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*Gottfried Haberler's 1930 Reformulation of Comparative Advantage
in Retrospect*

by

Daniel M. Bernhofen

The Author

Daniel M. Bernhofen is Professor of International Economics in the School of Economics, University of Nottingham and an Internal Fellow of GEP.

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Abstract

In 1930 Gottfried Haberler freed the doctrine of comparative advantage from its association with David Ricardo's labor theory of value and provided us with its modern opportunity cost formulation. Haberler's reformulation of comparative advantage revolutionized the theory of international trade and laid the conceptual foundation of modern trade theory. On the occasion of its 75th anniversary, a symposium has been organized to reflect on and celebrate one of the most durable and fruitful ideas in the history of economic thought. In this paper I revisit Haberler's original formulation, which was published in German in the *Weltwirtschaftliches Archiv*.

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The theory of comparative costs was developed on the basis of the labor theory of value, and all theorists who accepted it have indeed assumed that it rests also logically on the labor theory of value. For the authors who reject the labor theory of value, the theory of comparative costs foundes on the cliffs as the former, that is, on the fact that there simply exists no units of real cost, neither in the shape of days of labor nor in any other shape...

Fortunately, however, is possible to reformulate the theory in such a way that its analytical value and all conclusions drawn from it are preserved, rendering it at the same time entirely independent of the labor theory of value. This may most readily be shown in a diagrammatic representation of our theorem. (Gottfried Haberler, 1930)

It is well-known that the theory of comparative advantage, which trade economists proudly consider to be “the deepest and most beautiful result in all of economics” (Findlay, 1987, p. 514), orginated in David Ricardo’s famous passage of his *Principles of Political Economy and Taxation*.¹ It is less known that a milestone in the development of the much admired depth and beauty of the theory was laid by Gottfried Haberler in a neglected 1930 article in the *Weltwirtschaftliches Archiv*.² In that article Haberler freed the theory of comparative advantage from Ricardo’s labor value formulation, provided us with the modern opportunity cost formulation and laid the conceptual foundation of modern trade theory.

I will use George Stigler’s insight about *newness* in research as an organizing principle for discussing Haberler’s contribution. Stigler (2004, p.88) notes: “Many ‘new’ ideas are not new at all, only unfamiliar...New ideas look at new things or look at familiar things in a new perspective, and their fertility and usefulness are not self-evident”. Haberler’s new idea was to reformulate the theory of comparative advantage such that the value of good X is measured in terms of the forgone units of the production of good Y rather than the labor units that are necessary to produce good X, as in the Ricardian formulation. Haberler implemented this

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¹ Based on the evidence of Ricardo’s letters, Ruffin (2002) suggests a fascinating account of how David Ricardo actually came up with the law of comparative advantage. This provides compelling evidence that Ricardo should be given sole credit for the origin of the doctrine.

² Haberler’s original 1930 article was written in German and was not translated into English until 1985. His opportunity cost formulation was introduced to a broader English speaking audience in chapter 12 of his 1936 classic textbook on the *Theory of International Trade*, a translation of his 1933 book *Der internationale Handel*.

opportunity cost formulation of comparative advantage by introducing the concept of a substitution or production possibility curve into international trade theory.

To appreciate the significance of Haberler's contribution in the development of general equilibrium trade theory, it is helpful to recall the state of price theory at that time. One of the key unresolved theoretical issues in the 1920s was the formulation of a generally accepted price or value theory. There was a tension between the world views of the English classical writers, who stressed *real production costs* as the cause of price, and the utilitarians who emphasized *consumer utility* as the cause of price. By introducing his famous 'scissors', Alfred Marshall was able to reconcile this tension within the framework of a single market, but there did not exist a workable general equilibrium framework suitable for analyzing the determination of prices.³

Regarding the theory of comparative advantage, all major economic theorists took it then as a given that the concept of comparative advantage was inherently linked to Ricardo's labor theory of value. And since Ricardo's labor theory of value was viewed as antiquated, the free trade doctrine was also regarded in low esteem on the theory and policy front. A 1928 quote of John Maynard Keynes (1971-89, p.729) captures the *Zeitgeist*: "The free trade case must be based in the future, not on abstract principles of laissez faire, which few now accept, but on the actual expediency and advantages of such policy".

Haberler's pathbreaking insight was that the comparative advantage argument addresses, in its essence, a factor allocation problem. If this is recognized, it becomes irrelevant whether only one factor, as in Ricardo's formulation, or multiple factors are involved. Consequently, it shifted the attention from the valuation of factors to the valuation of commodities and opened the door to formulations of comparative advantage with multiple goods.⁴

A careful reading of Harberler's 1930 article reveals that his opportunity cost formulation of comparative advantage was inspired by a seminal article by Frank Knight (1928), who suggested a general theory of price in terms of alternative commodities. Knight,

³ Here I should note the critical role of Piero Sraffa's (1926) famous critique of the Marshallian supply curve which emphasizes the inability of this framework to address market interdependencies and returns to scale. The latter also inspired Joan Robinson to write her *Theory of imperfect competition*.

⁴ Haberler provides also, in section 4 of his paper, the first multiple good formulation of comparative advantage: the chain proposition. With the latter Haberler dismantled Ohlins' objection that comparative advantage works only for two goods.

on the other hand, was inspired by Adam Smith's famous beaver-deer metaphor. Haberler (1930, p.358) acknowledges his intellectual debt explicitly:

“Here I have used a rather unpretentious formulation which eliminates utility and simply expresses good A as the cost of good B. This formulation originated with F.H. Knight, who develops it –apparently without realizing that he thus in fact uses the concept of the Austrian School...Knight sets out from the celebrated beaver-deer case of Adam Smith and says: “The cost of beaver is deer and the cost of deer is beaver.”

To my knowledge, the Smith-Knight-Haberler connection has not been pointed out in the historical literature, which can be explained by the fact that Haberler states his inspiration most explicitly in his 1930 article.⁵ Ironically, this implies that Adam Smith, who is often accused of perceiving international specialization as a result of absolute rather than comparative advantage, provided the stimulus for the scientific rescue of the theory. This underlines the importance of continuity in economic thought which Haberler always stressed in his scholarly writings and which he so eloquently illustrated on a different occasion (Haberler, 1985, p. 109): “There is an unmistakable family likeness between the modern theories...and the early classical theories, just as there is between a modern jumbo jet and the Wright brothers' contraption.”

Haberler's reformulation was a turning point in the scholarly development of our discipline. It *“revolutionized the theory of international trade.. and laid the foundations for Ohlin's theory, as well as Lerner's and Samuelson's”* as John Chipman (1987) put it.

The subsequent Elizabethan age for pure trade theory, as Professor Samuelson calls this time period, provided us with the building blocks of the neoclassical general equilibrium trade model. After that, decades of research efforts have deepened our understanding and appreciation of comparative advantage. Now we know that the opportunity cost formulation is the most general way to think about comparative advantage and that the visions of Ricardo, Heckscher and Ohlin can be analytically embedded into a single analytical framework.

The German mathematician Carl Friedrich Gauss famously asserted that ‘mathematics is the queen of the sciences’. Economists like to echo Gauss and assert that ‘economics is the queen of the social sciences’. If this is the case, the theory of comparative advantage is

⁵ My main references here are Chipman (1965) and Maneschi (1998).

certainly one of the queen's crown jewels. We should then take the opportunity to commemorate a milestone in the molding of this jewel and celebrate its durability and relevance. Happy 75th anniversary!

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