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E. W. Kemmerer's contribution to the quantity theory of money

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Abstract

This paper aims at suggesting a new interpretation of Edwin Walter Kemmerer's quantity theory of money as it appears in his Money and Credit Instruments in Their Relation to General Prices (1903, PhD thesis; and 1907, first edition of the book). In that work, he proposes an equation to determine the price level as the ratio of its monetary and real determinants. The paper addresses Kemmerer's key question of how money and credit are related to general prices. Two directions are investigated. Firstly, I explain Kemmerer's quantity theory by means of his exchange equation and how his interpretation may have influenced Fisher's economic theory. Secondly, I consider his test of the quantity theory on the US economy and I show the empirical validity of his theory. It is argued here that both elements give a key contribution to finding a new interpretation of the deepest meaning of Kemmerer's approach to quantity theory.

Keywords:

Kemmerer | prices | money | credit | quantity theory | business confidence

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Notes

1 I would like to thank Cornell University for sending me the first copy of Kemmerer's 1903 PhD dissertation, Money and Credit Instruments in their Relation to General Prices. I develop some differences between his thesis and two after-editions of this work.

2 On the American neoclassical monetary theory and exchange equations, see Chandler (1953) and Tobin (1985).

3 Even if the famous Fisher's equation MV = PT is that which was retained by the economists, Kemmerer had already proposed an equation making it possible to determine the general level of prices. I thus will defend the hypothesis that Kemmerer was one of the Fisher (1911) influences to write The Purchasing Power of Money. Fisher made use of the equation, and certain of Kemmerer's postulates, to develop his own quantity theory of money. The answer as to why it is Fisher who stayed famous in the history of economic thought is a question that I will not expound here. I am interesting in the dialogue between these two authors, and the development of their economic theories in itself.

4 Even if there exist several elements linking the British debate with the American ones, the ‘British Monetary Orthodoxy’, as Fetter (1965) called it, was not present in the US monetary debate. On the British Monetary Orthodoxy see de Boyer des Roches and Diatkine (2008) and Laidler (1991).

5 Kemmerer (1907: 1) recommends reading Willis (1896) to better discern the state of the quantity theory at the beginning of the twentieth century in the United States. I also suggest Fisher (1894), Harvey (1894), Walker (1895), Mitchell (1896), Clow (1903), Laughlin (1886, 1903), Scott (1903), and more recently Friedman (1990), Timberlake (1993) and Dimand (2003).

6 ‘While adherence to the quantity theory does not necessarily make one bimetallist, it is none the less true that the principal argument advanced for bimetallism rests upon this theory for support’ (Kemmerer 1903: 3).

7 Kemmerer was young when the controversy between the monometallists and bimetallists took place. Nevertheless, he was engaged in the discussion: ‘I was greatly interested in this campaign controversy and read avidly the political literature on both sides, including such books as Harvey's Coin's Financial School, Laughlin's Facts about Money and Coin's Financial Fool. I early came to the conclusion that … the case for national bimetallism was untenable, and that the gold-standard advocates had much better of the argument.’ (Kemerrer n.d.: 20). See also David Laidler (2004) on American bimetallism and the quantity theory, and the gold monometallism and the ‘banking’ approach.

8 Most of the Prosilver congressmen explicitly specified a proportionality between the quantity of money and prices' (Timberlake 1993: 173).

9 ‘Advocates for a viable silver standard in the United States saw silver as a means for tempering the chronic decline in prices. However, the agitation for free silver, in the presence of a gold standard that would endure, actually had the reverse of the intended effect’ (Timberlake 1993: 181).

10 ‘There can be no doubt that the quantity theory has done yeoman service in the causes of metallic inflation’ (Willis 1896: 443).

11 On Kemmerer's explanation of gold standard, see Gomez Betancourt (2008b).

12 ‘E. W. Kemmerer made the most elaborate statistical study of the subject of elasticity and of variations that might indicate a need for an elastic circulating medium. He found that there were seasonal movements in interest rates, domestic and foreign exchange rates, check payments, and the price of bonds. Failures, he found, occurred in greatest numbers during the seasons of tight money markets; and the same was true for panics. None of the hand-to-hand currency showed any marked seasonal movement, except that all forms showed some slight tendency to increase in the autumn and early winter; and “none of them exhibit[ed] any considerable capacity to contract during the slack months of the year”. He used figures for clearings to indicate seasonal movements of deposit currency’ (Mints 1945: 227). See Kemmerer (1910) and Gomez Betancourt (2009).

13 About the notion and the role of bank deposits and checks I have to say that it is ambiguous in Kemmerer's book. In some places, Kemmerer understood that the bank deposits are money and the checks merely means of transferring it, but not everywhere. I have assumed that in Kemmerer's equation C represents the bank money (the checks and drafts that pass through the clearing houses). Credit obligations (promissory notes, drafts or bill of exchange) may be expressed by means of check circulation. ‘A draft may be looked upon as a check drawn by one bank upon another bank, and a non-interest-bearing bill of exchange as a check drawn by one individual or corporation upon another. For convenience we will adopt the common practice and refer to the all under the term checks’ (Kemmerer 1903: 50).

14 Kemmerer presents his quantity theory, which establishes a direct relation between the quantity of money and the price level in an economy. He starts from the equation of exchange, according to which the value of all the transactions that are carried out in an economy must be equal to the product of the quantity of money existing in this economy, and of the number of times that the money changes hands. Kemmerer worked out his interpretation of the quantity theory from that body of theory inherited from the classical tradition: Locke, Hume, Smith, Ricardo, Mill (Kemmerer 1907: 2–3). He also took from the contributions of contemporary quantity theorist who were authorities in monetary economy, such as Francis Walker in 1895, J. Shield Nicholson in 1893, Alfred Foville in 1896, Alfred Marshall in 1898, etc. Nevertheless, in the history of economic theory after Kemmerer, there were other ways of presenting the quantity theory of money. The bibliography treating this topic is vast and diverse; see for example Hegeland (1951), Humphrey (1984), Marget (1966[1938]) and Patinkin (1965).

15 ‘One of the very well-known American economists in the latter part of the nineteenth century, Francis Walker, was the most extreme ‘quantity theorist’ of his time. He not only defended the quantity theory against all kind of attacks, but also maintained that the value of money was completely determined by its quantity and that individual prices were determined by the quantity of money in circulation’ (Hegeland 1951: 75).

16 See also de Boyer des Roches (1999: 576).

17 ‘Except for the inclusion of velocity in his concept of the money supply, his [Kemmerer's] analysis is the same as modern monetarists’ (Humphrey 1984: 20).

18 Kemmerer wrote his exchange equation and did the test in his PhD dissertation as early as 1903 (Kemmerer 1903: 52). Nevertheless, in the economic circumstances of the time, there were differences between the two authors, and also among several of their colleagues from various universities and financial institutions on the solutions to the instability of the value of money, the gold standard regime, and the debate on the creation of their central bank. I found this discussion in Dimand (2003). See also Gomez Betancourt (2008a).

19 In Fisher's words: ‘Since no other kind of bank deposits will be considered by us, we shall usually refer to “bank deposits subject to check” simply as “bank deposits”. They are also called “circulating credit.” Bank checks are merely certificates of rights to draw, i.e. to transfer bank deposits. The check themselves are not the currency; the bank deposits which they represent are the currency’ (Fisher 1911: 33).

20 There are some difference in the definition of the aggregates between Kemmerer's PhD dissertation and his books (1907, first edition; and 1909, second edition). I observe an evolution in the vocabulary that became clearer in 1909. For example, in his dissertation (1903: 58) he writes: ‘the proportion of credit transactions to bank reserves is a function of business confidence’. Whereas in his book (1909: 87) Kemmerer writes: ‘the proportion of deposit currency to bank reserves is a function of business confidence’.

21 Kemmerer was neither the first to introduce this ratio of liquidity nor the only to explain the possibility of its variability. This ratio has been present before by Torrens and the Currency School. According to the Currency School, it must be constant whereas to the Banking School it is not constant.

22 Fisher (1911) shows that the ratio M/M′ must be constant. For him (1911: 50) ‘the fact is that the quantity of circulating credit, M’, tends to hold a definite relation to M, the quantity of money in circulation; that is, deposits are normally a more or less definite multiple of money′. Fisher explains that the banks must maintain a constraint of bank liquidity; that is, a constant ratio between the amount of their reserves in money and the volume of their deposits (Diatkine 1995: 52).

23 Kemmerer built his index of business confidence from the proportion of commercial failures and the variation on the stock market data to the number of concerns in business. ‘While the figures of commercial failures are probably the best criterion of business confidence, it may be well to test the movement they portray by reference to other data. I have accordingly included in the table certain figures pertaining to the stock market and to the banking business, figures which likewise furnish evidence concerning the movement of business stock’ (Kemmerer 1903: 97).

24 The rapidity of monetary circulation made out by William Petty (1665) and John Locke (1691) acquires with Cantillon a central place in monetary history (Jevons 1875). According to Cantillon (1997[1755]: 7990) the rapidity of monetary circulation depends mainly on three factors: the periodicity of income payment, the hoarding behavior and the development of credit. See de Boyer des Roches (2003: 34–5).