

EUGEN VON BÖHM-BAWERK'S "VALUE, COST, AND MARGINAL UTILITY": NOTES ON THE TRANSLATION

GEORGE REISMAN

I first read Böhm-Bawerk's essay "Value, Costs, and Marginal Utility" 44 years ago, as part of my research for my MBA thesis, the subject and title of which was *The Classical Economists and the Austrians on Value and Costs*. I knew at the time that Böhm-Bawerk's essay very much deserved to be translated. And some 20 or more years later, seeing that no one else had yet made the translation, I decided that I would do it at some point. So, in 1980, on my first trip back to New York City after having moved to California, I visited the Columbia University Library, whose extensive collections included Conrad's *Jahrbücher für Nationalökonomie und Statistik*, the 1892 issue of which contained Böhm-Bawerk's essay. There, I made a copy of the essay. With one thing and another, such as writing my book *Capitalism*, that copy remained quietly filed away in my possession until last year, when I finally got around to seriously working on the translation.

I did not complete the translation until last December. And even now, I do not consider it as absolutely final, because here and there a better choice of words is probably possible and there are still footnote references exclusively to the German original of Friedrich von Wieser's *Natural Value*. And even now, I do not consider it as absolutely final, because here and there a better

GEORGE REISMAN is professor of economics at Pepperdine University and the author of *Capitalism: A Treatise on Economics* (Ottawa, Ill.: Jameson Books, 1996), and is the translator of Ludwig von Mises's *Epistemological Problems of Economics* (New York: D. Van Nostrand, 1960). His web site is <http://www.capitalism.net>.

Böhm-Bawerk's essay originally appeared in Conrad's *Jahrbücher für Nationalökonomie und Statistik*, Dritter Folge, Dritter Band (1892, pp. 321-67). It appears below, pp. 37-79 in translation. It was originally delivered as a paper at the 2002 Austrian Scholars Conference. The translation and notes are copyright©2002 by George Reisman.

choice of words is almost certainly possible, as is the breaking up of some of the very long sentences and paragraphs of Böhm-Bawerk that still remain. Thus, for example, 321, shown in brackets at the very beginning of my translation, is the page in Conrad's Jahrbuch where Böhm-Bawerk's essay begins; 367, also shown in brackets is the last page in Conrad's Jahrbuch where Böhm-Bawerk's essay appears. The start of every intervening page in Conrad's Jahrbuch is likewise indicated in brackets, and the same procedure is followed within footnotes, in cases in which a footnote carries over to the next page.

I want to say as a broad proposition that in my opinion Böhm-Bawerk is the most important Austrian economist after Ludwig von Mises. I say this on the basis of the fact that his writings provide by far the best and most comprehensive development of the law of diminishing marginal utility and its application to price theory that is to be found anywhere. And to this, of course, must be added his major contributions on the subjects of capital and interest, including his critiques of the Marxian exploitation theory.

I suspect that Mises might have disagreed with my characterization of Böhm-Bawerk's importance. Mises was sometimes quite modest about his own contributions and, in addition, he had the same kind of awe and admiration of Böhm-Bawerk that I feel toward him, I once heard him compare Böhm-Bawerk to the Sphinx, who never slept and saw everything, and, on another occasion, describe how Böhm-Bawerk worked constantly, with the sole exception of taking time out to attend concerts on Sunday afternoons. Thus, it's entirely conceivable to me that Mises might have described Böhm-Bawerk as *the most important* Austrian economist. I know that he considered the translation of the third German edition of *Capital and Interest* to be of the very greatest importance and was the driving force behind it.

I would like to use an important observation of Mises's as the transition to my discussion of the specific importance of "Value, Cost, and Marginal Utility." In a little-known essay titled "The Role of Doctrines in Human History," which appeared in print for the first time in 1990, 17 years after his death, Mises (1990, p. 302) observes that "All doctrines are taught and accepted at least in two different, nay, conflicting varieties." As examples, he says:

Catholicism had a different meaning for Cardinal Newman and for the hosts of the credulous. The Darwinian theory of evolution is something else than its popular version that man is a scion of apes. Freudian psychoanalysis is not identical with pansexualism, its version for the millions. (Ibid.)

He adds: "The same dualism can be stated with all social, economic, and political doctrines." And he concludes: "An unbridgeable gulf separates the esoteric teaching from the exoteric one."

In other words, Mises claims that it is common, indeed, universal, that doctrines circulate in two or more varieties. One is the genuine version, which is typically complicated and more or less difficult to understand and can therefore be characterized as "esoteric." And then there are one or more other,

far more simplified versions of the same doctrine, which can thus be characterized as “exoteric.” (I have to admit that I had never seen or heard the word “exoteric” before reading this essay. According to my dictionary, it means “suitable for or communicated to the general public.”)

The title of the section of the article in which Mises makes these points is “Esoteric Doctrines and Popular Beliefs.” He begins it with an explanation of the underlying cause that gives rise to the existence of two or more versions of the same doctrine, which he describes in the following words:

Any attempt to study human conduct and historical changes has to make ample allowance for the fact of intellectual inequality of men. Between the philosophers and scholars who contrive new ideas and build up elaborate systems of thought and the narrow-minded dullards whose poor intellect cannot grasp but the simplest things there are many gradual transitions. . . .

Only a small elite has the ability to absorb more refined chains of thought. Most people are simply helpless when faced with the more subtle problems of implication or valid inference. They cannot grasp but the primary propositions of reckoning; the avenue to mathematics is blocked to them. It is useless to try to make them familiar with thorny problems and with the theories thought out for their solution. They simplify and mend in a clumsy way what they hear or read. They garble and misrepresent propositions and conclusions. They transform every theory and doctrine in order to adapt it to their level of intelligence. (Ibid., pp. 301f.)

Now this duality or multiplicity of versions of the same doctrine, I have to say, applies to Austrian economics, at least to that aspect of Austrian economics that is most immediately relevant here and now, namely, the Austrian doctrine on the relationship between value, cost, and marginal utility. I want to say, however, that I am not prepared to believe that the cause in the present case is necessarily a problem of differences in intelligence. All versions of Austrian economics are still confined to relatively small and more-or-less scholarly audiences, comprised almost entirely of people with well-above-average intelligence. Thus, I cannot help but believe that the problem is more one of a failure to read and study the genuine Austrian doctrine than any actual inability to comprehend it by those involved.

However that may be, the genuine Austrian doctrine on the relationship between value, cost, and marginal utility is to be found first and foremost in the writings of Böhm-Bawerk. Böhm-Bawerk represents the “Real McCoy” of Austrian economics when it comes to the theory of value and price. The present essay is, of course, by no means the only place in which he presents it. One should give equal or even greater weight to his treatment of the whole subject of value and price in *Capital and Interest*, including the supplementary essays in volume three of that work. The present essay serves to reinforce and amplify the treatment given there and to highlight the treatment of the relationship between value, cost, and marginal utility.

The simplified or exoteric version of the Austrian doctrine on the relationship between value, cost, and marginal utility is that the value of each and every product is determined by its marginal utility, which, in turn, reflects the demand for and supply of the product concerned. In no case do costs of production determine the value of products. Rather, costs of production, which represent the value of the means of production, are themselves determined by the marginal utility of the products they produce. The only way in which costs of production can possibly influence the value of products, if they do so at all, is, according to the exoteric version of Austrian economics, indirectly, by way of changes in supply.

Thus, for example, if the value of a product exceeds its cost of production by more than the going rate of return on capital, the supply of the product will be increased and its price will fall, bringing it closer to its cost of production, and its rate of return closer to the going rate. If, on the other hand, the value of a product does not exceed its cost of production, or does so only by an amount insufficient to yield the going rate of return on capital, then its supply will be decreased and its price will rise, until it equals its cost of production plus enough net return to yield the going rate of return. At all times, however, the immediate, direct determinant of the price of the product is its marginal utility, which is always determined by the demand for and supply of the product concerned.

This, I say, is the exoteric version of Austrian economics—the popular version, if one will, though, of course, not any kind of version of the masses, who have never even heard of Austrian economics.

Now let me turn to the more elaborate, more complicated—esoteric—version presented by Böhm-Bawerk and, incidentally, also by Wieser, who in the relevant respects agrees with Böhm-Bawerk. I will begin simply by reading the five points Böhm-Bawerk enumerates in reply to Heinrich Dietzel, a contemporary German economist who taught at the University of Bonn, and who had written a number of essays criticizing what Böhm-Bawerk describes as the “marginal-value theorists,” by which, of course, he means the Austrian economists. Based on my understanding of what most people understand by Austrian economics, I believe the reader will find the quotation to be downright startling, because most of Böhm-Bawerk’s corrections of the misunderstandings of Dietzel apply with equal force precisely to what the great majority of today’s Austrian economists believe about Austrian economics. The only difference is that what Dietzel held to be a shortcoming of Austrian economics, namely, its alleged denial of the role of cost of production in the determination of value and price, today’s Austrian economists hold to be a virtue. Böhm-Bawerk writes:

Whoever reads these passages, and numerous similar passages, in which Dietzel again and again puts forward the truth and expediency of cost valuation and criticizes us for “denying” or “not seeing” anything whatever that relates to cost valuation, must necessarily come to the conclusion that we marginal-value theorists really had overlooked the law of costs and, on

the basis of doctrinaire whim, had ignored the abundance of knowledge that can be obtained for the explanation of value from the relationship between costs and value.

In fact, the very opposite is the case. Whoever has read our writings, even with halfway attention, knows this. [328] However, in order to rule out every doubt and every misunderstanding, I want to make a few explicit declarations:

(1) We too fully recognize the sway of a “law of costs” for goods that are reproducible at will. “There is a law of costs”—I once wrote—“costs exercise an important influence on the value of goods.” “That costs of production of goods exercise an important influence on their value is a fact so well verified by experience that it absolutely cannot be doubted.” “One is in fact correct, when one says that costs govern value.”

(2) We too recognize the necessity of “supplementing” the universal law of marginal utility by means of special provisions that relate to the value of goods reproducible at will and that the substance of these is precisely the law of costs. And we have accomplished this “supplementing” in full detail, both for the field of subjective value and for that of objective value and prices.

(3) We too understand the law of costs in such a way that we ascribe to the height of the costs of production, that is to say, to the value of the means of production, the status of a cause—though, to be sure only an intermediate cause—in relation to the value of those products to which the law of costs generally applies. “In our present case (that of goods reproducible at will and of higher direct marginal utility), the value of the product must accommodate itself” (to the value of the means of production). “The value of products of higher direct marginal utility . . . comes to them from the side of the means of production.”

(4) In connection with this, we too acknowledge that changes in the conditions of producing goods reproducible at will never fail to bring about a change in the value of those goods and, to be sure, even without a change in the supply of finished products necessarily having to take place. To be sure, Dietzel maintains, with special emphasis reinforced by numerous repetitions (*Werttheorie*, pp. 593, 596), that “according to the marginal-value theorists, no change in value can appear here” and in the case of the same supply but different costs of production “valuation according to marginal utility [must] be absolutely the same.” And he also does not fail, with equally great emphasis and equally many [329] repetitions, to add the further assertion that “valuation according to marginal utility is incapable of doing justice to influences on value that operate from the side of the conditions of production.” Both pronouncements are proof only of the fact that Dietzel has not made himself better acquainted with the text and spirit of the theory of marginal utility.

(5) Finally, we too recognize the fact—on which Dietzel places such great stress—that in practice the value of goods reproducible at will is usually directly estimated by economizing subjects according to the costs, and we append to this recognition the one condition, which, indeed, Dietzel himself

requires, and must require, that the height of the costs is already known to the valuing individuals or is settled for them. "Countless times we already know the value of the cost goods . . . and in all these cases we measure . . . the value of products simply according to their costs." We are a long way from having the intention of putting the use of costs as a standard out of "circulation" or of allowing consideration of costs to take the stage only in "exceptional cases."

In short, concerning everything that is true and essential in the law of costs—that costs "govern" the value of goods reproducible at will, that we usually directly value these goods according to cost value, that changes that occur on the side of costs cause changes in value, and the like—we marginal-value theorists have not missed or denied an iota. The one difference—and I even believe that Dietzel would agree with us to a considerable extent, although he is by no means clear concerning how far he agrees with us—the one difference consists of the fact that we believe that with the statement of the law of costs we have not yet reached the end of the explanation.

Those are Böhm-Bawerk's own words.

To understand them, one must realize that according to Böhm-Bawerk, the basic, primary relationship between the value of products and the value of means of production is that the former determines the latter; that is, the value of products determines the value of the means of production. However, it is not the value of *all* products that determines the value of the means of production. Rather, it is the value of *marginal* products that determines the value of the means of production. The value of means of production, determined by the value of their marginal products, then operates to reduce the value of supramarginal products to the value of the marginal products. That is, in the case of supramarginal products, *the value of the means of production is determinative* in reducing the value of the products below what it would be if they were not related by way of production to the marginal products and instead had to be governed by their own, direct utility or marginal utility. Because they are related by way of production to the marginal products, the value of the supramarginal products is reduced to that of the marginal products.

In saying that the value of the supramarginal products is governed by the value of the means required to produce them, one says, of course, that the value of the supramarginal products is determined by their cost of production, for that is precisely what the value of the means required to produce them is. However, the equally important further implication of the discussion is that while cost of production is a real and frequent direct determinant of the value of products, it is never an ultimate determinant but is merely the means whereby the marginal utility of some products determines the value of other products. Thus, the causal role of costs in determining the value of products reproducible at will is, in Böhm-Bawerk's view, both true and, at the same time, a major vehicle for the operation of the law of diminishing marginal utility.

Please note. Contrary to the prevailing neoclassical doctrine, according to Böhm-Bawerk, the marginal product of a means of production need not exist in each and every industry that employs that means of production. It may exist in just one or a few of the industries that use one or more of the same means of production. Thus, for example, the marginal product of iron need not exist in all industries producing iron products. Conceivably, it might exist just in the production of bicycle bells or door knockers made of iron. The value of iron determined with respect to its marginal products would then be determinative for the value of such supramarginal products as iron and steel girders and surgical instruments made of iron and steel.

In Böhm-Bawerk’s own words:

All those goods and kinds of goods, which can be produced at will from one and the same means of production or cost good—following the practice of Wieser, we call them “production-related”—thereby, on that very basis, enter into a kind of community, within which value has the tendency everywhere to present itself on the same level. That is to say, just as several specimens of the same kind of good, for example, several sacks of the same grain or several hundred-weight of the same iron, must have the same value, when and because they can be drawn upon at our pleasure for the same useful services and can be mutually substituted for one another, just so, no difference in value between two goods of different kinds can persist, when and because they can be produced or replaced at our pleasure and in any quantity desired by means of one and the same third good—by means of their common producers’ good or cost good. And just as, furthermore, the value of each of several identical sacks of grain is determined according to the law of marginal utility by the utility of the “last,” most easily dispensable sack, just so the value of all production-related goods together is determined by the utility of the “last,” most easily dispensable product which is brought forth from the common production source, or, as we call it, by the marginal utility of the “marginal product.” This provides the measure both for the value of the common cost good as well as, via this last, the value of all other products produced by means of same.

Allow me to illustrate Böhm-Bawerk’s point here by means of a modification of his famous example of the pioneer farmer with five sacks of grain. As will be recalled, the five sacks serve wants in descending order of importance. One sack is necessary for the farmer to get through the winter without dying of starvation. The second enables him to survive in good health. The third enables him to eat to the point of feeling contented. The fourth enables him to make a supply of brandy. The fifth enables him to feed pet parrots.

Imagine that the first sack actually bears a little tag, describing it as “Sack Required for Survival.” Now imagine that rats or other vermin destroy the contents of this sack. What is the magnitude of the farmer’s loss? Is the utility of the lost sack as great as the importance he attaches to his life? Is his life at stake? The answer to these questions is “not at all.” Since he can easily replace that sack with any of the other four remaining sacks, his actual loss

will be the least important of the wants provided for by those four sacks. That, of course, will be the feeding of the parrots. The principle is that the utility of any sack—more broadly, of any unit of a homogeneous supply whose units can be mutually substituted for one another—will equal the utility of the marginal unit of the supply, that is, the utility of the least important unit of the supply.

Now let us slightly modify the example. Let us imagine that the first sack of grain has been used to make a supply of flour, which in turn has been used to make a supply of biscuits, and that it is this resulting supply of biscuits by means of which the first sack of grain performs its service of preserving the farmer's life. Once more, we can imagine a little tag attached, this time saying, "Biscuits Required for Survival." As before, our farmer still has four remaining sacks of grain, any of which can be used to make a fresh supply of flour and then a fresh supply of biscuits. And now, just as before, we may imagine rats or other vermin destroying the supply of biscuits.

Will the answer to the question concerning the magnitude of the farmer's loss be materially different? Certainly, his life does not depend on the supply of biscuits any more than it did on the sack of grain. For he can replace that supply of biscuits at the expense of the marginal employment of the remaining sacks of grain, which, of course, is the feeding of the pet parrots. To be sure, additional labor will have to be applied as well, but the magnitude of value lost here is that of the marginal product of that labor, which might be something such as the construction of a sun shade or an additional sun shade or even the feeding of the parrots. The point is that the value of the biscuits will not be determined by the importance of the wants directly served by the biscuits but by the importance of the marginal wants served by the means of production used to produce biscuits and from which a replacement supply of biscuits can be produced at will.

Those who have a good memory of Böhm-Bawerk's example of the pioneer farmer may come to the conclusion that to make my example closer to his in pattern, I should perhaps assume that three sacks of grain had been used to bake a tripled supply of biscuits, since it was three sacks that were intended to serve the food consumption of the farmer. I'm happy to make that modification, because it actually helps to bring out a further point.

If, as before, the supply of biscuits lost is still equal to the product of only one sack of grain, and if there are still two sacks that remain—one set aside for making brandy and one for feeding the parrots—the loss will still reduce to that of the importance of feeding the parrots and to the importance of the marginal product of the labor needed to process that sack into a fresh supply of biscuits.

What this particular example helps to bring out is the fact that even though there is some significant gradation in the marginal utility of different portions of the supply of biscuits, the value of any part of the supply of biscuits is not determined by the marginal utility of biscuits but by the still lower marginal utility of the fifth sack of grain, whose employment lies outside of biscuit making. The value of the biscuits is governed by the lesser marginal value of the means

of producing biscuits, which, in turn of course, is governed by the value of the true marginal product in this case, namely, the survival of the parrots.

And this opens up another insight, which Böhm-Bawerk and Wieser astutely drew, and which was clearly stated in one of the five enumerated points I quoted. We can see it merely by changing our assumption as to the supply and marginal utility of the remaining sacks of grain. If there were only one remaining sack of grain, the value of the lost supply of biscuits in question would be higher: it would reflect the value attached to the prospective supply of brandy rather than that of the pet parrots. And if, on the other hand, there were a third remaining sack of grain, to be used for some further, still less important purpose than the feeding of parrots, the value of the lost supply of biscuits in question would be lower.

These observations imply, as Böhm-Bawerk and Wieser saw, that the influence of cost of production on prices, in transmitting the value of marginal products to supramarginal products, can exist in the face of *unchanged supplies* of the supramarginal products. As Böhm-Bawerk wrote, and as I quoted him before:

In connection with this, we too acknowledge that changes in the conditions of producing goods reproducible at will never fail to bring about a change in the value of those goods and, to be sure, even without a change in the supply of finished products necessarily having to take place.

I can say now that in an accompanying footnote, he quotes Wieser as saying in the latter’s *Natural Value*: “Cases of the kind last discussed are conspicuous in that *the effect of cost on the value of the products takes place without the quantity of products being affected.*” (Italics in original. Translation mine.)

This point is highly significant. On the one side, it introduces a major line of opposition between Austrian economics and contemporary neoclassical economics, with the latter’s endless concern for elasticity of demand, down to the point of alleging the need to construct four-firm and eight-firm concentration ratios, as measures of the alleged ability of firms to exploit the elasticity or inelasticity of demand. The implication of cases of the kind just discussed is that the demand may even be perfectly inelastic and, in the case of goods reproducible at will, it does not affect the price: the price will be determined by cost of production.¹ The result is that oligopoly theory, game theory,

¹I believe that actual, real-world cases of perfectly or near perfectly inelastic demand curves abound in the realm of many kinds of spare parts. What depends on the presence or absence of many spare parts is all or most of the utility of the good for which the part is necessary. For example, probably the entire utility of many electrical goods depends on the presence or absence of a simple fuse, which can typically be purchased for less than a dollar, perhaps even for a matter of pennies. Even the most marginal electrical appliance in the entire economic system that depends on such a fuse probably has a utility that is far higher. The case is similar with respect to automobiles and the various spare parts they require. Buyers of such parts rarely pay prices that even remotely approach the value they

the doctrines of imperfect competition and pure and perfect competition—all either fall away completely or else are relegated to a modest, relatively obscure corner of economic theory, when it is realized that the prices of goods reproducible at will are generally determined by cost of production.

At the same time, on the other side, Austrian economics appears much less distant from old British classical economics, which, of course, also recognized the role of cost of production in determining the price of goods reproducible at will.² Unfortunately, of course, classical economics mistakenly held cost of production to be the *ultimate* explanation of the value and price of goods, which it is not, being in fact, as Böhm-Bawerk shows, merely the vehicle for the transmission of marginal utility from the value of marginal products to that of supramarginal products.

However, with the meticulous precision that is so characteristic of him, Böhm-Bawerk suggests that even this difference might have vanished had the classical economists been in a position to see matters as he and Wieser did. Ricardo, he points out, saw clearly that “‘corn is not high because a rent is paid’ (that is, because the producers’ good use-of-land has a value) but ‘a rent is paid because corn is high.’” There is not such a great distance between that insight and the recognition that the value of means of production in general ultimately derives from the value of products and does so no less in all those numerous cases in which the value of the means of production is the immediate or direct determinant of the value of supramarginal products.

Böhm-Bawerk’s characteristic care and precision even lead him to acknowledge that the quantity of labor required to produce goods can be a

attach to their automobiles, even though without the parts in question their automobiles would be largely or entirely useless.

²For example, Ricardo (1823, chap. 30) writes:

If the natural price of bread should fall 50 per cent from some great discovery in the science of agriculture, the demand would not greatly increase, for no man would desire more than would satisfy his wants, and as the demand would not increase, neither would the supply; for a commodity is not supplied merely because it can be produced, but because there is a demand for it. Here, then, we have a case where the supply and demand have scarcely varied, or if they have increased, they have increased in the same proportion; and yet the price of bread will have fallen 50 per cent at a time, too, when the value of money had continued invariable.

It is not without wisdom that Lionel Robbins says, in his introduction to Philip Wicksteed’s *Common Sense of Political Economy* (1933),

a very good case could be made out for the view that, with all their differences, the systems which seem to make the clearer break with the past are, in fact, nearer in spirit to the classical system than those which have preserved more closely the classical terminology and apparatus.

The system making the clearer break, of course, is that of Austrian economics. The one more closely preserving the classical terminology is that of Alfred Marshall.

causal determinant of their value, in fact, one that is more fundamental than marginal utility itself, because it (along with a variety of other causal determinants) helps to determine marginal utility. Thus, in the present essay, he says at one point,

If, however, we want to refer only to the technical facts of production, then it is entirely correct that these help to determine marginal utility. For example, the less the material and labor that the production of a jacket costs, the more jackets, of course, can one produce with the means of production available. Thus the more completely can the need for clothing be satisfied. And thus, other things being equal, the lower will be the marginal utility of a jacket. The technical conditions of production are, therefore, to be sure a cause of the value of goods lying further back, a “more ultimate” cause, than marginal utility.

Let me point out immediately that there is not an iota or scintilla of anything here that should be construed as giving any kind of aid or comfort to Marxism. Quite the contrary. By reducing the quantity of labor required to produce products, one increases the supply of products relative to the supply of labor and thereby reduces the marginal utility and price of products relative to the marginal utility and price of labor; that is, one raises real wage rates. This is precisely what businessmen and capitalists continuously accomplish under laissez-faire capitalism by means of their continuous efforts to raise the productivity of labor. While this inference may not be found to be stated directly or very forcefully in Böhm-Bawerk, I consider it to be clearly present in his writings.

In conclusion, I believe that the serious study of Böhm-Bawerk’s writings is an essential aspect of the education of every true Austrian economist. For those who have not yet embarked upon such a study, this essay of Böhm-Bawerk’s, “Value, Cost, and Marginal Utility,” can serve as an excellent starting point. For those who have so embarked, this essay should certainly not be missed.

REFERENCES

- Böhm-Bawerk, Eugen von. 1892. *Conrad’s Jahrbücher für Nationalökonomie und Statistik, Dritter Folge, Dritter Band*. Jena: Verlag von Gustav Fischer.
- Mises, Ludwig von. 1990. *Money, and the Market Process*. Richard Ebeling, ed. Auburn, Ala.: Praxeology Press of the Ludwig von Mises Institute.
- Ricardo, David. 1832. *Principles of Political Economy and Taxation*. 3rd ed. London.
- Wicksteed, Philip, 1933. *Common Sense of Political Economy*. 2 vols. Edited with an Introduction by Lionel Robbins. London: Routledge and Kegan Paul.