CONCEPTUAL AND ACCOUNTING ASPECTS RELATING CONSTRUCTION CONTRACTS IN PUBLIC ENTITIES

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Abstract
Subsequent to the nature of activities performed in construction contracts, the date on which contract execution begins and the date of its completion generate two major issues in accountancy. The former issue occurs as a result of the fact that most construction contracts concluded by public sector entities do not specify the value of revenues under the contracts and accountancy therefore must find solutions for the way to allocate contract costs for the reporting periods of time when work was rendered and related expenses were recognized. The latter issue occurs when construction contracts were concluded on a commercial or non-commercial basis while recuperating partial or total costs, an issue which accounting has to settle in relation with the allocation of contract revenues and contract costs of reporting periods during which work was performed.

Key words: cost plus or cost-based contract, commercial contract, non-commercial contract, fixed-price contract, contract deficit

JEL Classification M41

Introduction
The accountancy of public entities as a field in itself is characterized as open and responsive to the changes in the political, economic, social and cultural environments. Thus, current information requirements have imposed the choice of a common language in financial reporting. The progress attempts to envisage the improvement and reduction of differences between national accounting practices and regulations aiming at the preparation of general principles and norms meant for information comparability provided by the content of financial statements of public sector entities, namely also aiming at the reduction of differences among the accounting regulations of various countries.

The present paper suggests an analysis of the convergence and harmonization level of national accounting norms regarding the recognition and registration of operations related to construction contracts in compliance with International Public Sector Accounting Standard IPSAS 11 ”Construction Contracts”.

1. Conceptual Limits Regarding Construction Contracts

According to the international accounting standard, registering construction contracts is the object of international accounting norm IPSAS 11”Construction Contracts”. The objective of this standard is to prescribe the accounting treatment of costs and revenue associated with construction contracts. IPSAS 11 defines in its point 4 a construction contract as: “a contract or a similar binding agreement specifically negotiated for the construction of an asset or a combination of assets that are closely interrelated or interdependent in terms of their design, technology, and function or their ultimate purpose or use”.

The standard stipulates two categories of construction contracts as such:

a. Cost plus or cost-based contract – it is a construction contract in which the contractor is reimbursed for allowable or otherwise defined costs and, in the case of a commercially based contract, an additional percentage of these costs or a fixed fee, if any. Cost plus or cost-based contracts include:
- Construction contracts where it is specified that revenue to cover the agreed constructor’s construction costs and generate a profit margin will be provided by the other parties to the contract;
- Non-commercial contracts are concluded to construct an asset for another entity in return for full or partial reimbursement of costs from that entity or other parties. The cost recovery may encompass payments by the recipient entity and specific purpose construction grants or funding from other parties.

b. Fixed price contract – is a construction contract in which the contractor agrees to a fixed contract price, or a fixed rate per unit of output, which in some cases is subject to cost escalation clauses.
In some cases, one public sector entity constructs assets for another public sector entity and the cost of construction activity is not recovered directly from the recipient. Rather, the construction activity is funded indirectly by way of a general appropriation or other allocation of general government funds to the contractor, or from general purpose grants from third party funding agencies or other governments. These are classified as fixed price contracts for the purpose of this Standard.

The requirements needed to identify a contract or a group of contracts are also needed to reflect the accounting substance of the respective contract or group of contracts, starting from the provisions of IPSAS 11 "Construction Contracts" as such:

1. When a contract covers a number of assets, the construction of each asset shall be treated as a separate construction contract when:
   a. Separate proposals have been submitted for each asset;
   b. Each asset has been subject to separate negotiation, and the contractor and customer have been able to accept or reject that part of the contract relating to each asset; and
   c. The costs and revenues of each asset can be identified.

2. A group of contracts, whether with a single customer or with several customers, shall be treated as a single construction contract when:
   a. The group of contracts is negotiated as a single package;
   b. The contracts are so closely interrelated that they are, in effect, part of a single project with an overall margin, if any; and
   c. The contracts are performed concurrently or in a continuous sequence.

Let us start with the following situation: a public entity enters into a construction contract to build a kindergarten for pre-school children. The contract stipulates the accomplishment of the following assets: kindergarten building, kindergarten canteen, and special playground for the pre-school children. In such a context, the following question arises regarding the accounting treatment which should apply to such a construction contract. The proper treatment is as follows [Țenovici, C.O., 2013, p. 135]:

- Assumption one: if the three assets specified in the construction contract have been negotiated separately and the costs and revenue associated to each can be identified, they shall be treated as three distinct construction contracts, although there is only one contract if seen from the legal perspective;
- Assumption two: the contract recipient is one public entity and the three contracts have been negotiated together, whereas the works shall be performed concurrently or in a continuous sequence. In this case, there is only one contract if seen from the accounting perspective even if it envisages the construction of three assets.

There are cases when a contract is amended to include the construction of an additional asset. The construction of the additional asset shall be treated as a separate construction contract when:

a. The asset differs significantly in design, technology, or function from the asset or assets covered by the original contract; or
b. The price of the asset is negotiated without regard to the original contract price.

Here is another assumption with regard to the example shown above: the public entity which is the contract recipient wants the construction of an additional asset apart from the three assets originally stipulated under the contract, namely a sports hall. The price of the additional asset shall not be influenced by the price set in the original contract that is why the construction contract shall be recognized from the accounting perspective in order to accomplish this asset as a distinct one.

2. Recognition of Contract Revenue and Expenses Associated with Construction Contracts

According to IPSAS 11 "Construction Contracts", the outcome of a construction contract should include:

a. The initial amount of the original contract revenue; and
b. Amendments in contract works, claims and incentive payments to the extent to which: it is probable they will turn into revenue; and can be measured reliably.

If the revenue of a construction contract cannot be measured reliably, revenue shall be recognized only if it is probable contract costs incurred could be recovered, whereas contract costs shall be recognized as expenses during the period when they have been generated.

Although contract-associated revenue is set at the time of contract negotiation, in most cases the original contract revenue is significantly different from the final one. The differences can be caused by (IFAC, 2009, p.306):

a. A contractor and a customer may agree to variations or claims that increase or decrease contract revenue in a period subsequent to that in which the contract was initially agreed;

b. The amount of revenue agreed in a fixed price, cost plus, or cost-based contract may increase as a result of cost escalation or other clauses;
c. The amount of contract revenue may decrease as a result of penalties arising from delays caused by the contractor in the completion of the contract; or

d. When a fixed price contract involves a fixed price per unit of output, contract revenue increases or decreases as the number of units is increased or decreased.

According to IPSAS 11, “Construction Contracts”, contract costs shall comprise:

a. Costs that relate directly to a specific contract which include:
   - Site labour costs, including site supervision;
   - Costs of materials used in construction;
   - Depreciation of plant and equipment used on the contract;
   - Costs of moving plant, equipment, and materials to and from the contract site;
   - Costs of hiring plant and equipment;
   - Costs of design and technical assistance that are directly related to the contract;
   - The estimated costs of rectification and guarantee work, including expected warranty costs; and;
   - Claims from third parties.

These costs that are directly related to the contract may be reduced at the end of it by any incidental revenue that is not included in contract revenue.

For example, such revenue may ensue from revenue from the sale of surplus materials, namely the sale of plant and equipment at the end of the contract.

b. Costs that are attributable to contract activity in general, and can be allocated to the contract on a systematic and rational basis which include:
   - Costs of design and technical assistance that are not directly related to a specific contract – in some cases, the costs of design and technical assistance aim at assets that are subject to different construction contracts which leads to their allocation to each of the contracts;
   - Insurance should be similarly allocated to costs of design and technical assistance;

Construction overheads - such costs are allocated using methods that are systematic and rational and are applied consistently to all costs having similar characteristics.

c. Costs those are specifically chargeable to the customer under the terms of the contract. They may include some general administration costs and development costs for which reimbursement is specified in the terms of the contract.

According to Romanian accounting regulation [Government Decree no.28 / 2008] which endorses the framework content of the technical-economic documentation related to public investment and structures the draft methodology of the estimate for investment objectives and construction works in public entities, the costs associated to construction contracts are represented by:

a. Costs for land purchase and land development including the costs to obtain land and improve land, namely development costs aiming at ensuring environment protection and costs to bring the land to its original condition;

b. Utility costs needed to accomplish an objective;

c. Costs for design and technical assistance including: land-related studies; fees paid in order to be granted permits, agreements and authorizations, design and engineering; organization of purchase procedures; consultancy; technical assistance.

d. Costs for the initial investment including: costs for constructions and plants; technological machinery fitting; technological, functional machinery and equipment along with their fitting; machinery with no fitting included and transport equipment; endowment; intangible assets.

e. Other expenses: building site planning (construction works and costs associated to building site planning); commissions, quotas, fees, credit costs; miscellaneous, unforeseen expenses.

f. Costs related to technological samples and tests, and delivery to recipient including: training of operating personnel; technological samples and tests.

Costs that cannot be attributed to contract activity or cannot be allocated to a contract are excluded from the costs of a construction contract. Such costs include [IFAC, 2009, p.309]:

- General administration costs for which reimbursement is not specified in the contract;
- Selling costs;
- Research and development costs for which reimbursement is not specified in the contract;
- Depreciation of idle plant and equipment that is not used on a particular contract.

Where contract costs that are to be reimbursed by parties to the contract are not probable of being recovered, they are recognized as an expense immediately. Examples of circumstances in which the recoverability of contract costs incurred may not be probable, and in which contract costs may need to be recognized as an expense immediately, include contracts:

- that are not fully enforceable, that is, their validity is seriously in question;
- the completion of which is subject to the outcome of pending litigation or legislation;
- relating to properties that are likely to be condemned or expropriated;
- where the customer is unable to meet its obligations;
3. Recognition of Outcomes and Ways to Allocate Them by Reference to the Stage of Completion of Construction Contracts

3.1. Recognition of Construction Contracts’ Outcomes

In the case of a fixed price contract, the outcome of a construction contract can be estimated reliably when all the following conditions are satisfied [IFAC, 2009, p.310]:

a. Total contract revenue, if any, can be measured reliably;

b. It is probable that the economic benefits or service potential associated with the contract will flow to the entity;

c. Both the contract costs to complete the contract and the stage of contract completion at the reporting date can be measured reliably; and

d. The contract costs attributable to the contract can be clearly identified and measured reliably, so that actual contract costs incurred can be compared with prior estimates.

In the case of a cost plus or cost-based contract, the outcome of a construction contract can be estimated reliably when all the following conditions are satisfied [IFAC, 2009, p.310]:

a. It is probable that the economic benefits or service potential associated with the contract will flow to the entity; and

b. The contract costs attributable to the contract, whether or not specifically reimbursable, can be clearly identified and measured reliably.

In respect of construction contracts in which it is intended at inception of the contract that contract costs are to be fully recovered from the parties to the construction contract, when it is probable that total contract costs will exceed total contract revenue, the expected deficit shall be recognized as an expense immediately.

Public sector entities may often enter into construction contracts that specify that the revenue intended to cover the construction costs will be provided by the other parties to the contract. Here, too, the construction contracts expected deficit shall be recognized as an expense.

Allocating a construction contract outcome may take place by using two methods: the stage of completion method and the percentage of completion method.

3.2. The Percentage of Completion Method

The percentage of completion method means that contract revenue is matched with the contract costs incurred in reaching the stage of completion, resulting in the reporting of revenue, expenses, and surplus/deficit that can be attributed to the proportion of work completed. This method provides useful information on the extent of contract activity and performance during a period.

The stage of completion of a contract may be determined in a variety of ways [IFAC, 2009, pag.311]:

- the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs;
- surveys of work performed; or
- completion of a physical proportion of the contract work. According to IPSAS 11 “Construction Contracts”, when the stage of completion is determined by reference to the contract costs incurred to date, only those contract costs that reflect work performed are included in costs incurred to date. Examples of contract costs that are excluded are:
  a. Contract costs that relate to future activity on the contract, such as costs of materials that have been delivered to a contract site or set aside for use in a contract, but not yet installed, used, or applied during contract performance, unless the materials have been made specially for the contract; and
  b. Payments made to subcontractors in advance of work to be performed under the subcontract.

The author of the present study is to develop all the theoretical aspects shown above from a practical perspective starting with a number of illustrating examples.

Practical example to apply IPSAS 11 “Construction Contracts” – non-commercial contracts

A public entity “X” acting as the contractor enters into an agreement to perform the construction of a kindergarten for pre-school children with an entity “Z”, acting as the recipient of the construction works. The recipient public entity is funded by a grant. The construction contract concluded therefore identifies construction requirements including estimated costs, technical specifications and date of completion, but does not guarantee for the recovery of construction costs directly from beneficiary public entity Z”. The contract’s originally estimated costs are 32,000 Lei, and the construction duration agreed under the contract is three years. An aid agency has agreed to provide funding in the amount of 16,000 Lei, which has been clearly stipulated in the
construction contract concluded. Additional costs are estimated to occur by the end of Year 1, which shall raise the original contract costs up to 32,200 Lei. In Year 2, the Government has approved a variation resulting in estimated additional contract costs of 600 Lei. The aid agency agrees to fund 50% of this variation.

The completion stage of this construction contract is determined by calculating the proportion between up-to-date contract costs to bear and the latest estimated contract costs. Contract costs are recognized as expense according to the percentage of completion method and contract revenue is recognized by reference to recoverable costs born during the construction period measured by the proportion in which recoverable up-to-date costs to bear lead to estimating the total contract costs.

Table no.1.
Calculation of contract elements for the non-commercial contract concluded between "X" and "Z" public entities

<table>
<thead>
<tr>
<th>Year</th>
<th>Calculation elements</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial amount of revenue agreed in contract</td>
<td>16,000</td>
<td>16,000</td>
<td>16,000</td>
</tr>
<tr>
<td></td>
<td>Variation of contract revenue</td>
<td>-</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>Total contract revenue</td>
<td>16,000</td>
<td>16,400</td>
<td>16,400</td>
</tr>
<tr>
<td></td>
<td>Contract costs incurred to date</td>
<td>9,660</td>
<td>26,240</td>
<td>32,800</td>
</tr>
<tr>
<td></td>
<td>Contract costs to complete</td>
<td>32,200 - 9,660 = 22,540</td>
<td>32,800 - 26,240 = 6,560</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Total estimated contract costs</td>
<td>32,200</td>
<td>32,200 + 600 = 32,800</td>
<td>32,200 + 600 = 32,800</td>
</tr>
<tr>
<td></td>
<td>Stage of completion</td>
<td>9,600 / 32,200 = 30%</td>
<td>26,240 / 32,800 = 80%</td>
<td>32,800 / 32,800 = 100%</td>
</tr>
</tbody>
</table>

Table no.2.
Recognized revenue and costs in the statement of financial performance in terms of the non-commercial contract

<table>
<thead>
<tr>
<th>Year</th>
<th>Calculation elements</th>
<th>To date</th>
<th>Revenue/Costs recognized in prior years</th>
<th>Revenue/Costs recognized in current year</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Revenue</td>
<td>30% x 16,000 = 4,800</td>
<td>-</td>
<td>4,800</td>
</tr>
<tr>
<td></td>
<td>Expenses</td>
<td>30% x 32,200 = 9,660</td>
<td>-</td>
<td>9,660</td>
</tr>
<tr>
<td>II</td>
<td>Revenue</td>
<td>80% x 16,400 = 13,120</td>
<td>4,800</td>
<td>8,320</td>
</tr>
<tr>
<td></td>
<td>Expenses</td>
<td>80% x 32,800 = 26,240</td>
<td>9,660</td>
<td>16,580</td>
</tr>
<tr>
<td>III</td>
<td>Revenue</td>
<td>100% x 16,400 = 16,400</td>
<td>13,120</td>
<td>3,280</td>
</tr>
<tr>
<td></td>
<td>Expenses</td>
<td>100% x 32,800 = 32,800</td>
<td>26,240</td>
<td>6,560</td>
</tr>
</tbody>
</table>

Practical example to apply IPSAS 11”Construction Contracts” – commercial contracts [Ţenovici, C.O., 2013, p. 141-143]: A public entity "X" predominantly funded by appropriation, acting as the contractor is empowered by the main credit release authority to undertake construction work and has entered a fixed price commercial contract for 36,000 Lei to build a sports venue. The initial amount of revenue agreed in the contract is 36,000 Lei, and the contractor’s initial estimate of contract costs is 32,000 Lei. It will take three years to build the sports venue. By the end of Year 1, the estimate of contract costs has increased to 200 lei, and the costs incurred for work performed to date are 9,660 Lei. In Year 2, the customer approves a variation resulting in an increase in contract revenue of 800 Lei and estimated additional contract costs of 600 Lei, with the costs incurred for work performed to date being 26,240 Lei. The stage of completion of the contract is determined by calculating the proportion that contract costs incurred for work performed to date bear to the latest estimated total contract costs.

Table no.3.
Calculation of contract elements for the commercial contract concluded by public entity "X" – the percentage of completion method

<table>
<thead>
<tr>
<th>Year</th>
<th>Calculation elements</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial amount of revenue agreed in contract</td>
<td>36,000</td>
<td>36,000</td>
<td>36,000</td>
</tr>
<tr>
<td></td>
<td>Variation of contract revenue</td>
<td>-</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>Total contract revenue</td>
<td>36,000</td>
<td>36,800</td>
<td>36,800</td>
</tr>
<tr>
<td></td>
<td>Contract costs incurred to date</td>
<td>9,660</td>
<td>26,240</td>
<td>32,800</td>
</tr>
</tbody>
</table>
**Contract costs to complete**

\[ 32.200 - 9.660 = 22.540 \]
\[ 32.800 - 26.240 = 6.560 \]
\[ 32.200 + 600 = 32.800 \]

**Total estimated contract costs**

\[ 32.200 \]
\[ 32200 + 600 = 32.800 \]
\[ 32.200 + 600 = 32.800 \]

**Estimated surplus**

\[ 3.800 \]
\[ 4.000 \]
\[ 4.000 \]

**Stage of completion**

\[ 9.600 / 32.200 = 30\% \]
\[ 26.240 / 32.800 = 80\% \]
\[ 32.800 / 32.800 = 100\% \]

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**Recognized revenue and costs in the statement of financial performance in terms of the commercial contract – the percentage of completion method**

<table>
<thead>
<tr>
<th>Year</th>
<th>Calculation elements</th>
<th>To date</th>
<th>Revenue/Costs recognized in prior years</th>
<th>Revenue/Costs recognized in current year</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Revenue</td>
<td>30% x 36.000 = 10.800</td>
<td>-</td>
<td>10.800</td>
</tr>
<tr>
<td></td>
<td>Expenses</td>
<td>30% x 32.200 = 9.660</td>
<td>-</td>
<td>9.660</td>
</tr>
<tr>
<td></td>
<td>Surplus</td>
<td>1.140</td>
<td>-</td>
<td>1.140</td>
</tr>
<tr>
<td>II</td>
<td>Revenue</td>
<td>80% x 36.800 = 29.440</td>
<td>10.800</td>
<td>18.640</td>
</tr>
<tr>
<td></td>
<td>Expenses</td>
<td>80% x 32.800 = 26.240</td>
<td>9.660</td>
<td>16.580</td>
</tr>
<tr>
<td></td>
<td>Surplus</td>
<td>3.200</td>
<td>1.140</td>
<td>2.060</td>
</tr>
<tr>
<td>III</td>
<td>Revenue</td>
<td>100% x 36.800 = 36.800</td>
<td>29.440</td>
<td>7.360</td>
</tr>
<tr>
<td></td>
<td>Expenses</td>
<td>100% x 32.800 = 32.800</td>
<td>26.240</td>
<td>6.560</td>
</tr>
<tr>
<td></td>
<td>Surplus</td>
<td>4.000</td>
<td>3.200</td>
<td>800</td>
</tr>
</tbody>
</table>

Disclosure in the accounting of entity "X" is as follows:

Year 1:

a. accounting disclosure of expenses due to completion of works according to their nature (generic formula):

Class 6 – "Expense Accounts" = %

Class 3 – "Inventories"
Class 4 – "Third Party Accounts"
Class 5 – "Pecuniary Resources Accounts"

b. in the end of the tax year, the work performed is entered:

\[ 332 \]

"Work and Services in Progress"
"Inventory Variation"

Incidence of accounting disclosure upon the statement of financial performance in Year 1:

revenue from work performed: 10.800
contract costs incurred to date: 9.660
surplus: 1.140

Year 2:

a. accounting disclosure of expenses due to completion of works according to their nature (generic formula):

Class 6 – "Expense Accounts" = %

Class 3 – "Inventories"
Class 4 – "Third Party Accounts"
Class 5 – "Pecuniary Resources Accounts"

b. in the end of the tax year, the work performed is entered:

\[ 332 \]

"Work and Services in Progress"
"Inventory Variation"

Incidence of accounting disclosure upon the statement of financial performance in Year 2:

revenue from work performed: 18.640
contract costs incurred to date: 16.580
surplus: 2.060

Year 3:

a. accounting disclosure of expenses due to completion of works according to their nature (generic formula):

Class 6 – "Expense Accounts" = %

Class 3 – "Inventories"
Class 4 – "Third Party Accounts"
Class 5 – "Pecuniary Resources Accounts"

b. in the end of the tax year, the work performed is entered:

\[ 332 \]

"Work and Services in Progress"
"Inventory Variation"
c. contract billing for the recipient:
VAT registered public entity:

\[
\text{4111} = 45.632\% \\
\]

"Customers with less than one year maturity":

\[
704 = 36.800 \\
\]

"Revenue from services rendered and work performed"

\[
4427 = 8.832 \\
\]

"Output VAT"

VAT non-registered public entity:

\[
\text{4111} = 45.632 \\
\]

"Customers with less than one year maturity":

\[
704 = 36.800 \\
\]

"Revenue from services rendered and work performed"

\[
709 = 332 \\
\]

"Inventory Variation" "Work and Services in Progress"

d. accounting disclosure:

\[
\text{709} = 332 \\
\]

Incidence of accounting disclosure upon the statement of financial performance in Year 2:

- total contract revenue: 36.800
- revenue from work performed (b and d): 7.360
- contract costs incurred to date: 6.560

surplus: 800

3.3. The Stage of Completion Method

The stage of completion method is used by an entity to determine the contract outcome but only when the contract has completed. Revenue shall be recognized only to the extent of contract costs incurred that are probable to be recoverable from the recipient. During the stages of the contract, there is no surplus recognized which shall however be recognized during the tax year when construction works come to an end. The application of the method shall be done for the same type of commercial contract as shown above [Ţenovici, C.O., 2013, p. 144-146].

Table no.5.

Calculation of contract elements for the commercial contract concluded by public entity "X" – the stage of completion method

<table>
<thead>
<tr>
<th>Year Calculation elements</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial amount of revenue agreed in contract</td>
<td>36.000</td>
<td>36.000</td>
<td>36.000</td>
</tr>
<tr>
<td>Variation of contract revenue</td>
<td>-</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>Total contract revenue</td>
<td>36.000</td>
<td>36.800</td>
<td>36.800</td>
</tr>
<tr>
<td>Contract costs incurred to date and likely to be recovered from recipient</td>
<td>9.660</td>
<td>26.240</td>
<td>32.800</td>
</tr>
<tr>
<td>Revenue to be recognized in accounting as the stage of completion method</td>
<td>9.660</td>
<td>26.240</td>
<td>32.800</td>
</tr>
<tr>
<td>Estimated surplus</td>
<td>0</td>
<td>0</td>
<td>4.000</td>
</tr>
</tbody>
</table>

Table no.6.

Recognized revenue and costs in the statement of financial performance in terms of the commercial contract – the stage of completion method

<table>
<thead>
<tr>
<th>Year</th>
<th>Calculation elements</th>
<th>To date</th>
<th>Revenue/Costs recognized in prior years</th>
<th>Revenue/Costs recognized in current year</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Revenue</td>
<td>9.660</td>
<td>-</td>
<td>9.660</td>
</tr>
<tr>
<td>I</td>
<td>Expenses</td>
<td>9.660</td>
<td>-</td>
<td>9.660</td>
</tr>
<tr>
<td>I</td>
<td>Surplus</td>
<td>0</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>II</td>
<td>Surplus</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>III</td>
<td>Revenue</td>
<td>36.800</td>
<td>26.240</td>
<td>10.560</td>
</tr>
<tr>
<td>III</td>
<td>Expenses</td>
<td>32.800</td>
<td>26.240</td>
<td>6.560</td>
</tr>
</tbody>
</table>
Disclosure in the accounting of entity "X" is as follows:

Year 1:
a. accounting disclosure of expenses due to completion of works according to their nature (generic formula):
   Class 6 – "Expense Accounts" = \% 9,660
   Class 3 – "Inventories"
   Class 4 – "Third Party Accounts"
   Class 5 – "Pecuniary Resources Accounts"
b. in the end of the tax year, the work performed is entered:
   332 "Work and Services in Progress" = 709 "Inventory Variation" 9,660

Incidence of accounting disclosure upon the statement of financial performance in Year 1:
   revenue from work performed: 9,660
   contract costs incurred to date: 9,660
   surplus: 0

Year 2:
a. accounting disclosure of expenses due to completion of works according to their nature (generic formula):
   Class 6 – "Expense Accounts" = \% 16,580
   Class 3 – "Inventories"
   Class 4 – "Third Party Accounts"
   Class 5 – "Pecuniary Resources Accounts"
b. in the end of the tax year, the work performed is entered:
   332 "Work and Services in Progress" = 709 "Inventory Variation" 16,580

c. contract billing for the recipient:
   VAT registered public entity:
   4111 "Customers with less than one year maturity" = \% 45,632
   "Revenue from services rendered and work performed" 704 36,800
   "Output VAT" 4427 8,832
   VAT non-registered public entity:
   4111 "Customers with less than one year maturity" = 704 45,632

d. year-end inventory:
   709 "Inventory Variation" = 332 "Work and Services in Progress" 6,560

Incidence of accounting disclosure upon the statement of financial performance in Year 3:
   total contract revenue: 36,800
   revenue from work performed (b and d): 6,560 – 32,800
   contract costs incurred to date: 6,560
   surplus: 4,000
4. Conclusions

Although both methods lead to an identical contract outcome, the essential difference between them is the time of outcome recognition.

<table>
<thead>
<tr>
<th>Calculation elements Method</th>
<th>Surplus Year 1</th>
<th>Surplus Year 2</th>
<th>Surplus Year 3</th>
<th>Contract outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of completion method</td>
<td>1.140</td>
<td>2.060</td>
<td>800</td>
<td>4.000</td>
</tr>
<tr>
<td>Stage of completion method</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4.000</td>
</tr>
</tbody>
</table>

Therefore, public entities should choose the outcome allocation method that best allows them to estimate outcomes reliably, taking into account both the advantages and the disadvantages that ensue from the use of either methods.

The stage of completion method allows for determining the surplus in a construction contract upon its completion because there are many circumstances when outcomes are difficult to estimate at the date of contract conclusion, yet there are many disadvantages, too [Ţenovici, C.O., 2013, p. 146]:
- the method does not truly reflect economic reality since a contract is performed during several tax years and their surplus is recognized only upon contract completion;
- delaying the surplus recognition is not a proof of accounting prudence as it generates high fluctuation when recognizing contract surplus from one tax year to another with surplus being recognized during the tax year when construction work is completed;
- the significant increase of surplus during the tax year with construction work being performed provides an optimistic view upon financial performance although during its progress the surplus is null which can be regarded as a risk to the users of financial statement information.

The percentage of completion method has the advantages below:
- it allows the good connection of expenses to contract revenue, and outcomes are recognized during each tax year in proportion with the percentage of contract completion;
- outcome recognition is reduced from one tax year to another;
- it truly reflects economic reality as a contract takes place during several tax years and surplus is recognized during each tax year all throughout contract performance.

Some advantages are:
- public entities should have their own estimation and financial reporting system;
- the review of contract revenue and costs should be done for each reporting period and the effects of financial performance changes must be specified;
- the unrealistic determination of the completion percentage (artificial underestimation or overestimation) leads to the distortion of construction contract outcomes.

Thus, either of the two methods should be chosen carefully in order to avoid the tendency to manipulate information on the financial statements of public entities.

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