2. As is well known, elasticity of this demand curve is unitary throughout. Yet it is obvious that forward shifting differs—more of the tax is shifted when a per-unit tax is levied on $S_1$ than when the identical per-unit is imposed on $S_2$. Students often confuse slope and elasticity. Textbook writers should set a better example.

Mathematical Appendix

Let the demand function be $q = f(p)$ and the supply function be $q = g'(p - t)$, where $t = \text{the tax. Equilibrium requires that: } f(p) = g(p - t)$. Now, if $t$ changes, reestablishment of equilibrium requires:

$$f(p)dp - g'(p - t)dp = g'(p - t)dt \text{ or } dp/dt = g'(p - t)/f'(p - t)$$

*Thanks to William J. Baumol for this formulation.

References


This paper investigates the relationship between the policy recommendations which John Maynard Keynes (1883-1946) articulates in his phenomenological writings, and in his major theoretical works, *A Treatise on Money* and *The General Theory of Employment, Interest and Money*. More specifically, I suggest that the policy recommendations of the *Treatise* allow for some institutional differences, are identical to those articulated by Keynes in his phenomenological writings. In fact, the general level of policy outcomes were stabilized in three ways: (1) by changing the bank rate, (2) by using a trident of control (the bank rate, the forward exchange rate, and the buying and selling points for gold), or (3) by implementing a loan-financed, government-sponsored domestic investment program.

I suggest that even though there are scattered references throughout his phenomenological writings to the problem of unemployment, a careful perusal of these writings leads the reader to the conclusion that the term "unemployment" is used in a different context than it is the case in the *General Theory*. The context of his phenomenological writings is Ricardian and Marshallian: unfavorable changes in the general level of prices, either of an inflationary or of a deflationary nature, or the restriction by artificial means of the terms of international trade, results in periodic but temporary movements away from an equilibrium at a full employment level of output. When Keynes wrote the *General Theory*, however, unemployment had persisted for a long period of time. The British economy, Keynes believed, had settled into an equilibrium at a less than full employment level of output. That context is completely foreign to the economics of Ricardo and Marshall, and a reading of Keynes's phenomenological writings does not lead to the policy recommendation of the *General Theory*.
recommendation for which Keynes argues in each of these writings.

In *The Economic Consequences of the Peace*, Keynes attacks the Treaty of Versailles, because he believes the treaty is a Carthaginian Peace, a document which precludes the implementation of any post-World War I European economic reconstruction program: to destroy the German economy, by skimming it of every marketable asset, is to destroy the Allies' economies. The transition of Germany into an industrial society from an agrarian society was a major factor in Europe's prewar economic expansion. If Germany were to make reparations payments to the Allies, then it would be necessary to reduce these payments to a size that is in line with the Allies' legitimate claims against Germany; and it would also be necessary to leave Germany with the wherewithal to meet these payments.

Keynes, therefore, recommended that the Treaty of Versailles be amended in five ways: (1) the retention by Germany of most of her pre-war industrial base and access to the raw materials that fuel that base; (2) the cancellation of the inter-Allied debts; (3) the extension to the newly created states of Central Europe of a loan underwritten by the United States, the value of which would be $1,000,000,000; (4) the creation of strong central governments in the newly created states of Central Europe; and (5) the creation of a Central European Customs Union which would take the place of the economic trading areas of the dismembered Turkish and Austrian-Hungarian Empires. A treaty revised in the manner advocated by Keynes would have permitted Germany to pay reparations to the Allies and Europe to formulate a post-war economic reconstruction program. While *The Economic Consequences of the Peace* became the subject of highly favorable reviews, Keynes' policy recommendations were not implemented. A Revision of the Treaty summarizes some of the more important events that occurred after the signing of the Treaty of Versailles on June 28, 1919: namely, the results of the Reparation Commission's deliberations concerning the final figure for the reparations bill; the results of the plebiscites mandated by the treaty; the invasion of the Rhineland by France and Belgium; and the results of the series of conferences held by the Allies between April, 1920 and May, 1921, especially the Second London Ultimatum. The line of thought which dominated the Revision was that the reparations payment schedule outlined by the Second London Ultimatum was, at best, a stop-gap measure; the real solution to the problem posed by the reparations bill required that the Treaty of Versailles be revised.

To that end, Keynes recommended that the treaty be amended in four ways: (1) the cancellation of the inter-Allied indebtedness; (2) the deferment by the United Kingdom and the United States of their respective share of the reparations bill; (3) the removal of the pension claims from the reparations bill; and (4) the creation by Germany of an assistance fund of $2,000,000,000 for the newly created states of Central Europe. These revisions of the treaty, Keynes argued, would make for a just, sensible, and permanent settlement. The annual payment by Germany to the Allies would not be a crushing burden upon the German economy or an unjust amount in Germany's eyes; and the effort


which Germany might expend on fulfilling the terms of the revised treaty would provide the basis for Europe's economic recovery in the postwar period.

Seven years later the question of the reparations bill was still a problem without a solution. The Dawes Plan, named after the American General Charles Gates Dawes, chairman of the Dawes Commission, and the Young Plan, named after the American Owen G. Young, a former member of the Dawes Commission and chairman of the Young Commission, were attempts at resolving the reparations problem once and for all. Keynes and Bertil Ohlin (1895–1950) wrote a series of articles which appeared in the *Economic Journal*, the topic of which was: What is the mechanism through which these plans would accomplish their assigned task? Keynes argued that neither plan provided any means for obtaining a real and lasting solution to the reparations problem. Keynes concluded that the standard gold specie flow mechanism required that the then prevailing gold rates of efficiency-wages in Germany be reduced relative to efficiency-wages elsewhere. If Germany was to meet her financial obligation to the Allies; such a reduction would make Germany's exports more competitive in the international economy and permit her to raise her exports to an adequate aggregate total. Ohlin argued that the loans from the Allies to Germany, which were part and parcel of both the Dawes Plan and the Young Plan, would reduce the Allies' demand for German exports and increase Germany's demand for imports from the rest of the world. Ohlin concluded that if the loans were terminated, then Germany's demand for imports would decline; the Allies' demand for German exports would increase, and the reparations problem would be resolved. Thus Ohlin articulated an alternative adjustment mechanism, one which would work whether or not the standard gold specie flow mechanism operated. Ohlin's alternative mechanism played an important role in the General Theory's theoretical apparatus.

Another question which occupied Keynes' attention in the postwar period is whether or not Great Britain should restore a gold standard along the lines of the one which had been in existence in the prewar period. In *A Tract on Monetary Reform*, Keynes argued that the adoption of a prewar gold standard would produce deflation, a decline in the general level of prices as measured by some price index, say the Consumer Price Index; that deflation would reduce the willingness of entrepreneurs to run the risks associated with production; and that, the reduced willingness would be reflected in a falling level of output and a declining volume of employment. In other words, Keynes argued that a restoration of a prewar gold system would intensify the already depressed economic conditions which plagued Britain since the winter of 1920–1921. If those were the economic consequences of a restoration of a prewar gold system, Keynes did not want any part of them. Rather than restoring any gold system, Keynes argued for the adoption of a modified version of the then prevailing inconvertible paper currency standard. By separating Britain's gold reserves from the Bank of England's note issue, and by creating a trident of control which included the bank rate, the forward-exchange rate and the buying and selling points for gold, the Bank of England and the Treasury would be able to set different short-term rates of interest for domestic funds and foreign funds for the purpose of stabilizing both the domestic price level and the rates of exchange. Keynes believed that in order to increase the willingness of entrepreneurs to run the risks associated with the activity of production and, consequently, to increase the level of output and the volume of employment, it is first necessary to stabilize the domestic price level.
some time the general price level would eventually fall by an equal amount, the net result being no change in labor's real wage. The potential impact of Keynes' revision of the Bank of England and the Treasury's plan on the British economy was to increase the willingness of entrepreneurs to run the risks associated with the activities of production which would result in an increase in the level of output and the volume of employment. In "The End of Laissez-Faire," a pamphlet which is based upon the Belfry Ball Lecture (Oxford, November, 1924) and an invited lecture in Berlin (University of Berlin, June, 1926), Keynes recommends that British capital be modified through the inclusion of the agency of collected action. That agency manifested itself by the rise in the number of semi-autonomous bodies and by the addition to the state's agenda of questions not now addressed by anyone, for example, the coordination of savings and investment at the aggregate level.

Two points concerning Keynes' phenomenological writings should be noted at this juncture. First, Keynes believed that unemployment is the result of unfavorable changes in the general level of prices, either inflation or deflation, or of restrictions of the terms of international trade, and that unemployment is periodic but temporary. Second, Keynes believed that the First World War and its peace treaty had shaken and broken the general principles on which laissez-faire economics (the economics of Ricardo and Marshall) rests, and that, as a result, the government, in order to ensure that the economy would continue to be in equilibrium at a full employment level of output, had to increase its role with the economy.

In a Treaty on Money, Keynes advocated three public policy recommendations which were designed to stabilize the general level of prices. First, for a nation whose international sector is a very small percentage of its total output, the goal of price stabilization could be achieved by having that nation's central bank bring the market rate of interest into equilibrium with the natural rate of interest (that rate of interest which equates the volume of current savings with the value of new investment). With the market rate of interest in equilibrium with the natural rate of interest, the cost of new investment is equal to the value of new investment and both are equal to the volume of new savings. The recommendation to use the bank rate to stabilize the general level of prices originated in an article entitled "The Depression of Trade" which appeared in the Sunday Times on September 4, 1921. The argument developed in that article was expanded in A Treatise on Monetary Reform and "The Economic Consequences of Mr. Churchill." Keynes also stated, in a draft of what was to be the first chapter of the Treatise, that its "conclusion was the same, though in different words, as the leading tenet of his Treaty on Monetary Reform.

Second, for a nation whose international economy is a significant percentage of its total output, Keynes advocated the adoption by the central bank of a trident of control (the bank rate, the forward-exchange rate, and the buying and selling points of gold). That trident of control would permit the central bank to pursue a program of domestic price stabilization without the fear of having a balance of payments crisis short-circuiting the program. In short, the trident of control would allow the central bank the opportunity of setting different short-term rates of interest for domestic funds and foreign funds. This policy recommendation, except for some institutional details (adhering to the rules of a gold system versus having that nation's stock of gold completely separated from the note issue of its central bank), is identical to the trident of control recommendation advocated by Keynes in the Treatise.

In the General Theory, the Treatise's reserve weapon becomes Keynes' principal policy recommendation, namely, the implementation of a domestic investment program underwritten by the government. Recommendation of a program of domestic investment, although stated in different words, was first advocated by Keynes in "Means to Prosperity."

In "Means to Prosperity," Keynes broaches a new idea for resolving Britain's postwar unemployment problem, namely, an increase in the volume of employment by having the government underwrite a domestic investment program. The reasoning behind the idea is rather simple: if entrepreneurs are unwilling to run the risks associated with the activity of production because the expected rate of return is below what entrepreneurs believed to be, on the average, normal, then the government must step in and do the job. After all, some rate of return, however small, is better than the rate of return generated by underutilized or idle plant, equipment and labor. It must be pointed out, however, that while...
the policy recommendations of the General Theory have the appearance of being quite similar to the third policy recommendation of the Treatise, they are distinctly different. In the Treatise, that policy recommendation is designed to stabilize the general level of prices. With the general of prices stable, the business and investor classes would be better able to evaluate the risks involved with the activities of production and investment. In the General Theory, this policy is designed to move the economy from an equilibrium at a less than full employment level of output (an equilibrium that is foreign to the economics of Ricardo and Marshall) to a full employment level of output.

IV

In conclusion, it has been shown that the policy recommendations Keynes developed in the Treatise are, except for some institutional changes, identical to those policy recommendations developed in his phenomenological writings. This conclusion may explain, in part, the charge that the policy recommendations of the Treatise are old hat. They are old hat because, beginning with Economic Consequences, Keynes articulated a number of policy recommendations which were designed to stabilize the general level of prices. The Treatise’s recommendations are just three more among a long line of like-minded recommendations which flowed from Keynes’ pen since 1919. This is not the case, however, for policy recommendation of the General Theory. While there are scattered references to the problem of unemployment in his phenomenological writings, unemployment, is expressed in the phenomenological writings, in terms of disequilibrium whereas, in the General Theory, unemployment is expressed in terms of equilibrium. A careful perusal of the phenomenological writings, therefore, does not lead one to the General Theory. The writings do however, point directly to the Treatise.

References