INFLATION

ITS CAUSES AND CURES

By GOTTFRIED HABERLER

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Inflation
Its Causes and Cures*

INTRODUCTION

IT IS COMMONPLACE to say that inflation poses one of the most serious economic problems of our time. Many people are outraged by the social injustices which it implies. Many are alarmed by the realization that, although temporarily stimulating, it causes instability and thus reduces efficiency and retards the growth of an economy in the long run. Some believe, or pretend to believe, that the deep concern of the Administration, and the Federal Reserve Board in particular, with inflation is exaggerated, either on the ground that further inflation is not in the cards or that the consequences of a mild inflation are not so bad, at least as compared with the practical alternatives. But even these critics will presumably attribute importance to the fact that so many people, inside and outside the government, are deeply concerned. It would not be necessary to write article after article maintaining that no danger exists if there were not widespread apprehension concerning the lack of stability in the value of money—apprehensions which through anticipatory actions are likely to hasten the emergence of the dreaded consequences. It is difficult to believe that this state of apprehension is entirely the result of the unfounded superstitions of a few leading government officials or (as has also been suggested or hinted at) of the machination of reactionary forces which spread fear of inflation to further sinister ends.

The danger of inflation has let loose a veritable torrent of literature, ranging from highly technical memoirs couched in mathe-

* The study was sustantially completed in September 1959. Part of this essay was presented to a Round Table Conference on Inflation of the International Economic Association in Elsinore, Denmark and will be published along with the other papers presented at that meeting by Macmillan, London and the St. Martin's Press in New York.

matical and econometric terms to popular pamphlets. Congressional committees alone have published a whole library of compendia and hearings on the subject which contain, buried in mountains of trash and partisan statements, much useful material and even original papers by leading experts. The flood of outpourings shows no sign of receding.

In view of all this, it is hardly possible to say anything important that is both true and heretofore unsaid. But it may be worth while to give a rounded picture and to emphasize fundamental issues which seem in danger of being obscured by the great mass that has been and is being written. That is the objective of the present study. It does not attempt to cover all fine points, even if they seem to hold greater intellectual challenge than basic facts and principles which have been stated many times before.

MEANING OF INFLATION AND DEFLATION

UNLESS A DIFFERENT meaning is clearly indicated, I shall take inflation to mean a condition of rising prices. This is what people usually mean by inflation. I shall also follow general usage by referring, as a rule, to the level of consumer prices as an indicator and rough measure of inflation.

Economic terms, however, are never quite precise, nor is the use of words entirely uniform and consistent. The word "inflation" is most emphatically no exception. We shall, therefore, have to consider alternative definitions. But I hope to show that only unimportant marginal adjustments in the selected definition need be made.

Instead of a rise in the price level, inflation is often defined as an expansion in the monetary circulation; more precisely, as an increase in the quantity of money times the velocity of circulation of money, MV for short. To define it in terms of an increase in the quantity of money, of M alone, would not be quite correct because it would overlook the possibility that an increase in expenditures and prices might be due to an increase in V alone. It is, however, safe to say that there has never been a case in monetary history anywhere of a prolonged and violent inflation without a sharp rise in the quantity of money. V is subject to slow secular changes (as a rule in a downward direction) and to mild cyclical fluctuations (usually upward during business cycle upswings and downward during business cycle downswings). But large, rapid (though temporary) increases in V occur only during periods of galloping inflation, which could never happen without sharp increases in M.

Precise definitions of M and V present many fine points which we need not discuss in detail. Suffice to say that M is usually defined as currency outside banks plus demand deposits; [1] and V is the so-called "income velocity of money," that is, the average number of

[1] Occasionally, time deposits in commercial banks are included. If that is done, V becomes correspondingly smaller partly because time deposits have a lower rate of turnover than demand deposits. The definitions of M and V are always so adjusted as to make MV equal total expenditure.

times a unit of money is used for income payments within a year. MV is then equal to the money value of national income or total monetary expenditure (out of income). Again, there arise questions of detail: Should we use Gross National Product (GNP) or Net National Income or some other measure of aggregate expenditure? Fortunately, there again is no need to go into fine points. The reason is that, whenever there is a serious inflationary rise in total expenditure, all these various measures, GNP, Net National Income, etc. will go up, although perhaps not in precisely the same proportion.

We remember then that inflation can be defined either as a rise in prices or as an expansion in aggregate income (expenditure) MV.

In all cases of serious inflation, both definitions promptly indicate its existence, although the degree would not be quite the same—the volume of expenditure usually (i.e., in a growing economy) exhibiting a sharper percentage rise than the price level. For example, during and after the war until 1947, and again in 1950-52 and 1956-57, prices went up as well as MV. There are, however, cases where we have to speak of inflation if we take aggregate expenditure as a criterion while there is no inflation in terms of prices. For example, consumer prices (as well as wholesale prices) were practically stable from 1953 to 1955, while GNP and Net National Income rose (with a slight dip in 1954). Similarly, prices have been practically stable since the second quarter of 1958 while GNP, etc. have gone up.

The political issue behind these two divergent definitions of inflation is this: consider a progressive economy in which aggregate output and output per head, in other words aggregate real national income and real national income per head, are increasing. Should it be the aim of monetary policy to stabilize the price level or national money income per head? If prices are stablized, money income and expenditure (MV) will have to go up. If money income per head is stabilized in a progressive economy, the price level will have to fall gradually as output per head rises as a result of technological improvements and the installation of new machinery and equipment made possible by saving and the accumulation of capital. In the first

case, progress takes the form of rising average money wages (money incomes) and stable prices; in the second case, it takes the form of constant average money wages (money incomes) and falling prices —real wages (real income per head) rising in both cases. Unfortunately, progress often takes the form of rising prices and faster rising money wages (incomes). This is, of course, inflation according to both definitions.

In the past, many distinguished economists have argued that for the sake of growth and long-run stability, as well as for reasons of social justice, it is preferable that prices should be allowed to fall when technological improvements lead to a decline in the average cost of production (rise in output per head). This is equivalent to saying that inflation in the sense of a rise in money income (or expenditure) per head should be avoided.[2] Much is to be said for this view on grounds of social justice. For instance, when prices decline receivers of fixed money incomes, such as pensioners, beneficiaries of life insurance, and holders of bonds and savings deposits share in the fruits of economic progress which some of them through their frugality have helped to bring about.

On the other hand, it is not easy to see why the combination of constant money wages and falling prices is more conducive to economic stability than that of stable prices and rising money wages. Clearly, under certain by no means unrealistic assumptions, the opposite is true. For example, if money wages are under strong upward pressure exerted by powerful labor unions, an attempt by the monetary authorities to enforce a regime of falling prices by refusing to expand the circulation of money (by keeping MV per head stable, not by contracting it) would necessarily lead to unemployment—how much depending upon the pressure exerted by the unions.

[2] Some writers have even urged that the best policy would be to stabilize aggregate national income (expenditure), not just income per head of the population or of the working force. However, few would accept that precept today because it would imply that an increase in the labor force would entail a decline in average money wages (though not in real wages because prices would fall faster than money wages).

In fact, we all know that the upward thrust on wages has become so strong that we shall be lucky if we can barely hold the price line and prevent a continuous upcreep of prices. More on this later. In the meantime, we reluctantly conclude that it is inadvisable to set up an unattainable perfectionist superstandard for monetary policy, as would be implied by the policy of keeping MV per head constant. We shall, therefore, continue to define inflation in terms of prices and shall not speak of inflation when in a growing economy MV expands but prices remain approximately stable.

However, in order to avoid confusion, two factors must be kept well in mind, especially by those who advocate the more stringent definition. *First,* when we speak of prices being kept stable by monetary policy and wages being allowed to rise parallel with productivity, we refer to the *average* price level and *average* wage level. Prices of individual commodities (economists speak of "relative prices" as distinguished from the "general price level") must remain flexible in a smoothly working economy and the wage structure ("relative wages") should not be frozen. That is to say, there should be a flexible system of wage differentials as between different skills and localities, and between expanding and contracting industries in order to provide sufficient inducement for the labor force to adjust itself to the changing needs of the economy.[3]

An important corollary is this: Technological progress is never uniform, but affects different industries to an unequal degree. Cost of production is reduced faster in some industries than in others, or expressed differently, output per man-hour rises faster in the more progressive industries. If the average price level is to remain stable, if full employment is to be maintained, and if the best use is to be

[3] Since it is easier to bring about desired wage differentials by wage increases than by wage decreases, the system of stable prices and rising wage levels will work better than the system of stable wage levels and falling prices. But downward adjustment of wages in declining industries should not be ruled out altogether. If they are ruled out, unemployment and premature abandonment or scrapping of still serviceable capital equipment (e.g., in the railroads) entailing waste, slower growth, and lower average real wages are the unavoidable consequences.

made of productive resources, then the industries where costs have fallen more than elsewhere must reduce their prices. (If they produce a better quality product at the same price, this is equivalent to a fall in price but may not find sufficient expression in the indices.) If they fail to reduce their prices, demand for their products will not increase and since output per head has increased, employment will decline. This would also imply the emergence of large profits, and labor unions can be depended on to capture some of these profits in the form of higher wages.

So long as the prices of the cheapened products do not fall, the producers keep the fruits of technological progress in the form of higher wages and higher profits for themselves, instead of passing them on to the community at large, and employment suffers. But since the American economy is rather competitive, the chances are that sooner or later excess profits will be whittled away by competition. Wages, on the other hand, are notoriously sticky in the downward direction. There are then two possibilities. Either wages remain higher in the progressive industries in comparison with wages elsewhere, implying an unjustified and uneconomical discrimination between different groups of workers and a loss of employment; or, and this is the more likely outcome, wages in the less progressive industries will tend to be pushed up to be brought in line with the standard set by the progressive industries. This, of course, necessitates a rise of prices in the less progressive industries which have not experienced the same reduction in cost as the more progressive industries and hence, if they are not to reduce output and employment, must raise their prices when wage costs go up.

The upshot, to repeat, is that if the price level is to remain stable and employment is to be maintained, prices of products of industries where costs have been reduced more than elsewhere must go down while prices of the products of less progressive industries should go up. This results from the fact that in a progressive economy, if the price level is to remain stable, the *general* wage level has to go up roughly in proportion to the *average* rise in productivity. If the wage level behaves that way in the more progressive industries, wages rise less than productivity in those industries, hence prices must fall;

in the less progressive industries wages rise more than productivity in these industries, hence prices must rise.

We shall have occasion to return to these crucial relationships repeatedly in the course of our analysis.

The *second* point to remember is this: The postulate that the price level should be kept approximately stable for the long run does not mean that the price level should never be allowed to decline. The reason is very simple. It will hardly be possible, even apart from war and periods of acute international tension requiring large defense expenditure, to avoid periods of rising prices altogether. Business cycle upswings are almost always characterized by price rises. If then the long-term price trend should be horizontal, i.e., if long-run inflation is to be avoided, the price level must be allowed to fall in depressions to make up for the price rise during boom periods. It is well known that this did not happen during the last two depressions (1953-54 and 1957-58).

In short, the implications of long-run price stability are more exacting and far-reaching than appear at first glance. This must be kept in mind when deciding whether absence of inflation should be defined as stable prices or stable money national income per head.

Before we discuss types of inflation and their causes, a few words should be said about the correlative concept of deflation. If inflation is defined as a condition of rising prices, it would seem natural to define deflation symmetrically as a condition of falling prices. But just as in the case of inflation, we have in the case of deflation an alternative definition which runs in terms of income and expenditure (MV) rather than in terms of prices. In the case of deflation, more than in the case of inflation, the general usage of the word seems to favor the alternative definition. In deference to that we shall understand by deflation a condition of falling MV. One consequence of our definition is that we shall not speak of deflation if in a growing economy prices fall because the volume of output and the flow of goods for sale increases as distinguished from the case where prices fall because of contraction in aggregate expenditure (MV).[4]

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[4] There exists a corresponding situation in the case of inflation which

This definition of deflation does not settle the question whether the policy of letting prices fall when output increases is advisable or not. It will be remembered, however, that reasons were given why we might well be satisfied if we are able to keep the long-run price level stable and that it would be unrealistic to expect a long-run decline of the price level. But it should also be observed that there is a basic difference between a real deflation, that is, a decline in MV brought about by a contraction of credit (fall in M), or a wave of hoarding (fall in V) on the one hand, and a decline in prices resulting from an increase in output on the other hand.

Deflation is often defined (or implicitly interpreted) in still another sense, namely, as equivalent to "depression," or "recession" (the latter being merely a euphemism for a mild depression) that is, a low or falling level of output and employment. While everybody is, of course, free to define the terms he uses as he likes (provided he is clear about the implications and does not change the meaning in the middle of an argument), it would seem to be better to keep the two terms, deflation and depression (recession), apart. Deflation will usually bring about depression, but there may be exceptions to that rule: if wages and prices were perfectly flexible, deflation would result only in lower prices without ill effect (at least in the somewhat longer run) on output and employment.

At any rate, if deflation were defined as depression (not only as a possible cause of depression), deflation and inflation could exist at the same time, as was shown by the mild depression of 1957-58, when prices went on rising for months after output and employment

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should perhaps be mentioned, although it is less frequent and of lesser importance. When an economy contracts, i.e., when the volume of output falls, prices will rise if MV remains constant. Examples are crop failures or loss of output due to war destruction. One may well choose not to classify as inflation a price rise which reflects a decline in output rather than a rise in MV. Another, perhaps more important (for small countries), case is a rise in prices due to a rise in import prices implying a deterioration of the country's international "terms of trade."

had started to go down. It would seem rather confusing to say that an economy can simultaneously suffer from high and low blood pressure. We shall, therefore, distinguish between deflation and depression, as well as between prosperity and inflation. At the same time, we remain alert to the possibility that inflation may be combined with depression (or recession). While the coexistence of rising prices and falling output and employment is somewhat unusual, it is not at all unlikely that inflation will either eventually bring about deflation and depression or make it difficult to counteract a depression that has arisen independently. This is, in fact, one of the main economic dangers (apart from the social injustices which it engenders) of even a mild inflation. More on that in the section entitled "Causes of Inflation."

TYPES OF INFLATION

BEFORE CONSIDERING carefully the proximate and more remote causes of inflation, it will be well to clear the ground by distinguishing several general types.

There is first the obvious distinction between mild and severe inflations, depending both upon the magnitude of the annual price rise and the length of time it continues. A price rise of 1 or 1½ percent a year, even if continued for several years, need not be taken very seriously because of the inherent inaccuracy of price index numbers. For example, quality improvements of numerous commodities which evade consideration in measurement of the price level, may easily outweigh a rise in the index of 1 or 1½ percent. But let us not forget that at other times, in war periods for example, when qualities deteriorate, the shoe is on the other foot and the price index understates the real rise in the price level.[1]

An average price rise of 2 or 3 percent a year, if continued several years, cannot be called negligible. It is not serious if it lasts only a few years and follows, or is followed by, a price decline of the same order of magnitude, or at least by a prolonged period of stable prices. But, if there are no reversals of the price rise and only short spans of stable prices, even an annual price rise of 2 or 3 percent is bound to become a serious problem.

This is overlooked by those who argue that inflation in recent years has not been severe by historical standards. It is true that the price rise during the last business cycle upswing, between December 1954 and August 1957, (8 percent for wholesale prices and 6 percent for consumer prices) was not excessive compared with what happened during pre-1914 business cycle upswings. According to

[1] Also in peacetime when governments make use of direct price controls (price ceilings) or in inflation periods when the use of direct controls is under consideration, there are bound to be evasive actions in the form of lowering qualities (or even of quantities in packaged merchandise) to conceal price rises. Price index makers are not always able fully to allow for these changes.

Arthur Burns,[2] the average rise of wholesale prices during the ascending phase of 18 business cycle upswings between 1850 and 1950 (not counting war years and immediate postwar periods) was 17 percent.

But the special feature which made the recent price rise a serious matter is that there have been practically no reversals in the upward price trend and only short periods of stable prices. In other words, the judgment as to whether there is chronic inflation must not be solely based on the local properties of the price curve during a single phase of the cycle, but on the perspective of a longer period. Human beings are, after all, endowed with memory. The crucial fact is that the price curve since the beginning of World War II presents the shape of a flight of stairs, whilst during comparable periods in the past it had the shape of a wave.

A price rise of the order of magnitude of 2 or 3 percent a year is often called creeping inflation. If it lasts long, we call it chronic. And chronic creeping inflation can be either continuous or intermittent.

It would be misleading, however, to say that this country has lived under chronic or secular inflation for the last 100 years because the price peak of the second war was higher than that of the first, and the latter higher than that of the Civil War. We have had chronic inflation since the beginning of the Second World War because there has been no period of a substantial fall in prices since then. But, if the secular price curve is towered by two or three peaks produced by wars and separated by deep valleys with long flat bottoms, one should not speak of chronic inflation even if each succeeding valley is somewhat higher than the preceding one. Moreover, war inflation is likely to be regarded as an act of God and forgotten after a while, while a much more moderate price rise in peacetime will soon create doubts about the future of the value of money.

There is, I believe, general agreement that a price rise of 5 or 6 percent a year in peacetime would, after a few years, become quite

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[2] See his remarkable lectures, *Prosperity Without Inflation,* New York, Fordham University Press, 1958, p. 13.

intolerable for an industrially highly developed country such as the United States. It is true that much faster inflations, of 20 percent a year and more, can be observed for prolonged periods in many underdeveloped countries, especially in Latin America. But few would deny that such a condition is very bad for those countries and would be utterly disastrous for highly developed countries.

From a creeping inflation we distinguish trotting and galloping inflation. By that we mean, as the term suggests, an inflation that tends to accelerate because people expect a further rise in prices and lose confidence in the soundness of the currency. When that happens, more and more people will try to protect themselves by putting escalators (price index clauses) into wage, salary, and other contracts. The money rates of interest, as distinguished from the "real rate of interest," (i.e., the money rates corrected for actual or anticipated price changes) will go up because creditors demand protection from the expected loss of purchasing power of money, and debtors think they can afford to pay higher rates in view of the expected rise in prices. While such anticipatory measures can remove some of the inequities—only a small part, in view of the great mass of outstanding contracts—it stands to reason that they tend to speed up the inflationary spiral.

In later stages of galloping inflation, the stage of "hyperinflation," the velocity of circulation of money goes up because people reduce cash balances to a minimum and eventually shorten contract periods. Thus, at the height of the German inflation after World War I in 1923, wages and salaries were paid out twice a day (instead of weekly or monthly) to protect them against complete depreciation by the rapidly rising price level.[3]

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[3] Because of the tremendous speed-up in the turnover of money, money incomes and prices rose much faster than the quantity of money. Hence, the gold value of the monetary circulation fell sharply. It is amusing that this fact induced some German economists to deny that the increase in the quantity of money was the basic cause of the inflation! The German case has been fully analyzed by Frank D. Graham, *Exchange, Price and Production in Hyperinflation: Germany, 1920-23,* Princeton,

The economics of hyperinflation, a chapter in economic pathology, is fairly well known and not very controversial. Hyperinflation is not likely to develop in the United States and I shall, therefore, not discuss it. But a trotting inflation is surely not an impossibility. It is difficult to say at what speed or after how many years a creeping inflation is likely to turn into a trot or a gallop. Much depends on past history. Countries that have gone through periods of rapid inflation, the memory of which is still vivid, such as most continental European countries, react quicker than the United States or the United Kingdom which have been spared the ordeal of hyperinflation and complete depreciation of the currency.

Another very important distinction is that between "open" and "repressed" inflation.[4] The inflations after World War I were largely of the open or uncontrolled kind. Attempts then made to suppress the symptoms of inflation by price control, rationing, and exchange control were amateurish and ineffectual. The situation has, however, changed profoundly since World War I. The trend towards regimentation and control of the economy by governments, greatly stimulated and accelerated by the two world wars and the intervening Great Depression, has led to the development of more effective and, on the administrative level, more efficient direct controls than existed 20 or 30 years ago. It is true that the actual apparatus of price control, rationing, and allocation built up during the war has been dismantled to a large extent in all Western countries. But there can

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New Jersey, Princeton University Press, 1930; and by Constantino Bresciani-Turroni, *The Economics of Inflation,* London, 1931.

[4] As Professor W. Roepke has pointed out, it is better to speak of "repression" than of "suppression" because what is suppressed are only some symptoms, not inflation itself. What is controlled is the price "index" rather than the price level itself, if allowance is made for black market prices and official or unofficial rationing. But it is true that controlling the price index, if it makes it possible to restrain the rise in wages, may slow down inflation itself—at the price, of course, of all the waste, inefficiency, and misallocation of resources inherent in the system of direct controls.

be no doubt that it would be immediately reintroduced in case of war, and there is great danger that prolonged inflation would lead to the gradual imposition of direct controls even in peacetime. It is probably no exaggeration to say that the time of prolonged open inflation has passed, at least in the developed industrial countries. Even in the less developed countries of Asia and Latin America where rapid inflation is rampant, large areas such as the foreign exchange market and public utilities are being subjected to direct control in a futile and disastrous attempt to suppress some of the more glaring symptoms and consequences of the disease.

Inflation and its consequences have thus become one of the most powerful wedges for the introduction of all sorts of measures which interfere with the smooth working of the price mechanism and undermine the free enterprise system.

Still other distinctions, especially the distinction between demand pull and wage (cost) push, turn on the proximate or more remote causes of inflation and are discussed in the next section on causes.

CAUSES OF INFLATION

MANY DIFFERENT factors and policies have been held responsible for inflation. Some say aggregate demand rising faster than aggregate supply "pulls up" prices and wages ("demand-pull inflation"). The rise in demand in turn may be due to a government deficit ("government inflation") or to an expansion of bank credit for private investment ("credit expansion") or rising demand from abroad ("imported inflation") or an increase in gold production ("gold inflation"). Others say prices are being "pushed up" by wage increases forced upon the economy by labor unions under threat of strike ("wage-push inflation"), or costs may be raised by business monopolies ("administered price inflation"). To these positive factors can be added negative ones—for example, the failure of overall output to grow or of savings to stay on their "normal" level—factors for which, in turn, different causes may be found.

It is not difficult to think of conditions under which one or the other of these hypotheses would be valid and for several of these possibilities actual examples can be found in recent economic history.

But let me try to give a somewhat more orderly and systematic analysis of the primary cause. Let us start from the basic fact that there is no record in the economic history of the whole world, anywhere or at any time, of a serious and prolonged inflation which has not been accompanied and made possible, if not directly caused, by a large increase in the quantity of money. This generalization holds for developed as well as underdeveloped countries, for capitalist, precapitalist, and even centrally-planned economies. It is true that the velocity of circulation of money changes. It has a cyclical pattern usually going up during prosperity phases of the cycle and falling during depressions. During the Great Depression of the 1930's the velocity of circulation of money (the ratio of money income to the money stock) fell, and during the war it reached an abnormally low level. Since the end of the war it has gradually returned to a normal level. It also seems, at least in the United States, to have a slight downward secular trend; the economy has become more "liquid." The ratio of the money stock to national income has been larger

during the last 20 or 30 years than it was early in the century and much larger than in the 1870's or 1880's.

But except in periods of hyperinflation (which could not develop without a sharp and sustained rise in the quantity of money) a rise in velocity by itself has never caused, or substantially intensified, serious inflationary trouble. When judging this statement, it should be remembered that I define inflation as a rise in prices and not as an increase in MV. During depressions V falls and the economy becomes more liquid. Recovery from a depression can, therefore, be financed to some extent by a more intensive utilization of the existing money stocks. The Great Depression and the ensuing war have produced an unusual accumulation of idle funds; hence the postwar expansion could be financed to an unusual extent by a more active use of the existing stock of money. But these facts do not invalidate the statement in question because in such circumstances the increase in velocity is matched by an increase in output. I do not claim that there must be an exact parallelism between the rise in output and the increase in V, so that any rise in prices must be attributed to an increase in M. The increase in V may exceed, or fall short of, the rise in output. What I say is that a prolonged serious inflation (price rise) has never been caused by an increase in velocity.[1]

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[1] On some occasions, a mild price rise can be financed entirely by an increase in V. For example, in the United States the active money supply (demand deposits adjusted plus currency outside the banks) was at the end of 1957 exactly the same ($138.2 billion) as at the end of 1955, but consumer prices had risen 6 percent. But this incident does not constitute an exception to the statement in the text because I would not regard the price rise during that particular period as a case of serious and persistent inflation. It is not contradiction to take a serious view of that price rise, if it is taken not in isolation but in conjunction with the fact that it is a sub-period of a longer span of time during which prices have risen seriously. If we take any longer period—say, 1953 or 1954 (or any earlier year) to 1957—we find a sharp increase in currency plus demand deposits. Moreover, even for the period of 1955 to 1957 we find a significant increase in M if we include, as we probably should, time deposits in the quantity of money.

It follows that in every inflation the quantity of money is a causal factor, either active or permissive, and none of the factors and policies mentioned above can produce serious inflation unless they cause or induce or are accompanied by an increase in that quantity. Sometimes the connection between any one of these factors and the quantity of money is direct and noncontroversial. In other cases it is indirect and subtle. The mechanism of inflation is clear when, in the advanced industrial countries in times of war or in many underdeveloped countries even in times of peace, the government has a large deficit which is financed directly or indirectly by the central bank. If in peacetime the central bank is obliged to hold the interest rate down by pegging government securities at low yields (as the Federal Reserve System was forced to do before it regained independence through "the accord" with the Treasury in 1951)—it becomes an engine of inflation. If in a world-wide inflation any single country does not wish to appreciate its currency in terms of international money—it must undergo inflation.[2]

In all these cases the diagnosis is clear and simple. But the problem of chronic, intermittent, creeping inflation which confronts the United States and most Western European countries at present is not quite so clear-cut—precisely because the pace of inflation is slow and intermittent rather than rapid and continuous.

Let us return to the distinction made between demand-pull and cost-push inflation. Economists both here and elsewhere have been divided into two groups, those who stress demand pull and those who emphasize cost push, with several nuances in each group and quite a few occupying an intermediate position.

There are obviously a number of powerful factors that have operated to keep aggregate demand rising during the postwar period, even after the pent-up demand and piled-up liquidity inherited from the war and the prewar depression—the Great Depression—

[2] It should be observed, however, that even a single small country, if it lets its currency go up in terms of foreign currencies, cannot be forced to share in an international inflationary orgy. Nor is there any necessity or even probability that it will hurt itself by staying out.

had been worked off more or less. These factors include: a huge government budget—a multiple of what it was before the Great Depression, not only in absolute terms, but also as percent of GNP—a large part of it for unproductive purposes; a large welfare establishment; a high though fluctuating level of private investment; and above all a profound change in overall economic policy: a firm resolve to maintain full employment and not to tolerate any depression going beyond a mild, temporary drop in output and employment.

This sounds very persuasive and seems quite sufficient to explain postwar inflation, although it must be insisted that it is not enough to point to "pent-up demand," i.e., the urge of governments (national, state, and local) as well as of private producers and consumers to invest in order to make good war and depression-produced deficiencies of the capital stock (including houses and consumer durables) and the wish or necessity to spend for welfare purposes or defense. These forces could not produce inflation but only high interest rates and tight money, unless the quantity of money was continuously increased. Even the piled-up liquidity inherited from war and depression, insofar as it consisted (as it largely did) of Government securities, could be turned into effective demand for goods and services only because the Federal Reserve Banks stood ready to buy those securities at fixed prices, that is, to "monetize the debt" as the phrase goes. Only excess balances consisting of money (currency and bank deposits) can be spent directly without a helping hand from the central bank. But surely this source could not have sustained inflation for long. Moreover, the activation of idle currency and deposits could have been counteracted by central bank policy. (I do not now discuss what should have been done but only state what was done and what could have been done.)

To summarize, given the active cooperation or passive collusion or failure to take counteracting measures on the part of the monetary authorities, *prima facie* the demand theory of inflation sketched above seems to be perfectly capable of explaining the inflation that has happened since the war.

That wages rise in the process of demand inflation is natural and would in fact be inevitable, even if there were no unions and if perfect competition ruled in the labor market. Moreover, unions or none, wages would rise in excess of average productivity, that is to say, faster than average output per head (or per man-hour). That money wages rise faster than average output per head (productivity) is sometimes cited as proof that there is cost-push and not demand-pull inflation. This is not so. Even in a pure demand-pull inflation (unless wages are artificially frozen and labor rationed)[3] wages must rise faster than real average productivity (output in physical terms divided by the number of men- or man-hours). Furthermore, in a progressive economy in which (marginal) productivity of labor gradually increases and consequently real wages go up, money wages must rise faster than prices.

What then, is the nature of cost-push inflation? Can it be distinguished from demand-pull inflation and, if so, what are the criteria that permit us to distinguish one from the other?

One point should be clear. If there were free competition in the labor market, wages would be determined by demand and supply and there could be no such thing as a "wage push." Only if there are monopolistic organizations, i.e., labor unions,[4] can we speak of a wage push.

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[3] It has, in fact, been argued (not by union spokesmen but by liberal economists—using the word liberal in the original sense of *laissez-faire* liberal—such as Milton Friedman and Lionel Robbins) that the existence of unions, due to the delay in wage negotiations which they entail, sometimes leads to the maintenance of wage levels below the level that would prevail under perfect competition. Under war conditions with direct controls over wages and prices, this may be true. Also, in an uncontrolled peacetime economy at the beginning of an unexpected inflation the existence of union wage contracts may temporarily delay wage adjustments. But in a prolonged inflationary period these delays will rapidly disappear through shortening of contract periods or the introduction of escalator or escape clauses.

[4] I shall use the word "labor monopoly" without any ethical overtones. But there can, of course, be no question that modern labor unions are

The argument of the wage-push theorist as, for example, developed by S. H. Slichter with unsurpassed force and clarity, can be stated as follows: In many countries labor unions have become so powerful that they are able to get periodic wage increases (including fringe benefits) greatly in excess of the overall average increase in output per man-hour. Even if in some industries the wage increase is not greater than the increase in productivity of that particular industry and could possibly be granted without raising the price of the products of that industry,[5] these wage increases, to the extent

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monopolies in the sense that they seek, and usually succeed in, the suppression of competition among the sellers of labor and claim exclusive representations of all workers whether all members of the group like it or not. On the other hand, the application of the word "monopoly" to unions should not lead to the conclusion that they behave exactly as industrial monopolies are supposed to behave in economic textbooks. They do not simply maximize the collective income of their members. Their strategy and aspirations are more complicated than that.

[5] Here an important qualification must be made to which I shall return later. It is obviously not true that any increase in output per man-hour in any one industry, regardless of how brought about, can be passed on to labor in the form of higher wages without necessitating a rise in the price of the product. Suppose output per man in a particular industry increases sharply, because the industry in question has installed a lot of costly machinery (mechanization or automation), which will be done whenever a sufficient number of workers can be dispensed with ("replacement of labor by capital"); if in that case wages rose in proportion to the rise in output per man, the price of the product would have to go up, because otherwise not enough would be left to cover capital cost. There are other cases where the situation is different. Machines sometimes become more efficient without becoming costlier, or improvements in the process of production can be made that require no additional machinery ("capital saving innovations").

What holds for an individual industry, strictly speaking holds also for the economy as a whole. That is to say, we cannot accept as a dogma that if the average wage level rises in proportion to the average rise in output per worker the price level can remain stable—for precisely the

that they exceed the overall increase in productivity for industry as a whole, must lead to inflation, if the level of employment is to be maintained.

The reason for that is simple enough. If in the progressive industries output per man rises by, say, 10 percent and wages also go up by 10 percent, the cost and price of the product, as well as the volume of sales, will remain unchanged. Since the same output can now be produced with less labor, some of the workers will be thrown out of work. And in order to reabsorb the unemployed (in this particular industry and elsewhere) demand in general and prices will have to be inflated (or else wages be cut in the non-progressive sectors). What will probably happen, as was pointed out above, is that the wage increase in the progressive industries will be, to a large extent, generalized over the less progressive sectors which cannot absorb it without a rise in the price of their products. But it should be stressed once more that even if the spread of wage increases from progressive industries to the less progressive sectors did not happen, a failure of the sales prices of

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same reason, namely, that the increase in labor productivity may be attributable to the application of a greater amount of capital per unit of labor rather than to greater efficiency of labor itself (improved skills, better education) or other improvements not requiring larger capital outlays.

But there is this difference. For the economy as a whole there is a better chance than for any individual industry that capital-saving improvements of all sorts offset, on the average, those increases in output per unit of labor which are due to an increase in the capital-labor ratio. That such an offset has actually taken place to a considerable extent is suggested by the fact that the percentage share of wage and salary incomes in national income has remained fairly stable over considerable periods. This historical accident (it is by no means a theoretical necessity as some people think) makes it possible to lay it down as an approximation, as a rule of thumb rather than as a precise law, that the price level can remain stable when the wage level rises roughly in proportion to the overall increase in output per man.

the progressive industries to fall (either because wages have gone up in proportion to the increase in productivity or because profit margins have permanently risen) must entail unemployment or inflation.

To sum up, when the wage level rises faster (say, by 5 percent or more per year) than overall productivity (which, on the average of good and bad years, rises probably not more than by 1½ or 2 percent a year), prices must go up *if the level of employment is to be maintained.* If by monetary policy (the same holds for fiscal policy) the price level is kept stable, if, that is to say, the monetary authorities prevent the increase in aggregate demand (MV) that would be necessary to sustain the higher price level (either by refusing to let M go up or by reducing M so as to counteract a possible rise in V) then the inescapable consequence will be unemployment. At some level the pressure of unemployment would presumably become strong enough to prevent a further rise in the wage level.

We thus find ourselves, according to the cost-push theory, facing the dilemma: either let prices rise or permit a certain amount of unemployment. Slichter openly, others somewhat less candidly, argues that the former alternative is the lesser evil and that a "little" inflation is really not so bad. That question I shall take up later. At this point, we are concerned with the question whether and under what circumstances the indicated wage-push mechanism really operates.

It is undoubtedly a true and important statement that when overall output per worker rises by, say, 1½ to 2 percent a year and money wages go up by 5 percent or more per year, the price level must rise if unemployment is to be avoided.[6] But the mere fact

[6] A squeeze of other incomes—not so much of profits but rather of the income of bond holders, owners of savings deposits, pensioners, school teachers—is, of course, possible. But in view of the large share of national income going to wages and salaries, it cannot amount to very much and it cannot go on for very long; for even the so-called "fixed incomes" will after some delay be adjusted to the rising price level. In a long-lasting inflation adjustments of "fixed incomes" become more and more a matter of routine.

that during a given period of inflation wages have outrun productivity or that wages have outrun prices, is in general not sufficient proof that wage push rather than demand pull has caused the inflation. Only under certain circumstances is the conclusion unquestionably valid—for example, if wages outrun productivity, or in fact if they rise at all, during a period of depression and unemployment when aggregate demand stagnates or contracts. Thus when wages and prices rose during the recession of 1957-58, we had a clear case of wage-push inflation. Moreover, during a period which cannot be regarded as a depression period, because overall output and employment are rising—if wages rise in any particular industry where there still is much unemployment, we would have to speak of wage push; surely under these circumstances a wage rise could not happen in a competitive labor market. Thus the labor contracts in the automobile industry in 1958 and in steel in 1960 would seem to be cases of wage push.

In periods when wages, prices, and aggregate demand all go up more or less parallel—short lags and discrepancies are difficult to ascertain and hard to interpret—it is not easy to diagnose which is the active and which the passive factor. The crucial question to which we should like to have an answer is this: Suppose aggregate demand stops rising or is brought under control by monetary or fiscal measures so as to keep the price level stable; will that bring the wage rise to a halt? If so, we have a case of demand pull. If, on the other hand, wages go on rising and if it requires a sizeable amount of unemployment to bring the wage rise to a halt, we are confronted with a case of wage push.

The best way to find out is to try. Bring demand under control by monetary (or fiscal) measures and see what happens. But even if the experiment is actually made, if the expansion of demand is brought to a halt or stops by itself, the results will usually not speak for themselves but require judgment and interpretation. The transition from inflation to a stable price level, even if all goes well, may require a certain amount of temporary unemployment or even a moderate amount of more or less permanent unemployment. The reason is that inflationary periods are often characterized by "over-

full employment," i.e., a level of unemployment lower than the normal frictional unemployment which is needed for a smooth functioning of the economic system. Hence the appearance of a little unemployment after inflation has been stopped cannot always be taken as a sure sign of the existence of wage push. Moreover, in periods of inflation, labor unions get accustomed to large annual wage increases and they should be given some time to adjust themselves to non-inflationary conditions.

How much unemployment and for how long would be required to make the diagnosis of wage push certain, is difficult to say in general. It depends on one's estimate of the "normal" amount of frictional unemployment in the economy. The amount of frictional unemployment is, of course, always open to some doubt and dispute and it should not be assumed that it is the same percentage for different countries or that it does not change over time in any one country.[7]

There are, of course, clues and indications which suggest a tentative answer to the crucial question without actually putting the theory to a test. For example, the fact that the test has once been made, when in 1957 demand ceased to grow and wages and prices continued to rise, is very strong indication that the wage push had existed for some time. Another indication is supplied by studying the attitude and policies of labor unions. That a scholar of the late Professor Slichter's rank, whose knowledge of the institutions and policies of labor unions and whose insight into the psychology, aspirations, and strategy of labor leaders were unrivalled among economists, said flatly that the unions are responsible for creeping inflation, must carry great weight, even if some of the arguments

[7] In some countries or in some periods the mobility of labor is low, e.g., because of a scarcity of housing under rent control. Sometimes the structure of demand corresponds fairly closely to the existing structure of production and distribution of the labor force. At other times, the correspondence between the two structures is not so close. In the first case there is less frictional unemployment than in the second case.

which he adduced and some conclusions which he drew from his diagnosis were not convincing.[8]

Another clue might be the behavior of profits. A demand inflation, one should think, would result in large profit margins, at least for some time until wages and salaries begin to catch up. A wage-push inflation, on the other hand, would encroach on profits or at least be characterized by unchanged profits. But the difficulty with this test is that profits fluctuate very widely over the cycle. In fact, the amplitude of the swings of corporate profits over the cycle is much greater than that of wage and dividend payments made by corporations, which makes corporate profits a powerful built-in stabilizer of the American economy. This cyclical volatility of profits makes the interpretation of short-run changes very difficult.

Disregarding cyclical fluctuations, one can probably say that in the United States profit margins have shown a tendency to decline since the Korean War boom. That boom was clearly a case of

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[8] For example, the following statement I find unacceptable: "The principal reason the price level has increased and that inflation must be expected to continue more or less indefinitely is the strong tendency for labor costs to rise faster than output per man-hour. *During the past ten years, for example, hourly compensation of employees in private industry outside agriculture has risen more than twice as fast as output per man-hour.*" ("Argument for Creeping Inflation," *New York Times,* March 8, 1959. Italics supplied.) For the reason given earlier, the mere fact that wages have risen faster than output per head does not, in my opinion, prove that wage push was throughout the ten years the initiating factor. His categoric assertion that nothing can be done to stop the wage push except to create an intolerable amount of unemployment, I find much too pessimistic and entirely unwarranted. On the other hand, his theory that chronic creeping inflation of 2 to 3 percent a year is not so bad and can be continued indefinitely without ill effect is overly optimistic, to put it mildly. These matters will be discussed in the following sections.

demand-pull inflation.[9] But since then wage push seems to have been on the ascendency.[10]

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[9] See the following section for some evidence. It has been argued that the price rise during the Korean War was not a case of classical demand inflation, on the ground that prices were "pushed up" by speculation in anticipation of expected shortages and price freezes.

But it surely is misleading to say prices are "pushed up" by speculation. "Demand pull" does not exclude speculative demand and speculation is perfectly compatible with perfect competition. It should be clear on the other hand, that no large and long-lasting inflation could arise, with all the speculation in the world, without an increase in the quantity of money. An increase in the velocity of circulation can finance some price rise but hardly a large and lasting one.

[10] This is also the conclusion which Professor Robbins reaches for the development of inflation in Great Britain. (See his masterly "Thoughts on the Crisis" in *Lloyds Bank Review,* April 1958, esp. pp. 5 and 6.) He thinks that the first part of the postwar inflation until about 1954 can be explained by demand pull. Since then, wage push has become more important. Lord Robbins believes, however, that the excessive wage demands by the labor unions are a hangover from the period of demand inflation and will gradually subside.

In the British discussions, two criteria have been much used (e.g., by Robbins and in the "Cohen Report") for the purpose of deciding whether cost push or demand pull are responsible for a given price rise. If the number of vacancies is comparatively large or rising compared with the number of unemployed, demand pull is indicated. Cost push would tend to bring about the opposite movement. The other criterion is the relation of weekly earnings to standard national wage rates. Demand pull operates on the former and cost push on the latter.

These criteria have not been used in the American discussion because of the different institutional setup. But even under British conditions the two tests seem to me not quite conclusive. They prove perhaps the existence of demand pull, but hardly the absence of wage push. Wage-push inflation presupposes, of course, expanding demand; otherwise wage push would quickly lead to depression.

The developments in Great Britain since the middle of 1957, when energetic monetary measures were taken to bring aggregate demand under control, provide a better test of Robbins' thesis. Until now they

There can be hardly a doubt that wage push, in conjunction with demand pull and full employment policies, has been a powerful factor in the postwar inflation. The wage push is overt during periods of slack, but masked and difficult to evaluate and separate from other factors during periods of prosperity.

Even those who are inclined to discount the wage-boosting power of labor unions will admit that unions make wages rigid in the downward direction. It can be shown that mere wage rigidity combined with full employment policies go a long way to explain chronic though intermittent inflation, that is to say, why the price curve in the postwar period shows the general shape of a rising flight of stairs. During business cycle upswings, wages and prices are pulled up. During the downswing, unions block any reduction of wage rates [11] and anti-depression policies (whether in the form of automatic stabilizers or of *ad hoc* measures of reflation) quickly relieve the contraction. Thus by a sort of "ratchet effect" the price level is pushed up intermittently.

"Cost-push" or "seller's inflation" is often said to stem not only from wage push exerted by labor unions, but also from cost and price increases brought about by business monopolies and oligopolies. This theory usually takes the form of a theory of "mark-up or administered price inflation." A desire to be "impartial" as between different social groups undoubtedly contributes to the widespread habit of blaming business monopolies along with labor unions for inflation.

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seem to give some support to his interpretation, since the rise of prices and wages has been slowed down without causing much unemployment. But it may be too early to form a definite opinion.

[11] It is true that even if wage *rates* remain unchanged, wage *costs* are somewhat reduced. Overtime is eliminated, inefficient workers are laid off (as far as seniority rules permit), discipline is tightened and wastes eliminated, and inefficient equipment retired or scrapped. All this results in a reduction of hourly earning and an even greater reduction in wage costs per unit of output and fall of "efficiency wages." As far as it goes this is a salutary by-product of mild depression, but it is surely not enough to bring prices down appreciably.

However, it seems to me that there are basic differences between the operation of "industrial monopolies and oligopolies" on the one hand and of "labor monopolies" on the other hand—differences which make the impact of the two on the price level fundamentally different. But let it be said emphatically that the following analysis of these differences does not imply any ethical or moral discrimination whatsoever between management (business) and labor.

The first difference is connected with the fact that unions make wages rigid downward. We have seen that this rigidity through the "ratchet effect" jacks up the price level in prosperous years and prevents it from falling during recessions. No doubt some prices, too, are rigid downward (especially those subject to public regulations). But wage rigidity is certainly more widespread and enduring than price rigidity.

Secondly, it will hardly be denied that in the United States and many other democratic countries business monopolies are in a much weaker position than labor monopolies. They lack the physical coercive power, rigid discipline, and intense loyalties of their members, which many unions have developed. Moreover, in many countries, especially in the United States, industrial monopolies are subject to special controls from which labor unions are *de jure* or *de facto* exempt.

In addition to these two differences between the operation of labor unions and industrial monopolies, there is another one which can perhaps be best brought out by a mental experiment. Compare two hypothetical situations, one characterized by the existence of many "business monopolies" but with the prevalence of competition (absence of monopolies) in the labor market, the other by the existence of "labor monopolies" but with the prevalence of competition (absence of monopolies or oligopolies) in the commodity market.

Suppose first that there exist no industrial monopolies or oligopolies or that such monopolies or oligopolies are regulated as public utilities actually are,[12] but that labor is organized in powerful unions.

[12] Ideally in such a way that their pricing system conforms as far as possible to the competitive norm.

It will be agreed, I believe, that this would not essentially change the facts of cost inflation through wage push. It is true that some unions would have to change their strategy. It would no longer be possible for a union to pick out a particular firm and force it by strike to pay higher wages which are later generalized over the rest of the industry. This would not work because a single firm in a competitive industry cannot afford, even for a short period, to pay much higher wages and charge higher prices for its products than the rest. But as unions in competitive industries in this country (e.g., in the textile or coal industries) and abroad have amply demonstrated, competition in the product market is not an insuperable obstacle to the formation of very powerful unions whose bargaining power and ability to strike the whole industry is just as great as that in oligopolistic industries.[13]

Now make the opposite assumption that there is competition and no union monopolies in the labor market, but that there are numerous business monopolies and oligopolies. A brief reflection will show, I believe, that in this case there is no reason to assume that there will be a continuing pressure on the price and cost level resulting from monopoly prices being pushed up higher and higher, confronting the economy with the disagreeable dilemma of either letting prices rise continuously (inflation) or blocking the expansion of demand and stopping the rise of prices by monetary and fiscal measures which would imperil growth and impair the level of employment.[14]

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[13] The fact that in small countries unions have not much bargaining power in industries which have to sell in highly competitive world markets where no tariff protection is possible confirms what is said in the text. Striking against such an export industry is like striking against a single firm in a highly competitive industry. That is the main, though perhaps not the only, reason why labor unions are so "reasonable" in small countries such as Switzerland or the Netherlands, a fact which has often puzzled foreign observers.

[14] A third possibility would, of course, be the prevention of monopolistic pricing. This has its counterpart in the previous case where wage push could be eliminated by preventing monopolistic practices on the

It is true, of course, that business monopolies (to the extent that they in fact exist and are not effectively regulated) keep prices at a higher level than would prevail under competition; but there is no reason to assume that such monopoly prices would be pushed higher and higher. To put it differently, the introduction of *numerous* monopolies where there existed competition before, would lead to higher prices and could be called inflationary. But the existence of monopolies or oligopolies does not lead to continuing pressure on prices. I find it difficult to believe that anybody would seriously want to argue that, unless the government steps in and stops the process, there is a tendency for mark-ups to be continuously increased or of "administered prices" to be continuously raised.

A minor qualification ought to be added. It is possible that after a change the monopoly price which in the opinion of the monopolist under the given circumstances, maximizes his profits—the "optimum" from the monopolist's standpoint—will not be reached all at once, in other words that for a limited period of time individual monopoly prices tend to rise until the "optimum" has been reached. Also, there may be an interaction of labor and business monopolies operating so that the occasion of wage increases forced by unions is used by management as an excuse or occasion for bringing the price of the product closer to the monopolists' "optimum." The reason for this behavior might be that monopoly power was not fully utilized by the firms because they were afraid to arouse public opinion and to provoke government action. Wage increases then give management the opportunity to put the blame for the price rise on labor. However, these fine points of price strategy, of which some writers on inflation have made much, should not be allowed to obscure the essential difference between the import of business and labor monopolies for inflation.[15]

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part of the unions. My argument is, however, that *unregulated* business monopolies have different implications for inflation than *unregulated* monopoly power of labor unions, i.e., that they do not lead to a continuing cost push as unions do.

[15] For further discussions of the "administered price" problem see the following section.

It is perfectly natural, on the other hand, that strong unions should try to force large wage increases every year or every other year and to endeavor to push continuously beyond the level set by the general increase in output per man-hour, especially in industries where productivity rises faster than elsewhere.

Union power is, of course, not unlimited. The main limiting factor, besides restraining influences on the part of the government or of public opinion which come into play only in extreme cases, is the elasticity of the demand for the product of the industry (or firm) in question. The more elastic the demand the greater the threat of shrinking employment when wages are pushed up.[16] In this connection, the fact that in the short run elasticities of demand (for product as well as for labor) are likely to be much lower than in the long run, because it takes time for substitutes to be developed and for demand to shift to substitutes, is of very great importance. It means that employers give in to wage demands more easily and that before the deterrent effect of falling employment has time to restrain union demands for higher wages, wages have been raised elsewhere and aggregate demand and the whole price level have been pushed up. It is inherent in the inflationary process that it makes the earlier wage rises illusory and by the same token tolerable without impairment of employment. Needless to repeat that the process could not develop indefinitely without an expansion of the money supply.[17]

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[16] Another related factor is the share of labor cost in total cost. The lower this share, the less elastic the demand for labor and the more scope for unions to push up wages. This is the reason why craft unions, which represent small groups of specialists who are indispensable for the business but whose wages form only a small fraction of total cost, are especially successful.

[17] In some cases, the connection between the level of employment and the wage rate is quite clear and cannot be overlooked by union leaders. Thus J. L. Lewis and the U.M.W. seem to have consciously preferred high wages and a low level of employment over lower wages and larger employment. In this case, union policy closely resembles the behavior of the monopolist in economics textbooks. But these are rare exceptions,

I do not deny that to the extent to which unregulated industrial monopolies exist and to the extent to which it is possible by anti-trust policy or otherwise to introduce more competition, such a policy would have an anti-inflationary effect. But such a reform would have only a once-for-all effect and would not remove a continuing pressure for inflation. Moreover, no large once-for-all effects can be expected for the simple reason that the American economy is very competitive except in the area of public utilities (some types of transportation, communication, etc.)[18] where rates are controlled anyway. The most effective method of making sure that there will be a maximum of competition is freer trade. The large free trade area inside the United States is probably a more important factor than antimonopoly legislation, making the United States economy highly competitive compared with most other countries. But the rise of imports and of foreign competition, both in the United States and in foreign markets, in recent years has shown that even for a country of the size of the United States international trade is a strong antidote for inflation. Its anti-inflationary operation is, however, by no means based exclusively on its capacity to counter-

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at least in the U.S. As a rule, labor leaders strenuously deny that higher wages may result in unemployment. They vigorously contend that higher wages strengthen purchasing power and employment and most of them undoubtedly believe what they profess. Why shouldn't they, if reputable economists support their views?

As a consequence of this situation, falling employment operates only as a tardy and uncertain brake on excessive wage demands.

[18] In the long run there is, of course, a lot of competition in that area too. Railroads compete with buses and airlines, electricity with gas, etc.

The statement that the American economy is very competitive does not rest on the assumption that perfect (or pure) competition in the textbook sense (i.e., that the demand curve is horizontal for each firm as for each farm) is the typical market structure, but on the realization that Chamberlinian "monopolistic competition," which surely is very widespread, is (especially from the policy and welfare standpoint) competition and not monopoly in the ordinary sense. This is especially true of product differentiation.

act monopolies. Competitive industries, too, feel the spur of foreign competition, which stiffens the employer's resistance to inflationary wage demands and promotes progress and efficiency.

There can be no doubt that much more important than private monopolies or oligopolies are a great number of government operated, sponsored, or induced price maintenance and price support schemes ranging from haircuts, "fair price laws," stock piling policies, and import restrictions to the six basic farm products subject to the parity price policy. The last mentioned policy of parity prices for agricultural products is equivalent to a monopoly of gigantic magnitude dwarfing any monopoly that ever existed in the private sector. It not only keeps farm prices high, but involves a tremendous waste of resources in the form of unsaleable surpluses which a private monopoly neither could nor would do, and adds substantially to the government budget and deficits.

Like union wage push and unlike business monopolies, the farm price policy (if rigidly adhered to)[19] very likely constitutes a continuing inflationary force. This is the more probable if, as seems to be actually the case, agriculture belongs to the group of industries that exhibits a more than average rate of technological progress in the form of a rapid rise in output per input. For, as has been pointed out, stability of the price level requires that prices of products of technologically progressive industries fall, while those of technologically less progressive industries rise.

From basic causes we may distinguish factors accelerating and propagating inflation. If an inflation continues for a long period and is never interrupted by price declines or at least by prolonged periods of stable prices, more and more people will come to expect further price rises. Such expectations, which find their expression in higher interest rates, greater and more frequent wage demands, and eventually adjustments, at shorter and shorter intervals, of "fixed" incomes, obviously are an accelerating force. Cost of living escalator clauses in wage and salary contracts, and in later stages of

[19] The actual policy may be modified by periodic reductions of the support price level.

inflation also in debts and securities and other contracts, are another accelerating factor. Such arrangements obviously eliminate some, though not all, injustices of the inflationary process, but by the same token tend to bring the process more quickly to a head—accelerating the speed of inflation, if the money supply is elastic, or raising costs and thus slamming on the brakes, if there is no slack in the monetary system. We shall come back to this matter in the next section on consequences. Suffice it to say at this point that a universal or near-universal adoption of escalator clauses, which oddly enough is sometimes recommended by those who find a mild inflation innocuous if not positively wholesome, would take most (though not all)[20] pleasure, profit, and stimulus out of inflation. If any group, say, labor or agriculture, or business, or the government tried to steal a march on society as a whole, it would drive up all other incomes and prices and even the first recipients would gain only little (how much depending on the speed and frequency of the adjustments). This state of affairs is approached, though perhaps never quite reached, under hyperinflation.

Let me now summarize the conclusions reached in this section.

There can be no inflation without an expansion in aggregate demand and there can be no large and sustained expansion in aggregate demand without an increase in the supply of money.[21] This also holds in the case of wage push.

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[20] The recipients of newly-created money benefit from inflation, even if all prices adjust instantaneously.

[21] These are not tautological statements, because we have defined inflation as a rise in prices and not as an increase in aggregate demand. The only exception to the first part of the statement is that in a contracting economy prices could rise without an increase in aggregate demand. Until now this has been an extremely rare phenomenon and has never happened on a large scale. It would constitute an exception to the second part of the statement if a large and sustained inflation could be financed by a speed-up of the circulation of an unchanged stock of money. But it is safe to say that this has never happened except for a very limited period of time.

It follows that demand pull and expanding money supply are more basic than wage push. However, wage push by labor unions can be a potent factor in the double sense that (a) it tends to speed up demand-pull inflation (though it may also shorten the inflationary period by bringing things more quickly to a head) and (b) in case monetary demand does not expand any more, wages may still be forced up faster than output per man-hour rises so that prices continue to creep up. The resulting unemployment and loss of output and income provide a strong inducement to expand monetary demand and inflate prices.

That wage push has become an independent inflationary factor is strongly suggested by the fact that in 1957 and 1958 wages continued to go up in the face of a substantial volume of unemployment after the expansion of monetary demand had come to a halt. How important a factor wage push is compared with demand pull, during periods of expansion when aggregate prices and wages all go up simultaneously, is difficult to say. The crucial question is a hypothetical one—if expansion of demand comes to an end, would wages go on rising faster than output per head and how much unemployment, if any, would be required to stop the excessive rise in wages?

On this question views diverge sharply. The demand-pull theorist takes the optimistic view that very little unemployment or possibly the mere threat of unemployment will stop the wage push once demand pull has ceased. The cost-push theorist is the pessimist who believes that it will take an "intolerable" amount of unemployment.

The question is evidently quantitative—how much unemployment will be required? Nobody knows for sure, and even if the test is actually made, the results may be difficult to interpret due to lag effects and the difficulty of knowing what should be regarded as the normal volume of frictional unemployment. To draw policy conclusions, it is also necessary to specify what is regarded as a tolerable or intolerable amount of unemployment. That in turn requires a weighing of alternatives. One alternative is prolonged inflation. The cost and consequences of chronic inflation will be

discussed in the following section. The other alternative is to stop the wage push at the source by reducing the monopoly power of labor unions. Some observations on that problem will be offered in the last section below.

We furthermore reach the conclusion that business monopolies and oligopolies, to the extent that they really exist and are not regulated anyway, have a different bearing on inflation than labor unions. While labor unions, if they are powerful and aggressive, tend to exert a continuing upward pressure on costs and prices, the introduction of business monopolies, where there was competition before, would raise prices, but their existence does not entail a continuing upward pressure although reaching the price which suits the monopolist may take a little time. Compared with the host of government-enforced price maintenance schemes and government-operated or sponsored restrictions, ranging from haircuts to the agricultural parity price policy, unregulated business monopolies pale into insignificance.

CONFLICTING INTERPRETATIONS OF THE 1955-58 INFLATION IN THE UNITED STATES

THE DIVERGENCE of opinions on the causes of inflation is dramatically highlighted by the conflicting explanations of the 1955-58 experience in the United States which have been offered by different writers. In some cases writers belonging to the same economic school of thought find themselves on opposite sides of the fence as far as the explanation of the 1955-57 inflation is concerned.

On the extreme side of the demand-pull explanation we find Professor Alvin Hansen. In his note "A Neglected Factor in Inflationary Pressures 1955-57,"[1] he says, "the evidence seems to me overwhelmingly clear that the inflationary pressures were caused mainly by an excessive splurge of investment in plant and equipment. This indeed has been the main cause of inflationary pressures in boom periods throughout history. Yet there is no case in history, I believe, in which the *increase* from an already high base was so large as from 1954 to 1957."

Gone are the days of secular stagnation. There is—rightly, I believe—no mention of administered prices as a cause of inflation. Inventory accumulation might have been mentioned as an intensifying factor. That monetary factors and conditions of inflation are not stressed is not surprising. On the other hand, it is strange that nothing is said about wage push, because in his *A Guide to Keynes,*[2] Hansen has shown that he is well aware of the inflationary danger posed by aggressive labor unions.

> Money wage rates (wage units) tend to rise before full employment is reached owing to pressure from labor groups whenever profits rise. Such wage-rate changes are liable to be discontinuous—a succession of "semi-critical points." To the extent that this occurs the increase in Aggregate Demand is *unnecessarily* dissipated on higher prices with correspondingly less effect on output and employment. In so far as marginal cost rises as output increases, some part of the increase in Demand

[1] *Review of Economics and Statistics,* May 1959, pp. 184-85.

[2] New York, 1953, p. 193.

must be dissipated in higher prices. But if in addition money wage rates also rise, *employment suffers* as a result of the higher wages of the already employed workers. (Italics supplied.)

The reason for the neglect of the wage-push factor is probably that Hansen—rightly—assumes that the years 1956-57 were a period of substantially full employment while the quoted passage refers to a position before full employment has been reached. I see no reason, however, why the wage push should not continue after full employment has been reached. In fact, one should think that it will become stronger the longer the upward movement lasts.

Another writer who, before Hansen, strongly emphasized the "neglected" role of the large volume of investment in causing inflationary pressure is Arthur F. Burns in his lectures *Prosperity Without Inflation.*[3] Burns does not forget to mention the indispensable monetary preconditions of the investment boom and he also pays attention to the wage push exerted by labor unions. Burns' treatment of the problem is comprehensive and well rounded. But for the period of 1954-57 we can probably classify him as a demand-pull theorist.

An outspoken demand-pull explanation of the 1955-57 inflation has also been offered by Richard T. Selden in his able and well-documented essay "Cost-Push versus Demand-Pull Inflation, 1955-57."[4] As a member of the Chicago School he stresses the monetary factor. He reaches the conclusion "that the 1955-57 inflation was basically similar to inflations of the past and that the role of costs in this inflationary episode has been greatly exaggerated" (pp. 1-2). Again, "it seems reasonable to regard the recent boom as essentially the same sort of phenomenon that has characterized business expansions of the past" (p. 16). The role of investment is hardly mentioned. This is regrettable inasmuch as stress on the great volume of investment which characterized the period under consideration would have been perfectly compatible with Selden's main thesis that the emphasis on cost push has been greatly exag-

[3] New York, Fordham University Press, 1957. See esp. pp. 1-20.

[4] *The Journal of Political Economy,* February 1959, pp. 1-20.

gerated. In fact, explicit reference to the investment "splurge," to use Hansen's phrase, would have strengthened his case. There are indirect references such as "the feeling of optimism with which households and firms faced 1955." Seemingly a good Chicagoan must not speak aloud of investment causing expenditures and prices to rise, except by way of increasing M or V (which is, of course, true), much as a good Keynesian cannot admit that M or V can cause a rise in prices, except via the propensity to consume, the inducement to invest, or the liquidity preference (which also is true). Each avoids the other's terminology as though it were his toothbrush (to paraphrase Max Weber).

I personally agree with Selden that prior to the downturn of the cycle in mid-1957 demand pull was important or even dominant. But I wish he had explained why wages and prices went right on rising after demand had started to decline. He could not well have avoided the conclusion that this was due to wage push. And if this were accepted, would it not be reasonable to conclude that there existed a wage push, at least as an intensifying factor, all along or at least for some time before the downturn?

On the other side of the fence are, among many others, John Kenneth Galbraith and Gardiner Means.[5]

Means has resurrected and refurbished for the purposes of explaining the inflation from 1955 to 1958 the theory of "administered prices" or "oligopolistic pricing" in "concentrated industries" which he had helped, most prominently, to develop and to make popular in the 1930's. Then the theory was used to explain the rigidity of the prices of the concentrated, oligopolistic industries (mainly steel, machinery and vehicles, other metals and metal products,

[5] J. K. Galbraith, "Market Structure and Stabilization Policy," *Review of Economics and Statistics,* May 1957, and numerous appearances before Congressional committees. See Gardiner C. Means' Statement before the Senate Antitrust and Monopoly Subcommittee, January 24 and March 10, 1959, and before the Joint Committee on the Economic Report, February 16, 1959. See also his brochure *Administrative Inflation and Public Policy,* Washington, 1959, in which he summarizes his statements before the Congressional committees.

chemicals, fuel, and power). The failure of these prices to fall, or to fall as much as other prices, was put forward as one of the strategic factors responsible for the severity of the depression. In the 1950's, the alleged upward flexibility of these same prices was made responsible for the 1953-57 or 1958 phase of the inflation.[6]

Means distinguishes three types of inflation. First, there is the classical type of "demand or monetary inflation" under full employment, characterized by "too much money chasing too few goods." This type of inflation occurred during the Second World War and again during the Korean War. During such an inflation all prices, "market-determined" (competitive) prices as well as "administered" (oligopolistic) prices, rise more or less parallel. The second type is *reflation,* when prices rise during recovery periods following cyclical depressions. In that case, market-determined prices rise from the depth to which they had fallen during the preceding depressions while inflexible administered prices, which did not fall much during the depression, participate only little in the price rebound. Third, there is the so-called "administrative inflation" which involves a rise in the "inflexible," administered prices in "the more concentrated areas."

In his various testimonies before Congressional committees, Means presents statistics about changes in wholesale prices by product groups which lead him to the following conclusions. During the period from 1942 to 1947 market-determined prices rose more than administered prices—indicating a case of "reflation." From 1947 to 1953[7] there is no clear preponderance of price rises in either group—a case of monetary or demand inflation. From 1953 to 1957 and even more so from 1953 to 1958 price rises

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[6] Means' figures relate usually to the 1953-58 rather than the 1955-58 period.

[7] He offers four charts, the first giving the price changes from 1942 to 1947, the second from 1942 to 1953, and the third and fourth from 1953 to 1957 and from 1953 to 1958, respectively. (See especially his Statement before the Senate Antitrust and Monopoly Subcommittee, January 24, 1959.)

were heavily concentrated in the administered area, while several of the competitive, market-determined prices actually declined—a clear case of administrative inflation.

It would be unfair to subject the preliminary statements before Congressional committees to an exhaustive criticism inasmuch as the author promises a more detailed presentation of his views in a book. But that makes it the more helpful to point out a number of serious defects.

As indicated in the preceding section, I question the basic assumption of the widespread existence of monopoly power in the numerous industries designated as concentrated by Gardiner Means. Competition there is not atomistic, but is nonetheless very real.[8] The expressions "administered" and "market determined" are severely question begging. Surely market demand has much to do with the "administered" prices and the so-called "administrative inflation" could never develop without an expansion of monetary demand. But all I wish to show here is how, without the assumption of arbitrary administrative discretion in price fixing, the price behavior sketched by Gardiner Means can be explained.

The first period, 1942-47, was, of course, characterized by price control which naturally was more effective in the case of concentrated industries. (To a large extent, the price stability was spurious, reflecting quality deterioration and informal rationing.) Since, according to Means' figures, the second period, 1947-53, did not bring a readjustment, the rise of "administered prices" relative to other prices during the third period can, therefore, be regarded to some extent as a belated readjustment. (To the extent that the price stability during the earlier period was spurious, the later price rise was not real either.)

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[8] It is largely competition through "product differentiation" (Chamberlin). Temporary quasi-monopolistic positions in new products are natural and essential for the entrepreneurial and innovational process. This has been persuasively argued by Schumpeter. Similar ideas were later expressed by Galbraith in his *American Capitalism,* Boston, Houghton-Miffin Co.

More important, perhaps, the so-called area of administered prices comprises the very industries where boom demand is concentrated—steel, machinery, metals, and metal products. Moreover, these are industries with strong and aggressive unions. Hence, it is not at all surprising that during a very vigorous—according to Hansen, unprecedentedly strong—boom, prices in these industries should rise more than elsewhere. It is true that they did not fall much during the following recession. But the recession was mild and unusually short and nobody would deny that these prices are somewhat inflexible downward in the short run, partly because of the inflexibility of wages.

Burns, Hansen, and Selden have called attention to the facts that the period from 1953 to 1957 was a classical boom period characterized by a large and rising volume of investment and a rise in aggregate monetary demand, attended and made possible (some would say "caused") by a rise in M and V, in combination with a strong wage push by labor. These facts seem to be entirely sufficient to explain the observed price behavior.

Galbraith has tried to give very much needed theoretical underpinning to Means' thesis. His theory is that there existed in the late 1950's what he calls "unliquidated monopoly gains." That is to say, the concentrated industries had their prices set below the level which would maximize their profits. The reason for the policy of "underpricing" (underpricing—from the monopoly standpoint, not of course compared with a hypothetical competitive norm) is either fear of government intervention or fear that labor unions might capture a large part of the profits that would result from full exploitation of monopoly power, which in view of the downward rigidity of wages may involve a considerable risk for the future. A general inflationary situation then provided a welcome camouflage for pushing prices closer to the monopolistic "optimum."

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[9] An earlier attempt by R. C. Harrod in his *The Trade Cycle,* Oxford, Clarendon Press, (1936) to use theoroms of market structure for the explanation of cyclical phenomena was equally unsuccessful and has apparently been abandoned by its author.

The trouble with this theory is that it builds too much on fine points of highly conjectural price strategies and equally uncertain and unverified lags in price adjustment.[9] The elemental forces of the tremendous expansion of monetary demand stemming from the upsurge in investment and concentrated on the products of the "concentrated industries" and of strong union pressure for high wages are mentioned,[10] but the former factor is played down and accorded only minor importance.

It is not quite clear when the "unliquidated monopoly gains" have been accumulated. Is it a regular feature of every inflation period or of every cyclical expansion that "monopoly power" piles up during the earlier phase and is then used up later when the economy approaches full employment? Or were "the unliquidated monopoly gains" a special feature of the recent inflation, a legacy of the price control during the Korean War (or possibly during the Second World War)?

Like Means, Galbraith exaggerates the monopoly power of the so-called concentrated industries and greatly underrates the strength of competition in that area as between firms, products and, increasingly, from imports. If there had been a delayed utilization of preexistent monopoly power, this would have shown up in a huge rise in profits. Aggregate profits, to be sure, did rise from 1953 to 1957, as they invariably do during business cycle upswings, but they promptly and drastically declined in 1958—and rose sharply in the first half of 1959. (As pointed out earlier, the cyclical variability of corporate profits is a very potent built-in stabilizer of the United States economy.) But the rise in profits during the 1954-57 upswing was very uneven, also as between the so-called "oligopolistic" industries.[11] According to the National Income Accounts, corporate

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[10] The former on A. Hansen's urging. See *Review of Economics and Statistics,* May 1957, p. 130.

[11] On this point see the able paper by Otto Eckstein, "Inflation, the Wage-Price Spiral and Economic Growth," *The Relationship of Prices to Economic Stability and Growth,* Compendium, Joint Economic Committee Print, 85th Congress, 2nd Session, 1958, pp. 370-71.

profits rose only about 5 percent from 1951 to 1957 while GNP went up by 30 percent.

More important than the movement of aggregate profits is the behavior of profit margins. Profit margin on sales in manufacturing—the series most readily available and most relevant for the purpose on hand—for obvious reasons varies much less over the cycle than do aggregate profits. From 1953 to 1957 this margin remained fairly stable.[12] Over the period from 1948 to 1957, profit margins show a considerable downward drift apart from year to year fluctuations. Whatever may be true of particular industries, the over-all picture provides not a shred of evidence of a delayed utilization, or an increase of monopoly power, or of a continuous rise of mark-ups.

The conclusion must be that the administered price theory of inflation makes at best a minor contribution to the solution of the inflation problems, a contribution which definitely becomes negative, if one considers that it diverts attention from the basic issues—demand pull and wage push.

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[12] The figures as given by Otto Eckstein (*loc. cit.,* p. 368) are as follows:

	Per Cent*
1948	11.1
1949	9.3
1950	12.6
1951	12.2
1952	9.2
1953	9.2
1954	8.4
1955	10.2
1956	9.7
1957	9.3

*Profit Margin on Sales Before Taxes, Manufacturing. SEC data.

SOME CONSEQUENCES OF INFLATION

DISCUSSING THE economic and social consequences of inflation, I shall again concentrate in the main on creeping chronic inflation, for two reasons. First, this type rather than rapid inflation is relevant for the United States and most other industrial countries, at least in peacetime, and secondly, it is a more controversial and insidious process than the rapid inflation that is rampant in other parts of the world. But by way of introduction, a few words should perhaps be said about the latter.

I take it for granted that an inflation of, say, 5 percent or more per year continued for more than a few years would become intolerable in a modern industrial country like the United States.

It would bring revolutionary changes in the income distribution, rapidly depreciate hundreds of billions of dollars worth of bonds, life insurances, mortgages, and other monetary assets, and would be extremely hard on fixed income receivers.

It is true that our capitalist economy has shown tremendous recuperative power. The two war inflations have, in fact, brought about some of the changes I just mentioned, but our productive capacity and social fabric remained undamaged. The war experience does not, however, in the least contradict the statement that a peacetime inflation of 5 percent or more per year would soon become intolerable. Before it brought about radical changes, it surely would accelerate. It would start a flight from monetary assets, raise interest rates, and lead to the introduction of escalator clauses in wages, salaries, and later in debt contracts. We can be sure that before it took on aspects of hyperinflation it would be stopped, if not by financial measures, then by direct controls.

So far, the United States has been spared that type of inflation. The inflations we have had were war inflation, short-run cyclical inflations, and recently chronic, though intermittent, creeping inflation. Rapid, prolonged inflation is, however, rampant in many underdeveloped countries, especially in Latin America. There can be no doubt, I believe, that it retards economic growth. If some of the

highly inflationary countries, e.g., Brazil, have experienced economic growth nevertheless, they would have grown even faster with less inflation.[1]

Let me briefly indicate how inflation damages the economies of underdeveloped countries and retards their economic growth. Chronic inflation discourages thrift and makes the development of a capital market well-nigh impossible. It is a constant complaint in underdeveloped countries that they are handicapped by the absence of a well-functioning capital market. But how could it be otherwise? It is true, a poor country cannot hope, even without inflation, to develop a capital market that distributes more capital—or to look at it from the other side, which absorbs more securities—than the meager savings plus the funds that may be attracted from abroad permit. Inflation does not only discourage saving, it also drives savings abroad, i.e., it encourages capital flight and impedes capital imports. Without inflation there is no reason why small and poor countries should not have well-functioning capital markets which efficiently and economically distribute the limited amounts of capital available among competing uses.

Furthermore, inflation not only dries up the sources of capital funds but also misdirects capital funds that become available. It may not discourage global investment, but it encourages the wrong kind of investment—excessive merchandising, building, and inventories. Open inflation stimulates excessive investment in inventories. Controlled or repressed inflation—if it is really effectively controlled—sometimes does the opposite. Thus, the British economy in 1946 and 1947 under repressed inflation was denuded of commodity reserves, which greatly contributed to its brittleness and lack of adaptability. But in underdeveloped countries where inflation is more of the open kind, there is more danger of excessive inventory accumulation. The situation is made much worse by import controls. If businessmen are never sure whether materials, spare parts, and replacements will

[1] It goes without saying that this statement has to be qualified with respect to the means used to stop inflation. It is always possible for Beelzebub to chase the devil.

be available they lay in reserves which they otherwise would not need. Large amounts of capital are thus tied up and diverted from more productive uses.

Even in underdeveloped countries prices are not entirely uncontrolled. The existence side by side of controlled and uncontrolled prices and areas creates very serious distortions. A glaring example is public utility rates. The prices of telephone and telegraph services, railroad fares, and electricity rates are subject to control. These prices then lag far behind in the general rise and the consequence is serious undermaintenance and underinvestment in these vital services. The problem becomes especially acute if these services are provided by foreign companies. Inflation, "planning," and government intervention thus lead to a deficiency in social overhead capital, the importance of which for economic development the advocates of government planning never get tired of emphasizing.

The modern form of repressed inflation and semi-repressed inflation causes or implies a proliferation of controls and interventions—price control, import controls, exchange control, rationing, allocation, etc. This overtaxes and corrupts the administrative apparatus and diverts government energies and know-how from more important functions. This is a serious matter for any country, but especially for underdeveloped countries which are poorly endowed with the precious resource of governmental know-how, administrative efficiency, and political honesty; it involves a great waste of scarce manpower and brainpower which underdeveloped countries can ill afford.

It is unfortunately, in general, impossible to estimate concretely the loss of income due to inflation in a particular country. But let me cite one informed guess of the order of magnitude of the loss in a concrete case. This estimate has been made by Professor Theodore W. Schultz of the University of Chicago. After careful investigations, Professor Schultz comes to the conclusion that "today Chile is operating about 20 or 25 percent below its normal output simply because of the way it is trying to live with its chronic inflation. If you go around in Chile and just assess the resources in agriculture, and in the shops in the cities, and so forth, you have rather a firm basis that if for a few years, there were to be a stable price level, and expectations

got adjusted, one would see that economy produce about 20 or 25 percent more than is now the case. There is that much slack in the economy, and the slack comes from the fact that there are price rigidities, price controls, and some factor prices, and product prices are held down, foreign exchanges are regulated, all sorts of devices are brought into play, and each distorts the economy a bit, and in Chile these distortions have become serious." [2] Chile may present an extreme case, but there are others not much less serious.

Let me concede freely that situations are thinkable and do arise in which inflation, even rapid inflation, may appear to be the lesser evil —a terrible evil to be sure, but still better than some alternatives.

If a country grows despite inflation, this may be deemed better than no growth at all. And governments sometimes manage to maneuver themselves into a position where this is the only alternative. Let me give two examples, for which it would be easy to cite concrete instances from recent Latin American history. If wage rates of industrial workers are raised exorbitantly by minimum wage legislation— 50 or 100 percent jumps of statutory minimum wages are no rarity in Latin America—or by government-coddled labor unions, massive inflation may be the only way to prevent disaster. Or if governments by means of deficit financing continuously try to capture a larger and larger fraction of the national product for unproductive purposes (for the upkeep of an exorbitant military establishment, lavish government buildings, expansion of a huge bureaucracy, overambitious social welfare establishments, etc.) it may well be the lesser evil to top the government inflation by private credit inflation, i.e., to intensify inflation, in order to prevent the government from bidding away too large a portion of available resources from productive investment for its wasteful purposes. But it cannot be emphasized too strongly that such situations where rapid inflation appears to be the lesser evil are always the result of faulty policies. They may be

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[2] Hearings before the Subcommittee on Foreign Economic Policy of the Joint Committee on the Economic Report, *Foreign Economic Policy,* 84th Congress, 1st Session, 1955, pp. 581-82.

socially and politically difficult to avoid but there is no intrinsic economic reason, even in underdeveloped countries, why they should not develop without inflation—and without the continuous sapping of economic strength which the losses and wastes of inflation entail.[3]

Let us turn our attention now to the slow creeping type of inflation with which the United States and other industrial countries are confronted.

An annual price rise of 2 to 3 percent is, of course, a lesser evil than one of 5 percent or more.[4] Some people may argue that if the alternative to such inflation is permanent unemployment of, say, 6 or 7 percent of the labor force (on the average over good and bad years) with the corresponding annual loss of output and income, this condition would still be preferable to the injustices and evils of an inflation of 5 percent per year or more; but that they would accept a 2 to 3 percent inflation as the price for reducing unemployment by 3 or 4 percentage points and for avoiding the annual income loss that the unemployment entails. They might add that in the case of a slow inflation it would be easy to eliminate the more glaring injustices by frequent adjustment of fixed incomes and escalator clauses in long-term contracts.

The plausibility and reasonableness of the social preferences ("value judgments") implied by such views are debatable and I shall not discuss them. The crucial fact is that in reality there exists no such choice. A continuous creeping inflation of 2 to 3 percent a year could not go on indefinitely without causing unemployment. After a while the creeping inflation would accelerate, or if it were kept at the creeping pace the unemployment would emerge which the

[3] On this point compare the eloquent paper "Inflation and its Control in Underdeveloped Countries" presented by A. W. Marget to a Round Table on Inflation organized by the International Economic Association in Elsinore, Denmark, 1959.

[4] This statement could be questioned only on the ground that a rapid inflation would soon become clearly intolerable and therefore stopped, while a creeping inflation is more likely to drag on for a long time before something is done about it.

creeping inflation was supposed to forestall. I am speaking now of *continuous* creeping inflation. The case of the *intermittent,* that is, from time to time interrupted or reversed, creeping inflation is not quite so clear. Its course and outcome depend on the frequency and magnitude of the interruptions or reversals.

That the pace of continuous creeping inflation will inevitably tend to quicken, if it is not halted or reversed, follows from the fact that as creeping inflation continues, more and more people will expect a further rise in prices and will take steps to protect themselves. Interest rates will go up because the lender wants protection from the depreciation of the value of money and the borrower thinks he can afford to pay higher rates because the price of his products will go up; labor unions will ask for high wage increases in order to secure real improvement; the frequency of wage and salary adjustments will increase and cost of living escalators will be built into more and more contracts; and eventually "fixed" incomes will be regularly adjusted.

It is, therefore, an illusion to believe that a creeping inflation can remain so indefinitely. How long it takes before it starts to accelerate, and the rate of acceleration, depend on many factors, among them past history. People who have gone through a disastrous inflation react quicker than those, like Americans, who have had less experience with inflation. But the fact that this country has not experienced a significant price fall for a long time has made many people more sensitive to inflation than they were before World War II. For that reason, it is quite misleading to compare the price rise from 1955 to 1957 with the price rise during earlier periods of business cycle expansion, as is often done, and to conclude that there is no reason to worry.

Intermittent creeping inflation is less serious than continuous in flation, for the lulls in the price rise provide a breathing spell during which confidence in the stability of the value of money can revive But it seems that since the end of World War II, the intermissions have been too short fully to restore confidence. It takes then only a short period of renewed upcreep of prices to rekindle fears of infla-

tion, which in turn lead to anticipatory actions tending to turn the creep into a trot.

Some proponents of the theory that creeping inflation is no serious menace take the position that the monetary authorities always have it in their power to prevent creeping inflation from accelerating. The late Professor S. H. Slichter, for example, called upon the Federal Reserve to keep money sufficiently tight to prevent prices from rising by something like 5 percent a year, but to make sure that prices are allowed to go up by 2 to 3 percent. An annual price rise of more than 4 or 5 percent would be dangerous inflation. Less than 2 or 3 percent would create unemployment because of the irresistible wage push exerted by labor unions.

It is, of course, true that sufficiently tight money can prevent prices from rising faster than 5 percent annually—or any other pre-assigned rate. But everything will not be fine if an acceleration of the price rise is prevented by monetary policy. That belief forgets that once a creeping inflation tends to accelerate—because wages, interest, and other cost items are increased in anticipation of rising prices—the policy of keeping the price rise to a creep must have the same results, i.e., unemployment, as would prevention of the price creep in the first place. Creeping inflation is only a temporary stopgap if Professor Slichter were right in saying that labor unions will always insist on, and have the power to obtain, wage increases in excess of the general rise in average productivity. Only under one condition would the distortion be rectified: if unions, and everybody else, could be fooled indefinitely to regard, despite rising prices, exactly balancing increases in money incomes as representing increases in real income.[5]

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[5] It is interesting to recall that Keynes, too, in *The General Theory,* Harcourt, Brace & Co., New York, made the untenable assumption that workers are under such a strong money illusion that they don't realize the difference between money and real wages. But he wrote during the Great Depression when prices were falling and he was thinking of wage reductions rather than wage increases. If confined to these conditions, the assumption is not so absurd as it is under inflationary conditions.

This obviously is entirely unrealistic, especially during a period of chronic inflation when awareness of changes in the value of money has been greatly sharpened. You cannot fool all the people all the time. If the dilemma of the wage push does in fact exist, inflation cannot avoid but only postpone it. Moreover, if a wage push did not exist in the first place, that is to say, if demand pull were the original cause of inflation, prolonged inflation is likely to create wage push, because inflation fosters the emergence of labor unions, it gives them prestige and power by offering them unending opportunities for easy (though under those circumstances largely phony) successes in the form of wage increases which would have come anyway, but for which the unions take credit. This will accustom them to annual wage increases, which they then will try to continue when the demand pull has come to a halt.

Professor Slichter's prescription for the monetary authorities—that they must allow a 3 percent inflation, but must not let it go to or beyond 5 percent—is tantamount to asking for a balancing act which defies the laws of physics; it prescribes that the central bank should walk a tightrope, not straight, but bent over with all the weight on one side!

BUSINESS CYCLES, GROWTH, AND INFLATION

THE UNITED STATES has never before, certainly not during the 19th century, gone through a period of chronic inflation, continuous or intermittent, resembling the inflation of the last twenty years. The same holds true of Western Europe. The inflations that the country experienced before 1940 were war inflations or cyclical inflations which almost always characterize the upward phase of the short-run business cycle, and beyond that the mild undulations of the so-called "long waves," sometimes called "Kondratieff cycles." The latter are, however, not very pronounced and some prominent experts who have made careful investigations, think that the long waves are "to some extent illusory" or "partly an optical illusion." [1] Suffice it to say that none of the so-called long waves offers an example of an extended period of price rise of the same order of magnitude or the same character as the price rise of the last twenty years.

However, many prominent economists (not to mention scores of lesser writers and outright cranks) have linked inflation and growth, or pictured inflation in one form or other as a helping or even an indispensable condition of economic growth. Keynes has devoted much space to the discussion of inflation in almost every one of his economic writings. In one of his first books, *The Economic Consequences of the Peace* (of Versailles), he had this to say:

> Lenin is said to have declared that the best way to destroy the Capitalist System was to debauch the currency. . . . Lenin was certainly right. There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency. The process engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one in a million is able to diagnose.[2]

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[1] See A. F. Burns and W. C. Mitchell in their authoritative study *Measuring Business Cycles,* National Bureau of Economic Research, New York, 1949, p. 460.

[2] London, 1919, p. 220.

This sounds like an indictment of the slow creeping inflation, but was actually directed against open war inflation which makes the description of the process as "subtle" somewhat inappropriate.[3]

In the 1930's Keynes became, understandably, more and more preoccupied with the dangers of deflation and, by comparison, inflation lost in Keynes' mind much of its dread and ominous qualities. But it is incorrect and unfair to call Keynes, as is done so often, an out-and-out inflationist. It is true that in his *A Treatise on Money*,[4] he sings the praise of "profit inflation" as a stimulus to economic progress and, carried away as he often was by the flash of an idea

[3] The next paragraph reads as follows:

In the latter stages of the war all the belligerent governments practised, from necessity or incompetence, what a Bolshevist might have done from design. Even now, when the war is over, most of them continue out of weakness the same malpractices. But further, the Governments of Europe, being many of them at this moment reckless in their methods as well as weak, seek to direct on to a class known as "profiteers" the popular indignation against the more obvious consequences of their vicious methods. These "profiteers" are, broadly speaking, the entrepreneur class of capitalists, that is to say, the active and constructive element in the whole capitalist society, who in a period of rapidly rising prices cannot but get rich quick whether they wish it or desire it or not. If prices are continually rising, every trader who has purchased for stock or owns property and plant inevitably makes profits. By directing hatred against this class, therefore, the European Governments are carrying a step further the fatal process which the subtle mind of Lenin had consciously conceived. The profiteers are a consequence and not a cause of rising prices. By combining a popular hatred of the class of entrepreneurs with the blow already given to social security by the violent and arbitrary disturbance of contract and of the established equilibrium of wealth which is the inevitable result of inflation, these Governments are fast rendering impossible a continuance of the social and economic order of the nineteenth century.

[4] Vol. II, Chapter 30, *Historical Illustrations*.

and his own eloquence, puts forward a theory which almost amounts to an "inflationary interpretation of history." He speaks of "the extraordinary correspondence between periods of Profit Inflation and Profit Deflation and with those of national rise and decline."

> The greatness of Spain coincides with the Profit Inflation from 1520 to 1600 and her eclipse with the Profit Deflation from 1600 to 1630. . . . In the years of The Armada, Philip's Profit Inflation was just concluded, Elizabeth's had just begun. And if we compare France with England, the contrast between the financial strength of Louis XIV and the financial weakness of James II is seen to be due to the fact that wages in France did not rise relatively to prices in the last two decades of the 17th century as they did in England.[5]

These are fascinating speculations. But Keynes was clearly in a playful mood and wrote with tongue in cheek, especially when he pictured Shakespeare riding the wave of inflation.

> We [in England] were just in a financial position to afford Shakespeare at the moment when he presented himself. . . . I offer it as a thesis for examination by those who like rash generalizations that by far the larger proportion of the world's greatest writers and artists have flourished in an atmosphere of buoyancy, exhilaration and the freedom from economic cares felt by the governing class, which is engendered by profit inflation.[6]

To be serious, Keynes' historical examples are taken mostly from the pre-capitalist or early-capitalist era. It may be true that under those circumstances inflation was sometimes an explosive force which served to shake countries loose from feudal bonds and in this way promoted economic progress. But Keynes made it quite clear that he was not speaking of inflations resembling the present creeping type. "It is the teaching of this Treatise," he said, "that the wealth of nations is enriched, not during Income Inflations but during Profit Inflations—at times, that is to say, when prices are running away from costs," i.e., from wages and hence real wages are falling.[7]

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[5] *Ibid.*, p. 161.
[6] *Ibid.*, p. 154.
[7] *Ibid.*, p. 154.

The clear implication is that Keynes would have looked with great concern on the present kind of inflation, no matter whether it is of the pure wage-push type in the sense that wages are pushed up and prices follow, or whether prices forge ahead and wages follow without delay, quickly annihilating the profits produced by the price rise. What matters from Keynes' standpoint was that wages (and other nonprofit incomes) should lag substantially behind prices so as to leave a large and long-lasting margin for profits. This is clearly out of the question under present-day conditions. It is probably for this reason that Keynes, despite all he said in favor of profit inflation, summed up his position as follows: "I am not yet converted, taking everything into account, from a preference for a policy to-day which, whilst avoiding Deflation at all costs, aims at the stability of purchasing power as its ideal objective." [8] There is no reason to believe that he ever changed his position. During World War II he became again concerned with the problem of inflation. But he, like many others, underestimated the danger of inflation for the postwar period and was too much preoccupied in his postwar plans with guarding against deflation, thus preparing to fight, like many famous generals, the battles of the last war. There can be no doubt, however, that if Keynes had lived longer he would energetically have taken up the fight against chronic inflation which, in his scheme of things, clearly is in the nature of income rather than of profit inflation.

Schumpeter, too, attributed to inflation an important role for economic growth under the capitalist system, of whose capacity to increase output and to raise the economic welfare of the masses he had the highest opinion.[9] According to him, the capitalist, free

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[8] *Ibid.*, p. 163.

[9] It is true that he was pessimistic, in fact unduly pessimistic, with respect to the chances of capitalism to survive. But his gloom was not based on the belief that capitalism, under present-day economic circumstances, has lost its productive power. On the contrary, he said explicitly and emphatically that there was every reason to believe that the capitalist system, if given a chance, would continue to produce spectacular results. His theory was that by an inimical anticapitalistic social and political atmosphere and misguided policies (which by complicated sociological

enterprise economy necessarily develops and grows in cycles. Mild fluctuations of business activity[10] are an essential part of the capitalist growth mechanism and credit inflation is an essential ingredient of the business cycle upswing. The prosperity phase of the cycle is the time when the innovating entrepreneurs introduce new ventures (new products, new markets, new methods of production, etc.) into the economic system. These innovations require large investments which are partly financed by inflation. Inflation and the forced saving which it entails, are the method by which the innovating entrepreneurs draw resources away from the more stagnant or routine parts of the economy.

Just as Keynes, so Schumpeter regards only profit inflation—inflation which is not too quickly followed by wage rises—as potentially productive. He makes it clearer than Keynes that in the nature of the case this productive inflation can be no more than a passing phase of limited duration and must be unforeseen and unanticipated. In fact, he was of the opinion that in a well-functioning capitalist economy the "natural" *long-run* trend of the price level is downward rather than upward, because during the depression phase of the cycle, when the new innovating investments undertaken during the upswing begin to bear fruit, prices normally would fall more than they rose during the preceding boom. Without necessarily accepting every detail of Schumpeter's theory, I find it difficult to believe that it does not contain a good measure of truth.

Another conclusion is also clear, namely, that the current type of chronic inflation in which wage push plays an important role, either

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theorizing he explained as the very consequence of the prodigious production feats of the capitalist system) capitalism would not be given much longer the chance to demonstrate its undiminished productive capability. (See his *Capitalism, Socialism and Democracy,* 2nd edition, New York, Harper & Bros., 194 *passim.*)

[10] Severe depressions like the Great Depression of the 1930's are, of course, entirely different. They definitely retard growth, but are due to special factors that are not inherent in the mechanism of capitalist development.

as an initiator or as a quick-acting intensifier of a demand-initiated inflation, cannot possibly be justified on Schumpeterian grounds.

Attempts have often been made to shed light on the question whether chronic inflation is likely to help or to hinder economic growth by statistically correlating price changes and growth rates. Such computations are designed to answer questions like these: Are periods of rapid growth in any one country concentrated in time spans of rising, stable, or falling prices? Has there been a tendency during a given period for output to grow faster in those countries that managed better to keep prices stable than in those that were less successful in containing inflation?

Brief reflection should make it clear that a mechanical approach to the growth problem is likely to be grossly misleading or completely worthless. For example, a correlation between *annual* growth rates and *annual* price changes would lead to the conclusion that inflation is highly conducive to economic growth, because as everybody knows business cycle expansions are almost invariably associated with rising prices and business cycle contractions with falling prices. This result is entirely useless for the problem of whether *chronic* inflation is likely to help or to hinder economic growth. Of much importance, however, is the fact revealed by closer study that it is by no means the most vigorous business cycle expansions that are associated with the largest price rises.

Also misleading are comparisons between price changes and output changes in different countries over the same time interval. S. H. Slichter, for example, found that for the period of 1948-57 in Austria a large price rise (124 percent) was associated with a large increase in real product per head (94 percent), while Switzerland, with a very stable price level, had one of the smallest increases in per capita output.[11]

As a consequence of a highly destructive war, Austria started in 1948 from an extremely low output level. Production per capita was,

[11] "Slow Inflation: Our Inescapable Cost of Maximum Growth Rate," *The Commercial and Financial Chronicle,* March 26, 1959.

For other countries he finds similar though less extreme results.

therefore, bound to rise sharply. In view of the fact that in 1948 scores of consumer goods were still unavailable, severely rationed, or of exceedingly poor quality, a situation which completely changed during the next ten years; the rise in the price level was partly spurious. To the extent that it was real, it was simply a necessary adjustment to international levels, which is highlighted by the fact that during the same period the real international value (black market quotation) of the Austrian currency almost doubled. On the question whether chronic inflation is conducive to economic growth, such comparisons contribute very little. And the example of Austria shows how ignorance or disregard of local conditions, especially in such disturbed periods as the postwar years, is apt to vitiate completely the conclusions.[12]

A better method has been used by Otto Eckstein.[13] Using Simon Kuznets' data, he gives rates of growth of output per decade and rates of change of price per decade for the U. S., the U. K., and several other advanced countries covering the period of 1870 to 1954. It is highly important that during "the late decades of the 19th century, which saw some of the most rapid growth of Western countries, prices generally were falling." It is, of course, not surprising that there exist periods of falling prices associated with very low growth rates (e.g., in the U. S. in 1929-38) and decades of rapidly rising prices (mainly war inflation) that also were periods of exceptionally slow growth. That destructive wars and deflation retard economic growth is to be expected, but I should like to recall that falling prices, when the price decline is due to rising output (as in the late decades of the 19th century), are radically different from falling prices that are due to the contraction of the monetary demand—deflation of MV. Also recorded are decades of rising prices associated with rapid growth (e.g., in the U. S. in 1904-13 and 1939-48). This checkered statistical picture has induced some investigators to

[12] See also A. W. Marget, "Inflation: Some Lessons of Recent Foreign Experience," *American Economic Review, May* 1960, p. 205.

[13] *Op. cit.*, pp. 361-62.

throw up their hands in despair and to conclude that nothing general can be said on whether inflation is good or bad for economic growth. In my opinion, this conclusion is much too defeatist. Surely decadal figures (the only ones available for earlier periods) are too crude, because they overlap cycles and war periods. But it does not follow that a more careful historical-statistical investigation, which pays attention to the cyclical phases and other special conditions of each period and country, would not lead to useful generalization. To my knowledge, a systematic investigation of that kind has not yet been made and this gap cannot be filled on this occasion. I confine myself to making a few general observations.

Such an investigation ought to keep three points firmly in mind. First, it cannot be denied, I believe, that a moderate inflation can stimulate investment and growth provided (a) that prices keep sufficiently ahead of cost, in particular of wage costs, to create the necessary profit incentives for investment; and (b) that strong inflation psychology does not develop. If the latter happens, the chances are that even if profits are still satisfactory, the wrong kind of investments will be stimulated which entail a waste of resources and inevitably come to grief, causing losses and contraction of output and employment.

It seems to me clear that in our times in both respects little margin is left for "creative" inflation *à la* Schumpeter and Keynes. Wages have become very flexible in the *upward* direction (while remaining rigid downward) and inflation psychology has become widespread and is ready to re-emerge quickly even when allayed by a lull in the price rise.

The second point to keep in mind is that the stimulus to investment and growth, which inflation can temporarily afford, can also be provided by non-inflationary policies without the same limitation and detrimental side effects. If it is true (as Schumpeter and Keynes say) that inflation promotes growth by creating profits which serve both as incentives and as financial sources of investment, it is also clear that the same incentives can be provided at stable or even at slightly falling prices, if only the increase in wages (and other costs) is kept in

bounds. I refrain from trying to specify what kind of wage rise would be compatible with non-inflationary growth. Depending on the circumstances it may be a little more or a little less than the average rise in labor productivity. But it should be stressed that under non-inflationary growth *real* wages will rise just as much, and in the long run faster, than under inflationary conditions.[14] That rapid growth is possible with stable or even falling prices is confirmed by the experience of the last decades of the 19th century and during the postwar period by the phenomenal growth of Western Germany and Switzerland. (The latter looks less impressive only because it started from a much higher base.)

The third point to remember is that avoidance of chronic inflation is a necessary, though not a sufficient, condition for maximum growth. It is easy, for example, to think of methods of stopping inflation which would make things worse than they are under inflation. Suppose we stop inflation in the face of a strong wage push by monetary or fiscal policy. The consequences will be losses, low investment, and unemployment. If nothing can be done about wage push, the only choice left is one between two evils—the wastes and dangers of inflation or unemployment. Which one is greater depends primarily upon the strength of the wage push and the vulnerability of the economy to inflation. The American economy, like the economies of other financially and economically highly-developed countries, is undoubtedly very vulnerable to chronic inflation, much more so than the more primitive economies of underdeveloped countries. In the U. S., the wage push (not to mention other types of cost push) is hardly strong enough to justify continuation of inflation with its mounting dangers and losses. In other countries, the scales may be weighted differently. But whatever one's judgment in this matter, one thing is clear: chronic inflation can never be the *best* policy for growth, but only the lesser evil.

Keeping all this in mind, it is not surprising that the statistical record does not show a one-to-one correlation between stable prices

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[14] In the short run, it may be possible to squeeze fixed income (not so much profits) in favor of wages.

and rapid growth. On the contrary, *a priori* one would expect to find in history periods of rising prices that are associated with higher rates of growth than certain periods of stable prices. But to repeat, it is highly significant that one does also find periods of stable or even of falling prices which are characterized by rapid growth. A more extensive study would have to pay attention to several factors other than growth and prices—especially the movement of wages, other cost items, and profits and the ups and downs of the business cycle.

It is sometimes said that inflationary wage push is good for growth because it forces entrepreneurs to invest in laborsaving machinery, to cut waste, and improve methods of production in every possible manner in order to protect their profits and not to be squeezed out of business.

This "shock theory" of high wages attributes to wage push and inflation what in reality is the result of the normal forces of competition. The inducement to expand, invent and invest, improve methods, and introduce new products, obviously depends upon profit expectations (including avoidance of losses) and profits as a source of finance (to be ploughed back). Profits (and losses) depend (given technological knowledge and the entrepreneur's abilities) upon the relation between costs and prices. Now whatever is the relation of wages (and other costs) to prices that provides the necessary profits, it evidently can be realized at a rising as well as at a stable price level. Suppose we have wage push, wages rising 8 percent per year. Suppose, furthermore, that this wage rise requires a price rise of 5 percent a year in order to provide the necessary profits as an inducement and finance for investments and improvements (the excess of the increase of wages over the rise in prices being covered by a rise in productivity). Suppose now that there is no wage push; there is then no reason whatever why the same price-cost relationship, providing exactly the same profits as finance and inducement to invest and improve, cannot be had with stable prices and wages rising 3 percent, instead of wages rising 8 percent and prices 5 percent a year.

INFLATION AND THE DEFICIT IN THE U.S. BALANCE OF PAYMENTS

ONLY TWO years ago it would have been difficult to find anyone, economist or not, who would have thought that the state of the balance of payments could in the foreseeable future become an important factor in the choice between a "little" inflation and no inflation. (It would have been conceded though that a "big" inflation, a price rise of 5 percent or more per year, after a while might cause balance of payments troubles.)

Now the unexpected has happened. The state of the balance of payments has become a matter of widespread concern. It is true that the change has not come overnight. While many, experts and laymen, were talking of a dollar shortage which was supposed to be perpetual and incurable (except by drastic measures incompatible with a free enterprise economy relying on market forces), the U. S. has been running a deficit in its balance of payments of about $1 billion in every year since 1950 (except in 1957). But in 1958 the deficit jumped to $3.4 billion and continued at $3.7 billion through 1959. The U. S. gold stock has fallen from $22.86 billion in 1957 to $19.51 billion in 1959 and short-term foreign liabilities which were at $7.12 billion in 1950 rose to $13.64 billion in 1957 and $16.11 billion in 1959.[1] The rise in foreign-owned short-term dollar balances, of which over $9 billion are held by foreign official institutions (mostly central banks) reflects the fact that the U. S. has become the world's foremost banker. Many countries hold a large part of their international reserves in dollars rather than in gold—

[1] These are all year-end figures. The facts have been much discussed and are by now so well known that we need not recount them in greater detail. The figures can be found in the *Survey of Current Business, Federal Reserve Bulletin,* and *International Financial Statistics,* and have been repeatedly analyzed, e.g., in the *Economic Report of the President* and "International Effects of U.S. Economic Policy," by E. M. Bernstein. (Study Paper No. 16, Joint Economic Committee, 86th Congress, 2nd Session, January, 1960.)

the world is on a dollar exchange standard and no longer on a gold standard.

It is generally agreed that it would be dangerous if the deficit in the U. S. balance of payments were allowed to continue for much longer at the present level, because it might undermine the confidence of the world in the soundness of the U. S. dollar and lead to a withdrawal of foreign balances in the form of gold. In view of the fact that the law requires that the currency in circulation be covered 25 percent by gold, which at present binds more than $12 billion of the gold stock, large withdrawals of gold would be a serious matter.[2]

The question that primarily interests us in this study is—what has been the role of inflation in the deterioration of the U. S. balance of payments? The answer which one often hears is that inflation has nothing to do with the external deficit on the ground that during the last five years or so prices in the U. S. have risen less, or at least not more, than in the great majority of foreign countries.

In one sense, this answer has some foundation in the facts, but is misleading; in another sense, it is entirely wrong and irresponsibly complacent. It is true that since the early 1950's the U. S. indices of wholesale prices, consumer prices, wage rates, and wage costs have not risen more than the corresponding indices in most foreign countries, with two or three exceptions—and even in the exceptional cases (Germany, Switzerland, and Belgium) the difference is rather small and depends on which base year is taken. But for certain important commodities U. S. prices have risen much faster than those in competing countries. This is especially true of steel where wage push has been especially strong. Moreover, U. S. export prices (as distinguished from the price level in general) definitely seem to have risen substantially more from 1953 to 1959 than European or Japanese export prices.

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[2] It is true that the *Federal Reserve Act* (Sec. II, par. 4) gives the Federal Reserve Board authority to suspend reserve requirements at any time for specified periods, thus making available virtually all our gold for international use. But the necessity to invoke this emergency clause might be taken as a sign of weakness.

The rapid deterioration in the U. S. trade and payments position since 1957 has to be attributed mainly to the rapid recovery of industrial Europe and Japan from war destruction and dislocation and to the fact that these countries have increasingly adopted sound financial policies which have greatly improved their competitive positions *vis-à-vis* the U. S.

From this it does not follow, however, that U. S. inflation has nothing to do with our payments position. On the contrary, it means that in view of the changed competitive position the U. S. can no longer afford even a "little" inflation without losing gold. Moreover, disinflation or at least holding the pace of inflation below that of our principal competitors is the main prerequisite for a correction of the imbalance.

Here is not the place to discuss other measures that could be taken to improve the balance—elimination of discrimination against dollar exports, larger contributions by Europe for mutual defense and for economic aid to underdeveloped countries, tied loans, and so on. The effect on the balance of payments of all these measures combined will probably be insufficient to eliminate the deficit and, at any rate, it could be easily wiped out by loose financial policies.

The position of the U. S. as the world's foremost banker and of the dollar as the world's principal reserve currency greatly increases our responsibilities. At the same time, it excludes easy solutions which would be open to others. Thus if Canada were confronted with a large deficit in her international balance she would let her dollar drop a few points and that would take care of the problem. The U. S. cannot tamper with the gold value of the dollar without committing a crass breach of the confidence of all those who have entrusted us with keeping their international reserves and without provoking an international financial crisis which would greatly weaken American leadership in the Free World. Only a radical change in the existing international payments methods and arrangements could alter this situation.

The conclusion is that, from now on not only considerations of international stability and sustained growth, but also the international position of the U. S. imperatively require that inflation be

stopped. The U. S. monetary policy is no longer exempt, as it was or many thought it was, from external restraints. Every effort must be made to avoid a serious clash between the requirements of external and internal stability. If, for example, excessive wage push and downward rigidity of wages put us in a position where only an inflationary price rise could prevent serious unemployment, we would find ourselves in a dangerous spot in view of our external vulnerability. Or, as E. M. Bernstein has pointed out, if the U. S. entered the next recession with a large deficit in the balance of payments, vigorous anti-depression policy by means of easy money, as it was practiced rather successfully in earlier postwar recessions, may be seriously hampered; for low interest rates may well induce large withdrawal of foreign funds in search of higher yields elsewhere.

All this adds to the urgency of preventing any further price rises, or still better—and safer—of working for a gradual price decline. If we maneuvered ourselves into serious balance of payments difficulties, every solution available—deflation and unemployment, trade or payments restrictions, devaluation of the dollar—would be in varying degrees painful, detrimental, humiliating, and repugnant to accepted economic principles and policy objectives.

ANTI-INFLATION POLICY

MUCH HAS been said already in the course of our analysis, explicitly or implicitly, on how to avoid, prevent, or stop inflation. It remains to pull together and summarize what has been stated or implied.

One conclusion is certain and cannot be stressed too strongly: In principle, it is always possible, in developed as well as underdeveloped countries, to manage in such a way that chronic inflation is avoided without creating prolonged and serious lapses from full employment and without endangering economic growth. This follows from classical equilibrium theory as well as from Keynesian economics. If inflation seems to become unavoidable or if, compared with practical alternatives, a policy of letting prices rise appears as the lesser evil, it is always due to faulty monetary, fiscal, and wage policies. These include: Excessive government spending; inability to tax sufficiently; impotence or unwillingness to curb labor unions and to prevent them from pressing for wage increases in excess of the average rise in labor productivity; and last but emphatically not least, lack of monetary discipline which either produces demand pull of its own or gives way to cost push and provides inflationary finance for government deficits.

The type of measure used for preventing inflation or stopping it once underway must, of course, to some extent depend on the diagnosis of what kind of inflation it is. Especially relevant is the question of whether demand pull or cost push is responsible, and, if both are involved, their relative strength.

In general, it might seem that the specific cure for demand inflation is a policy of controlling, restricting, or cutting back over-all demand by monetary and fiscal policies, while in the case of a cost-push inflation monetary and fiscal policies are out of place and measures to curb the power of labor unions or possibly to increase competition in oligopolistic industries are called for.

The problem, however, is not as simple as that suggests. Let us discuss the case of pure demand inflation first and then the case where cost push is also present.

We have seen that demand pull is more basic than cost push, because a cost-push inflation could not develop without an increase in aggregate demand.[1] Hence what is said about dealing with pure demand inflation applies also, although with certain qualifications, to cost-push inflation. These qualifications, which will be taken up, concern the desirability or necessity that measures to control or to cut back aggregate demand be accompanied or preceded by measures designed to prevent wage push and possibly to control monopoly power of firms in oligopolistic industries.

Aggregate demand depends on M and V. We have seen that a prolonged and serious inflation never has developed in the past, and is not likely to develop in the future, without a sharp rise in the quantity of money. But in the short run, changes in V may be disturbing. Velocity of circulation is, however, not subject to direct control, except by means of *comprehensive*[2] price freezing and rationing—a system of regimentation which in the United States is, and let us hope always will be, entirely unacceptable as a peacetime policy.

Aggregate demand can be controlled and, if necessary, cut back and the quantity of money can be regulated, either by monetary or fiscal policy. *Monetary* policy comprises discount rates, open market operations, and changes in reserve requirements of private banks as well as more specialized measures dealing with particular types of credit—such as stock exchange credit, real estate credit, and con-

[1] The only exception to this statement is a rise of prices while money income (MV) falls, implying severe unemployment or drop in output per head due to war destruction, bad harvests, or other catastrophes. (In the case of small countries which depend for a large part of their livelihood on international trade, a sharp deterioration of their international position, entailing a worsening of their terms of trade, constitutes an external factor.) Such cases are, however, rare and at any rate the present inflationary troubles in the U.S. are not of this nature. They will, therefore, not be further considered, although it would not be difficult to formulate policy principles for dealing with such situations.

[2] Partial price controls affect V, but do not lead to price distortions and misallocation of productive resources.

sumer credit. By *fiscal* policy, we mean variations in government expenditures and government revenues. Through developing a deficit or surplus, the government can add to, or subtract from the expenditure stream and increase or decrease the privately held quantity of money (money held by the government is usually not counted as money in circulation). Care must be taken, of course, that the changes in the public debt, implied by the existence of a deficit or surplus, are managed in such a way as not to counteract, or at least not completely to offset, the direct effects of the deficit or surplus on aggregate expenditure.

The comparative efficiency and merits of monetary and fiscal policies, in general, as well as that of specialized measures in either field, have been discussed many times and at great length.

Only a brief consideration of the salient problems from the point of view of fighting or preventing inflation is possible in this study. Since the anti-inflationary policy objective can be achieved by different measures or combinations of measures, the choice of policy must be influenced also by considerations other than that of containing inflation—considerations of long-run growth and efficiency, considerations of social justice, considerations of smoothing the short-run business cycle—considerations which partly overlap and conflict with one another as well as with the anti-inflation objective.

Monetary policy has the great advantage that measures can be initiated and changed quickly in case of need, while fiscal policy changes are subject to long delays because they have to go through lengthy parliamentary procedures. Moreover, in countries where the monetary authorities have some political independence—and to some extent this is still the case even in those western countries where the central bank has been formally nationalized [3]—monetary policy

[3] It is interesting to observe that even in western countries with Socialist governments where the central bank has been nationalized, the managers of the central bank, who were appointed by Socialist governments, usually develop "sound money" attitudes. They then try to pursue policies of tight money (often in opposition and defiance of the wishes of their governments, which appointed them, but are not always able to

is less subject to demagogic political pressures than fiscal policy.

On the other hand, it is probably true that measures of monetary policy (changes in interest rates and availability of credit brought about by discount and open-market policies) unless applied sharply and abruptly in large doses influence expenditure streams and prices slowly, with a lag, while fiscal policy measures, on the expenditure and revenue side, once they are taken, exert their influence more quickly. However, this advantage of quicker effect, of fiscal policy over monetary policy, establishes a superiority of fiscal policy only if the handicap of legislative and administrative delays in taking the respective measures has been overcome—a most serious handicap indeed. Even then this advantage of fiscal policy would be important more from the point of view of counteracting the business cycle rather than from that of the anti-inflation objective. The reason is that, while for the former objective quick decision and rapid action are of paramount importance, persistent application and not quick action counts most in preventing chronic inflation.

If the battle against inflation is to be won, monetary and fiscal policy should be coordinated. At the very least they must not be operated at cross purposes. Clearly, the anti-inflationary effect of a tight money policy can be offset by a loose fiscal policy (budget deficit) and a firm fiscal policy (a balanced or overbalanced budget) will not stop or prevent inflation, if it is accompanied by a flabby monetary policy.

This does not exclude the possibility that within limits inflationary pressure generated in one area can be offset, or more than offset, by deflationary policy in the other area. Keeping money tight for private business can mean that a government deficit will not cause a rise in prices. The opposite rarely happens but is equally possible, namely, that a tight fiscal policy (budget surplus) may provide the means for credit expansion without causing inflation.

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remove them) not essentially different from those in non-Socialist countries where the central bank is still semi-autonomous,—policies which in these non-Socialist countries are denounced by the leftist opposition, academic and political, as conservative and obsolete.

Such divergent operations, usually of the first kind, are as a rule the result of a lack of coordination, the one arm of government trying to undo the mischief done by the other. But situations may arise in which good reasons could be advanced for consciously operating the two branches of financial policy in a seemingly contradictory manner. If in an emergency the government has to increase its expenditures quickly, it may not be able immediately to raise sufficient revenue. Tightening of credit can then be employed to prevent inflation. But one should not forget that this kind of policy implies the transfer of productive resources from the private sector, that is, from productive private investment, to the government—an indirect concealed method of taxation.

The opposite case, where the inflationary effects of an easy credit policy are offset by a tight budget, is rarely encountered nowadays. If the budget surplus were produced by taxes on consumption, or still better by reducing government expenditures for useless purposes, this procedure would amount to a policy of forced saving or transfer of resources for productive purposes which could become a potent weapon of economic development, especially in underdeveloped countries. It is a pity that it is so rarely practiced.

One could discuss endlessly the relative merits of different measures in the field both of monetary and fiscal policy. To what extent should the former rely on the broad measures of discount policy, open-market operations, and regulating reserve requirements of commercial banks, and to what extent on regulating special types of credit (consumer credit, stock market credit, and mortgage credit)? Should non-bank financial intermediaries be subject to regulation? Is the bills-only policy of open-market operations justified or should the Federal Reserve operate over the whole range of maturities? Similarly, innumerable details concerning fiscal policy arise: Which of the many existing taxes and myriad of government expenditures should be changed?

No doubt many of these decisions have their bearing upon the problem of long-run efficiency and growth, short-run stability and social justice—not to mention questions of political expediency,

feasibility, and strategy. But it would be self-defeating if endless debates and inability to agree on the optimal package of anti-inflation policy—optimal from the point of view of growth, short-run stability, and social justice—should delay or prevent adoption of any effective policy against inflation, which in the long run is so inimical to these same objectives.

So far we have discussed policies against demand inflation. Combinations of monetary and fiscal, in one word financial, measures are indicated in that case. Let us assume now that there are good reasons to believe that wage push, too, is in the picture which, as we have seen, is undoubtedly the case at the present time. Although often asserted, it is wrong to say that monetary policy is of no use against that type of inflation. Monetary policy, fiscal policy, or any combination of the two that prevents expansion of demand will also prevent a price rise resulting from or intensified by wage (or other cost) increases. But it must be admitted that it will do so only at the price of permitting a certain amount of unemployment—how much depending upon the strength of the wage push. It should be observed that in this respect fiscal policy is in precisely the same position as monetary policy, which is often ignored or overlooked by the critics of monetary policy.

The ideal policy would, of course, be to remove the cost push at the source while keeping a tight rein on aggregate demand by means of financial policies. We shall presently consider what precisely is meant by removing cost push and how this aim might be accomplished. It is clearly a very difficult task which may be accomplished only gradually after long delay. In the meantime, monetary and fiscal policies must remain the first line of defense against inflation even if wage push is unquestionably present. The reasons for this statement are the following.

We cannot be sure how strong the wage push really is. Maybe only a little unemployment will be required to stop it. There is no sure way to find out other than to try. Moreover, once inflation has proceeded for a while, some transitional unemployment will result when inflation is stopped, even in the absence of a real wage push.

Hence the monetary brakes on inflation must not be released immediately when some unemployment appears. The monetary medicine must be allowed to work for a sufficient period. In addition, whatever the basic strength of the wage push, we can be sure that it is intensified (if not originally brought about) by the inflation, which it may have helped to create or at least to accelerate. Concretely, a prolonged inflation cannot fail to strengthen labor unions by giving them endless opportunities of easy though partly spurious and illusory successes. They will want to continue the wage increases after inflation has been stopped or slowed down—a habit from which they can be disabused only gradually.

But to repeat, the ideal, least painful, and least costly method of stopping a wage-push inflation—or more precisely an inflation which contains an element of wage push—is to remove the wage push at the source or at least to reduce it to innocuous proportions. If there were competition in the labor market, it would be easy to prevent inflation by monetary and fiscal policy, and with a stable price level the wage level would rise roughly in proportion to the gradual rise in average labor productivity. Or if the wage level could somehow be so manipulated as to rise in proportion to the gradual increase in average labor productivity, the price level could be maintained roughly stable without causing unemployment.

I say "roughly," because there is no guarantee that full employment equilibrium may not require slight deviations between the rise in the wage level and the rise in average productivity; in other words, between marginal and average productivity of labor. Suppose average productivity of labor (i.e., output per man-hour) rises largely because of heavy capital investment, then the *share* of labor in total output may have to go down; the equilibrium wage would still go up but not quite in proportion to the rise of output per head.

If, on the other hand, overall output and output per head rise largely in consequence of improvements in labor skills or of "capital saving" inventions and improvements, the *share* of labor in total output would go up and equilibrium wages would have to rise somewhat faster than output per head.

The fact that over many years the share of labor income in total national income has been fairly stable,[4] a phenomenon that has often been observed and commented upon, would seem to warrant the conclusion that only slight deviations between the rise in the wage level and the level of average productivity are required to maintain equilibrium at full employment. It is for this reason that we can regard a wage level which rises parallel with average labor productivity as a rough yardstick for non-inflationary wage policy.

How can the wage level be prevented from outrunning the average productivity of labor? The wage level is, of course, a highly abstract concept. It is not a policy variable, at least not in a free enterprise economy. This does not mean, however, that the problem is in any sense unreal. In practice, it reduces to the question of whether and how the power of the big labor unions can be curbed, because the big labor unions are the spearhead of the wage push. Wages and salaries of non-unionized workers and employees follow the road bulldozed by union pressure. Naturally, there are delays, but in a prolonged inflationary climate these lags tend to become shorter and shorter. Taking a broad view, it is remarkable and a tribute to the flexibility and competitive vigor of the American economy at large and the labor market in particular, how little influence union pressure seems to have on the wage and salary *structure.* Union pressure pushes up the level of money wages without causing large *lasting* distortions in relative wages and salaries.[5] (It is very doubtful on the other hand whether the *real* wage level can be influenced by union pressure.)

If union pressure on the wages of unionized workers is kept under control, no inflationary wage movements need be expected to

[4] Especially if one excludes years of deep depression and war years, the stability of the share of compensation of employees in national income is remarkable.

[5] There are, of course, exceptions. Teachers' salaries are a case in point and while they last, the distortions are painful and damaging. If demand pull is relieved by monetary and fiscal policies and the wage push is not correspondingly eliminated, the distortions caused by union wage policy will become greater than they are under inflation.

emanate from the non-unionized employees. Wages and salaries there are, of course, subject to demand pull. This means that in case demand is so controlled as to keep the price level stable, wages and salaries will be pulled up roughly parallel with average productivity; but we need not fear that an independent upward thrust from that quarter would imperil either employment or price stability.[6]

But how can union power be curbed? Some of the leading experts on labor think it just cannot be done. The late Professor S. H. Slichter, who clearly saw the dilemma posed by union wage pressure, repeatedly said that nothing could be done to curb union power to raise wages except to create an intolerable amount of unemployment, and he therefore accepted slow creeping inflation as the lesser evil. He insisted, however, that money must be kept sufficiently tight so as to prevent the price creep from becoming a trot or gallop.

We have already taken issue with the idea that it is possible to have a continuing price rise of, say, 2 to 3 percent a year without the creep tending to become a trot, whereupon a monetary or fiscal policy of holding the price rise to 2 or 3 percent a year must lead to unemployment. Let me repeat, because it is being so often misunderstood, that the issue is not whether it is likely that there will be galloping inflation in the United States. I am inclined to agree with Slichter and others that it is very unlikely that the price creep will actually become a gallop for the simple reason that the Federal Reserve will refuse to permit the large increase in the supply of money which would make galloping inflation possible. But the

[6] An impression to the contrary, namely, that wages and salaries of non-unionized personnel can exert inflationary pressure of their own, is sometimes created by delayed adjustment of such salaries to increased union wages.

The erroneous impression of an independent wage push operating in the unorganized sector of the labor market may also be created, if demand for labor happens to be strong for that kind of labor. The sharp rise in research and scientific development expenditure entailing a sharp increase in demand for certain professional workers in recent years is a conspicuous example. This is, however, in reality, a case of demand pull and not of cost push.

point at issue is another one, to wit, that as soon as the creeping inflation *tends* to accelerate beyond the creeping pace, keeping inflation to a creep by controlling demand without stopping the wage push will produce unemployment and slack.

Here I wish to make the point that Slichter's theory is highly implausible in another respect: If it is possible, even in the face of a continual price rise, as Slichter evidently assumed, to prevent wage pressure from becoming so strong as to necessitate a price rise of 4 percent per year or more—why should it be entirely impossible to do a little better so as to prevent a price rise altogther? On the other hand, if it is really impossible to prevent a wage push which necessitates a price rise of 2 to 3 percent per year, can we then be so sure that we shall be able to prevent one which necessitates a 4 or 5 percent rise of prices? The categoric statement that less than 2 or 3 percent is entirely impossible while more than 4 or 5 percent is possible, sounds highly implausible, to put it mildly.

I find it difficult to believe that our society should be unable to curb union power without resorting to measures so drastic as to be difficult to reconcile with individual freedom and free enterprise. Such drastic measures would be compulsory arbitration, government wage fixing, or splitting or dissolution of unions. At any rate, there are less extreme reforms and changes in policy which have never been tried or at any rate not persistently applied; these should be given a trial before more drastic measures are contemplated.

First, unions have acquired over the years *de jure* or *de facto* numerous immunities and exceptions which go far beyond anything accorded to business and other private associations.[7] It is difficult to believe that legal reforms restoring a more balanced power equilibrium between the parties in wage bargains, and eliminating violence and other abuses, would not have some effect in relieving inflationary wage pressure.

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[7] See the authoritative study *Legal Immunities of Labor Unions,* Roscoe Pound, American Enterprise Association, Washington, 1957; and E. H. Chamberlin, "Labor Union Power and the Public Interest" in *The Public Stake in Union Power,* edited by Philip D. Bradley, University of Virginia Press, Charlottesville, 1959, pp. 3-20.

Secondly, and probably more basic and important than legal reform, is a change in the attitude of public opinion and of all branches of the government. It should be possible to arouse public opinion to the dangers of wage inflation and to bring its weight to bear on unions which by force of crippling strike and intimidation impose inflationary wage increases on the economy. Then the aroused public opinion could force the government, in its executive as well as in its legislative branch, to pick up some courage, instead of maintaining a studious neutrality in wage bargaining and issuing platitudinous appeals to everybody to behave, or outrightly capitulating to striking unions and bringing pressure on employers to capitulate. If instead of that unions were told in no uncertain words that their wage demands are inflationary and intolerable, one could expect to observe quickly a marked tendency for moderation in wage bargains.

Is it entirely Utopian to persuade union leaders that wage increases greatly in excess of the rise in over-all productivity must drive up prices and, therefore, are, in the last resort, self-defeating and damaging to labor itself? Maybe it is Utopian to expect any results from persuasion and to make the individual unions see the problem that way. But then they have not really been told (except by the employers and a few theorists, whose arguments obviously carry little weight). If public opinion understood these simple truths and the government expressed them forcefully, it would make some impression. But it surely is necessary that argument should be backed up by monetary tightness. If monetary policy gives way as soon as a little unemployment appears, and the monetary authorities are ready to bail out by monetary expansion those who engage in inflationary wage policies, the battle of arguments cannot be won.

It will not be easy to eliminate inflationary wage pressure. But experience in foreign countries, notably in Western Germany and now also in Great Britain and France, shows that it is not a hopeless task to prevent wage inflation without creating much unemployment and checking growth. Though the task is not easy, neither should the magnitude of the problem be exaggerated. If wage inflation is prevented, real wages would increase just as much. In the long run

they would rise even faster. For setbacks and interruptions, which are the consequences of inflation, would disappear and cyclical depressions or recessions resulting from other causes than from stopping inflation in the face of wage pressure could be counteracted more quickly and vigorously by monetary and fiscal measures—if the authorities are relieved of the constant fear that by combating a cyclical depression they would give a fresh push to chronic inflation.

Fortunately, it would require only a small decrease in the rate of increase of money wages to eliminate inflationary wage pressure. It is understandable, however, that politicians are reluctant to grasp the nettle of labor-management relations in general and of labor union control in particular, that they seek refuge in side issues and hire experts to write tons of reports on all conceivable aspects and ramifications of the problem and propose minor reforms on hundreds of matters which do not go to the root of the problem, but enable the politician to stay away from the disagreeable fact of wage push. Let us, therefore, ask whether there is no way out of the dilemma other than that of curbing union power or permitting a certain amount of unemployment, probably not large, but an amount greater than would exist in the absence of inflationary wage push.

Clearly, any policy or measure that tends to increase output per head may be thought to that extent to relieve inflationary pressure by creating a larger margin for non-inflationary wage increases. Now there are many ways in which new policies, changes in policies, and last, but emphatically not least, abandonment and discontinuance of established policies can accelerate growth (output per head).[8]

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[8] It should be superfluous, but unfortunately it actually is necessary, to emphasize that when speaking of measures that may accelerate growth and so relieve inflationary pressure, we mean *non-inflationary measures.* It is impossible to relieve inflationary pressure by increased spending. It is true that it is often possible, even if we leave highly depressed periods out of account, to get a burst of higher activity by inflationary injections. But the question is how long would that activity last and what will come after. At any rate, to say that *inflation* (as distinguished from an alleged slack) can be cured or relieved by more spending, even

This is not the place to sketch a program for accelerated economic growth. But let me mention a few areas where effective action could be taken. A radical change in agricultural policy would reduce the price level and liberate annually several billion dollars' worth of resources for productive purposes, now wasted in accumulating unwanted surpluses. Large savings could be made in the Veterans' budget and possibly in defense spending. Social Security laws could be changed so as to encourage older workers to stay longer in the labor force by letting them have a part of their pensions even if they continue to work and/or letting them earn higher pensions later. Changes in tax laws to stimulate investment could have a major effect on productivity. There can be no doubt that high marginal tax rates, made more onerous by inflation, encourages waste and checks investment. Very substantial tax reductions especially in the higher brackets have greatly contributed to the phenomenal growth of German industrial production since the currency reform in 1948.

However, all these reforms are politically difficult to carry out and even if made, their effect on prices may be slow in coming (except the effect of an elimination of price supports). Suppose it were possible after a few years to raise the annual rate of output growth by 1 or 2 percent, which would be quite an achievement. This would be very desirable on several grounds, but it might not relieve the wage pressure; labor unions may get used to larger wage increases and raise their sights a little bit. If that should happen, and the chances are that it would, the basic problem of wage push would remain.

Control of profits and prices in "monopolistic" or "oligopolistic" industries will be demanded by many as a complement to a policy of curbing union power. Leaving aside questions of political strategy and expediency, nothing useful can be expected from such policies. The reason for this statement was given earlier. Since there does not exist an independent continual cost push emanating from "adminis-

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if it were for productive projects, is about as sensible as to suggest that the best method to make a drunk sober is to force whiskey down his throat!

tered" prices comparable to the wage push exerted by trade unions, there is no room in a rational anti-inflation policy for measures to prevent "mark-up inflation." Any move in that direction would only make things worse by multiplying red tape and diverting attention and effort of business managers away from the pressing problems of increasing efficiency of production and lowering costs.

Some measures in this area which have been proposed by economists as powerful antidotes for inflation and are actively sponsored by influential politicians would have opposite effects from those intended. For example, Senator O'Mahoney's plan starts from the theory that "inflation will be checked if the pricing policies of the [dominant] corporations are publicly reviewed before increased prices may be made effective" and the Senate Bill 215 of April 1959, which embodies some of O'Mahoney's ideas and has received serious consideration in Congress, provides for public hearings and investigations of large corporations whenever they want to raise prices.

Professor Machlup has convincingly demonstrated [8] that a policy which makes price increases difficult and highly embarrassing would provide the strongest possible inducement for the firms concerned to avoid price reduction. The long-run effect would be to freeze prices. In view of the fact that stability of the general price *level* requires, as we have seen, that prices of products of progressive industries and firms be reduced and be flexible downward, any policy that makes precisely these prices rigid is bound to have inflationary effects in the long run whatever may be the short-run effect at the time when the policy is first introduced.

All this does not mean that the substitution of competition for monopoly, wherever the latter exists, would not be desirable. But since the American economy is very competitive anyway, not much can be expected from an intensification of antimonopolistic policies. At best it can be regarded only as a slow-moving reform with un-

[8] See his penetrating analysis in "Another View of Cost-Push and Demand-Pull Inflation," *Review of Economics and Statistics,* May 1960, p. 138.

certain outcome. There does exist, however, a method of anti-monopoly policy, which does not involve the use of expensive bureaucratic machinery, red tape, and endless costly litigations—namely, freer trade. The rise in recent years of foreign industries competing with a long list of American industries ("oligopolistic" as well as competitive) has increased healthy competition and further weakened and made obsolete the theory of administered prices and administered price inflation.

Instead of pursuing a policy of harassing business leaders in law courts and before Congressional committees for alleged "profiteering" and monopolistic practices, it would be far better to subject them to still stronger competition from abroad by reducing barriers to imports. Reductions of tariffs and other obstacles to imports could and should be bartered for similar reductions in trade barriers in foreign countries.

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