

# The Barnett Critique

Subjects: Others

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The Barnett critique states that there is an internal inconsistency between the theory that is implied by simple sum monetary aggregation (perfect substitutability among components) and the economic theory that produces the models within which those aggregates are used. That inconsistency causes the appearance of unstable demand and supply for money. The incorrect inference of unstable money demand has caused serious harm to the field of monetary economics.

Keywords: Divisia monetary aggregates ; demand for money ; Barnett critique ; index number theory ; aggregation theory

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The term "Barnett Critique" was coined and defined in a British paper published by the St. Louis Federal Reserve Bank, "Empirical Evidence on the Recent Behavior and Usefulness of Simple-Sum and Weighted Measures of the Money Stock" by Chrystal and MacDonald <sup>[1]</sup>. By conducting empirical tests with the St. Louis Federal Reserve's reduced form policy equation (originated by Andersen and Jorden <sup>[2]</sup>), Chrystal and MacDonald compared the statistical properties of differently defined monetary aggregates, including simple sum and Divisia aggregates, among others. As explained below, the Divisia monetary aggregates are produced using the Divisia quantity index formula with user cost prices. Chrystal and MacDonald found that the Divisia aggregates, derived and advocated by Barnett <sup>[3]</sup>, performed best as an economic indicator by showing the strong causal relationship with important economic variables and recommended that Divisia monetary aggregates be produced and supplied by the Federal Reserve at all levels of aggregation, so that researchers can test thoroughly the performance of these indicators. Subsequent confirming reconsideration of the Barnett Critique was published by Belongia and Ireland <sup>[4]</sup> among many others, using all available criteria.

Since 1970, economies throughout the world have been experiencing substantial monetary and financial innovation. As the structure of financial innovation has been expanding, internal consistency of monetary aggregation with economic theory is growing in importance. Divisia aggregation is directly derived from economic theory and assures consistency with economic theory at all levels of aggregation. An international library of Divisia monetary and financial aggregation research and data are maintained online by the Center for Financial Stability (CFS) in New York City.

The appearance of instability of the demand for money function disappears, if the relevant neoclassical microeconomic aggregation and index number theories are used to produce the monetary aggregates, which then would nest properly within the money demand functions. In fact, studies of the demand for money function using competently produced monetary aggregates and state-of-the-art demand system modeling methodology have found the demand for money function to be more stable and more easily modeled than the demand for most other consumer goods. See, e.g., <sup>[5]</sup> (ch. 2, 7, 9, 16, 17, 18, 24), <sup>[6]</sup> (ch. 1, 4, 8), and <sup>[7]</sup> (pp. 92–110).

## A Competition

The date 26 September 1983 could be remembered as that on which an unusual controlled experiment of the Barnett critique was conducted. On that same day, Milton Friedman and William A. Barnett both went on the record by publishing their conflicting views and forecasts in major magazines, providing opposite conclusions about the likelihood of inflation and recession, based on analogous data sources, differing only by the method of aggregation. In "A Case of Bad Good News," Friedman wrote in Newsweek magazine (p. 84) that a huge spike in the growth rate of the M2 money supply had occurred; would surely cause inflation; and would be followed by a recession caused by overreaction of the Federal Reserve to the inflation.

Friedman's last conclusion, of "unavoidable recession," was a uniquely monetarist view. Not all economists agreed with that inclusion. For example, economists of the Real Business Cycle school did not agree that an overreaction of monetary policy would cause a recession. They would have agreed with an unavoidable spike of inflation caused by a huge spike in the growth rate of money, but not subsequent changes in real variables, such as unemployment and output. According to that view, the Federal Reserve has no control over real variables, only nominal. At the time of Friedman's dramatic article in Newsweek, there had indeed been a huge spike in the growth rate of simple sum M2. Friedman was very confident of his inflation forecast, which did not contradict the views of non-monetarist real business cycle theorists.

According to the Barnett Critique, Friedman should have used a properly measured index number for M2, such as Divisia, Fisher ideal, Paasche, or Laspeyres. In his article with the title "What Explosion?" in Forbes magazine on that exact same day, Barnett wrote (p. 196), that there had been no spike in Divisia M2; there would be no surge in inflation and no recession from a Federal Reserve overreaction to an inflation surge that would not occur.

### Results of the Competition

There was no surge in inflation or recession following the non-inflation. History proved that Barnett's conclusion was right, and Friedman's was wrong, although the huge surge in simple sum M2 seen by Friedman did indeed occur. Barnett explained that the reason for the misleading spike in simple sum M2 was a change in regulation. The Federal Reserve had just permitted banks to introduce a new type of monetary asset, Money Market Deposit Accounts (MMDA), which, at that time, were yielding a higher market interest rate than other assets included in M2. Of less importance, the Federal Reserve had also just permitted banks to introduce super-NOW accounts, which similarly were at that time providing high market interest rates. Many economic agents transferred money into those new high-yielding accounts with the source of funds often coming from outside M2 as, for example, from money market mutual funds and Treasury bills, being held largely for investment motives, while yielding high unregulated market interest rates.

The transfer of investment motivated funds into MMDA accounts in banks (and less importantly super-NOW accounts) caused the simple sum aggregates to surge, since deposits entered into the newly permitted accounts were being added into the simple-sum monetary aggregates without weights. But the new deposits were largely motivated by their interest rate yields, as opposed to currency and demand deposits, which did not yield interest and were being held for their monetary services in transactions. However, since the new deposit types were yielding very high-interest rates, their user cost prices, reflecting the opportunity cost from foregone interest, were very low. Divisia monetary aggregates remove the investment motive. Those new monetary innovations, priced at their low user cost prices, smoothly integrated into the Divisia monetary aggregates without creating a spike. The excessive weighting of MMDAs (and super-NOWs) in the simple sum monetary aggregates was the reason that the simple sum and Divisia growth rates at the time of the innovation were so drastically different.

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### References

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