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Macroeconomics: Was Vickrey Ten Years Ahead?

David Colander

In praising the Nobel laureate William Vickrey, the author proposes that government policies can still be developed to maintain full employment.

When you read the Nobel citation for William Vickrey, it is clear that he was lauded for his work in microeconomics. However, if Vickrey were here today he would not be talking about micro; he would be talking about macro policy. Specifically, he would be chastising policy-makers for not working hard to expand the economy beyond where it currently is. It was because of his work in macroeconomics that Vickrey was pleased that he had won the Nobel prize. He fully intended to use that prize as a bully pulpit to spread his views on macroeconomic policy.

Vickrey had been talking about macro policy for a number of years, and in his presidential address to the American Economics Association in 1992 he made some of the arguments he would have reiterated here. I attended that address and I remember overhearing two young economists sitting in front of me as they shook their heads and asked, "Who is this kook? Is he for real?" While the majority of macroeconomists would have been far

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more subtle and polite, they would have agreed in principle with that assessment. Somehow, the thought, in the early 1990s, that you could expand the economy significantly below the then-perceived natural rate of unemployment of 6.5 percent qualified Vickrey as a kook.

Vickrey knew how the profession felt, and it did not bother him. After all, in micro, he had been considered a kook until the profession caught up with him. And, in "transportation," he had roller-skated to work back in the 1950s, predating by forty years the roller-blading craze. Being years ahead of the profession was a standard operating policy for Vickrey.

Vickrey's Early Work in Macro

Let me begin by talking a bit about Vickrey's early work in macro. Many will be surprised to hear that there was any early work at all. But, in fact, in 1963 he wrote a macro text, *Metastatics and Macroeconomics*, in which he set out his basic understanding of macro issues. Vickrey saw macro as an extension of micro, and his 1963 framing of the macro problem in a general equilibrium micro perspective occurred years before others caught up with him and created New Classical economics. In the first part of that book he discussed metastatics, which he defined as an analysis of change through time in which uncertainty is excluded. He developed a general metastatic intertemporal equilibrium in a hypothetical futures economy "as a prelude" to dealing with macro issues.

Unfortunately, Vickrey was not good at marketing. Using the word "metastatics" in the title was not a wise marketing move. Had he chosen as his title "New Classical Economics with Rational Expectations," he might have had more sales.

Vickrey's impatience with theorizing for its own sake is apparent in that early book. His interest in theory always flowed from policy issues. Thus, since he could intuit the policy result of his general equilibrium metastatic model—perfect markets working perfectly always lead to the conclusion that government should not intervene—he had no interest in expanding and formalizing metastatics as modern researchers have done. Instead, Vickrey saw metastatics as a logical, neat first step into the interesting issues of macrodynamics. This, of course, was the case of many early Keynesians, and if younger economists spent a bit more time reading the work of those economists on whose shoulders they are standing, and less time assuming that their Keynesian predecessors were dumbbells who failed to understand metastatic intertemporal issues, the profession would be much further along in its understanding of macro than it currently is.

The point is that Vickrey, and many early Keynesians, saw nothing inconsistent between a dynamic interpretation of Keynesian economics and their view of metastatic general equilibrium. Such a perfect foresight equilibrium was so far from reality that to waste time studying it would violate the law of significant digits. Their interest was in dynamic inconsistency issues—issues that they recognized were beyond the mathematical tools available to them and thus inappropriate for formal study. It is only now, in the 1990s, with the development of the science of complexity, that such formal work begins to make sense. And what that new work tells us is that Keynesian economics has a potentially solid theoretical foundation in a framework of intertemporal dynamics with uncertainty, just as Vickrey argued it did in his metastatics book.

Vickrey was essentially an economic engineer whose interest was policy. Theory was a way to understand the economy so that he could design policies and new institutions to make the economy operate more efficiently and fairly. For Vickrey, economists were the economy's investment in institutional technological change.

Vickrey's interest in macro theory followed from his interest in policy, and in his 1963 book his reading of the macro policy was relatively clear. We had the tools to expand the economy, but we did not have the tools to make certain that that expansion resulted in real output growth rather than inflation, nor did we have an acceptable braking system to slow the economy down without causing a recession.

A Simple Idea

In the 1970s it was I who brought Vickrey's interest back to macro. He was intrigued by a little paper I wrote in 1974 called "The Free Market Solution to Inflation." The paper proposed that, instead of its current institutional structure, rights to change nominal prices were rationed in the following way: Suppliers could lower or raise their nominal prices only if they found other suppliers who would agree to raise or lower their nominal value-added weighted prices by an offsetting amount. Such an economy, I argued, could have no inflation problem.

Vickrey was intrigued by my simple idea. It was, for him, a major breakthrough in our understanding of the institutional structural change we needed in our real-world economy to solve the inflation problem. It would allow the level of inflation to be institutionally set and the economy to reach a preferable real equilibrium.

This view needs some explanation since it is quite inconsistent with the "natural-rate view" of aggregate equilibrium, which has become the new orthodoxy. Vickrey, and most early Keynesians, did not accept the concept of a unique natural rate of unemployment. Vickrey saw the economy as capable of achieving a variety of unemployment equilibria. Which one it achieved depended on expectations, government policy, and institutions. Thus, Vickrey considered our economy a multiple equilibria economy. Unique equilibria existed only in a metastatic general equilibrium model that was irrelevant for policy.

Vickrey did not try to develop his model from micro foundations; the interrelationships in the economy were too complicated for that. Instead, he formulated his concept of aggregate equilibrium as a systemic concept—one in which the dynamic pressures pushing the price level up equaled the dynamic pressures pushing the price level down. Within the range of unemployment where our economy generally operated (between 4 and 8 percent unemployment), these inflationary pressures were

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only minimally affected by aggregate demand. Moreover, core inflationary pressures were subject to significant shifting as a result of institutional changes and random events. Inflation was primarily a supply-side, expectational phenomenon. In such a systemic model, equilibrium is still brought about by individual decision-makers, but the connection between the market incentives they face and the aggregate equilibrium outcomes their decisions lead to are too tenuous for individuals to take into account their contribution to the aggregate equilibrium in their decision-making. Thus individual rationality does not imply collective rationality.

The Short-Run and Long-Run Connection

For Vickrey, the macro policy question was: What policies should we use to move the economy to a desirable equilibrium? His support of substantial deficits can be understood in this light. Vickrey believed that, within the economy's standard operating range, a deficit, combined with expansionary monetary policy, would push the economy to a preferred short-run equilibrium. Doing so would create new patterns of trade, coordination, and technology, increasing productivity and thereby leading the economy to a preferred long-run equilibrium.

This short-run and long-run connection was central to Vickrey's, and early Keynesians', analysis of the economy, underlying their support for expansionary aggregate demand management policy. The long-run equilibrium toward which the economy gravitated depended upon short-run government policy.

Expressed in modern terminology: Expansionary aggregate demand policy influences the long-run equilibrium through its effect on the equilibrium selection mechanism. The unique equilibrium natural-rate model misses that effect since it assumes away the need for an equilibrium selection mechanism.

If one accepts Vickrey's view of how a short-run expansion can lead to a preferred long-run equilibrium, Keynes's quip that "in the long run we're all dead" has been seriously misinterpreted. It should be interpreted as meaning not that we should forget about the long run but, rather, that the long-run equilibrium depends on the short-run equilibrium we choose. Specifically, in the 1930s, early Keynesians believed, I think correctly, that unless we dealt with the short-run problems, our economic system would not survive. Abba Lerner clarified this when he said, "In the long run we are simply in another short run."

To clarify their views further, what should be added to that is that the short-run equilibrium we find ourselves in, in the long run, depends on the short-run policies we adopt now. If Vickrey's views are right, throughout the 1990s we have been operating at lower output than was possible and economists' unique natural-rate vision has cost our society hundreds of billions of dollars in forgone achievable output. This was the message Vickrey wanted to get out.

The Death of the Natural-Rate Theory

For those of us interested in the spread of ideas, the introduction of the natural rate as the fulcrum for economic policy is an interesting case study. It caught on because it fit the data of the 1970s better than did the standard Phillips curve. It has, however, never provided an especially good statistical fit with the data, and in the 1990s it has failed miserably. In terms of predicting how much room exists for expansion, most economists, with the exception of a few such as Vickrey and Robert Eisner, have serious egg on their face. Recent experience demonstrates that the natural-rate theory has provided a false certainty about policy prescriptions. It should, at this meeting, be declared dead, and given a proper burial, just as the false certainty of fine-tuning was declared dead some thirty years ago.

Of course, I am saying this with hindsight. Unlike Vickrey, who was arguing the above throughout the 1980s and 1990s, and being called a kook for doing so, I chose to keep my "reasonable economist" designation, and to keep quiet about macro policy. I did so because I see far more ambiguity in our understanding of the macro economy than Vickrey did. In my view, no one model of the economy is appropriate for all times. The job of policy-oriented economists is to pick the right model, not to provide a single model.

Let me explain what I mean. Models are a way of compressing information. Efficient compression of workable policy precepts is likely to involve hierarchical compression in which policy precepts are initially separated by the economy's structural characteristics at that time. Given those structural operating characteristics, one can develop a model and come up with policy precepts.

The first thing a policy economist must do is select the appropriate model. We economists have not done well in that selection process, largely because we seem to want one model to fit all. That desire has often led us to use a model in a time period for which it is inapplicable. We end up like the child in the fable who, having been told that the correct way to bring home a dog is with a leash, carries over that "lesson" to the next time he is sent to pick up something. He drags home a pound of butter on a leash.

What I am arguing is that many of the economic issues relevant for policy are not technical modeling issues that can be resolved by the statistical analysis methods currently available.

The death of the natural-rate theory raises the question: What theory are we going to replace it with? I suggest a far less certain theory, one that reflects our actual knowledge of the economy.

They are judgment issues, and judgment is not something selected for in the process that turns young men and women into economists. I look at the economy today, one in which inflation is not a serious problem, and where there are serious questions of a global glut, one in which global competition is holding wages and prices down, and I see the type of economy early Keynesians saw in the 1950s and early 1960s. Yet I see economists conceptualizing their policy prescriptions based on the structural characteristics of the economy of the 1970s, not the 1990s.

The Natural-Range Theory

The death of the natural-rate theory raises the question: What theory are we going to replace it with? I suggest a far less certain theory, one that reflects our actual knowledge of the economy. This theory might be called a *natural range of unemployment theory*. It is a theory that sees a range of nonaccelerating inflation rates of unemployment equilibria as possible. This range is institutionally determined and, for the United States, is somewhere between 3 and 4 percent unemployment on the low side and 8 and 9 percent unemployment on the high side. The macroeconomic policy debate is primarily about what the appropriate policy should be within the range, with a secondary policy debate concerning the size of the range. Once the economy is outside this range, there is little policy debate.

I am attracted to this natural-range theory because it is encompassing enough to accept both Vickrey's view of the economy and the current mainstream view. These views differ about the nature of the inflation–unemployment trade-off within the natural range. Vickrey's view paralleled that of Abba Lerner that, within this natural range, there was essentially no inflation and unemployment trade-off. Alternatively expressed, within this range, the Phillips curve is flat, and aggregate demand has little effect on inflation. If this theory is true, it suggests that the relationship between unemployment and inflation is nonlinear, and the statistical fit we get between increases in inflation and unemployment comes primarily from the extremes, not small deviations.

This natural-range theory is much more inclusive than the natural-rate theory. It accepts, as Vickrey did, that current standard economic theories are relevant outside the natural range. Given the current U.S. economy's structural characteristics, below 3 to 4 percent total unemployment, aggregate demand creates inflationary pressure, and causes inflation. Above 8 to 9 percent unemployment, cutting aggregate demand will eliminate inflation and, depending on institutional characteristics of the economy, it may actually create deflationary pressures. But it also is consistent with Vickrey's view that within the 4 to 8 percent range, the standard relationship breaks down, and one must look elsewhere for ways to fight inflation.

Unlike the standard Phillips curve or the natural-rate theory, a natural-range theory is consistent with experiences in both the 1970s and the 1990s. The inflation of the 1970s was caused by major nominal upward price shocks, combined with wage- and price-setting institutions conducive to inflation, both of which led to expectations of inflation and increased inflation. The lack of inflation in the 1990s, in spite of expanding aggregate demand, is due to (1) nominal downward price shocks, (2) wage- and price-setting institutions experiencing significant international competition, and (3) the building of these structural characteristics into expectations of declining inflation.

Dealing with the Inflation Problem

Vickrey's view does not mean that inflation cannot be a problem. It simply means that, within the 4 to 8 percent range, inflation is a problem separable from unemployment. Within that range, inflation is best dealt with by means other than contractionary monetary and fiscal policy. Contractionary policies to fight inflation simply add to the misery index without significantly reducing inflation. Using contractionary aggregate demand policy to fight inflation is the modern equivalent of bloodletting to cure diseases. It piles one misery onto another, without doing any significant good.

In 1996 anyone who had been so bold as to say that unemployment could be reduced to 4.6 percent without generating accelerating inflation would have been labeled a kook. That didn't stop Vickrey from arguing that, and if Vickrey were here today he would be telling you that, given current conditions, unemployment could, and should, be reduced to 4 percent, or even 3.5 percent, without generating accelerating inflation.

I do not know whether Vickrey was right in that view, but I also do not know whether he was wrong. The empirical evidence, when scrutinized, is ambiguous and does not allow us to reject a wide variety of theories. Many, if not most, economists would agree with me on this, especially if they include the evidence of the past two years. But, by the same token, the evidence does not allow us to hold the theories that we hold with much certainty. Yet economists seem to hold deeply whatever

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theory they subscribe to, as if it is the truth. Economists seem to have a genetic predisposition against uttering: "We don't know, and the empirical evidence doesn't tell us the answer."

Induced Unemployment Is an Immoral Policy

To say that Vickrey had a complete formal theory of the aggregate economy would be wrong. But for Vickrey that did not matter. His interest was in translating the understanding we did have into policy proposals that would achieve his normative judgments about what our economy should be. For Vickrey, unemployment was an immoral way of holding down inflation that was borne unequally by the poor and the less well-off. This meant that not only was it inefficient, but it was also unfair. Thus, even if he were wrong in his assessment that reducing unemployment to less than 4 percent would not generate accelerating inflation, he said he would still advocate doing so. To those who said that the result would be that government would be forced to change policy and induce a recession, he would have answered: No. Fighting inflation by keeping the poor and less well-off unemployed would violate society's collective normative judgment. He followed Lord Beveridge in believing that it is society's job to create more positions than job seekers, so that firms do the primary searching for workers, not workers for jobs.

The appropriate policy, if an inflation were started, would be to change the institutions of the economy so that the lower unemployment rate is consistent with no inflation. You don't accept a normatively unacceptable rate of unemployment as an equilibrium.

The Free-Market Solution to Inflation

It is here that my free-market solution to inflation, later reworked, further developed and, renamed the *market anti-inflation plan* (MAP) by Abba Lerner and me, came in. Vickrey saw MAP as the institutional change needed to guarantee that a true full employment—roughly 2 to 3 percent unemployment—could be reached in a way that was institutionally compatible with a noninflationary economy. And it could do so in a way that was fully consistent with existing institutions.

To see why, consider the following questions: Asssuming that there were property rights on value-added prices, what would the price of raising prices be? What implication for the economy's natural rate would a positive price of raising prices have? The answers are simple: By definition, assuming that there were no inflationary pressures, the price of raising prices would be zero. If there were a positive price of raising prices, then MAP would be eliminating inflation pressure. The higher the price of raising prices, the more inflationary pressure it would be eliminating.

To emphasize that the purpose of this program was to allow real growth, rather than to stop inflation, in his recent work Vickrey had started to call the rights to change prices "growth warrants." Here's how the growth warrants are allocated: All firms are allowed warrants equal to their level of value added at the initial starting period. Each year firms receive additional warrants equal to the average increase in productivity in the economy. Thus, all firms are allowed nominal raises in input prices consistent with a noninflationary economy—that is, increases in growth warrants equal to the average total factor input productivity.

When firms hire additional workers, or invest more, they receive additional growth warrants equal to the value of those inputs in their previous use. This means that firms increasing their inputs would receive additional growth warrants, and firms decreasing their inputs without lowering their value-added price would be forced to buy additional warrants. This would create inflows of capital to growing firms from firms that were monopolizing, increasing their value added per input. That is why the plan can also be seen as a tax on monopolization.

A positive price of growth warrants would encourage hiring and price cuts. The MAP plan is a type of synthetic competition that modifies our current institutional structure so that it operates more competitively than it actually is.

Many technical and practical questions need to be answered before these plans can become reality. Concern about these questions kept many economists who supported the plan in principle from supporting it in practice. However, no serious attempt was made to deal with these issues. Vickrey felt that all of these practical and technical questions had answers—not perfect answers, but answers—and that a major effort should be undertaken to find them. It never was undertaken because, politically, such a major institutional change was not in the cards.

The higher the price of these growth warrants, the higher the cost in administrative expenses and misallocated resources. But the higher the price of these growth warrants, the lower the achievable unemployment rate. Thus, the imposition of this plan would present government with a new trade-off—the systemic gain in aggregate efficiency against the administrative costs of the plan.

The plan has one other major advantage: It would allow a much more precise use of monetary policy because the price of growth warrants would give us a direct measure of the inflationary pressures in the economy. We would no longer need to operate monetary policy blind but could set a monetary rule based on the price of these growth warrants.

Vickrey was much more of a visionary than I am, and much more willing to argue that MAP was ready for prime time. I do not know whether MAP actually is workable in practice or whether the politics of inflation control could ever change sufficiently so that it could be tried. However, I will argue that it should be explored in much greater detail than it has been because there could be large potential gains.

Concluding Comment

With the benefit of the observations of the late 1990s, it is now clear that Vickrey's view that, within the natural range, inflation and unemployment are separable issues has much more merit than the profession had perceived. A profession that can turn out young economists who see such ideas as kooky, without a deep consideration of them, is not training its young economists acceptably. Somehow, we need to give young economists a better sense of our lack of our understanding of the economy.

I suspect that, in view of recent developments and economists' poor record of predicting those developments, Vickrey's macro views will be making a comeback. It is quite likely that, sometime in the future, the profession will come to believe that Vickrey was years ahead of the profession not only in micro but in macro.

For Further Reading

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