income.<sup>2</sup> In the sample, taxable income is only 43 per cent of total income on average. We see that the income tax and the income tax plus the employee's contribution are progressive in the lower deciles, and flatten out a bit in the top deciles. When the employer's contribution is added, the burden becomes fairly flat across the distribution with a noticeable drop in the tax burden in the top decile.

Table 2 aggregates the individuals into their households and presents the results according to deciles of households ranked by weighted per capita income. The fourth column shows that income tax is a progressive tax on household incomes as it was on individual incomes, although it flattens for the top deciles. The addition of the employee's social insurance contribution increases the average tax burden and appears to make the burden on the top deciles flatten more, but the differences are not statistically significant. The addition of the employer's contribution increases the burden across the distribution significantly and definitely makes the total burden regressive at the top of the distribution.

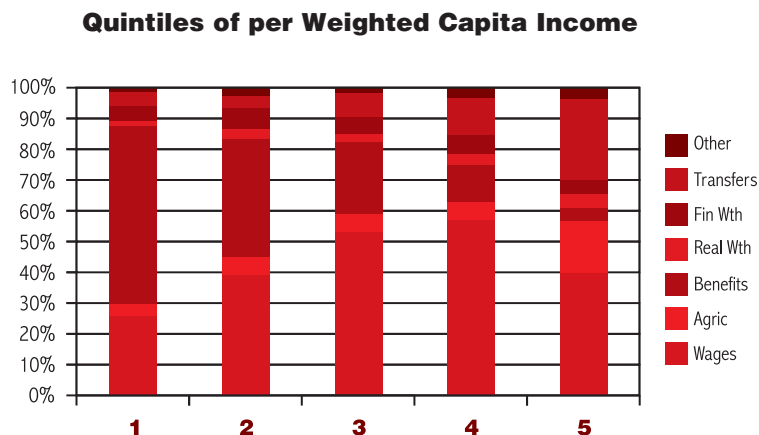
<sup>2</sup> The decile sizes are not exactly equal, as seen in the column labelled "N," because decile cut-offs sometimes occur in groups of equal incomes, and those observations need to be in one decile.

**Table 2. Income tax and SIC burden on household income, ISLS Survey**

Deciles	N	Weighted Per Capita Income	PIT Burden		Employee Tax Burden		Payroll Tax Burden	
			Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
Avg.	3650	18,234	0.012	0.023	0.025	0.032	0.131	0.142
1	365	2,065	0.000	0.000	0.008	0.013	0.149	0.245
2	365	4,175	0.000	0.001	0.007	0.012	0.096	0.156
3	364	5,618	0.001	0.003	0.011	0.014	0.124	0.147
4	366	7,547	0.003	0.008	0.016	0.019	0.137	0.137
5	365	9,330	0.008	0.015	0.023	0.025	0.138	0.126
6	366	11,535	0.012	0.018	0.029	0.027	0.162	0.115
7	369	14,800	0.017	0.021	0.034	0.031	0.152	0.108
8	360	19,313	0.022	0.025	0.039	0.035	0.149	0.103
9	366	28,695	0.025	0.030	0.040	0.041	0.126	0.103
10	364	79,471	0.027	0.043	0.037	0.053	0.081	0.098

The effects of taxes on different deciles of the income distribution come from two factors, the structure of the tax system and the structure of household income. In addition, when analyzing tax burden on households, it is important to take into account the social benefits received by households. That is, benefits could be considered “negative taxes”—money that comes into the household from the budget rather than going out to the budget. The structure of household income, then, tells us both about which households benefit from taxes as well as which households are likely to pay more taxes. Chart 1 below shows the structure of household income across weighted per capita income quintiles.

**Chart 1. Structure of household income across weighted per capita income quintiles**



As indicated by the earlier analysis, the chart clearly shows that the share of wage income in total income decreases for the top quintile, although it increases across quintiles for the first four. As long as income and social insurance taxes are based primarily on wage and salary income, they will essentially be regressive at the

top end of the distribution. The benefits share of income follows the expected, and desired, path. Benefits (which include pensions) account for a large share of income for low-income households but a small share for high-income households. Perhaps more striking is the role of agricultural income. We might expect that low-income households would have a significant share of income from agriculture since those households would be more likely to engage in home production to make extra money. Such a hypothesis might justify why income from agricultural production is not taxable under the income tax law. Instead we see that agriculture accounts for a significantly larger share of income in the top quintile of households. These are probably not individual producers but owners of farms. Agriculture is taxed through the land tax, which is calculated on cadastre values that are supposed to correlate with potential value of output, but it is unlikely that this correlation is close. A final trend to notice in the chart is the increasing share of income across quintiles that is accounted for by private transfers. It is sometimes argued that private transfers have prevented even more Armenians from becoming poor during the transition. That might be true, but transfers seem to be benefiting the rich more than the poor and are thus contributing to the increase in inequality.

In conclusion, the results show that the income tax and employee SIC relative to taxable income are, not surprisingly, progressive. As a share of household income and across weighted per capita income deciles, the taxes are still progressive but the burdens flatten out across the top deciles as these households have a greater share of income from non-taxable sources. When the employers' SIC is added to the mix, however, the total tax burden becomes flat across the bottom deciles and regressive in the top deciles. Benefits seem to be benefiting the poorer households but the preferences given to agricultural income may be benefiting rich households more than poor households.

### The Burden of Property Tax on Housing

*This article is an adapted excerpt from a longer paper written for and presented at the Armenian International Policy Research Group conference "Armenia: Recent Economic Trends and Growth Prospects" in January 2003. The full version of the paper in English may be found at <http://www.armpolicyresearch.org/>. Dr. Annette Brown is the former Resident Economic Advisor for the USAID/Armenia Tax, Fiscal and Customs Reform Project and continues to serve as the Executive Editor for "Economic Policy and Poverty."*

One of the popular arguments during the PRSP discussions was that the best way to increase taxes without hurting the poor is through the property tax, in particular by improving the administration of the tax and possibly moving to market valuation. We have two databases that can be used to analyze the burden of property tax, particularly property tax on dwellings in Yerevan. First, there is an administrative database—data from the State Tax Service—on property tax. Second, in 2000 and 2001, the USAID Tax, Fiscal, and Customs Reform project commissioned a study of the market values of dwelling units in Yerevan. The survey produced data on both cadastre value and market value for the sample of properties. While neither source contains or can be linked to information on taxpayer incomes, we can still draw some conclusions about tax burden across different property tax brackets.

First, however, we can use the National Statistical Service's Integrated Survey of Living Standards to look at housing characteristics across income categories. Ninety-two per cent of the sample of households with positive income owns their residence. Table 1 presents some descriptive statistics on the ownership and size of residences across weighted per capita income quintiles.

**Table 1. Descriptive statistics of residences by weighted per capita income quintiles**

Quintile	N	Percent Owned		Living Space		Number Rooms	
		Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
1	730	0.927	0.260	58.3	31.0	2.94	1.20
2	730	0.922	0.268	54.5	33.3	2.82	1.17
3	731	0.919	0.273	49.7	25.6	2.66	0.99
4	729	0.915	0.279	50.0	27.8	2.73	1.15
5	730	0.908	0.289	57.6	31.9	2.86	1.13

The striking feature of table 1 is how little difference there is between income classes. In fact, although the differences are probably not statistically significant, it appears that the lowest quintile has the most ownership of larger residences with more rooms. In this quintile, 93 per cent own residences that on average have 58.3 square meters of living space and 2.94 rooms. The smallest residences on average appear to be owned by those in the middle income quintile. To the extent that the value of a residence is based on its

size, this evidence suggests that there is not a positive correlation between the value of housing and the income of the household that owns it. In addition, households in the highest quintile are the least likely to own the residence they are living in.

These findings are not surprising in the transition environment. Initial ownership came from privatization by giving households ownership of the residences they were living in. Officially, housing was not allocated according to household income during the Soviet period. Now, it is actually the better off households that are able to move to a more preferred residence by either renting or selling their initial residence. This argument is also consistent with the results from the survey that the primary reasons for moving are to improve housing condition and for family reasons, i.e. moves by household choice rather than necessity.

Using the property tax administrative data, table 2 below shows the average cadastral values for all dwelling units in Yerevan in 2001 according to the property tax brackets. The final column comes from the property tax survey and shows the ratio of cadastre value to market value for the survey observations in the same property tax brackets. It should be noted that the market value adjustment ratios for the higher tax brackets are based on very small samples from the survey; the ratio for the top bracket is based on only 12 observations. The similarity of that ratio with the ratio for the next bracket down lends additional credibility to the estimate, however.

The final column reveals that the cadastre value of residential property in Yerevan increasingly under-estimates market value as cadastre values increase. For example, while the cadastral value is 105 per cent on average of the market value for properties with cadastral value below 3,000,000 AMD, cadastral value is 26 per cent on average of market value for properties with cadastral values over 40,000,000 AMD.

Applying these adjustment ratios, I estimate a market value for each of the Yerevan properties in the administrative database and then use the rate structure in the property tax law to calculate estimated tax liability for these valuations. Table 3 shows the tax burden across tax brackets of the current residential property tax rates for both cadastral valuation and market valuation. Clearly the tax itself is progressive across tax brackets. This result is clear from the tax structure itself. The comparison between the cadastral burden and the market burden, however, shows that the tax burden would be more progressive across tax brackets if the tax were applied to market valuation. That is, if households owning residences with market values over 40,000,000 AMD paid tax based on the market valuation, that tax liability would be 0.7 percent on average of the market valuation, whereas the current liability is 0.1 percent on average of the market valuation. Put differently, a household owning a property with a high cadastre value, while paying more tax than those with lower valued residences, is likely paying far less than it would be if the tax were based on the market value of the property. We cannot conclude from this evidence, however, anything about the progressivity or regressivity of the property tax across income classes. As seen in table 1, residences do not necessarily vary in their basic characteristics across the income distribution.

**Table 2. Cadastral value tax liabilities and adjustment factors for residences in Yerevan**

Tax Bracket	Number of Buildings	Average Cadastral Value	Total Tax Liability	Adjustment to Market Value
0 – 3,000,000 AMD	123,238	423,108	0	1.0555
3,000,001 – 10,000,000	97,136	4,608,905	165,996,161	0.7491
10,000,001 – 20,000,001	3,891	13,240,774	52,845,805	0.5009
20,000,001 – 30,000,000	688	24,277,823	30,417,370	0.3746
30,000,001 – 40,000,000	355	34,466,755	33,334,687	0.2805
> 40,000,000	395	60,089,604	113,687,648	0.2614
Total	225,703	-	396,281,671	-

**Table 3. Tax burden of property tax on residences in Yerevan relative to estimated market value of property for cadastral and market valuation**

Tax Bracket	Cadastral Valuation			Market Valuation	
	N	Mean	St. Dev	Mean	St. Dev
0 – 3,000,000 AMD	123231	0.0000	0.0000	0.0000	0.0000
3,000,001 – 10,000,000	97136	0.0002	0.0001	0.0005	0.0002
10,000,001 – 20,000,001	3891	0.0005	0.0001	0.0020	0.0005
20,000,001 – 30,000,000	688	0.0007	0.0001	0.0050	0.0004
30,000,001 – 40,000,000	355	0.0008	0.0001	0.0064	0.0001
> 40,000,000	395	0.0011	0.0002	0.0070	0.0002

On the surface, this evidence may seem to support the argument that moving to market valuation would increase tax revenues without hurting the poor. This argument is not entirely valid, however. The value of the property that a household owns and is living in is part of that household’s wealth, but does not produce money income. Property tax is a tax on wealth, but it must be paid from income, even when the property is not generating income. This distinction is likely to be important in some cases in Armenia because of the transition process.<sup>3</sup> Because of the way apartments were allocated officially during the Soviet period, there are likely to be households that are poor but that obtained, through apartment privatization, apartments with very high value in the market economy, for example, apartments in the center of the city. As table 1 shows, according to some characteristics, lower-income households own similar residences to higher income households. If these original households are still occupying their apartments, a property tax based on market values might be unaffordable and could thus force them out of their homes. Some would argue that there is no problem with this, as it is merely forcing these households to realize the income possible from their wealth by selling or renting. But that argument is always controversial, because people often do not want to move.

In conclusion, the property tax on residences may be seen as “regressive” not because the rates themselves are regressive, they are actually quite progressive, but because the cadastre values vastly undervalue property the more valuable the property is. Thus, households with high-value property benefit disproportionately from the continuation of the cadastral system.

## Estimating Tax Administration Effectiveness<sup>1</sup>

**Vahram Stepanyan**

For most former Soviet Union (FSU) countries the contraction in output in the early stages of transition led to substantial decline in the traditional tax base (i.e. industry,) and as a result government tax revenues fell sharply (Table 1). Although in the early mid-1990s many countries started to record positive economic growth rates, in many cases this growth did not lead to substantial increases in tax revenues because of tax policy and tax administration weaknesses, including various exemptions that eroded the tax base and a failure to bring a large portion of informal sector into the tax net. In terms of institutional and administrative constraints for reforms, these countries faced a number of challenges: (i) the institutional capacity of the tax administration did not improve much, while the scale and functions necessary for the market economy increased compared to a planned economy; (ii) planned economies typically were concentrated in a state-owned industrial sector, while the transition to a market economy assumed more taxpayers and growing share of private sector; (iii) unfamiliarity of tax officials and taxpayers with the new system; (iv) limited resources for capital costs, like computer equipment, and training; and (v) old traditions and attitudes – the tradition of negotiation and bargaining in taxation needed to be broken and taxpayers attitude towards tax evasion and voluntary payments changed. The slow pace of reforms and difficulties with their implementation also resulted from the fact

<sup>3</sup> This distinction is also important in U.S. cities where old, poor neighbourhoods become gentrified, and property values increase significantly in a short period of time.

that in many countries tax administration has been a highly politicized function of government with tax liabilities largely negotiated instead of determined by law and there has also been a lack of political commitment by the government officials towards major changes in tax administration. Tax administration reforms in FSU countries have mainly focused on enactment of necessary legislation, establishment of organizational structures, development of systems and procedures; however, little has been accomplished in collection and enforcement areas. Thus, estimating the effectiveness of tax administration has been one of the challenging issues for the authorities in their efforts to improve tax revenue performance.

In general, the level of taxation effectiveness can be assessed (i) by looking at the tax ratios – tax revenues relative to GDP; and (ii) on the basis of effective tax rates, by comparing statutory tax rates with the realized average tax rates. Tax ratios are a much simpler method of assessment that allows one to illustrate the relative weight of taxes in the economy as well as to make cross-country comparisons. This approach, however, has the following shortcomings: first, total tax revenues to GDP ratio does not account for separate estimates of the tax burden on a particular factor income; and second, even if we take tax ratios for particular types of taxes, these are not a good basis for assessment of the tax burden or collections on corresponding tax bases because changes in tax ratios may not only be caused by a change in tax policy, but also by a change in the share of corresponding tax bases in GDP, the latter caused by other factors. Constructing estimates of effective tax rates – actual collections of a tax divided by the estimated tax base – helps to overcome the above-mentioned shortcomings; however, in many cases, the complexity of tax systems and lack of necessary data (tax rates, tax returns by taxpayer groups, income distribution data) makes estimation of effective tax rates very difficult.

Using country's fiscal and national accounts data as well as data on tax systems design, an attempt is made to arrive at value added tax (VAT) efficiency estimates for selected FSU countries which can be used as a basis for judging tax administration effectiveness.

The effective tax rate is estimated in the following way. If TB is the tax base and TC are actual tax collections, then the effective rate will be:

$$\mathbf{TRe = TC / TB} \quad \mathbf{(1)}$$

Tax efficiency ratio is estimated by dividing the effective tax rate by the statutory rate. Thus, if TRs is the statutory rate, then tax efficiency ratio will be:

$$\mathbf{TE = TRe / TRs} \quad \mathbf{(2)}$$

The next step is to arrive at an estimate for the tax base. A proxy for the VAT base is derived by excluding certain sectors and activities from the country's gross domestic product (GDP). In particular, (i) the GDP is adjusted with the trade balance, i.e. imports are included while exports are excluded; (ii) an adjustment is made for capital formation which is not taxed with VAT; (iii) government wages and salaries are not taxable and are subtracted from the GDP; and (iv) certain exempt sectors/activities, mostly related to agriculture, are deducted from the base. It should be noted, that the estimates for VAT base thus reflect a proxy for the actual tax base, i.e. the base which is consistent with each country's VAT legislation, although minor legislative provisions may not be included due to the lack of sufficient data.

Then, actual VAT collections are divided by the estimated tax base to arrive at the effective tax rate. The effective rate divided by the statutory rate provides the estimate for the tax efficiency. This type of tax efficiency estimate provides the gap between actual tax collections and potential tax collections which could be achieved with the existing VAT legislation, and thus, describes the efficiency of tax administrations<sup>2</sup>.

Table 2 contains estimates for VAT effective rates and tax efficiency ratios for 11 FSU countries for the period 1997-2000. As we can see, the Baltic countries have the highest VAT effective rates and efficiency ratios, even though the standard rates are lower than in other FSU countries. This shows that these countries' authorities have been more successful in reforming their tax administrations and maintaining fewer exemptions. In other FSU countries effective VAT rates during the period under consideration have ranged between 2 to 10 percent and efficiency ratios have mostly been below 50 percent. With the exception of Ukraine and Moldova there seems to be an improvement trend in VAT efficiency in all these countries. This reflects the continuing tax administration reforms though the information suggests that there is still much scope for further improvement.

<sup>1</sup> This article is an extract from the author's current research paper on tax policy reforms in FSU countries.

<sup>2</sup> If data allows, such estimates should also take into account the tax deferrals and write-offs.

**Table 1. FSU Countries: General Government Tax Revenue (in percent of GDP)**

	1993	1994	1995	1996	1997	1998	1999	2000	2001
Estonia	39.4	41.7	38.2	37.0	37.6	36.9	35.9	35.4	34.5
Latvia	36.4	36.1	33.0	33.7	34.8	36.0	33.9	31.4	30.4
Lithuania	30.2	31.7	31.5	28.8	31.5	31.2	30.4	28.4	-
Armenia 1/	28.9	27.7	12.7	12.9	16.3	16.9	16.1	14.7	14.3
Azerbaijan	40.5	33.8	12.3	15.1	15.6	13.9	14.2	14.5	14.7
Georgia	-	11.7	7.0	10.6	12.7	12.8	13.8	14.2	14.3
Kazakhstan	21.1	18.5	11.0	11.4	12.2	16.2	16.0	20.0	22.0
Kyrgyz Republic	25.1	20.8	15.0	12.7	12.5	14.2	12.3	11.7	12.4
Moldova	22.8	33.6	28.8	27.4	29.9	28.3	21.8	22.3	22.4
Ukraine	42.7	41.9	34.8	34.7	35.6	34.3	32.0	29.7	29.9
Uzbekistan	35.3	32.3	27.7	32.3	27.7	29.4	27.9	26.2	23.2
Russia	36.2	34.6	23.5	22.5	33.0	28.6	28.8	31.3	33.4
Belarus	44.8	47.5	34.2	29.0	27.6	32.0	26.6	37.6	37.6
Tajikistan	-	-	-	-	-	11.7	12.8	12.9	14.1
Turkmenistan	12.8	8.1	9.1	13.6	18.6	18.5	20.2	25.8	25.1
FSU unweighted avg.	32.0	30.0	22.8	23.0	24.7	24.1	22.8	23.7	21.9
OECD unweighted avg.	36.6	36.6	36.7	37.3	37.5	37.8	38.1	38.2	-

Source: EU 2 and FAD Databases, IMF  
1/ Central government budget

**Table 2. Selected FSU Countries: VAT effective rates and efficiency**

	1997		1998		1999		2000	
	TRe	TE	TRe	TE	TRe	TE	TRe	TE
Estonia	11	63	10	55	10	54	11	60
Latvia	10	58	11	61	10	56	10	55
Lithuania	11	62	11	58	10	56	10	53
Armenia	6	28	8	38	8	41	8	39
Azerbaijan	6	29	5	25	6	28	6	29
Georgia	5	23	4	22	4	22	5	27
Kazakhstan	5	26	6	30	6	32	8	42
Kyrgyz Republic	13	67	10	49	8	40	11	55
Moldova	15	76	17	84	12	58	10	52
Russia	8	42	7	37	6	30	6	32
Ukraine	12	58	10	51	10	51	10	48

Source: Author's estimates based on the data from Recent Economic Developments, IMF

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## Evaluating Tax Expenditures in Armenia: Getting Started

Lilit Melikyan

The concept of tax expenditures is not often familiar to economists and civil servants at large, but all tax systems include tax expenditures. In this article, we provide the conceptual framework behind tax expenditures.

Broadly defined, tax expenditures are deviations in tax liabilities that result from preferential provisions in the tax system. Some of these are clearly designed as tax incentives and could theoretically be substituted by direct government spending. Evaluation of tax expenditures usually includes quantifying these tax breaks and incentives. There are several powerful reasons for governments to document, track and quantify their tax expenditures. Such an exercise allows governments:

- to compare tax expenditures vs. government spending programs as two alternative means of achieving a given objective on the basis of a cost-benefit analysis.
- to assess the full distributional aspects of the tax system.
- to analyze the impact of tax expenditures on collection of revenues and tax administration.
- to increase public knowledge of government policy. Most often, direct expenditures are far more scrutinized than tax expenditures. Equal treatment should be provided between tax expenditures and direct expenditures, as they are both expenditures of public funds.

Currently, most OECD countries produce, and in many cases are obliged to, annual or semi-annual tax expenditure reports. In some countries, such as France, Belgium, Finland, Spain and Portugal, the preparation of tax expenditure reports is even directly linked to the budget process.

Tax expenditures can be grouped according to the purpose they are meant to serve:

- *Administrative* – sometimes a group or a good is particularly difficult to tax, and a tax expenditure provision is instituted in order to prevent high tax administration costs;

- *Equity* – some tax expenditure provisions are specifically designed to alleviate the tax burden of disadvantaged groups;
- *Programmatic* – tax expenditure provisions can be used to allocate resources to particular groups to meet government objectives;
- *Economic growth / efficiency* – sometimes tax provisions are designed specifically to foster behavior that is believed to contribute to economic growth.

While it is generally accepted that a tax system should be efficient, equitable, simple to administer, and easy to comply with, theory provides no indication as to which requirement should take precedence and no rule as to how to balance these criteria. Ultimately, the task of trading off one criterion against another requires judgment, and this affects how in a practical sense should tax expenditures be identified, which is also ultimately a matter of judgment. Hence, and it is important to note, that tax expenditures are not inherently good or bad. However, it should be noted also, that, because they are “built-in” the tax system and often not visible, they present a number of disadvantages.

### Table 1. Advantages and Disadvantages of tax expenditures

#### Advantages

- 1) They are simple to implement. They constitute a straightforward means to transfer resources to groups quickly and efficiently. Substituting tax breaks with subsidies involves higher administrative costs.
- 2) May be a politically more feasible method of achieving an objective because they do not go through the same governmental approval processes as budget expenditures.
- 3) Are often instituted by different government agencies than budget expenditures- an advantage from the point of view of those instituting agencies.

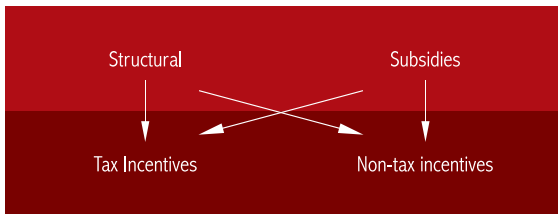
#### Disadvantages

- 1) They decrease tax revenues.
- 2) They are harder to control than government spending.
- 3) They have privileged funding status (no appropriation needs to be made: they are not vulnerable to budget freezes or cuts) and thus distort the influence and activities of government more than might be intended.

- 4) They are often ineffective because targeting is much less precise
- 5) They are very difficult to evaluate in terms of program effectiveness
- 6) They often increase vertical inequity in the tax system as a whole by distorting prices
- 7) They increase the complexity of the tax system
- 8) They are much less transparent than other forms of government activity

Procedures for defining tax expenditures vary depending on the classification approach chosen. According to one approach, tax expenditures might be structural vs. subsidies and incentives vs. not incentives.

**Matrix of tax expenditure classification<sup>1</sup>**



**a) structural tax incentives vs. tax subsidies<sup>2</sup>.**

- Structural tax expenditures are provisions that apply generally in the tax code.
- Tax subsidies, on the other hand, are more narrowly targeted tax expenditures usually with a specific programmatic goal, often meeting the following three conditions: application to a narrow class of transactions or taxpayers; representation of special allowances against a general provision; and identification easy enough to enable for an equivalent subsidy to be designed and administered as an expenditure program.

**b) tax incentives vs. not tax incentives.**

Tax incentives are tax expenditures specifically designed to encourage behaviors that are thought to contribute to economic growth. Tax expenditures that are not tax incentives address the first three of the objectives listed above (equity, efficiency, programmatic), while tax incentives are those designed

to address the fourth objective, namely economic growth.

The Armenian tax system does not feature too many tax expenditures, but there are some rather significant ones.

The current exemption of agriculture from almost all major taxes is an example that could be classified both as a tax incentive and non-incentive subsidy: it was instituted with the aim of encouraging the growth in agriculture, but in addition, taxing agriculture is administratively cumbersome. This exemption will be removed by 2009 as a result of Armenia joining WTO.

Structural tax expenditures that are tax incentives are not meant to affect any particular group in the economy; anyone who qualifies is entitled to these kind of preferences, intended to contribute to economic growth. The Armenian tax system does not explicitly feature this type of tax expenditures, although one could argue that certain provisions, and even the existence of simplified tax and presumptive payments' regimes lead to tax expenditures of this nature.

Structural tax expenditures that are not tax incentives are fairly common and are often related to administrative objectives. An example from many other countries with VAT is the VAT exemption for financial services. The purpose is not to encourage more financial services activity but rather to avoid trying to administer the VAT on financial services.

Tax subsidies can also be incentives or non-incentives. One example of a tax subsidy that is not directed at economic growth, but rather equity and social considerations is profit tax privileges for the companies employing disabled. The objectives behind these provisions include equity and social considerations. One could imagine that instead of having a tax credit, the government could implement an expenditure program where households could have applied to the government for a grant or subsidy to achieve the same level of support. There are also tax expenditures that could be identified as tax-incentive subsidies. Exempting from VAT the sale of precious and semi-precious stones and semi-finished jewelry products, or privileges granted to companies with foreign investments are good examples in place.

It is not vital that each tax expenditure be put in one box. Oftentimes the line is blurred. It is useful in

<sup>1</sup> Adapted from A. N. Brown "Tax Expenditure Report: Indonesia". Barents Group of KPMG Consulting Indonesia Tax and Fiscal Reform Project, 2000

<sup>2</sup> This distinction is first made by Seymour Fiekowsky

evaluating these expenditures, however, to understand the categories and discuss each tax expenditure in terms of these distinctions.

In order to identify tax expenditures, it is necessary to establish a “baseline” tax structure that does not contain any preferential tax provisions. Tax expenditures are then defined as deviations from this benchmark. It is important to recognize that reasonable differences of opinion exist as to the definition of the benchmark tax system, and hence what constitutes a tax expenditure. The main components of a benchmark are: the tax unit, taxation period, tax rate/base structure, treatment of inflation/deflation. In addition to the basic components of the benchmark, there are certain other features that are elements of a fair tax system. Measures to include these features should be considered part of the benchmark and should not be considered tax concessions.

It would be misleading to rely mainly on the language of the tax law to identify tax expenditures. Oftentimes there are clauses that use such language as “exemptions”, “deductions” etc, but the aim of which is to avoid double taxation, or which do not incur any revenue foregone for the government. Thus identifying the list of tax expenditures requires an in-depth analysis of the revenue impact of the tax laws. While there is an agreement that quantifying tax expenditures is extremely useful, there is no widely accepted operational methodology for estimating them. Quantification presents some challenges: data insufficiencies or data quality concerns; whether and how to account for behavioral responses of economic agents in case of proposed tax policy change; the drawbacks of a static approach where the cost of each tax expenditure is estimated separately, assuming that all other tax provisions remain unchanged; the assumption that all other economic factors remain unchanged; accounting and measurement problems and so on. The next step, after taking care of the caveats above and data availability is choosing a method of estimation of tax expenditures. There are generally four methods used to calculate tax expenditures: revenue forgone (the most common one); present value estimation; expenditure equivalent and revenue gain method.

Currently the MFE together with the USAID/BearingPoint “Tax, Fiscal and Customs Reform Project”, is developing the first ever tax expenditure report for Armenia. This will be the first effort aimed at making an inventory of tax expenditures with price tags attached, as a base for considering alternatives in tax policy reform. Thus, apart from providing an

inventory of tax expenditures and analysis of these tax expenditures, the analysts will also quantify them (using the revenue forgone method) where possible depending data availability. Models for VAT and profit tax developed by the project will be useful tools for such an exercise.

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## Introduction of Minimum Tax

### Paylak Tadevosyan

The general aim of applying a minimum tax is to prevent those who have high incomes and profits from avoiding paying taxes. In many developing countries minimum taxes are used only with regard to enterprises, while very frequently with regard to individuals. Minimum taxes are applied both for joint stock companies and other business types. Such system is used also in many developed countries.

The minimum tax can be viewed as a more efficient and just method of taxation. Inequality in applying the profit tax can be conditioned by various possibilities of executing the tax legislation requirements - tax holidays, etc. Simultaneously, many countries have limited possibilities to control the correct calculation of the profit tax base. As a result, businesses earning the same profit may pay different amounts of profit tax depending on how they follow the law. Application of the minimum tax may reduce that inequality when the tax rates are linked to certain indicators that are not related to the declared income.

In many developing and developed countries, the enterprises are forced to either pay the “standard”

profit tax without any holidays or the minimum tax, which will refrain the businesses from abusing the tax holidays. When not using the tax holidays, the enterprises increase the amount of the “standard” tax. Thus, the tax holidays usually serve as an argument to switch to the minimum tax system.

Minimum tax can be of several types. The choice of a particular type depends on the purpose it should serve. A simple version of this tax requires the payment of a presumptive nominal amount. Despite its efficiency, since it covers all businesses, it is unfair, since it does not differentiate between different incomes. This tax is efficient to apply when the data for the minimum tax is insufficient. And the amount of presumptive tax should be defined so that the enterprises would pay a minimum tax, but not a nominal sum of money.

Another version of this tax is when a relatively small rate is applied to the gross income (or turnover). The advantage of this option is that the turnover is an indicator of financial performance that is easy to measure, and thus, on which to levy taxes, such as the VAT. However, its disadvantage is that the turnover does not necessarily reflect income. An enterprise with large turnover might have lower income, or even suffer losses. Nevertheless, with a minimum tax in place, it would pay a significant minimum tax, while a low-turnover enterprise might have higher income and pay relatively low taxes. Consequently, the minimum tax is not a good replacement for the profit tax.

A third option is to apply a low tax rate to the balance sheet assets. This option is more efficient than the previous one, since it supposes that the incomes from economic activities should have direct relation to assets. Normally it is assumed that in a stable capital market, revenues from capital investments are proportionally distributed among the investors. Thus, the asset-linked minimum tax can be a better proxy for the profit tax, although not a perfect one.

Another option is to levy the tax on the income adjusted in accordance to an initially prescribed methodology, as it is the case in the US. According to the legislation, enterprises have to calculate both the standard tax and the minimum tax, and pay the higher thereof. The difference between the two can be added to the future taxes to be paid, but it cannot reduce the profit tax amount lower than the minimum tax. In this case, the minimum tax is calculated through certain adjustments, applying concessional taxation regimes prescribed in the legislation. However this

method can be only applied in countries where tax administration is properly performed and revenues are not distorted by high inflation rates.

Application of the minimum tax requires a clear definition of the tax base – turnover, assets, or adjusted income. Turnover is measured easily, however, tax authorities face difficulties in measuring it, especially in agriculture and retail. It is easier to measure the turnover of large industrial enterprises. Even developed countries experience difficulties in defining criteria for measuring the turnover of small businesses, in particular, in service industries. In order to avoid these problems, France has developed an “accord” system, which is in its essence a tax-preventing system, relying on certain objective characteristics of an enterprise.

Asset taxation, as a rule, covers the gross assets. Assets include cash and securities, accounts receivable, inventory, land and other fixed assets, taking into account exchange rate depreciation and amortization. Taxes can be levied either on fixed assets or on net assets (total assets minus debt). Certain factors need to be considered in defining the taxable asset. If the objective of the minimum tax is to replace a profit tax regime that does not encourage debt-financed assets, it is recommended to apply the tax to total assets. If it aims to replace a profit tax that allows deductions for interest paid on debt financing, but no privileges for equity financing, then it is recommended to levy the minimum tax on net assets.

The chosen tax rate should reflect the objective of the minimum tax, which is a source of budget revenues and a stimulus for the growth of entrepreneurship. It is crucial not to set a high minimum tax rate that would be an additional burden to non-profitable businesses. The rate should be set so that the tax attains the objectives of fairness and efficiency. Thus, the rates may vary depending on the necessity of collecting budget revenue and the original profit tax rates.

The presumptive tax and simplified tax are the current proxies for the profit tax in Armenia. The problem of measuring the turnover of retail and service business is also relevant for Armenia. To this end, presumptive tax is used for certain categories of businesses, while for the others – the simplified turnover tax. Considering the difficulties in controlling the turnover of businesses subject to the simplified tax, the option of applying the minimum tax can be discussed, in particular, in retail, food and service industries.

In order to define the minimum amount, we believe, that profits by sectors, as well as potential turnover, and the value of assets involved in profit creation should be considered. The latter (assets) might create additional problems. Taxpayers may tend to avoid declaring all assets, however, the disclosure of such assets is not a difficult task from the point of view of administration. Simultaneously, the subjective approach of tax officers should also be taken into account, which, eventually, may result in unequal and unjust distribution of the tax burden hampering the efficient application of the minimum tax.

Analyses of profits and profitability in certain sectors may lay a basis for the definition of the minimum tax amount, as well as rationale for its application.

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## **Some Issues Related to the Tax-Deducted Losses and Their Transfer**

### **Aram Muradyan**

Business entities in an economy very often incur risks pertaining to their businesses. As a result, successful businesses get profits and pay taxes, but business risks may also result in losses. Tax losses are losses that exceed gross income. Most frequently, new businesses or those that offer new products and services suffer losses. Losses normally result from low sales and additional costs related to gaining a market share or getting customer to learn about the new product or service. Very often, the fixed costs of a new business or new product are relatively high as compared to the gross income, and this difference results in losses.

The issue of indirect losses is also quite relevant here. Specifically, losses also occur when the previous losses are not indexed properly or the fixed assets are not regularly revalued when sold. In this regard, in some countries (e. g. in Ukraine) the law prescribes an index coefficient for a period of time. Although even at 0 inflation rate, the losses will shrink in accordance with the discount.

Losses may also be a result of state policies. According to Armenian legislation the minimum depreciation period for the fixed assets in the earthquake zone is one year. Both in this case, and when accelerated depreciation is used, significant losses may appear.

Considering that the tax system needs to be just and fair, and to not discriminate against risk-incurring taxpayers, these losses should be taken into account when calculating taxes. In other words, if profitable businesses pay taxes, non-profitable ones need to be reimbursed the taxes resulting from their losses. Usually, international expertise allows non-profitable enterprises to deduct losses from their gross income. Laws in many countries allow to transfer the losses to the subsequent year - with or without time limitations.

There exists another method to deduct losses from taxable income, which is to transfer losses to previous years. Normally, this is subject to time restrictions (3-5 years,) and eligible enterprises are those that currently have losses but paid taxes before. Provided that the current losses do not exceed the profits of the previous years, the enterprise receives back the taxes paid previously. This method has restricted application, since the current losses may well exceed the previous profits. Despite that restriction, the loss transfers to previous periods can put pressures on the government budget. We believe that the most disadvantageous aspect of this option is the inequality in competition it creates for new businesses as compared to old ones, since the former cannot offset their losses against previous profits.

The issue of losses in Armenia is subject to regulation under the Law on Profit Tax, according to which, the current losses can be transferred to the next 5 years. Loss transfer options seem to have negative aspects at first sight; that is, the government undercollects its tax revenues. However, it encourages entrepreneurship and thus the government receives new tax payments as new businesses grow.

There are also practical aspects to applying the loss transfer option - related to both identification and actual transfer of losses - that distort the initial objective of the Law. In particular.

- a. "Artificial" losses – a profitable enterprise may become non-profitable after merging with an enterprise suffering losses. In this case, the enterprise avoids paying taxes.
- b. Creating a non-fair environment – those that avoid paying taxes create an impression of an unfair tax environment and distort the main principles of tax discipline.
- c. Losses inherent to certain businesses – enterprises may suffer losses because the type of their business is relatively less profitable.

Simultaneously the links between tax authorities of Armenia and other countries should be considered: it might be unfair to offset the losses of Armenian residents in other countries against the profits in next years. Under such circumstances, the verification of the income and losses of our residents incurred in other countries is practically impossible. I believe that the issue of information exchange between the countries that sign "Agreements on avoiding double taxation of income and property and preventing tax avoidance" is extremely crucial in order to prevent creation of artificial losses by enterprises. In other words, it is fair to offset the losses incurred in a certain country against the future profits to be gained in the same country, as it is the case in Cyprus.

Some countries, related to the specifics of their legislation and economic policy, choose to place the following limitations on loss offsets:

- Legislation in some countries does not allow non-profitable enterprises to merge with others, or else the losses are not eligible for offsetting.
- Some other countries have restrictions on losses incurred from non-primary activities of businesses: non-primary activities are viewed those that enterprises may choose to involve in.
- There are also countries where large enterprises are not allowed to offset their losses. The rationale is that the budget implications are very large. Besides, the small and medium enterprises tend to grow faster.
- In some countries, non-profitable enterprises are not allowed to merge with non-resident enterprises: this restriction is typical for more advanced economies, where the real sector is developed.
- Some countries apply loss restrictions depending on the sector and enterprises. I. e., sectors that need to be developed receive better treatment.
- Capital losses are allowed to be deducted only from the amount of increased capital stock.

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*This Column is dedicated to the review of various poverty monitoring systems used by different institutions and to the discussion of the monitoring results. It is intended to present the Policy Tools Monitoring system, which is a vehicle for analyzing the policy tools and their transition mechanism to the poverty indicators. This system consists of two major sub-systems – the policy impact on the income level and the policy impact on the income distribution. In this issue, we will present poverty indicators for Armenia and the first among the abovementioned subsystems. The objective is to begin discussions for the elaboration and development of poverty monitoring systems and to assist analyses in this area.*

## Policy Impact on Income

### Section 1. Main Poverty Indicators

During 1996-2001, poverty declined by 3.8 percentage points, or 7 percent, in Armenia under a real GDP growth of 32.9 percent during the same period and a reduction of the Gini coefficient by 0.125.

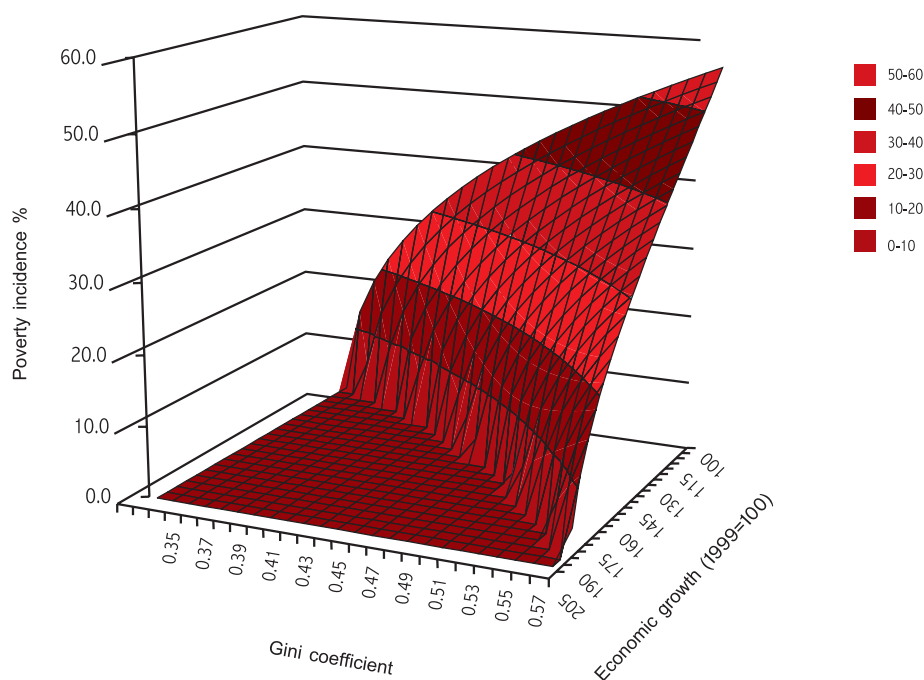
**Table 1. Main Indicators: 1996-2001**

	1996	1998/99	2001
Real GDP (1990=100), %	55.7	63.8	74.1
Gini coefficient			
Incomes	0.653	0.570	0.528
Expenditures	0.444	0.372	0.344
Poverty incidence, %	54.7	55.1	50.9
in urban areas, %	58.8	58.3	51.9
of which in Yerevan	58.2	55.2	46.7
in rural areas, %	48.0	50.8	48.7
Extreme poverty, %	27.7	22.9	16.0
Poverty depth, %	21.5	19.0	15.1
Poverty severity, %	11.1	9.0	6.1

*Source: National Statistical Service data.*

Obviously, income poverty is conditioned by gross disposable income and its distribution. In other words, each specific level of income and the degree of inequality in its distribution results in a certain level of poverty incidence. We present the interrelation between these indicators for Armenia in Figure 1. We use the real GDP growth index (compared to 1999) and Gini coefficient as proxies for income and its distribution. Figure 1 displays possible combinations of the Gini coefficient and real GDP magnitude that correspond to a certain maximum level of poverty in Armenia (or the upper border of poverty shown in colored strips). In other words, each layer shows all possible combinations of GDP growth and Gini coefficient corresponding to that particular level of poverty. In the figure, the actual outcomes for 1999 and 2001 appear at the top of the graph as poverty in those years is characterized by both low incomes and a high inequality. In order to move to lower and more desirable layers on the graph, the policies to boost economic growth and reduce inequality need to be intensified.

**Figure 1. Poverty incidence for possible combinations of real growth and Gini coefficient**



Source: NSS data, EDRC Growth and Distribution Model

Figure 1 allows us to make the following comparisons: under the current level of income, if the income distribution equaled that of in Latvia or Poland<sup>1</sup>, the poverty incidence in Armenia would be close to zero. The Figure also tells us, that in order to reduce poverty in Armenia by half, the economic growth and Gini coefficient indicators need to be in the range of their respective indicators shown in 20-30% brackets.

## Section 2. Income Level and Fiscal Policy

Clearly, fiscal policy significantly affects both incomes and their distribution. In order to assess the impact of fiscal policy on income one needs to estimate the Fiscal Multiplier. The Fiscal Multiplier indicates the additional income created as a result of growth of public procurement of goods and services by one unit. The magnitude of the Fiscal Multiplier is

conditioned by the marginal propensities of the economy to consume and to import (MPC and MPI<sub>m</sub>).

Since it is extremely hard to estimate marginal propensities to consume and to import, Table 2 summarizes the Fiscal Multiplier values calculated for different values of marginal propensities to consume and to import. It shows how much of the economic growth in Armenia is conditioned by fiscal policy under various marginal propensities to consume and to import. For example, Table 2 shows that under MPC of 0.9 (which implies that an increase in income of 1% increases consumption by 0.9%) and MPI<sub>m</sub> of 0.55 (which implies that an increase in income of 1% increases imports by 0.55%) the Fiscal Multiplier equals 131.9. That is, each additional monetary unit of government spending brings in additional 1.3 monetary units of income.

<sup>1</sup> Gini coefficient in Latvia for 1996-1999 equaled 0.32, in Poland – 0.33. (Source: "Making transition work for everyone", WB, Washington 2001):

**Table 2. Fiscal Multiplier for various levels of Marginal propensities to consume and to import**

Marginal Propensity to Import (MPIm)	Marginal Propensity to Consume (MPC)						
	0.7	0.75	0.8	0.85	0.9	0.95	1
0.3	146.2	156.3	167.8	181.2	196.9	215.5	238.1
0.35	136.2	144.9	154.8	166.1	179.2	194.6	212.8
0.4	127.6	135.1	143.7	153.4	164.5	177.3	192.3
0.45	119.9	126.6	134	142.5	152	162.9	175.4
0.5	113.1	119	125.6	133	141.2	150.6	161.3
0.55	107.1	112.4	118.2	124.7	131.9	140.1	149.3
0.6	101.6	106.4	111.6	117.4	123.8	130.9	138.9

Source: EDRC calculations

While the Fiscal Multiplier indicates the new income created by the growth in public consumption by one unit, the Fiscal Impulse shows the increase of the income resultant from the growth of public spending as compared to the base year.

**Table 3. Fiscal Impulse: Income Growth Compared to 1998**

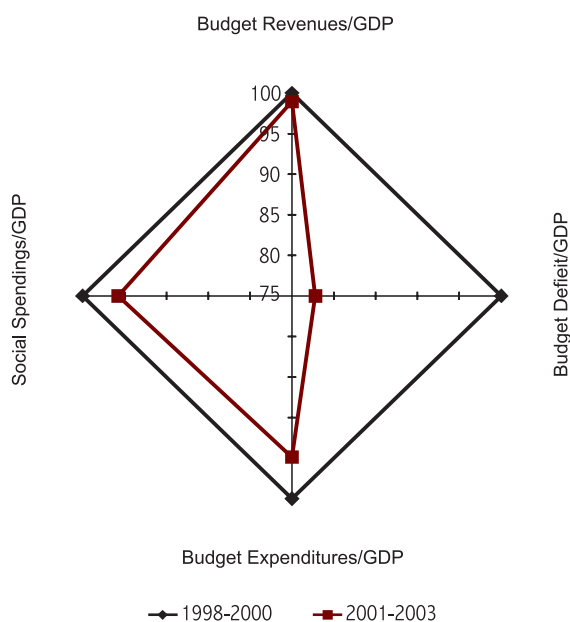
Marginal Propensity to Consume (MPC)	1998	1999	2000	2001	2002	2003
	Actual	Actual	Actual	Actual	Actual	Program
0.80	100.0	103.4	118.8	129.5	148.4	142.5
0.82	100.0	103.5	118.8	129.5	148.4	142.3
0.84	100.0	103.5	118.8	129.6	148.5	142.2
0.86	100.0	103.5	118.9	129.6	148.5	142.0
0.88	100.0	103.5	118.9	129.6	148.6	141.9
0.90	100.0	103.6	119.0	129.7	148.6	141.7
0.92	100.0	103.6	119.0	129.7	148.6	141.5
0.94	100.0	103.6	119.1	129.8	148.7	141.3
0.96	100.0	103.6	119.2	129.8	148.7	141.2
0.98	100.0	103.7	119.2	129.9	148.8	140.9
1.00	100.0	103.7	119.3	130.0	148.8	140.7

Source: Data -Ministry of Finance and Economy, calculations - EDRC

Table 3 presents estimates of the impact of public expenditures on the level of income in the economy under various levels of the MPC. For example, if the MPC for 2002 is 0.9, government spending created 48.6%<sup>2</sup> more income in real terms as compared to 1998.

Figure 2 displays changes in 2001-2003 fiscal position compared to 1998-2000 in order to assess the main directions of the fiscal policy between these periods.

**Figure 2. Changes in the Fiscal Position (average for 1998-2000 is taken as 100)**



The analyses of the main fiscal policy tools (budget revenues, expenditures and deficit) reveals that, despite the decline of budget expenditures as a share of GDP, the was mainly conditioned by the reduction of the budget deficit. However, the reduction in budget expenditures has included reductions in social spending.

<sup>2</sup> The MPC is assumed 0.52 when calculating the indicators in Table 3.

## Budget Revenue Projection Methods in Armenia

Arman Davtyan

The choice of projection methods for budget revenues depends on each particular type of tax and should account for the legislative basis for each tax. The legislation should be reviewed first, and then certain parameters characteristic to the type of revenue should be analyzed. Based on those parameters, available data can be analyzed using reference formulas and the interrelations of certain parameters in order to calculate estimates and hypothesize about errors or biases.

It should be noted that the accuracy depends both on the quality and coverage of the data (how accurately they reflect the current state of the economy), as well as on the choice of projection method and, finally, on the ability to simulate the impacts of changes in the tax legislation. Thus, in order to improve the quality of projections for Armenia, a reliable database needs to be compiled. The completeness of the data will highly affect the results, since the tax legislation has been vastly amended and developed during recent years (introduction of new taxes, changes in tax rates and tax base, etc.) If possible, data needs to be collected to reflect the new legislative system.

One needs to bear in mind that revenue projection is a difficult task, and projections are just estimates, not precise forecasts. In countries with well developed budgetary systems, several bodies and agencies calculate revenue projections, including the respective department of the parliament, using various projection methods. These comparisons allow careful examination of projection errors. In Armenia, various local and external consulting institutions are involved in budget revenue projections in addition to the Government. However, the expansion of these activities, as well as continual improvement of the quality and coverage of the data will significantly improve revenue projections and reduce the size of the errors.

Here, we will present the main projection methods for budget revenues along with the fundamental principles for each tax.

### Tax Revenue Projection Methods

As mentioned above, many factors affect the choice of a specific projection method. Methods to project tax revenues can be categorized into several groups.

- a. Tax rate method: the main feature of this method is its applicability when the tax rates are flexible, as well as for projecting effective and newly introduced “simple” tax revenues. Nonetheless, except when applying this method to simple taxes, data availability can be a constraint, as well as the fact that this method is not applicable for the cases when the tax base has changed. Moreover it creates certain difficulties in estimating tax benefits and does not reflect the penalties and fines accruable on the specific tax liabilities.
- b. Detailed modeling method: this method is applicable for more “complex” taxes. It relies on a survey of tax declarations, and thus, its accuracy depends the reliability of available tax declaration data. The method involves building a model with the characteristics of the population of the current taxpayers in order to simulate the impact of different initial conditions on the calculation of their liabilities. By using data from individual taxpayers, this method can produce very accurate projections. However, this method requires reliable data, application of statistical methods and adequate technical equipment and software. Thus this method can be very costly and time-consuming.
- c. Elasticity method: this method is widely used. It estimates the increase in tax revenues under the expansion of the tax base and stable tax structure. This method does not require highly accurate and reliable data and can be easily applied. However, it is not very accurate, since it does not consider the liquidity of the taxpayers and changes in the shadow economy.

## Projection Methods used in Armenia<sup>1</sup>

Currently the budget revenues in Armenia are projected based on their actual trends in recent years, as well as on changes in the main macroeconomic indicators that directly affect certain tax bases and can have significant impact on tax revenue levels, such as: sectoral breakdown of the GDP, imports and exports, exchange rate, GDP deflator, etc. Below we discuss the main principles that are used to project the revenues from those taxes that constitute the larger shares of total tax revenues<sup>2</sup>.

**Value Added Tax (VAT).** VAT revenues constitute the largest portion of the budget revenues in Armenia and include the VAT components of the presumptive tax on petrol and tobacco, as prescribed by the current legislation. Here, the standard<sup>3</sup> portion of the VAT is projected separately – based on domestic turnover and import projections. The revenues from presumptive taxes on petrol and tobacco products are projected separately.

VAT from imports is projected using estimates of the tax base – total imports less the customs value of imports of diamonds, petroleum products and tobacco. Then customs duties and excise taxes are added to that base. The effective tax rate<sup>4</sup> is then applied to that base to obtain the amount of VAT to be paid by the real sector to the budget.

For the VAT revenues from domestic turnover, GDP is taken as a first estimate of the actual tax base from which several major components are subtracted: agricultural production (VAT exempt), exports of goods and services (taxed at 0% rate), and the turnover corresponding to the amount of net indirect taxes, presumptive taxes and tax benefits defined by the legislation. Consequently, applying the current 20% VAT rate to the GDP<sup>5</sup> (including the excise tax) VAT revenues are estimated, which afterwards are reduced by the amount of VAT on imports that are projected to be directed to the intermediate consumption.

**Excise Tax.** For the Excise Tax revenues, as with VAT revenues, the projections are made separately for the petrol and tobacco products.

The standard Excise Tax revenues are projected for the major groups of goods taxable by excise tax, based on actual data on purchases of excise-taxable goods as reflected in taxpayers declarations (according to the

State Tax Service or Customs Department data), and applying the tax rates defined by the legislation. The major assumption in projecting excise tax revenues is that the consumption of excise-tax-levied goods will increase proportionally to the growth of services sector in the economy. While for the projection of excise tax on imports, the growth rate of dollar-denominated imports is taken.

**Profit Tax.** Profit Tax revenues are projected for the major groups of taxpayers, based on the previous year's indicators, since the profit tax amount depends on the performance of the previous financial year. For example, profit tax revenue projections are based on certain performance indicators of resident companies and the nominal GDP growth rate for the previous year. In some cases, current profit tax payments are also considered along with the last year's nominal GDP growth rate.

**Income Tax.** Income Tax revenues are projected according to the major sources of Income Tax and based on the current payments and nominal GDP growth rate. The largest share of Income tax payments comes from wages and salaries, which therefore need to be estimated and projected most accurately. To that end, the number of employed, their salaries and social contributions, average per capita nominal salaries growth rate (provided by the State Social Insurance Fund) for each salary bracket are taken as a basis.

**Presumptive Tax.** Presumptive tax revenues are projected for each activity eligible for presumptive taxation in accordance with the current legislation, and are calculated separately for petrol and tobacco products, since their presumptive taxes constitute 23 percent of total tax revenues of the budget.

For tobacco products, first the volumes of domestic production and imports are projected, taking into account the trends of the current year<sup>6</sup>. The same approach is used for projecting the imports of petrol and diesel. Based on the estimates of the tax bases, the presumptive taxes are projected, which then are divided into VAT and excise tax.

For the activities eligible for presumptive taxation, the projections rely on the actual payments of the specific activity and the real final consumption growth rates. For other tax revenues, real GDP growth rate and actual payments of the current year are taken as basis for projections.

<sup>1</sup> Observations of the Budgetary Department of the Ministry of Finance and Economy.

<sup>2</sup> See also the 2003 Budget Declaration.

<sup>3</sup> For this article, the term "standard" tax is used to describe the taxes levied in accordance with general procedures (excluding presumptive taxation).

<sup>4</sup> Effective tax rate is used as the actual (previous year's) ratio of actual VAT revenues to the actual tax base.

<sup>5</sup> VAT for the domestically produced of excise-taxed goods is calculated basing on the turnover including the amount of the excise tax.

<sup>6</sup> E.g. in 2002, consumption of domestically produced filter cigarettes showed an upward trend after raising the tax rates on imported cigarettes, substituting the imports of the latter.

## Projections of the VAT revenues (2003 Annual budget)

<b>Domestic Turnover</b>		<b>Import</b>	
<b>Nominal GDP</b>	<b>1434.9</b>	<b>Imports of goods and services</b>	<b>522.2</b>
<b>Deductible Items,</b>	<b>1052.2</b>	<b>Deductible Items,</b>	<b>123.2</b>
of which		of which	
Exports of goods and services, excluding agricultural production	434.6	Customs value of diamonds	61.6
Gross value added in agriculture	335.4	Customs value of petroleum	34.3
Net indirect taxes	145.0	Customs value of diesel fuel	11.4
Presumptive tax and simple tax base, tax benefits <sup>7</sup>	137.2	Customs value of tobacco	15.9
<b>Additions,</b>	<b>4.8</b>	<b>Additions,</b>	<b>10.3</b>
of which		of which	
Excise tax	4.8	Customs duties	10.0
		Excise tax	0.31
<b>Actual VAT base</b>	<b>386.8</b>	<b>Actual VAT base</b>	<b>409.3</b>

The following calculations are performed to project the VAT revenues from domestic turnover:

1. The potential tax base – GDP – was reduced by exports, value added in agricultural production, net indirect taxes, presumptive and simple tax bases and tax benefits.
2. Tax base for locally produced excise-taxable products was calculated, then – the excise tax amount itself, which was subsequently added to the VAT base.
3. The current 20% rate was applied to the estimated tax base, thus, bringing us to the projection of the VAT revenues.
4. Subsequently, the VAT on imports and VAT component in presumptive taxes for petroleum intended for intermediate consumption was deducted from the amount obtained in the previous step.

As a result, VAT revenues from domestic sales (excluding VAT components in presumptive taxes) was projected to be about 36 bln AMD.

VAT on imports was projected as follows:

1. The customs values of diamonds, petroleum, diesel fuel and tobacco imports was deducted from the projected imports.
2. The customs duties and excise-tax base from imports was estimated, then, the sum of duties and excise tax was added to the VAT base.
3. The effective rate of 10.7% (calculated for 2001-2002 actual data) is applied for the VAT tax base to project the revenues from VAT on imports.
4. The change in revenues resulting from the legislative changes are estimated and added to the VAT amount.

Thus, VAT revenues from imports of goods and services are projected to amount to 47.8 bln AMD, resulting in VAT revenues (excluding VAT component of presumptive taxes) projected at 83.8 bln AMD

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<sup>7</sup> Data from taxpayers' declarations are taken as a basis for the projection of this item

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Economic Policy and Poverty project funded by USAID/Armenia  
Tax, Fiscal and Custom Reform Project.



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