

*Charter House Essays in Political Economy*



On the Problem of  
Technological Ignorance amongst  
KM Economists



The Real Incomes Approach



Hector W. McNeill  
SEEL

Portsmouth  
December  
1981

McNeill, H. W., On the Problem of Technological Ignorance amongst KM Economists  
December 1981  
ISBN: 978-0-907833-10-9

## On the Problem of Technological Ignorance amongst KM Economists

### The objective of this paper

KM stands for Keynesian-Monetarist. KM economists are those practitioners of economics concerned with macroeconomics and policy-making who adhere to the Keynesian and Monetarist approaches.

One has to assume that the degree of comprehensiveness of economic analysis is reflected in the completeness of the range of relevant factors included within analyses that represent a reasonable representation or model of how the economy works. The title of this paper therefore applies the word ignorance in the sense of a lack of reference to, and therefore apparent lack of awareness of, the role of technology in most macro-economic texts in the Keynesian and Monetarist approaches. Such ignorance is a selective state of unawareness on the part of KM economists since at the micro-economic level it is self-evident that technology is important. There is, therefore a certain over-estimation of the certainty of the relevance and value of KM macro-economic analysis and policy formulation.

### Technocracy?

The introduction of technology as a significant factor in macro-economic analysis does not automatically mean that the associated analysis and decision-making assumes a more technocratic organization under which decisions are taken by experts in each field of application.

### Technique

The majority of transactional decisions in an economy are taken at the micro-economic, firm or individual levels. Because the circumstances surrounding any firm's or individual's activities<sup>1</sup> are different it is important to understand that technology is not some absolute that automatically generates a fixed relationship between inputs and outputs but rather presents a range of potential relationships which rely heavily upon the way in which technology is applied, that is, technique.

### Learning Curve

Technique is the way in which technology is applied and it possesses a significant component made up of human capabilities in managing or handling technology or tools and performance in applying technology can improve as a result of people learning how to use technology and refining techniques. There is a learning dimension to technique in that over time, the ratio of output to inputs will increase, that is, physical and economic productivity will increase over time. This effect, known as the learning curve<sup>2</sup> is a real and measurable phenomenon.

### Economic performance

It is apparent that as humans develop their skill in applying specific techniques, a given technology will provide an increasing physical and therefore economic performance and this in turn, over time, will contribute to economic growth. The main contributing factor to economic growth is the ability to maintain a relationship between the real value of the currency expressed in terms of the ability to purchase increasing quantities and qualities of goods and services.

---

<sup>1</sup> Conditions within the same economy and specific markets vary greatly in relation to real prices since these are determined not by the market but by individual circumstances.

<sup>2</sup> The learning curve in economic terms has been described and measured in many case studies including, T. P. Wright, *Factors Affecting the Cost of Airplanes*, Journal of Aeronautical Science, February, 1936, pp. 122-128.

## Price performance ratio & economic growth

The skillful application of technology and the learning curve, enable managers to increase unit profits while stabilizing unit prices, or even reducing them, to gain market penetration. This is facilitated by declining unit costs. Under such circumstances the price performance ratio (PPR) can attain values of less than one where the price performance ratio is measured by the ratio of rates of change output unit prices to changes in unit input values.

$$PPR = dP/dI$$

Where

dP is the percentage change in unit prices

dI is the change in unit input values.

Unit input values are usually a recipe of physical components each multiplied by their unit price so as to estimate the "unit input value" for a single unit of output associated with a given unit price.

## Technology and the Real Economy

It is important to note that the shifting of physical input-output relationships over time give rise to real quantitative changes in performance and in the purchasing power of the currency leading to an increased purchasing power and, therefore, rise in real incomes.

## No technology and nominal income

If the technology effects are ignored, the physical determinants of performance are obscured and the management function is relegated to a pricing function only. As a result analysis shifts from one dealing with real production to one dealing with monetary aggregates expressed as aggregate demand (Keynesian) or money volume (Monetarist) measured largely in nominal terms. The corollary of this is that nominal income levels are determined by manipulated aggregate demand as the policy instrument used to determine economic growth prospects or the policy instrument is adjusting the price of money as an interest rate which in turn is used to determine economic growth prospects. In both cases the fundamental motor of growth, technical performance, has dropped out of the macro model.

## Growth?

The history of Keynesianism and the future under Monetarism see the economy as a one gear model within which nominal growth is manipulated through fiscal and monetary policy instruments that generate shifts in aggregate nominal national income levels. Under high or low fiscal policy-induced aggregate demand and high or low monetary policy manipulated interest rates there remains an inadequate incentive to apply technology and technique so as to achieve real economic growth under any conditions. This inability to stimulate real economic growth under any circumstances is a direct outcome of the very similar nominal financial nature of Keynesianism and Monetarism policy objectives. This strict similarity justifies the term KM; they are not alternatives.

KM macro-economic policies can never lay a policy foundation for adequate real growth options until their analyses incorporate a full consideration of technology. At the moment, growth depends upon the wit of individuals to progress in spite of the conditions shaped by KM macroeconomic policy.