

CHAPTER 5 — PRODUCTION: THE STRUCTURE

CHAPTER SUMMARY

The evenly rotating economy (ERE) is an important tool in Misesian economics. The ERE is a fictitious construct where the future is certain, a world where economic activities repeat themselves indefinitely.

The ERE is primarily used to distinguish *profit* from *interest*. Entrepreneurs earn pure profits when they judge future conditions better than their rivals, while they suffer losses if they exercise poor foresight. In an uncertain world, a man may anticipate that consumer demand for a new product will be higher than others expect, and he will buy the factors necessary to produce the good and reap a much higher payment when he sells the finished product to consumers. This phenomenon is impossible in the ERE, because everyone knows exactly how much each good will fetch from consumers in the future. However, because capitalists advance *present* money to the owners of factors in order to sell goods to consumers *in the future*, the capitalists still earn more money from consumers than they had to pay to all of the factor owners who contributed to the production of the good. This excess would appear as a “profit” to an accountant, but not to an economist. It merely represents the interest earned by the capitalists on their invested funds. In the ERE the rate of return (per unit time) will be equal in all lines of production.

The difficult problem of analyzing the payments to various factors of production is broken down into simpler cases. In this chapter, we assume that all factors are completely specific, i.e. are useful only in the production of one good. We then deal with the case of joint ownership of the product by the factor owners; that is, the owners of land and labor each contribute their efforts to the maturing product, and then get paid their portion when the consumer purchases the finished good. The primary lesson from this analysis is that capitalists earn no independent return; ultimately all revenue from the sale to a consumer can be traced back to the owners of the original factors.

We later relax this assumption and allow for capitalists to pay the owners of land and labor *upfront* for their services, in exchange for relinquishing ownership over the maturing capital goods as they move through the production process. In this more realistic scenario, the capitalists do indeed retain a certain portion of the total revenue spent by consumers. However, this revenue is due to the fact that the capitalists paid the workers and landowners *before* their services yielded revenues from the consumers. It is the agio on present versus future goods (*not* exploitation or superior bargaining power) that explains the discounted payment to the original factor owners.

Cost is a subjective, ephemeral concept. The cost of an action is immediately borne by the actor, and is known only to him. The classical economists, as well as Alfred Marshall, were mistaken when they argued that prices are somehow influenced by the “costs of production.” The causality is completely the reverse: It is not the case that diamonds are expensive because they are costly to produce. On the contrary, diamond mines are expensive because consumers place a high marginal utility on diamonds. If one man takes ten hours to produce a good than another man can make in five hours, the first man cannot expect to earn a high price in the market because of his higher “costs.”

CHAPTER OUTLINE

1. *Some Fundamental Principles of Action*

A review of concepts discussed earlier.

2. *The Evenly Rotating Economy*

The evenly rotating economy (ERE) is an fictitious mental construction in which all economic activities repeat themselves in a perfectly predictable manner. The ERE is the final end state toward which the market would tend if all disturbing influences were held at bay.

There is no uncertainty in the ERE. The ERE allows the conceptual distinction between *profit* and *interest*: Because there is certainty, there can be no profits or losses in the ERE. However, there is still time preference, and hence interest.

3. *The Structure of Production: A World of Specific Factors*

This section analyzes a hypothetical world in which each good is produced by several completely *specific* factors; i.e. each factor of production is suited to produce only one good. There is thus no “economic problem” in deciding on the allocation of factors: Once consumers decide upon which goods they desire, it is a simple matter to employ the factors in the proper fashion.

It is clear that the total revenue obtained from consumers for a given good must be the total incomes paid to the factors used in its production. To analyze the distribution of this total income among the various complementary factors, Rothbard deals with two possible cases: joint ownership versus ownership by the capitalists (sections 4 and 6 below, respectively).

4. *Joint Ownership of the Product by the Owners of the Factors*

In this simple case, Rothbard assumes that the owners of the (completely specific) factors, which are used in the production of a given consumer good, maintain joint ownership of the goods-in-process as they “move down the pipeline” from the highest orders to the final consumer good. The main purpose of this analysis is to drive home the point that there can be *no* independent return to the owners of capital goods; all income received at the point of final sale (from the consumer) ultimately flows to the owners of the original factors, land and labor.

5. *Cost*

The marginal cost of an action is the value placed on the next-best alternative. This is clearly a subjective concept, since value is subjective. No outside observer can determine what the cost of someone’s decision. Moreover, cost is “ephemeral” in the sense that, once a man acts, the best alternative course is *immediately* rendered unattainable. (If it were not, then its value would not really be a cost of the original

action. One cannot *undo* an action, he can at best perform another action.) Because action is forward-looking, the costs of production have no bearing on the sale price of a good.

Notice that in the special case of completely specific factors, there is no cost to production. If a factor is suitable for the production of only one type of good, then its use for this end entails no foregone alternative. Where this is obviously not the case—such as a wooded area being inherently beautiful if not used for erecting a shopping mall, or labor hours being used for leisure if not devoted to a productive end—simply proves that in the real world, factors of production are not completely specific; they must be allocated among competing ends.

6. *Ownership of the Product by Capitalists: Amalgamated Stages*

In this section Rothbard makes the more realistic assumption that, rather than the owners of land and labor waiting for their joint product to “ripen” into a final consumer good before receiving any income, instead the capitalists pay the owners of original factors at each stage of production. It is then the capitalists who retain ownership of the goods-in-process as they move down the pipeline from the highest order to the final consumer good. If there are no entrepreneurial errors, the capitalists will always receive more from the consumer than the sum total in payments made to the original factor owners.

This apparent change (from section 4, where the factor owners maintained joint ownership of the maturing product) is *not* due to “exploitation,” and it does *not* indicate a separate return to the capitalists as such. In section 4, the factor owners had to *wait* until the final sale to the consumer before receiving any payment. For example, laborers in coal mines would have to wait years before receiving any income from their efforts. But the capitalists offer to pay workers (and land owners) *immediately* for services that will not yield finished consumer goods until the future. Thus, the capitalists are exchanging a present good (money) for a future good (the marginal product, in terms of the final consumer good, of the factor in question). The excess of the capitalists’ income from consumers, over the sum of payments they make to the owners of original factors, is due to interest (i.e. time preference), and *not* to any bargaining power or other “contribution” of the capitalists.

7. *Present and Future Goods: The Pure Rate of Interest*

In the ERE there are no pure profits or losses. (Profits accrue to those who anticipate future conditions better than other actors, but in the ERE there is no uncertainty.) However, present goods still exchange at a premium against future goods, and thus capitalists can still earn interest. In the ERE, the rate of return in all lines must be equal; if capitalists earned 5% in one line and 3% in another, then they would shift out of the latter and into the former until the rates were equal. The precise determination of the interest rate will be discussed in the following chapter.

The classical economists (as well as today’s layman) thought that labor earned wages, land earned rent, and capital earned interest. This tripartite division is completely fallacious. All productive factors earn a (gross) rent or “hire price” per unit time in

accordance with their marginal productivity, whether the factor is labor, a piece of land, or a machine. Those who buy

8. *Money Costs, Prices, and Alfred Marshall*

The classical economists tended to think that prices were determined by the “costs of production” (at least in the long-run and for reproducible goods). After the marginal (or subjective) revolution in the 1870s, many economists (including the Austrians) stressed the primacy of utility in the determination of price. Alfred Marshall famously argued that cost (supply) and utility (demand) determined price together, and that to ask which cause dominated would be akin to asking which blade of a scissors did the cutting. The Austrian response to Marshall is that even supply curves are ultimately determined by marginal utility. There is no “real cost” (in an objective, technological sense) to anything; all actions, including decisions to produce, are accompanied by a marginal cost that itself flows from a subjective valuation.

It is true that in the ERE, money prices for consumer goods tend to equal money prices for factor payments (due account being made for interest). But this does not mean that money costs determine money prices. The consumer of a good does not care how much money a producer spent in its production; the price of a good is determined by its marginal utility to the consumer. If the utility of a certain consumer good is so low that a producer cannot afford to purchase the factors necessary for its construction, the producer will hire fewer of the factors and produce less of the good. This will tend to lower the rents (i.e. prices) earned by the factors, and the reduced supply of the good will raise its marginal utility to consumers. The process will continue until the sum total of factor payments (including interest) equals the sale price of the consumer good. This process explains the tendency that “price equals cost.”

9. *Pricing and the Theory of Bargaining*

Because the analysis to this point has assumed completely specific factors of production, economics can say very little about the *distribution* of the income earned at each stage among the complementary factor owners. (We do know that the total income earned in a given stage must be discounted at the prevailing rate of interest.) Any voluntary agreement among the factor owners will leave them all better than if they did not produce at all, but we cannot predict what the actual agreement will be because of “zones of indeterminacy.”

At the very end of the section Rothbard explicitly introduces the assumption that labor is scarcer than land. There are always uses to which labor may be devoted to increase human happiness—if only to be consumed as leisure by the laborer himself. In contrast, at any given time there are always “submarginal” plots of land and other natural resources. It simply does not pay to incorporate them into a production process. Note that this assumption is not an *a priori* truth, but an empirical observation.

NOTABLE CONTRIBUTIONS

- Mises' notion of the "evenly rotating economy" is his own invention. Other economists dealt with a stationary state, but Mises uses the concept to clarify the difference between profit and interest. This focus on the relationship between uncertainty and profit is not unique to the Austrians (e.g. Frank Knight), but Mises' attention to the merits and dangers of unrealistic constructions is quite rare.
- As mentioned in Chapter 1, the "structure of production" approach is fairly unique to the Austrians. It clarifies and underscores the role of time in production.
- The Böhm-Bawerkian insight that capital goods earn no *net* return is an Austrian doctrine that most mainstream economists consider archaic. (Paul Samuelson ridiculed Joseph Schumpeter in this regard.) But it is a completely logical extension of the ERE analysis.
- Rothbard's piecemeal approach to the problem of factor payments—first assuming completely specific factors and joint ownership, then relaxing the assumption of joint ownership, and finally (in a later chapter) relaxing the assumption of complete specificity—is an extremely helpful innovation that is not present in *Human Action*. Moreover, his diagram illustrating the factor payments at various stages is another pedagogical device that clarifies the analysis of the ERE.
- The Austrian position on the utility-versus-real-costs controversy, and on Alfred Marshall's famous eclecticism, is quintessentially subjectivist. Austrians since Carl Menger have viewed market phenomena as the expression of underlying human valuations. The objective facts of technological recipes, resource supplies, and so forth are merely the means through which these valuations are expressed.

TECHNICAL MATTERS

- In mainstream economics, a state of equilibrium means merely that there are no pure profit opportunities. Moreover, mainstream theorists will often use a construction involving perfect foresight *and* changing conditions. (For example, the seasons might vary, requiring the production of parkas in the winter but bathing suits in the summer. Yet so long as all of these fluctuations are perfectly anticipated, the prices of all factors will reflect their [discounted] marginal productivity.) Mises' construction of the ERE does not readily handle this type of situation, and care must be taken in generalizing results that are true in the ERE but not necessarily so in a world of perfectly predictable change. In particular, the ERE is a *special case* of the general equilibrium construct along the lines of Arrow-Debreu.
- Note that the ERE does not in fact require complete recurrence of all events. For example, Mises notes in *Human Action* that people can still die, and new babies can still be born, in the ERE, so long as the effects are offsetting and do not influence the quantities of goods and services demanded by consumers.
- There are some subtle complications in Rothbard's discussion of bargaining theory (section 9). In the first place, it makes a great difference if each of the completely specific factors is also *indispensable* for the production of its respective good. If this is not the case, then marginal principles can still be brought to bear in the pricing problem, even when each factor is completely specific. The factor owner would then be incapable of commanding more than the market value of that portion of the final product that would be diminished were he to withhold his inputs. (For example, suppose Smith and Jones own parcels of land of equal size that are only useful for the production of a certain type of berry. If Smith's land is twice as fertile as Jones', then Smith will necessarily earn a higher income than Jones. Of course, Rothbard could deal with this case by designating one type of good "berries produced by Smith" and another "berries produced by Jones.") On the other hand, when each factor is not only completely specific, but also indispensable for the final good (and this seems to be what Rothbard has in mind), then marginal principles are not helpful at all, because the "marginal product" of each factor is apparently the entire finished product. (For example, marginal principles are not helpful in evaluating the relative importance of various ingredients in a cake. If we take away the eggs, we will not simply have less cake, we will not really have a cake at all.)

STUDY QUESTIONS

- (1) How does Rothbard justify study of the ERE, when Austrians are so critical of unrealistic assumptions in mainstream economics? (pp. 322-323)
- (2) Why is the ERE not only unrealistic, but indeed self-contradictory? (pp. 328-329)
- (3) How would Rothbard classify those goods that produce second-order capital goods? (pp. 330-331)
- (4) In the case of joint ownership, where the final product is a diamond ring, arrange the following in order of their respective waiting times to be paid: (a) the truck driver bringing diamonds to the jeweler, (b) the laborer in the diamond mine, and (c) the jeweler who sets the diamond on a ring. (pp. 334-337)
- (5) What is the problem with so-called “cost-plus” pricing schemes for public utilities (in which the utility companies are allowed to charge consumers what their “costs” are plus a certain percentage markup)? (pp. 341-342)
- (6) By what process does one pure rate of interest arise in the ERE? (p. 351)
- (7) Can a landowner earn interest in the ERE? (pp. 351-353)

Study Guide to Rothbard's Man, Economy, and State
by Robert P. Murphy

Technical point: psychic revenue vs. profit

Study questions: fortune teller providing a service?