

THE WORLD OF TO-DAY

WHY PRICES RISE  
AND FALL

BY

F. W. PETHICK LAWRENCE

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*Under the general editorship of*

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## PREFACE

THIS little book has been written for the man or woman who wishes to understand the economic basis of prices. For this purpose I have endeavoured to make it as readable as possible by giving a number of illustrations taken from the practical affairs of every-day life.

The first four chapters deal with the general principles of making and using, and are of universal application. The next three chapters illustrate exchange and money. Chapters VIII to XI are devoted to an outline of the recognized economic theory of prices based on the system of complete competitive private ownership. I have indicated the basis on which the proceeds are shared out between rent, interest, profits, and wages; and have specially discussed the effects of an increase in wages on prices and of an increase in prices on wages and profits. Chapter XII is concerned with the result of taxation. In Chapter XIII I have explained the basis on which prices are decided when the competitive system gives place to monopoly. Chapter XIV is a brief sketch of the effect of public control on prices under competitive or monopolistic conditions. In Chapter XV I have discussed prices under public ownership. In Chapters XVI and XVII, I apply the theories of the preceding chapters to the events of the last six years. Chapter XVIII is a somewhat hazardous attempt to penetrate into the future.

Owing to the rigid limits of space, the book is necessarily a mere outline of the subject. But if I have illumined some dark places, still more if I have made this part of the 'dismal' science intelligible and even interesting, I shall feel that my work has not been in vain.

F. W. PETHICK LAWRENCE.

11 OLD SQUARE, LINCOLN'S INN.

*July 1920.*

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# WHY PRICES RISE AND FALL

## CHAPTER I

### THE EFFORT OF MAKING

NOTHING is made without effort, and nothing is adapted for human use and enjoyment without human exertion. This remains true even where bounteous nature lends her services most freely. Blackberries grow wild in the hedgerows in the autumn, but human fingers have to pick them and human labour has to cook them if they are to be eaten in a pie. The generous Irish landlady who made no charge in the bill for the eggs the visitors had had for breakfast was only stating a half-truth when she said, 'Sure, it's no trouble to us; it's the hens that lay them.'

Much of the effort of healthy human beings is in itself pleasurable. In games and sports it is undertaken for this reason alone. In other cases it has a further object, and would not otherwise be expended. It is then called 'work.' A man or woman will work to make things which will either directly minister to the satisfaction of themselves and those whom they love, or to dispose of to strangers in return for other benefits. An Irishman digging peat from the neighbouring bog and bringing it home for warming his house, a housewife sewing the clothes of herself and her children, are examples of the former; a navvy digging a pit for an employer, a tailoress making clothes for her master's customers, are examples of the latter.

In some simple cases the human effort of production



is a single act, such as gathering firewood or picking wild fruit; but in our complicated modern civilization it is more often a long chain of processes. Before a pair of boots can be worn there is first the cattle rancher on the South American prairie, where cattle are born and reared and slain; then the railroad men and ship's crew who bring the hides across the land and the ocean; then the tanner who makes them into leather; then the manufacturer who in many processes makes the boots; and finally, the shopkeeper who displays them and serves and fits the customer. Even this long list does not really cover all the human effort involved, for behind the men who did these things were the men who made and developed the ranch, the men who built the railroad and the ship and those who hewed the coal with which they are driven, the men who made the tannery, the men who built the boot factory and those who made the tools used there, the men who developed the city and built the shop where the boots were sold. And behind these men were other men and women who made the things with which these men worked, and so on, stretching backwards right to the dawn of civilization when only natural resources were available.

For practical purposes, however, in thinking of the effort of production no one attempts to visualize all these processes at once. A single process or a group of processes is considered alone. A man starts with a place to work in, tools to work with, raw materials on which to work; he labours, and turns out the finished product.

Thus, in the case of the pair of boots, it is usual to think of five stages of production. First the rancher: his work-place consists in so many square miles of prairie, his tools are his sheds and his fences and his various implements, his raw material<sup>1</sup> is his parent stock, his finished product the beef and the hides. Secondly the transporters: their work-place is the land on which the railway tracks, sidings, termini, and docks are situate;

<sup>1</sup> It will be noticed that 'raw material' has a relative, and not an absolute meaning.

their tools are the tracks, termini, docks, etc., the engines, the wagons, and the ships; their service is transport, they carry the hides from where they are grown to where they are used. Thirdly the tanner: his work-place is the site of his tannery, his tools are his tannery and tanning implements, his raw material is hides, his finished product leather. Fourthly the manufacturer: his work-place is the site of his factory, his tools are his factory itself and his machinery, his raw material is leather, his finished product boots (wholesale). Lastly the retailer: whose work-place is the site of his shop, whose tools are his shop itself and its fittings, whose service consists in transferring a wholesale consignment of boots to individual customers.

The economist, looking at these facts, divides the essential elements of each process of production into three: (1) land, (2) capital, (3) labour. Land is where the process is performed. Capital includes both the tools with which and the raw materials on which the process is performed. Labour is the human effort, whether of brain or hand, which performs it. Sometimes all these elements are in the hands of a single person, as, for instance, when a peasant who owns his own land, farm buildings, implements and stock, grows cattle or raises crops for his own use or to sell. In that case the whole proceeds are his. In some cases each of the elements is in separate hands, as where boot-operatives make boots out of their employer's leather with his tools in a factory owned by him, on a site for which he pays a ground rent to his landlord. In that case the landlord, the employer, and the workman each claim a part of the proceeds. In other cases the division into owners is not identical with the division into land, labour, and capital. Thus the 'landlord' may also own the factory or farm houses, but not the machinery or the stock; in that case he is really part capitalist as well as landlord; or the peasant may hire some of his machinery, in which case he is landlord and labourer, but only part capitalist; or the workman may own his own tools or work on his own material, in which case he is part capitalist as well

as labourer, while the rest of the capital is owned by another, and there is a landlord as well.

Finally, it is common in modern industry for one man or group of men to take the responsibility for the enterprise and to hire for carrying it out all the essential elements of production. For such a man there is no suitable English word. 'Undertaker' has sometimes been tried, but it has too unpleasant associations; so it is usual to employ the French word *Entrepreneur*. The *entrepreneur* is in one sense merely a capitalist, but he is the capitalist who takes all the risk of the undertaking and under our present system is entitled to the 'profits,' whereas the ordinary capitalist lends his money on reasonable security and obtains his share of the proceeds in 'interest.' The *entrepreneur* must not be confused with the manager or managing director, who is really a labourer working with his brain, though it often happens that in private businesses *entrepreneur* and manager are one and the same person.

## CHAPTER II

### MAKING A QUANTITY

WE are all familiar with the pre-war riddle: 'If a herring and a half cost three-halfpence, how much would six herrings cost?' And the correct answer is said to be 'sixpence.' But this assumes that the fishmonger will charge exactly the same price *per herring* for one and a half as for six. As a matter of fact he will very likely not do so.

When a woman goes to the baker's she finds that buns are a penny each or seven for sixpence; at the cutler's, one knife may be 2s., but a dozen can be got for 21s.; at the grocer's, one cake of soap may be 6d., but a dozen can be got for 5s. 6d. How does it come about that the baker, the cutler, and the grocer are willing to charge a different price for a quantity? Can it be that the 'effort of making' depends to some extent on the number

of similar articles 'made' at the same time? At first it seems that this cannot be true in the examples given: the buns are already baked and are lying on the baker's tray before the woman makes her choice; the knives have also been manufactured and are at the shop; the soap is at the grocer's. But it must be remembered that 'making' (as defined in Chapter I) includes the work of the retail shopkeeper. The 'effort of selling' will be greater if the baker has to sell all his buns singly and find a paper bag for each than if he sells them seven at a time. The cutler, to sell a single knife, has to break open his packets of dozens; the grocer, to sell one cake of soap, has to cut up his bars and to wrap up each one separately; therefore, in all these cases it is clearly true that the 'effort of making' is less when a quantity is taken at a time.

Proceed a step farther. A caterer buying 1,000 buns at a time will expect and get a considerable further reduction, and one buying 10,000 a day will get them a little cheaper still, because there will be many economies in this wholesale production, and the effort of making each bun will be correspondingly less. This continuous reduction in the 'effort of making' is what is known to economists as the 'law of increasing returns,' because for each additional human effort an increased return is forthcoming. Unthinking persons assume that it will go on indefinitely. But this is not the case.

Suppose that a body of philanthropists, taking compassion on Eastern Europe, were to propose to send there from England an immense consignment of buns—or, shall we say, bread—running into thousands of tons a week. They would find that their order would affect the price of flour; and if instead of thousands of tons their order was for tens of thousands, the price would go up and up, because the available supplies of flour would run short. If their order went on for years this might be met to some extent by putting additional land under wheat, but even so, if their order went on increasing, the time would come when there was no more equally good wheat-growing land available, and inferior land had to be

employed, requiring a greater effort to make it produce. At some point or other the limitation of natural resources would overtake the increased facility of manufacture, and the yield to human effort would go down.

This phenomenon, which is of universal application, is known to economists as the 'law of diminishing returns.'<sup>1</sup> It may be stated briefly as follows: 'After a certain point of production has been reached, every additional human effort will be rewarded with a diminishing return.' It might equally be expressed by saying that after a certain point it takes a greater and greater human effort to produce an equal return. It may be illustrated by the following examples.

1. The national output of coal to-day in this country is about 250 million tons a year. Some of this is got from wide seams near the surface, some from seams that are either poor or deep. If only 100 million tons a year were needed it could all be got from the best mines only, and the return to human effort would be proportionately greater; if, on the other hand, as many as 500 millions were required, seams so poor and deep that they are not worth working to-day would have to be used, and the output for effort would be diminished.

2. When Manchester first existed it got all its water with little trouble from local sources. In 1847 the Corporation carried through a plan of getting water from the Longdendale Valley, sixteen miles east of the city. But as the city grew, even this supply proved inadequate, and in 1890 a costly scheme had to be adopted to raise the level of Lake Thirlmere 50 feet, and bring the water 96 miles from there in an aqueduct, consisting of 15 miles of tunnels, 36 miles of covered cutting, and 45 miles of pipes.

3. A farmer starts working on a field of arable land, and finds that by careful husbandry he can increase its yield of wheat from 30 bushels to 40 per acre. By still further labour and manures, he can increase it to 50 bushels. To get 60 bushels out of it he would have to

<sup>1</sup> An economic 'law' means a statement of how things work out; no legal or moral sanction is implied.

provide additional labour much greater than before, and to produce 70 bushels would tax him out of all proportion to the increase in yield.

4. The United Kingdom contains altogether about 75 million acres of land, of which in 1918 about 21 millions were arable and produced 50 million quarters of cereals and 50 million tons of other food stuffs. It is likely that a few million additional acres as good as these could (if it was desired to take them away from other uses) be ploughed up, and would, after a few years, yield roughly as great a return per acre as these 21 millions. But after that more food could only be produced either by working inferior land or by more intensive culture. In either case the yield to human effort would tend to diminish.

It is now possible to see what is at the back of the economist's mind when he distinguishes between land and capital as factors in production. Land is limited in extent, fixed in position, and receives an uncontrollable amount of rain and sunshine. Capital is limited only by the power of man to produce it, and most of it is mobile.

It is also possible to get a new light on the two laws as to returns. If a certain number of men working with a certain quantity of capital on a certain area of land produce a certain quantity of goods, then double the number of men, with double the capital, on double the land (assumed equally useful), will turn out *more than* double the quantity of goods. That is the law of increasing returns, and it will apply even where the area of land is not doubled provided the land factor is a small one. But when the land factor is important and the area of equally useful land is not doubled, then double the men with double the capital will turn out *less than* double the quantity of goods. That is the law of diminishing returns; and as all production ultimately depends on the output of natural resources, it will always predominate in the long run.

One word of caution is however necessary. Man, by his ingenuity, is always discovering new and more econo-

mical ways of doing things. In the year 1900 he was able to obtain more produce from the same land than in 1800. In the year 2000 he will have increased still more his power to produce. That fact does not vitiate the law of diminishing returns, which is not a comparison of the state of affairs at two different dates, but a statement of what is true at each particular date.

### CHAPTER III

#### THE SATISFACTION OF USING

NOTHING is made except to satisfy some use. The use may be material, as that of food or clothes or a tool for a further process of production. It may be æsthetic, as that of a picture or the performance of a play. It may be intellectual, as a treatise on philosophy or on pure mathematics. It may be spiritual, as the execution of some sacred rite or the performance of some noble duty. It must still be regarded as a 'use' in economic language, even where it is anti-social, as the manufacture of war munitions or of injurious food-substitutes or of poisonous drugs. The essence of use is that someone shall propose to use it or pass it on to others.

The amount of satisfaction derived from use has no connection with the amount of effort of making. Lowell in his poem, 'Sir Launfal,' says :

' Bubbles we buy with a whole soul's tasking :  
 'Tis heaven alone that is given away,  
 'Tis only God may be had for the asking ;  
 No price is set on the lavish summer ;  
 June may be had by the poorest comer.'

The æsthetic pleasures of nature are among the greatest things in life and are acquired without any effort. Even where things have had to be adapted for human use by human effort, this effort bears no necessary proportion to the satisfaction derived from using them.

What is more, the same thing may be put to different uses, and from these a very different amount of satisfaction may be derived. An army camping at the end of

a day's march desires water. Water to drink is an absolute necessity, so much that if it has not carried water with it, it *must* select a spot for a camp where enough water to satisfy the thirst of man and beast can be found. Water for the army to wash clothes and refresh weary limbs is very desirable, but not so essential; and finally, if water abounds, it can be used to clean the wagons and motor lorries.

Even where the article is put to the same kind of use the satisfaction from successive quantities may be very different. A cottager in England forced to face a winter with no fuel at all (but with other means of cooking) would suffer frightfully from the cold. Given one ton for the year he would be able to have a fire on the most bitter days and would save himself and family from severe illness. Given two tons he could probably just manage to get along. Given three tons he would not seriously feel the shortage. Given four tons he could have a fire whenever he really needed it. Given five or six he would have an abundance. The satisfaction from the first ton would be much greater than that from the second, the second than the third, and so on, while after five or six the satisfaction would be practically nothing.

Finally, an article is used to bring satisfaction to different people. It cannot be too clearly stated that no genuine comparison can be made between the feelings of two separate people. It is impossible to say whether a loaf of bread given to each of two hungry men brings equal satisfaction or gives more to one than to the other. It is not even possible to prove that a motor-car given to a rich man brings as much delight to him as a penny toy to a poor child. But it is possible to express satisfaction in terms of what a man will give in exchange for it; and if these things given in exchange by different people are all of the same kind, such as money, then this money can be used as a common denominator and the 'effective satisfactions' of different people can be compared. In this way it is possible to say that the first few baskets of some luxury—such as strawberries, or the first bunches of roses, or some rare silks—provide a high 'effective



satisfaction,' for the rich people who get them are prepared to express their satisfaction by a high exchange. When strawberries or roses or silks become more plentiful they go to other people, and provide them with a lower 'effective satisfaction.'

It will be seen that whether we consider the use of an article for different purposes, or its use in successive quantities by the same person, or its use by different people, there is in all cases a diminishing 'effective satisfaction' as successive quantities are available.

## CHAPTER IV

### THE EQUILIBRIUM OF EFFORT AND SATISFACTION

WHEN a man labours to produce something for himself the satisfaction he gets from its use (or at any rate, expects to get from it) must at least compensate him for the effort of making it; otherwise he would not trouble to do so. A man in the Stone Age making an arrow-head of chipped stone and fitting it into a bow and arrow must have been put to a lot of trouble, but it paid him to do it, for he became thereby a much more efficient hunter.

When a man turns out a number of the same things, it has been noticed in Chapter II that they do not all cost him the same effort. At first his work is very likely to be subject to the law of increasing returns; as he gets more adept and has in his possession just the right implements, each thing is made more easily. But later on the law of diminishing returns begins to operate and he produces less and less for each effort. Also, each hour that he adds to his daily labour is more of a trouble to him.

On the other hand, if he uses the things himself, it has been noticed in Chapter III that the satisfaction he gets from the use of each of them is not the same, but tends to get less and less for each successive thing. Thus there is neither a definite cost (in effort of making) per article, nor a definite satisfaction (in use) per article.

How then can there be any equilibrium between making and using?

Anyone who starts to think about this problem will probably suggest that *average* cost and *average* satisfaction are the determining factors, and that a man working for himself will simply see that his average satisfaction exceeds his average cost. But this is not correct. Take the case of a man drawing water from a well (his sole source of supply). He would give anything he has rather than be deprived of the first bucket he draws up, for otherwise he and his family would die of thirst. Taking this into account, the *average* satisfaction of the ten or twelve buckets he draws up altogether would be enormous—far exceeding the trouble he was put to in drawing them.

The right answer will be found by thinking of why he comes to stop drawing water. Suppose he draws twelve buckets altogether. Then, when he had drawn eleven, he said to himself: 'I will draw another, because the trouble of drawing it will be compensated by the satisfaction I shall get from using it.' When he had drawn the twelfth, he thought: 'I will not draw another, because the trouble of drawing it will be more than the use I can put it to.'

A woman has a basket of stockings to darn. She stops when she comes to the stocking which just isn't worth darning.

From these examples the general law will be understood, which is as follows: *Where a man is working to supply himself, he works on to the point at which the cost in effort of the article which he just decides not to make would be just greater than the satisfaction which he expected this article to provide him.*

Sometimes it would seem that a man stops working for reasons other than this; for instance, if a man goes on until 'he can't see any more,' or if he goes on until 'he has got enough.' But these are really only particular cases of the general rule. In the first, the law of diminishing returns has operated so drastically that the output of another hour's labour (in the dark) would be

actually nil. In the second, where he is completely satiated, the law of diminishing satisfaction has operated so abruptly that the satisfaction from an additional article has come down to nothing. In practice, there is generally a twilight period, or a margin of utility which prevents the extreme abruptness even of these cases.

Reverting to the general principle, it will be found that it is now possible to form some idea of the total advantage to a man of some natural resource—say, the presence of a peat bog near his cottage. I will assume that with a quantity of effort which is measured by 20 he can cut and bring home a load of peat, that the next load would cost him more, say 21 units of effort, the third 22, the fourth 23, the fifth 24, and so on. I will further assume that the satisfaction from the use of the first load is measured by 50, the second by 40, the third by 30, the fourth by 20. He will cut and bring home three loads altogether, for the fourth would not be worth the trouble, as the cost would be 23 and the satisfaction only 20. The third load will yield him an advantage measured by  $30 - 22$ , i.e. 8; the advantage of the second load will be  $40 - 21$ , i.e. 19; the advantage of the first load will be  $50 - 20$ , i.e. 30. The total advantage will therefore be measured by  $8 + 19 + 30$ , i.e. 57.

## CHAPTER V

### EXCHANGE

WHEN a man makes something for someone else the satisfaction of the user bears no necessary relation to the effort of the maker. A rich man may waste in an hour without much enjoyment what it has taken a score of men weeks to produce; an immense boon may be conferred on a whole people by an invention or a work of art which may have taken but a short while for one man to achieve. In such cases the economic side of the transaction involves the element of exchange.

A simple case of exchange is that of a tailor and a bootmaker living next door to one another who agree to exchange a pair of boots for a pair of trousers. Assuming they are both looking after their own interests, we learn several things from this transaction: (1) that the boots are more serviceable to the tailor than the trousers, or he would not have effected the exchange; (2) that the satisfaction he gets out of the boots is worth the trouble of making the trousers, or he would not have exerted himself to make them; (3) that he could not have got a better pair of boots elsewhere in exchange for his pair of trousers. Similar conditions apply to the bootmaker. Accordingly we can say that both men gain by the exchange; we cannot, however, say whether they both gain equally. In order to find out why they fixed this particular rate of exchange (one pair of boots exactly for one pair of trousers), we have to take into account the other bootmakers and tailors in the locality and their various customers.

This discussion will be more simply carried out by taking a different example, and by supposing the exchange to take place, not by barter of one kind of manufactured article for another, but by the usual method of exchanging goods for money.

Take the case of a village supplied with milk by local farmers before the war when prices were unregulated. Suppose that it would just pay the farmers to have available for daily sale 50 gallons of milk if they could get a 1s. a gallon for it; if the price were 1s. 1*d.*, one of the farmers would be willing to keep another cow and sell an additional 5 gallons of milk (i.e. 55 gallons in all); if the price were 1s. 2*d.*, another farmer could be induced to make less butter and put another 5 gallons of milk on the market (i.e. 60 in all); if 1s. 3*d.*, another 5 gallons would be available (i.e. 65 in all). Suppose at the same time, with the price at 1s. 6*d.* the village would only think it worth while to buy 50 gallons, but at 1s. 4*d.* 5 additional gallons would be bought (making 55 in all), and 5 more if it were 1s. 2*d.*, making 60 in all, and 5 more if 1s., making 65 in all. A comparison of the figures

shows that the price would be 1s. 2d. and the quantity 60 gallons.

From this example it is easy to understand the general principle on which supply and demand come to equilibrium, and both price and quantity are determined. The 'law,' which is similar to that found in the last chapter, for the equilibrium between effort and satisfaction when a man is working for himself may be expressed as follows :

*Under free competition of buying and selling, the quantity of an article produced is such that the price the consumer is willing to pay for the last article made just covers the cost of making it, and that the price obtainable for one more article would just not cover the cost of making that.*

The word 'last' used in this law does not of course mean last in time. From the producer's point of view it means the article most expensive to produce; from the consumer's point of view, it means the article least wanted in terms of money, and therefore that for which the lowest price will be given. Sometimes the word 'marginal' is used instead of 'last,' because this article is on the margin of being made or not made.

Of course the price of every article actually sold is the same, and therefore the makers who would have sold below this price and the buyers who would have bought above it all get an advantage. Thus, in the example, 50 gallons of milk would have been sold if the price had been 1s. ; therefore, when the price is 1s. 2d. there is a profit on them above cost of at least 100 pence; a further 5 gallons would have been sold at 1s. 1d., at a price of 1s. 2d. there is a profit on them above cost of 5d. When, therefore, the 60 gallons are sold for 1s. 2d., there is an aggregate profit to the farmers of at least 105 pence. This is sometimes called 'producer's rent.' At the same time, customers would have paid at least 1s. 6d. a gallon for 50 gallons, and a further five would have been bought at 1s. 4d., so that when it sells at 1s. 2d. these customers are getting a clear gain of at least 210 pence, and probably considerably more. This is sometimes called 'consumer's rent.'

I now return to the case of the boots, and take all the

boots made and bought inside the country. For the sake of simplicity I will assume that all boots are of one grade and size and that there is no foreign trade. Suppose with an annual aggregate output of 40 million pairs of boots the worst-run factories can just cover expenses if the price be 25s. a pair. Suppose that at this price there is a demand for 40 million pairs. Then these figures give equilibrium; and so long as circumstances remain the same it will not change. For if it were to go down, the worst factories would cease to be profitable and the aggregate output would be reduced; the public would be clamouring for boots they could not get and prices would go up again to 25s. If they were above 25s. some customers would decide to go without new boots and patch up their old ones, and the manufacturers would find themselves with a stock of boots left over; they would therefore reduce their prices back again to 25s.

From this example it will be seen that the price is such as just to cover the cost of production in the worst-run or worst-situated factories; all that the better-run factories can save in cost against this they can claim as profit and rent. In the same way, in the case of coal the price at which it sells under free competition must be such as just to keep going the worst coal mines which are necessary to produce the quantity actually sold. All that the better mines can save on this they can take for profits and mining royalties.

Among those who have not studied economics a dispute often arises about price, some saying that it is settled by cost of production, others that it depends on value in use. They are of course both right. Price is at one and the same time the cost of producing the marginal (i.e. the most costly) article and the value in use of the marginal article (i.e. the one for which there is the least effective demand expressed in money). The fact that the quantity to be produced is also variable enables both these conditions to be fulfilled simultaneously.<sup>1</sup>

<sup>1</sup> The points of this chapter can be shown by Algebra. Let  $q$  be the quantity produced, then the cost of producing the

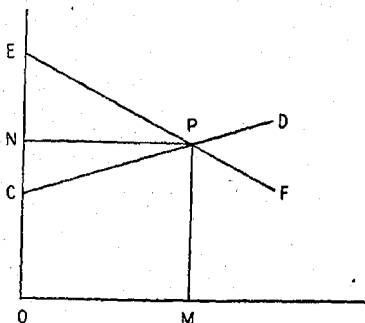
marginal article can be expressed in terms of  $q$ . The simplest case would be if this cost were equal to  $a + bq$ , when  $a$  and  $b$  were constants dependent on the conditions of manufacture. In the same way the effective demand (expressed in money) for the marginal article might be  $A - Bq$  where  $A$  and  $B$  were other constants depending on public requirements. Then both  $p$ , the price at which the article sells, and  $q$ , the quantity produced and sold, will be found from the two equations,  $p = a + bq$ ,

$p = A - Bq$ , giving  $q = \frac{A - a}{B + b}$ ;  $p = \frac{aB + bA}{B + b}$ ; the producer's rent

will be found to be  $\frac{1}{2}bq^2$ , i.e.  $\frac{1}{2}b \frac{(A - a)^2}{(B + b)^2}$ , and the consumer's

rent to be  $\frac{1}{2}Bq^2$ , i.e.  $\frac{1}{2}B \frac{(A - a)^2}{(B + b)^2}$ .

This may also be expressed graphically by geometry. Let  $OM$ ,  $OE$  be two straight lines at right angles to one another, and let price be measured by height above  $OM$ , and quantity by distance from  $OE$ . Then a line of cost may be drawn  $CPD$  at any point on which the height above  $OM$  measures the marginal cost of production when the cost is distance from  $OE$ , and a



line of demand  $EPF$  may be drawn at any point of which the height above  $OM$  measures demand expressed in money for the marginal article when the total quantity bought is measured by distance from  $OE$ . The point where these lines intersect, namely  $P$ , gives price  $PM$  (the perpendicular to  $OM$ ) and quantity  $PN$  (the perpendicular to  $OE$ ). Producer's rent will be measured by the area of the triangle  $PNC$ , and consumer's rent by the area of the triangle  $PNE$ . Following the algebraic illustration the lines of cost and demand,  $CPD$  and  $EPF$ , have been drawn as straight, but in reality they would probably be curved.

## CHAPTER VI

## THE PRICE IN GOLD SOVEREIGNS

So long as money is regarded solely as a medium of exchange it is of no importance what value is attached to the money itself, or what it is called. If the only fact to be noted is that 8 lb. of tea, 40 loaves of bread, a pair of boots, a pair of trousers, two scythes, and a table will each exchange for one another, it does not matter whether their common exchange value is called one pound or two pounds, or 15 shillings, or 5 dollars or 20 dollars, or 10 francs or 50 francs; the man who sells the 8 lb. of tea and gets its price in money knows that he can buy any of the other things with it, and that is all he cares about it.

But money serves a good many other purposes besides being merely a medium of exchange. For one thing, it is a standard of value and a base of contracts. When the milkman sells a customer a quart of milk a day he expects his bill to be paid in money at the end of a week, a month, or a quarter. When a builder builds a house he contracts to build it for so much money. It will make a great difference if there is a change in the purchasing power of money between the supply of milk or the building of the house and the payment of the bills. So, too, wages are paid in money, and the workman when he agrees to accept a certain wage expects to be able to buy so much with it each week; if after a few weeks its purchasing power changes, he will naturally be dissatisfied and want to receive a larger sum. A man invests capital in another man's business—in practice it is bricks and mortar, machinery, and tools, but in theory it is so much money—and it is in the same amount of money that he will be repaid (or in goods which exchange for this) at the date of repayment.

Consequently it is of considerable importance that the purchasing power of money should remain roughly constant, not merely from day to day, but from month to month and year to year. One way of trying to secure



this is to choose as money that which has value of itself in other ways, and which can be put to these other valuable uses when not required as money. Thus, before the war gold was employed as money in most of the civilized countries of the world, and the price of an article meant the number of gold pieces of a fixed weight which would exchange for so much of it. In this country the fixed weight was just a little more than a quarter of an ounce, and pieces of gold of this weight were minted into coins called sovereigns.

If 32 lb. of tea, 160 loaves, 4 pairs of boots, each exchanged before the war for a little more than an ounce of gold, then the price of each of these quantities was £4, and the price of a pound of tea was 2s. 6d., of a loaf of bread 6d., of a pair of boots £1. If an ounce of gold had exchanged for only half these quantities, then the price per article would have been doubled; and in general, a low exchange value of gold in terms of things meant high prices, and vice versa.

Gold is produced by human effort, and gives satisfaction in various ways by its use; consequently it is subject to the law of supply and demand just like other things. Even if it were not used as money, it is highly prized in the arts, and, as it is scarce and can only be mined at great trouble, its exchange value would still be high. The fact that it is used as money increases the demand for it, and calls into play poorer mines to produce it, with the result that its exchange value goes up.

If the number of things produced in the world by man's industry increases, and therefore the total volume of trade increases, the demand for money will increase in order to effect the necessary transactions. Accordingly, the exchange value of gold will go up and the general level of prices will go down.

But even when gold is used as the basis of money people do not always employ gold coins whenever they want to make purchases or to settle accounts. They frequently use silver and copper coins to pay small sums, and notes and cheques to pay large ones. Nevertheless,

these subsidiary coins and the various kinds of paper take the value from the gold they represent. Thus, before the war the silver in a shilling was only worth about 4*d.*, but the shilling itself was worth one twentieth of a sovereign, because anyone could take twenty shillings to the bank and get a gold sovereign for it (while the gold sovereign, even if melted down and sold to the goldsmith or the dentist, would fetch its face value). So the paper notes and cheques were good payment, because anyone could if they wanted get gold coins for them by going to the banks.

The effect of using paper and silver in this way is that much less gold is needed than would otherwise be the case. Consequently the demand for gold is less, and as a result its exchange value is lower and the general level of prices are higher than if every transaction were to be carried out by actually transferring gold.

The exchange value of gold will also tend to fall, and therefore prices to rise, if the supply of gold be increased. This may happen in various ways. First, new and highly productive gold mines may be discovered. Secondly, new methods may be devised which enable the gold to be extracted from the mines with much less effort. Finally, some countries which have hitherto used gold as coin or bullion may discard it and export the gold they no longer need. From the point of view of countries which receive it, this will operate precisely similarly to an additional source of supply. (Alternatively it may of course be regarded as a reduction in the total world demand.)

For some forty years before the war, (1) man was producing more and more things; (2) additional countries were adopting the gold standard; (3) notes, cheques, and credit systems generally were supplanting actual handling of gold; (4) new gold mines were being discovered and increased mining facilities invented. Events (1) and (2) were tending to lower prices, while (3) and (4) were tending to raise them. During the first twenty of the forty years, (1) and (2) predominated over (3) and (4), with the result that this was a period of slowly

falling prices, while during the second twenty years, (3) and (4) predominated over (1) and (2), with the result that prices slowly rose. The course of events during the war and after will be discussed in Chapters XVI and XVII.

## CHAPTER VII

### THE PRICE IN PAPER 'BRADBURY'S'

WHEN a man is at the same time wealthy and honourable his promise to pay is very nearly as good as payment itself. If he goes farther and promises to pay whenever he is asked to do so, it is quite as good; and if also his wealth and honour (which together are usually spoken of as his 'credit') are matters of common knowledge, then the piece of paper on which his promise to pay is written may be handed about from person to person just like money.

The Bank of England before the war fulfilled all these conditions. It possessed great stores of gold. Its commercial honour was above suspicion. It was in the habit of writing on pieces of paper promises to pay £5, £10, £50, etc., and giving these to people to whom it owed money on the definite understanding that either they or persons to whom they gave them could come whenever they liked to get from the bank 5, 10, or 50 gold sovereigns in exchange for them. The person who got the gold could do anything he liked with it; he could use it as money, he could melt it down, or he could send it abroad. This being so a man who wanted to carry in his pocket a considerable sum of money preferred to have it in notes rather than in gold sovereigns.

So long as these conditions held, the possession of notes was in effect the possession of gold; the only difference was that the gold was in the vaults of the bank instead of in a man's own pocket or in his safe, but he could have the gold out whenever he wanted it and use it just as he pleased. Accordingly, though articles were often sold for bank notes, their prices were still prices in terms of gold. Similar conditions prevailed in other countries

which had a gold standard but employed a quantity of paper money.

It often happens in human affairs that people go on repeating an action after the original reason for it has ceased to exist; for instance, an Englishman is said to go about with his trousers turned up in tropical countries where there is no mud to soil them. So, in this question of paper money it has been found over and over again in various countries that people will continue to value it and exchange it from hand to hand even when the conditions which induced them to do so in the first instance have been withdrawn. Sometimes the bank which has issued the notes has got rid of nearly all of its gold, but still people continue to rely on its notes, and its 'credit' remains.

Sometimes the process is carried a stage farther, and the bank definitely announces that it will not pay gold when notes are brought to it. If the bank be a private one this creates a panic, and the 'credit' of the bank is gone; it goes bankrupt, and the note-holders have to accept so much in the pound. But when the bank has the backing of the Government, the result is different. The Government simply declares that the notes are 'legal tender'; that is to say, that a creditor must accept them (if offered by his debtor) in payment of a debt in spite of the fact that he cannot get gold for them at the bank. Things go on apparently much as before; but in reality the paper money, though it is handled as it used to be, has had its whole basis removed. It reminds one of the Indian conjuring trick in which a man places a table on the ground, and puts a ladder on that, and sends a boy up the ladder; then he removes the table, and it is said the ladder remains up in the air with the boy on the topmost rung. In financial language, the money of the country is now said to consist of 'inconvertible paper.'

It does not follow that the prices of things will change very much at first when the paper money of a country ceases to be convertible. If the amount of such paper were kept strictly limited, the need for it as a medium

of exchange would prove sufficiently great to keep its exchange value nearly where it was. But in practice the same tendency which altered its character nearly always continues to operate, and the bank (or the Government supporting it) nearly always prints more and more paper. This paper is, of course, of no use to the goldsmith, nor can it be employed in foreign trade; its only use is for exchange inside the country. Consequently, as more and more of it is printed, it goes down and down in purchasing power, because there is more of it to do the same actual amount of trade.

A great many transactions are carried through by cheque. A cheque is a piece of paper written by a man who has got a deposit at a bank, and is an instruction to the bank to pay to the holder of the cheque, out of this deposit, the sum written on the face of the cheque. The man may have got this deposit at the bank originally, either by taking money to the bank and leaving it there or by getting the bank to lend him the money on credit. In either case the holder of the cheque can go to the bank and get money for it.

In the days when the basis of money was gold, the holder could, as we said in the last chapter, demand gold sovereigns from the banks for his cheque, and therefore the banks between them had to have in their vaults enough gold to meet not merely the bank notes, but also as many cheques as were likely to be presented at the same time for payment in gold. Consequently they were very restricted in the amount of money they could lend on credit.

But when notes are inconvertible there is no obligation on the banks to provide gold for cheques. Consequently they are free to lend much larger sums to customers whose credit is reliable. In particular, they are willing to lend to the Government (which has the whole of the credit of the country behind it) as much as it likes. The Government deposits these loans in the Bank of England, and pays its bills by cheques drawn on the Bank of England and payable out of their deposits there. The persons who receive these cheques pay them into their own

deposits at their own banks, and the only part they draw out in cash is what they require for wages and small purchases; and even this part the banks can pay in paper notes supplied to them by the Government.

So long as the gold basis is retained, notes and cheques have always got gold behind them, and the effect of increasing the use of them is to reduce somewhat the demand for gold, and as a result to lower slightly the exchange value of gold and increase prices. But when notes become inconvertible, there is no limit except public prudence to the extent to which the note and cheque system may be expanded and prices be increased.

Russia, during and since the war, is an illustration of the expansion of the currency by the direct printing of paper notes. Before the war the ten-rouble paper note was convertible into about  $\frac{1}{4}$  oz. of gold, and was therefore equivalent to the English pound. At the same time about five or six roubles (equal to about  $\frac{1}{4}$  oz. of gold) would buy a pair of boots. During the war the notes became inconvertible, and first the Czar's Government, then Kerensky, and finally Lenin, have printed more and more of them. With each successive issue the purchasing power of the paper rouble has gone down and down, until to-day the price of a pair of boots is probably over fifty thousand roubles.

In the United Kingdom the holder of a bank note can still demand gold for it at the Bank of England, but he is not allowed to melt the gold down when he gets it, or to send it abroad. For practical purposes, therefore, he can only use it as money, and the fact that he can get gold for his notes is no advantage to him. At the same time, the Government themselves have issued one pound 'Bradburys'; and if you will look at one of these you will see nothing about a promise to pay, only a statement that they are 'legal tender.' No doubt a man could ultimately get gold for them, but this would be hedged about with the same restrictions and would be of no use to him.

The fact is that with our usual British compromise

we have to all intents and purposes got to a state of inconvertible paper currency without doing so directly, and based on this inconvertible currency is a great system of cheques and credit. In consequence, a paper 'Bradbury' is not worth as much as the gold in a gold sovereign. If a dentist wants an ounce of gold he has to pay about £5 to-day for it instead of £4; and if a trader wants to send gold to America he can buy it for export, but must pay about £5 an ounce. The price of 100 loaves of bread is to-day about £5, or the same as an ounce of gold. If, therefore, our currency were still on a gold basis, one could get 25 for a sovereign (which is about  $\frac{1}{4}$  oz.) instead of 20. And a single loaf would be about 10d. instead of 1s. This shows that the rise in prices is partly due to the fact that our money has no longer got a real gold basis.

## CHAPTER VIII

### SHARING THE PROCEEDS

WHEN an article is sold there are three groups of persons who claim a share in the price—the man who supplied the land on which it was made, the men who supplied the capital, and the men who supplied the labour. Of course all these people are not waiting on the other side of the counter to divide up the £2, say, which some customer pays for a pair of boots; they have most of them made their bargain beforehand with the man or men who take the risk. The landlord has agreed to *rent* his land for so much a year, the labourer to work for time-rate or piece-rate *wages*, the capitalists who do not take the risk to lend their capital for so much *interest*. The capitalists who do take the risk will then have as *profits* the difference between what they get in sales of the article and the rent, interest, and wages they have had to pay. But though these bargains are made beforehand, they are constantly being readjusted, so that in the long run it is quite true to say that all these groups get their share of the price.

Under the competitive industrial system each man

is expected to do the best for his own interest—the landlord to let his land to the tenant who will pay him the highest rent, the capitalist to lend his money at the highest available interest, the workman to secure the highest obtainable rate of wages, and finally, the *entrepreneur* (i.e. the capitalist who takes the risk) to procure all these factors of production at their lowest money equivalent and sell his articles at the highest possible prices so as to make the largest profit. On the assumption that all these persons do actually carry this out is built up the modern theory of economics, which may be expressed in the following propositions or ‘laws.’ The question of how far in practice they deviate from this course, with a consequent modification of results, will be considered later.

*Law I. There cannot be two different prices in the same market at the same time for precisely similar things.*

This must be true, because if two different prices did exist there would be no buyers at the higher price and no sellers at the lower one.

The law applies to all sorts of different things for which money is paid. Thus it applies to articles for consumption—such as flour, tea, meat, leather, etc.—whether sold wholesale or retail. Two shops in different localities may charge a slightly different price for something, but where the shops are near together (‘in the same market,’ in economic language) and the article is of standard quality, they cannot do so, for custom would very soon leave the dearer shop. In the same way, the law applies to articles used for capital, such as engines, machinery, tools, etc.

It applies to what is called the ‘price of money,’ which means the rate of interest to be paid for hiring the use of £100. Every day large numbers of people are considering how best to invest their money. Two different undertakings of equal security and prospects will offer the same rate of interest. For if one offered less than the other, then either that one would not get the capital it required or, if both succeeded, then the one that offered most would have paid unnecessarily much.



It applies to the hire of labour. Two equally efficient workmen will get the same wage, whether employed in the same or different occupations. Strictly, the proposition only applies to interchangeable work, such as unskilled labour, when the same workman can turn his hand to either. But with a slight allowance for delay for adjustment the proposition has a wider application. Many a man investigates carefully before he decides whether to apprentice his son as a carpenter, an engineer, or a boiler-maker. His choice will be affected by the current wages (including in that term all the net advantages of the occupation). If one calling were worse paid than others, it would soon find itself short of men.

It applies to the rent of land. But here it has only a limited application, for as site has an important bearing on the utility of land, it will only be for certain purposes that two pieces of land can be described as 'precisely similar.'

Finally, it applies loosely to profits and to the risk taken by the *entrepreneur*; two undertakings with similar risk will tend to make the same proportionate profit. In this case, however, the personal and speculative elements play so large a part that the proposition must not be too rigidly applied.

Law II (form *a*). *Production is carried on to the point at which the cost of employing an additional quantity of any one factor would just not be repaid by the result.*

Something like this has already been stated and illustrated in Chapters IV and V, but the present law goes farther than what is said there, because it extends the rule to each factor of production. Thus, a market gardener has not merely a general extension of his business to consider; he has various forms of extension open to him. He can rent an additional piece of land. He can buy more implements. He can hire more labour. He can do any one of these things separately or he can do any two or all of them together. If he does none of them, it is because he comes to the conclusion that none of them would pay him.

On the other hand, the fact that he went so far as he

did shows that the last bit of land he brought into cultivation, the last money he spent on implements, the last man he took on, were each just worth while. The word 'last' is really better expressed by the word 'marginal,' because it is not a question of time but of the land, the implement or the labourer which is at the margin between being worth while and not being worth while. The law may then be expressed as follows:

Law II (form *b*). *The output of the marginal increment of land, capital, or labour fetches a price just equal to the cost of this increment.*

As this is rather a complicated point and very important I propose to give several illustrations.

A smallholder is working a farm of 10 acres with the help of his wife. He pays rent for the land and cottage of £120 a year, and his produce sells for £300 net. An adjoining meadow of three acres becomes vacant, and he learns that he could rent it if he liked. Neither he nor his wife are prepared to work any harder than they do; he has not any more money to spend on capital; but without either of these he can use the additional meadow by an alteration in his method of farming. If he does so, he reckons that his produce will sell yearly for £330, i.e. an increase of £30. If, then, the landlord wants more than £10 an acre for these three acres, he will refuse it; if he wants less, he will rent it; if he asks exactly £10 an acre this meadow will be on the margin between being taken or left. (Of course, whether the landlord will rent it to him for £10 or not will depend on what other tenants are prepared to pay.)

Suppose that instead of adding to the size of his farm the smallholder was considering the possibility of spending an annual sum on manures. He might very well find that the first £5 a year spent on manures would increase the value of his crop by £7, a further £5 by just £5, a further £5 by only £3. Then he would spend the first, but not the third £5, while the second would be on the margin.

Suppose that instead of either of these he could hire labour to help him at the harvest for 50s. a week. He

finds that if he hires it for the most important week of the year he will add to the value of his produce £4; he will certainly hire it that week. An additional week will add, say, £3, an additional week £2 10s., an additional week, £2. The third week, when the price of the additional output exactly equals the additional wages paid, is the marginal week. (It may be the first or last in time, or even a middle week.)

Finally, take the case of a manufacturer with a large plant. From week to week he is taking on and discharging men, but he cannot change the area of his factory grounds, the size of his factory, or even his machinery except at considerable intervals. He finds that when he is employing 1,000 men the price he gets for the week's output of finished articles exceeds the cost of the corresponding quantity of raw materials by £5,000; when he is employing 1,010 men it is £5,035 (i.e. £35 more, or £3 10s. a man); when he is employing 1,020 it is £5,065 (i.e. a further £30, or £3 a man); when he is employing 1,030 it is £5,090 (i.e. a further £25, or £2 10s. a man). If, then, he can get men for £3 10s. a week, the first ten over the thousand will be on the margin, and he will employ any number between 1,000 and 1,010; if £3 a week, then he will employ between 1,010 and 1,020; if £2 10s., between 1,020 and 1,030.

## CHAPTER IX

### RENT

THE supply of land is not capable of increase; therefore, only the land already in existence is available. This land the landlord will let to the highest bidder, who will be the tenant prepared to put the land to the use bringing in the largest profit.<sup>1</sup> Comparing two pieces of land of precisely similar suitability, the rents will be

<sup>1</sup> Not necessarily the largest profit to the *community*. A rich sportsman may be willing to pay more for land to be used as a game preserve than a farmer intending to use it for crops. A brothel-keeper may be willing to pay more for a site for a brothel than another man who would erect workmen's dwellings.

the same. Comparing two pieces of land of different suitability, the landlord of the better piece will be able to claim a rent greater than the other by the whole amount of the difference in utility to the tenants.

This applies both to agricultural and to urban land. Moreover, as in every country there is some land so poor and so far from markets as to be not worth cultivating, there will always be some land on the margin of cultivation. This land can be had for the asking, or for a purely nominal rent. The rent obtainable for any piece of other land will equal the difference between value of the output from this piece and that from the piece on the margin of cultivation.

Thus, a farmer finds that he could have for nothing, or for a pound or two a year, 200 acres on the edge of a moor. He examines it, and comes to the conclusion that if he worked it himself with his two sons and a little capital he could just recoup himself for his capital outlay and pay himself the equivalent of the wages of himself and his sons, but no profit beyond this. On the other hand, there are another 200 acres of better land where he could make all this and £100 a year beside. The landlord will be able to get as rent the whole of the £100 a year.

Similarly, outside a city there is land so far from the centre as to have no urban site value, and there is land on the margin where site value begins. The rent obtainable for any piece of urban land will equal the difference between the annual advantage of building on this particular piece and on a site on the margin.

Thus a manufacturer finds a site of  $\frac{1}{4}$  acre on the outskirts of a town which he can have for a few pounds a year, on which he can erect a factory. Alternatively he can erect it in the centre of the town, where he will get all the town facilities, the net value to him of which will be £1,000 a year. The landlord of the town site will be able to get as rent the whole of this £1,000 a year.

The cases of the agricultural and urban land may both be summed up in the following 'law' with regard to rent:

*The rent of a piece of land is equal to the excess of the annual value of its use over that of a piece on the margin of employment.*

Of course this excess annual value is not a fixed amount, but changes with circumstances; it tends to increase with the growth of population, with improved methods of agriculture, and with a more concentrated urban civilization. The whole differential advantage can be claimed by the landlord.

An increase in price will enable the landlord to obtain more rent, (1) because it will increase the differential advantage of one site over the other, and (2) because it will become worth while to work still less productive land. On the other hand, if rents rise owing to some other cause, as, for instance, the demand for land for new purposes, then this rise of rents will raise the cost of production and put up prices.

The rent spoken of above is really a 'rack' rent, which a landlord, having a piece of vacant land and determined to get the highest possible rent for it, may claim. Very often land is let for a term of years at a fixed rental. When this has been done the landlord cannot alter his bargain to secure the full rack rent under changing conditions until the lease runs out. Even where a farm is let on a yearly tenancy, a 'good' landlord will frequently refrain from putting up the rent even though he could claim an increase. In all such cases the tenant secures any benefits which may arise from changing circumstances, and becomes to this extent a temporary landlord, drawing the economic rent either from a sub-tenant or from his own use of the land.

Thus, A lets a site in a city to B for a rent of £200 a year on a 99 years' lease. B builds on it, and sub-lets on a yearly tenancy. B can claim from his tenants the return on his capital and a rack rent, while A only receives a fixed sum and will have no other interest on the land till the end of the 99 years.

Again, C lets a farm to D on an annual tenancy at a rental of £100 a year. C knows that if D left this year he could get £120 from another tenant. Perhaps

next year he could get £130. The real rack rent this year is therefore £120 and next year £130; but he continues to let D stay on at £100. So long as C adopts this policy, D is, in effect, in the position of landlord-farmer with a mortgage on which he has to pay £100 a year. But of course at any moment C may decide to turn D out, and get the full advantage for himself.

In common parlance the word 'rent' is not confined to hire of land, but also covers hire of houses. House-rent, from an economic point of view, is partly interest or profit on capital and partly rent of land. When once a house is built, however, it is so indissolubly connected with the site on which it stands that the hire of it is in many ways analogous to rent proper.

## CHAPTER X

### INTEREST AND PROFITS

INTEREST is the annual charge for the hire of capital. Just as there is a demand for land, so there is a demand for capital. But unlike land there is a supply of capital which can be increased by production and saving. The law of supply and demand determines both the amount of capital available and the rate of interest paid for the hire of it. Every industrial undertaking will try to get all the capital it can profitably use, i.e. it will get more and more until the marginal use to which it puts it just equals the rate per cent. it has to pay for it (see Chapter VIII, law II b). Further, the various undertakings will all be competing against one another, so that investments of equal security will have to pay the same percentage. On the other hand, the rate of interest paid must be sufficient to induce persons to save as much as they do.

*Equilibrium is reached at a point where (1) the marginal utility of capital in every industry is just equal to the rate of interest, and (2) the rate of interest provides just sufficient inducement for the existing rate of accumulation of capital.*

The words 'rate of interest' must be understood to

refer to secure investments. Just in so far as risk is involved in investment, the investor will expect to get a higher rate per cent. to cover a kind of insurance as well as interest proper. When this risk is considerable, the rate paid for the hire of capital is called 'profits,' and the investor becomes a part *entrepreneur* in the business. Thus in the case of a good company the debenture holders are secure and get a fixed rate of interest, while the ordinary shareholders take the risk and receive the profits.

A rise in the current price of interest will cause a progressive rise in prices. To understand this it is necessary to realize that (1) existing investments cannot claim the new rate (investors made their bargain and must stick to it), but that (2) all new investments will be paid at the new rate. Accordingly, so long as the existing businesses are sufficient to supply the demand for commodities prices will not go up, but as soon as the demand compels new businesses to be formed and extensions of old businesses to be made and new capital to be called for, the cost of production must increase and prices go up. Moreover, the increase in prices will in turn increase the price of machinery, etc., required for the business, so that the amount of capital to be borrowed for production is increased as well as the rate paid for it, and the effect is accordingly twofold and cumulative.

Rising prices cause increased profits, because during the time which elapses in the course of production money value increases and a wider margin is available for profits. The result of increasing profits is to divert the supply of capital from interest-bearing investments to profit-making investments; and the reduction of the supply of the former tends to send up the current rate of interest and (what is another way of expressing the same thing) to send down the Stock Exchange quotation of the capital value of gilt-edged securities, i.e. very secure investments yielding a fixed rate of interest.

## CHAPTER XI

## WAGES AND PRICES

WAGES, in the economic use of the word, cover the remuneration of all forms of labour, whether manual or mental and whether generally known as wages, salary, stipend, or directors' fees. Even the 'profits' of a business man are really partly wages for his labour and partly a speculative profit on his invested capital. Wages are not confined to the money reward of labour, but often include perquisites (cheap coal for miners, cheap travelling for railway servants) and other advantages.

We have already in Chapter VIII discussed the varying demand for labour according to the price at which it can be obtained. There is also a variable supply. Men and women may work harder or better or for longer hours. The working age may be extended or reduced at both ends (i.e. of children or old people). There are the unemployed. There is immigration and emigration. Finally, by reduction of the death rate and by increase of the birth rate, the population may be increased, thereby adding to the numbers of workers and to the amount of labour available. Summing up the effects of all these it is probably true that the net result of higher wages is to induce a larger supply of labour. The amount of labour employed and the rate of wages which it receives are thus determined by the law of supply and demand.

As an illustration take the case of a manufacturer employing 100 workmen at 2s. an hour for an eight-hour day. If he likes he can induce them to work a ninth hour by paying 2s. 6d. an hour for it. It will only pay him to do so when, owing to his being exceptionally busy, he has a big demand for labour.

No two men are absolutely equal workers, and in a state of completely free competition every man would be paid a different wage according to his ability. To some extent this happens in the case of piece-work; but in time-work manual workers are paid a fixed hourly wage according to the grade of work which they do.



This is largely due to combinations among the workmen; and in so far as these exist, partial monopoly has already taken the place of competition and the economic theory enunciated in Chapter VIII is not fully working.

Nevertheless, it still remains true that the output of the *last* man (which in this case means the *worst* man) must just recoup the employer for what he has to pay for him, and that the number of men he employs and the wages he pays them will be determined by this fact. Further, taking the whole industrial field employing the same grade of labour, the price of the output of the 'marginal' man must be the same. Finally, from the men's point of view the wage must be just sufficient to induce the *last* man (which in this case means the man least anxious to work) to come into the labour market.

Though labour is actually paid to-day out of the proceeds of the labour of yesterday or last year, it is to all intents and purposes paid out of the proceeds of the labour of to-day, and the greater those proceeds are the greater is the available total of which its wages form a part. A vital question arises, however, as to whether with an increased output labour will get (1) an increased amount, *and* (2) an increased percentage of the total. Economic theory does not supply an unequivocal answer to either of these questions. As to (1), we have already seen in Chapter IX that under certain circumstances the landlord can secure for himself the whole increase; and under other circumstances, it is possible that the whole increase might fall to labour or capital. But more usually it will be divided between them. As to (2), the theoretic points involved are extremely complicated, and the experience of the nineteenth century, during which free competition broadly prevailed, is not conclusive, because the proportion of land, labour, and capital available differed so greatly at one time from another.

An analogous and highly controversial question is the effect of wages upon prices and of prices on wages. A rise of prices affects wages in two ways: (1) it increases the money value of the product of which labour is entitled

to a share ; (2) it increases the cost of living and thereby reduces the inducement to labour offered by a certain money wage. The first tends to increase the demand expressed in terms of money for labour, the second to lessen the supply at this wage. Consequently, under free competition there is no doubt that labour will be able successfully to claim higher money wages. But it is not so easy to answer decisively the subsequent question : Will labour obtain such an increase of wages as to secure the same or a greater quantity of things as before ? It must be remembered that a rise in prices cannot occur 'out of the blue.' It must itself be the result of some other cause ; and the result will be found to be different in each case.

For instance, a rise in prices may be caused by depreciation of the currency. Suppose that in a country where the sovereign has been 4 oz. of gold it is suddenly reduced to 2 oz., prices will tend to rise to double their former level. Profits will leap up, but the existing debenture holders cannot claim any increase of interest ; and so profits, wages, and rent between them will have more than double to share out. It is probable, therefore, that labour can successfully claim more than double the money wage, and therefore actually more real wages in terms of things than before. But as time goes on and more new capital has to be introduced, and will have to be remunerated in accordance with the laws of supply and demand, labour will tend to fall back to exactly double its previous money wages, i.e. to exactly an equal wage in terms of things. A depreciation of a *paper* currency would have a similar effect.

On the other hand, a rise in prices may be the result of natural scarcity, such as bad harvests. In this case the total product to be shared out will be actually less, and its value in the aggregate in terms of money little if at all increased. Money wages will therefore increase less than the increase in price, and real wages in terms of things will be reduced.

Thirdly, prices may rise because capital, being in great demand elsewhere, may successfully claim a higher

rate of interest. This will only apply to new capital and not to old. It will not operate therefore rapidly at once, but its effect will be cumulative. Money wages under free competition will go up, but not to equal increases in prices.

Fourthly, prices may rise because wages rise (the rise in wages being due to the great demand for labour elsewhere, e.g. for soldiering). If this is the sole cause of price-increase, wages will under free competition rise more in proportion than prices, and labour will have better real wages in terms of things. Thus, suppose a manufacture in which for every £1 spent in raw materials, and £1 spent in wages, the finished article sells for £3, leaving a margin of £1 to go in overhead charges, including rent, interest on capital, and profits. If wages were doubled it would in the first place put prices from £3 to £4, assuming profits remained the same. But the cost of raw materials will go up, and the landlord will be able to claim successfully an increase of rent. On the other hand, old capital will not be able to claim an increase of interest. The net result will be that prices will go up 50 or 60 per cent. or perhaps more, but not 100 per cent. As money wages have gone up 100 per cent., real wages will have improved.

Finally, prices may rise owing to several of these causes operating simultaneously. This is, of course, what has happened during the war. In this case the question whether real wages will be greater or less depends on which is the predominating cause.

## CHAPTER XII

### TAXATION

PRICES are affected by taxation. In considering how this occurs, it is useful to divide taxes into (a) customs, (b) excise, (c) taxes on exports, (d) taxes on profits, (e) taxes on land, (f) taxes on incomes, (g) taxes on capital.

(a) Customs are taxes on imports. First, take the case of an import tax upon an article of which there is

no home production, such as tea. When there is no tax the equilibrium between supply and demand results, say, in the sale of a million pounds of a certain grade of tea at 1s. 6d. a lb. This price just makes it worth the while of the tea merchants to do the trade. An import tax of 6d. a lb. is imposed. The merchants will put up the price about <sup>1</sup> 6d. a pound, for only by so doing will it continue to be worth their while to continue to import it.

Secondly, take the case where there is home production but where there is a corresponding tax on the home article. Thus, when additional taxes are put on imported beer, taxes, called 'excise,' are simultaneously imposed on beer brewed in the United Kingdom. The results are similar to those in the previous paragraph. The price is increased by about the amount of the tax.

Thirdly, take the case where, though there is home and foreign production, there are customs but no corresponding excise. This applies to the much-discussed proposal to put a 'protective' tax on corn or manufactured articles. So long as there is no increase in price it will not pay merchants to import from abroad; accordingly, the whole foreign import will be cut off and demand will exceed supply. Equilibrium can only be reached by an increase in price. As price rises, it may perhaps happen that a new equilibrium may be reached in which the home supply alone may satisfy the whole demand, owing to the increased stimulus to the home trade and the reduction in demand. In that case the exchequer gets no money, and the result of the tax is that the consumer pays a bonus to the producers to make it worth their while to do the whole trade. But more usually the price rises until it exceeds the old price by the full amount of the tax. In that case some of the supply still comes from abroad, and the exchequer gets some money, but

<sup>1</sup> As a matter of fact they will probably put it up a little more than 6d. For in the first place, the increase in price will slightly reduce the demand and so give them a smaller trade; and secondly, they will need a larger capital since they have to pay the tax before selling the tea. They generally *camouflage* the additional increase above 6d. by giving a slightly inferior blend.

a large part of what the consumer pays goes as a bonus to the home producers. A little thought will show that where raw materials or food are being thus 'protected' most of this bonus can be claimed by the landlord.

(c) Taxes on exports, as, for instance, on coal, make the foreign trade slightly less profitable; they do not have very much effect on the home prices.

(d) Where businesses in a country are producing articles in which there is no foreign competition a general tax on their profits can be and is passed on to the consumer in the shape of increased prices. Where businesses are subject to full foreign competition the effect will be to make the home trade less profitable, and prices will rise little if at all. If the tax is not on profits generally, but solely on excess profits, it is a debatable question to what extent, if at all, the foregoing results occur.

(e) Taxes on land, if imposed for *national* purposes, should have no effect on the strict 'economic' rent, for the landlord, theoretically, takes in any case in rent the whole differential value between land which is employed and that on the margin of cultivation, and he cannot take more than this because his land or his rent is subject to taxation. In practice, the actual landlord very likely has not been demanding his full rack rent, and the imposition of the tax spurs him into doing so. Taxes on land for *local* purposes presumably benefit the occupiers; they therefore increase the differential value and enable an increased rent to be charged.

(f) Taxes on income do not directly increase prices. Indirectly, however, they may do so. A tax on unearned incomes diminishes the effective purchasing value of incomes liable to it, and affords less inducement to labour for a given wage or salary. It therefore may be said to some extent to reduce the supply of labour. A tax on investment incomes similarly has some effect in diminishing the inducement to save, and in so far as it does so reduces the supply of capital, thereby tending to increase the current rate of interest. Both these results operate theoretically, therefore, to raise prices. It is a very debatable point to what extent they do so in practice,

owing to the element of time and the psychological considerations which enter into the question.

(g) Death duties and other recurrent taxes on capital have also possibly some effect in the same direction. Whether a unique levy on capital would do so also depends mainly on the psychological factor. It would, in fact, depend on whether persons thought it was likely to be repeated.

The effect of taxation on monopolies will be considered in the next chapter.

## CHAPTER XIII

### MONOPOLY

FREE competition has been described by its friends as 'enlightened selfishness,' or the 'means by which each person, considering solely his own interest, achieves the greatest good of the greatest number.' Its enemies have summed it up in the phrase 'Each for himself, and the devil take the hindmost.'

For better or for worse this system, which reigned triumphant through most of the nineteenth century, is to-day passing away. Workmen combine in trade unions and refuse to undercut one another. Employers have 'gentlemen's agreements' which limit competition; they go farther, and form trusts and syndicates which exercise partial or complete monopoly. In the light of these facts, the price system built up in the preceding chapters on the basis of free competition has to be reconstructed. I shall jump straight to the case of complete monopoly, and leave the reader to figure out for himself the effect of intermediate conditions.

In the case of monopoly the price is fixed as that at which the monopolist will make the largest total profit. It seems offhand as if this would be indefinitely high, but this is not necessarily the case. Take first of all a simple illustration. Suppose a solitary greengrocer in a small town can buy from a market gardener as many pounds of strawberries as he likes at 1s. a lb. He finds that if he charges 2s. a lb. retail he will only sell 5 lb.,

making a total profit of 5s. ; if he charges 1s. 9d. he can sell 10 lbs. and make a profit of 7s. 6d. ; if 1s. 6d., 20 lb. with a profit of 10s. ; if 1s. 3d., 30 lb. with a profit of 7s. 6d. If he is wise he will fix the price at 1s. 6d., at which he will make the largest total profit, viz. 10s.

Now consider the transference of a great industry such as that of tobacco from free competition to monopoly. For simplicity I assume all tobacco to be of one grade and to be sold by the pound throughout the world ; further, that there be no taxation on it. Then under free competition the trade will yield the same rent, interest, wages, and, in the long run, the same rate of profits as other similar trades ; and price will be determined by equating marginal demand to marginal cost. Thus, suppose the cost (including rent, wages, interest, and normal profits), of producing a world supply of 4 million<sup>1</sup> lb. a week be 3s. 6d. a lb., and that after that the law of diminishing returns begins to operate and each additional million costs a further penny a lb., then the tenth million will be produced at the rate of 4s. a lb. If, at the same time the public would buy 4 million lb. if the price were 5s. a lb., and a million lb. more for every twopence reduction in price, then with a sale price of 4s., ten million lb. will be bought. The equilibrium of supply and demand fixes therefore the price at 4s., and the quantity sold at 10 million lb.

Suppose, now, a syndicate has means to prevent anyone outside their own ring from engaging in the tobacco trade. They will still have to procure land, capital, and labour in the competitive market, and will therefore have to pay the same rent, interest, and wages as prevail elsewhere. But profits will now bear no relation to normal profits and will simply be the maximum which the syndicate can procure. Suppose that *exclusive of all profits* the cost of producing the first 4 million lb. of tobacco under the syndicate be 2s. 6d.<sup>2</sup> a lb., and rises as before so that the

<sup>1</sup> All these figures are purely hypothetical.

<sup>2</sup> The figure is a shilling less than that given in the preceding paragraph. This difference is due partly to the economies effected by the monopoly and partly to the fact that the previous figure was inclusive and the present figure exclusive of 'normal' profits.

fifth million costs 2s. 7d. a lb. and so on; suppose the demand is as before. Then the syndicate could fix the price at 5s. a lb., in which case it would sell 4 million lb. and make a profit of 2s. 6d. a lb. or £500,000 altogether. If it sold at 4s. 10d. it would sell 5 millions, of which the first 4 millions would cost 2s. 6d. a lb. and the next million 2s. 7d.; it will be found that the total profit would be a million times 11s. 7d., or about £580,000. Proceeding with different prices it will be found that the maximum profit will be obtained for the price of 4s. 4d., when 8 million lb. will be sold and a total profit of about £680,000 will be made.

It will be seen that on these assumptions the price is not much higher than under free competition, and under certain circumstances it might be actually lower. This is so because a reduced price results in so many more pounds being sold that it is worth the while of the monopolist to keep prices down. Whenever the demand varies greatly with the price, as it does with most luxuries, the demand is said to be elastic, and similar results follow. With necessaries the case is very different, and leads to quite different results.

Suppose that the supply figures of the last example remain the same, with flour being substituted for tobacco, and the price per stone for that of price per pound. However great the increase on the price of bread people must still have a considerable quantity of it, so that the demand will be something as follows: 10¼ million<sup>1</sup> stone if the price be 3s. 6d.; 10 million if it be 4s.; 9¾ million if it be 5s.; 9½ million if it be 6s.; 9¼ million if it be 7s. 6d.; and 9 million if it be 10s. The price under free competition would be 4s. Under absolute monopoly there is no limit to the price that would be charged, for the higher the price the greater the profit. This accounts for the fury which anything like a corner in wheat provokes.

A water company with an absolute monopoly in a certain district might in the same way, unless regulated

<sup>1</sup> Of course, in reality, the world demand is very much more than this—about 400 million quarters a year, or 300 million stone a week.



by law, charge an exorbitant rate, for people would have to pay it or leave the neighbourhood.

Combinations among workmen act in a way somewhat similar to monopoly. If a trade union contains all the men in a trade, and also can limit the number of new apprentices, it has a complete monopoly and can force up wages. Just as in the case of an employers' monopoly the trade union will have to be careful that the increased wage per man does not reduce the total demand for the employment of its men, so as to make the aggregate increase in wage not worth while. Wage increases will come in the first instance out of profits, but if the employers are working under free competition and not making more than normal profits they will pass on the added cost of production to the consumer in the shape of increased prices. If the employers are also in a monopoly the increase in the cost of production will alter the basis of their calculations and incline them to do a smaller trade at a greater price. Whether or no the price will go up by less or more than the increase in cost is a point too complicated to be discussed here.

The effect of taxation on a monopolist depends on the form the taxation takes. If it is a licence to trade (independent of the amount of his trade) he will not be able to pass this tax on to the consumer, for he is already making as much profit as he can and the licence will not alter the conditions. But a tax on a monopolist, paid in proportion to his output, will increase prices, for it will be equivalent to an increase in the cost of production, and will act similarly to a rise in wages discussed at the end of the preceding paragraph.

## CHAPTER XIV

### PUBLIC CONTROL

MAN is a social animal, and prospers by co-operating with his fellows. Accordingly the whole economic structure of the society in which he lives is continually subject to public opinion, and where any part of it

offends against what is felt to be reasonable, forces will be set in motion with the object of modifying it. In ancient society this public opinion crystallized into established customs, and anyone who ran counter to them stood the risk of ostracism and what is now called 'boycott.' There was therefore a very strong incentive to conform to them. These customs varied locally and from time to time, but broadly they regulated prices in such a way that production met supply, and that each class of the population was able to maintain a certain standard of life.

Under modern conditions old customs have lost their force, but public opinion endeavours to bring society into conformity with its ideas by means of legislation. Thus we have had for several years wages boards to prevent sweating, fair rent courts in Ireland and elsewhere, maximum fares on railway trains, regulations fixing the price of gas and electricity according to a sliding scale, and many other similar enactments. In recent years, and especially during the war, many additional forms of control have been introduced.

The essential fact to be borne in mind is that public control, in order to be successful, must work through the fundamental laws of economics and not counter to them—just as a bee keeper learns that he can only achieve his ends by utilizing the laws of the hive, and that to attempt to ride roughshod over the habits of the bees will only result in failure.

Thus it is easy to pass a Bill fixing minimum or maximum wages, or the price of bread or meat or sugar or milk or wool, but unless such other steps are taken as to bring this measure into accord with facts, either it will in practice be disobeyed, or it will be obeyed but the results arising from it will be entirely different from what were anticipated.

Thus, after the Black Death in England statutes were passed fixing maximum wages, but as labour was scarce and many farmers were willing to pay above the maximum rather than have no labour, the statute became a dead letter.

Suppose that the price of milk be fixed at 6*d.* a quart when only a few farmers find they can make any profit on it at this price. Then the remaining farmers will either turn their milk into cheese and butter, or they will kill off their cattle and sell them as meat. The result will be that there will be a serious shortage of milk, many customers will go without, and milk-queues will be formed for what there is to be got.

Suppose that in a country whose normal annual consumption of wheat is a round 30 million quarters, the Government fix a price of 6*s.* a quarter at a time when this price will only attract 10 million quarters from abroad, and the acreage under wheat inside the country can only be expected to produce about 10 million quarters. If the Government take no other steps to deal with the situation there will be a grave shortage of bread, and the poorer classes will starve.

From these two illustrations it will be realized that it is not enough to fix *price*, it is necessary to tackle at the same time the question of *quantity*. It will be remembered that under the free working of competitive supply and demand, an equilibrium between them was reached which settled both price and quantity; and it is natural therefore that if public control attempts to regulate the one it should have to regulate the other also.

Take the bread illustration. The Government can increase supply by compelling the home farmer to substitute wheat for other crops; but even so, it cannot compel people to work at a loss, and if 6*s.* a quarter does not cover cost of production, including a fair measure of profit, the Government must pay the farmer a bonus on every quarter produced or he will cease production. The foreign supply can only be increased by a direct subsidy to the importer. Meanwhile, by a system of rationing, the Government can reduce the demand of the wealthy classes and secure that a proportion of such bread as there is, is available for the poor. In these ways alone can it equate supply and demand.

Monopolies are generally subjected to some form of public control, especially when they are concerned with

the production of necessaries, for, as was noticed in the last chapter, they are able otherwise to enforce extortionate demands. The British railways are partial monopolies, and have been compelled for many years to carry passengers at fixed fares. Water companies, gas companies, electricity companies, have monopolies in certain areas, and in consequence local control has in many cases been established. One of the most interesting forms of control is the provision of a sliding scale for a gas company, by which it is allowed to make a certain rate of profit on its capital and pay certain wages so long as it sells gas at a certain price. If it reduces the price of gas and raises wages it is allowed to make more profit, and vice versa.

In controlling a monopoly the community can prevent the syndicate making an extortionate profit, but if it cut the profit below a certain figure, still more if it attempts to reduce it to less than nothing, the monopoly will cease to function and production will be abandoned.

## CHAPTER XV

### PUBLIC OWNERSHIP

THE relative merits of public and private ownership are the subject to-day of acute political controversy. Which system provides the greatest, the best, and the cheapest production, and the most satisfactory conditions for all grades of producers is being hotly debated by rival protagonists.

The general issue lies entirely outside the scope of this book. As to it I shall content myself with pointing out two indisputable facts. First, both expressions, though apparently definite, cover in reality several widely different methods of conducting business. Public ownership includes municipal ownership, state ownership, international ownership; and any one of the three may be combined with a measure of control by the workers—as under the proposals of the Guild Socialists. Private ownership, on the other hand, may mean free competition

or complete monopoly or any intermediate system, and any one of these may or may not be subject to a certain measure of public control. Secondly, though the arguments of both sides are usually based on first principles, and should therefore be universally applicable, the controversialists have in reality much more in common than either party is prepared to admit. Few if any of the most inveterate opponents of public ownership would urge the community to abandon to private ownership the roads, the sewers, and the educational system, or even the post office or such successful examples of municipal trading as the Glasgow Tramways. On the other hand, the most doctrinaire Socialist will hesitate to recommend 'taking over by the State' of such essentially personal things as domestic service, literature, or art.

My main concern, however, in this book is with the method by which price is fixed under public ownership. It is scarcely an exaggeration to say that the public who own the service may put the price at whatever they like. They may put it at nothing at all, as they do to-day for the use of roads or free ferries or education; in this case the loss falls on the taxpayers or ratepayers. They may run it like a private monopoly so as to make the largest gross profit, as is sometimes done with a municipal tramway system; in this case the profits go in relief of taxes or rates. They may charge a price which will in the aggregate just cover the total cost, as is approximately done with the post office in this country.

If the system of public ownership were to be widely extended to productive enterprises there is little doubt that it is the third principle which would be generally adopted. It is interesting to see that it establishes an entirely different criterion of price from that of any of the systems previously discussed. It really amounts to equating price with *average* cost; and it follows that the cost of the least profitable part of the enterprise will be greater than the price charged for it. That this is actually the case with the postal service it is easy to see. The Government undertakes for a uniform charge of twopence to deliver a letter to any person in the United Kingdom.

One letter is posted at a post office directed to a person living in the same street, and is delivered to him as one of a score of similar letters; another has to go by van, rail, and steamer to a remote village in Ireland, and the postman has to undertake a special walk of a mile or more in order to deliver it. Clearly the cost of the latter exceeds the price charged; but in spite of this fact it is accepted that it is in the public interest that any inhabitant of the United Kingdom shall be able to obtain the services of the post at a uniform rate.

We have seen in Chapter V that under a system of free competition the price of coal must be such that the worst-run mine shall not work at a loss, and that the better-worked mines shall make a corresponding profit. Under state ownership the price would be fixed so that the loss on the less profitable mines would just balance the profits on the more profitable. This seems to suggest that prices under public ownership would necessarily be less; but the issue is not quite so simply decided, for it must be remembered (1) that costs under public ownership will include interest on the compensation, if any, paid to present owners; (2) that the change in ownership may result in an increase or a decrease in the efficiency of working. It is of course precisely on the latter point that the rival controversialists are most sharply divided.

## CHAPTER XVI

### DURING THE WAR

READERS who have followed the discussion in the preceding chapters on the theory of prices will have little difficulty in applying it to the circumstances of the late war. They will probably have noticed already that nearly every condition for an increase in prices existed; and they will understand that where so many different forces were all acting in the same direction it was only to be expected that the result would be con-

siderable. I propose to enumerate these causes one at a time.

The first was financial. Even before the war was declared the gold sovereign was replaced by the paper BrADBury. As the war went on the Government raised only a small part of its cost by taxation and secured the remainder by printing hundreds of millions of BrADBurys and sending gold to the non-belligerent countries, and by borrowing from individuals and from banks and from foreign countries. The flooding of the non-belligerents by the gold flung out from the currencies of European belligerents resulted, as described in Chapter VI, in sending down the exchange value of gold and in raising the prices of articles in terms of gold. At the same time, in this country, the printing of BrADBurys and the creation of credit by means of loans sent gold 'to a premium'; that is to say, it made the gold in a sovereign worth more than a pound; prices of things in terms of paper BrADBurys went up, therefore, still more than prices in terms of gold.

Secondly, while the supply of commodities from abroad was reduced owing to the use of ship space for war purposes, the supply of commodities produced at home was rendered more costly because (1) nearly all new capital was borrowed by the Government, and (2) labour was conscripted by the Government for soldiering and competed for in munition making. Had this shortage of supply been met by a corresponding reduction in demand expressed in money (which would have been the result of drastic taxation), the equilibrium between supply and demand would not have worked out at any great change in general prices<sup>1</sup>; but owing to the fact that the Government paid for the war by borrowing, 'demand' was left nearly unchecked in the earlier stages of the war, and prices rose accordingly.

Thirdly, many new taxes on tea, sugar, tobacco, beer, etc., were imposed, raising directly the prices of these articles;

<sup>1</sup> Of course, when the taxation was 'indirect,' i.e. on tea, sugar, etc., the tax itself would have increased price, as seen in the next paragraph.

other taxes had also a roundabout effect in the same direction. An opposite result was, of course, produced by the subsidy on bread.

Fourthly, the elimination of foreign competition and the obstacles to the formation of new businesses at home had the effect of transforming many existing businesses into virtual monopolies, which were enabled to charge far higher prices and make far greater profits than would have been the case under free competition. The imposition by the Treasury of the Excess Profits Duty, while it secured a share for public funds, exaggerated rather than diminished the tendency of monopolists to put up prices.

Fifthly, the attempts at public control and price regulation did not, in their initial stages, proceed in accordance with the fundamental laws of economics. They were accordingly (as shown in Chapter XIV) foredoomed to failure. Later in the war, by forbidding indulgence in luxuries, by rationing the public in necessities, and by fixing prices after analysing costs, better results were obtained.

Lastly, the rapid improvisation of public ownership at a time when due attention was little likely to be paid to economy or efficiency, led in many cases to waste, which was reflected in price increase.

How far could these results have been prevented by different action in this country? It is doubtful whether under any circumstances the gold standard could have been maintained, but had a larger part of the cost of the war been paid out of current taxation and had loans by banks been avoided, the disparity between gold and paper (i.e. the excess of the value of the gold in a sovereign over a pound) might have been less, and prices in Bradburys kept more nearly the same as gold prices. On the other hand, the action of this country can only have been slightly responsible for the increase of world prices in terms of gold, which would undoubtedly have risen whatever we had done.

As to the other causes, a different policy from the commencement could have checked price-raising by virtual



monopolies. It could, perhaps, have prevented waste where public ownership was in operation. It could have cut off all luxury expenditure and rationed necessities before they became scarce. Finally, by much heavier taxation it could have reduced demand nearly to the level of supply.

Much of this would have been of real advantage to the community; but some of it would only have altered the denomination of the counters in which the trade of the country is done. War, with its destruction of human life and material wealth, must inevitably reduce the net product available for human consumption.

## CHAPTER XVII

### AFTER THE WAR

It was the confident belief of the man in the street that with the end of the war prices would take a downward turn. He argued, quite naturally, that war had put them up and that peace would put them down again. Instead of this, wholesale prices, which had advanced from a base of 100 in August 1914 to 240 at the Armistice, increased further to 330 in March 1920. It cannot be surprising if he set to work to inquire how far this was war's inevitable aftermath which he had failed to foresee, and how far it was the result of the policy of the Government of this country and of the victorious Powers generally.

Prices, it has been seen, mainly depend on supply and demand. The war, while it lasted, exerted an enormous demand for soldiering and for war material of all kinds; when hostilities ceased most of this demand fell off, but other demands sprang up to take its place—demands for expenditure on demobilization, for the purchase by individuals of comforts and luxuries postponed during the war, for replacement of capital destroyed, for necessary extensions of capital, and finally, for the score of 'little wars' which continued to be waged in the Middle East.

Supply, on the other hand, had been arranged while the war lasted with a view to war conditions, the civil population putting every ounce of energy into the task. The termination of the war could not immediately put everyone back into his niche in civil life; still less could it bring back to life the men that had fallen, give renewed health to the injured, or make good for a long time the capital destroyed. Moreover, the loans from America and the East to the Allies ceased with the war, and goods had to be paid for with goods instead of with paper. Finally, the blockade of Central Europe, carried on for many months after the Armistice; the blockade of Russia, which was still virtually in effect when this book was written (July 1920); and the imposition of indemnities—all had the effect, by cutting off food, raw materials and machinery from these countries, of preventing their populations from getting to work and so of reducing their foreign exports almost to zero. No timber or grain came from Russia, no wheat from Transylvania, no beet sugar from Germany or Austria. Finally, the war between Poland and her Eastern neighbour made further inroads upon the man power of those nations.

It is not enough, however, merely to consider supply and demand: it is also necessary to take into account the state of the paper currencies of Great Britain and Europe generally. Up to July 1920 no serious attempt had been made anywhere to get back to a gold basis. Prices were therefore not in terms of gold, but in terms of paper, and gold was on July 1 1920 at a premium of about 25 per cent. in Great Britain, 140 per cent. in France, 225 per cent. in Italy, 800 per cent. in Germany, 1,500 per cent. in Austria, and several thousand per cent. in Russia! Thus in England, the gold in a sovereign was worth on that date about £1 5s., and 25 shilling loaves of bread would just about have exchanged for it.

The reason for this depreciation of the currency was twofold. First, the Government of this country (and to a much greater extent the Governments of other European belligerents) went on spending after the war

large sums of money over and above what they raised in taxation; this money they got by borrowing (and in the Continental countries by a further increase of paper notes), thereby inflating the currency precisely as was the case during the war. Secondly, Europe needed to import from America far more goods—capital and raw materials and food—than she was able to send her in exchange. No further loans were to be had from the American Government, and interest was due on the loans lent during the war. So that as Europe's 'credit' was bad the transactions forced up the exchanges between her countries with their paper currency and the United States which had preserved the gold standard.

Those who consider the matter carefully will realize that the depreciation of the paper currency and the equilibrium of supply and demand are not two separate phenomena, but are closely interrelated. They operate on prices partly directly, partly through the high current rate of interest brought about by the great scramble for capital, and partly through the high wages brought about by the great demand for labour coupled with the high cost of living. Their combined effect is to raise prices to a point which is prohibitive to all demands which cannot express themselves in a high money equivalent.

## CHAPTER XVIII

### A PEEP INTO THE FUTURE

It was a wise man who said 'Do not prophesy unless you know!' Nevertheless, in order to frame to-day's conduct we must inevitably make some estimate as to what the future will bring forth. This book would not therefore be complete without some expression of opinion as to the possible movements of prices in the future. My temerity in attempting to give this will, however, be qualified by the fact that my prophecies will be conditional upon the fulfilment of certain assumptions which I shall name.

I propose to begin by examining the prospect of prices being 'pegged' by some artificial means while the ownership and management of industry remains, as at present, mainly in private hands. There are several ways in which this might be done.

First, an attempt may be made to revise and extend the scheme of price regulation adopted during the war. It has been seen in Chapter XIV that such a method, to be successful, involves at the same time the regulation of quantities by means of rationing; and further, that in any case a margin must, under free competition, be allowed for normal profit. Therefore, prices cannot be fixed at a point very far from the level to which they would automatically gravitate. Under monopolistic conditions, on the other hand, a considerable reduction may be effected. Taking all the circumstances into account, it seems to me unlikely that public opinion in this country will tolerate the amount of interference with individual liberty which an extensive system of price control and rationing would imply.

Secondly, an attempt may be made to 'peg' the general level of prices by financial means. It has been seen in Chapter VII that when the currency of a country consists of inconvertible paper, the Government of a country, by controlling the amount of paper money in circulation, can alter the general level of prices. If it floods the market with paper money, prices will go up, if it contracts the circulation they will go down. This principle might be utilized by the Government to steady prices. Every month economists prepare and publish 'index' numbers, which are compiled from the price lists of nearly everything that people buy, so as to show the variation from month to month in the aggregate cost of fixed quantities of all these things. When this index number went up the Government, by restricting the currency, might bring it down again, and vice versa. Ideally, this would be a very satisfactory method. But it implies a self-restraint on the part of Governments which I am bound to confess they show to-day little likelihood of exercising. Even if they were to consent

to operate it correctly in normal times, in emergencies they would almost certainly throw it over.

Another financial method of regulating prices by financial means would be to return to the gold basis of money. This would not 'peg' them, but would tend to prevent their rising or falling more than a certain amount, because there would always be a comparison between the 'effort' of producing any article and the 'effort' of producing an ounce of gold. Thus, during any of the 40 years preceding the war, while the gold basis existed in England, a good pair of boots could have been bought for about £1; and even wheat, which suffers from good and bad harvests, only fluctuated between 22s. and 37s. a quarter; and the index percentage number of prices fell from 120 in 1880 to 84 in 1896, and then rose to 117 in 1913. The question of a return to a gold basis in this country (which need not necessarily mean a return to the use of gold sovereigns) is the subject of acute controversy in banking circles. If it were adopted soon (which could only be done by a drastic reduction of paper notes and credit facilities), it would undoubtedly reduce prices, but it seems unlikely that for some time this course will be taken. On the Continent of Europe the return to a gold standard is most improbable for many years to come.

If prices are not to be 'pegged,' then whether they rise or fall will depend in the main upon the extent to which the country as a whole is prepared to live within its means.<sup>1</sup> If everyone—Government and people—continue to spend above their income and to raise the necessary funds by using their capital, this must inevitably continue to send up prices. This is true, whether industry be carried on by free competition, by monopoly under a measure of public control, or by public ownership. If prices are to go down, this policy must be reversed. The Government must cut off all unnecessary expenditure at home and abroad. It must take steps to reduce its

<sup>1</sup> Even financial methods of lowering prices by restricting paper notes and credit will only operate successfully if they achieve this end.

total debt. It must bring home to the public (preferably by heavy taxation<sup>1</sup>) the loss resulting from the war and the necessity of curtailing private expenditure. The public, in its turn, must abandon much of its present luxurious outlay and return to a simpler method of life. Even so the great scramble for capital to make good that which has been destroyed must go on for some time, and consequently the rate of interest is likely to remain high and prices cannot be expected to fall considerably, if at all, for several years to come. The forces tending to push them up still farther have not yet spent themselves, and even when forces in the opposite direction are set in motion they must take some time to operate.

Finally it must be remembered that reduced prices<sup>2</sup> are by no means synonymous with increased material prosperity. In fact, except for the relationship between debtor and creditor, which carries with it the case of people with fixed money incomes, the absolute level of prices is of no consequence. It is the comparison between prices and incomes that is of importance, and this depends on two factors, (1) the sum total of production, (2) the character of distribution.

Man, with his growing knowledge and skill, undoubtedly has it in his power to increase the total output of his labours and to secure to every one of the population a growing standard of comfort. But in so far as, instead of co-operating to achieve these ends, he destroys life and wealth in war and fails to create harmony by solving the problem of distribution, he cuts off the source of his wealth and drives humanity backward towards penury and starvation.

<sup>1</sup> My personal view is that this taxation should include a levy on capital.

<sup>2</sup> Prices in the act of falling cause a slump in business which leads to unemployment and general depression.

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