

The following notes on Mr. Harrod's analysis are possibly unnecessary now in the light of Tuesday's blackboard discussion and the appointment of a drafting committee. Since agreement, even on points of exposition, is desirable, and should be easily attainable provided that we are all clear in our own minds, I put these comments before the drafting committee to test the clarity of my own views.

Harrod p.9. Perfect Competition. (assuming that action is rational and informed).

"Price should be equated to the (short period) marginal cost."

Price is equated to marginal cost simply because price equals marginal revenue: the economic principle is that marginal revenue and marginal cost are equated.

Harrod's qualification "short period" relates to a difficulty that crops up again on page 11, case (i) b.

Imperfect Competition. (action rational & informed).

Harrod says that "price should be made to exceed this [marginal cost?] by an amount  $(x - y)$ ".

"x is the difference between the price received and marginal revenue and its value depends on the elasticity of demand at the stated price". [i.e.  $x = \frac{\text{price}}{\eta}$ ]

y is called the [marginal] appreciation of goodwill. (It may be negative).

It is the present value of the probable future increment of aggregate net revenue per increment of present sales. [If  $Y + K =$  present value of future aggregate net revenue (where K is the constant expected net revenue when present sales are zero) and  $X =$  present <sup>volume</sup> value of sales,  $y = \frac{dY}{dX}$ .]

Harrod's x constitutes no difficulty. Abstracting from his y, the economic principle remains "marginal cost = marginal revenue". At this output price would be such that it would be  $x = \frac{\text{price}}{\eta}$  above marginal cost.

But does the introduction of his y affect the economic principle?

If y is negative, the situation is the Marshallian one of spoiling the market. Selling at the price which would rule

Fragment, by unidentified author, relating to Harrod's "Notes on Interviews with entrepreneurs"

Original held at Nagoya University of Commerce and Business Administration, Harrod collection, file 4.23.2

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without taking account of this would cause a permanent shift in the demand curve to the left and therefore a fall in the present value of plant. If account were taken of this in the Marshallian way an allowance for it would be added to cost. It is a variable cost. Therefore it raises the marginal cost curve. Alternatively, a deduction could be made from average revenue; but I have always regarded this as more difficult and less satisfactory. Mutatis mutandis the same applies when  $y$  is positive. Hence the economic principle remains marginal cost = marginal revenue.

Harrod p.11. The covering of overheads - following the economists' criterion (i.e. marginal cost = marginal revenue?)

Case (i) Perfect Competition - two ways of covering overheads.

(a) Rising marginal costs are assumed and therefore in equilibrium price is greater than average cost by an amount sufficient to cover overheads.

I should prefer to say that an average overhead cost curve is added to the average prime cost curve to get an average total cost curve. In equilibrium price = marginal cost = average total cost; and overheads are covered.

The necessary condition of equilibrium is still marginal cost = marginal revenue; the sufficient conditions require average cost = average revenue. This latter condition may be attained by the demand line moving, possibly in conjunction with movements in the cost curves (with changes in the size of firms).

(b) Plant is assumed to be working to capacity, say at  $N$  units. Then the "computed marginal cost" refers to the  $N$ th unit. Harrod says that in this case a "price in excess of computed marginal cost may be charged". Marginal cost may be regarded as being anything between computed marginal cost for the output  $N$  and the cost of producing new plant to produce an  $(N+1)$ th unit plus the computed [marginal?] prime cost of producing the  $(N+1)$ th unit with the aid of the new plant. Any price between these limits may be charged: in equilibrium it will give an excess of price over average prime sufficient to cover overheads.

I have two difficulties here:

- (1) In perfect competition the firm has not the freedom with respect to price fixing that seems to be implied here. This is probably only a formal point. It does not affect our cases, as Harrod recognises (p.12, line 1.)