ON THE MEASUREMENT OF TAX CORRUPTION

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The article discusses the issues of measuring the level of tax corruption in the country. The authors proposed two ways to measure tax corruption. Both ways give the same result. Issues related to the specifics of taxation in various sectors of the economy are discussed separately. These are, first of all, agriculture and foreign trade. Taking into account these features of taxation, this paper proposes the use of a system of indicators of tax corruption. Each of the indicators of the system can be measured by the approaches discussed in this paper.
Key words: *tax corruption; tax revenues; nominal GDP; taxation of agriculture; taxation of foreign trade.*

The problem of corruption in tax administrations is one of the most acute (e.g. Bridi, 2010; Fjeldstad, 2005; Pashev, 2006; Rahman, 2009). The quantitative assessment is of great importance when speaking about tax corruption. Indicators necessary for consideration vis-à-vis tax corruption are taken from comparing potential and actual tax revenues (Papava, 2001; Shevardnadze et al., 2000).

The measurement of a country's tax corruption index is based on the gross domestic product (GDP) which is used to estimate the size of the country's economy. By Y_0 and Y_1 we denote the nominal GDP, respectively, in the base (0) and comparable (1) years. Note that for our purposes, the GDP in nominal terms is taken for reasons of comparability with tax revenues.

Let T_0 and T_1 be the tax revenues collected by the tax office, respectively, for the base and comparable years.

For both the base and the comparable years, it is necessary to determine the appropriate indexes t_0 and t_1 tax revenues from the GDP:

$$t_0 = \frac{T_0}{Y_0} \text{ and } t_1 = \frac{T_1}{Y_1}.$$

Potential tax revenues in the comparable year are $T_1^p = t_0 Y_1$. Taking into account these parameters, it is possible to construct a *country tax corruption index*:

$$I'_{tc} = \frac{T_1^p - T_1}{T_1^p} = \frac{t_0 Y_1 - t_1 Y_1}{t_0 Y_1} = \frac{t_0 - t_1}{t_0} = 1 - \frac{t_1}{t_0}. \tag{1}$$

If $I_{tc} > 0$ (or $I_{tc} < 0$) then there is an increase (or reduction) in tax corruption at the tax administration.

The tax corruption index can be calculated in an alternative way when the growth rates of the GDP (α) and tax revenues (β) are directly compared:

$$\alpha = \frac{Y_1}{Y_0} \text{ and } \beta = \frac{T_1}{T_0}.$$

In this case, a country's tax corruption index (I''_{tc}) can be calculated as follows:

$$I''_{tc} = \frac{\alpha - \beta}{\alpha} = 1 - \frac{\beta}{\alpha} = 1 - \frac{T_1/T_0}{Y_1/Y_0} = 1 - \frac{T_1/Y_1}{T_0/Y_0} = 1 - \frac{t_1}{t_0}. \tag{2}$$

Comparing (1) and (2), we come to the conclusion that both methods of measuring country tax corruption lead to the same result; i.e:

$$I'_{tc} = I''_{tc}.$$

In both methods of measuring tax corruption (1) and (2), it is assumed that tax policy in the comparable year remained unchanged as it was in the base year. If the tax policy was changed in the comparable year, then the following should be done: it is necessary for the compared year to recalculate tax revenues based on the tax policy of the base year. In this case, the measurement of the level of tax corruption can be calculated either by method (1) or by method (2).

The abovementioned methods for calculating a country's tax corruption in a direct form, as they are given in (1) and (2), are inappropriate. The problem is that not all parts of the GDP are taxed in the same way. Our most striking example is agriculture which tends to use a different tax regime than other sectors of the economy. Therefore, the sectoral tax corruption index should be calculated separately for agriculture. The principle of calculating this index coincides entirely with (1) or (2).

It is necessary to calculate the level of tax corruption in foreign trade separately since imports and exports are taxed differently and these taxation mechanisms are fundamentally different from the mechanism used in domestic production and consumption. Corresponding indicators of tax corruption for imports and exports can also be calculated based on schemes (1) or (2).

Thus, in order to measure a country's level of tax corruption, it is necessary to create a *system* of relevant indicators on the basis of (1) or (2). Each of these indicators should take into account the specifics of the taxation regimes in each sector of the GDP.

In conclusion, we note that the system of indicators of tax corruption makes it possible to identify "weak points" in tax administration which ultimately will contribute to the adoption of adequate measures against this corruption.

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საგადასახადო კორუფციის გაზომვის შესახებ

ნოდარ ხადური
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ანოტაცია

სტატიაში განხილულია ქვეყანაში საგადასახადო კორუფციის გაზომვის საკითხები. ავტორების მიერ შეთავაზებულია საგადასახადო კორუფციის გაზომვის ორი ხერხი. ორივე მათგანი ერთსა და იმავე შედეგს იძლევა. ცალკე განიხილება ისეთი საკითხები, რომლებიც ეკონომიკის სხვადასხვა დარგის დაბეგვრის სპეციფიკასთანაა დაკავშირებული. ეს, უწინარეს ყოვლისა, ეხება სოფლის მეურნეობასა და საგარეო ვაჭრობას. დაბეგვრის ამ თავისებურებათა გათვალისწინებით სტატიაში შეთავაზებულია საგადასახადო კორუფციის მაჩვენებელთა სისტემის გამოყენება. სისტემის თითოეული მაჩვენებელი შეიძლება გაიზომოს იმ მიდგომების საფუძველზე, რომლებიც სტატიაშია განხილული.

საკვანძო სიტყვები: საგადასახადო კორუფცია; საგადასახადო შემოსავლები; ნომინალური მთლიანი სამამულო პროდუქტი; სოფლის მეურნეობის დაბეგვრა; საგარეო ვაჭრობის დაბეგვრა.