CHAPTER VII

APPRAISAL OF JEVONS' APPLIED ECONOMICS

Contribution

Jevons' contribution to economics is not merely limited to pure theory, and we would not have done him justice if we were to sketch his significance as an economist without taking into consideration his work in the field of applied economics. For it is in this field of study that Jevons had really demonstrated his great ability in handling facts, in marshalling large bodies of statistical evidence in a clear and succinct manner, in applying the tools of his scientific method, and in extracting the utmost significance from them.

Jevons major incursions into the field of applied economics were three, namely:

a) his investigation of the trend of prices in the fifties and sixties;[1]

b) his investigation of the coal question;[2]

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[1] The discussion is contained in a pamphlet called, A Serious Fall in the Value of Gold, published in April, 1863. It is reprinted in Jevons' Investigations

[2] The Coal Question was first published in 1865.

and, e) his investigation of the trade cycle.[3]

His incursions of lesser importance included the investigation of the frequent autumnal pressure in the money market, the condition of the gold coinage of the United Kingdom, the Silver question, the match tax, etc.

Investigation of Trend of Prices

Jevons was very successful in his investigation of the trend of prices in the fifties and sixties in the United Kingdom. He tackled the problem of the serious fall in the value of gold upon the price levels on the statistical side. It was for this purpose that he made his first index numbers. Through such devices he was able to demonstrate with a great degree of certainty and precision, that prices had increased in England, as against those who said that no increase had taken place.

He was also able to say approximately how great the increase had been, as against those who held that the increase in the supply of gold must lead to a catastrophic inflation. This is indeed a notable

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[3] Reprinted in Jevons' Investigations.

contribution both to the monetary discussions of the time and to the technique of quantitative economics.

The Coal Question

Jevons' investigation of the coal question is of no less importance than his earlier investigation. The Coal Question[4] is to this day still a very valuable treatise on a realistic problem of great social importance to England.

The problem was how long the English coal deposits would last. Though English coal supplies at that time were more than sufficient for the industries, people still feared that the time must come sooner or later when the coal deposits would be more or less depleted, and the inevitable effects on England's economic position would naturally be of great concern.

Jevons worked out the secular trends, the probable future trends of coal output in Great Britain in his book, and discussed the whole problem in a very thorough, scientific fashion. Jevons' contentions of the coal question, however, were not completely convincing. His estimates had not taken into consideration the prospect of a considerable decline in population.

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[4] The Coal Question, published in 1865, is a treatise on an inquiry into the progress of UK, and the probable exhaustion of its coal mines.

But Jevons was definitely correct in saying the rate of increase of the middle of the last century could not be maintained without rising cost of production. So was he correct in supposing that, as time went on, the competition of other sources of coal supply would become increasingly difficult to meet.

Investigation of the Trade Cycle

Jevons' sun-spot theory of trade cycle is interesting, but proves to be a failure.

In this theory Jevons undertook to demonstrate on a statistical basis that there was a close correlation between the astronomical phenomena - the sunspot cycle - and the periods of severe commercial crisis. The connection between the two phenomena on Jevons' hypothesis was that weather changes and, hence weather crops, were probably controlled by alterations in sun-spots, thus leading to changes in price and quantity of harvests, which in turn led to a cyclical fluctuation.

But economic history had shown that the cycles did not always fit; two of the biggest crises of the century fell outside the series. It is quite possible that weather changes or solar activity may affect crop yields and economic activity generally, but they are certainly not the only disturbing forces in any business cycle. There is no evidence at all

to show that this kind of shock could be so serious as to cause a cyclical fluctuation.

Modern theorists on trade cycle have not taken seriously Jevons' sunspot cycle. Instead they have concentrated on other factors such as monetary changes, over-investment, technological changes, etc. as among the causes of a business cycle.

Method of Inquiry

Leaving the substances of his investigations alone, and turning to the question of methods employed by Jevons in his inquiry into applied economics, we find that he did not advocate any particular inductive method. His hypothetico-deductive method, which had been successfully used in his physical inquiry, still holds good generally.

It must be added, however, that Jevons attached great importance to the introduction of exact treatment into economic investigations. He contended that the subjects like commercial fluctuations, the condition of the currency, etc. which were much related through the notion of Price, were further connected by the fact that they all admit of treatment by exact and statistical methods. His papers, which have been discussed earlier, were to him "an attempt to substitute exact inquiries, exact numerical calculations, for

guess-work and groundless argument ..... to investigate inductively the intricate phenomena of trade and industry."

Jevons was one of the first economists to see that the general theory of probability which had been developed primarily by mathematicians and then applied to the study of social phenomena as births and deaths, might also be applied to the treatment of economic data. In fact, economists today do not pay so much attention to the significance of his investigations, (save perhaps the historical significance) as to his method which is still so fresh, so lively, and so profound that even when the substance is insignificant or dead, they can still contemplate its form with profit.