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Two models of income measurement within the Italian accounting theory of financial statements: a research note based on a pragmatic constructivist analysis

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1 Introduction

Financial statements measure and monitor a company's major life events. For this reason, they have always been a central object of analysis and discussion in the accounting field and, more generally, in business administration.

By drawing on foundational theoretical principles, regulations and accounting standards, financial statements record the dynamics of both capital and income over the years to provide a logical synthesis of a company's economic, financial and asset situation. They constitute a vital document for both internal controls and reporting procedures, thereby supporting corporate decision-making and communication processes directed at the external environment. This role of financial statements as a managerial and informative instrument at both intra-organisational and inter-organisational levels brings with it the need to interpret the meaning of the income and the capital resulting from financial accounts, especially in terms of their capability to truthfully and effectively convey a certain business reality, also in light of the particular historical moment of reference. Different dominant values of different historical eras may influence how financial statements are prepared and formatted. Whether historical cost approaches, fair value approaches or calibrated combinations of the two are taken depends on the circumstances.

In this article, we adopt a pragmatic constructivist perspective to interpret the validity of two theoretical models proposed in Italian literature on the theory of financial statements (the so-called *Economia Aziendale* approach) and to suggest some avenues for future research. Our focus is the underlying logic of the two models. Our goal is not to get into specifics about the accounting technicalities underpinning the functioning and the mechanics of the two models but to reflect on their foundational logic. The research note that this paper proposes might, therefore, constitute a useful, broad enough reference framework to interpret the meaning of different configurations of income and capital, as well as their evolution over time, which result from the practical application (through regulations and accounting standards) of the basic logics of financial statements preparation that this paper analyses.

2 A pragmatic constructivist perspective on performance measurement through financial statements

The production of information is at the core of every definition of accounting. This task entails identifying actual occurrences in the real world, measuring these occurrences to produce accounting information and, finally, arranging the information in an appropriate format to present it to the user and enable the latter to use this information (Nørreklit et al., 2010). In the realm of financial accounting, the appropriate format mentioned above is the financial statements prepared in accordance with established theoretical principles of accounting, national and international regulations and accounting standards.

The purpose of financial statements (or financial reporting in general) is to provide primarily financial information that is based on trustworthy evidence and that existing and potential actors in the corporate orbit would find useful for

multiple purposes (e.g. stewardship and decision-making, controlling, investing, etc.) (Mitchell et al., 2017). The concept of truth is, therefore, central to the accounting practice (Nørreklit et al., 2007), and the truthfulness of financial reporting is the basis for financial statements' *validity* (from the Latin *validum*, which comes from the verb *valeo*, meaning *be capable of, be effective to, have meaning* (Campanini and Carboni, 1960)).

Addressing the issue of financial statements' validity (i.e. their *capability of or effectiveness in* representing the business reality of a certain business organisation by producing *meaningful* information) requires starting from its ontological and epistemological premises. Concerning ontology, the basic premise (Nørreklit et al., 2010) for the balance sheet to be a valid source of knowledge about the company and its performance is to select appropriate ontological assumptions, that is, an appropriate perspective or paradigm,¹ regarding the empirical reality of the phenomenon object of representation through financial accounting. Concerning epistemology, once the practice ontology has been defined (i.e. the business reality that is subject to accounting measurement), the analysis of the accounting measurement's validity requires reflecting upon the epistemological apparatus of the accounting measurement itself (Mitchell et al., 2017).

Let us start with the ontological premises of financial statements' validity. A position taken commonly in the accounting literature is that mainstream accounting theory and practice emanate from the paradigm of realism (Nørreklit et al., 2010). According to this paradigm (e.g. Chua, 1986), empirical reality is objective and independent of the human subject. The basic assumption of realism is, therefore, that the external business reality can be objectively and truthfully represented (by the accountant) through accounting measurement methods, tools, numbers and, ultimately, the financial statements.

However, this view has been challenged in several respects – with theoretical objections (e.g. the social constructivism view (e.g. Tinker, 1991)) and by pointing to practical issues in the accounting profession (e.g. the need to make estimates and judgments when measuring the performance of an operating entity) and practical failures (e.g. the Parmalat case (Melis, 2005)), thereby proving that it is reductive and distorting to assume the realist paradigm's assumptions are ontological (Nørreklit et al., 2007; Mitchell et al., 2017).

To overcome the shortcomings of long-established paradigms, including the realist one, the paradigm of pragmatic constructivism (for an overview see Nørreklit, 2017) has been established in the accounting literature as a sound paradigm for the analysis of business reality to be represented by performance measurement tools in general (Nørreklit et al., 2007) and financial statements in particular (Mitchell et al., 2017) and as an approach to solving validity problems of measurement (Nørreklit et al., 2007).

Ontologically, pragmatic constructivism is grounded in the concept of reality. Every actor – broadly defined as a person or an organisation – is constantly constructing their relationship with the world, thereby establishing the construction of their own reality. The goodness of the reality construction constitutes the foundation for successful practices and actions. Specifically, four dimensions of reality must be integrated into the actor–world relationship for the construct to be successful. These are a factual basis, a set of possibilities grounded on facts (i.e. factual possibilities), values that drive the actors in the choice of the factual possibilities available and finally, communication as a means for allowing confrontation and a link between different actors' reality constructions (Nørreklit, 2017). This is the lens of business reality to adopt in order to avoid validity problems. The adoption of other paradigms – and, thus, of inadequate concepts of reality – might lead to an improper construction of concepts and abstraction activities (Nørreklit et al., 2007). The latter, however, are pivotal to the construction of valid performance measurement theories, methods and tools.

Regarding the epistemology-related aspects, business actors need to develop highly detailed knowledge about their business reality in order to observe, control and lead business activities. To this end, they rely on conceptual frameworks of measurement, which are tools (e.g. financial statements) that are useful in representing some traits of business reality that are essential to developing functioning managerial practices and providing valuable information for stakeholders (Nørreklit et al., 2007; Mitchell et al., 2017).

The focus on the validity of accounting measurement practices requires an analysis of the correspondence and coherence attributes of the practices' conceptual structures (Nørreklit et al., 2007; Mitchell et al., 2017).

Correspondence means that a conceptual framework of measurement can accurately reflect the current state of affairs in the world. As a result, statements derived from such a conceptual framework actually reproduce the complexity of the real world without significant distortions and, thus, can be considered reliable. In practice, however, achieving correspondence and objective knowledge is not an easy matter. The direct observation of phenomena is always affected by subjectivity, exposing the outcome of the observation (i.e. what the observer believes to be true) to the risk of being invalid and incapable of representing the reality of organisations in terms of income and related invested capital. The means through which this risk can be mitigated and correspondence achieved is the creation of an "epistemic platform". This is a record of evidence and data functioning as a medium between the level of the real world and its phenomena and the level of concepts, statements, models and theories. Correspondence is established by collecting data for the epistemic

¹ "A paradigm is taken to mean a set of ontological and scientific assumptions that make up a framework within which knowledge can be obtained, acted upon, evaluated, and developed. [...] a paradigm includes the basic presumptions made about the nature of our environment and our place within it" (Nørreklit et al., 2010: 734).

platform and using them to develop concepts, statements, models and theories that are grounded in actual phenomena. Validity problems occur if there is insufficient grounding (i.e. scarce evidence, low quality of data or an unsatisfactory phenomenological basis for the collection of evidence) and/or in the case of misleading conceptualisation activities (Nørreklit et al., 2007).

Coherence requires that the conceptual framework of measurement is both internally and externally coherent. Internal coherence is a property of a model or a theoretical system, and it implies that the model's or the system's inner elements are logically combined according to specific, logical relations that are valid from both a theoretical and operational point of view. External coherence concerns the relation between the model or system and external factors. It requires that the conceptual model be matched with the topoi of the various organisational actors (i.e. company coherence), as well as the institutional conditions of society (i.e. institutional coherence). While correspondence concerns the factual aspect, coherence informs us about logical, communicative and values aspects (Nørreklit et al., 2007).

A conceptual framework of measurement that complies with both the correspondence and coherence attributes produces a pro-active truth. This is a form of truth that is theoretically valid because it is based on a valid understanding of business reality and a valid model of measurement. It consists of a set of statements forming a narrative about a company's performance profile. Whether this narrative is actually true requires ex-post judgment, that is, confronting the performance narrative with the actual results. If the expected results are achieved, the narrative is pragmatically true. Since pragmatic truth can only be judged retrospectively, the representation of a business reality through measurement tools always determines a truth gap as a difference between pro-active and pragmatic truth. The higher the validity of the tool of measurement (in our case, the financial statements), the smaller the truth gap and the higher the relevance of the financial statements for the multiple purposes for which it was conceived.

3 The models of income measurement according to the Italian financial statements' accounting theory²

According to the Italian approach of *Economia Aziendale*, income is determined as the difference between revenues and costs coming from the operations carried out over a certain period (usually a year). The central problem in the determination of income is to assess the possible outcomes of ongoing operations and to allocate them between the current year and future years. Therefore, the determination of income is based not only on past transaction data but also on data concerning the probable outcome of ongoing operations (i.e. the probable development of future business operations). The central problem of income determination, therefore, lies in choosing the right criteria to define the accrual of costs and revenues and the match between the former (i.e. costs) and the latter (i.e. revenues).

The Italian financial statements' accounting theory proposes two different models for income calculation: the cost deferral model and the revenue anticipation model.³ These two models constitute borderline cases that are significant as logical paradigms of reference for other possible, intermediate logics.

3.1 The cost deferral model

The cost deferral model operates the correlation between costs and revenues for income determination relying on the assumption that only revenues earned during the financial year must be considered in income calculation. This means that revenues in the process of being earned and forecasts of future revenues are excluded from income determination. On the cost side, the cost deferral model considers as relevant for income determination those costs that have been incurred in the financial year (along with those transferred from the previous year) to realise the revenues as specified above. All other costs are deferred to future years (hence, the model name) with the presumption that they will be recovered through future revenues, i.e. the revenues that will be realised in future years. Therefore, the role of expected revenues in this model is to allow for the deferral of costs that are not correlated with the year's earned revenues. The possibility of deferring costs is strictly subordinated to this forecast. Costs can be deferred to future years provided that there is a probability that they will correlate with future revenues and that this correlation is also likely to appropriately remunerate the capital invested in the business. By contrast, they concur with the determination of the income for the financial year under consideration. Conducting this fundamental audit requires as complete as possible a representation (or projection) of the company's future operations and, thus, of its most likely financial trends.

Underpinning the logic of this model is the central role of completed operations. And since operations are concluded when revenues are earned, the focus of the determination of income is precisely the revenues that are earned.

² This section is based on the work of Capaldo (1998).

³ The original, untranslated names of these models are "*Modello basato sulla logica del rinvio dei costi*" and "*Modello basato sulla logica dell'anticipazione dei ricavi*", respectively.

3.2 The revenue anticipation model

The revenue anticipation model is based on the assumption that the focus for income determination is on all revenues – not only those earned during the financial year but also those that may realistically be expected to be earned in the future as a result of the investments, projects and activities that were made and launched during the financial year and that will be carried out in the future. For the preparation of the financial statement, future revenues are anticipated in the calculation of the income for the financial year (hence, the name of the model).

According to this measurement model, since all revenues are considered in the assessment of the firm's financial performance, all costs also have to be considered. Therefore, the income calculation includes not only all costs incurred in the financial year but also all costs expected to be incurred in future years so that the operations from which future revenues are expected can be completed. According to the revenue anticipation model, income is obtained by deducting from the sum of revenues earned and forecasted the costs already incurred and those estimated to be incurred until the forecasted revenues are generated. To this end, it is necessary to discount the expected revenues and related costs. It would not be correct to add the incomes that are expected to be earned in future years to the income earned in the current financial year without first making them homogeneous through the mathematical operation of discounting.

Underpinning the logic of this model is the assumption that business operations are linked to each other in a causal chain. The pivotal role of measurement models, in this case, is to measure the outcome of ongoing operations and the value of a certain business organisation given its state of being (but also its state of becoming).

The application of the measurement model requires – as in the previous case – a representation (or projection) of the company's future operations and, thus, of its most likely financial trends.

4 A pragmatic constructivist analysis and a reflection on the validity of the cost deferral model and the revenue anticipation model

The deferral cost model and the revenue anticipation model outlined in the previous section are two different theoretical approaches to measure and represent business performance through financial statements. The purpose of financial statements, and thus of both the performance measurement models considered, is to provide information that reliably represents the business reality they refer to. Accordingly, the concept of truth is central to the accounting practice (Nørreklit et al., 2007) and the truthfulness of the financial reporting, thus the capability of the theoretical principles guiding this activity to produce truthful reports, is the basis for the financial statements' validity.

Thus, it seems central the analysis of the two theoretical models considered in this paper in terms of the level of truthful representation of business reality that they make it possible to achieve. We argue that it is necessary to think in terms of the truth gap perception that may result from both approaches to performance measurement and prefer the theoretical model that produces a smaller truth gap perception and, as a result, a more truthful representation of the business reality object of measurement.⁴ Those who prepare financial statements should in fact aim to close this gap and increase the reliability of financial reporting.

This requires an analysis of both models' correspondence and coherence attributes (Nørreklit et al., 2007; Mitchell et al., 2017). To this end, the paradigm of pragmatic constructivism offers us sound ontological directions. As a result of the models being well established in the literature, we take their internal coherence for granted and will concentrate the analysis on correspondence and external coherence.

The deferral cost model is essentially a historical cost measurement model. Most of its content is based on past transaction records and documentation. Business performance is monitored through an observational and reporting system whose observations are primarily anchored in the principles of completed operations (i.e. earned or realised revenues and incurred costs). Hence, the deferral cost model represents business reality mainly through past factual possibilities, that is, through the reporting of what it has been factually possible to do up to the moment of the financial statements' preparation and disclosure. However, an accurate exploration of future factual possibilities is also required because it is through the projection of what is expected to be factually achievable in the future that there can be a deferral of costs. For instance, if we consider a very common and typical operation that is preparatory to the measurement of a company's income at the end of the financial year, such as the depreciation of fixed assets, we can clearly see that this operation is unquestionably founded on a forecast of the future life of the assets and, consequently, on a prospective evaluation of the future factual possibility of the assets' utility and employment for the company. As a result, although not all activities that are in progress appear in the financial statements (that is, they are not communicated through the financial statements), their reconnaissance is critical for the proper operation of the deferral cost measurement model. The deferral of costs and

⁴ The truth gap is the difference between pragmatic and pro-active truth. In this paper, its application to performance measurement through financial statements is considered the difference between business reality as represented in financial statements and actual business reality.

the configuration of income that results from the model at hand are, in fact, strictly dependent on the identification and assessment of these future activities.

Thus, the deferral cost model is only apparently grounded in past factual possibilities. Even though the communication of business performance through the financial statements prepared in accordance with this model suggests that this is the case, we have seen how the whole model is *de facto* dependent on the identification and evaluation of future factual possibilities. The latter tend to be omitted in the communication of a firm's performance through the financial statements, but they are at the basis of the cost deferral model application.

The revenue anticipation model is essentially an economic value measurement model. It produces and communicates a far wider measure of income than the deferral cost model. Business performance is monitored through an observational and reporting system whose observations are primarily anchored to a future-oriented perspective. The revenue anticipation model represents business reality in the financial statements through the integration of past and future factual possibilities. It represents the business reality by reporting not only what it has been factually possible to do up to the moment of the financial statements' preparation and disclosure but also what is expected to be factually achievable in the future. The integration of past and future factual possibilities is done through the mathematical operation of discounting. In this way, future factual possibilities are "*brought back*" (i.e. discounted) to the present time, and the financial statements prepared under this model communicate the value of the firm as a living and dynamic entity with future operation prospects. In this case, reconnaissance of the activities in progress at the company is made explicit, translated into financial values and communicated through the financial statements.

The analysis conducted so far allows us to formulate some reflections on the two models' degree of validity. From a pragmatic constructivist point of view, the truth gap – understood in this paper as the variance between business reality as represented in financial statements and actual business reality – intrinsic to both measurement models is the same. We have pinpointed how both models are based on future projections and how the financial measures representing business reality in the two cases depend on those projections. It is, therefore, not possible to claim that one model is more reliable (i.e. that it generates a higher correspondence) than the other because both are based on the same past events and the same future projections, the latter constituting by definition pro-active truths. Only time will tell whether the models' representations correspond to business reality.

What changes among the models is the content of the communication. In the case of the cost deferral model, the financial statements omit forecasted factual possibilities of value creation and, thus, the communicative flow emerging from the financial statements takes on a more past-oriented and conservative appearance. The truth gap is concealed here by communication that stresses how the model is anchored in past operations. By contrast, the financial statements prepared in accordance with the revenue anticipation model record forecasted factual possibilities of value creation and the communicative flow emerging from financial statements takes on a more future-oriented and less conservative appearance.

Thus, an external coherence issue explains the difference, also in terms of validity, between the two models. The cost deferral model and the revenue anticipation model realise different forms of communication, which, in turn, match different organisational and societal topoi. The very difference between the models lies in the kind of communication one wants to generate through financial statements, and it is people's and society's values that ultimately drive which type of communication is chosen. The communication flow generated by the revenue anticipation model provides a more comprehensive, correspondent representation of a certain business reality because it represents the intrinsic value of an organisation at a certain point in time and focuses not only on the past but also on the future. However, this higher perceived correspondence of the narrative produced by the revenue anticipation model is not the result of a different or better use of the accounting toolbox – in this case, in comparison with the cost deferral model – or the result of a superior epistemic platform. It is the result of the choice of generating a different form of communication through financial information.

It is the external coherence element – and, more precisely, the values dimension – that influences the financial representation of business reality through the cost deferral model and the revenue anticipation model in the financial statements.

5 Conclusions and research perspectives

Adopting the lens of pragmatic constructivism, this article analysed the integration of two financial reporting theoretical models (the cost deferral and the revenue anticipation model) established in Italian accounting theory within a constructive pragmatic approach to the discussion regarding the validity of financial statements.

By acknowledging the central role of the concept of truth as a key driver of financial statements' validity, this paper showed that the two models could produce the same truth gap perception between the representation of the business reality through financial statements and the actual business reality. In both cases, in fact, the financial measures representing the business reality resulting from the cost deferral model and the revenue anticipation model require projecting business operations into the future. However, the paper also showed that the models generate different

communicative flows and, therefore, different narratives on the business reality as represented in the financial statements. Therefore, the choice of one model over the other, which is driven by organisational and societal values, may produce a more or less comprehensive representation of the actual business situation. It is thus aspects outside the realm of accounting technicalities (i.e. aspects related to values and communicative dimensions) that confer a different degree of validity – that is, a different capability of truthfully representing business reality – to the accounting models.

As for future research avenues, it seems interesting to explore how different organisational and societal values and regulations may influence the financial accounting practice and the choice of one model or the other (or a combination of the theoretical principles of both), thereby impacting the validity of how the business reality is represented in the financial statements. The transition from shareholder-oriented values to more stakeholder-oriented values has already been underway for years. Moving to a society that is more and more driven by new organisational and societal values (e.g. the Agenda 2030 for sustainable development) requires an accurate reflection on existing financial accounting models as the source of foundational information for stakeholders. If it is true that the choice of a certain theoretical model of measurement is de facto influenced by values and communicative dimensions, exploring and understanding the theoretical principles at the basis of financial statements' measurement on these dimensions seems essential. Doing so enables the selection of accounting models that facilitate the production of a communicative flow through financial statements that is actually significant and relevant for various stakeholders and their information needs, as well as the development of a deeper understanding of what the financial statements tell us, what they do not and why.

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