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THE CONCEPT OF STANDARD COST IDENTIFIABLE AS A DRIVER OF CONJUNCTION BETWEEN PUBLIC ACCOUNTING AND PUBLIC MANAGEMENT

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Abstract: *The topics of Public Accounting and Public Management are frequently discussed separately in the international scientific literature: aim of the paper is to identify the possible connection themes between the two disciplines.*
In this perspective, a significant interest can be identified in the concept of standard cost, an abstraction that usually pertains to the profit-oriented private sector.
The analysis of standard costs in the Public Sector originates at the European level from the introduction of the Maastricht Treaty parameters in the 1990s and in particular from the new accounting discipline introduced by the Treaty.
The new discipline has been the basis of many accounting reforms that have taken place in the European context which have generated, in some countries, the integration (or in some cases the replacement) of the traditional Cash Basis Accounting (used in the Public Sector) with the Accrual Basis Accounting (used in the private sector).
In order to pursue the declared aim, the paper proposes the following articulation: the Public Accounting dilemma (Accrual Basis Accounting vs. Cash Basis Accounting); the analysis of the different cost variations deriving from the different Public Accounting models; the cost analysis for Management Control purposes, the determination of the different cost configurations, the derivation of the standard cost and finally, the use of the standard cost as a driver in the reengineering processes implemented by the Public Management.
The revision of the organizational models, an activity pertaining to Public Management, represents the solution of the critical issues indicated by the cost analysis - and in particular of the standard cost analysis - implemented by the Management Control derived from Public Accounting.
In this perspective, the concept of standard cost (obtained through the full costing methodology) can be considered the driver of conjunction between Public Accounting and Public Management.

Keywords: *Public Accounting, Public Management, Standard Cost, Cash Basis Accounting, Accrual Basis Accounting*

JEL classification: *M38, M41, M48*

1. Introduction

The present contribution aims to provide the connection between Public Accounting and the cost analysis implemented by Public Management useful for Management Control in order to optimize the re-engineering process of the Public Institution oriented towards to efficiency, effectiveness and cost-effectiveness. The principle of cost-effectiveness enucleates as the ability of the Public Institution to manage itself according to the two criteria of effectiveness and efficiency in the long-term period.

The first criterion - the effectiveness - implies, alternatively, the assessment of the ability to achieve predefined institutional objectives (internal or managerial effectiveness), or the assessment of the ability to satisfy the needs of its external stakeholders (external or social effectiveness), while the

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second criterion – the efficiency - measures the ability to achieve a specific corporate objective by optimizing the available resources.

The cost-effectiveness is, therefore, the cardinal condition that each entity (be it a Public Institution, a non-profit organization, or a business enterprise) must satisfy in order to be long lasting, or being an enduring economic institution. Gino Zappa (1879-1960), the main reference of modern Italian business economics, stated in this regard: "(...) *an enduring economic institution which, for the satisfaction of needs human needs, composes and carries out in continuous coordination, the production or acquisition and consumption of wealth* (...)" (Zappa, 1957).

At the European level, the cost analysis applied to the Public Sector was originated by the introduction of the Maastricht Treaty parameters in the 1990s and in particular from the new accounting discipline introduced by the Treaty.

Since then, the European Commission has examined whether budgetary discipline is respected by euro countries, based on the following parameters: annual government deficit (given by the ratio of annual government deficit to gross domestic product) not exceeding 3 %, government debt (given by the ratio of gross government debt to gross domestic product) not exceeding 60 %. These parameters are now at the centre of a political debate inside the European Parliament for their possible revision in a future perspective (European Parliament, 2023)

The new accounting discipline has been the basis of many accounting reforms that have taken place in the European context which have generated the integration (or in other cases the replacement) of the traditional Cash Basis Accounting (used in the Public Sector) with the Accrual Basis Accounting (used usually in the private sector, but now also for the Public Sector).

The institutional bodies responsible for drawing up accounting standards valid for the Public Sector are: IPSAS (International Sector Accounting Standard), issued internationally by the IPSASB emanation of the IFAC (International Federation of Accountants) and EPSAS (European Public Sector Accounting Standard) proposed at European level by EPSAS Expert/Working Groups, Eurostat, European Commission.

The current issues of Public Management originated from the theory of New Public Management (acronym NPM), born in the mid-1980s in the United States and the United Kingdom. This new approach constitutes the appropriate proposal to the growing demand for a better quality of Public services and a related containment of Public spending (Hood, 1983; Osborne et al., 1992; Barzelay, 2001; Reed, 2019; Reiter et al., 2019).

2. Public Accounting: Cash Basis Accounting (CBA) vs. Accrual Basis Accounting (ABA)

Public Accounting has traditionally had two alternative methodologies: Cash Basis Accounting (acronym CBA) and Accrual Basis Accounting (acronym ABA) (Kwon, 1989; Soesetio et al., 2022; Sa'diyah, et al., 2021).

The CBA origins can already be found in Greece, Egypt and ancient Rome, where it was embodied by the figure of the "rational", or "accountants" in the present.

This accounting model was born with the affirmation of the currency minted for the first time by Croesus, king of Lydia (city located at present-day in Turkey) in the sixth century BC. CBA recognizes revenue and expenses only when money enters or exits the company's accounts.

CBA methodology is the simple-entry bookkeeping: each administrative fact is financially accounted for only once and the methodology generates the Cash Flow Statement.

About ABA's origin – question somewhat discussed in historical reconstructions – it is attributed to the mathematician Luca Pacioli (1445-1517), who in 1494 defined for the first time, in systematic terms, the double entry method in the book "Summa di arithmetica, geometrica, proportione et proportionalita", in the chapter entitled "Tractatus de computis et scripturis" (Pacioli, 2016).

The publication of this book earned him the title of "father of accounting". ABA recognizes revenues when they're earned (but not necessarily cashed), and expenses when they're billed (but not necessarily paid). ABA methodology is the double entry bookkeeping: each administrative fact is

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accounted for at least twice and this methodology generates the Annual Report, a document consisting of three sections: Cash Flow Statement, the Balance Sheet and the Income Statement. (Eulner et al., 2022; Grandis et al., 2012; Pina et al., 2009).

The prerequisite for the implementation of the CBA is the availability of an up-to-date initial balance sheet reconciled with the Public Institution's inventory: this initial accounting situation must be included in an initial balance sheet.

The ABA methodology identifies two types of cost: a) accrual cost and b) long-term cost (or asset).

A) Accrual cost. Accrual cost represents an economic sacrifice sustained for the purchase of short-cycle production factors (example: costs incurred for the purchase of raw materials, services, employee labour, etc.) and it is included in the Income Statement.

B) Long-term cost (or asset). Long-term cost (or asset) constitutes economic sacrifice sustained for the purchase of long-cycle production factors (example: costs incurred for the purchase of furniture, fittings, machinery, etc.). It is included in the Balance Sheet: the allocation of the portion of the multi-year cost pertaining to the economic period of the single financial year takes place through the amortization process in the Income Statement.

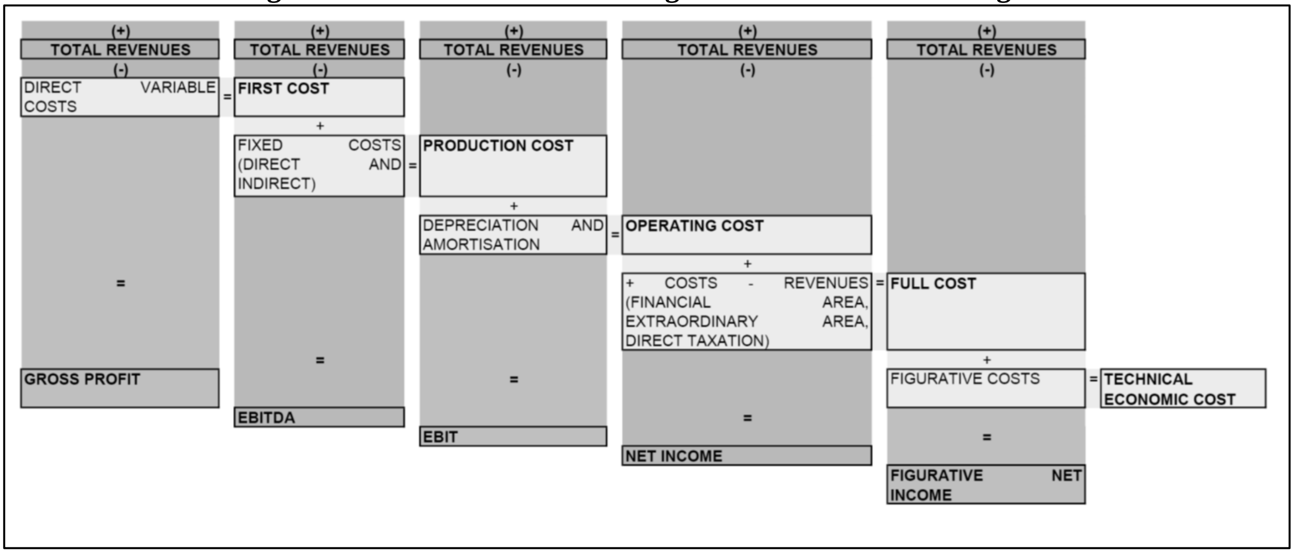
Although the ABA model represents a positive evolution of the CBA, the international debate on which model to adopt between the two is still very open. Technically, the derivation of standard cost is possible with both methodologies: thus, the “Cash Basis Accounting (CBA) vs. Accrual Basis Accounting (ABA)” dilemma turns out to be essentially unfounded (Pollifroni, 2021).

After this brief comparison between the two reference accounting models in the Public Sector, the following paragraph tries to illustrate the path of conjunction between the Public Accounting and Public Management models.

3. The path of conjunction between the Public Accounting and Public Management models.

The determination of economic values aims to obtain the different cost configurations (see Figure 1) attributable to the individual service unit produced in a Cost Centre.

Figure 1: Business economic configurations of costs and margins.



Source: Authors’ elaboration.

In the Public Sector, the Cost Centres correspond to the service-producing areas for which is calculated the standard cost, while the Administrative Responsibility Centre is the management-level organisational unit to which financial, human and instrumental resources are allocated to produce the services. The holder of the Centre of Responsibility is responsible for the management and the results

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deriving from the use of all the resources assigned to him/her: one Centre of Administrative Responsibility may correspond to one or more Cost Centres, depending on the activities carried out.

Supporting this process, the subsequent reclassification of the costs obtained follows two criteria. The first criterion concerns the possibility of identifying the variability (or stability) of the costs obtained in relation to the volumes of service provided (in this case, costs are divided into fixed and variable).

The second criterion regards the possibility to allocate directly (or indirectly) the costs obtained to a Cost Centre (in this case, costs are reclassified into direct and indirect).

To better understand these two criteria, consider for example a Public Institution set up to provide two different services: organizing Public competitions to select personnel and providing training courses for employees of other administrations. In this case, the Public Institution is an Administrative Responsibility Centre with two Cost Centres, Public competitions and personnel training.

At this point, it might be interesting to calculate the standard cost related to a single Public competition, or a single hour of personnel training.

In the latter case, the calculation of the standard cost of a single personnel-training hour, the combination of the two criteria set out above provides the three real situations that are operationally relevant:

a) variable-direct costs (e.g. the hourly cost of trainer teachers),

b) fixed-direct costs (e.g. the costs of planning and organizing the teaching activities),

c) fixed-indirect costs (e.g. the cost of personnel operative in the Centre of Administrative Responsibility).

In the latter case, the allocation of the cost of personnel in the Centre of Administrative Responsibility to the Cost Centre is done by a driver (e.g. given by the ratio of hours devoted to training to total hours worked by the personnel).

The standard cost is derived from the income statement and it is given by the ratio between the full cost attributable to the single Cost Center and the volume of services provided and related to the same Cost Center.

In the Public Sector, the standard cost is the production cost of a Public service, obtained assuming normal operating conditions.

Public Management uses the standard cost to evaluate, in comparative terms (in time and/or space), the efficiency of a process, understanding the latter as the measurement of the ability to achieve a certain corporate objective, optimizing the resources available.

The necessary prerequisite for the implementation of a proposed Management Control model, oriented to the company's economic profile, is the joint availability of both non-monetary quantitative data (e.g. units of delivered activities, personnel employed, etc.) and the related economic/asset values attributable to the delivered activities obtained from the ABA methodology.

The process for determining standard cost therefore identifies the following steps:

a) To derive the costs from the adopted accounting system (Accrual Basis Accounting or Cash Basis Accounting);

b) To analyze the different costs deriving from the different Public Accounting models;

c) To expose the different cost obtained for the Management Control purposes;

d) To determine the different cost configurations;

e) To derive the standard costs related to a service provided (or to an internal process);

f) And finally, to use of the standard cost as a driver in the reengineering processes implemented by the Public Management.

In Italy, cost analysis for the purpose of Management Control applied to Public Institutions is based on the Constitution of the Italian Republic, in the following terms: "(...) *Public offices are organized according to legal provisions, in such a way as to ensure good performance and impartiality of the administration*. (...)" (Source: Article 97, paragraph 2 of the Italian Constitution).

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The themes of Management Control recall the broader theme of the "system of controls" applied to Public Institutions, which is recognized as having a dual doctrinal derivation: that proper to administrative law and that pertaining to business economics.

The combination of the two disciplines - administrative law and business economics - has generated two types of control activities: "external controls" and "internal controls", where the "external controls" are those carried out by subjects' external to the Public Institution subject to control, such as, for example, the Inspection Services of Ministries, the controls of Tax Agencies, etc. While the "internal controls" are those carried out by subjects internal to the Public Institution subject to control, dedicated internal structures and independent bodies envisaged by the specific laws, such as, for example, the Evaluation Boards, the Auditors, etc. and obviously Public Management.

The Management Control implemented by Public Management represents a management monitoring system that identifies the objectives to be pursued, the relative resources allocated and the subsequent evaluation of the results obtained.

This approach also makes it possible to constantly compare forecast data with actual data and thus to direct management, intervening with appropriate corrective actions in the event of deviations.

The monitoring action involves a continuous improvement process articulated in the stages of the PDCA cycle (an acronym for Plan, Do, Check, Act), also known as Deming Cycle (Reid et al., 1999; Free, 2012).

The phases of the cycle are respectively: a) Plan - establish the objectives and processes necessary to deliver results in accordance with user requirements and organisational policies, b) Do - implement the processes, c) Check - monitor and measure processes and service against policies, objectives and product requirements and report the results and d) Act - take action to improve process performance continuously.

In this perspective, the model can be continuously improved and expanded over time in the aspects concerning the measurement of the effectiveness, efficiency and affordability of the management of the Public Institution. The priority concerns the analysis and interpretation of any deviations (detectable between the forecasting and reporting phase), in order to identify further strengths of the management and proposing any corrective actions on the side of the improvement areas.

The transition from the Check to the Act phase is based on a question-answer relationship that can be traced back to the "5W1H" model (acronym for: Who? What? Where? When? Why? In addition, How?), also known as the "Kipling model" (Dereli et al., 2010). In order to remove the causes at the origin of these deviations - detected by the indicators produced by Management Control and aimed at measuring effectiveness, efficiency and affordability - one should therefore proceed with the mapping of the underlying business processes in a Business Process Reengineering (BPR)-oriented logic.

In the Public context, we could rename Institutional Process Reengineering (IPR) or Institutional Process Analysis (IPA) (Elapatha et. al., 2020; Frascheri, 2020; Grover et al., 1995; Pollifroni, 2020).

As stated, the methodological path exposed has tried to identify the strong connection between the two disciplines Public Accounting and Public Management: a rigorous and systematic application of the two disciplines is intended to implement ethics and transparency in the management of the Public Institution (Pollifroni, 2012).

As evidence of the importance of these concepts, current practice has recently coined the term Open-Government, a neologism that identifies a model of Public Institutions oriented to the following themes:

a) Transparency, i.e., citizens must have access to all the information they need to know about the functioning of Public Administrations;

b) Engagement, i.e., all citizens, without any discrimination, must be involved in decision-making processes and policy-making by contributing ideas, knowledge and skills to the common good and efficiency of Public Administrations;

c) Accountability that is the obligation of Public Administrations to be responsible to the citizens for their actions and decisions, ensuring full responsibility for the performance achieved and measured.

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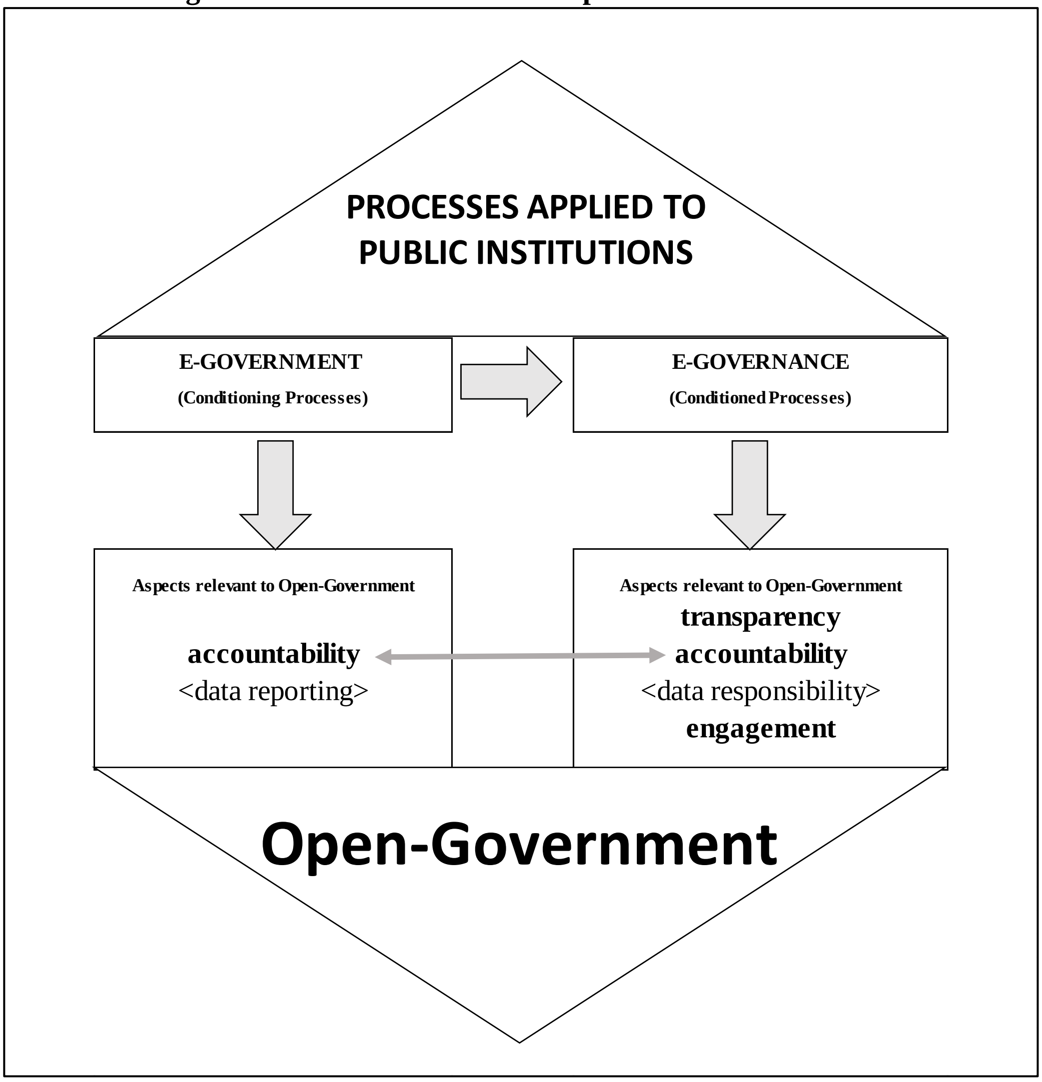
From the above, Open-Government feeds jointly: a) from the e-Governance processes, with regard to the aspects of transparency, engagement and accountability (in the sense of date responsibility), thus, in a broad sense, aspects concerning Public Ethics and b) from e-Government processes, regarding aspects of accountability (in the sense of data reporting), related to the measurement and evaluation of realized performance.

The path of systematization set forth here highlights how e-Governance processes depend by e-Government processes. In other words, the theorization that e-Government processes (conditioning processes) can be considered the prerequisite for the development of e-Governance processes (conditioned processes) is corroborated.

Figure 2 provides a summary of the Open-Government concept, set forth here.

Figure 2: Schematization of the Open-Government Model



Source: Authors' elaboration.

4. Conclusions

As has been stated in the previous pages, the revision of the Maastricht Treaty parameters is at the center of the current political debate within the European Commission and the European Parliament: unfortunately, the political agreement that was to be enshrined by the end of 2023 has slipped to the first half of 2024. The postponement of the agreement follows from the fact that the 27 EU member states failed to find a shared mediation on the complex reform of the Stability Pact, that is, the set of rules that set parameters on how much and how much a country can borrow and spend. The agreement on the EU

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budget overhaul supported by 26 countries, but with Hungary's veto, it failed to find unanimity: for this reason, the final decision should arrive to the first half of next year.

In any case, regardless of the final version of the agreement, in the future perspective, the crucial role of Public Management will go from strength to strength, especially for heavily indebted nations.

The reduction of Public Debt, in adherence to appropriate fiscal policies, will be strongly conditioned by the presence of Public Managers capable of managing Public Institutions according to the principles of efficiency, effectiveness and cost-effectiveness (Voda et al., 2021; Doran et al., 2017). Consequent to what has been stated, in a medium-long term perspective, the growing need to strengthen the link between Public Management actions resulting from the quantitative determinations of Public Accounting will increasingly emerge.

In this perspective, the course of study presented in the paper, which sought to highlight the strong and growing link between Public Accounting and Public Management, assumes significant importance.

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