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ECONOMIC INCOME, HISTORICAL COSTING INCOME AND CONSERVATISM. AN INTEGRATED APPROACH

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Abstract:
The paper intends to contribute at the debate on the 'Evolutionary Advantage of Cost Accounting and Conservatism' (*Accounting, Economics and Law: A Convivium*, 2019. 9. issue), founded on Braun's study (2016) about *The Ecological Rationality of Historical Costs and Conservatism.* Moving from the IASB Conceptual Framework (2013) it stresses the renewed interest in *income concept.* The economic financial crisis of 2008-9 stimulated discussions between the traditional 'received view' of 'cost-revenue approach' (historical cost accounting) and 'balance-sheet approach' ('current values' and 'present values', that is 'economic values'). Revaluations of assets, liabilities and owners' equities are consistent with the cost-revenue model as well as the discounting future income flows in order to reach *sustainable economic income* magnitudes and *sustainable economic capital* values.
The whole function of the information system is related to decision-making and control: the 'accountability concept' is crucial in this regard and is part of the process for predicting future 'economic financial situations'. Certainly *historical cost* is relevant part of accountability valuation; the future economic results can be better predicted by a long past segment of outcomes from all the entity activity, 'operating incomes' and 'capital gains and losses'. These principles drive in the direction of *historical costing* (and conservatism) integrated, through 'revaluations', with other different methodologies, typically 'current values' and 'present values', in a unitary systematic comprehensive framework, according to *economia aziendale* (entity economics) school of thought.

Keywords: *sustainable income, historical cost, conservatism, revaluation and economic capital, accountability*

RENTA ECONÓMICA, RENTA DE COSTES HISTÓRICOS Y CONSERVATISMO. UN ENFOQUE INTEGRADO

Resumen: El artículo pretende contribuir al debate sobre la 'Ventaja evolutiva de la contabilidad de costos y el conservadurismo' (Contabilidad, economía y derecho: A Convivium, 2019. número 9.), basado en el estudio de Braun (2016) sobre La racionalidad ecológica de los costos históricos y conservadurismo. Pasando del Marco Conceptual de IASB (2013), enfatiza el renovado interés en el concepto de ingresos. La crisis económica financiera de 2008-9 estimuló las discusiones entre la tradicional 'visión recibida' del 'enfoque de costos-ingresos' (contabilidad de costos históricos) y el 'enfoque de balance' ('valores corrientes' y 'valores presentes', es decir ' valores económicos '). Las revalorizaciones de activos, pasivos y acciones de los propietarios son consistentes con el modelo de costos-ingresos,

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así como con el descuento de los flujos de ingresos futuros para alcanzar magnitudes de ingresos económicos sostenibles y valores de capital económico sostenibles.
Toda la función del sistema de información está relacionada con la toma de decisiones y el control: el "concepto de rendición de cuentas" es crucial en este sentido y es parte del proceso para predecir las "situaciones económico-financieras" futuras. Ciertamente, el costo histórico es una parte relevante de la valoración de la contabilidad; Los resultados económicos futuros pueden predecirse mejor mediante un segmento de resultados de toda la actividad de la entidad, "ingresos operativos" y "ganancias y pérdidas de capital". Estos principios conducen en la dirección del costeo histórico (y conservadurismo) integrado, a través de 'revaluaciones', con otras metodologías diferentes, típicamente 'valores actuales' y 'valores presentes', en un marco integral sistemático unitario, de acuerdo con la economía aziendale (economía de la entidad) escuela de pensamiento.

Palabras clave: *ingreso sostenible, costo histórico, conservadurismo, revalorización y capital económico, rendición de cuentas.*

1 Introduction. A renewed interest in income concept

This paper aims to contribute to the recent debate on the *income concept*, following the "Symposium on the Evolutionary Advantage of Cost Accounting and Conservatism", *Accounting, Economics and Law: A Convivium*, 2019. 9. issue, based on the paper by Braun Edward (2016) 'The Ecological Rationality of Historical Costs and Conservatism'.

A renewed interest in *income concept* comes from ongoing reforms of accounting standards, which cannot be successfully implemented without a profound understanding of it. In the recently published discussion paper on the Conceptual Framework, IASB (2013) recognizes primary relevance at the *income concept* as a crucial element for valuating the 'economic entity' performance and the need of 'recycling'[1], though not complete but at least partial (Saito and Fukui 2017: 5; *passim*); nevertheless this consideration of *traditional earnings* in the IASB Conceptual Framework needs a profound theoretical foundational research, not yet sufficiently developed[2].

Particularly after the economic-financial crisis of 2007-2008 (see Mattessich and Galassi 2016) there has been an emphasized trend in favor of *historical cost accounting and conservatism*, together with the tightly connected *going concern principle* (cf. Biondi 2013; Zeff 2007), followed by debates between the *received traditional view* and the view endorsed by the standards setters (cf. Tang 2017). The 'traditional view' would help 'economic entities' to enhance the probability of surviving better in market competition, with greater *income capacity* in the long run.

The dislocation of the old principles, connected to the traditional *cost-revenue approach*, that is the *historical cost principle and conservatism*, has been sternly criticized[3]. These *culturally evolved principles* "are compatible with the results of neuroscience" and "must have a deeper meaning as they can be rediscovered in the logic of the human brain" (Braun 2017: 2).

[1] 'Recycling' in the IASB framework is referred to gains and losses reclassified to income statement when realized.
[2] Ijiri (1996:85) offers the following warning: "What could be a dangerous sign for accounting research…is the 'erosion of the common body of knowledge, experience and interest'…When this common body is gone, so is the accounting discipline…This point brings up the importance of 'foundational research in accounting' ". For the foundations of accounting measurements see extensively Ijiri (1967); Mattessich (2015).
[3] For the debate between *historical cost* basis and *fair value* basis see Biondi (2011), Braun (2016,2017), Sellhorn and Stier (2019), Tang (2017).

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Hicks (1939) renowned notion of *income* not only brings out the need for valuation but also the 'well-offness' aspect which implies the social entitlement, e. g. the ownership claim, on this *income*. This notion applies also to the 'system of national accounting'. More properly an alternative to the Keynesian imperative for 'national income account' would be to base national accounts on the *income notion* of Lindahl (1933), Fisher (1906) and Hicks (1939).

The Fisher-Hicks-Lindahl definition of *income*, as return on wealth, is deemed to be more suitable for measuring *sustainable income*[4] than is the Keynesian version, which defines income of the entrepreneur (1936: 53) "as being the excess of the value of his finished output sold during the period over his prime cost". Though the question is whether this kind of 'sustainability' sufficiently accords with the more radical notion of a 'sustainable biosphere' held by *ecological* economists, in contrast to *environmental* economists, and whether it is compatible with the traditional *net worth* definition of wealth[5].

The economist Irving Fisher, through studies on capital and income and fluctuating purchasing power, contributed essentially to financial accounting (e. g. Fisher 1925). He used such accounting tools as the 'income statement' and the 'balance sheet' for clarifying economic theory (Fisher 1906). Thus, it was not difficult to apply the economist's, and particularly Fisher's, 'present value theory' to accounting; he promoted a somewhat modified 'profit and loss and balance-sheet model' as the proper tool for analyzing the economists' notion of income and wealth (Fisher 1906).

The *present value*, 'economic value', a valuation basis for accounting and 'entity economics', relies on the discounting of expected future net income flows (or net cash flows)[6]. This results in the *economic income*, supposed to maintain the business entity's earning power. The basic idea of this approach goes back to the nineteenth century as well as to economic theories, further developed by Fisher (1906) and applied to accounting by Canning (1929). Zappa and Schmalenbach searched for a method of maintaining the income capacity of the firm, measured by the change of *economic capital* (the intrinsic effective value) under *ceteris paribus* conditions, *i. e*. without counting dividends and capital withdrawals.

In Continental Europe, Schmalenbach (1919) and Zappa (1920-29) also rejected the 'present value' method for financial statement presentation, except for some depreciation purposes, but accepted it outside the double-entry scheme (outside the exercise), mainly for the total valuation of the firm, *economic capital.*

In Zappa's view (1920-29; 1937) the central theme of business accounting was 'income determination' (Cf. Biondi 2002: part II). This basic phenomenon became the foundation of all explanations of the accounting process, particularly of accounting theory and the 'balance sheet and income statement'. Just as in Schmalenbach's dynamic accounting theory, the balance sheet was in Zappa's accounting scheme an instrument of *income* determination. He equated the value

[4] *Sustainable income* is the average economic income which the business enterprise has the capacity to produce in the long run.

[5] The question of progress in evolutionary thinking is discussed in Baker (2016: 2. 1., 2.2.). On interesting aspects of 'evolutionary economics', 'evolutionary epistemology', 'evolutionary ontology', and 'evolutionary ethics' cf. Richard Mattessich (2014: 20-22; 202; *passim*).

[6] The preference some times for cash flow over income flow, in various configurations, it may be for simplicity. Income is a construction whose determination has purposely been separated from cash flow, without being divorced; the accidents of receipts and expenses are often unrelated to the 'value added' or any other measure of general performance. The main concept of income also requires accruals and deferrals. All kinds of cash flows are poor indicators of future performances; the traditional income concept is deemed by many Authors in fact superior to all the more easily implemented alternatives. See Vatter (1947); Lee (1984, 1985); Egginton (1985); Lawson (1985); Charitou and Katz (1990).

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of a business, and its capital, to the magnitude that could realize its future 'earning capacity'. *Economic capital* was simply future income discounted or 'capitalized' (Zappa 1937: 306-7)[7]. *Capital is a derived concept of income*, not the reverse. Recently John Cochrane (2014: 1), quoted by Fukui, Saito (2018: 4) has built a multi- period equilibrium Capital Asset Pricing Model, CAPM, focusing on "the optimal stream of final payoffs, rather than on the composition and dynamics of portfolio returns".

2 Historical Cost, multi-value basis and revaluation

Zappa and Schmalenbach have had a bias in favor of the *acquisition cost basis*, but they accepted a multi-value basis when necessary. Thus, in *Economia Aziendale* and *Betriebswirtschaftslehre* theories of both scholars one encounters values other than 'acquisition costs'. *Historical costs* offered the best starting point, even if requiring adjustments later on; these *revaluations* of the 'balance sheet capital', involve all classes of assets (included intangibles which have gained so great relevance in to-day global economy), liabilities and net worth, and are linked to a general periodic revision of the *system of values* (Zappa 1937: 583-6; Schmalenbach 1959: 171-97; Masini 1959: book II).[8]

In North American accounting research the work by Paton and Littleton (1940) pivots on *income power*, with *acquisition costs* as a starting point and the main task of accounting was seen to be *income determination* by means of *matching costs and revenues*[9]. Alike to Schmalenbach's and Zappa's theories, Paton and Littleton put income determination into the foreground and regarded the values of assets and equities as residuals, unexpired costs and unexpired liabilities. These Authors, after a beginning sympathy with *replacement costs*, ultimately yielded, also for practical reasons, to *historical costs* and the 'realization principle' (Galassi 1966).

As to this traditional postulate and the *historical cost model*, they were generally accepted by Hatfield (1909), Dicksee (1911) and other prominent Authors as the basis for sound and *conservative* accounting practice. Gilman's book (1939) emphasized the notion of profit and income statement as opposed to the balance sheet, possibly influenced by Schmalenbach or Zappa who pursued similar aims in Germany and Italy, respectively (Biondi 2013).

Historical costs system includes 'holding gains' and 'holding losses' into reported income through depreciation as the 'productive capacities' are used, that is realization happened through production and sale. General price-level variations and future changes in economic financial prospects are not explicitly considered, except to stress that for a sound dynamic economy these implications may roughly countervailed, or be limited, so that the resulting *historical income* reports may be significant (Masini 1959: § 35 and appendix G).

[7] More precisely, the value of any resource was the discounted value of its future return.

[8] Braun (2016: 16) argues that "the age-old accounting principles are closer to behavioral economics than to neoclassical economics". On the contrary Saito and Fukui (2017: 3) discusses that "neoclassical economics neither supports the asset-liability view [cf. IASB and FASB] nor rejects the revenue-expense one". As a matter of fact traditional accounting approach and 'entity economics' are founded on neoclassical economics, as shown by the works of Zappa, Schmalenbach, Paton and others.

[9] Braun (2016: 4) points out that "[f]inancial accounting according to the traditional revenue-expense approach provides new and private information to the market process, whereas the balance-sheet approach does not add new information to the market; it only summarizes on the firm level information provided *by* the market".

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In characteristic *historical costs system*, 'holding gains' and 'holding losses' are included in the incomes magnitudes through depreciation with connected deductions, as the resources are employed and are considered to be realized; all incomes are realized in liquid form notwithstanding that individual contributions from specific 'productive conditions' are simply not determined and probably not determinable. The *historical cost assumption* is that realization, evidence support and liquidity conversion, is complete; total revenue in liquid form is sufficient evidence to express the 'value added' of all 'productive conditions' that contributed to it (Zappa, Azzini and Cudini 1955: 138-43; *passim*).

The depreciation concept that seems more consistent with the 'going concern' assumption is founded on the expected future 'replacement cost' to keep the 'production capacity' (production potential of the firm), both in physical and economic terms, intact, explicitly allowing for changes in the monetary unit and in economic financial prospects, as above mentioned[10]. Of course the same purpose can be approximated with 'current entry values'. But the market judgments are implicit in the *historical cost* magnitudes as well; in this way *historical costs* too are past expression of market expectations of predictive economic power and of specific and general price-level variations.

Let us assume the hypothesis of continuing increases of 'replacement costs'. To the extent that productive changes (production and sale processes, organization schemes and so on) just compensate for changes of monetary unit, the depreciation based on *historical costs* will be approximately equal to the deduction founded on expected 'replacement costs'; if the economic improvements are transferred to other classes of interest, a greater amount will be required to maintain income capacity than the *historical cost* deduction. In case of efficient market hypothesis, EMH, the current exchange prices of 'productive conditions' (factors or means of production) should incorporate expectations of future economic prospects as well as expectations of future variations of monetary unit. A comparison of *historical magnitudes* with 'current entry values' should afford relevant inferences about market behavior and management behavior as well. Of course the premise is that *historical costs* are 'revaluated', both upward and downward.

The aversion for reporting 'holding gains' and 'holding losses' of any kind apparently arises from the belief that management is better informed for decision making, and investors about management performance; there is no reliable support that inclusion of 'holding gains' and 'holding losses' in the reports on a continuous basis, every exercise, will improve the reporting function. The determination process measures operating performance from a shifting base of the 'values system', a system of resources values represented in the balance-sheet, considering that *income* and *balance-sheet capital* are not at all independent determinations. The main support for periodic 'system of values' comes from the expectation that 'entry values' or 'exit values' are acceptable surrogates for the environment conditions, the opportunities. Probably a variations in present market values of 'productive conditions' should indicate higher or lower *income power* from the entity and consequently from its different elements.

In each exercise the total magnitude of 'holding gains' and 'holding losses' on all assets and liabilities is approximately equivalent to enter the capitalized value of expected variations of future income prospects as 'periodic income', in the assumption of discounted subjective values.

[10] The difference between the method of renewal depreciation and current cost accounting is not significant if market valuations and management valuations are similar and if management judgments were revaluated at intervals.

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'Holding gains', 'holding losses' and 'operating income' are not independent at all. If variations in 'holding gains' and 'holding losses' seize the capitalized value of expected future 'operating incomes', later actual 'operating incomes' should reflect managers' ability in the operating area.

'Income' founded on *historical costs system*, as a base of predictions, is a composite of 'operating income' and 'holding gains' on all the 'productive conditions', assets, liabilities and net worth. In the periods of rising prices the 'programmed incomes' related to book values are expected to be larger with original costs. While the 'system of values' is changing over time, and the 'holding gains' and 'holding losses' are a weighted combination of past decisions and actions (in the sense they are generated by operations in the period between the previous and the present revaluation, in the case of historical cost system, or every exercise in current values accounting), the overall effect for forecasting may be more or less reliable exactly as with some other methodologies.

Any past valuation must consider the quality of the environment in which the 'productive conditions' are located. Thus *historical values* include every kind of answers, *sustainability*, to all sorts of identifiable or unidentifiable variations in external conditions.

3. Cost-revenue approach and balance-sheet approach. The integration

As to income determination, the *cost-revenue approach* vs. the *balance-sheet approach* simply reflect the perennial struggle to find a place somewhere between two extremes[11] : on one hand, the need of accounting practice for simple and *conservative principles* (as 'lower of cost or market values', 'realization at point of sale', 'cost and revenue matching', 'nominal capital maintenance', 'income smoothing', and so on); on the other hand, the longing for more basic assumption and theorems, better justifiable from an economic and managerial viewpoint (such as 'present values' or 'replacement values' or 'exit values', 'real', 'financial' or even 'physical' capital maintenance, 'comprehensive income', 'clean surplus statements', and so on).

Therefore we might argue that 'objectivity' is a matter of degree and if the accountant's judgement is sound, he will be able to sense which means fits a particular end. And in this process of matching means to ends properly there lies all the 'objectivity' attainable at the present state of knowledge[12].

The essential problem of 'income determination' is a matter of *matching costs and revenues.* When one considers the usual impossible task of finding separable value contributions for each 'productive condition', in conjunction with a varying background of supporting factors and a shifting business environment, the value of the returns, services, actually received can be far more or far less than the value of the return *expectations* at any time. It takes some kind of measures

[11] Saito and Fukui (2016: 8) clarify "that only the necessary part of the asset-liability view is valid in the sense that revenue/expenses cannot be recognized unless assets/liabilities are recognized beforehand because the former process needs the latter. However, recognition of assets/liabilities is not a sufficient condition for that of revenue/expenses because we may impose other conditions on income recognition": it is the instrumental function of 'balance-sheet capital' in order to income determination, and this is in line with Zappa, Schmalenbach, Paton (and many others scholars) approach.

[12] This is best expressed by Myrdal (1970: "The only way in which we can strive for strict 'objectivity' in theoretical analysis is to expose the valuations into full light, make them conscious, specific and explicit, and permit them to determine the theoretical research".

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for specific returns offered and to be offered by each 'productive condition', or class of it, and to use these measures to assign costs – rules for determining expired services. Any excess returns, 'economic results', are imputed to the economic entity and configure as 'income'.

The argument is that cost should be written off as the services expire or that some method of direct valuation, which possibly may keep the 'earning power' of the business entity intact, should be used, such as, for example, *economic depreciation* related to the gross profitability of the periods, exercises; the principle for making the assignment must be based on value determinants in the form of returns received and returns expected. And this is the only way of consistency with the usual meaning of a reliable *sustainable income*.

According to Schmalenbach and Zappa, *revaluations of assets, liabilities and owners' equity* are consistent with cost-return expectations requirement for original entry value. Discounted economic-financial variations, increases or decreases above or below original expectations at the time of acquisition or later, are possible, provided the net discounted value – algebraic sum of 'capital gains' and 'capital losses' – may be excluded from income statement and reported in the owners'equity[13]. But the economic interpretation of these gains and losses says that they integrate overtime (in the perspective of different exercises) the past and future income flows.

Discounting future income stream is seen as a means of determining the value of the *economic capital*, the *synthetic valuation moment*, but not as the only component; another, a complementary one, is the *revaluation* of the *balance sheet capital*, the *analytical valuation moment*, from which one attempts to forecast future net income, specifically the 'distributable' future income[14].

More precisely, in this economic logic, 'capital gains' and 'capital losses' are not treated as positive or negative items of income in the pertinent fiscal period. They constitute 'adjustments' of the estimated income realized in preceding fiscal periods – where they were regarded as anticipations of the future, upon which every attempt of income determination had to be based. In other words, with the passage of time, such 'capital gains' and 'capital losses' change the character of income itself (cf. Zappa 1937: § 140; Schmalenbach 1959: chapt.VII; Masini 1959: 754-62, 1979: 157, ff.; Solomons 1961: *passim*)[15].

The 'revaluation process' would take in consideration realistic depreciation, price-level adjustment, market values, appraisal value and so on. In other words, the new conditions and the economic financial prospects are determined by dynamics of the environment and that of the enterprise (Galassi 1980). Obviously, a revaluation of fixed assets and other items could convert *acquisition costs* into 'current market values' and 'present values' (Sellhorn and Stier, 2019: 596-7).

The real interdependence of 'going concern values' from 'market values' is usually not stressed. 'Market values' are not permitted to be more than partial determinant of 'going concern

[13] Cf. Saito and Fukui (2016: 13): "A windfall engendered by the changed expectation for future prospects of cash flows and/or discount rates are to be excluded from income on a project-by-project base, carried over as part of net assets through OCI, and recycled once expectation is realized without anything left at the end of the project".

[14] For different valuation approaches cf. Galassi (1974); Monaham (2018).

[15] Particularly, Masini's (1959, first ed. 1955) work can easily compete with Edwards and Bell's classic (1961) on business income because it is laid down in the *economia aziendale* framework and the comparison clearly reveals the different scientific outlook of Italian (and Continental European) accounting and 'business economics' theories of this period. An extensive discussion if 'capital gains' and 'capital losses' are recognized as income or capital adjustments is in Hicks (1939).

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value'[16], *economic capital.* This is a conjectural magnitude with no chance whatever of being proved 'true' (right or wrong) by reference to data or constructs from without the system[17].

In a degree of approximation, 'going concern value' of an economic resource, or the entire entity investment, is equivalent to the *original cost* multiplied by a fraction whose numerator is the remaining returns still expected and whose denominator is total expected returns – the magnitudes in preference, but not necessarily, need to be in monetary units[18]. This *economic approach* is operational and the most effective meaningful construct for the responsibility of the managers who take general society's decisions; and this appears in line with the *ecological rationality* (Braun 2016: 16, *passim*).

The interrelationship of this doctrine with the *economic valuation model* is pretty tight. Both require a prediction of expected future returns – the *economic model* in monetary units at each statement date. The latter model implies further the choice of a congruent 'capitalization rate', not necessary, in first approximation, in the cost allocation method, where it is replaced by the use of original cost, which may has had as one of his determinant a discount rate. And the continued use of *original cost* base – and rules for determining expired returns – can be roughly equivalent to the continued use of the original expectations and original discount rate; the substitution of 'current replacement costs' is approximately similar to varying either the discount rates, the expectations or both, in relation to variations in the market valuation of these agents.

By the way, the integration of economic valuation model and cost-revenue approach would improve the ongoing reforms of the IASB and FASB accounting standards, which should be based on its sound understanding.

4. Economic income and economic capital. The 'purchasing power' intrinsic values

The reference to *economic income* is found in discussions about 'value'. There is by no means agreement among economists as to the central meaning of the 'income concept' and even less of its utility in decision processes (see Parker and Harcourt 1969). For example, the enthusiasm of Fisher (1930: 13): "Income is the alpha and omega of economics" is not shared by Hicks (1939: 171, 177): "At bottom they [income, saving, expectation] are not logical categories at

[16] Schmalenbach (1959: 28) explained the point in this way: "A successful investment can bring big profits…This means that my business, because it has won through, is worth much more than the amount shown by my capital account…The value of the business should be calculated on the basis of expected returns…the total of the costs incurred in establishing a business is not the value of that business. Even by substituting other methods of valuation for *cost of acquisition,* the value of a business cannot be arrived at by an accounting synthesis which tries to ascertain the value of an economic entity by adding together the individual values of its unfree parts" (Italics added).

Many factors affect the value of *economic capital:* general and specific variations in the currency economic, intrinsic, values, changes in business economic processes and combinations, variations in other business conditions, also of governance, changes in 'market' or 'general environment' conditions, and so on (cf. Masini 1961: 93-106).

[17] On the other hand, the distinction between the 'economic entities' and the markets is very relative, in the sense that *the market is the set of transactions, characteristically similar for contractual conditions, operated by the economic entities, that is negotiations happened not in an ephemeral way, in a short period of time.*

[18] The total expected returns could be used for the denominator to allocate the cost, for instance depreciation, under the 'benefit doctrine'. The resulting fraction is applied to the *original cost*, which is an imperfect monetary expression of expectations at the time of acquisition.

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all…They are bad tools, which break in our hands"[19]. Hayek (1941: 13) is certainly skeptical: "…there must go economist's habitual practice of separating out the part of general investment activity which happens to leave the capital stock in some sense constant as something different from activities which add to that stock. This distinction has no relationship to anything in the world"[20].

In view of the allocation and distribution of limited resources it seems that one of the major function of reported income is the information that will help to allocate society's resources efficiently and effectively[21]. *Income* magnitudes are predominantly, not exclusively, *ex-post* determinations, because forecasting-predicting process enters necessarily depreciation, inventories and so on.

Income statement is ordinarily one of the more relevant informative determinations for new investment decisions and for combining 'productive conditions'. For prompt comparison of alternative opportunities in different 'economic sectors' the *ex-post income* connected to the necessary investment is highly desirable, although the decision is obviously made on the expected rate of return, relating the expected *differential income* to the incremental investment.

Current expectations are influenced by *past* experiences and trends in *costs, revenues and incomes. Ex post* determinations are the only magnitudes possibly available; expectations and *ex ante* data must be based on the knowledge of similar or analogous situations. It is the 'forecasting predicting process' that is conduct determining, but 'estimates' and 'conjectures' are conditioned by the *past* models and economic results (Basu and Waymire 2017: 9, *passim*)[22].

With reference to the famous John R. Hicks' (1939: 71, ff.) income definition as an index of the amount that could be consumed without being any better or worse off, index of withdrawal (cf. Braun 2016: 8-9), it loses some of its appeal in a dynamic growth economy and seems better fitted to the 'household consumption entity' or to the small commercial entity. If such a function of income figure is accepted, 'capital maintenance' in *physical* terms or in *purchasing power* terms seems the most appropriate of the feasible solutions. The general index for price-level changes applied to *original costs* may be adequate for this purpose. However, the benefit from general price-level adjustments and changing in specific (relative) prices as well (for Sweeney contribution cf. Henry and Graves, 1996: 572-3) is also in the area of 'holding gains' and 'holding losses'.

Thus income is defined to be equal to the magnitude that could be withdrawn and leave the capitalized remaining economic financial prospects equal to the amount of the capitalized prospects at the beginning of the period. But to operationalize this definition it is essential to offer

[19] By the way Williams (2006) attacks the Schipper and Vincent (2003) line of reasoning on the correspondence between the comprehensive income concept and the Hicksian income notion. The latter is in Williams' view, not a scientific concept but merely a practical term.

[20] Fukui and Saito (2018: 4) point out that the neoclassical concept of income of these leading economists "is closer to traditional earnings based on the income statement approach, rather than comprehensive income based on the balance sheet approach".

[21] Braun (2016: 17) explains that the evolved ecological rational historical principle, cost-revenue approach, and conservatism "are advantageous for the individual firm, but they also seem to be congenial to the functioning of the market economy as a whole". The synthesis of the symposium on 'cost accounting and conservatism' is in Braun (2017).

[22] On the 'objective' quantities and 'subjective' ones, such as 'estimated' quantities and 'conjectural' or 'abstract' or 'relative' quantities (*e. g*. exercise or periodic net income, balance-sheet capital, depreciation quota, full cost and so on), see widely Azzini (1982: 110-14); Ferrero (1968: 289-96); Masini (1979: 109-12); Onida (1963:468-72); Zappa (1957: I, II, *passim*).

De Computis, Revista Española de Historia de la Contabilidad
17 (2), diciembre 2020, 28 - 42
ISSN: 1886-1881 - doi: http://dx.doi.org/10.26784/issn.1886-1881.v17i2.395

definite rules for specifying the 'economic entity' (Biondi 2013), predicting and capitalizing economic financial prospects, and selecting capitalization rates (Cf. Onida 1951: 54-6).

The capitalization rate, discount rate, is the operational definition of the 'income rate' and is a leading factor in assigning expectations to *exercises* and periods. Obviously the 'discount rate' is equivalent to the 'income rate', so it affirms the circularity of the capitalization process, because the rules for determining a reliable discount rate are not independent of the rules for determining *economic income*. The 'income rate' will be equal to the 'discount rate', unless the definition of income includes the economic results of favorable or unfavorable variations in economic financial expectations; in this way, 'capital gains' and 'capital losses' can be interpreted as *income* (Coda 1963: § 3. 6.; Devine 1985, vol. II: 31, ff.; Masini 1961: § 5.2.)[23].

Economist' s valuation model, with his emphasis on future flows estimates, may also mean that his construct has not a general wide operational content. Nevertheless the 'economic model' is correct in holding that there is a general tendency to valuate 'economic entities' and properties in terms of discounted return, that most alternative approaches can be translated into discounted framework, and that economic results tend to maintain '*capital intact in economic terms'. Income,* as a result of value judgments is highly subjective, better it is an 'abstract quantity', which cannot be tested even by appeal to the 'social consensus', that is a requirement of 'objectivity' (Masini 1979: § 8.3.; Onida 1951: § 8, 1963: § 97).

The passage from 'certainty', perfect competition (with no need at all to revise estimates and determined income, completely smoothed to a constant rate on investment by the discounted process), affects strangely the economist's model of income. If a revision, *revaluation*, of economic financial prospects is necessary, the magnitude of smoothing will vary with the time between the revaluation and the time of event happening: the less the distance ahead, the greater the fluctuations (cf. Sellhorn and Stier 2019).

From the accounting viewpoint future expected income flows are rarely smoothed with discount rates and the reported income magnitudes will tend to fluctuate sharply. The total impact of expectations variations, according to accounting standards, is reflected in the period of *revaluation*. These fluctuations will always be greater than the tendency proper of the economists' model, even if the fluctuations could be numerous and smoothed by the mean.

With the 'going concern' assumption and the capital maintained intact, in economic sense, for an indefinite period, the influence of discounting future flows is reduced to an insignificant smoothing effect. The *continuum* of future income expectations will be roughly the same at the beginning and at the end of the exercise, and the period. Without unusual events and with the 'capital intact in economic meaning', the smoothing effect will tend to a 'constant' periodic income, which is not relevant for the *cost-revenue approach*[24]. If the unusual events, extraordinary items or inputs, occur the exercise periodic income is variable, not stabilized.

[23] A set of 'income rates' for entities of varying risks are usually available from past transactions – of the same entity or a sample of 'similar' entities – and from quotations of specialized projects. Of course the choice of a congruent rate is highly subjective because it depends partly on the kind of risk and on the probability of predicted income flows or cash flows.

[24] With the assumption of income under certainty, the disregard of the discounting process requires some measurement rules to keep future economic financial prospects constant in infinity. These rules mean a methodology for recognizing new economic production, revenues in wide sense, at definite periods, neglecting the interest effect if the flow of values is expected reasonably unceasing and uniform. Furthermore the 'going concern' principle asks for capital supplying and an unchanged horizon with indefinite future extension. If economic financial

De Computis, Revista Española de Historia de la Contabilidad
17 (2), diciembre 2020, 28 - 42
ISSN: 1886-1881 - doi: http://dx.doi.org/10.26784/issn.1886-1881.v17i2.395

5 Historical cost, accountability and decision making

The *acquisition cost* incorporates the economic rents for the economic sector, so that it is a magnitude of the discounted value of the marginal 'productive condition' in the industry. Thus for the purchasing entity these expected external economies, extra-entity, occur in *acquisition cost* and subsequent depreciation; if the entity is in marginal position, its incomes would tend to converge to its internal rate and to the market capitalization rate. Any economic result, positive or negative, due to the particular entity special abilities, works out as incomes in excess or in defect of the market capitalization rate, the 'normal' implicit external rate of return.

The discounting approach tends to smooth erratic tendencies and to present a still longer view, that is the average *income capacity* of the economic entity in the long run. The accounting valuation rules in the *cost-revenue scheme* permit the reported income to vary -- without the smoothing effect of discounting -- from period to period according to current activity. The correlation between *income recognized* and *added value* is a common purpose of 'economics' and 'accounting' doctrines[25].

With reference to the management of society's economic resources, it emerges the problem as to whether income as a normal rate on capital plus the discounted variations in future economic financial prospects is the most fruitful approach. The alternative is *matching costs with revenues*, where possible, on a return basis, specific for each 'productive condition' potential, and to stress the periodic contribution of revenues over the costs necessary to maintain specific prospects for 'return'. If depreciation is on straight-line basis, the costs for 'productive factor' consumption are constant in different periods, tending to accentuate the variable 'exercise income' over time. *If depreciation is on variable 'conservative' basis, according to favorable or unfavorable economic prospects of different periods, than the 'periodic income' tends to be smoothed and stabilized.*

The whole function of the information system is related to decision making and control. Decisions are about future actions, considering their probable consequences, which, in turn, require predictions. The comparison of predicted outcomes with some normal or standard stream of consequences helps to guide decisions and actions and this is the *economic control* (Galassi 2019, *passim*).

It is interesting the contention advanced by Ijiri (1975: 85-91, *passim*, 1983) and his apparent separation of 'accountability' from decision making – the 'decision oriented approach' reflects the mainstream view. Clearly this concept of 'accountability', emphasized by Ijiri, is relevant for the *economic control*[26]. Any 'economic entity' requires that tasks and responsibilities

prospects are invariable, the discounting process is less necessary. On the other hand the discounting framework is an appropriate measuring device when a shifting capital investment is assumed.

[25] The distinction between *income earned* and *income realized* is a matter of recognition. *Income earned* normally means that the value has been added, i. e., the value increase has happened; for economists and some accountants value increases should be observed as income as soon as the evidence is congruent to support the valuation.

[26] Ijiri attributes to accounting not only a passive function of representation, under given aspects, of business-economic phenomena, in comparison with the real economic world, but also an active function, insofar as it can impact on the behavior of economic subjects. Consequently the accounting information, as to the choice of information criteria, should also consider the reactions these valuations can imply on the economic behavior of the operators and the "desirability" of these reactions.

De Computis, Revista Española de Historia de la Contabilidad
17 (2), diciembre 2020, 28 - 42
ISSN: 1886-1881 - doi: http://dx.doi.org/10.26784/issn.1886-1881.v17i2.395

be divided among participants and be related to productions processes (Masini 1960: I.3., 99; Onida 1963: part I, chapt. II). Quantitative determinations accounts for outcomes and any fruitful measurement must be in terms of 'causative factors' and responsible antecedents (Galassi 2018 : 5-7)[27].

Incomes and other measures of economic results are the outcome of joint efforts and impossibility to account for precise contributions from specific 'productive factor' or decision is to be expected (Zappa 1957, tome II: 829, ff.). In any case *earnings* magnitude includes the net of these unidentified and undifferentiated contributions (Zappa, Azzini and Cudini 1955: 138-143).

Accountability is part of the process of predicting responses to future economic financial situations, finding relevant principles and standards, coordinating answers and exercising psychological pressures, usually in the form of motivational moments. The effect of accountability on subordinate behavior normally operate through the process of valuation and decision making and these processes require prediction (Devine 1985, vol.IV: 53, ff.; Zappa 1957, tome I: 102,ff.). Past outcomes, predictive analogues[28], and standards are used to help the predicting function.

The contention of Ijiri and others (Dicksee, Hatfield, Paton, and so on) that *historical costs* are appropriate for the accountability function meets the difficulty of the interdependence of accountabilities; outcomes of all the personnel cannot be confused with accountabilities of capital investors. Moreover *historical cost* for long term investments is a relevant part of accountability valuation; but those operators who made the early decisions are no longer on managerial positions and there is little reason to monitor their performances, accountabilities, because no more relevant to any future decision[29]. All predictions are crossover in longitudinal sense; nevertheless it is

[27] 'Causative factors' are joint and interwoven (Zappa 1957, tome I: 4-6). Determinations for specific decisions or actions involve isolating various points of recognizable accomplishment, for instance stages of production and sale, and relating the accomplishment first of all to decision making operators who have some control over economic productive processes and combinations. Critical analysis and refinements of the accomplishment magnitudes are essential to locate single responsibilities and accountabilities, and allow for many endogenous and exogenous conditions involved. Accountability and valuation, at least from a methodological perspective, are virtually identical.

Richard Mattessich (2014: chapt. 9) introduces the specific notion of *upward* vs. *downward causation* and/or *explanation:* some causal relations among entities, systems and levels of reality are *upward* (from lower entities or levels to higher ones), some are downward (from upper entities or levels to lower ones), others may be *same* level causations or even *multiple* level causations and/or explanations.

[28] Scientific theories are more than *sentential picture* of 'reality', they are perhaps *structural analogues* which depict reality more accurately than purely linguistic configurations are able to do.

[29] The predicting process depends on stability relationships, particularly on judgments about prospective environmental lateral conditions and other exogenous impulses: in any case, the quality of information is related to its suitability to specify and valuate indicators of prospective conditions; the problem is of joint influence and responsibility (Zappa 1957, tome II: 54, ff., tome III:169). Because all economic results are consequences of joint inputs from various endogenous and exogenous influences, every 'antecedent-consequent' judgment needs allocations and imputations.

In as much as every item in the environment is equally or even significantly influential in every situation, it is more productive, respect the concept of 'causation', the attempt to isolate main influences from various contributory ones. The forecasting process is clearly related to the concept of induction, which proceeds from the known to the unknown on the basis of established relationships, that can lead to fruitful anticipations. These concepts may be considered parts of the broader field of 'analogy'; the entire process of reasoning is based on similarities, analogies, with the resulting ambiguities, always present except in analytical solutions that are true by definition.

De Computis, Revista Española de Historia de la Contabilidad
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ISSN: 1886-1881 - doi: http://dx.doi.org/10.26784/issn.1886-1881.v17i2.395

fruitful the classification between predicting *future historical-cost income* by *past historical-cost income* and predicting *future business income* from *past historical-cost income*[30].

Accounting 'exercise income' is not only determined by operations of the period but is also influenced by partial outcomes of decisions and actions implemented in past long times; even if income is determined by difference of market values, security values, or as discounted subjective flows, we cannot avoid the *past economic results*.

The future economic results can be better predicted by a long past segment with smoothed sets of weighted outcomes from all the activity[31], which places constraints on current and future operations, as long as productive processes remain relatively steady. Clearly *historical costing,* to be forecasting, must assume some degree of stability in managerial ability to implement 'productive combinations' and 'economic coordinations'; the principles lead in the direction of *conservatism,* a "preference for better future reports over better current reports".

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[30] It is clear the relevance of the 'unusual' in the 'causation process' and the related concept of 'extraordinary' items in accounting. The more useful and the more difficult forecastings concern the entity's reactions to extraordinary or unusual exogenous inputs. For *earnings* forecasting see widely Monaham (2018). Sellhorn and Stier (2019: 592) explore whether fair value information helps predict future firm performance.

[31] With reference to past events, the traditional historical average is a moving process that tends to emphasize the more recent decisions and operations, without omitting older ones that still remain influential.

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