
DEBATES

Notes on Double-Entry Bookkeeping and Economic Progress

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Following the lead given by Werner Sombart, several economic historians and others have assigned to the practice of double-entry bookkeeping a significant role in the development of capitalism or of Western economic growth. Elsewhere I have examined and questioned Sombart's own views and Sombartian propositions based upon them.¹ I do not propose to traverse the same ground here. Instead, this paper is addressed to a consideration of new claims made for the double-entry system. These claims do not appear in Sombart's work but, if valid, would serve to reinforce Sombartian conclusions about the economic significance of the system.

1.

In his *Venice: A Maritime Republic*, Frederic C. Lane writes:²

The use of resident agents instead of traveling merchants was facilitated by a number of improvements in commercial technique. One was the system of double-entry bookkeeping. This way of grouping and checking the records of every transaction made it easier for a resident merchant to keep tract [track?] accurately of what his partners or agents were doing... This kind of bookkeeping enabled a merchant operating simultaneously on many market places to know the extent of his liabilities and the extent and nature of his assets.

¹ B. S. YAMEY, *Scientific Bookkeeping and the Rise of Capitalism*, «Economic History Review», vol. 1, 1949, pp. 99-13; *Accounting and the Rise of Capitalism: Further Notes on a Theme by Sombart*, «Journal of Accounting Research», vol. 2, 1964, pp. 117-136.

² F. C. LANE, *Venice: A Maritime Republic*, Baltimore and London, 1973, pp. 140-141.

Herrman Kellenbenz writes in similar vein:³

And the new system [double entry] certainly made it easier for a business like the Fuggers to control their network of agents than it had been, let us say for the Veckinghusens, a century earlier with a less highly developed system.

These claims cannot stand up to examination. The system of bookkeeping used by the merchant affords him no control over the activities of distant factors (or partners) and can give no independent information about what they are doing. That this is so is evident from the fact that the merchant relies upon the factor for information about matters such as the disposal of the assets entrusted to him, the collection of cash from debtors, the payment of expenses, the soundness of outstanding debts and the acquisition of assets on the merchant's behalf. The reliability and accuracy of the information and the speed with which it is transmitted to the merchant depend upon the agent's integrity and efficiency, as does the outcome of the transactions conducted by him on his principal's behalf. The efficacy of the merchant's control over his distant factors depends, in turn, on his success in the choice of factors, the training he gives them and the sanctions he is able to apply *ex post facto*. The particular system of accounts he adopts makes no contribution here. At most his own accounting records can tell him reliably what assets he has put into the care of his factor, and what returns he has received from his factor. But patently this does not take the principal very far. And even the most rudimentary and "unorganised" accounting records can provide this information. There is no reason to suppose that the Veckinghusens did not have information of this kind.

It may be noted, by way of digression, that the principal's direct control over his agent or employee through his accounts can be effective when the latter is allowed little or no discretion in the use of the assets entrusted to him and when there is a predetermined relationship between the quantities of these assets and the returns to be yielded by them if the employee deals with them in accordance with his instructions. In the limiting case the principal's records of the physical quantities issued to his agents or employees can provide virtually complete control over them in so far as sanctions can be applied when incompetence or misappropriation is revealed. Records of this kind were used in the domestic or putting-out system of manufacturing, for the control of materials and items of equipment put out to more-or-less dispersed workers. Basically similar records are used today by the central headquarters of some chain-store organisations to control the managers of branch stores.

³ H. KELLEBENZ, *Technology in the Age of the Scientific Revolution*, in C. CIPOLLA (ed.), *The Fontana Economic History of Europe*, 1974, vol. 2, p. 234.

It is apparent, however, that Lane and Kellenbenz did not have in mind trading factors whose commercial discretion and permitted range of operations were as closely circumscribed as those of such employees. Moreover, the efficacy of the control of the employees in situations of tightly circumscribed discretion in no way depends upon the use of double-entry bookkeeping, but on the care and accuracy with which records of assets issued and received are kept and used by the principal.⁴

Returning to the main theme, it hardly needs saying that the use of the double-entry system by factors (or partners) could not and did not constrain them to act honestly and efficiently on behalf of their distant principals (or partners). The system, if it be followed properly, provides an arithmetical constraint in that the total of debit entries in a ledger must equal the total of credit entries. It does not coerce the factor to act honestly and efficiently or to enter his transactions honestly and accurately.

Although to many readers it may seem redundant to provide historical examples, one illustration is of interest.

Wilfrid Brulez has explained how Jan della Faille as factor in Antwerp systematically defrauded his principals and kinsmen, the de Hane's of Venice. Both parties kept their accounts on the double-entry system — della Faille's journal, to judge from a specimen page, would have provided an impeccable illustration for a contemporary sixteenth-century treatise on the Venetian system. It is interesting that the de Hane's discovered the fraud not through

⁴ For studies of two enterprises, widely separated in time, which practised the putting-out system, did not use the double-entry system, but seem to have controlled effectively their dispersed activities, see FLORENCE DE ROOVER, *Andrea Banchi, Florentine Silk Manufacturer and Merchant in the Fifteenth Century*, « Studies in Medieval and Renaissance History », vol. 3, 1966, pp. 223-285; and K. H. BURLEY, *Some Accounting Records of an Eighteenth-Century Clothier*, « Accounting Research », vol. 9, 1958, pp. 50-60. According to van Werveke, the early cloth industry in Flanders was conducted on the putting-out system by illiterate merchants without written records. H. VAN WERVEKE, *Industrial Growth in the Middle Ages: the Cloth Industry in Flanders*, « Economic History Review », vol. 6, 1954, pp. 237-245. For a comment on an inference drawn by van Werveke, see A. C. LITTLETON and B. S. YAMEY (eds.), *Studies in the History of Accounting*, London and Homewood, 1956, « Introduction », p. 5, n. 8.

Dr. de Roover's discussion of Banchi's bookkeeping practices includes a statement which deserves comment. She remarks: « To determine profits, Banchi and his partners had to go to the trouble of making a detailed inventory and then preparing a *saldo*, or general financial statement. Profits were not determined by balancing and closing the books but by the more laborious process of deducting liabilities and initial investment from assets... » (p. 236). First, the reference to the trouble and labour involved neglects the additional effort involved in keeping books by double entry. Second, where the profit calculation was required to determine amounts to be distributed or credited to partners on a dissolution of a partnership or on a change in its composition or terms, those concerned would have insisted on detailed "ausser buchmässige" inventorisation (to use Sombart's term) and would not ordinarily have been prepared to rely upon the figures in the account-books, regardless of the system by which they were kept.

their own records but because della Faille's younger brother had fallen out with him and had passed on information to them about some of his transactions. Brulez's general comments are of interest and relevance:⁵

The example of Jan della Faille is particularly instructive, because it shows how it was possible in that period for enterprising and unscrupulous factors to build up their own fortunes apart from and against their principals. We are dealing here with a phenomenon, which was still typically sixteenth century, typical that is of a period in which the principal-factor relationship was primarily a question of trust. Only later were such relationships (as of trade in general) to become more "objectivised" and the personal element of less importance. In the sixteenth century the principal was as much dependent upon the personal integrity of his factor as the factor was upon that of the former.

In so far as Brulez is correct in his view that the element of personal trust became less important in later centuries, this development cannot be ascribed to the increasing adoption of the double-entry system. Indeed, one observer at the end of the eighteenth century — admittedly a biased commentator since he was blatantly making propaganda for his own "new" system of bookkeeping — drew a different inference. Edward Thomas Jones alleged that the double-entry system had served to facilitate frauds on absentee owners, since the results of the depredations could be more readily concealed in the more complex account-books by the wrong-doers.⁶ Double entry, « being more complex and obscure » than single entry,

admits of greater secrecy in case of fraud, and is more capable of being converted into a cloak, for the vilest statements that designing ingenuity can fabricate...

If a Bankrupt should be a dishonest instead of an unfortunate man, and has had his books kept by Double Entry, what a cloak for deception is the apparent regularity of them...

Jones is not a powerful ally as a witness. But his hyperbolic statements do serve to draw attention to the elements of intricacy and contrivance in the double-entry system which could be abused as a cover for fraud or impro-

⁵ W. BRULEZ, *De Firma della Faille en de Internationale Handel van Vlaamse Firma's in de 16e Eeuw*, Brussels, 1959, pp. 17-21.

Another example is provided by the experience of the Leicester partnership trading in Morocco in the sixteenth century. The accounts were kept in double entry, the bookkeeper having been provided with « a lidger, a great journall, a memoriall » (the three account-books of the classical Venetian model). The partnership did not prosper. Among other things, « it is impossible to read the partnership's accounts without being struck by the lavishness of the factors' expenditures... All suggest the exuberant expenditure of men in a remote and strange country where control from London was difficult if not impossible ». T. S. WILLAN, *Studies in Elizabethan Foreign Trade*, Manchester, 1959, pp. 240-265 (quotations from pp. 242 and 262-263).

⁶ E. T. JONES, *Jones's English System of Book-keeping*, Bristol, 1796, pp. 12-13.

priety. But factors did not, of course, have to await the development of that system to be able to perpetrate fraud on their principals.

A further point concerns Kellenbenz's reference to the Fuggers, which implies that this family enterprise kept its books on the double-entry basis. Unfortunately virtually none of the relevant accounting records of this famous family has survived, and it is therefore impossible to establish whether the double-entry system had been used. The weight of the evidence, however, is against the supposition that the system was used. Matthaus Schwarz, who became the Fugger's head bookkeeper in Augsburg in the first half of the sixteenth century, wrote a manuscript on bookkeeping which has survived (in three copies).⁷ From this manuscript it is reasonably clear that the Fuggers did not employ the double-entry system, either in Augsburg or in their widely dispersed factories. The most telling single piece of evidence is Schwarz's differentiation between the system in Italy in which goods were treated as third parties as if they were debtors (« . . . wie mans in welschlanden helt, als das man die Guetter auch für Schuldner helt, wie andre Schuldner ») and the system in Germany in which this treatment was not followed (« . . . in Teutschen Landen darinnen man die Guetter nicht für Debitor helt »). The former treatment is a characteristic of double entry; the latter is not. The general tenor of his manuscript discussion is that the Fuggers did not use the Italian system. Another piece of evidence is the surviving inventory of 1527 (and some later inventories). The method of profit calculation (for the period 1511 to 1527) and the detailed entries in the inventory point to underlying accounting records which were not kept on the double-entry system.⁸

⁷ On Schwarz's manuscript, see B. PENNDORF, *Geschichte der Buchhaltung in Deutschland*, Leipzig, 1913, pp. 48-56; A. WEITNAUER, *Venezianischer Handel der Fugger nach der Musterbuchhaltung des Matthäus Schwarz*, Munich and Leipzig, 1931; and B. S. YAMEY, *Fifteenth and Sixteenth Century Manuscripts on the Art of Bookkeeping*, « *Journal of Accounting Research* », vol. 5, 1967, pp. 52-60.

⁸ For the 1527 inventory of the Fugger, see J. STRIEDER, *Die Inventur der Firma Fugger aus dem Jahre 1527*, Tübingen, 1905.

Brulez (*op. cit.*, p. 432) states categorically that the Fuggers did not use the double-entry system in the sixteenth century.

The only tenuous, and highly unreliable, basis for a view that the Fuggers used the double-entry system as early as the fifteenth century is a passage in A. WAGNER's *Eduard T. Jones neuerfundene einfache und doppelte Englische Buchhalterey . . .*, first edition, Leipzig, 1801: « Ich selbst habe in Augsburg in einer Privat-Bibliothek ein Hauptbuch von Antonius Fugger gesehen, welches zwischen 1415 und 1427 gehalten ward. Dieses Denkmal der alten Buchhalterei war im Ganzen, die undeutliche und Gothische Schreibart abgesehen, unser jetzigen Hauptbüchern gleich. Schon da hatten die Charten die Überschrift *Debet* und *Credit*, und das Ganze setzte ein andres Buch (Journal) voraus, aus welchen der Übertrag geschehen war » (p. 51 of 3rd edition, 1807). Such a bilateral ledger and the use of a journal need not, of course, imply that double entry had been used. More important, Wagner is unreliable as a witness: see PENNDORF, *op. cit.*, p. 46, n. 3; and B. S. YAMEY, *Luca Pacioli's "Scuola Perfetta": A Bibliographical Puzzle*, « *Gutenberg-Jahrbuch 1974* », pp. 110-116.

2.

In an article published in 1951, G. Connell-Smith concluded a study of the ledger (1522-1528) of Thomas Howell with this statement about English merchants in Spain: « Emphasis was placed on the accounts being easily interpreted by others, and not merely existing for the convenience of the merchant compiling them ». The author referred, in support, to a document in which Howell gave his « opinion of the ill-kept books of a fellow-merchant in Andalusia ».⁹ In a more recent article James Winjum refers to the same passage from the document after stating: « If his affairs were systematically and comprehensively recorded with double-entry accounting, even those unfamiliar with the merchant's activities could comprehend and follow his accounting methods ».¹⁰

These views raise the interesting question whether the double-entry system became, as early as the sixteenth century, a commonly-known "language" of accounting which, like any other language, facilitated commercial intercourse, and to that extent helped to promote economic growth. However, an affirmative answer to the question runs up against the difficulty that by no means all merchants were in fact familiar with the system, even by the eighteenth century; and I have quoted Jones's view to the effect that the system could be manipulated to deceive those not conversant with the system. Moreover, in the period up to (say) 1800 there were wide variations, within the double-entry system, as to the arrangement of the accounting records, the treatment of several types of transactions, and the valuation of assets at the balancing of a ledger. The uniformities imposed by the double-entry system should not be exaggerated.

In any event, both Connell-Smith and Winjum were mistaken in their designation of Howell's ledger as a double-entry ledger. Inspection of the ledger, in the possession of the Drapers' Company, London, reveals that it was not kept on the double-entry system. It contains a large number of bilateral accounts. It falls far short of the minimum requirements of double entry in that there is no capital account, no profit-and-loss account and no consistent duality of entry for each transaction. Further, both authors misinterpreted the passage in Howell's documentary statement of 1528. The key statement is:¹¹

... he [Howell] never sawe any accompt gevyn by any marchaunt of what nacion soever he were of / but the playnnes therof myght be easelly perceyved by every man that hath any knowledge and not be gevyn yn such forme as

⁹ G. CONNELL-SMITH, *The Ledger of Thomas Howell*, « Economic History Review », vol. 3, 1951, pp. 363-370.

¹⁰ J. O. WINJUM, *Accounting and the Rise of Capitalism: An Accountant's View*, « Journal of Accounting Research », vol. 9, 1971, p. 348.

¹¹ CONNELL-SMITH, *op. cit.*, p. 370.

noo man can understonde yt but hym self orelles the marchauntes of Spayn
wyll call him noo playn marchaunt.

The passage refers to the "giving" of an account and not, as the two authors supposed, to the "keeping" of accounts. In the sixteenth century the giving of an account meant the rendering to a debtor of a statement of his account in the ledger. In the first published exposition of bookkeeping, in Pacioli's *Summa de Arithmetica...* of 1494, this matter is dealt with in the first part of chapter 30 of the section on bookkeeping. The relevant part of the title runs: « Comme se debia levare un conto al debitore che lo domandasse... ». In the title of chapter 14 of the English version (the *A notable and very excellent woorke* of 1547) of Jan Ympyn's Paciolian treatise of 1543, the words used are: « ...and how to geue accomte to the debtor... ». The text includes the following:

... And if it fortune any debtor whiche hath had long to doo with you, to come and desire you to make hym a copie of his reconnyng out of your boke, whiche you maie not well saie nay, then shall you take a leafe of paper as great as the reconnyng doth require, and rule it after the maner of the greate boke [ledger], ...

Ympyn, like Pacioli, also advises that the entries in the copy should be checked against the original recordings of the transactions.

Although the Pacioli and Ympyn treatises describe the double-entry system, it is evident that the "giving" of an account did not presuppose or require that the books were kept on the double-entry system. Personal ledger accounts for debtors and creditors were of course often kept even by merchants who used technically-primitive bookkeeping "systems". Moreover, since Howell did not keep his own ledger on the double-entry system, his statement could scarcely have had reference to that system or to any practice distinctively derived from or associated with it.

