MEASURING PERFORMANCE OF HOW GOODS CONSTITUTING PUBLIC AND PRIVATE SECTORS OF THE STATE AND ADMINISTRATIVE-TERRITORIAL DIVISIONS ARE USED

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ABSTRACT: Along with solving the public bookkeeping dilemma: CASH ACCOUNTING vs. ACCRUALS BASIS OF ACCOUNTING there is a drive for implementing elements of management accounting in order to track the velocity of the economic phenomenon and the judicious evaluation of the performance of public resource consumption. Therefore we proposed a set of indicators to measure the effect and appraise credibly the performance of public resource consumption that shape the public and private sector of the state (or the one of the administrative-territorial divisions). The eventuality of implementing a managerial system alongside with adopting the accrual accounting and the reasonable implementation of international accounting standards for the private sector will definitely lead to obtaining realistic financial standings.

Keywords: public sector, private state sector, inventory, performance, indicator

JEL Codes: H83, M41

Introduction

The actual global crisis developed firstly as a disfunctionality of the American banking system to spread afterwards both as a systemic crisis and slump of the European finance public system.

Premise of realizing this study was to help accountants in the working field. Thus, the following computational models for measuring efficiency will help taking decisions but also analyzing the way of dealing with handed public resources.

According to the philosophy of NPM ("New Public Management"),

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starting with 2006, public institutions from Romania switched from cash accounting regulation based on the Ordinance of the Public Finances Ministry No. 596/1970 to accruals basis of accounting regulated by the Ordinance of the Public Finances Ministry No. 1917/2005 (from now onwards OPFM 1917/2005).

The scientific importance of our study together with its contribution to technical accounting literature for the public sector stands behind the fact that Romania doesn't have any similar research to credibly analyze the performance of how public and private state sectors are made use of.

It is widely spread that management accounting occupies a rank of maximum importance within new economic divisions. So it's thrive is to extend over the public entities as well.

In 2007, Roman C., Roman A. Geta şi Tabără V. issued a work related to financial inventory of the local public entities, Economic publisher, in which they tried to elaborate the indicators for local public entities, but corresponding to the cash accounting.

In addition, Tiron Tudor released in 2008 a study related to the new public accounting system in Romania. His bottom line was that employees working in the public institutions of cities, municipalities and villages within the accounting department need to seriously improve their knowledge. Furthermore, the ones elaborating financial standings and using bookkeeping information need to be trained. At village level, there exist only few, almost no trained accountants and the financial management is seen less important than respecting the law. Tiron considers that the first step made towards accruals basis of accounting in Romania was made by OPFM 1917/2005.

Indicators and statistical shaping of phenomena

In order to define capital, there can be used the following indicator types:

1) capacity indicators
2) structure indicators
3) dynamic range indicators
4) physical dimension indicators
5) movement indicators
6) indicators of efficient usage

Each indicator group will have a different approach for the following sectors:

- Public and private state sector
- Public and private sector of administrative territorial

divisions[3]

The inventory capacity of goods in the public and private domain can be measured following two sets of indicators:

- Indicators expressed in physical units
- Indicators expressed in units of account

The physical units division is used for measuring the capacity of the public and private sector of the state on each category.

This way it is impossible to determine a synthetic indicator to reflect the range of public and private sector of the state out from a credit sequencer or national economy. The units of account imply using the accounting values registered within the accounting entries of public and/or judicial entities.

Inventory value of state sector goods

The inventory value of goods can be expressed at complete initial value, rest value or substitution value.

Account statement facilitates assessing a synthetic indicator and correlating to other economic indicators.

Complete initial value (VIC) = the total amount of expenditures made for building or acquiring, transporting and operating assets that form public and private state sector. This value is the main characteristic to represent dynamics and structure of fixed assets, as well as their efficiency together with calculating depreciation.

Rest Value (VR) = the VIC fragment that hasn't been yet shifted to the production via depreciation.

$$VR = VIC - Am \quad (1)$$

where:

Am - Depreciation (subsidiary account 281)

or

$$VR = VIC - Uz \quad (2)$$

where:

Uz – Usage

Using rest value there is possible to shape physical dimension of inventory value of goods forming public and private state sector that can be also identified within fixed capital and its efficiency. These indicators are

[3] Out of procedural incentives there will be presented only indicators to form the public and private state sector

often used at underlying the investment scheme.

The Substitution value (VI) is assigned once with revaluating the inventory of goods forming public and private state sector. Its goal is to correlate the value from the accounting records with the existent prices at the revaluation moment.

The expressed value of goods forming public and private state sector highlights its value amount at a certain time, so as a stock indicator.

The inventory (assets) of goods forming public and private state sector is necessary for economic analyzes with flow indicators. Therefore it is important to calculate the *annual value of fixed assets* that can be estimated as the average of monthly amounts.

$$\overline{F} = \frac{V_1 + V_2 + V_3 + ... + V_{12}}{12} \quad (3)$$

or

$$\overline{F} = V_1 + VMI - VME \quad (4)$$

where:
VMI = average inflows
VME = average outflows

Remaining average annual value:

$$\overline{FR} = \overline{F} \cdot \frac{VR_1 + VR_{12}}{V_1 + V_{12}} \quad (5)$$

where:

V = monthly amount

Goods forming public and private state sector - composition

Can be estimated after arrangements of goods forming public and private state sector on components according to the "General entries plan". The grouping takes place as follows:

According to the material constitution it can be divided into elements after the "General entries plan"

according to the main credit sequencer

according to the service duration:

new goods forming public and private state sector younger than a year

goods forming public and private state sector with shorter service duration than the rated duration

goods forming public and private state sector with longer service duration than the rated duration

$$g_i^F = \frac{FF_i}{\sum FF_i} \cdot 100 \qquad (6)$$

where:

g_i^F - Composition of goods forming public and private state sector

FF_i - Public and private state domain component

$\sum FF_i$ - Sum of all public and private state domain components

Goods forming public and private state sector - dynamics

Is characterized by the following specific indicators:

- *Status indicators*
- *Utility status indicator*
- *Usage indicator*
- *Motion indicators*
- *Renewal indicator*
- *Outflow (shutting down) indicator*
- *Efficient use indicators*
- *EFFECT/EFFORT Indicators*
- *EFFORT/EFFECT Indicators*

The motion of the inventory of goods forming the public and private state sector can be estimated with the following indicators:

$$I^{FF} = \frac{FF_1}{FF_0} \qquad (7)$$

where:

I^{FF} – motion indicator

1. Status indicators of the inventory of goods forming the public and private state sector:

- Utility status indicator
- Usage indicator

The inventory's status of goods forming the public and private state sector is evaluated on behalf of usage and utility status indicators.

The utility status indicator of the inventory of goods forming the public and private state sector expresses how much represents the rest value from the complete initial value in percentage.

$$IUZ = \frac{UZ}{VIC} \cdot 100 \qquad (8)$$

where:

ISUT- Utility status indicator of the inventory of goods forming the public and private state sector (%)

VR - rest value

VIC – complete initial value

The bigger the indicator is, the better the utility status of goods forming the public and private state sector.

The usage indicator of goods forming the public and private state sector expresses the percentage of the complete initial value that has been recovered through depreciation.

$$IUZ = 100 - ISUT \qquad (9)$$

where:

IUZ- Usage indicator of the inventory of goods forming the public and private state sector (%)

ISUT- Utility status indicator of the inventory of goods forming the public and private state sector (%).

The smaller the indicator is, the better the utility status. But on macroeconomic level there is possible to estimate the utility status of the usage of goods forming the public and private state sector with another indicator. This one expresses the actual weight of goods usage forming the public and private state sector from the total permanent capital. The bigger the weight of the new permanent capital is, the better the utility status.

Motion indicators of the inventory of goods forming the public and private state sector

- Renewal indicator of the inventory of goods forming the public and private state domain
- outflow (shutting down) indicator of the inventory of goods forming the public and private state domain
- Motion indicators of the inventory of goods forming public and private state sector estimate its operation and decommissioning. In order to evaluate these aspects there are the following two indicators:
- the renewal indicator of the inventory of goods forming public and private state sector represents a ratio between the value of the operating permanent capital during the year and the value of the permanent capital at the end of the year. For both ways the ratio is reported to complete initial value.

Outflow indicator of the inventory of goods forming public and private state sector (shutting down) can be defined as a ratio between the value of the operating permanent capital during the year and the value of the permanent capital at the beginning of the year. Operating and decommissioning new capital has a great influence on their physical status.

Efficient use indicators of goods forming public and private state sector

Use efficiency of goods forming public and private state sector can be calculated by efficiency component indicators. For measuring and analyzing the efficient use there are the following indicators:

- EFFECT/EFFORT indicators that express the resulted effect on each input effort unit. These are also known as efficiency of goods forming public and private state sector.
- EFFORT/EFFECT indicators that establish the necessary effort for attaining one effect unit and can be also recognized as required capital of goods forming public and private state sector.

Within the efficiency analysis of goods forming public and private state sector, the effort is expressed as the value of the inventory of goods forming public and private state sector at initial value or remaining value after reducing the depreciation.

The effect is expressed by production indicators like: GDP, NI, PIN, VAD etc.

Research methodology

At national economy level the efficiency of the inventory of goods forming the public and private state domain is expressed as follows:

$$EFF = \frac{PIB}{FF} \tag{10}$$

where

EFF- efficiency indicator of the inventory of goods forming the public and private state domain

PIB- Gross Domestic Product

FF - component of public and private state domain

At national economy level, "EFF - efficiency indicator of the inventory of goods forming the public and private state domain" is the arithmetic weighted mean of efficiencies at branch level, i.e.:

$$\overline{EFF} = \frac{PIB}{FF} = \frac{\sum VAB_i}{\sum FF_i} \tag{11}$$

$$EFF_i = \frac{VAB_i}{FF_i} \tag{12}$$

$$VAB_i = EFF_i \cdot FF_i \tag{13}$$

where:

$$\overline{EFF} = \frac{\sum EFF_i \cdot FF_i}{\sum FF_i} = \sum EFF_i \cdot g_i^{FF} \tag{14}$$

where:

$$g_i^{FF} = \frac{FF_i}{\sum FF_i} \tag{15}$$

EEF dynamics is expressed by the efficiency indicator - efficiency indicator of the inventory of goods forming the public and private state domain:

$$I^{EFF} = \frac{\overline{EFF_1}}{\overline{EFF_0}} \tag{16}$$

or

$$I^{EFF} = \frac{I^{PIB}}{I^{FF}} \tag{17}$$

EFF extension means that IEFF indicator > 1 is, fact that is reflected as a faster increase of the GDP than the FF, i.e. IPIB > IFF. In order to determine the influence that factors have on EFF change there can be used necessitation and stochastic methods (see also work productivity). In the case of necessitation methods the main used methods are the following:

1) $\overline{EFF} = EFF_i \cdot g_i^{FF}$ (18)

The influence of composition on efficiency of goods forming the inventory of public and private state sectors can be interpreted as follows: in case that the structure changes favorable to high efficiency branches it will determine an increase at national economy level.

$EFF_i \cdot g_i^{FF}$ represents the total absolute contribution of each branch to average efficiency.

The relative contribution of branches at achieving the average efficiency will be:

$$\frac{EFF_i \cdot g_i^{FF}}{\sum EFF_i \cdot g_i^{FF}} \cdot 100 \tag{19}$$

where:

$EFF_i \cdot g_i^{FF}$ total absolute contribution of each branch to average efficiency

$\sum EFF_i \cdot g_i^{FF}$ is the sum of all absolute contributions to attaining the average efficiency

2) Efficiency analysis of fixed capital dependent on the efficiency of asset goods that form the inventory of public and private state sector.

Asset goods that form the inventory of public and private state sector represent those assets that influence working objects directly.

We define at branch level the efficiency of asset goods that form the inventory of public and private state sector.

$$EFFA_i = \frac{VAB_i}{FFA_i} \tag{20}$$

$$EFF_i = \frac{VAB_i}{FF_i} \tag{21}$$

$$EFF = \frac{VAB_i}{FF_i} \cdot \frac{FFA_i}{FFA_i} \tag{22}$$

$$g_i^{FFA} = \frac{FFA_i}{FF_i} \tag{23}$$

Result

$$EFF_i = EFFA_i \cdot g_i^{FFA} \tag{24}$$

Thus efficiency of goods forming the inventory of public and private state sector relies on both the efficiency of asset goods forming the inventory of public and private state domain and on the structure of the social used capital.

$$\overline{EFF} = \sum EFF_i \cdot g_i^{FF} \tag{25}$$

$$\overline{EFF} = \sum EFFA_i \cdot g_i^{FFA} \cdot g_i^{FF} \tag{26}$$

Conclusions

The need of reforming the accounting sector of public authorities brings into discussion the following dilemmas:

- Accrual basis of accounting is completer than cash accounting;
- Forces public authorities to keep a record of all assets, liabilities, capitals, earnings and expenditures;
- It offers a greater picture over the assets and liabilities of public authorities;
- Stresses on transparency and accuracy;
- Gathers information in a completer way regarding service costs, and for the better analysis process, it measures the expenditures with programs and activities;

- Avails information regarding performance or inefficiency of public authorities in economic terms as well as cash disposals;
- The implementation of this new regulation within accounting sector of public authorities hasn't been evolved enough in terms of statistical and performance measuring indicators of public budget management, especially the treasury flows.

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