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Milton Friedman, Teacher, 1912–2006

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Nobel laureate Milton Friedman, who died on November 16, 2006, changed the course of modern central banking. Many of his proposals for the conduct of monetary policy were controversial at the time he made them but are now widely accepted. This *Commentary* reviews some of Friedman's contributions to monetary economics.

A legend in the economics profession died recently at the age of 94. Few economists have had the impact that Milton Friedman has had on economics. He retired from the University of Chicago in 1977, a school on which he also had a profound impact. He became synonymous with the term the "Chicago School." In actuality, however, he never retired. He was active until the end, speaking out on issues about which he cared deeply. His contributions are too numerous and varied to enumerate here. His influence was widely felt and remembered in macroeconomics, economic history, the philosophy of economics, policy circles, and libertarianism. He was equally adept at communicating in three disparate circles: He could talk at ease with academics, politicians, and the public. That ability in and of itself sets him apart from most of his colleagues.

Friedman's ideas were not without controversy. This is most apparent in his advocacy of libertarianism. As a libertarian, Friedman advocated legalizing drugs, promoted school vouchers, and opposed the state's power to license doctors, automobile drivers, and others. He was criticized for these views, but he stood by them, arguing that prohibiting, regulating, or licensing human behavior either does not work or creates inefficient bureaucracies.

Friedman insisted that unimpeded private competition produced better results than government systems. He felt strongly that economic liberty was the cornerstone of political liberty, and that any restrictions of economic liberty would inevitably lead to restrictions on political liberty. He became a teacher to the entire nation with the publication of his book *Free to Choose*, co-authored with his wife, Rose. The book was a best-seller and became a popular 10-part television series in 1980. Although Adam Smith's "invisible hand" is well-known to both academics and the lay-public alike, the revival of Smith's ideas was largely due to individuals such as Milton Friedman.

Friedman had an important and lasting legacy on monetary economics. As with his advocacy of libertarian principles, many of his proposals for the conduct of monetary policy were controversial at the time he made them. However, many of these views are now widely accepted.

Friedman and the Great Depression

Friedman was trained in economics at the University of Chicago and Columbia University during the depths of the Great Depression. Many of Friedman's intellectual contributions were inspired by his reflections on the economic experience of the United States and the world during these years. The prevailing lessons received by most post-Depression economists were threefold: First, market economies are inherently unstable—with the Great Depression being a grand example. Second, monetary policy is largely ineffective at responding to economic fluctuations. And third, active fiscal policy is a necessary ingredient to a stable economic environment.

The prevailing economic orthodoxy in the post-Depression years was Keynesian economics. The key ingredient of Keynesian theory is the assumption that excess capacity is the normal state of affairs, and that fluctuations in demand drive movements in output. Since consumption comprises most of demand, Keynes focused on what he called the "consumption function," a stable link between household income and consumption. This linkage implied that changes in fiscal policy (such as tax cuts or spending changes) would lead to magnified effects on output. Keynes argued that the Depression was caused by unexplained decline in demand, and could be remedied by a fiscal expansion of the appropriate magnitude.

In what came to be seen as a frontal assault on Keynesian economics, Friedman developed the permanent income hypothesis in *The Theory of the Consumption Function*. Friedman later claimed that this was his most important scientific contribution. The hypothesis was that household consumption decisions depended not on current income (as in the Keynesian paradigm) but on a household's average income expected over its entire lifetime ("permanent income"). Temporary changes in taxes would have a negligible impact on permanent or lifetime income. An immediate implication of the hypothesis is that

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Keynesian fiscal stimulus can have only a limited effect on consumption and output. Friedman's theory of the consumption function was thus a broad intellectual attack on the prevailing Keynesian wisdom, which relied on the power of fiscal stabilizers.

Instead of fiscal policy, Friedman argued that movements in the money supply were the most important determinants of economic activity. This assertion came to be called "monetarism." His monumental *A Monetary History of the United States, 1867–1960*, co-authored with Anna Schwartz, provided compelling evidence of the importance of movements in the money supply in explaining movements in U.S. output. An entire generation of economics students grew up reading this book and were influenced by the evidence suggesting the importance of monetary aggregates in the behavior of the national economy. One such student is now the chairman of the Board of Governors. In a speech marking Friedman's 90th birthday celebration, Ben Bernanke, then a governor at the Board, noted that "I first read *A Monetary History of the United States* early in my graduate school years at M.I.T. I was hooked, and I have been a student of monetary economics and economic history ever since. I think many others have had that experience, with the result that the direct and indirect influences of the *Monetary History* on contemporary monetary economics would be difficult to overstate."

Most famously, Friedman and Schwartz's *Monetary History* documented the astonishing decline of the money stock during the Great Depression (a decline of roughly one-third from 1929 to 1933). Friedman and Schwartz make clear who was to blame: "If the pre-1914 banking system rather than the Federal Reserve System had been in existence in 1929, the money stock almost certainly would not have undergone a decline comparable to the one that occurred….It also would have cut short the spread of the crisis, would have prevented cumulation of bank failures, and it would have made possible, as it did in 1908, economic recovery after a few months."

Friedman's *Monetary History* is a wonderful example of his data-driven approach to economics. This philosophy is outlined in his paper, "Methodology of Positive Economics." Friedman argues that models should be judged solely on their ability to match the data. Whether or not a model or an assumption is "true" is irrelevant. What matters is whether the models explain the data. Friedman's methodology paper has been extremely influential. For many graduate students in economics, it is the only methodology paper that they read.

■ Money in the Short Run and Long Run

While Friedman convincingly argued for the importance of the money supply in the short run, he also argued for the real neutrality of money in the long run. That is, an increase in the money supply may have short-term effects on real activity, but in the long term, it only changes prices, and real economic activity returns to its original level. This long-run perspective is best summarized by Friedman's famous aphorism that "inflation is always and everywhere a monetary phenomenon." Inflation has nothing to do with aggressive unions, greedy businesses, or even oil cartels—the bad guys who frequently take the blame. Prices move in the long run if and only if there is too much money chasing too few goods.

Friedman's short-run vs. long-run monetary analysis is outlined most clearly in his famous 1968 presidential address to the American Economic Association, another must-read for an entire generation of economic graduate students. Friedman asserted: "There is always a temporary trade-off between inflation and unemployment; there is no permanent trade-off. The trade-off comes not from inflation per se, but from unanticipated inflation….The monetary authority controls nominal quantities. It cannot use its control over nominal quantities to peg a real quantity—the real rate of interest, the rate of unemployment, the level of real national income."

The proposition that changes in the money supply cannot permanently alter the level of output highlighted the importance that expectations plays in economics. This led to the development of the theory of rational expectations, a theory that Friedman himself never fully bought into. But the development of rational expectations garnered Robert E. Lucas, Jr., a student of Milton Friedman's, the 1995 Nobel Prize in economics. Lucas was also cited for formalizing the insights contained in Friedman's 1968 address—another example of Friedman the teacher.

From the vantage point of 2006, it is hard to appreciate the revolutionary nature of Friedman's presidential address. The notion that the Fed can only influence real economic variables like the unemployment rate in the short run hardly seems revolutionary today. Every student of economics understands that in the long run, money only influences prices and not real economic activity. Yet these ideas were revolutionary in 1968. The fact that they seem obvious today is testament to the power of Friedman's logic and rhetoric. Friedman's assertions in his 1968 presidential address are the economic orthodoxy of today.

■ Lessons for Today

Friedman's advice on central banking logically reflects his reading of history. In a *Monetary History*, he argued that every contraction was linked to a decline in the money stock. Historically, monetary policy appeared to do more harm than good. Friedman argued: "The first and most important lesson that history teaches about what monetary policy can do…is that monetary policy can prevent money itself from being a major source of economic disturbance." One policy prescription that follows from this argument is to impose a rule that permits the money supply to grow only at a constant rate; such a rule helps policymakers avoid doing more harm. Friedman never claimed that this was the first-best policy. Instead, historical evidence suggests that it was the clear second-best policy. In particular, Friedman argued that such a policy would have prevented the Great Depression.

The view that the Federal Reserve System exacerbated the Great Depression is widely held today. Bernanke ended his Friedman birthday speech with a humorous admission of commission: "As an official representative of the Federal Reserve, I would like to say to Milton and Anna: Regarding the Great Depression. You're right, we did it. We're very sorry. But thanks to you, we won't do it again."

What have we learned from Friedman, so we won't we do it again? Probably the most important lessons are contained in his presidential address. First, the central bank cannot fine tune real behavior. Any attempt will necessarily

lead to failure in the long run and greater instability in the short run. Second, the central bank can control prices in the long run by controlling the growth of monetary aggregates. Both lessons strongly encourage central banks to focus on a nominal anchor such as the price level or the rate of inflation.

The means by which contemporary central banks pursue nominal targets are quite different from those advocated by Friedman. His prescription of a constant money growth rule sounds quite archaic today. Friedman's proposal was developed under the premise that the real demand for money is stable and predictable. In such an environment, a stable nominal money supply growth would necessarily imply a stable growth of prices in the long term. Central banks have ignored Friedman's money growth proposal because there is evidence that money demand exhibits instability. Because of this, central banks have abandoned money targets and instead operate off of short-term interest rates—in the United States, the federal funds rate.

However, the abandonment of money as a central policy instrument does not discount Friedman's assertion that excessive money growth is the root cause of inflation. A central bank that operates off of interest rates may not look at money directly, but the amount of money is still in the background, moving passively to hit the interest-rate target. These money-supply movements are the principal determinant of inflation. Many may disagree today with Friedman's optimism that a constant money growth rule would be desirable but would not disagree with the long-run policy goal of stable prices.

■ Conclusion

Although we are Chicago alumni, we are too young to have overlapped with Friedman at the University of Chicago. Despite that, the long arms that Friedman had over the university were ever apparent. No one can study economics at the university without his presence being felt. Milton Friedman and his wife, Rose, published their memoirs in 1998 titled, *Two Lucky People*. In actuality, we as a profession and as a society are the lucky ones for having Milton Friedman's clarity of thought and academic guidance. We are all students of Milton Friedman.

■ Recommended Reading

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