

# STRUCTURAL FACTORS CAUSING PRESENT-DAY INFLATION

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## I. *Introduction*

As many economists point out, present-day inflation has certain characteristics which orthodox theories of inflation can not explain. The most outstanding of these is that prices do not react to demand, but to costs in the course of inflation, however, the causal factor which starts inflation in these theories is always demand, not cost whose increase is induced by demand. The factor which plays a central role in present-day inflation as opposed to old type inflation is costs, and this is the reason why present-day inflation is called cost inflation.

It follows that the question to be raised here must be why prices react to costs, while they do not react to demand. In order to answer this question, however, we have to analyse the mechanism of price formation, and this leads to the study of pricing policy of the firm, wage determination, and monetary and fiscal policy. I will approach these studies as studies of the corresponding market structures by which I mean the commodity, labor and financial market structure. I have to explain here why I think it important to analyse structural factors causing present-day inflation.

Inflation is a type of an economic phenomenon, and an economic phenomenon is a type of social phenomena, behind which lies man's behavior. Since the behavior of a man is ruled by the circumstances in which he lives, we must make clear what circumstances are dominating in our living world if we wish to know and to investigate the causal factors which bring about a phenomenon. And in the second place, we must consider how a man behaves under the given circumstances. It does not need to be pointed out that the basic principle of man's behavior is based on rationality, and rationality in economic behavior means maximization. But the question "who maximizes what"<sup>1</sup> must be answered in accordance with the given circumstances, and so with economic structures which reflect changes of economic environment.

I will analyse present-day inflation as an economic phenomenon from the viewpoint just mentioned above. The inflation I would like to analyse here is the one prevailing in the advanced and industrialised countries, and dominating especially after the World War Two.

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<sup>1</sup> Cf. Joan Robinson, "Imperfect Competition" revisited", in *Collected Economic Papers*, Vol. 2, pp. 222-38. In this article she states: "It seems to me that the most valid simple generalization is that the aim of the entrepreneur is for the firm first to survive, and secondly to grow. To this end he must pursue profit, but he must avoid action which, though profitable in the present, will damage his future position, and, since this is partly bound up with reputation, his course of conduct will be much influenced by the climate of opinion in which he operates. All this is sadly vague, and the subject needs much more field study of business behavior." See p. 226.

## II. *Structural Changes and Economic Behavior*

To establish the characteristics of the modern economy which affect economic phenomena and our economic behavior, I will investigate the changes which occur in economic structures. In the previous section I divided economic structures into three parts, namely, commodity, labor, and financial market structure. First I will consider the relation between structural changes and economic behavior in the commodity market.

In orthodox price theory the dominating type of competition is perfect and free competition, but what we find in the modern economy is no other than oligopolistic competition. Paolo S. Labini, the author of "Oligopoly and Technical Progress" tells that "it is common view among students of economics that in the past competition ruled in industrial as in all other markets, and that it is only in our own age that market forms other than competition have become more and more frequent in the industries of advanced economies."<sup>2</sup> I can not explain here why oligopolistic competition has appeared, for such a study belongs to the students of economic history. The important question in this concern is rather what the essence of oligopoly is. I think it is the existence of uncertainty about reactions of rivals and about future market conditions.

The next question is what rational behavior in the world of uncertainty is. In this connection I would like to refer to the theory of pure or impure choice, the term of which was first used by G. L. S. Shackle in his article on the theory of interest. "Theories may secondly be distinguished according to the mode of choice which faces their acting subjects. When a theory supposes the available alternatives to be perfectly known to these subjects in every respect which concerns them, I shall speak of a theory of pure choice. Under any other assumption the acting subject has, with greater or less freedom, to create his own list of alternatives before he can choose among them. If the alternatives are not given to him, or in so far as they are not given, he must necessarily produce them by his own thought, judgment and imagination. Choice of this two-stage kind I shall call impure choice. A subject facing pure choice has no motive for not dealing at once with every question that arises concerning the details of the action he shall adopt. For he knows everything about the consequences of every available act. But a subject facing impure choice may elect a simple immediate act designed to secure freedom of deferred choice among more specialised alternatives."<sup>3</sup> We can readily relate his theory of impure choice to Mr. Keynes' theory of liquidity preference. But we can also find a resemblance between his theory and Mr. Kaldor's concept of imagined demand curve<sup>4</sup> and Sweezy's theory of kinked demand curve. In the theory of liquidity preference a 'simple act' means not to buy securities but to hold money.

In classical economics this type of behavior was considered to be irrational, because classical economists believed that elasticity of expectation would be unity, and that the future would be expected with certainty. In the theory of price there are two kinds of uncertainty, one is about future market conditions and the other is about reactions of rivals.

<sup>2</sup> *Oligopoly and Technical Progress*, p. 1.

<sup>3</sup> "Recent Theories Concerning the Nature and Role of Interest," *The Economic Journal*, June 1961, p. 210.

<sup>4</sup> "Mrs. Robinson's 'Economics of Imperfect Competition'," *Essays on Value and Distribution*, pp. 59-60.

Kaldor's concept of imagined demand curve and Sweezy's theory of kinked demand curve are constructed upon the latter type of uncertainty. Sweezy states as follows: "The most important consideration in this connection seems to me to be the obvious fact that rivals react differently according to whether a price change is upward or downward. If producer A raises his price, his rival producer B will acquire new customers. If, on the other hand, A lowers his price, B will lose customers. Ordinarily the reaction to a gain in business is a pleasurable feeling calling for no particular action: the reaction to a loss in business, however, is likely to be some viewing with alarm accompanied by measures designed to recoup the loss. If the cause of the loss is obviously a rival's price cut, the natural retaliation is a similar cut. From the point of view of any particular producer this means simply that if he raises his price he must expect to lose business to his rivals (his demand curve tends to be elastic going up), while if he cuts his price he has no reason to believe he will succeed in taking business away from his rivals (his demand curve tends to be inelastic going down). In other words, the imagined demand curve has a corner at the current price."<sup>5</sup> The kinked demand curve explains why the price remains at the current level, or why prices resist downward pressure in times of recession and depression. This kind of behavior may be regarded as irrational judging from the conditions for short-run equilibrium that marginal cost must equal marginal revenue, because all we can say is that marginal cost must certainly not be greater than marginal revenue. But according to this theory it is irrational that a producer maximizes his profit from the short-run point of view. This is due to the fact that there is uncertainty about reaction of rivals.

As I pointed out earlier, we have another kind of uncertainty, namely, uncertainty about future market conditions which was pointed out first by Alfred Marshall in his *Principles of Economics*. He says: "The immediate effect of the expectation of a low price is to throw many appliances for production out of work, and slacken the work of others: and if the producers had no fear of spoiling their markets, it would be worth their while to produce for a time for any price that covered the prime costs of production and rewarded them for their own trouble. But, as it is, they generally hold out for a higher price: each man fears to spoil his chance of getting a better price later on from his own customers: or, if he produces for a large and open market, he is more or less in fear of incurring the resentment of other producers, should he sell needlessly at a price that spoils the common market for all."<sup>6</sup> What he says is in short that producers do not cut their price even in the time of contraction of demand for fear of spoiling the market. Having fear of spoiling markets means that a producer has a long-period demand curve which is far more elastic than the short-period demand curve. J. K. Galbraith also points out the necessity to consider the long-period demand curve. "It is in the long-run that the corporation lives. It is the return over the fullness of time which is relevant to managerial calculation. If the prices that maximize profits at the moment will bring wage demands that will threaten the cost position of the company over time: or if there promises to be wrong-public reputation will be hurt, then short-run maximization of return does not accord with self-interest even when this is defined in the narrowest of pecuniary terms. The firm will not proceed to maximize its current return unless something happens—an important point—to make this possible without

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<sup>5</sup> "Demand under Conditions of Oligopoly," *Readings in Price Theory*, p. 405.

<sup>6</sup> *Principles of Economics*, 8th edition, p. 311.

damaging the long-run interest."<sup>7</sup> His point is that a producer will not raise his price even in the time of expansion of demand for fear of damaging the long-run interest. The behavior which does not maximize current return will not be irrational if the firm is in a situation where there is uncertainty about future market conditions.

The type of competition ruling in our modern industrial society is oligopoly, the essence of which is the existence of two kinds of uncertainty as explained above. In the world of uncertainty the principle of profit maximization in the short-run can not be considered as rational basis of pricing policy of the modern firm. All we can say is that a producer should maximize his profit with the qualification that he never lose his customers. There must be some range within which a producer can not revise his price even though the conditions of demand and cost change. I think one of the important tasks imposed upon the students of price theory may be to establish the determinants of this range and the necessary conditions for a producer to revise his price.

As to the determination of the wage level, there are I believe two types of theories. One is the demand and supply theory and the other the bargaining strength theory of wage determination. The basic hypothesis of the demand and supply theory is that there is competitive bidding on the demand side and perfect mobility on the supply side. If these conditions can be recognized in reality, money wage will react to excess demand for labor, and it will rise automatically with the competitive bidding of employers for labor, each offering jobs a little above the prevailing level of rates in order to attract labor from other employers. A.W. Phillips proved this theory to fit reality in his research paper titled "The relation between unemployment and the rate of change of money wage rates in the United Kingdom, 1861-1957."<sup>8</sup> He constructs the curve which shows the relation between unemployment and the rate of change of money wage rates, the form of which is non-linear,  $\log(y+0.900)=0.984-1.394 \log x$ , where  $y$  is the rate of change of money wage rates and  $x$  is the percentage unemployment. In the conclusion he says that this curve holds good except for the period 1913-1948 in which import prices rise rapidly enough to initiate a wage-price spiral as a result of war.

But N. Kaldor criticizes this theory from the viewpoint of bargaining strength theory. He states: "The demand-pull theory assumes a degree of perfection in the labor market which is unrealistic. It pays an individual employer to offer higher wages if thereby he can attract labor from other employers and thus increase his own output. But whether it does so or not depends on whether it is possible for him to offer higher rates to newcomers without increasing at the same time the wages of his existing workers: and on the number of additional men the employer wishes to engage in relation to his existing labor force. A large establishment clearly could not discriminate in favor of new employees without a serious deterioration of labor relations: added to which is the fact that the elasticity of supply of labor to a large employer may not be large. Hence it is only in the case where the employer hires only a single employees (as, for example, in domestic service) that a shortage of labor is likely to exert an upward pressure on the wage level from the side of demand."<sup>9</sup> He puts forward an alternative theory in which the rise in money wages depends on the bargaining strength of labor. According to this theory, bargaining strength is closely related to the prosperity of industry which determines both the eagerness of labor unions to demand higher wages

<sup>7</sup> *The Affluent Society*, pp. 169-170.

<sup>8</sup> *Economica*, 1958. Reprinted in *Readings in Macroeconomics*.

<sup>9</sup> "Economic Growth and the Problem of Inflation," *Economica*, Nov. 1959, pp. 292-293.

and the willingness and ability of employers to grant them. It is when investment is high that profits are high, and it is in periods of rising total production and rising productivity that profits are rising. He continues to tell: "Such periods in turn are periods of low unemployment, and also periods of falling unemployment. If instead of relating wage increase to unemployment Professor Phillips had related them to the increase in production, or to the increase in profits of the previous year, I am confident that he would have found an even better correlation for all his periods, interwar and post-war, as well as pre-war, excepting perhaps those years when Sir Stafford Cripps was Chancellor and a policy of voluntary restraint by the labor unions was in operation."<sup>10</sup> We can interpret Kaldor's theory as saying that wages go up more when industrial prosperity is increasing, independently of whether more labor is being hired relative to its supply. On the other hand Phillips' theory predicts that wages go up more when employers hire more labor, relative to its supply, independently of how well the employers have been doing.

Richard G. Lipsey and M. D. Steuer tested these two theories in their statistical research paper titled "The relation between Profits and Wage Rates," and drew the conclusion that "Kaldor was wrong in asserting that his theory would come out very much better than Phillips' when tested at the aggregate level. Such margin of advantage as there is favors Phillips' theory in the two periods 1870-1912 and 1949-58, and Kaldor's in the period 1926-38."<sup>11</sup> But I think there is something wrong in their interpretation of Kaldor's theory, because he implies that his hypothesis holds good only for large companies and enterprises and so the test can not be done at the aggregate level. We must divide firms into two groups, namely, small and medium size firms on the one hand, and large firms on the other hand. In the former group where the elasticity of the supply of labor is fairly large, Phillips' hypothesis will be proved to be correct. But in the latter case where the supply of labor is not elastic Kaldor's theory will be fit. If we confine our observation to the oligopolistic firms, those firms usually being large in size, I think it is better to accept Kaldor's theory. In this connection I would like to point out the difficulty we must face. It is the pricing policy of an oligopolistic firm which affects how the increase in productivity is absorbed in wage increase or in price cutting, or in profit increase. There must be a close connection between the wage determination and the price formation.

At any rate it can not be denied that the money wage rate increases in times of industrial prosperity indicated by low unemployment and high profit, whether it is raised directly by competitive bidding of employers or it is won by labor unions bargaining strength. In either case demand conditions play an important role and especially we must not lose sight of the fact that the prosperity of industry influences the bargaining power of labor unions. But this does not lead to the conclusion that we can explain the rise in wages by either theory.

Here I would like to consider the behavior of trade union as a decision making unit. In classical theory it is an individual who offers labor by making a selection between income and leisure. At the given level of wage we have a combination of income and leisure which maximizes total utility function, and we have such a combination at each wage level which forms a labor supply function of individual. We must note here that the decision making

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<sup>10</sup> *Ibid.*, p. 293.

<sup>11</sup> *Economica*, May, 1961, p. 150.

unit maximizing utility and offering labor is an individual, not a labor union. The character of the trade union is that it is composed of many individuals and so its behavior is based on collectivism, not on individualism. As the organization of labourers has been promoted, the theory of bargaining power has appeared. For example we have a theory of J. R. Hicks. However, his theory assumes only a part of the wage to be determined by the labor union, namely the additive to the wage given by free competition.<sup>12</sup> There is still philosophical background presuming a community of sovereign individuals. But what we need is the philosophy of collective action. The decision making unit is a labor union instead of an individual. The relative preference of an individual for real income and leisure can not be the principle of supply of labor. In this connection I highly appreciate the theory of J. T. Dunlop. He assumes: "A trade union is composed of wage earners in a particular market, either actually employed or willing to work under some conditions, who have formed an enterprise with leadership to act as their collective agent."<sup>13</sup> and that "Such a function is not an average relationship: the increment in the amount of labor affiliated with the union is specified for each increment in the wage rate. The membership function must be regarded as the appraisal by the leadership of the amount of labor that will be allied to the union at each wage rate."<sup>14</sup> This is the supply function of labor. As to the demand function he adopts the conventional one which depends on the technical conditions of production, and the more dynamic factors. But the crucial point is that he clarifies what the union is attempting to maximize. Of course there are many alternatives, but his basic assumption is this: "The wage policy of a trade union may be directed at achieving the largest possible wage."<sup>15</sup> This means the maximization of total wage bill. This is due to the fact that he regards a union as a kind of household, the income of which may depend largely on the employment status of other household members. It must be discussed further whether his hypothesis can be applied to any type of a union. But I think it is important to consider what kind of new preference collective action may introduce.

Finally I would like to consider the problem of the financial market structure. The problem I point out here is slightly different from those mentioned above. This is because hitherto the discussion was focused upon the economic behavior of a man or a group, but here I would like to discuss chiefly the monetary system and its impact on present-day inflation.

Of course the shift of the monetary system from gold standard to managed currency has been successful if we consider the stable and high level of employment and economic growth in the advanced countries. But the Western countries are now suffering from a vicious spiral of rising prices and wages. It is debatable whether such a phenomenon is truly an attribute of managed currency. But there must be some reason why managed currency is called labor standard or wage standard in contrast with gold standard. Hicks puts it in the following way: "So long as wages were being determined within a given monetary framework, there was some sense in saying that there was an 'equilibrium wage,' a wage that was in line with the monetary conditions that were laid down from outside. But the world we now live

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<sup>12</sup> Cf. *The Theory of Wages*.

<sup>13</sup> *Wage Determination under Trade Unions*, p. 32.

<sup>14</sup> *Ibid.*, p. 33.

<sup>15</sup> *Ibid.*, p. 36.

in is one in which the monetary system has become relatively elastic, so that it can accommodate itself to changes in wages, rather than the other way about. Instead of actual wages having to adjust themselves to an equilibrium level, monetary policy adjusts the equilibrium level of money wages so as to make it conform to the actual level. It is hardly an exaggeration to say that instead of being on a Gold Standard, we are on a Labor Standard."<sup>16</sup> If the equilibrium wage level means the wage under full employment, the function of managed currency can be defined in terms that it controls the volume of money so that the full employment is achieved regarding the current level of wage as being given. As we know, under the system of managed currency the central bank can control the volume of money through increasing or decreasing loans and buying or selling financial assets. Assume the situation in which the central bank is not given this function of monetary control. In the context of the cost inflation this means the rise of wage level holding the quantity of money constant, which makes money income increase and prices rise.

Here the question arises whether this process can persist indefinitely with the stock of bank deposit and currency held constant, and whether this process can continue maintaining the level of employment. We can give one possible answer in the context of the simple Keynesian model. Let us divide the demand for money into two parts, one for income or transaction motive, the other for precautionary or speculative motive. The rise in money income will induce the demand for money held for income and transaction motive to increase. This increasing demand must be filled with the money held for precautionary or speculative motive. That is, idle money must be converted into active money, for we assumed the total stock of money held constant. But if idle money is interest-elastic, this conversion will soon or later make the interest rate rise, which in turn decrease real investment outlays.<sup>17</sup> As the theory of investment multiplier shows, this decrease in investment reduces the real national income and the volume of employment. If we estimate the real cash balance effect, there may be decrease in consumption outlays, too. This will also reduce the effective demand and the level of employment. It follows that there will be no such mechanism as maintains the level of employment and allows the wage-price spiral to continue indefinitely in the absence of increase in the supply of deposits and currency.

R. F. Harrod evaluates managed currency as follows: "It has been said that, in place of the gold standard, we now have a wages standard. The general level of prices appears to be no longer determined by the relation between the demand for and the supply of gold or by its cost of production, but by the levels at which wages in the various trades are fixed under the pressures of collective bargaining. If wages are pressed upwards, the whole price structure has to be adapted to that. This applies particularly in a country mainly concerned in producing processed goods: prices of primary products that are determined in world markets, being less closely governed by their costs of production, still take the lead, and the earnings, wages or other, of their producers have to follow suit. There is an element of truth in this idea that industrial countries now have a 'wages standard' of money. Civilization requires that money be a good standard. It needs stability. There is an element of danger in being at the mercy, in this vital issue, of the chance effects of bargain resulting from the rough and

<sup>16</sup> *Essays in World Economy*, p. 88.

<sup>17</sup> Cf. R. J. Ball, *Inflation and the Theory of Money*. He states: "Cost Inflationists favour the view that investment is inelastic and the demand for money highly elastic with respect to the rate of interest, while their critics reverse the order of sensitivity," p. 69.

tumble of negotiations, with the possible threat of strikes in the background. If it is indeed true that we are tending towards a wages standard, then the whole question of wage fixing will have to be looked at from this point of view. The proposition that we have now reached what is basically a wages standard is an over-statement. The course of wages may be strongly influenced by factors analysed in the traditional theory of money. Wages may rise, or rise more than they otherwise would, because there is monetary laxity. Or, stepping aside from purely monetary factors, and reverting to the Keynesian analysis of aggregate demand we may judge that over-full aggregate demand (demand-pull inflation) may cause wages to rise more than they otherwise would."<sup>18</sup>

There is slight difference between Hicks and Harrod in regarding the system of managed currency as that of labor standard or wages standard. But both admit that the monetary system we have now has an important relation to rising prices and wages. The existence of the system of managed currency is a necessary condition for the vicious spiral of wages and prices in the sense that the monetary system is relatively elastic so that it can accommodate itself to changes in wages and prices. But I would like to emphasize that the system of managed currency can be regarded as rather a sufficient condition for the wage-price spiral, because as Harrod points out, the course of wages may be strongly influenced by monetary factors or aggregate demand. If otherwise, the relation between the rate of change of money wages and unemployment or profit could not have been found in the econometric studies by Phillips or by Steuer and Lipsey. I will return to this point later.

So far, we have discussed the characteristics of economic environment or structures which affect human behavior. In the commodity market I pointed out two kinds of uncertainty the entrepreneur of an oligopolistic firm must face, and the outcome of which was the denial of the simple short-period maximization of profit. In the labor market I emphasized the importance of the theory of bargaining power. There are still problems about the behavior of a trade union. But there I noted the fact that industrial prosperity or demand conditions would have a strong influence upon bargaining power and rising wages. Finally in the financial market I explained the elasticity of money supply which would enable the wage-price spiral to continue. All these structural characteristics affect each other to cause present-day inflation. In the following section I will analyse the mechanism of inflation based on the structural analyses developed above.

### III. *The Mechanism of Inflation*

We are now in a position to take up a question of the greatest practical importance, that of the mechanism of present-day inflation. Typically we have two types of theories about inflation, namely that of demand inflation, and that of cost inflation. According to the theory of demand inflation, prices will react to excess demand in the commodity market. But the pricing policy of an oligopolistic firm implies that this is not the case. Because it is the long-run demand condition which a producer takes into consideration when he intends to revise his price. There will be found an accumulation of backlogs instead of price rises in times of prosperity. Then can we explain the present-day inflation by the simple mechanism of cost inflation? Cost inflationist always assumes that prices react to costs, and that there

<sup>18</sup> *Policy against Inflation*, p. 209.

is cost push on the part of factors of production. For example, prices will rise when a labor union demands a wage increase, and in this case it is a labor union who is responsible for the price rise. But there remains the question as to why a producer agrees to demand for higher wages independently of demand conditions. So in either case theory is not sufficient to explain the present-day inflation, and we try to construct a model which makes up for the defects of both theories. This is the main purpose in this section.

As the first step to construct a model, we will ask when a producer can change his price in an oligopolistic world. In the previous section we defined the essence of oligopoly as the existence of two types of uncertainties, namely that of reaction of rivals and that of future market conditions. It is not difficult to see that a producer can change his price when there are no uncertainties about these. This means the disappearance of the kink in the demand curve from the analytical point of view. First the disappearance of uncertainty of a reaction of rivals will be considered.

The kink will disappear if either or both of the following conditions occur. One of these is the demand condition: "It may be suggested that an increase in demand leading to a fuller use of capacity, more difficulty in getting quick delivery, etc., will make the imagined curve less elastic for upward movements in price. For downward movements in price the result is likely to be a more elastic curve, since it may be assumed that rivals are less worried about losses in business and hence less ready to retaliate against a price cut. In terms of the marginal revenue curve the effect is thus to bring the two sections closer together and to decrease the gap between them."<sup>19</sup> The other condition is the cost condition: "The common business explanation that prices have been raised to cover the higher costs is clearly inadequate. If the costs of only one firm had increased it is unlikely that a price increase would follow. The firm raises prices when it is able to, and it is able to when the costs of other producers have risen sufficiently that they will concur in a price increase. At this point the firm shifts over to an inelastic demand curve based on the assumption that price increases will be followed. The price policy of the firm is mainly determined not by its own costs but by the costs of other producers as reflected in their price policies and thus in the firm's own demand curve."<sup>20</sup> We have to note that above conditions are necessary but not sufficient for a producer to raise his price, because they mean the disappearance of only one kind of uncertainty. So next we have to consider the other kind of uncertainty.

This kind of uncertainty is deeply connected with public reputation of the company. Then we must find the condition that the company would not lose its public reputation even if it raised the price of the commodity. This condition is satisfied when there exist a reserve of unliquidated gains and wage advances. Professor Galbraith states: "In a period of high and rising demand, short-run possibilities for increasing prices are likely to run ahead of the long-run assessment of where prices should be. Therefore, firms in the typical industrial market are likely to have what amounts to a reserve of unliquidated gains from unmade price advances. Unlike the farmer or other competitive producer, who is effectively isolated from any such opportunity, firms in these markets could exact higher prices than they do. They will do so if circumstances so change as to make short-run maximization more nearly consistent with

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<sup>19</sup> Paul M. Sweezy, *ibid.*, p. 407.

<sup>20</sup> Lloyd G. Reynolds, "Relations between Wage Rates, Costs and Prices" *Readings in the Theory of Income Distribution*, p. 298.

the firm's view of its long-run interest."<sup>21</sup> These circumstances would happen when the union demands the wage advances. He continues: "The role of wages in relation to inflation has long been a troublesome matter for economists. Obviously wages have something to do with price increases. Yet it is plain that a firm that advances its prices after a wage increase could have done so before. At the previous lower cost and the higher prices it would have made more money. The wage increase did nothing to enable it to get the higher price. An advance in steel wages adds only infinitesimally to the demand for steel-mill products and only after a time. In any event this is not something which steel firms take into consideration in their typically prompt response to a wage increase. The explanation lies in the existence of the margin of unliquidated gain and in the further fact that the wage advance, of itself, promptly increases the opportunity for short-run maximization in relation to long-run maximization. This is most obviously the case when the firm has been unwilling to advance its prices because of fear that it would attract the attention of the union which would press for wage increase. Now the union's attention has manifestly been attracted, and there need no longer be any reluctance on this score. The danger of an adverse public reaction is also least at such times."<sup>22</sup>

From above considerations about two kinds of uncertainty we can deduce that those uncertainties would disappear if there were excess demand or unliquidated gains and wage advances. In other words inflation would occur only under particular demand and cost conditions. But here a question arises in relation to the determination of wages. In the previous section I noted the fact that industrial prosperity or demand conditions would have a strong influence upon bargaining power and rising wages. Of course industrial prosperity does not necessarily mean that there is excess demand in that industry. If there were rises in productivity: for example, profits would also increase which in turn would mean industrial prosperity in Kaldor's terms. But if we confine ourselves to the analysis of the short-run aspects, bargaining power will be greatly influenced by demand conditions. The above reasoning can be justified by Phillips' econometric study about the relation between unemployment and the change of money wage rates. Then we can conclude that inflation would not occur at least in the short-run if there were no excess demands or unliquidated gains in the economy. But there remains another question to be answered in relation to demand. We assumed that demand and cost were factors independent of each other. However, in the dynamic process costs must equal incomes of factors of production from which consumption outlays will be made. In this sequence of events a rise in costs means an increase in demand. Thus it is difficult to find a causal factor which initiates inflation.

But there is a reason why we can regard demand factors as the causal factor of inflation if monetary factors are taken into consideration. This is because, as I have showed in the last section, a wage-price spiral can not continue indefinitely in the absence of increases in the supply of deposits and currency. A rise in wages will eventually make the interest rise by decreasing idle money for speculative motive, and this in turn induces a decrease in investment outlays. It must be a necessary condition for inflation that there are increases in demand which are accompanied by an increase in the supply of money. In this respect we can also assert that current monetary policy adjusts the equilibrium level of money wages so as to make it conform to the actual level, or in other words that the function of managed

<sup>21</sup> *The Affluent Society*, p. 170.

<sup>22</sup> *Ibid.*, p. 171.

currency is to control the volume of money so that the full employment is achieved, with the current level of wage being given. But from the individual producer's point of view he could not finance higher wages if there were no excess demand or unliquidated gains unless there was an increase in productivity. Then we can conclude that an oligopolistic producer would raise his price if there were excess demands or unliquidated gains which would have a strong influence upon bargaining power and wage advances.

Here we are now in a position to build up a model for explaining present-day inflation. As far as we infer the characteristics of present-day inflation from the analysis given above, it seems that we can not find any substantial difference from typical demand inflation. Regarding unliquidated gains as a kind of excess demand from the past, the dominant factor of inflation is no other than excess demand. But if we examine the above analysis carefully something inherent to the present-day inflation will be found. First it must be pointed out that prices are not sensitive to demand, but to costs. This seems paradoxical, but this is true. If a union does not demand a wage advance, a producer will not raise his price even if there is excess demand. The result will be an accumulation of backlogs instead of price rises, and he will have a reserve of unliquidated gains from unmade price advances. This act is rational because he maximizes profit from the long-run point of view. However, if there is requirement for wage advance, he will avail himself of it and raise his price, because his act will not damage his long-run interest or his public reputation. He can maximize profit from the short-run point of view. In this sense prices are sensitive to costs or prices of factors of production rather than to demand. But secondly the fact must be pointed out that prices of factors of production are sensitive to excess demand. This does not mean that money wages, for example, rise automatically in response to excess demand for labor. The fact is that wages rise because the prosperity of industry determines both the eagerness of labor union to demand higher wages and the willingness and ability of employers to grant them.

Above two characteristics of present-day inflation can be summed up in a simple model. That is, prices of commodities are the function of factor costs,<sup>23</sup> the change of factor prices are the function of excess demand for them in the present or from past, and excess demands are the function of autonomous rises in demand and induced rises by wage advances. This model, however, must be regarded as explaining the behavior of a union, a producer, or a monetary authority and government. Their behavior would not be so simple as these equations suggest. We must pay attention to their behavior in the real world.

#### IV. *Concluding Remarks*

From the analysis in the previous section how can we define the characteristics of present-day inflation? As I have emphasized demand factors play a central role in the course of inflation. The money wage rate would not change in the absence of excess demand, and it is not a union but monetary laxity or over-full aggregate demand that is responsible for inflation. In this sense present-day inflation can be called demand inflation. But if we pay attention to the pricing policy of a producer, the name of cost inflation will be more appropriate. Because if there were not demands for wage advances, a producer could not raise

<sup>23</sup> This is analogous to the formulation of the full-cost principle.

his price without damaging his long-run interest. We can not decide which name is more befitting. I think it will be better to define the characteristics of present-day inflation as disguised demand inflation or disguised cost inflation. But in the case of the former, the unions have an excuse to demand wage advances, and in the case of the latter, a producer can have an excuse to raise his price.

As I pointed out in the introduction of this paper, this characteristics is due to the structural changes of the economy and to the change of the mode of human behavior. In this respect I would like to emphasize that everything depends on our behavior and that there is nothing automatic such as old type of inflation. As Kaldor points out, we can stop inflation and will succeed in attaining both stable prices and a high rate of growth if we behave wisely. "All that is necessary is to recognize that the proper way of dealing with inflation is to damp down, or restrain, the rate of increase in money wages as such, instead of damping down the demand for goods and services. If the increase in wages is slowed down, the growth of monetary demand will be automatically damped down too, and so will the rise in profits. Measures restricting the cost-push inflation coming from the side of the unions, unlike measures restricting the demand for goods, do not necessarily interfere with the real rate of growth of the economy."<sup>24</sup>

For this purpose so-called incomes policies have been advocated and are now adopted in some countries. But even if the direct cause of inflation were the union's requirement of wage advances, a part of the responsibility must be attributed to the tricky way of raising price by an oligopolistic producer who avails himself of a wage advance for the purpose of increasing profit. Therefore adopting only incomes policy will make us lose sight of the another cause of inflation. In this sense it is most favourable that a union and a producer voluntarily refrain from raising wages and prices. However, this will be unrealizable. From the analysis so far it seems most promising to control demand so as not to bring about excess demand and to adopt an incomes policy supplementarily. It is not a high pressure of demand but a moderate one which is necessary for high and stable growth of the economy.

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<sup>24</sup> N. Kaldor, *ibid.*, p. 296.