

PART III

THE BUSINESS ENTERPRISE, THE MARKET PRICE, AND DEMAND

CHAPTER 6

Business Enterprise, Reproduction, and the Market Price Differential Prices and Fluidity of Market Shares

So far we have dealt only with the individual isolated enterprise, especially with respect to price setting. However generally more than one enterprise produces the same product, thus meaning that more than one enterprise inhabits the same market. Thus we are immediately faced with the task of explaining how the market is divided up among the enterprises and the effect of a non-uniform market price on the fluidity of market shares. In a market with a uniform market price, the market sales are distributed among the enterprises in the market according to their goodwill. That is, for the sake of convenience of acquisition, the maintenance of easy access to supplies, the maintenance of a regular clientele which permits smooth (predictable) production runs for the selling enterprise over the accounting period, and the convenience of accounting, buyers and sellers strive to establish mutually rewarding social relationships that go under the title of goodwill. But the buyer-seller relationship is not impervious to the price the seller charges. Because of the nature of enterprises which inhabit industrial markets in which the product bought becomes part of the costs of another product sold, the buyer enterprise would institute routine searches to make sure that the price it pays for the product was, over time, no more than its

competitors. This is necessary since different behaviour would increase its costs relative to its competitors and therefore place it at a competitive disadvantage. Thus, a buying enterprise would not continually prefer a higher-priced over a lower-priced product from the same market - the definition of higher-priced is a price that places the product in a different "income bracket". As a result the selling enterprise will experience a rapid and permanent reduction in its production/sales hence market share as its buying enterprises transfer their orders and goodwill to the other lower price enterprises in the market.

This transference will come about in two ways: first, the higher price will result in an immediate decline in the selling enterprise's sales as its buying enterprises immediately transfer their orders to the lower price enterprises. The size of the transference will depend on the size of the price differential. In addition, the size of the transference for any initial price difference will increase with time if the initial difference is held for a period of time since other buying enterprises begin to realize that the price difference is permanent and thus transfer their orders and goodwill so as to reduce their costs. Now let us extend the above analysis over a single accounting period. Assuming for simplicity sake that the market output is the same for each production period throughout the accounting period, then the enterprise's output would diminish over the accounting period as its buyers switch their orders and goodwill to the lower price enterprises (assuming $p_e > p_m$). Of course if $p_e < p_m$ over the

accounting period, then it will be operating at full capacity with a possible backlog of sales. Finally, assuming at the end of the accounting period (which is also assumed to be the pricing period) the enterprise matches the lower market price or the higher market price will match the lower enterprise price. In both cases the market will now be divided up solely along the lines of goodwill. But because the goodwill of the previous accounting period had been rearranged because of the price differential, the realignment of prices will not restore the pre-existing market shares. In the former case (assuming the market output remains unchanged), the enterprise has a lower flow rate of output (hence higher costs and lower profits) than his competitors (who have lower costs and higher profits) who have increased their output at his expenses. [The reverse case occurs when the enterprise's price is below the market price.] Hence to prevent an erosion of sales at a production period, accounting period, or over accounting periods, enterprises will strive to maintain the same market price. Moreover, because of the nature of goodwill, enterprises know that once it is lost it is difficult to regain. Thus, they will not in general adopt a price policy that promotes or accept short or long term price differentials since such a policy would reduce their flow rate of output to the point of driving them from the market. In short, market shares, whether in the production period, accounting period, or over many accounting periods, are extremely fluid with respect to price differentials.

Relationship between Market Price and Market Sales

The above discussion implied that enterprises in a market would not pursue a price policy that would result in differentiated prices in the market; the discussion also implied that, for a given production period, a negative sloped sales-price curve could be constructed but that it had no place in the enterprise's price policy. Now we want to consider a more aggregate relationship between the market price and market sales.

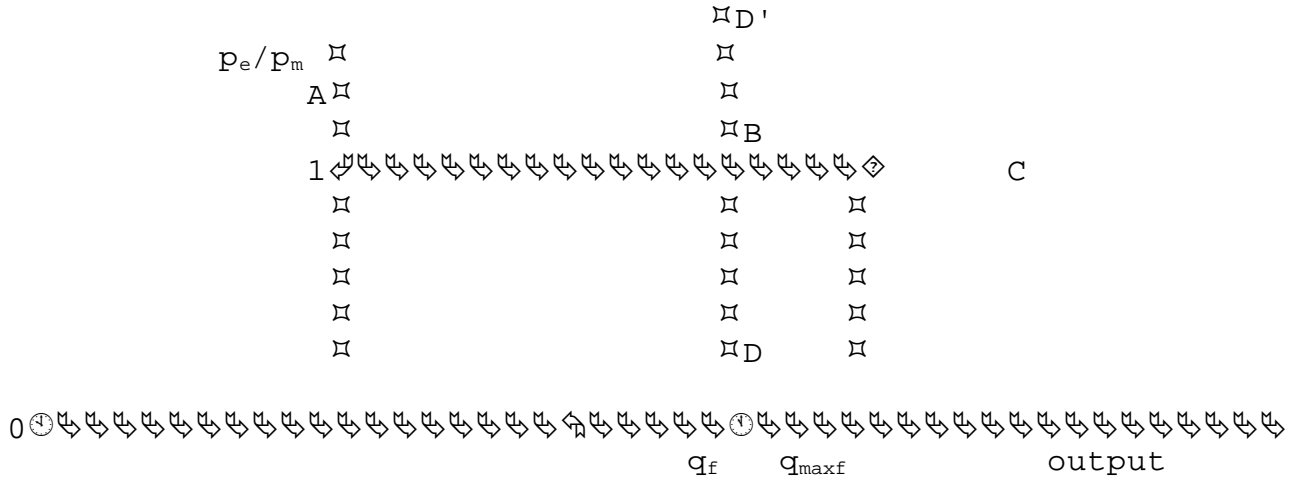
Let us assume the time period under consideration is a production period, that a single price reigns in the market, that technical change is absent from the economy as a whole, and that the level of aggregate investment is given. The question being asked is whether a fall in the market price will generate an increase in market sales. Given the assumptions above, the answer is generally no. First of all, a decrease in the market price is in fact a reduction in the "market" costing margin. That is, the market price is set by a target rate of return pricing procedure, which for the moment we shall assume to be that of the market's price leader. Since SATC is given, price variation can only come at the expense of the target mark up for profit or the target costing margin. Consequently, the market price can only vary within a limited range, depending on the response of market sales, since the profits arising from the costing margin must maintain the existing level of aggregate investment. Second, a reduction in the market price of an intermediate or investment products will not result in an increase of market sales for two reasons: (a) with given technology, enterprises already buying the intermediate input

cannot buy more of it (we are ignoring speculation) and enterprises who may want to buy it cannot--if the enterprises did in fact buy the input, it would remain unused because they would not have the technology to utilize it; and (b) demand for investment goods are generally based on factors other than the price, such as needs for cost reductions and expansion of output--therefore a price reduction in itself would not increase sales since the sales of the buying enterprises are unaffected by the price change. However, a decline in the market price could stimulate sales of an investment product if it dropped the product to the next lower income class. But such a possibility is remote since the necessary price reduction would place the market price outside its limited range and since enterprises will not rearrange their long term investment plans based on a price alteration in a single production period. Third the demand for consumption products--given use value--depends on the income class in which it is placed, i.e. on its price. However such a price reduction, while possible, would probably place the price outside its limitative range. Thus, we can conclude that a price change for a consumption product will not result in an increase in market sales. So we can conclude that there is no relationship between the market price and market sales, given the above assumptions.

Sequential Production and the Market Price

We are now in the position to describe the price-sales relationship between enterprises in the market in a given accounting period. Let us consider the following figure:

Figure 6.1



ABC is the enterprise's sales-price curve if it alone varies the selling price;

D'D is the market sales-market price "relationship" for the single enterprise in that throughout its length $p_e/p_m = 1$ although the absolute value of p_e and p_m can vary; and

ABD is the enterprise's market sales-price relationship in that if it raises its price ($p_e/p_m > 1$) then sales will

decline, and if it lowered them, then all enterprises in the market the price ($p_e/p_m = 1$ but p_e and p_m decline).

The question that we want to answer now is whether this hybrid relationship is sustainable over the accounting period and in face of fluctuations in the market flow rate of output. Assuming given technology for the enterprise and the economy as a whole and given market prices in all other markets in the economy, then fluctuations in market flow rate of output over the accounting period will have the following impact upon the enterprise and the market price.

A decline in the market flow rate of output, resulting in a

decline in the enterprise's flow rate of output from one production period to the next, will not induce enterprises to reduce their price by cutting their costing margins because the net result would be a reduction of net profits for each enterprise and therefore a greater possibility of bankruptcy. That is, since a reduction in price by any one enterprise would be matched by all other enterprises in the market, thus maintaining relative market shares at any flow rate of output, and since a reduction in market price would result in no increase in the market flow rate of output, any reduction in the market price would only result in a fall in net profits to all enterprises. Continuing, since actual average total costs (generally) increases as the flow rate of output falls, a reduction in the market prices increases the possibility that enterprises would be unable to cover them. Therefore enterprises would not maintain such pricing policies and, on the contrary, would try to promote market wide price maintenance schemes to prevent such occurrences as weak selling.

An increase in market sales also would not induce enterprises to increase their price by increasing their costing margin because the net result would be a reduction in their ability to survive and grow. The reasons are twofold. First, within the market, an arbitrary increase in the costing margin probably would not command the adherence of all enterprises, even if sanctioned by the trade association or initiated by the price leader. Consequently the enterprises that do increase their price would not only lose goodwill and market share in the

production period but also continually lose it over the accounting period. Second, if the arbitrary increase in the costing margin was accepted by all enterprises within the market, then not only would the enterprises lose goodwill, thus making it easier for enterprises in general to enter the market, but the increased costing margin would increase the ability of enterprises outside the market, but within the industry to enter easily and quickly, possibly by the next accounting period. Since the entry of new enterprises would disrupt the market price and reduce the market shares of the existing enterprises, the existing enterprises would not adopt such a price policy.

Thus we can conclude that the above hybrid relationship captures, in part, the forces which support a stable market price policy in face of variations in the market flow rate of output over the accounting period. That is, the hybrid relationship shifts over the accounting period as the market flow rate of output varies, but its form remains the same. Yet because the relationship does not explicitly show why 'depressed' market prices are detrimental to the enterprise over the accounting period and over many accounting periods, the relationship between sequential production and the market price is not completely delineated.

Sequential production, reproduction, and the market price

To start off this discussion, let us first construct a very simple model in which we assume that the enterprise exists and has its complement of plant and equipment, that it produces one product at standard flow rate of output for each production

period during the accounting period, and that overhead expenses are evenly dispersed over the accounting period. Now for production to occur, the enterprise must have enough working capital on hand to procure the necessary amount of direct and overhead inputs. Once obtained, production occurs, the output sold, and the revenue collected. If the amount of total revenue received at the end of the production period equals the initial expenditure of working capital for the inputs, the enterprise can repeat the process for each production period throughout the accounting period, thus "reproducing" the entire enterprise. If conditions do not change, this process can continue on over many accounting periods (thus reproducing the enterprise over many accounting periods) as long as the original sum of money advanced is returned--see Table 6.1. Thus in this

Table 6.1

	accounting period I						
production period 1:	M_{wc}	-->	TC_n	-->	P_n	-->	TR_n
production period 2:	M_{wc}	-->	TC_n	-->	P_n	-->	TR_n
						
production period n:	M_{wc}	-->	TC_n	-->	P_n	-->	TR_n
	accounting period II						
	etc.						

where M_{wc} is the cash advanced in the form of working capital;

TC_n is total costs at normal output;

P_n is production at normal output; and

TR_n is the total revenue at normal output.

simple model, the enterprise can only engage in sequential acts of production at normal output if total costs equal total revenue, or, more specifically, the enterprise sets its price equal to average total costs at normal output ($p = NATC$). Moreover, by setting $p = NATC$, the enterprise can not only partially "reproduce" the enterprise each production period, but also completely "reproduce" itself over accounting periods.

The model can be extended beyond the simple reproduction of the enterprise by postulating that total revenue is greater than total costs at normal output. That is, by marking up average total costs at normal output, the enterprise can set a price that would cover costs and produce a profit at normal output which could be used to expand its scale of production. Assuming that $p = NATC(1+r)$, that normal capacity utilization occurs at all times, that there are two production periods in an accounting period, that the profits in any accounting period are divided between increasing capacity and expanding working capital, and that the new capacity comes on line in the subsequent accounting period, the model in Table 6.1 can be rewritten as

Table 6.2

accounting period 1

production period 1: q^1* so $M_{wc1}^1 \rightarrow TC_{n1} \rightarrow P_{n1} \rightarrow TR_{n1} =$

$$q^1*[(NATC_1)(1+r)] = TC_{n1} + \quad {}^1_{11} + \quad {}^1_{12}$$

production period 2: q^1* so $M_{wc2}^1 \rightarrow TC_{n2} \rightarrow P_{n2} \rightarrow TR_{n2} =$

$$q^1*p = TC_{n2} + \quad {}^1_{21} + \quad {}^1_{22}$$

accounting period 2

production period 1: q^{2*} so $M_{wc1}^1 + {}^1_{11} + {}^1_{21} = M_{wc1}^2 \rightarrow$

$$TC_{n1}^2 \rightarrow P_{n1}^2 \rightarrow TR_{n1}^2 =$$

$$q^{2*}[(NATC^2)(1+r)] = TC_{n1}^2 + {}^2_{11} + {}^2_{12}$$

etc.

where q^{1*} is the normal output for the accounting period one;

q^{2*} is the normal output for the accounting period two;

${}^i_{f1}$ is the portion of profits of the fth production period in the ith accounting period set aside for use as working capital in the next accounting period; and

${}^i_{f2}$ is the portion of profits of the fth production period in the ith accounting period set aside for expanding capacity in the next accounting period.

The implication of the above model is that for an enterprise to grow and expand over accounting periods, it must not only mark up its costs when determining the price, but the price must remain stable throughout the accounting period if the profit objective is to be met (more on this below).

The implication of the above models is that the price and price stability are crucial to the reproduction and expansion of the enterprise over time. That is, in models Table 6.1 and Table 6.2, where output did not vary and always occurred at standard capacity utilization and where overhead expenses did not vary from production period to production period, price stability is necessary if the enterprise is to reproduce and expand. If the

price ever fell below the 'target return price' then the enterprise in model 8.1 could not continue to engage in sequential production and the enterprise in model 6.2 could not fulfil its investment plans or, in the extreme, continue to engage in sequential production. Moreover, the models suggest that an unstable price would seriously constrain the enterprise's ability to reproduce and expand, even if access to bank credit is possible, since increasing interest payments could push the enterprise towards bankruptcy simultaneously as the price falls.

Consequently, enterprises within a market are driven to establish market institutions which would eliminate the problem of destructive price competition and establish a stable market price. Such organizations include trade associations, cartels, open price associations, and price leadership.

The price used in the above models was a stable and a common price; since it was conceptually the same for the f production periods. The models also clearly showed the market specific property of the price. That is, the target return price set by the enterprise, 'in theory', would permit the enterprise to reenter the market in a continuous sequential manner - hence the price 'embodied' the conditions which will maintain the market through time, at least from the perspective of the enterprise. Contrary to this is the exchange-specific price which, because of the manner of its determination, does not 'embody' the conditions which would permit the enterprise to reenter the market in a continuous sequential manner. Hence the exchange-specific price does not, in principle, maintain the market through time.

Summary

The aim of this chapter was to delineate the relationship between the market price and market sales. It was argued that market shares are fluid with respect to price differentials and that variations in the market price had no affect on market sales within the production or accounting period. Consequently, destructive price competition occurs when enterprises in the market engage in price competition, especially when market sales fall off, through reductions of the costing margin in an effort to obtain increased sales at the expense of its competitors. It was shown quite clearly that destructive price competition inhibits the enterprise's ability to reproduce and expand. Hence, it was indicated that enterprises resort to codes of behaviour and specific kinds of market organizations in order to establish a common market price. Thus, we are now in the position to investigate the kinds of market institutions enterprises establish in an effort to establish a common market price.

Terms

goodwill
price differential
market share
simple reproduction
sequential production
working capital
common price

Exercises and Questions

1. Define the following terms:
 - a. goodwill
 - b. price differential
 - c. market share
 - d. simple reproduction

- e. working capital
 - f. common price
2. Outline the forces that make the enterprises in a market set the same price. (Be sure to discuss the role of goodwill in dividing up the market.)
 3. Outline the relationship between the price the enterprise sets and its ability to engage in sequential production. What implication does this relationship have for stable prices?
 4. Why do differential prices produce a rapid shifting of market shares? What impact does a rapidly declining market share have on the enterprise's ability to reproduce itself?
 5. Why does destructive price competition drive enterprises to establish market institutions which would eliminate price competition?
 6. Discuss the fluidity of market shares and its impact on the enterprise's ability to engage in sequential production.
 7. Why are variations in the market price not connected with variations in market sales.

Readings

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