

## CHAPTER 7

### INFLATION AND THE DYNAMIC INTERACTION BETWEEN BUSINESS AND INDUSTRY

In the preceding chapter we proposed to view the phenomenon of stagflation as arising from the dynamic process of corporate restructuring. Specifically, we suggested that, in a 'mature' capitalist economy, the differential processes of business concentration and consolidation of corporate coalitions appeared on the aggregate level in the form of chronic excess capacity, coupled with an inflationary expansion of assets and sales. The tendencies toward excess capacity and asset inflation were in turn seen as the chief reasons contributing to slower growth and rising prices. Before we could proceed to assess these hypotheses, however, it is necessary that we reexamine our basic definitions for inflation and stagflation. This is required because existing indices used to describe such phenomena are inadequate for three principal reasons.

One well-known shortcoming is the lack of reliable statistics which associate individual prices with particular sellers. From the neoclassical perspective for perfect competition, no such data are necessary. Since the commodity is assumed to be homogenous and firms to be sufficiently small, there is a single equilibrium price for all firms and this price is determined by market forces, not individual companies. Under alternative conditions, however, firms can no longer be viewed as 'price takers.' In monopolistic competition, oligopoly or monopoly, firms are 'price makers' and then it becomes important to know which firms set what prices. Unfortunately, such information is usually unavailable. Economists have tried to circumvent the difficulty by adopting some restrictive institutional assumptions. One common method, dating back to the 1930s, has been to associate the rate of price change with the corresponding industrial concentration ratios for the underlying industries. Yet, this approach is meaningful only if both 'market power' and price are so-called 'industry variables.' Otherwise, the aggregating of firms' power and prices may be highly misleading. The lack of adequate price indices for individual firms means that we also do not know very much about the output of such firms. In order to construct firm-specific indices for output we need to divide the firm's sales by its own prices, but that

could not be done since the necessary firm-specific price indices are unavailable. Given these data deficiencies, it is then clear that, while we may be able to theorize about the central role of firms in the stagflationary process, it would be much more difficult to assess that role empirically. The price and quantity statistics necessary for this purpose simply do not exist.

The appropriateness of standard price and quantity indices for structural theories is questionable for another reason. The existing indices are inaccurate to the extent to which they fail to reflect qualitative change in the nature of commodities. Although the problem of quality adjustment is well known to economists, its significance for structural inflation theories is commonly neglected or simply misunderstood. The conceptual difficulties arising in this context were dealt with at some length in Chapter 5, and it is perhaps useful to briefly reiterate them here. Ordinary price indices measure the normalized value for a given 'quantity' of commodities. When the 'quality' of commodities changes, the change has to be quantified, so as to enable an appropriate adjustment of the price index. (For example, an increase of 50 percent in quality could be interpreted as reduction of 50 percent in price.) There is a considerable literature which addresses the quality-change problem and proposes practical procedures to solve it. Unfortunately, these procedures are valid only for equilibrium situations in perfectly competitive markets. Any deviation from these strict requirements causes the quality-adjustment procedures to break down. Thus, we cannot properly quantify the extent of quality change in the nature of commodities such as automobiles, aviation services, processed food, military hardware, medical equipment, banking services or industrial machinery, simply because they are not produced and sold in perfectly competitive markets. Even in the rare cases when market conditions seem close to the ideal of perfect competition, our inability to identify the occurrence of equilibrium still constitutes an unsurmountable obstacle toward applying the quality-adjustment procedures. Finally and perhaps most importantly, the very meaning of 'quality' seems to be cloaked in mystery. Several writers have suggested that 'quality' denoted the objective characteristics of a commodity and that these should be distinguished from human preferences, or the subjective assessment of quality. There are no practical procedures to help us make this distinction, however. Given that the unclear dichotomy between the 'objective' and 'subjective' continues to haunt us since the Greek philosophers, it is questionable whether such a procedure is at all possible. These limitations are highly disconcerting. As it stands, the problem is not

that existing price and quantity indices are inaccurate but, more fundamentally, that, in the context of a modern capitalist economy, it is not clear what would constitute 'accurate' indices. Once we leave the pristine framework of the orthodox neoclassical model and move into a complex and often rapidly changing institutional setting, once we substitute collective for individual action, the power of coercion and persuasion for sovereign hedonic desires, and continuous restructuring for equilibrium and stability, there may be no meaningful basis for measuring quality-adjusted prices and quantities.

A third deficiency of existing inflation proxies stems from their exclusive focus on commodities rather than on economic processes. The common use of standard price indices, such as the Consumer Price Index or the Producer Price Index, centres our attention on the price aspect of inflation, thus serving to obscure the broader, macroeconomic interaction between 'business' and 'industry' which, in our opinion, lies at the root of inflation. This basic interaction is not reflected in existing inflation indices and new proxies are needed to explore it.

Taken together, these considerations seem to suggest that, before we can explore the empirical relationship between corporate restructuring and stagflation, we may first need to redefine the very way in which *describe* inflation. A new definition is needed for three principal reasons: firstly, so we could focus on firms rather than industries, secondly, in order to free us from the restrictive neoclassical framework of perfect competition and equilibrium and, finally, to help us understand the dynamic interaction of 'business' and 'industry' which lies at the root of inflation and stagnation.

The purpose of this chapter is to provide such a new definition and then use it to devise alternative inflation indices which hopefully will be more adequate for our own analysis. We begin the first section by contrasting the standard 'multiprice' interpretation of inflation with the alternative 'value-quantity' perspective. Based on this latter viewpoint, we propose a new, dual-variable index which reflects the inflationary interaction between 'business' and 'industry.' In the second section, we use the new definition to consider the difference between 'abnormal' stagflation and 'simple' inflation and assess whether this distinction is at all meaningful. In the third section, we broaden the scope of our examination and suggest that the inflationary interaction between 'business' and 'industry' could be

described in a variety of ways, using different combinations of variables. The fourth section seeks to compare the temporal behaviour of these new indices with the patterns recorded by standard proxies. Here we demonstrate that all different approximations -- standard and new -- reflect the same general process of inflation.

## 7.1 Inflation and the 'Business-Industry' Dimension

When economists talk about inflation, they commonly refer to a continuous increase in one or more comprehensive price indices, such as the Consumer Price Index (CPI), the Producer Price Index (PPI), or the Implicit GDP Deflator. Each of these indices measures the 'average price' (in some base units) for a given basket of commodities and it can be interpreted in two distinct ways. We can think about this 'average price' as a weighted average of numerous individual prices. This is the 'multiprice' definition for a price index. We can also view the 'average price' as a ratio between the aggregate dollar value and the aggregate quantity of commodities included in the basket. This is the 'value-quantity' definition for a price index.<sup>1</sup> Although these two definitions are mathematically equivalent, their implications for the study of inflation are drastically different.

According to the 'multiprice' interpretation, a price index is a weighted average of individual prices and, hence, the rate of inflation (at least approximately) is simply a weighted average of the rates of change of individual prices. The 'multiprice' definition indicates that inflation occurs when individual prices change but, in itself, this definition provides no insight into the economic process generating those price changes.<sup>2</sup> The 'value-quantity' definition is different. Here, the 'average price' is not a weighted average of individual prices but rather a ratio between two non-price variables: the aggregate value and

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<sup>1</sup> Note that while the precise meaning of 'weights,' 'total value' and 'total quantity' depends on the type of index being used (fixed-base, current-base, etc.), every price index has distinct 'multiprice' and 'value-quantity' interpretations.

<sup>2</sup> The value for a current-base index (like the Implicit GDP Deflator) can change even if individual prices do not change at all. This may occur if the weights of individual commodities with different prices alter from one period to the next. Such weight adjustments can affect the measured rate of inflation but their impact is commonly secondary to the combined changes in individual prices. The effect of shifting weights on the overall rate of inflation may become substantial if price *changes* for individual commodities proceed at different rates. Yet, here too, inflation remains a weighted average of individual price changes.

the aggregate quantity of commodities. Consequently, the rate of inflation appears as the difference between the rate of change of aggregate value and the rate of change of aggregate quantity, such that

$$(1) \quad (\Delta P / P) \approx (\Delta V / V) - (\Delta Q / Q),$$

where  $\Delta$  indicates first difference,  $P$  is the price index,  $V$  is aggregate value and  $Q$  is aggregate quantity.<sup>3</sup> Viewed from this perspective, inflation involves a dynamic interaction between two spheres of economic activity -- the 'business' domain and the 'industrial' realm. The rate of change of total value ( $\Delta V \div V$ ) reflects circumstances in the business domain, where commodities are *sold and bought*; the rate of change of total quantity ( $\Delta Q \div Q$ ), on the other hand, mirrors conditions which prevail in the industrial realm, where commodities are *produced*.

In referring to 'business' and 'industry' here we follow the terminology proposed by Veblen to distinguish between the material and technological framework of capitalism, which he labelled the 'industrial system,' and the social and institutional setting which was dominated by the principles of 'business enterprise' (see Chapter 6). Recall that Veblen's distinction between 'business' and 'industry' was not synonymous with the conventional neoclassical dichotomy between the 'nominal' and 'real' sectors. According to some orthodox neoclassical analysis, the material course of a capitalist economy is determined in the barter-like, 'real' sphere of activity. Output, employment, and relative prices are regulated here by the interaction of hedonic wants and technological know-how. The 'nominal' sphere of the system has little or no bearing on 'real' variables. This sphere encompasses monetary and fiscal activities of governments, the main effects of which are limited to the level of absolute prices. Veblen's framework was different. The *potential* capacity of modern capitalism was indeed determined by the scope and technological progress of the industrial system, but the *actual* course of economic events was regulated by the institutions of business enterprise. As Veblen (1904, p. 26) succinctly put it, 'Industry is carried for the sake of business, and not conversely.' This did not imply, of course, that business enterprise was somehow more 'real' or important than the industrial system; moreover, business and

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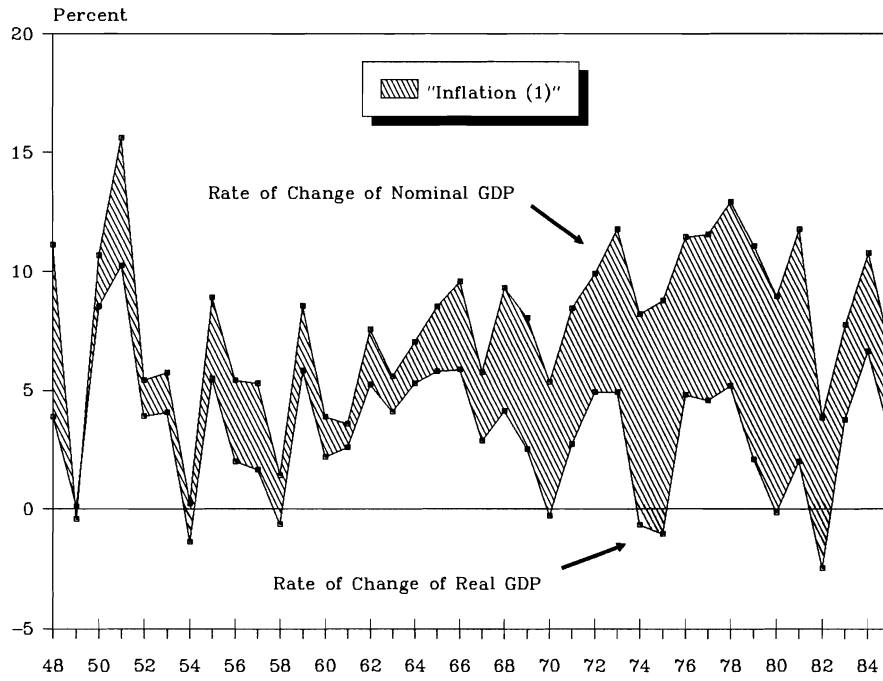
<sup>3</sup> Because it uses first differences rather than differentials, Equation (1) provides only an approximation for the rate of inflation as measured by the rate of change of the price index itself. As we demonstrate below, this approximation is quite accurate even for annual rates of change.

industry were anything but independent from each other. For Veblen, it was the contradictory *interaction* between these two spheres which determined the course of economic events.

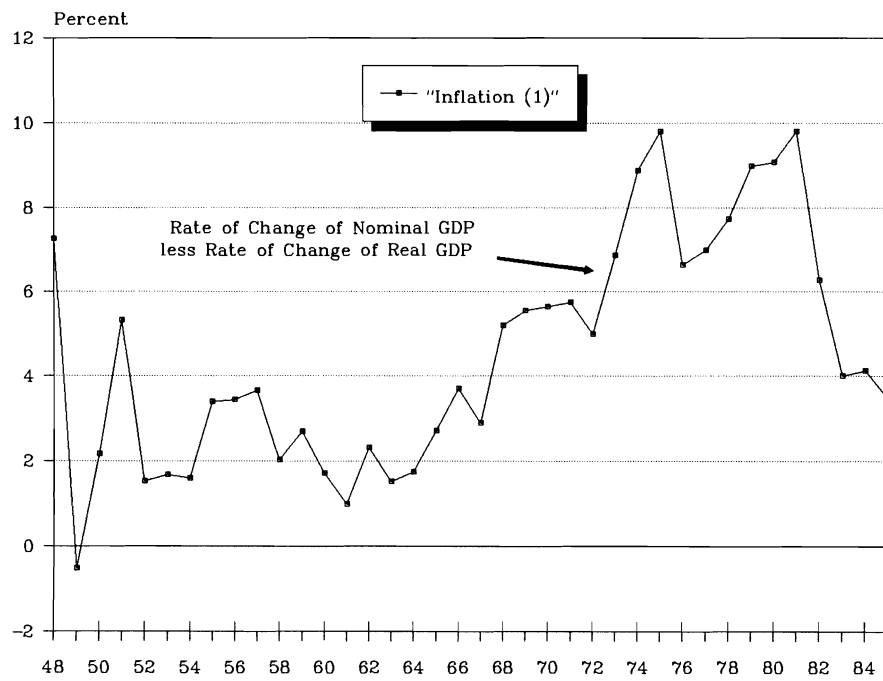
This dichotomy between the 'business' and 'industrial' spheres is useful for our own analysis of inflation. It enables us to anchor the inflationary process in both of these spheres: the rate of change of total value reflects the dynamics of business activity, the rate of change of total quantity reflects industrial conditions, and the difference between them approximates the rate of inflation. Changes in total value and total quantity need not create inflation, of course. When the rate of change of aggregate value is exactly equal to the rate of change of aggregate quantity, the rate of inflation is zero. The important point, however, is that broad price changes cannot occur *unless* there are underlying changes in the aggregate value of commodities, their aggregate quantity, or both. In other words, price inflation can arise *only* when there are underlying changes occurring in the business and industrial spheres. This interaction between business and industry is at the root of inflation. Without it, the overall price level would not change. Moreover, the inflationary interaction between business and industry is necessarily *dynamic*. The fact that the rate of inflation is continuously changing means that the difference between the rate of change of aggregate value and the rate of change of aggregate quantity is constantly changing too. So, while inflation arises from an interaction between business and industry, variations in the rate of inflation occur because the very nature of this interaction changes over time.

In order to illustrate the inflationary interaction between business and industry, we turn to Figures 7-1a and 7-1b. Figure 7-1a describes the annual rates of change of nominal GDP and real GDP for the United States over the period between 1948 and 1985 (data definitions and sources for all variables are provided in Appendix A). The difference between these two rates of change is approximately equal to the annual rate of change of the Implicit GDP Deflator and we label it as "Inflation (1)." (The double quotation marks are used to distinguish the 'value-quantity' family of indices from the standard 'multiprice' measures. The number in brackets serves to distinguish among different indices within the 'value-quantity' family.) Graphically, this difference is depicted by the shaded area in Figure 7-1a. The actual annual levels of "Inflation (1)" are charted in Figure 7-1b. A simple comparison of these two figures indicates why a single, 'composite' index such as the rate of change of the Implicit

**Figure 7-1a** The inflationary interaction between business and industry: a temporal presentation



**Figure 7-1b** "Inflation (1)"

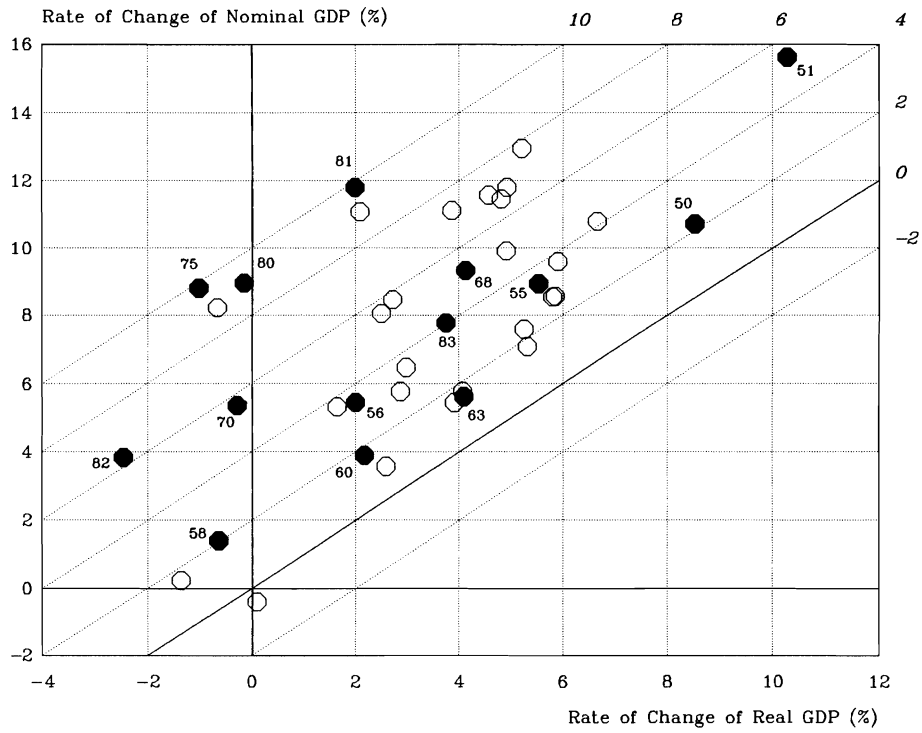


Price Index [approximated by "Inflation (1)"] is potentially too restrictive. Figure 7-1b shows that inflation remained relatively low and stable until the mid-1960s; that it increased during the late 1960s and through the 1970s; and that, subsequently, during the early 1980s, inflation experienced some decline. Yet, as it stands, Figure 7-1b tells us nothing about the underlying processes which generated this inflation. More about these processes can be learnt from Figure 7-1a which 'decomposes' the summary index into its constituent components. The data indicate that the moderate rates of inflation experienced between the late 1940s and the mid-1960s involved relatively similar growth patterns for the business and industrial spheres. This apparent synchronization broke down in the late 1960s. During the late 1960s and the 1970s, the rate of growth in the business sphere increased on an upward trend, while the rate of growth in the industrial sphere experienced a secular decline. As a result, the trend rate of inflation was positive in that period. We can also discern in that period a greater disparity in the short-run fluctuations of the two series, which serves to explain the relatively large fluctuations in the annual rate of inflation. During the mid-1980s, the two series returned to a more similar pattern of change and this explains the moderation of inflation in that period. These dynamic aspects of inflation are obscured when we use standard proxies, such as the rate of change of the Implicit GDP Deflator. The standard measures 'summarize' the business-industry interaction into a single number and, hence, serve to conceal the *dual* nature of the underlying process. To explore this double sided, ever-changing interaction of business and industry, we must decompose the standard indices into their elementary components.

The significance of this decomposition can be further clarified in reference to Figure 7-2 which provides an alternative presentation for the data charted in Figures 7-1a and 7-1b. The vertical axis in Figure 7-2 denotes the annual rate of change of nominal GDP, which we take as a proxy for changes occurring in the business sphere. The scale for this variable is charted along the vertical axis on the left. The horizontal axis denotes the annual rate of change of real GDP, which we consider as a proxy for developments in the industrial sphere. The scale for this variable is charted along the horizontal axis at the bottom of the diagram. The third variable implicit in the diagram is the rate of "Inflation (1)." This variable has an imaginary diagonal scale extending from the south-east to the north-west of the diagram. In order not to clutter the figure, we charted the scale for this variable on the north-east part of the diagram, first up along the vertical axis on the right and, then, across the top horizontal axis toward the



**Figure 7-2** The inflationary interaction between business and industry: an *isogrowth* presentation



left. (The numbers on the "Inflation" scale are italicized.) Figure 7-2 is crisscrossed with horizontal, vertical and diagonal *isogrowth* lines which we now turn to explain. (In order to facilitate the presentation, we have darkened those observations which are referred to in our illustrations.) Each horizontal line constitutes a *business isogrowth*. It is the locus of points representing the same rate of change in the business-sphere variable. For example, the observations for 1955 and 1980 lay close to the same business isogrowth of 9 percent, while the observations for 1960 and 1982 are close to the business isogrowth of 4 percent. Similarly, each vertical line constitutes an *industry isogrowth* and denotes the same rate of change in the industry-sphere variable. The observations for 1956 and 1981, for instance, share the same industry isogrowth of 2 percent, while those for 1963 and 1968 are just off the 4 percent industry isogrowth. The diagonal south-west to north-east lines are *price isogrowths*, each of which represents the same rate of "Inflation (1)." The value of each price isogrowth is simply the difference between the rate of growth of the business variable (nominal GDP) and the rate of growth of the industry variable (real GDP). For example, in 1983, the rate of growth of nominal GDP was 7.7 percent while the rate of growth of real GDP was 3.7 percent. Consequently, the rate of "Inflation (1)" amounted to 4 percent and, indeed, the observation for 1983 rests on the price isogrowth of 4 percent.

As Figure 7-2 makes clear, a given rate of inflation can be generated by different underlying conditions in the business and industrial spheres. Consider for example the observations for 1950 and 1958. The rate of "Inflation (1)" in the two years was almost the same: 2.2 percent in 1950 and 2.0 percent in 1958. The underlying business and industrial conditions, however, were drastically different. In 1950, both the business sphere and the industrial sphere experienced vigorous growth rates, with nominal GDP rising by 10.7 and real GDP increasing by 8.5 percent. The year of 1958, on the other hand, was marked by a relative stagnation in the business sphere, where nominal GDP increased by a mere 1.4 percent, and a serious recession in the industrial sphere, where real GDP dropped by 0.6 percent. Another example is provided by examining the moderate inflationary experience of 1951 and 1970. In 1951, both the business and industrial spheres were booming, with nominal GDP rising at an annual rate of 15.7 percent and real GDP growing at a pace of 10.3 percent per annum. The resulting figure for "Inflation (1)" was 5.3 percent which is very close to the rate of 5.6 experienced in 1970. In 1970, however, neither sphere was booming. Instead, nominal GDP rose at a moderate rate of 5.3

percent, while real GDP actually declined by 0.3 percent. Finally, even a very rapid inflation can arise from drastically different conditions prevailing in the business and industrial spheres. In 1975, for example, the rate of "Inflation (1)" reached 9.8 percent because an 8.8 percent rate of growth for nominal GDP was accompanied by a drop of 1.0 percent in real GDP. In 1981, the rate of "Inflation (1)" was also 9.8 percent but, this time, it arose because nominal GDP rose by 11.8 percent and real GDP increased by a modest 2.0 percent.

Milton Friedman, in his well-known assertion, proclaimed that 'inflation is always and everywhere a monetary phenomenon.' This statement, we maintain, is only partially correct. 'Monetary' phenomena occur in the business sphere and, in this sense, inflation is indeed always and everywhere a monetary phenomenon. Yet inflation involves changes in the industrial sphere as well, and, hence, it must also be always and everywhere a 'real' phenomenon. In order to describe inflation we must consider 'monetary' as well as 'real' variables. For instance, in both 1955 and 1980, the U.S. experienced the same rate of growth for the nominal GDP (8.9 percent), yet, in 1955, the rate of inflation was only 3.4 percent, whereas in 1980 it was almost three times higher, at 9.1 percent. Obviously, this disparity could not be explained by differences in the rate of growth of nominal GDP. Instead, it was wholly attributed to the different rates of growth experienced in the industrial sphere: in 1955, real GDP grew at a rate of 5.5 percent, while in 1980 it fell by 0.2 percent. As evident from Figure 7-2, the 'monetary' variable of the business sphere is constantly changing, but so too is the 'real' variable of the industrial sphere. Over the period between 1948 and 1985, the growth rate of nominal GDP fluctuated between -0.4 and 15.6 percent, while the growth rate of real GDP varied between -2.5 and 10.3 percent. In light of this historical experience, the notion that nominal changes have been somehow more 'important' for inflation than real changes, appears unwarranted. Moreover, even when the rate of change of one variable is larger than that of the other, the difference between them provides no indication of their relative 'importance' for inflation. To illustrate this point, consider the observation for 1980, when the rate of change of nominal GDP was 8.9 percent, while the rate of change of real GDP was -0.2. Could we argue that, on the basis of this information, inflation in 1980 was largely a 'nominal' phenomenon and hardly a 'real' one? The answer to this question, we believe, is negative. Inflation in 1980 amounted to 9.1 percent, not only because nominal GDP increased at the rate of 8.9

percent, but also because the rate of change of real GDP was *only* -0.2. In this case, the rate of change of real GDP contributes to inflation by being 'too low.' More generally, a 'low' real rate of growth affects the rate of inflation to no lesser extent than a 'high' nominal rate of growth. For inflation, the 'physical' magnitudes of the industrial sphere are neither less important nor more important than the 'monetary' magnitudes of the business sphere. Since the rate of inflation is equal to the difference between the rate of change of a monetary variable and the rate of change of a real variable, both of these variables are essential aspects of the inflation process. In this sense, we can say that 'inflation is always and everywhere a nominal as well as real phenomenon.' There is nothing 'theoretical' about this claim. It is a simple logical corollary of the 'value-quantity' perspective for inflation. Taking this conclusion one step beyond the narrow and perhaps misleading 'nominal-real' dichotomy, we can state more broadly that *inflation is always and everywhere a dynamic interaction between business and industry.*

## 7.2 Inflation or Stagflation?

A dual index which anchors inflation in both business and industry provides a convenient way to explore the meaning of 'stagflation.' As it turns out, economists who use the 'multiprice' definition tend to characterize the occurrence of inflation differently from the way they portray the phenomenon of stagflation: the first is usually described with a single type of variable (a price index), while the second appears to necessitate two types of proxies (a price index and an indicator for industrial conditions). This taxonomical difference disappears when we follow the 'value-quantity' framework for inflation. Here, the dynamics of industry are seen as an *integral* part of inflation and, hence, a description of inflation includes, by definition, a description of industrial conditions -- irrespective of whether industry declines, stagnates, or prospers. Unlike the standard, 'multiprice' view for inflation, the 'value-quantity' definition makes no *a priori* distinction between different 'kinds' of inflation and that forces us to reexamine what is meant by 'stagflation' as opposed to 'normal' inflation. As we demonstrate below, there may be no simple answer to this question, primarily because the *definitions* for inflation and stagflation are commonly biased by theoretical views on their separate *causes*.

According to the data presented in the previous section, the post-war era between 1948 and 1985 was characterized by persistent inflation. Indeed, in every year -- with the sole exception of 1949 -- the rate of "Inflation (1)" was positive. The data also indicate that, in most of those years, inflation involved a positive rate of growth in both the business and industrial spheres. The observations for such years lay to the right of the zero *industry-isogrowth* in Figure 7-2. In several years -- notably 1954, 1958, 1970, 1974, 1975, 1980 and 1982 -- inflation resulted from an expansion in the business sphere coupled with a *contraction* in the industrial sphere. Observations for those years are charted to the left of the zero *industry-isogrowth* in Figure 7-2. It is common to label this second brand of inflation as 'stagflation,' denoting a combination of *stagnation* and *inflation*. Interestingly, there is no special name for the first type of inflation, that which occurs during periods of real growth. With the possible exception of Sidney Weintraub (1978), economists rarely refer to this brand as 'growthflation.' They simply call it inflation. This asymmetry involves more than semantic negligence. It seems to be rooted in the bias of mainstream macroeconomics toward demand-pull theories for inflation. According to such theories, growth inflation is the 'normal' form of inflation and, hence, does not deserve any special qualification. Inflation becomes 'abnormal' only when it persists in the presence of stagnation. This brand of inflation is anomalous and deserves a special name, stagflation.

What makes inflation in the midst of stagnation so special as to require exclusive terminology? According to mainstream economic theory, price movements are governed by the laws of supply and demand. In the macroeconomic context, the overall price level should fall when aggregate supply exceeds aggregate demand, in other words, when there is 'excess aggregate supply' or 'deficient aggregate demand.' The problem is that excess supply or deficient demand are based on notional functions and, hence, their magnitudes cannot be observed. One common solution is to substitute the rate of growth of real GDP as a proxy for excess supply or excess demand and then argue that inflation in the midst of stagnating output is abnormal because stagnation signifies the presence of deficient demand. But then the question arises as to what is meant by 'stagnation'? When can we say that the economy is 'stagnating' in the sense of experiencing excess aggregate supply? Specifically, what rate of growth indicates excess supply and what rate of growth is associated with excess demand? Since excess supply (or excess demand) cannot be observed, the answer to such questions must be arbitrary.

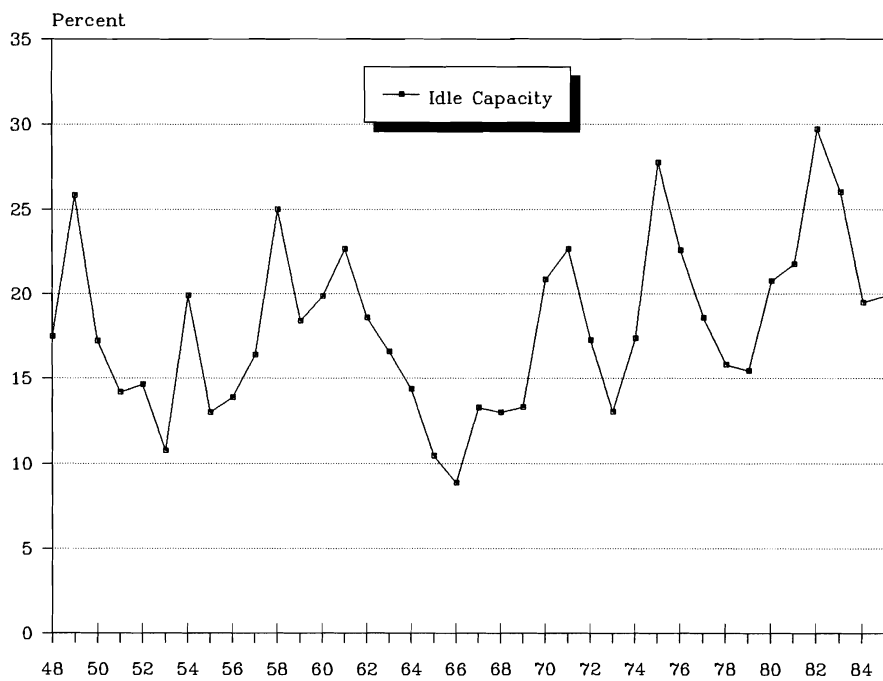
Parkin and Bade (1986, p. 618), for example, define stagflation as a combination of rising prices and falling output. According to their definition, the United States experienced stagflation only when real GDP fell, that is, in 1954, 1958, 1970, 1974, 1975, 1980 and in 1982. The choice of zero growth as the threshold between inflation and stagflation is not unanimously accepted, of course. Baumol, Blinder and Scarth, for instance, offer a different view. According to their basic textbook (1986, p. 83), 'stagflation is inflation that occurs while the economy is growing slowly ("stagnating") or having a recession.' The difficulty with this definition is that we do not have a clear yardstick to distinguish 'slow' from 'rapid' growth. If a real rate of growth of 2 percent is 'slow,' then 1957, 1960 and 1981 must also be classified as stagflationary years. If we consider anything lower than 3 percent as a 'slow' rate of growth we should also add 1956, 1961, 1967, 1969, 1971, 1979 and 1985 to the list of stagflationary years. The question, of course, is where do we stop? Should we decide on 2 percent as the proper threshold, or should we pick a higher figure like 3, 4 or perhaps 5 percent as a more appropriate benchmark?

The issue is complicated further when we consider other proxies for 'stagnation,' such as the rates of unemployment or idle capacity. When the term 'stagflation' was first coined by Samuelson (1974, p. 801), it was used to describe an 'inflationary rise in prices and wages at the same time that people are unable to find jobs and firms are unable to find customers for what their plant can produce.' Taken literally, this definition means that the United States experienced stagflation throughout the post-war era! That becomes evident when we inspect the data charted in Figures 7-3a and 7-3b. The first of these figures describes annual levels for the overall rate of unemployment. As the data indicate, the average rate of unemployment over that period was 5.7 percent and it never fell below 3 percent. A similar picture of persistent stagnation emerges from Figure 7-3b which depicts annual levels for idle capacity as a percent of total manufacturing productive capacity. (We use the manufacturing series because data for broader aggregates are available only from 1967 onward. The temporal behaviour of these later data is almost identical with that of the manufacturing series.) The average rate of idle capacity over the 1948-1985 period was 18.1 percent and only once did it fall below a level of 10 percent.

**Figure 7-3a Stagnation: unemployment**



**Figure 7-3b Stagnation: under-capacity utilization**



An unbiased layman inspecting Figures 7-3a and 7-3b would probably conclude that the United States indeed suffered from a permanent state of stagnation. On the basis of these evidence, he or she might also infer that inflation in the midst of unemployment and under-capacity utilization was rather normal. There would be no need for a special term such as ‘stagflation’ because there seems to be nothing special about the concurrence of stagnation and inflation. On the other hand, the layman might be surprised to observe an occurrence of inflation *without* unemployment and idle capacity. Such anomaly would surely deserve a special name. The layman might then wish to call it ‘full-empflation’ (for full-employment inflation), or ‘full-capflation’ (for full-capacity inflation).

This perspective would have been completely consistent with the views expressed by Veblen, who argued that a combination of stagnation and inflation in fact became the ‘normal’ state of the U.S. economy already by the turn of the century! Interestingly, this claim seems to be supported by available data. During the decade of the 1910s, for example, the Producer Price Index increased at an average annual rate of 8.1 percent, while the official rate of unemployment fluctuated around an average of 5 percent. By comparison, during the ‘great stagflation’ of the 1970s, the average rates for these same variables were only marginally higher, standing at 8.4 percent for inflation and at 6.2 percent for unemployment.<sup>4</sup> In other words, if we accept Samuelson’s original definition, we must conclude that ‘stagflation’ is not only a ‘normal’ phenomenon, but also that it is almost a century old.

The majority of economists, however, would probably reject this straightforward interpretation as overly simplistic. Most would simply disagree that the United States experienced over three decades of uninterrupted stagflation since the late 1940s, or that the phenomenon has made its early debut already at the turn of the century. The common opinion seems to be that a combination of inflation and low unemployment does not constitute stagflation. In order to have stagflation, inflation must persist together with *serious* unemployment. Bronfenbrenner (1976, p. 226), for example, argues that stagflation occurs when ‘the price level is rising despite the existence of substantial unemployment.’ Similar definitions for stagflation are found in Bowles and Edwards (1985, p. 348) and in Haberler (1985, p. 1),

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<sup>4</sup> These figures are computed from data published by the U.S. Department of Commerce in *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series D86, p. 135 and Series E23, p. 199, and from *Citibase* (1990), Series PW, p. V-1-3 and Series LHUR, p. IX-1-6.



who stress 'high' unemployment, in Meade (1982, p. 1) and Sherman (1986, p. 536), who emphasize that unemployment must be 'heavy' and in Olson (1982, p. 3), who refers to 'unusual' unemployment levels as a precondition for stagflation. The question arising from these definitions concerns the operational meaning of 'serious,' 'high,' 'heavy' or 'unusual' unemployment. What differentiates 'unusual' from 'usual' unemployment? When do we move from a 'low' range of unemployment into the 'high' zone? What separates 'light' from 'heavy' unemployment? What rate of unemployment is sufficiently 'serious' to turn normal inflation into abnormal stagflation?

Here, too, the answer seems related to views about the impact of excess demand on inflation. Many mainstream economists attempted to address this question by identifying the 'natural rate of unemployment' as a border line separating low from high unemployment. Unfortunately, this choice is not very practical. As we argued in Chapter 2, the 'natural rate of unemployment' depends on the theory used to *explain* stagflation and, hence, cannot be used to *define* the phenomenon at the same time. Moreover, studies on the natural rate of unemployment seem to suggest that this rate has been constantly rising. This would mean the definition of stagflation must be changing as well. For example, during the 1950s, the occurrence of inflation together with a rate of unemployment of 5 percent would constitute a stagflation, because the 'natural rate of unemployment' was reputedly lower than 5 percent. During the 1970s, however, this same combination of inflation with 5-percent rate of unemployment would not be classified as stagflation because the 'natural rate of unemployment' has presumably risen above 5 percent. The difficulty is even greater for non-orthodox economists, since their rejection of the 'natural rate' thesis leaves them with no conceptual way of distinguishing 'normal' inflation from 'abnormal' stagflation.

The standard taxonomy of inflation appears to be interwoven with theoretical predispositions concerning the causes for inflation which, in turn, affect our choice between the 'multiprice' and 'value-quantity' frameworks. By using the 'multiprice' approach, we explicitly or implicitly presuppose that changes in the industrial sphere (the so-called 'real' economy) are *exogenous* factors. Inflation is seen as a process of price revaluation and, in that context, changes in output, unemployment or under-capacity utilization can only help us to *explain* inflation, but not to *describe* it. Thus, as long as

these industrial conditions appear to be consistent with our theoretical dispositions, inflation is regarded as 'normal' and its description requires no reference to industry. It is only when the effect on inflation of industry seems contrary to our theoretical expectations -- for example, when inflation persists although industrial performance has dropped below some 'critical' level -- that we feel compelled to complement the inflation index with a proxy for industrial activity and label the outcome as 'stagflation.'

In contrast to the 'multiprice' view, the 'value-quantity' definition states that inflation is a dynamic interaction between the business and industrial spheres. From this perspective, changes in the industrial sphere are seen not so much as a potential *cause* for inflation but, more profoundly, as *part* of the inflationary process. Based on this view, the very narrative of inflation requires an explicit description of industrial conditions. This need to always describe both the industrial and business components of inflation may lead us to conclude that 'stagflation' is in fact a rather superfluous term. If we follow Veblen and argue (as we have done in Chapter 6) that the expansion of business values and the stagnation of industry are two sides of the same inflationary process, and that this double-sided process stems from the internal dynamics of 'mature' capitalist economies, then there is very little reason to talk about 'stagflation' as some unique form of inflation. Since inflation always appears as stagflation, the relevant issue is no longer the *coexistence* of price inflation and industrial stagnation, but rather the *nature and magnitude* of the stagnation component in the inflationary process. The stagnationary essence of inflation, which is sometimes blurred by the common use of output growth to approximate industrial conditions, becomes more apparent when we focus on input-related indices, such as changes in employment, unemployment or idle capacity. We turn to such proxies in the following section.

### **7.3 The Inflationary Interaction Between Business and Industry: Alternative Perspectives**

From the common 'multiprice' perspective, inflation is a narrowly defined phenomenon of changing prices. From the 'value-quantity' perspective, however, price inflation is only a consequence of a broader process, namely, the dynamic interaction of business and industry. Initially, we analyzed this interaction by contrasting the rate of growth of nominal GDP as a proxy for business conditions, with the rate of growth of real GDP as an indicator for industrial conditions. These variables were convenient

because their interaction approximated the rate of change of the Implicit GDP Deflator. Yet, if our interest is in exploring the underlying essence of inflation, namely, the interaction between business and industry, we need not confine ourselves to price-related indices and may use other variables. A broader definition for the rate of "Inflation" could hence be given by

$$(2) \quad \text{"Inflation"} = \text{'business-sphere' variable} \pm \text{'industry-sphere' variable} .$$

For example, instead of the rate of change of nominal GDP, we could use the rate of change of corporate sales as a proxy for business conditions. We may similarly wish to characterize changes occurring in the industrial sphere by using variables other than the rate of change of real GDP, particularly when we want to assess the extent of stagnation in that sphere. For this purpose we could use variables such as the rate of change of employment, the rate of unemployment, or the rate of idle capacity (under-capacity utilization). These input-related variables may provide a better indication than output-related proxies (such as real growth) on the extent to which industry operates below its full potential. Note that, while pro-cyclical 'industry' variables, such as the rate of change of real GDP or the rate of change of employment, are subtracted, counter-cyclical variables, such as the rate of unemployment or the rate of idle capacity should be added.

As suggested in the introduction, there may be several advantages in broadening the scope of inflation indices. First, the substitution of other industry variables for 'real' output enables us to bypass the methodological difficulty of quality adjustment. Recall that, in order to derive meaningful estimates of 'real' output, we must first correct the corresponding price indices for quality -- but that such corrections can be meaningful only under the very unrealistic assumptions of pure competition and continuous equilibrium. The interpretation of existing estimates of employment, unemployment, or capacity utilization, on the other hand, is much simpler and requires fewer assumptions about underlying market mechanisms.<sup>5</sup> Second, the new indices could be useful in associating inflation and its

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<sup>5</sup> This assessment requires some elaboration. Employment indices can be interpreted in different ways. When considered as an input, employment services undergo a continuous qualitative change and must be adjusted if we are to obtain meaningful labour-input indices. On the other hand, if we think about employment simply as the number of employed persons, then there is no need for any quality adjustment. A similarly straightforward numerical interpretation is clearly meaningless for a 'real' output index. The rates of unemployment and capacity utilization can also be interpreted in a simple manner.

consequences with particular firms, or groups of firms. Data on firm sales and employment are often available and we use them later in our work to construct enterprise-based indices for "Inflation." A corresponding disaggregation is not available for standard price and inflation statistics. Finally, the new indices enable us to explore more than one aspect of the inflationary interaction between 'business' and 'industry,' something we cannot do with existing inflation proxies. The significance of this last point is considered further below.

Note that each of these variables offers a distinctly different description for business or industry conditions. No single variable can fully capture the aggregate state of the business sphere and there is no unique representation for overall conditions in the industrial sphere. Nominal GDP, for example, covers only final sales, whereas corporate sales include revenues from the sale of both final and intermediate commodities. On the other hand, nominal GDP includes the activities of unincorporated businesses and the government, as well as changes in firms' inventories -- items which are excluded from estimates of corporate sales. As a proxy for broad business conditions, the rate of change of nominal GDP is neither superior nor inferior to the rate of change of corporate sales. They are simply different. For the same reason, we should not interpret the rate of change of employment, the rate of unemployment, or the rate of under-capacity utilization as approximations for the rate of change of real GDP. Each of these variables offers a distinct, perhaps equally significant, indication of industrial conditions.

The inability to capture broad business or industrial conditions by the movements of a single index implies that we need more than one description for inflation. The interaction between the rate of change of nominal GDP and the rate of change of real GDP is one way to describe this process, but this portrayal is neither the only one nor the 'best' one for that matter. The inflationary interaction between business and industry has many additional faces and we examine some of them in the remaining of this section.

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Being ratios of similar variables, (unemployed as a share of the labour force, actual output as a share of potential output), the values for the rate of unemployment or the rate of capacity utilization are pure numbers. The measurement of the underlying variables could be complicated by methodological difficulties, but to the extent that these difficulties affect the numerator and denominator in the same way, the effect on the accuracy of the final ratio may be less serious.

Our exposition involves several indices. There are 2 variables to represent business conditions and 6 variables to reflect industrial conditions. These variables are combined to create 8 different measurements for inflation which can be arranged in two broad groups: those that relate to the economy as a whole (including the public sector), and those which are restricted primarily to the private sector. The definitions for the composite indices are given below:

#### 'Economy-Wide' Indices

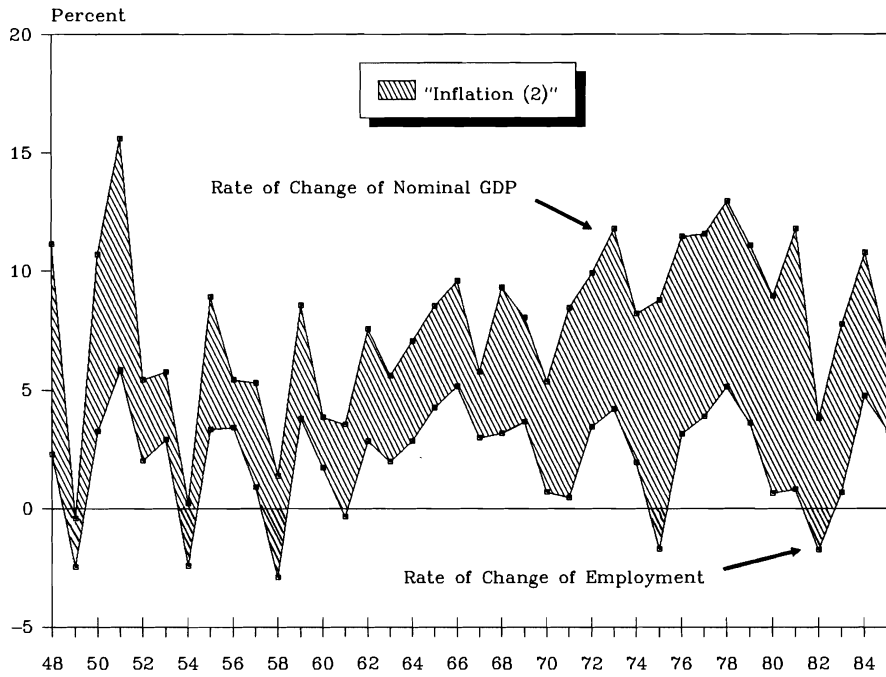
- "Inflation (1)"  $\equiv$  Rate of change of nominal GDP – Rate of change of real GDP
- "Inflation (2)"  $\equiv$  Rate of change of nominal GDP – Rate of change of employment
- "Inflation (3)"  $\equiv$  Rate of change of nominal GDP + Rate of unemployment
- "Inflation (4)"  $\equiv$  Rate of change of nominal GDP + Idle-capacity index

#### 'Private-Sector' Indices

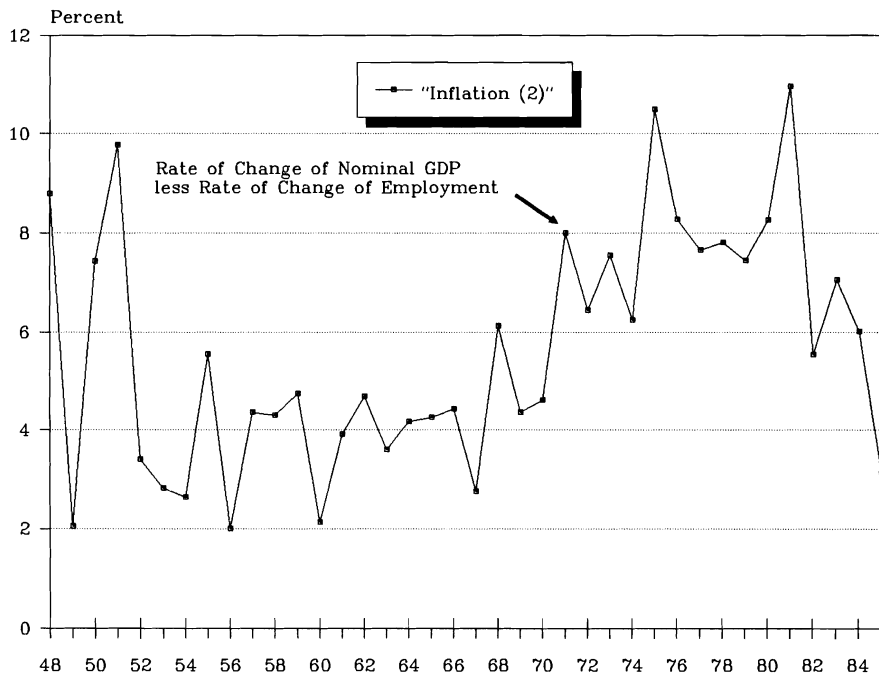
- "Inflation (5)"  $\equiv$  Rate of change of corporate sales – Rate of change of real private GDP
- "Inflation (6)"  $\equiv$  Rate of change of corporate sales – Rate of change of private employment
- "Inflation (7)"  $\equiv$  Rate of change of corporate sales + Rate of change of unemployment
- "Inflation (8)"  $\equiv$  Rate of change of corporate sales + Idle-capacity index

We turn first to 'economy-wide' indices. All "Inflation" indices in this group use the rate of change of nominal GDP as a proxy for business conditions. The indices differ from each other in the variables used to represent industry conditions. "Inflation (1)" which uses the rate of change of real GDP as an industry variable was already described in the previous section. The construction of the second index is described by reference to Figures 7-4a and 7-4b. These trace the interaction between the annual rate change of nominal GDP and the annual rate of change of employment over the period between 1948 and 1985. The top line in Figure 7-4a indicates the rates of change for nominal GDP as before, and the bottom line charts the rates of change for employment. Given that the first variable is a proxy for business conditions and the second variable is a proxy for industrial conditions, the difference between them provides an index for the rate of inflation which we label as "Inflation (2)." The rate of "Inflation (2)" is described by the shaded area in Figure 7-4a and its actual values are charted in Figure 7-4b.

**Figure 7-4a** Nominal GDP growth, employment growth and "Inflation (2)"



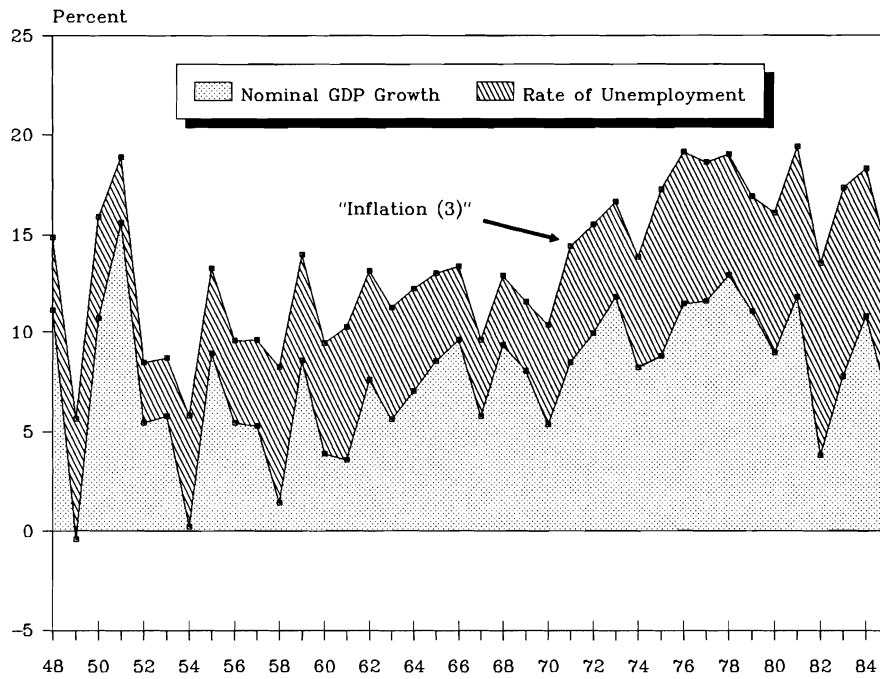
**Figure 7-4b** "Inflation (2)"



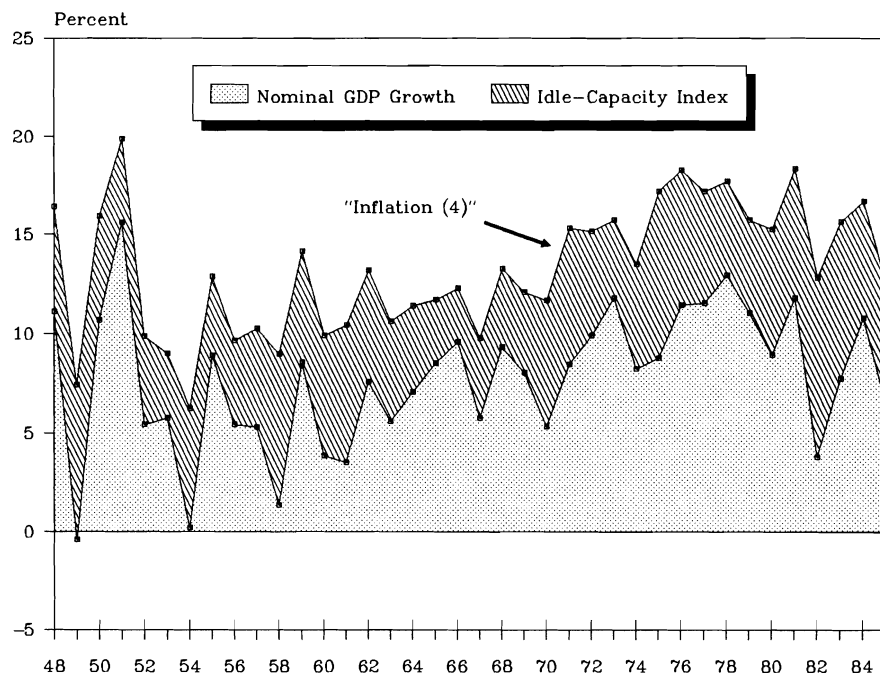
In Figure 7-5 we characterize inflation by using the rate of change of nominal GDP as a proxy for business conditions and the rate of unemployment as a proxy for industrial conditions. Here, too, we employ annual data for the period between 1948 and 1985. In contrast to the rate of growth of real GDP and the rate of growth of employment, the rate of unemployment is an 'inverse' proxy for industrial conditions: it rises with industrial stagnation and falls with industrial expansion. We hence propose that, in order to find the rate of "Inflation" in this context, the rate of unemployment should be *added* to the rate of growth of nominal GDP. In Figure 7-5, the rate of growth of nominal GDP is depicted by the lower shaded area, while the rate of unemployment is described by the upper shaded area. The sum of these two indices yields the rate of "Inflation (3)" which is charted as the top line in the figure.

A similar index for inflation is derived in Figure 7-6, where we chart the rate of growth of nominal GDP together with a special index for idle capacity. Idle capacity denotes the percent of unused capacity in manufacturing as reported by the Board of Governors of the Federal Reserve System. We use the manufacturing variable because comparable estimates for the economy as a whole are not available, while estimates for total industry (manufacturing, mining and utilities) are available only since 1967. (It should be noted that, over the 1967-1985 period, the idle-capacity indices for manufacturing and total industry were almost identical, both in their levels and in their temporal behaviour. It is not unreasonable to conjecture that the economy-wide index for idle capacity followed a similar pattern.) Like the rate of unemployment, the rate of idle capacity is also an 'inverse' indicator for industrial conditions and, hence, should be added to rate of growth of nominal GDP. Yet a simple sum of a business-sphere variable and the rate of idle capacity is perhaps inadequate as a proxy for "Inflation." The problem arises because the order of magnitude of idle capacity appears to be 'too' high relative to other variables for industry conditions. (In general, the magnitude of industry variables is somewhat lower than the magnitude of corresponding business variables. The magnitude of idle capacity, however, is much higher.) An "Inflation" index based on a simple sum of the rate of growth of nominal GDP and the rate of idle capacity would hence tend to 'overstate' the importance of industrial changes relative to business changes, at least when compared to other indices for "Inflation." We can overcome this difficulty by creating a modified, 'scaled-down' index for idle capacity. Our definition for this new index is based

**Figure 7-5** Nominal GDP growth, unemployment and "Inflation (3)"



**Figure 7-6** Nominal GDP growth, idle capacity and "Inflation (4)"

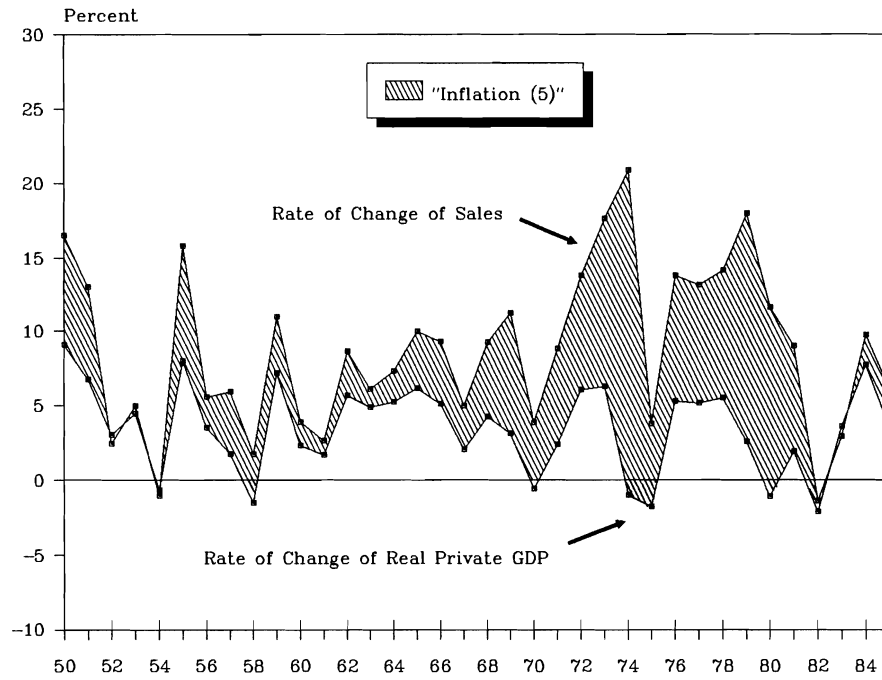




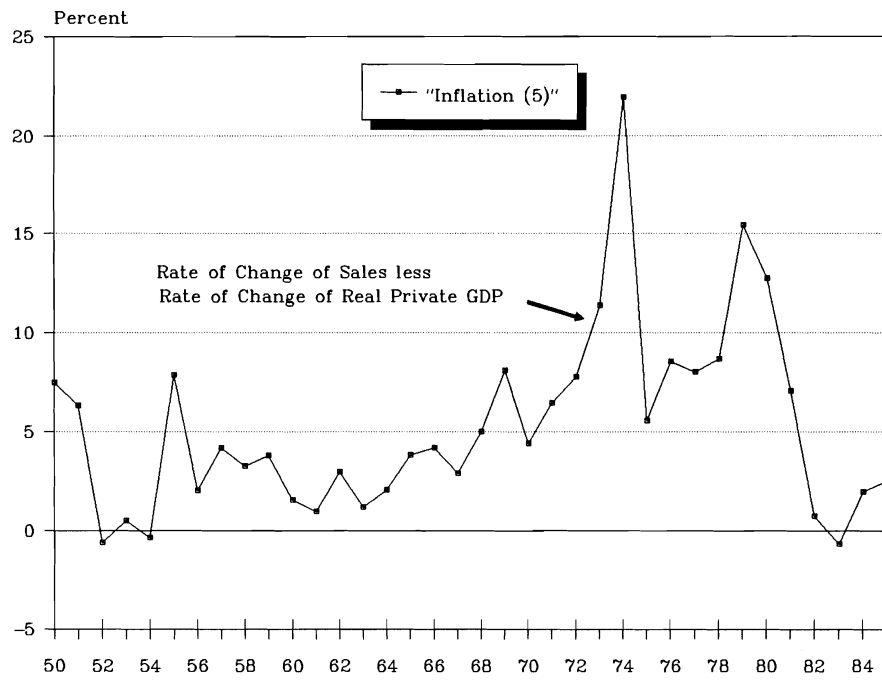
on a comparison between idle capacity and the rate of unemployment from 1948 until 1985. Over that period, the two indices were highly correlated though their orders of magnitude were different: the average rate of unemployment was 5.5 percent, while the average rate of idle capacity was 3.3 times higher at 18 percent. Based on these observations, we construct a special idle-capacity index by dividing the actual rate of idle capacity by a factor of 3.3. The new index retains the temporal fluctuations of actual idle capacity, yet its order of magnitude is similar to that of the rate of unemployment and it no longer 'overwhelms' variations of the business-sphere variable. (The use of this new idle-capacity index as a proxy for industrial conditions is of course arbitrary to some extent but, for that matter, so is the use of actual idle capacity, the rate of unemployment, the rate of growth of employment, or the rate of growth of real GDP.) We define "Inflation (4)" as the sum of the rate of growth of nominal GDP and the idle-capacity index as computed above. These variables are charted in Figure 7-6, where the lower shaded area denotes the rate of growth of nominal GDP, the upper shaded area represents our idle-capacity index and the top line designates the rate of "Inflation (4)."

We now turn to the second set of 4 "Inflation" indices. These indices relate primarily to the private sector and all of them contain the rate of change of corporate sales as a proxy for business conditions. Figures 7-7a and 7-7b present annual data for the rate of change of corporate sales, the rate of change of real private GDP and the rate of "Inflation (5)" over the period between 1950 and 1986. (We use private rather than total GDP in order to better match the index of corporate sales.) In Figure 7-7a, the rates of change of corporate sales and the rates of change of real private GDP are charted as two separate lines. The rate of "Inflation (5)," defined as the difference between these two variables, is depicted by the shaded area. The actual values for "Inflation (5)" are plotted in Figure 7-7b. In Figures 7-8a and 7-8b, we contrast the annual rates of change of corporate sales with the annual rates of change of private employment (excluding agricultural) for the period between 1950 and 1986. "Inflation (6)" is defined as the difference between these two variables. As before, the business and industry variables in Figure 7-8a are denoted by distinct lines, while the rate of "Inflation (6)" is indicated by the shaded area between them. The values for the latter variable are charted separately in Figure 7-8b.

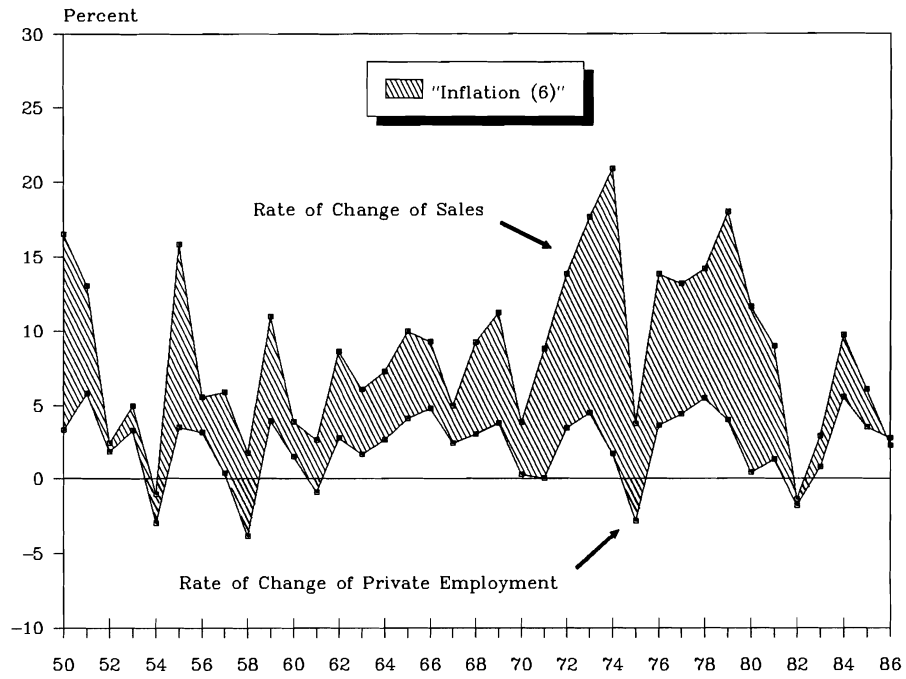
**Figure 7-7a** Sales growth, real private GDP growth and "Inflation (5)"



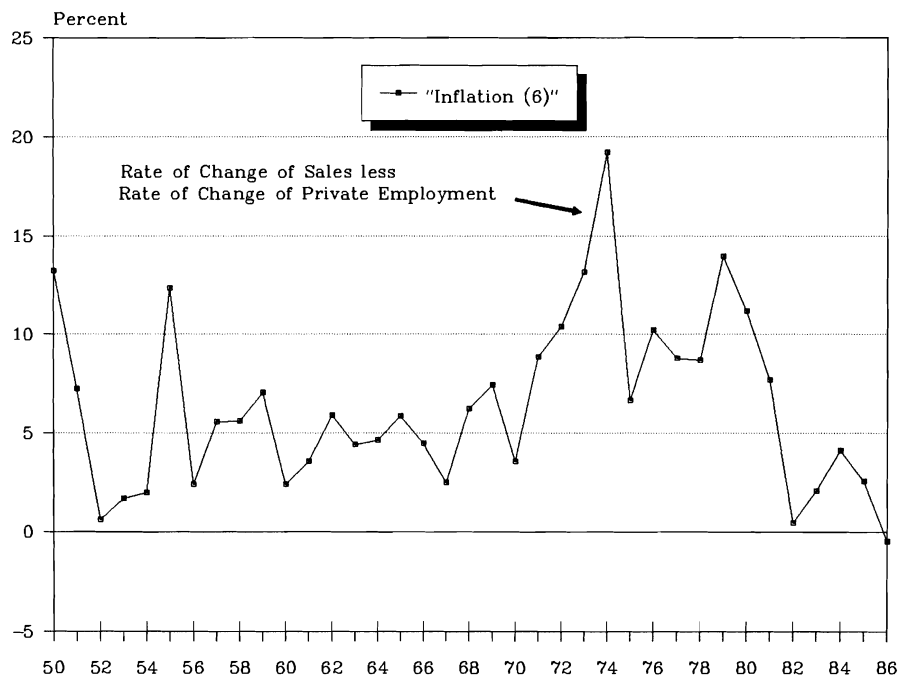
**Figure 7-7b** "Inflation (5)"



**Figure 7-8a** Sales growth, private employment growth and "Inflation (6)"



**Figure 7-8b** "Inflation (6)"

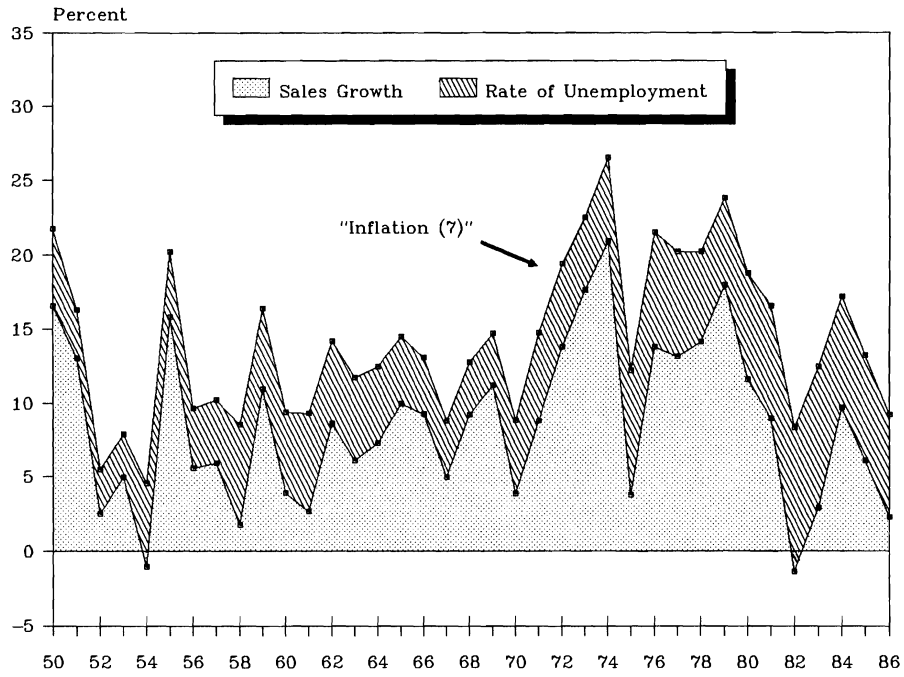


The following two figures combine the rate of change of corporate sales with 'inverse' industry indices. In Figure 7-9 we chart the rate of "Inflation (7)," defined as the sum of the rate of change of corporate sales (lower shaded area) and the rate of unemployment (upper shaded area). A similar exposition is used in Figure 7-10 for "Inflation (8)" and its underlying components -- the rate of change of corporate sales and the special idle-capacity index described earlier. Here, too, the rate of inflation is derived by adding the lower shaded area, which denotes the rate of change of corporate sales and the upper shaded area, which represents the idle-capacity index.

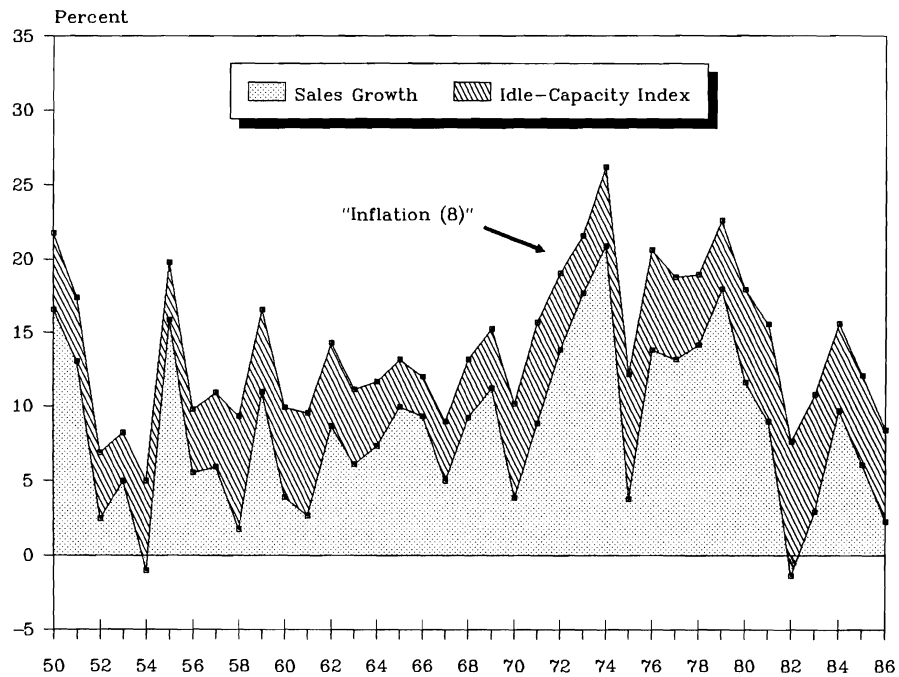
#### **7.4 Some Comparisons**

The inflationary interaction between business and industry is complex and cannot be fully captured by a single index. In order to properly describe this process, we must approach it from different viewpoints, as we do with our various "Inflation" indicators. The different perspectives lead to different temporal patterns for the various "Inflation" variables. The existence of such differences makes each index significant. Yet, despite variations in perspectives, the temporal behaviour of the various "Inflation" indices must be similar to some extent. This is to be expected given the correlations which exist among the underlying business variables and industry variables. In the business sphere, for example, corporate sales usually rise and fall with nominal GDP. Similarly, in the industrial sphere, employment and real GDP are positively correlated and both are negatively correlated with the rates of unemployment and idle capacity. Beyond their differences, all "Inflation" indices are derived from the same general interaction between business and industry, and should all reflect the broad character of that interaction. At this point one may ponder how we could expect "Inflation" indices to be both different and similar at the same time, yet there is nothing paradoxical in this requirement. In operational terms, it means that the indices should differ in absolute magnitude as well as in their year-to-year variations. Such disparities would reflect the heterogeneity of perspectives on the inflation process. On the other hand, because the indices approximate the same general process, they should all exhibit common long-term movements, for example, by having similar peaks and troughs.

**Figure 7-9** Sales growth, unemployment and "Inflation (7)"



**Figure 7-10** Sales Growth, idle capacity and "Inflation (8)"

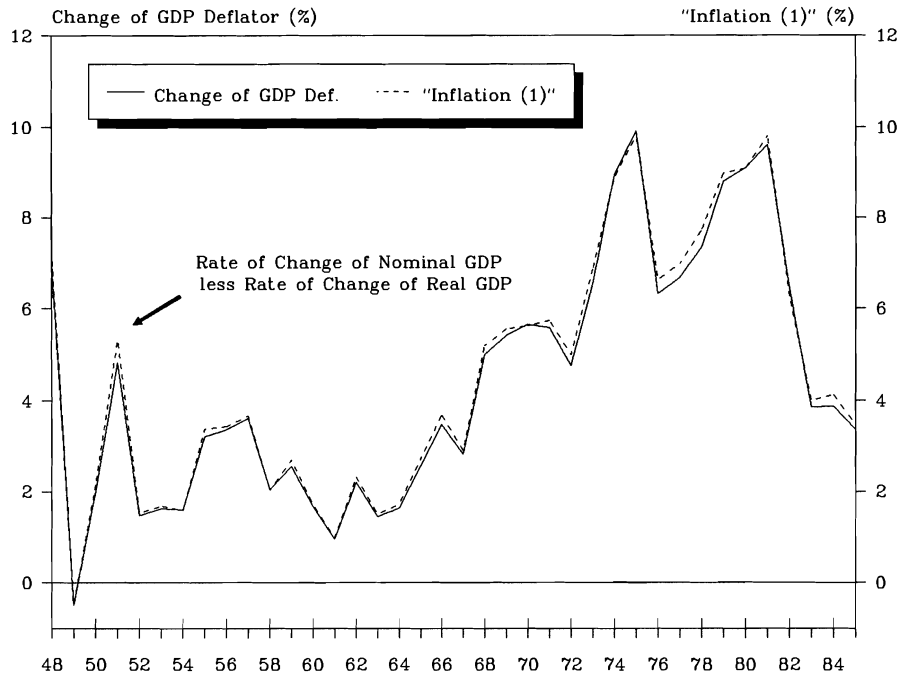


We can examine this notion of 'differentiated-similarity' by comparing our "Inflation" indices with more traditional proxies for price inflation. The indices for "Inflation" summarize the underlying interaction between business and industry and, hence, should be correlated with the consequence of that interaction, namely, the phenomenon of price inflation. The yardsticks we chose for our comparisons are two standard measurements for inflation: the rate of change of the Implicit GDP Deflator and the rate of change of the Producer Price Index. Given our earlier discussion, we expect that the standard indices will differ from our "Inflation" variables in both absolute magnitude and short-term variations, but that their long-term movements will be relatively similar. Note that in these comparisons we do not seek to rank "Inflation" indices according to their ability to 'predict' price inflation. The interaction of business and industry is the underlying *cause* of price inflation, but this does not mean that every "Inflation" index should be highly correlated with price inflation. Our goal is only to demonstrate that the observed phenomenon of price inflation reflects the underlying interaction of business and industry and that the various facets of that interaction are all correlated *to some extent*.

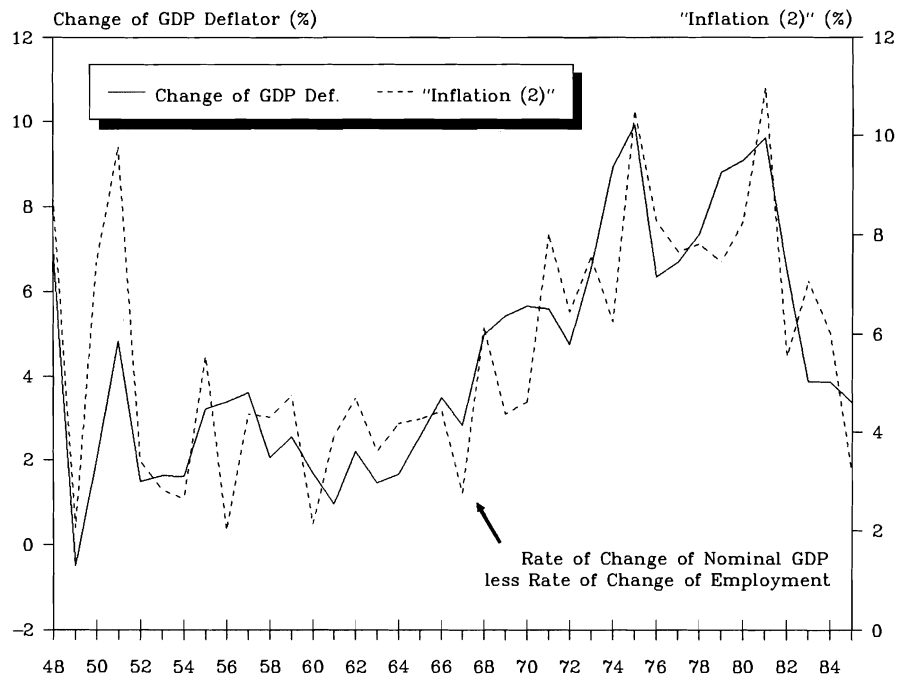
In our comparison we have attempted to match "Inflation" indices with corresponding variables for price inflation. The first set of figures (7-11 to 7-14 inclusive) compares "Inflation (1)", (2), (3) and (4) with the rate of change of the Implicit Price Deflator. The match seems adequate because these are all 'economy-wide' indices. The second set of figures (7-15 to 7-18 inclusive) charts "Inflation (5)," (6), (7) and (8). These latter variables relate more to the private sector than to the economy as whole and, hence, we contrast them with the rate of change of the Producer Price Index.

Figure 7-11 describes the temporal behaviour of the rate of change of the Implicit Price Deflator and of "Inflation (1)" for the period between 1948 and 1985. Recall that "Inflation (1)" is the discrete approximation for the rate of change of the Implicit Price Deflator, and as the figure demonstrates, this approximation is highly accurate even when we use annual data. In Figure 7-12, we contrast the rate of change of the Implicit Price Deflator with "Inflation (2)" over the 1948-1985 period. The order of magnitude of the two indices differs somewhat (note the dual scale), but their temporal movements are remarkably similar (with the exception of 1950 and 1951, when some disparity is evident).

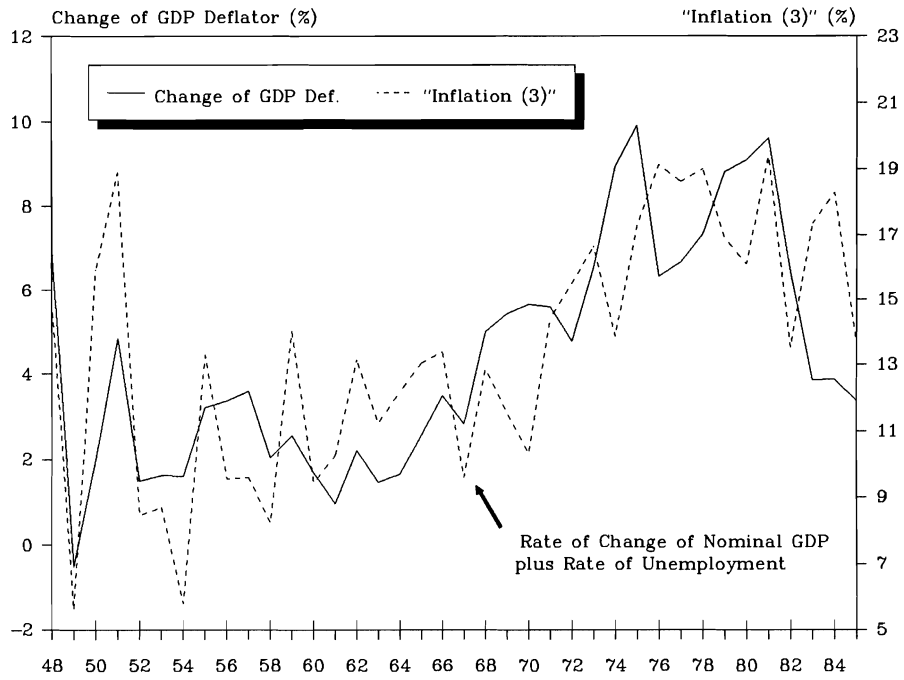
**Figure 7-11** Change of GDP Deflator *versus* "Inflation (1)"



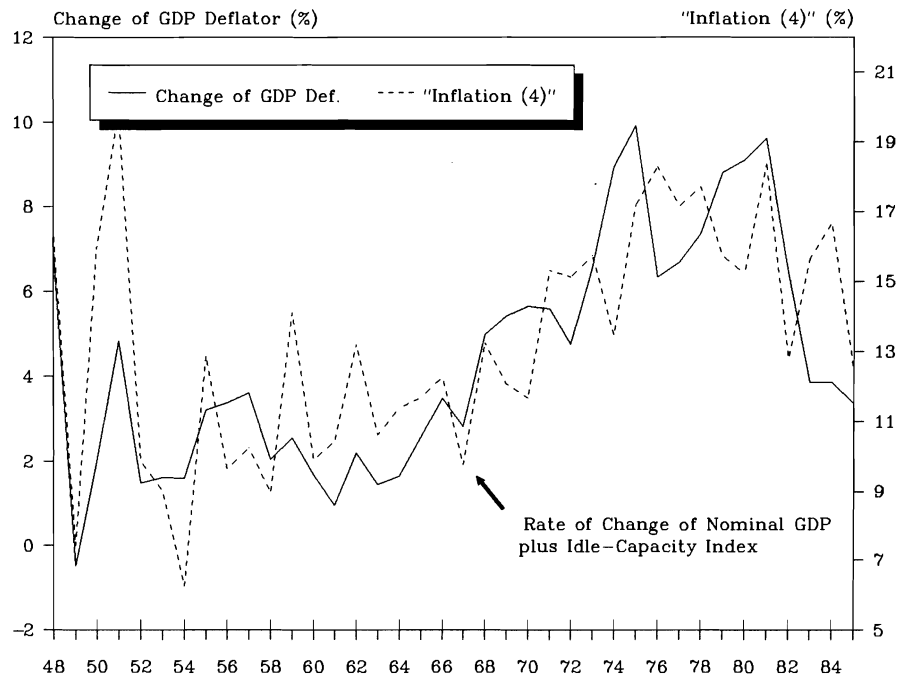
**Figure 7-12** Change of GDP Deflator *versus* "Inflation (2)"



**Figure 7-13** Change of GDP Deflator *versus* "Inflation (3)"

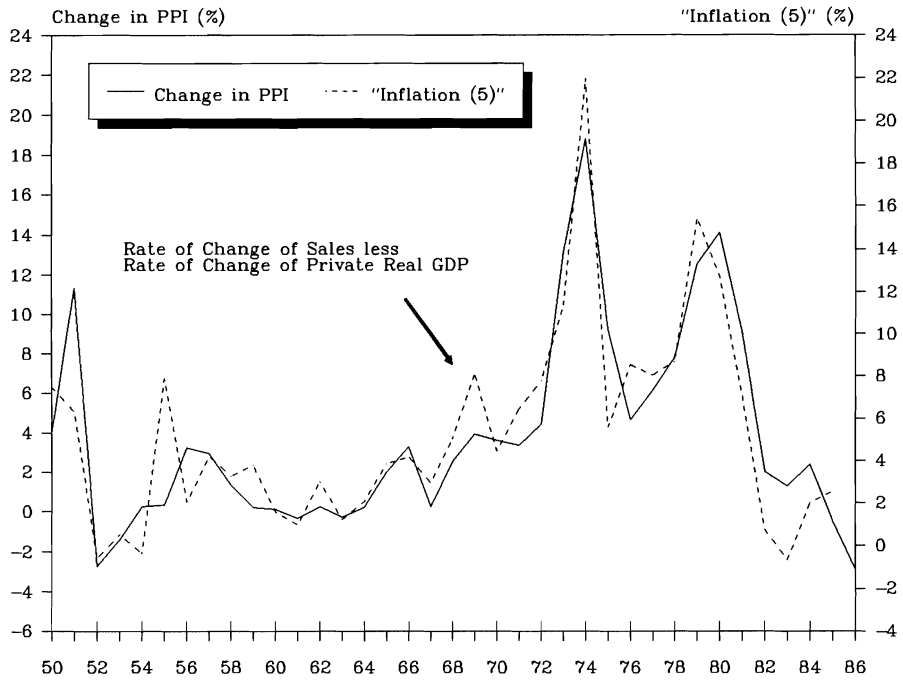


**Figure 7-14** Change of GDP Deflator *versus* "Inflation (4)"

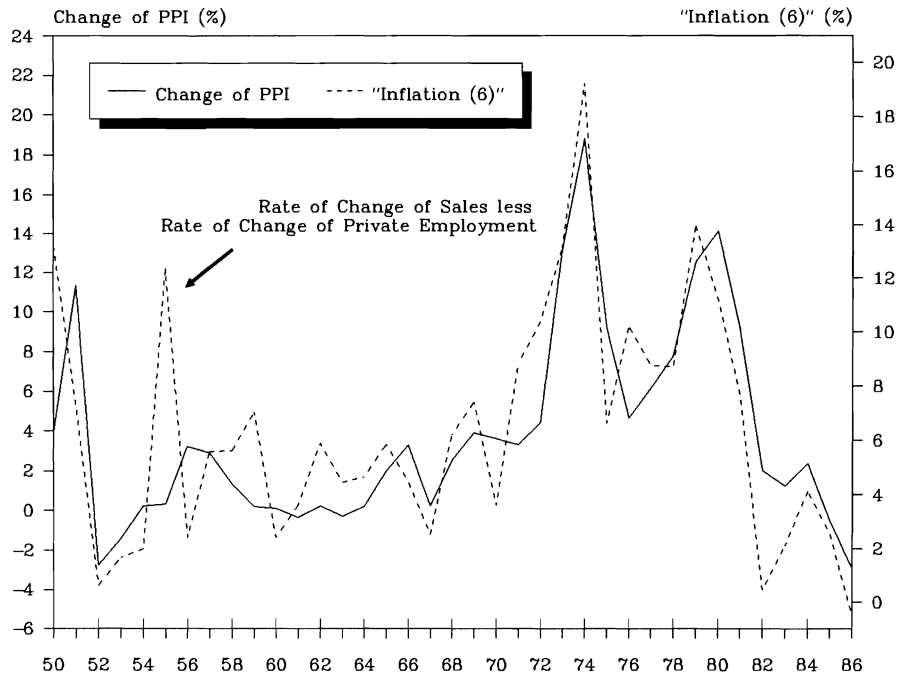




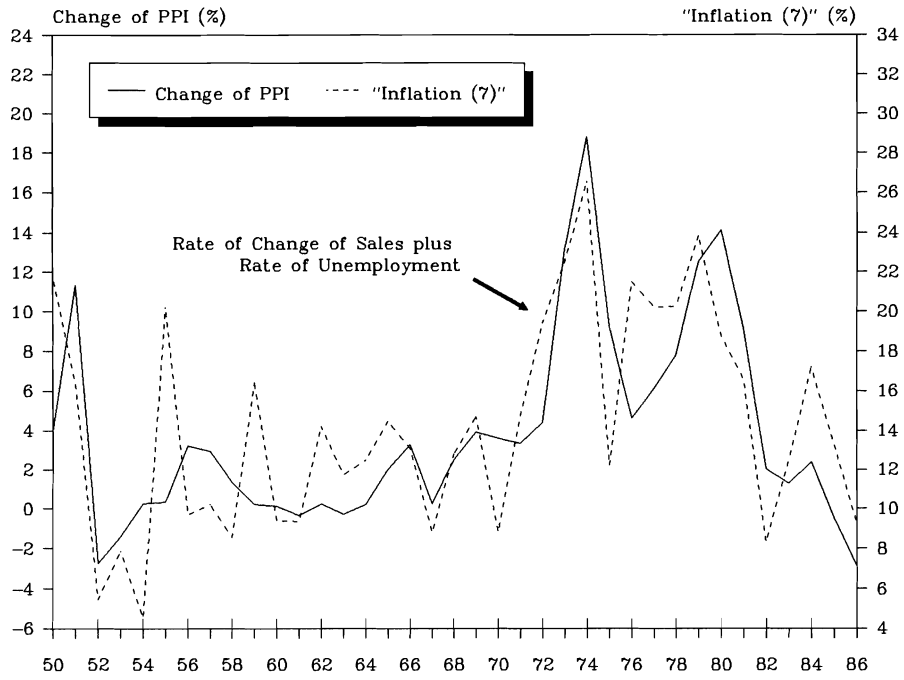
**Figure 7-15** Change of PPI versus "Inflation (5)"



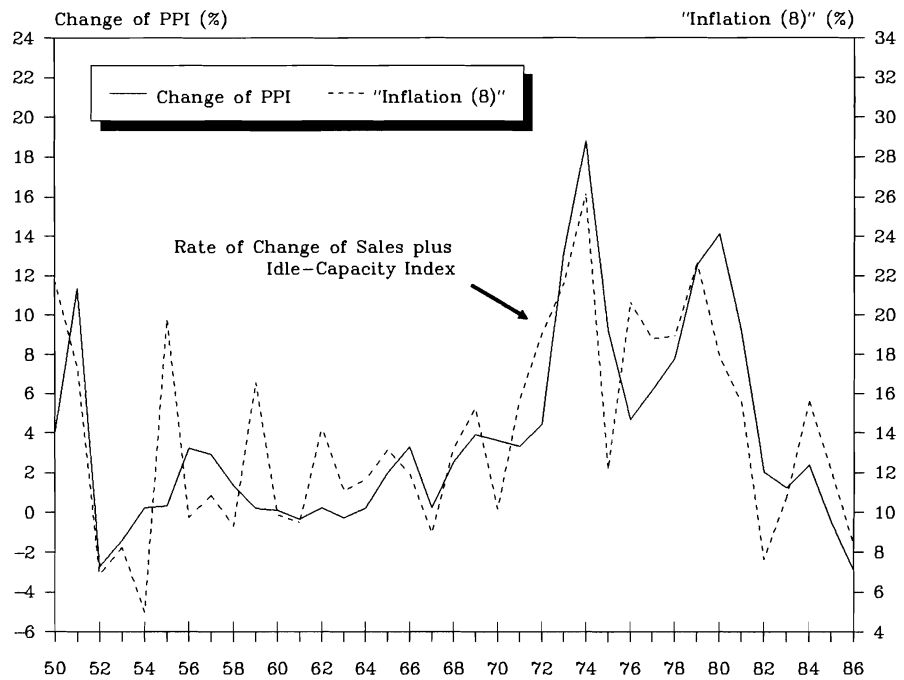
**Figure 7-16** Change of PPI versus "Inflation (6)"



**Figure 7-17** Change of PPI versus "Inflation (7)"



**Figure 7-18** Change of PPI versus "Inflation (8)"



Figures 7-13 and 7-14 contrast the rate of change of the Implicit Price Deflator with "Inflation (3)" and "Inflation (4)," respectively, for the period between 1948 and 1985. The differences in the order of magnitude are quite pronounced here (values for the "Inflation" indices are approximately twice as high as those for the rate of change of the Implicit Price Deflator). There are also substantial disparities in the year-to-year changes of the indices throughout the period. Yet the general movements of both "Inflation (3)" and "Inflation (4)" seem similar to those exhibited by the rate of change of the Implicit Price Deflator.

The remaining four figures (7-15 to 7-18 inclusive) compare indices related to inflation in the private sector. In Figure 7-15 we chart the annual values for the rate of change of the Producer Price Index between 1950 and 1986, and for "Inflation (5)" between 1950 and 1985. The order of magnitude of the two indices is very similar; the indices also share a very similar pattern of short-term fluctuations as well as long-term movements. Figure 7-16 contrasts annual data for the rate of change of the Producer Price Index with those for "Inflation (6)" over the 1950-86 period. While the range of fluctuations of the first index is larger than that of the second, their short-term and long-term movements are very similar (with the potential exception of 1954).

Figures 7-17 and 7-18 compare the rate of change of the Producer Price Index with "Inflation (7)" and "Inflation (8)," respectively. For the period between 1950 and 1986, we can discern differences in the absolute magnitudes of values for the different indices in each figure; some variations in short-term behaviour are also evident. But here, too, the overall movements of "Inflation (7)" and "Inflation (8)" are closely related to that exhibited by the rate of change of the Producer Price Index.

## **7.5 Looking Ahead**

Starting from the 'value-quantity' perspective for price indices, we argued in this chapter that standard proxies, such as the GDP deflator or the PPI, may be inadequate if we wish to explore inflation as a dynamic interaction between 'business' and 'industry.' Instead, we proposed a new family of indices in which the separate significance of each of these dimensions was explicitly recognized. While both the

new and standard indices reflect the same broad process of inflation, the new indices were found preferable for a number of different reasons. Firstly, by combining different pairs of elementary variables, we could examine many different facets of the inflationary interaction of 'business' and 'industry' -- a process which is totally concealed by the standard, one-variable inflation indices. Secondly, the new proxies help us evade the difficult methodological problem of quality change and, by extension, the inherent dependency of standard indices on the assumptions of consumer sovereignty and perfectly competitive equilibrium. Finally, data for the elementary components of some of the new "Inflation" indices are available on a disaggregated level. In particular, these data can be used to decompose broad "Inflation" indices into sub-indices specific to firms or groups of firms.

The new "Inflation" indices are particularly suitable for the broad theme of this work, namely, that, in the modern system of business enterprise, inflation and restructuring are in fact two sides of the same process. On the one hand, the dual nature of these indices captures the dynamic interaction between business and industry. On the other hand, the fact that these indices could be defined along ownership criteria (as opposed to product lines) enables us to look into the underlying process of corporate restructuring. We turn to examine these interrelated transformations now.