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ADDRESS OFFICIAL CORRESPONDENCE
TO THE BOARD

December 12, 1945

Dr. Germán Bernácer
Bank of Spain
Madrid, Spain

Dear Dr. Bernácer:

I very much regret that I have not had time to devote to a thorough-going study of your article myself. Following your suggestion, however, I turned it over to a younger member of the Division of Research and Statistics, Mr. Evsey Domar who is a very competent general theorist and mathematician and asked him to give it a thorough examination. Mr. Domar's chief criticism is that you do not set forth the purposes of your system of equations. He finds it rather difficult to evaluate the theory as a whole unless it is apparent as to why the system was constructed.

Domar offers also a number of more detailed criticisms which I will quote verbatim:

> "I did not check whether Professor Bernácer's algebraic manipulations are correct in the narrow technical sense. Let us assume that they are correct. One still wonders about a number of things. Is the increase in stock (Δ E) meant in the intentional or realized sense? Why does he call purchasers of final products "consumers" when purchasers of capital equipment are included in the total demand? If purchasers include not only consumers, then a part of money which the consumers are supposed to hold is really held by producers and therefore should be included in circulating capital, thus ruining Professor Bernácer's nice distinction between money held by producers and by consumers (A and c). The treatment of production and sale of capital equipment is a difficult and slippery problem and, as far as I could gather, Professor Bernacer did not face it at all. He also did not tell us

how he would treat purchases of final products on credit, which do not involve any exchange of money, at least for the time being. This, I imagine, could be taken care of by introducing additional factors, but it might rob Professor Bernacer of the nice simplicity of his results.

"It is rather puzzling why the expression (π -1) should be integrated and what is the meaning of the result. π is the ratio of demand to supply. π -1 indicates the fraction by which demand exceeds supply. Sometimes it is positive, at other times it is negative. Suppose its integral over a certain period of time equals zero. Does that indicate the absence of disequilibrium? Not at all. It just means that the excesses of demand over supply over some periods of time cancelled the excesses of supply over demand over other periods; the country might have gone through a deep depression and a war inflation in the meantime, and still come out with a zero integral.

"At best, the model sets up the conditions of a static equilibrium (the dynamic part of the paper being visible only in its title). I suspect that such an approach is not very useful for a study of economic fluctuations. We also do not know the causal relationship between the various factors. The several equalities remind one of the equation of exchange, which failed to acquire life in spite of Keynes' Treatise. Personally I often feel that humanity would be better off if that equation was never invented; others, however, find it quite useful."

I shall be very glad to receive the reprint of an article by Professor D. H. Robertson in which he comments upon some of your work. I trust that the criticisms which have been proffered in my letter will be of some possible use. Please accept the expression of my regards.

Most cordially yours,

Howard S. Ellis

Howard S. Ellis,
Assistant Director,
Division of Research and Statistics.