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A NEGLECTED INCONSISTENCY IN MILTON FRIEDMAN'S AEA PRESIDENTIAL ADDRESS

BY
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Milton Friedman (1968)—his famous Presidential Address to the American Economic Association—contains an elementary error right at the heart of what is usually supposed to be the paper's crucial argument. That is the argument to the effect that during an inflation, changing expectations shift the Phillips curve. It is suggested that the fact of this mistake and of its having gone all but unnoticed are points of historical interest. Further reflections, drawing on the arguments of Forder (2014), Macroeconomics and the Phillips Curve Myth, *are suggested.*

I. INTRODUCTION

The first objective of this short paper is to draw attention to a clear error of logic in what is usually taken to be the crucial argument in Milton Friedman (1968)—his famous Presidential Address to the American Economic Association. That argument is to the effect that a continuous inflation would come to be expected, and when that happens, any reduction in unemployment initially brought about by the inflation would be reversed. The second objective, building in part on the history of the Phillips curve presented in Forder (2014), is briefly to consider what reaction might be appropriate both to this error's having gone almost without comment, and apparently entirely without being thought important, and to the fact of the error itself.

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II. THE ERROR

Having defined the natural rate of unemployment, Friedman (1968) considered the effect of an increase in the money supply, which, he said, would raise demand, and he continued,

> Producers will tend to react to the initial expansion in aggregate demand by increasing output, employees by working longer hours, and the unemployed, by taking jobs now offered at former nominal wages. This much is pretty standard doctrine. (p. 10)

The appearance of the word "former" is notable for its inelegance and for being mildly ungrammatical, but its meaning is clear enough: The expansion of employment occurs at unchanged wages. However, Friedman continued immediately, in the next paragraph, by saying,

> But it describes only the initial effects. Because selling prices of products typically respond to an unanticipated rise in nominal demand faster than prices of factors of production, real wages received have gone down—though real wages anticipated by employees went up, since employees implicitly evaluated the wages offered at the earlier price level. Indeed, the simultaneous fall *ex post* in real wages to employers and the rise *ex ante* in real wages to employees is what enabled employment to increase. (p. 10)

Like the earlier part, this can hardly be said to be a carefully written passage. One point would be that the sense of "faster" in the second line is ambiguous—it is not clear whether the idea is that the prices of goods start to change before those of factors, or that they move at a greater rate once underway. But more strikingly, in the third line, real wages anticipated by employees are said to have gone up. Since prices have certainly not fallen, that contradicts the earlier statement, which was that there was an increase in employment at unchanged—"former"—nominal wages. So Friedman's story, as it was put, is inconsistent. It is hard to see that there could be doubt that this was an error, but in case there is, a further indication comes from the reformulation of the point in Friedman (1972). That is a rather less well-known paper but is in many respects very similar to Friedman (1968). There, he made much the same argument about expectations, but avoided the mistake, saying,

> Let inflation accelerate to a level higher than the level that was generally expected to prevail. The resulting rise in nominal wages will simultaneously raise real wages as judged by employees in light of their price expectations, and hence raise the amount of labor available, and lower real wages as judged by employers in terms of the prices of the individual products they produce, and hence raise the amount of labor demanded. (pp. 193–194)

Here, it is clear that nominal wages rise at the start of the process and this change of presentation may be some indication that Friedman later recognized the mistake in the earlier version.

III. RESPONSES

One response might begin by noting that the error, although clear, and at the heart of the argument, is easily corrected. The substitution of "higher" or perhaps even "firmer"

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for "former" removes the problem. Either of those changes would render the passage more elegant as well. So it could even be that the problem arises from a typing mistake.[1]

If that is the case, it might appear to be no more than a curiosity. That is how David Laidler (1990 and 1994) seems to have seen it. In both pieces, his interest was in considering the development of monetarism and related lines of thinking before and after Friedman (1968) rather than considering that paper in detail. But he did little more than note that the different views Friedman put lead to different interpretations of the Phillips curve, both of which featured in the developments he was considering, and move on. No one else, I believe, has commented on it at all.

And, indeed, a curiosity may be all it is. Certainly, there is no suggestion that the argument cannot be repaired, so there is no great error of theory uncovered here. But even if it is just a curiosity, as a matter of historical observation, it should surely be noted that it is *very* curious, and all the more so if it really has gone so nearly unnoticed for all these years. Friedman (1968) is not merely very highly cited, though it is certainly that. It is also widely regarded as enormously influential. Robert Gordon (1981) thought it probably the most influential article in the previous twenty years; Paul Krugman (1994) regarded it as a decisive intellectual achievement; Robert Skidelsky (1996) called it the most influential paper in macroeconomics in the whole of the postwar period; and for Laidler (2015 p. 12), it was the one that completed the "intellectual structure" of monetarism. Those sorts of views appear to be widely held. Even more than that, though, the influence of Friedman's paper is held to arise precisely from his presentation of the expectations argument in the paragraph quoted above. It is, supposedly, Friedman (1968) and the almost simultaneous Edmund Phelps (1967) who first challenged the idea that the Phillips curve offered a stable "menu of choice" so that a continuous inflation could permanently lower unemployment.

The point that the lecture is supposed to be influential precisely for introducing the expectations argument very much adds to the oddity of this mistake's going unnoticed. It is not, it should be noted, merely that Friedman put the argument carelessly, or that he put it loosely or informally, but that he put it wrongly, with a definite error in the crucial paragraph. That would mean that a controversial and revolutionary argument, which, after a long debate, overturned orthodoxy, contained a clear mistake that no one thought worthy of comment. It is all very well to say the theoretical point at stake is trivial, and in itself worth no more than a footnote. But academic point scoring does not wait for important arguments, Friedman was a controversial figure, and—we are supposing—the stakes were extremely high. Yet, so it seems, that footnote was never written.

A better response, I suggest, is to question the impact and reception of Friedman (1968) when it first appeared. One particular point is that Friedman and Phelps were certainly not the originators of the expectations argument. In James Forder (2010) I presented more than a dozen earlier statements—most of them by prominent authors, in easily accessible sources—and in Forder (2014, ch. 4, part 1), I added several more, and suggested a variety of other arguments to the effect that it must have been well

[1]Daniel Hammond suggested something might be learned from checking earlier drafts of the lecture at the Hoover Institution collection of Friedman's papers. But except that "former nominal wages" is merely "former wages," the passage, including the mistake, is identical in in the first draft (July 1967, p. 10).

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known in the 1960s. Friedman would have been perfectly well aware that the expectations argument was well known—he made it himself in (1958), among other places, after all—and so his Presidential Address would not have been written with it in mind that this was a revolutionary argument. Rather, the heart of the argument was on the question of rules versus discretion, on which Friedman's views have been considered by Silvie Rivot (2015). The casualness of his presentation of it is then much easier to understand. Friedman presented it quickly, and perhaps loosely, no doubt thinking nothing very much turned on it. The logical mistake is there, but in this view it was not at the heart of the argument of his paper, so there would indeed be no point in anyone else making comment on it.

That may not be the only point of interest arising from the way in which Friedman put his argument. When he described the initial effects of expansion in terms of prices and wages being unchanged, he described it as "standard doctrine," and there must be a question of what he was understood to have meant by that expression.

Here, the temptation from years later is perhaps to suppose he was invoking the idea of a naive Phillips curve—in which case, the word "former" is a mistake. But it would be hard to make the case that there was any such standard doctrine. There was a commonly held view, later associated with James Tobin (1972) or George Akerlof, William Dickens, and George Perry (1996), but well known earlier from Charles Schultze (1959), to the effect that gentle inflation "lubricates" the labor market by overcoming nominal rigidities, and this can result in lower unemployment.[2] But that line of thinking does not fit a corrected version of Friedman's presentation, since it concerned the benefits of reducing the real wages of those in work in declining industries, not bringing the unemployed into employment by raising their nominal wages. Other than that argument, it is a very hard search—as is apparent throughout Forder (2014)—to find anything resembling advocacy of an exploitable Phillips curve in the literature of the 1960s.

An alternative is to read the first part of Friedman's argument just as it was written so that employment expands at unchanged prices. Such an outcome might well be said to be the standard doctrine of the time, since it was precisely the outcome anticipated in the theoretical picture that the later literature came to call that of the "(reverse) L-shaped aggregate supply curve." That idea is sometimes treated just as a primitive version of the Phillips curve in which wages and prices were assumed to be fixed whenever there was unemployment, and to respond to demand only at full employment so that there was, as Richard Lipsey (1978) put it, a "strict dichotomy" between conditions of unemployment and of full employment. In Forder (2013) and Forder (2014, ch. 1, part 3), I argued that a better view as regards prices is that the earlier theory treated the rate of inflation as exogenous to the process determining unemployment, rather than the price level as being fixed, and that this view indeed was widely held. In the model the role of various factors that came to be grouped as "cost–push" was then to explain inflation, but they did so, in the treatments of the 1960s, substantially without reference to the level of unemployment.

Absolutely to establish the status of this sort of picture as "standard doctrine" is no easy matter because it is avowedly an interpretation of various lines of thinking.

[2]Forder (2014, ch. 3, part 5) discusses the widespread acceptance of this view in the 1960s, and the idea itself is also discussed by Norikazu Takami (2015).

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But sustenance for the view certainly comes from the Council of Economic Advisers (CEA) (1962, p. 46), which said,

> Expansion of aggregate demand is clearly the specific remedy for unemployment caused by a deficiency of aggregate demand. Excessive aggregate demand, however, is a source of inflationary pressure. Consequently, the target for stabilization policy is to eliminate the unemployment which results from inadequate aggregate demand without creating a demand-induced inflation.

As other remarks reveal, they certainly did not insist that there was a sharp division between levels of demand at which prices would be stable, and those at which they would rise—neither would anyone else have done so outside a narrow textbook model. There were too many complicating factors, with the argument of Schultze (1959) being one. But the CEA clearly did think that the way to start thinking about the issue was that the problems of inflation and unemployment were separate ones, and the idea of the L-shaped supply curve represents that outlook. Just the same can be said of Paul Samuelson (1967)—the seventh edition of his textbook.[3] Chapters 12 and 13 presented the determination of income on the assumption of fixed prices, and chapter 18 the 'synthesis' by which the Classical postulates relating to price change are confirmed so long as policy maintains full employment. (What Samuelson called "the Phillips curve" is featured in his discussion only in the appendix to this chapter, and as a description of cost–push inflation.) Then, chapter 19 was entitled "Fiscal Policy and Full Employment without Inflation." There, Samuelson discussed (what then seemed to be) the success of the "New Economics" and the tax cut of 1964. The fact that this was under the heading "without inflation" and that nothing was said to suggest that the policy had been adopted accepting an inflationary price for increased output surely conveys a great deal: "standard" thinking at the time had nothing to do with accepting higher inflation in pursuit of lower unemployment. In any case, in this discussion, the Phillips curve went unmentioned.

If that was standard doctrine of 1967, the question still remains as to why Friedman's inconsistency attracted no comment. The answer may be that the critical responses to his lecture very much focused on econometric investigations of whether the adjustment of expectations led to the literal truth of the "vertical Phillips curve" hypothesis—Robert Solow (1968) and Gordon (1970) were two. When such studies found, as these two did, and other early ones tended to, that the Phillips curve was not vertical, their authors seem to have regarded that as an adequate rebuttal of Friedman. They might have mentioned theoretical explanations of the result, such as the lubrication argument from Schultze, but perhaps there was a false security given by the econometrics. Then, with the econometrics focused on the question of the adjustment of expectations, when later studies like Gordon (1977) semed to show Friedman was right, there was neither reason nor inclination to return to the way he had put the argument.

Two things about this econometric work can be noted. One is that when it started, it was natural to refer to Friedman as a proponent of the expectations argument not

[3]Textbook responses to the Phillips curve more generally—and their dramatic change in about 1978—are considered in Forder (2015).

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because he was the first to advance it, but—on the contrary—because he was the most recent. The date of his paper also explains why he happened—unlike earlier authors—to put the point in terms of the language of the "Phillips curve." Second, these econometric responses were tests of the proposition that prevailing rates of inflation would become incorporated into expectations, so their authors showed no interest in the question of whether or why inflation would start. Consequently, one might say that it is with these econometric investigations that the ongoing debate parted company with the theory that suggested unemployment could fall without inflation.

In that case, there is a further point of historical importance to be made. The implication of the L-shape theory is not only that unemployment might change with no effect on inflation, but also that there was no tendency (or, in practical terms, insufficient tendency) for unemployment to be driven to any particular level, and certainly no useful automatic tendency to achieve full employment. Rather, demand policy had a role in achieving that goal. That point, however, was entirely lost in the econometric debate over the shape of the Phillips curve. One result of that was that it became hard to articulate how macroeconomic policy might affect unemployment other than by moving round a Phillips curve. The fact that this point apparently went unnoticed is another puzzle of the times, although Michel de Vroey (1998) both noted the point and expressed surprise at how few others had.

IV. CONCLUSION

The interest of the point considered in this paper is that Freidman's presentation—as it was written—is suggestive of the L-shape view. It is also suggestive, perhaps, that Friedman thought his challenge really was grounded in that doctrine, and not a fundamentally different position. In that case, it almost starts to appear that there might have been no comment on "former" because that was the position that the orthodox accepted—even if that was not reflected in the econometrics. And, indeed, there is one later statement that gives an indication in that direction. That is a remark made more or less as an aside by Tobin (1995, fn1) who said, "Until I re-read Friedman's Presidential Address in order to write this chapter, I had the impression that Friedman accepted a Keynesian non-market-clearing explanation of unemployment in excess of the natural rate."

In other words, it seems that Tobin, at least, may have conducted his share of the debate under the impression that Friedman was accepting much more of the then-orthodox position than he was. It is difficult to see what there is in the Presidential Address or other works of Friedman from that period that could give that impression except for the fact that employment was said to expand at "former" nominal wages.

So Friedman's mistake is clear. On conventional accounts of history, it is astonishing that it went unnoticed until the 1990s, and almost unnoticed then. That is a clue that the conventional accounts are wrong—a view for which there is, in any case, other evidence. But beyond that, there is just the possibility that Friedman's flawed way of putting his point had an effect of directing criticism away from what might have been expected to be a controversial aspect of his presentation. In that case, his way of putting it may have particular significance in the change in macroeconomic thinking in the 1970s.

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