DIVISION OF THE HUMANITIES AND SOCIAL SCIENCES

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA, CALIFORNIA 91125

THE U. S. PRODUCTIVITY SLOWDOWN AND ITS RELATION TO THE INFLATION PROBLEM

Burton H. Klein

SOCIAL SCIENCE WORKING PAPER 286

August 1979

THE U. S. PRODUCTIVITY SLOWDOWN AND ITS RELATION TO THE INFLATION PROBLEM

Burton H. Klein*
California Institute of Technology

Numerous explanations for the productivity slowdown of the United States have been expounded by economists, business leaders, and politicians since it became painfully apparent in the early 1970s. With the imposition of a form of environmental regulation upon American industry in general not unlike that imposed by the Defense Department upon its contractors, the most commonly given cause is government regulation. How else to explain the productivity slowdown?

Regulation, as it is commonly practiced, can have a highly nonlinear effect on the generation of productivity gains. All advances in technology, whether or not in the form of productivity gains, come about because of cleverness and luck in changing initial conditions; that is, they occur in the form of a dynamic process. But the more constraints that are imposed upon dynamic process -- whether by government regulation or a research and development manager intent upon maximizing the short-run benefits of an R & D project -- the more difficult it will be to bring

*I want to thank David Feinstein for undertaking the statistical analysis described in Parts III and IV.

about successful advances. This is not to say there is anything wrong with the goal of environmental regulation. The problem, rather, is the failure to appreciate that the best form of regulation is competition to stimulate the development of more efficient technology from an environmental point of view.

Nevertheless, it is my conviction that while government regulation certainly expedited the loss of dynamism in the U. S. economy, it did not cause it. The most important condition for the maintenance of a dynamic industry is the more or less continuous entry into it of new firms. But greatly rising entry costs sooner or later discourage the establishment of new firms. Therefore, more and more industries become forests without any new trees, and a loss of dynamism in the entire economy can be predicted.

I. FAST AND SLOW HISTORY

Very often the best way to come to grips with a highly complicated problem is to consider a somewhat simpler one that will hopefully provide insights with respect to the larger issue. The specific problem which I discussed in my book Dynamic Economics is this: Why is fast history in the evolution of a technology almost invariably succeeded by slow history? Suppose that the rate of progress in improving the performance of a technology can be roughly measured. Improvements in the performance of the technology might take the form of either reductions in costs or improvements of quality (e.g., as in the case of semiconductors); but whether they take one or the other form, let us regard such

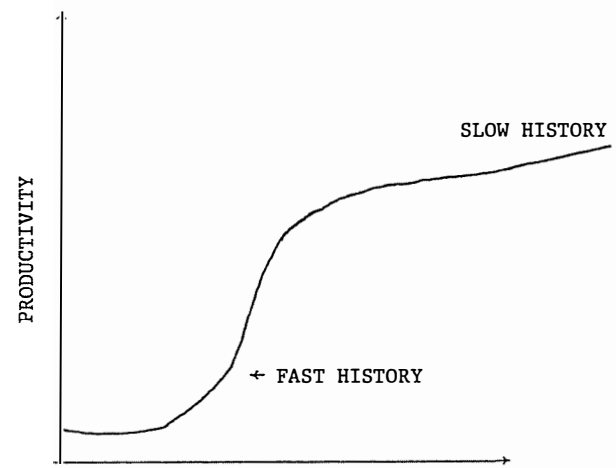
improvements as increases in productivity. It would be nice, of course, if we could devise a single index which took both cost and quality improvements into account; in other words, if we had price indices that were related not to the cost of particular commodities, but rather to particular kinds of operations. However, inasmuch as we do not have such indices, let us assume that productivity gains can be measured in either terms of reductions in costs or improvements in quality, depending on which provides a better approximation of reality.

Now, if improvements in productivity are plotted against time, typically the curve will take the form of an S-shaped curve in which a period of very rapid progress (fast history) is followed by a period of slower progress (slow history): see Figure 1. Consequently, the question of concern to me is why the rate of progress slows down? According to conventional wisdom, the slowdown occurs because all the really good ideas for nonincremental advances have been exploited. Therefore, we are told, if progress is to continue it must become very slow and expensive.

Now, it certainly can be agreed that if a technology were defined in a highly specific manner, for example, if the definition of railroad technology only encompassed the possibility of steam engines, a slowdown in the performance of that technology would sooner or later be inevitable. However, a technology need not be defined so narrowly. Indeed, nearly all significant advances involve broadening the definition of the technology in question. The question, therefore, is why do well-established firms in an

FIGURE I

PERFORMANCE VS. TIME



industry eventually define their technology very narrowly?

That they do is indicated by the fact that when a technology is finally defined more broadly, seldom is it done by a major firm in that industry. Impressive advances are often made by a new firm in the industry (for example, Bessemer steel), by a firm in another industry (for example, deisel locomotives), or they may be brought about by a university laboratory (for example, computerized machine tools). But once a technology has slowed down, seldom, if ever, do insiders play a major role in speeding up its history. And, if conventional wisdom is right -- if it is true that ideas for impressive and relatively inexpensive advances are in very short supply, then why do the ideas have to come from outsiders rather than insiders?

Still another reason for being skeptical of conventional wisdom is the history of foreign trade. Very often, when the United States loses its export advantage in a particular field, it is not because the ideas were unknown to American firms, but that foreign firms were much faster on their feet in exploiting them. For example, the "new revolutionary" low fuel-consuming American automobiles are surely not based on ideas completely unknown to American automotive engineers ten or fifteen years ago. Nor are the "new revolutionary" Japanese semiconductors based upon ideas completely unknown to people in the American semiconductor industry; what distinguishes the Japanese firms is that they seem to be better listeners.

If progress in improving a technology does not slow

down because of a shortage of ideas, then why does it slow down? As will be suggested in the next section, slowdowns do not occur because of a shortage of ideas, they occur because of a shortage of hidden-foot feedback.

II. THE ROLE OF FEEDBACK IN DETERMINING THE RATE OF TECHNOLOGICAL CHANGE

The ability of an industry to make fast history is dependent upon both the internal characteristics of firms and their external challenges. The most important internal characteristic is entrepreneurship -- the essence of which is the ability to ask searching questions. While entrepreneurs are often described as risk-takers, this is not the key difference between an entrepreneur and a manager. The key difference is that whereas the former has a relative advantage in asking sharp questions about technological and market possibilities, the manager's relative advantage consists in answering well-defined questions. The most important external factors consist of hidden-hand and hidden-foot feedback. Hidden-hand feedback is measured by changes in profits -- the larger and more unpredictable the changes, the greater the degree of feedback. Hidden-foot feedback is measured by changes in market shares -- the larger and more unpredictable the changes, the greater the degree of feedback. A high degree of hidden-foot feedback indicates that entrepreneurs are taking significant risks. To be sure, it is conceivable that all firms in an industry can be pressing for large advances, that all will be equally successful, and their market shares will remain more or

less constant. But statistically speaking, such a result has a probability of something like one-tenth of one percent. When firms take large risks, almost invariably there is a wide variance in the degree of success of R & D projects; and, typically, large changes in market shares hinge on differential degrees of success. In other words, that which is a technological risk for one firm is a competitive risk for another. And the greater the degree of technological risk-taking, the more effective the hidden foot -- and the more effective the hidden foot, the more likely that entrepreneurs will ask searching questions.

The question-asking function is crucially important because, while productivity gains cannot be brought about without changing initial conditions, initial conditions cannot be changed without asking searching questions. To be sure, asking tough and searching questions does not necessarily insure that good answers will be forthcoming. The hints required to provide such answers may come from science, from such an unlikely source as seeing in a German toy a way to obtain a missile guidance system with non-linear responses, or from an industry quite unlike the industry in question. For example, a Ford Motor Company employee conceived the idea for introducing automatic production lines by observing that process employed in meat packing plants -- and by asking himself why, if such a process could be used for disassembling carcasses, could it not be used for assembling automobiles?

This is not to say, of course, that the entrepreneur will always be lucky in discovering the appropriate hints. Nevertheless, the probability of being lucky is infinitely greater than it would be if the entrepreneur did not raise searching questions. To rephrase Pasteur's famous remark, "Chance favors a questioning mind."

Finally, it may be noted that this question-raising function has very important side benefits. People within the organization who are highly responsive to searching for better answers are typically well-rewarded -- financially and in terms of recognition. In other words, the very process of searching for better answers generates a good deal of internal feedback. Indeed, it is only by the creation of such an internal feedback system that a firm is able to respond to a high degree of feedback in its external environment.

To sum up the argument thus far: The roles of chance and necessity are not independent. Necessity in the form of the hidden foot greatly stimulates the question raising activity -- and this, in turn, greatly increases the probability that one or another firm in the industry will be favored by luck.

An industry may be blessed by a goodly amount or a small amount of hidden-foot feedback. What determines whether there will be an adequate supply or a shortage of feedback is the ease of new firms entering the industry in question. In almost any rapidly evolving technology newly established firms invariably account for more than their share of significant discoveries -- and by doing so they help prevent the well-established firms from becoming well-organized bureaucracies. Unfortunately, however,

as the evolution of a new technology continues, scale economies of one kind or another become increasingly important -- so much so that the cost of entry increases by one or two orders of magnitude. It is my conviction that this is why fast history in improving a technology is typically followed by slow history. In short, slow history sets in not because of a shortage of ideas, but, rather, because of a shortage of feedback.

This is not to say, however, that without the presence of a hidden foot the hidden hand cannot bring about rapid improvements in productivity in a particular industry. Suppose that the inputs for such progress are generated in a completely different industry and then sold to the industry in question in a manner that it has to take no significant risks. The classic example is the airlines which were able to achieve sensational advances in productivity during the 1950s and the 1960s primarily on the basis of buying airliners with lower and lower operating costs. However, without a good deal of rivalry in the industry engaged in buying progress, it is highly unlikely that sustained progress will indefinitely occur in the supplying industry. Thus, deregulation of the airlines was probably one of the most constructive steps that could have been taken to maintain our technological leadership in the field of commercial aircraft. For example, as a result of competition in the cotton textile industry the United States was once an important exporter of textile manufacturing machinery. But the advances in productivity in the cotton textile industry over the past ten or fifteen years occurred mainly as a

consequence of cotton textile machinery imported from Europe.

Nevertheless, in one important sense, at least, even the less dynamic industries are not completely lacking in negative feedback. During periods of recession firms in these stries must face the prospect of large and highly unpredictable declines in profits. So to protect themselves from this kind of unpredictability firms must begin asking the questions they stopped asking once prosperous business conditions prevailed. However, it must be emphasized that the fault for this cannot entirely be blamed on managers working hard one year and slacking off the next. In slow history organizations, officials tend to be highly unwilling to accept responsibility, and for this reason they impose on themselves highly inflexible operating procedures and an enormous amount of red tape. Moreover, the speed with which this bureaucratic response can happen, after a slow history organization has dealt with a new series of challenges, is positively amazing.

This is not to suggest, of course, that the business cycle can be explained in terms of lapses from bureaucracy during downturns and the reemergence of bureaucracy during upturns. While no doubt this is a contributing factor, many other factors too are at work. All that I suggest is that inasmuch as feedback is more continuous in the high productivity industries, we can expect to observe that progress in improving productivity in the lower productivity industries is to a greater degree associated with the business cycle.

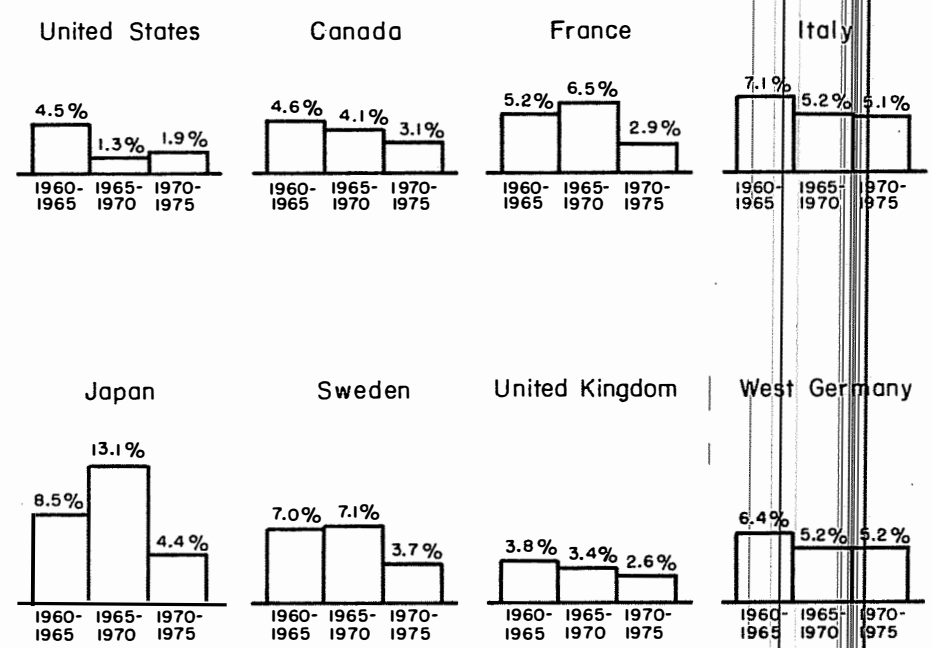
III. DIMENSIONS OF THE PRODUCTIVITY SLOWDOWN

There are two ways of judging the extent of the productivity slowdown. One is by comparing U. S. performance with that of the other major industrialized nations. And, as Figure II shows, in terms of this measure, U. S. relative performance has been worsening for some years -- to the extent that now its productivity performance is hardly better than that of Britain's. In turn, this comparison helps to show why the U. S. balance of trade began to deteriorate even before large increases in the dollar volume of oil imports occurred. When a country's productivity performance is improving relative to the performance of other countries, it will enjoy a favorable balance of trade. On the other hand, when a nation's longer-term productivity performance is poorer than that of others, this implies that costs in that country are not being reduced at the same rate. Consequently, its products will be less competitive in international trade. For example, it is no accident that almost since the beginning of this century Britain has faced a chronic balance of payments problem.

The other way of judging productivity performance is by examining the longer-run productivity trend in the United States. For this purpose, the best available measure takes both capital and labor inputs into account in order to construct a measure of "total factor productivity gains." However, inasmuch as such estimates are not available for recent years, the estimates shown for the period 1948-1977 in Figure III take into account only

FIGURE II

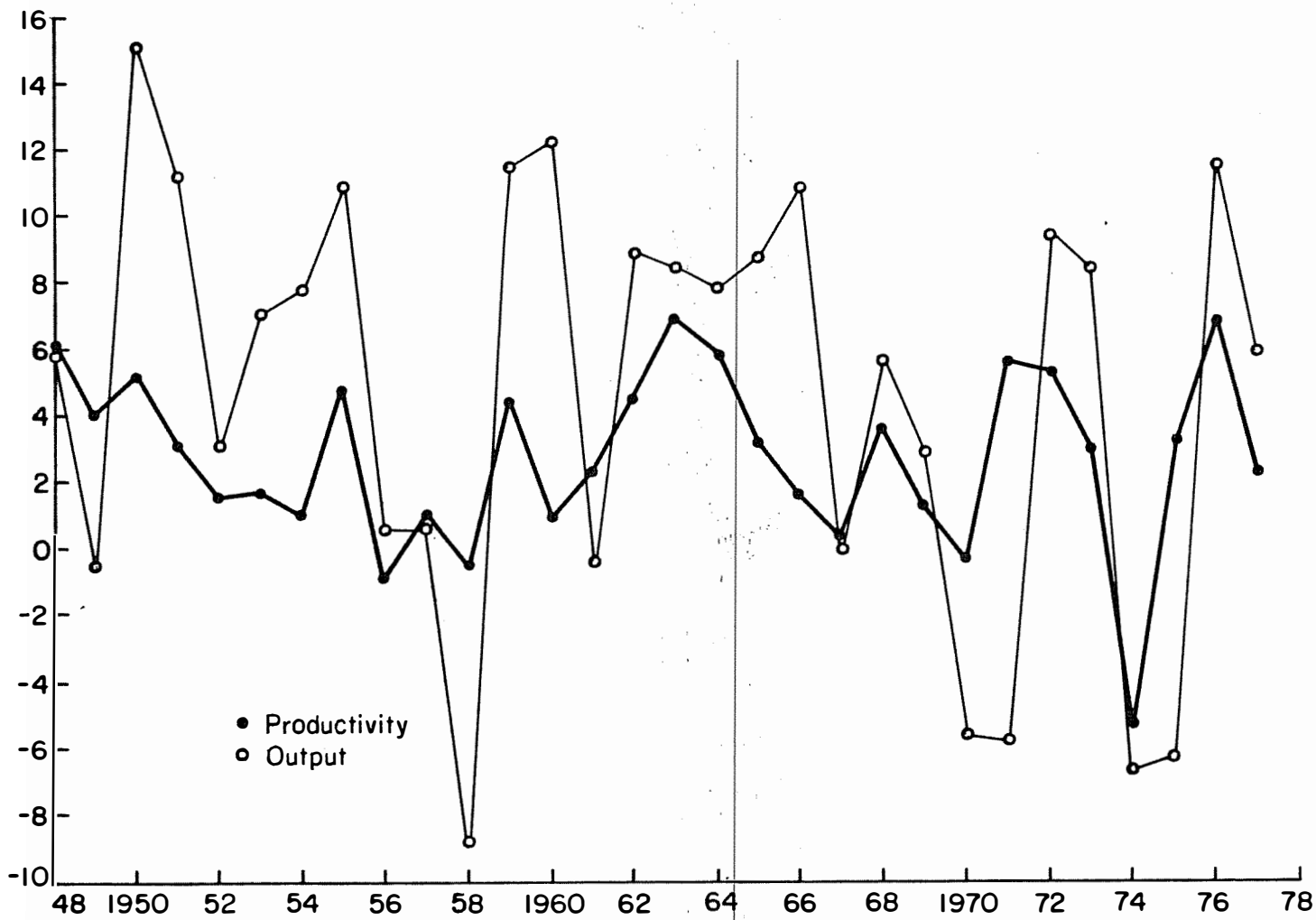
TRENDS IN PRODUCTIVITY IN MANUFACTURING
(average annual rate of change)



Source: Gerald Ford, International Economic Report of the President (U.S. Government Printing Office, January 1977).

FIGURE III

CHANGES IN PRODUCTIVITY AND OUTPUT, 1948-1977



Source: U.S. Bureau of Labor Statistics.

labor inputs. However, because savings in capital inputs tend to be highly associated with savings in labor inputs, estimates of labor productivity tend to be in very close agreement with estimates of total factor productivity.

As Figure III shows, because of the close relationship of productivity performance to the business cycles, it is by no means easy to establish a trend line for judging long-term changes in productivity performance. While it is generally agreed there has been a decline, Edward Dennison, a top expert in the field of productivity measurement, does not believe that the decline began until the early 1970s. However, I believe that the decline began in the middle 1960s, when, despite increasing defense expenditures and the stimulus provided to growth in output in manufacturing, American productivity performance began to worsen -- anticipating a slowup in the growth of output in the manufacturing sector of the economy. It fact, had it not been for large public expenditures, the United States might have had a serious economic downturn in the late 1960s.

It is also impressive that, while the rate of productivity increase declined more during the 1973-1974 recession than in previous post-World War II recessions, the recovery was very rapid. And it should be noted that this cannot be explained entirely by the conventional static argument: an inevitable slowing in the rate of productivity gains when capacity utilization is very high, coupled with a reluctance to lay off workers when output declines. First, a definite retardation in the rate of productivity increase

occurred in 1971, when the degree of capacity utilization was not conspicuously high. Secondly, and more important, while the static argument can explain why, as measured in absolute terms, productivity should decline during a recession, the fact of the matter is that in absolute terms productivity is typically higher after downturns. For example, during the 1971 recession the rate of productivity increase did not decline below zero.

In order to obtain a deeper understanding of the productivity decline and its inflationary implications, I have recently been studying the performance of some 500 manufacturing industries, based upon data supplied by the Bureau of Labor Statistics for the period 1958 to 1976. On the basis of their average rate of productivity gains during the first part of the period 1958 to 1967, these industries were divided into high, medium, and low performance groups. The high performance group consisted of industries more than one standard deviation above the average; and it accounted for about 8 percent of total manufacturing employment. The low performance group consisted of industries more than one standard deviation below the average, and accounted for 6 percent of manufacturing employment.

The following three figures (IV, V, VI) provide information on the performance of the high, medium, and low performance groups. Note that the figures also contain lines relating to unit costs and prices; for the moment, however, ignore these. Their relevance will become clear when we turn to the question of inflation.

If the performance of the high group is compared with

FIGURE IV

TIME DOMAIN PERFORMANCE
OF LOW PRODUCTIVITY INDUSTRIES

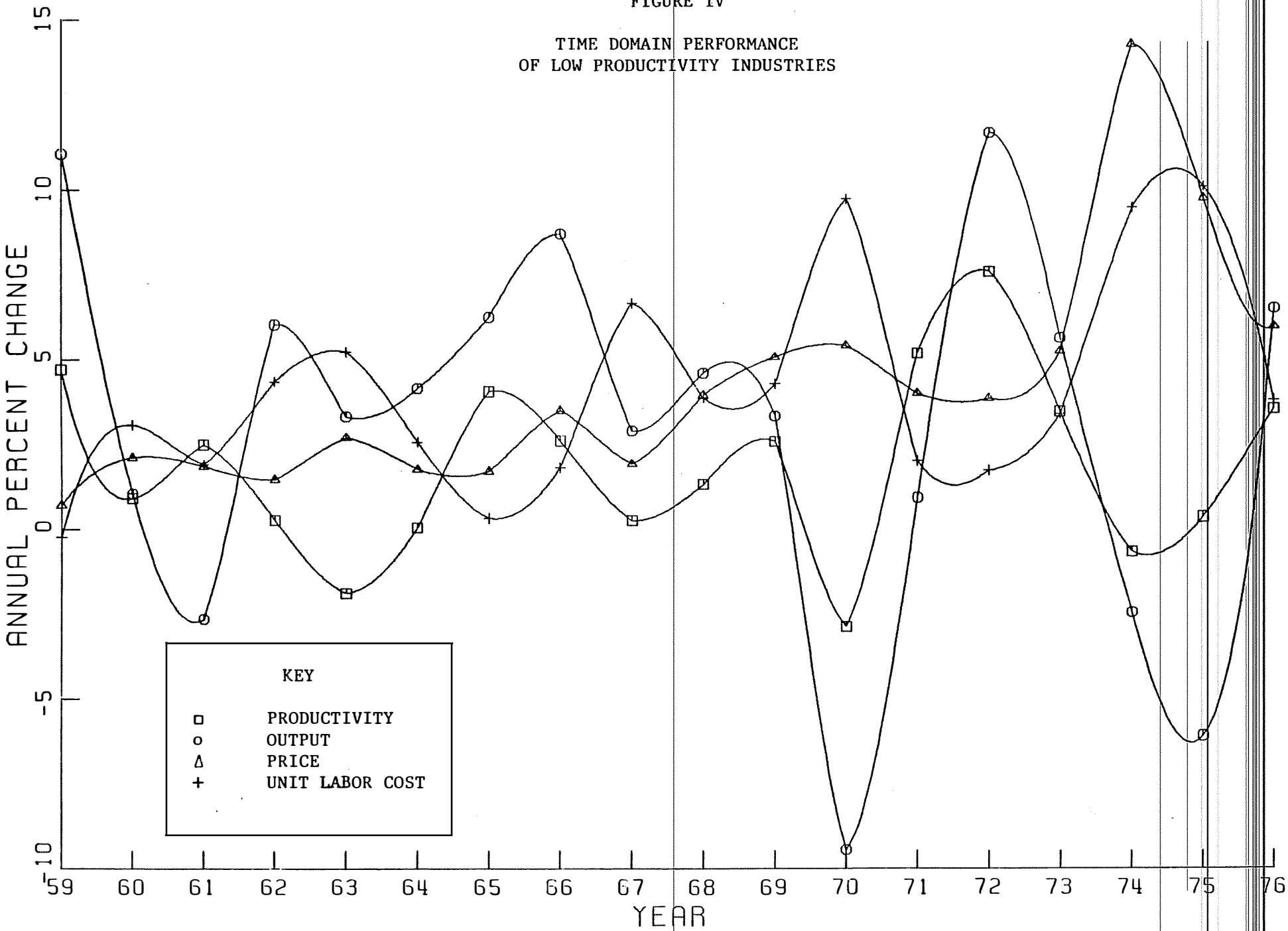


FIGURE V

TIME DOMAIN PERFORMANCE
OF MEDIUM PRODUCTIVITY INDUSTRIES

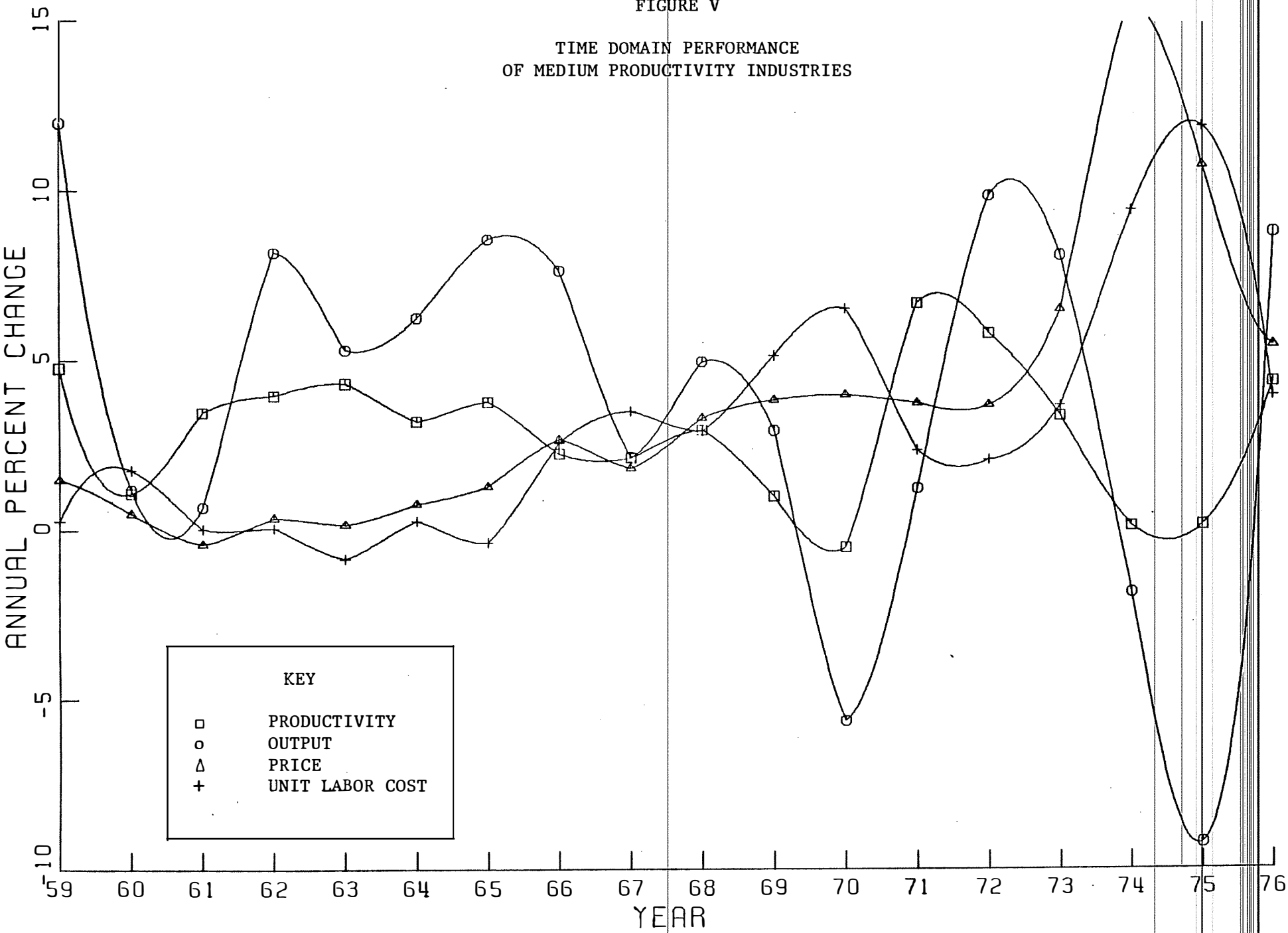
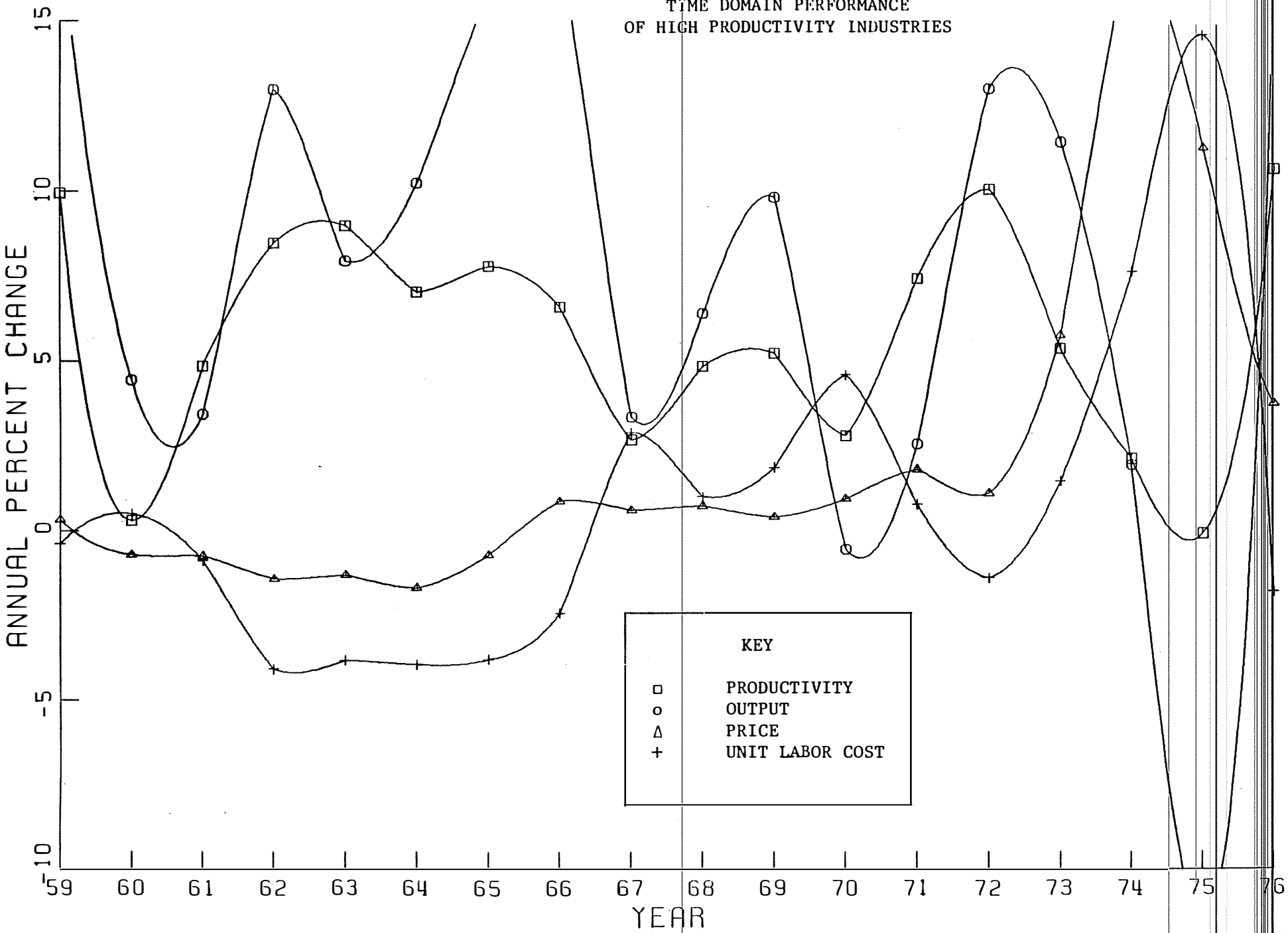


FIGURE VI

TIME DOMAIN PERFORMANCE
OF HIGH PRODUCTIVITY INDUSTRIES



that of the medium and low groups, two important differences can be seen. In the first place, until the 1973-1974 downturn, fortunes of the high performance group were not nearly so closely linked to the business cycle. In fact, until that downturn the rate of increase in output of this group was not significantly below zero. In other words, recessions in these industries occurred mainly in the rate of growth. By contrast, the 1959 and the 1968-1972 downturns were quite serious for both the medium and low performance groups. The principal reason for this difference in behavior is that suggested in the previous section, namely, that the high performance group did not have to depend so much on challenges for their recessions. Indeed, in these industries a recession caused by a rival business firm could have far more serious consequences than a general economic downturn. Moreover, the fact that those in the high performance group were more accustomed to dealing with negative feedback may help to explain why the productivity recovery of this group was much greater than that of the low and medium performance industries.

On the other hand, the fact that those in the high performance group needed such a jolt in order to bring about substantial improvements in their performance also suggests a group of industries in which there is a lessening of feedback, except during times of recession.

Unfortunately, there is no way to prove it, but it is my guess that these high performance industries are beginning to suffer from essentially the same problem as the less stable

industries, namely, a substantial slowdown in entry of new firms. There is a wide variety of evidence to indicate that the internal symptoms of a collapse in dynamic behavior are highly consonant with the hypothesis of a shortage of feedback in the form of the hidden foot. For example, in the 1979 Batelle Report, "Probable Levels of R & D Expenditures in 1979," the following barriers to innovation are listed:

1. A growing insistence on certainty of profits in the short term.
2. The "not invented here" syndrome.
3. Growth of a professional management class which has no entrepreneurial stake in the business.
4. Formalization of short-term executive tours of service -- e.g., up, down, sideways, or out every three to five years -- discouraging longer-term, innovative projects.
5. Use of executive incentives programs which emphasize accounting concepts of achievement.
6. Failure to organize for innovation -- instead, business is increasingly organized for steady profitability and not for risk-taking.
7. Tendency to try to buy corporate growth through acquisitions rather than through innovation and/or expansion.

IV. A LESS AND LESS FLEXIBLE PRICE SYSTEM

Turning next to the question of inflation, it can be seen that the most impressive fact about the last three figures is the very rapid rise in the rate of price inflation between 1972 and 1974; and its failure to abate while the manufacturing industries were heading into the steepest downturn since 1956. To be sure, something like one-third of the total increase in prices (i.e.,

one-third of the area beneath the curve) can be attributed to increases in the price of oil. However, even after giving OPEC its fair share of the blame, the conclusion is much the same; that is, the sensitivity of prices to economic downturns is very low -- so low that we can experience a serious recession and severe inflation simultaneously.

However, the insensitivity of prices to economic downturns is not an entirely new element in the American economy. In fact, each downturn in which manufacturing output has fallen 5 percent or more has evoked a smaller price response. Thus, during the 1956-1958 downturn, prices were far less sensitive to declines in output than they were during the milder recessions of the mid-1920s. Then, during the 1968 to 1972 recession, prices and output began to move in opposite directions for the first time; that is, while output was going down the rate of inflation jumped to 5 percent. Finally, during the most recent downturn prices not only jumped after the downturn but they kept on jumping.

If prices do not move with general business conditions, then with what do they move? As Figures IV, V, and VI show, there is a high degree of correspondence between movements in unit labor costs and prices. Unit labor costs are defined as the average labor cost of producing one unit of output, and are obtained by dividing output in a given time period by the total wage bill. In turn, unit labor costs account for about 75 percent of total costs in manufacturing. Moreover, the correlation between movements in unit wage costs and prices has been increasing. As

Figure VII shows, during the period 1958-1967 the correlation coefficient between changes in unit wage costs and prices (r^2) was about .3, and in the period 1967 to 1976 it was about .5. And during the second period, the "mountain" stretched out along the regression line, indicating a tendency for very high increases in unit labor costs to be associated with very high increases in prices.

It should be noted that this diagram was obtained by simply counting the number of industries in each cell and having the computer plot the heights of the mountain accordingly. However, it also should be noted that the smoothness of the plane around the mountains was enhanced by computer interpolation that preserved all the original data points. Such diagrams have an important advantage over the familiar scatter diagrams; namely, they provide a better picture of the changes that have been occurring.

To return to the main discussion, it should be apparent that the businessman is becoming more intent on balancing his budget over the course of the entire business cycle. Curiously enough, as of the time that Calvin Coolidge was president, business firms were far less concerned with balancing their budgets over the course of the entire business cycle than they were during the period after World War II -- at which time prices moved more in accordance with general business conditions and less in terms of costs.

During the earlier period the industries in which the

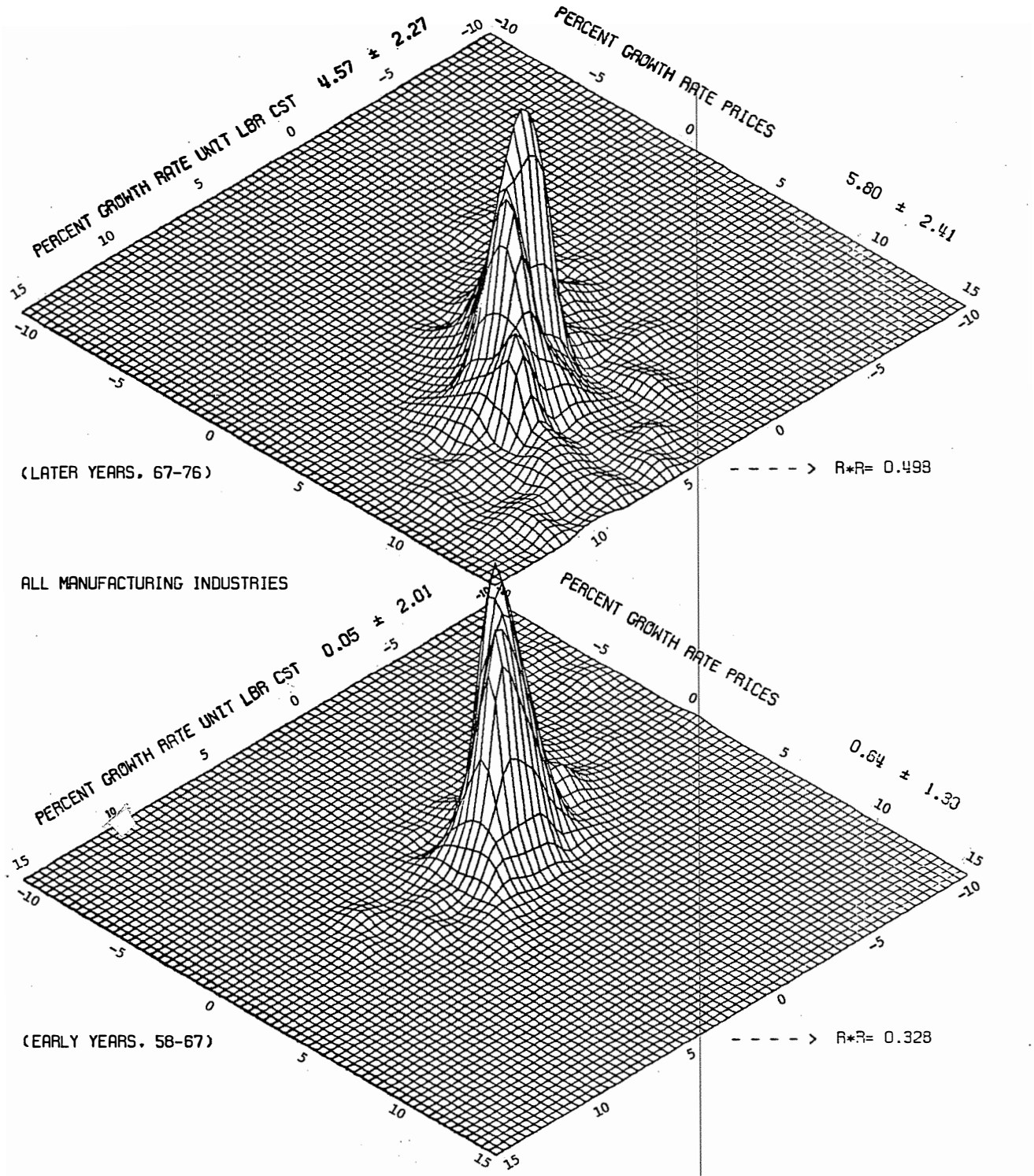


FIGURE VII

MEAN TIME RATE CORRELATION OF PRICES VS. UNIT LABOR COSTS

association between unit labor costs and prices was the highest were the high productivity industries. However, this does not necessarily indicate there was little rivalry in these industries. Rivalry seems to have taken the form of improvements in quality rather than reductions in price. As far as the semiconductor and computer industries are concerned, we certainly know this to be true. On the other hand, the most startling improvements in the correlation during the latter period occurred with respect to the medium and, especially, the low performance groups. It is almost as if people in the latter industries thought they could enjoy the same degree of stability by adopting the same pricing practices!

Contrary to what is generally believed, changes in unit labor costs are in major degree associated with changes in productivity and not with changes in wage rates. As Figure VIII shows, in both periods the correlation coefficient was about .8. On the other hand, there is no significant correlation between changes in wages and changes in unit labor costs. To be sure, for many years economists were in general agreement that increasing wage rates, as the economy neared full employment, was one of the main causes of inflation. In fact, for years the relationship between the rate of inflation and the degree of unemployment (i.e., the Phillips curve) was regarded by macroeconomists as a sacred truth. However, what generates large increases in prices during periods of prosperity is not so much abrupt increases in wage rates as it is declines in productivity.

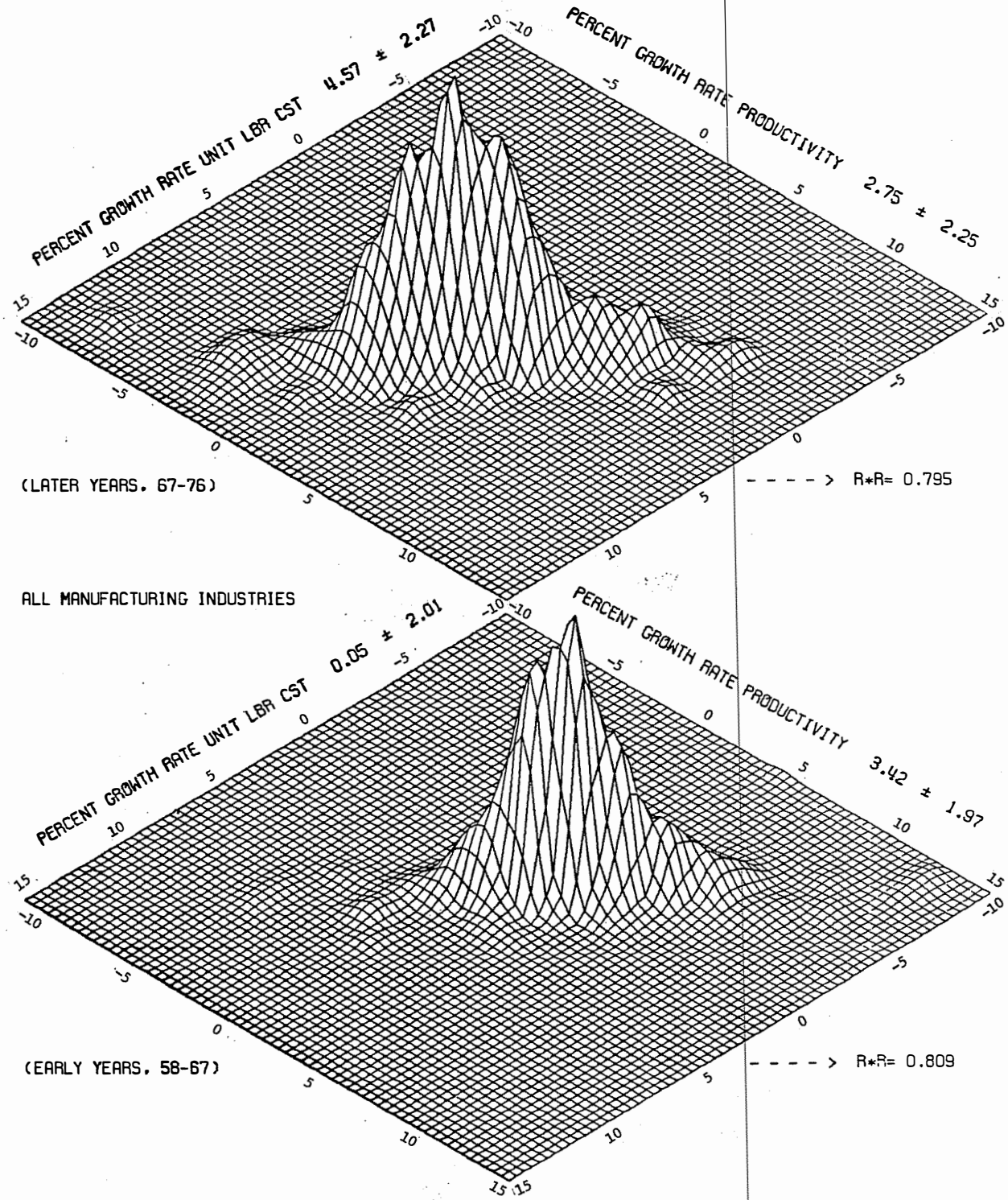
This is not to say, of course, that increases in wage

rates have no impact on inflation. In fact, wage rates have become quite as irresponsive to downturns as prices. hus in both the 1971 and 1973-1974 downturns, increases in wage rates began to abate only after recovery was underway. On the other hand, it is equally clear that placing the major blame for inflation on the labor unions certainly would involve a gross distortion of the facts. But I hasten to add that neither can the blame for the inflation be attributed to the greed of the businessman. Between the two periods the rate profits rose was somewhat less than the rate wages increased in the second period as compared with the first. Whatever else may be said about the attempt of firms to set prices in a way to balance their budgets over the cycle, it certainly is not a sign of greed. Indeed, the fundamental reason the stock market was more exuberant during the 1920s may well be that then good times and high profits were more highly correlated.

What may be said about movements in wages is that they are highly responsive to the degree of rivalry in an industry. Particularly in industries with a high degree of rivalry there is a large variance in profit rates. This in turn means that if labor unions try to push for too rapid increases in wages they will risk pushing the less profitable firms out of business. On the other hand, in industries with a lower degree of rivalry a lower degree of constraint on wage increases is to be expected. Is this a reasonable hypothesis? If it is, then we should find little or no correlation between wage and productivity increases.

FIGURE VIII

MEAN TIME RATE CORRELATION OF PRODUCTIVITY VS. UNIT LABOR COSTS



If the higher productivity industries are, generally speaking, the most rivalrous, then we should observe a higher degree of wage constraint in those industries than in the lower productivity industries. As Figure IX shows, the correlation is close to zero. However, it also may be observed that in the later period there was a tendency for wages to rise more rapidly in the higher productivity industries -- another indication that rivalry in those industries was declining.

On the other hand, it is also not surprising that when inflation began in the late 1960s wages and prices in the medium and low productivity industries rose at about twice the rate they did in the high productivity industries, because those industries provided a lower degree of constraint upon wages.

While some economists tend to blame the unions for everything bad, and others, like Galbraith, blame the business leadership, the truth is that a lack of rivalry and highly demanding unions go hand in hand.

To sum up this discussion: Leaving the land and the gold speculators out of account, inflation is a zero-sum game. The slowdown in productivity gains certainly contributed to inflation. But the longer-term slowdown is only a relatively small part of the story. The main part of the story concerns the cyclical behavior of productivity gains: the tendency for the rate of productivity gain to slow down before the rate of output slows down, and as this occurs costs and prices are pushed upward. In such a crazy world the rate of inflation can be expected to reach its maximum

in poor times and its minimum in good times!

V. PROGNOSIS FOR THE FUTURE

It would be nice, of course, if those firms that raised prices most during a recession were suitably punished, and those that raised prices least, suitably rewarded. If that were to occur, the feedback effect might help to mitigate both the severity of the next wave of inflation and the subsequent economic decline. Unfortunately, however, there is no such close association between low price growth and high growth in output. To be sure as inflation gathers more and more momentum, customers are forced to curtail their buying. For example, it is well-known how consumers react to very rapidly increasing meat prices. Nevertheless, as far as the manufacturing industries are concerned, the evidence for a high degree of negative demand response to price increases is relatively weak. As Figure X shows, there is no significant correlation between low growth rates and prices and high growth rates in output. To be sure, the upper left hand side of the diagram does indicate that in the recent period very high growth rates in prices have been associated with negative growth rates in output. However, just how much feedback effect that will have in mitigating future inflation will be very difficult to judge until we have had another serious downturn.

It should be apparent from this discussion that as far as the future is concerned policymakers do, indeed, face a very serious dilemma. Monetary restraint is the principal instrument

FIGURE IX

MEAN TIME RATE CORRELATION OF PRODUCTIVITY VS. WAGES

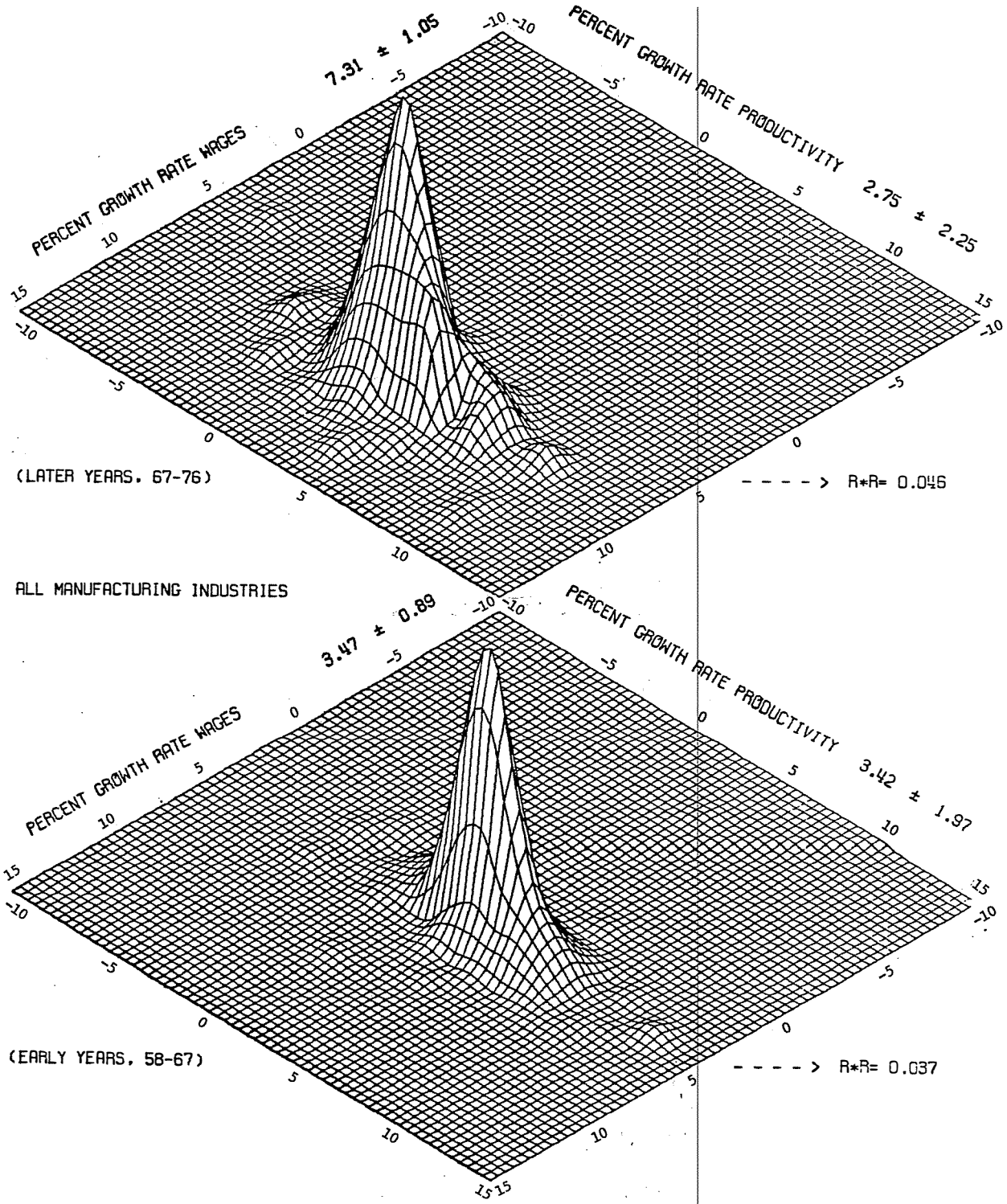
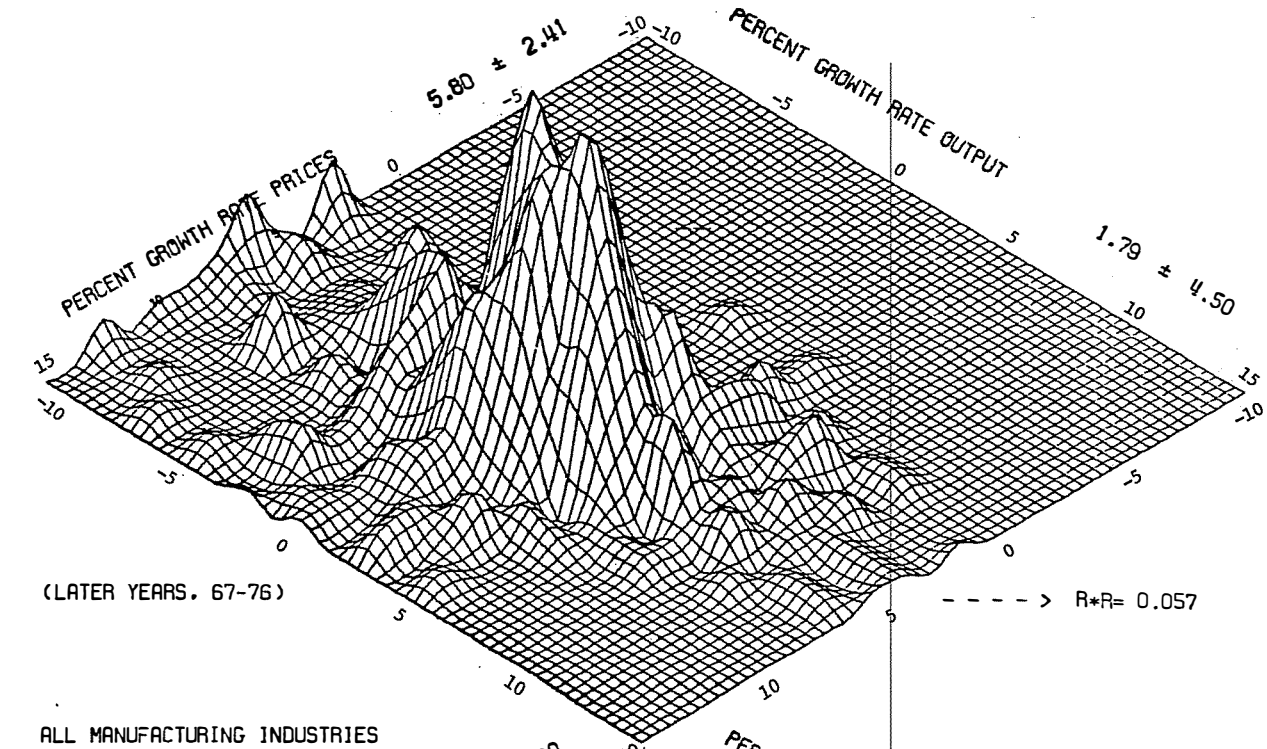
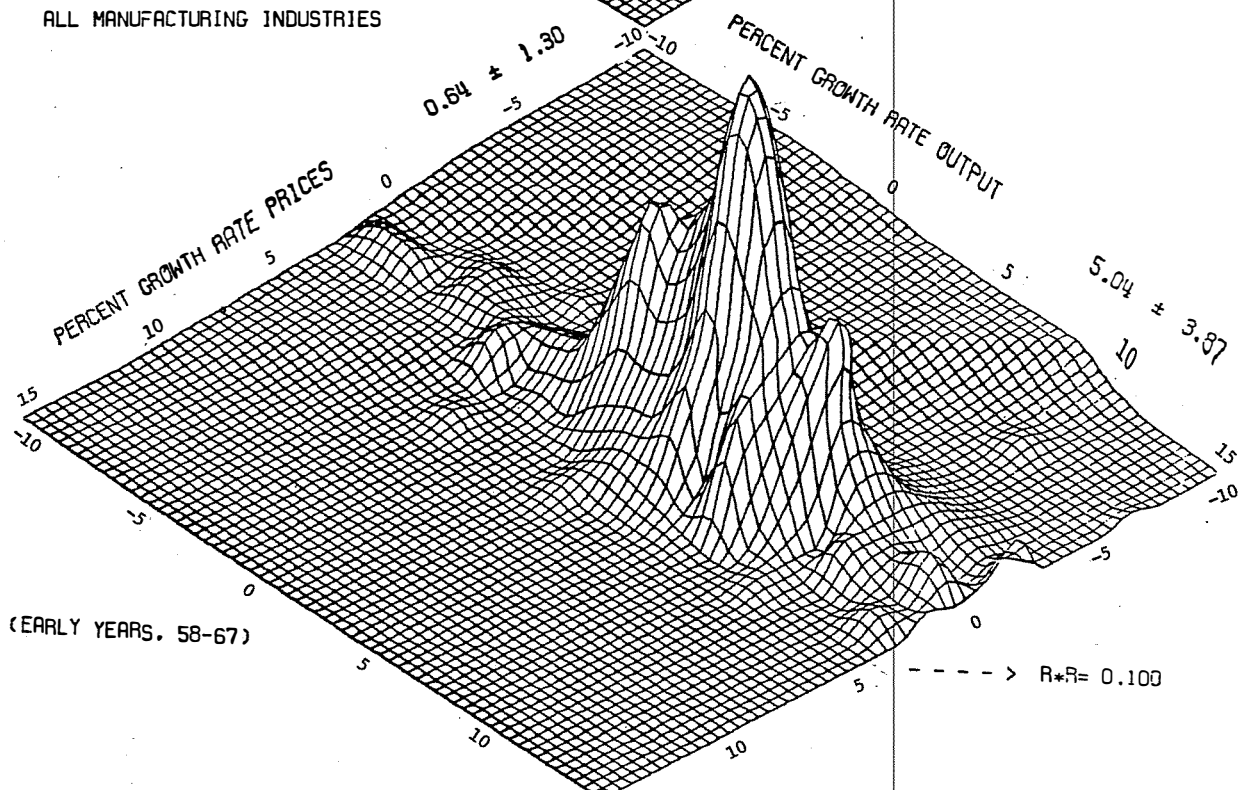


FIGURE X

MEAN TIME RATE CORRELATION OF OUTPUT VS. PRICES



ALL MANUFACTURING INDUSTRIES



for dealing with inflation. But the more that monetary restraint slows growth in output, the more that productivity will be damaged, and the more rapidly prices will increase! To be successful in preventing inflation, monetary policy would have to keep us in a permanent state of recession -- because only by doing so could it insure an adequate supply of negative feedback was more or less continuously available. Unfortunately, however, those who would have to pay the price of such a stability policy are mainly the youth and the minority groups; in these two groups the incidence of unemployment is the greatest.

On the other hand, as some Republican senators have been urging, perhaps the action to take is to cut taxes. No doubt, in the short-run this would stimulate output and productivity; and in doing so a tax cut would help keep prices down. But what about the impact on the longer-run stability of the country? To the extent that such a policy was successful in the short-run, it would justify raising prices during the slack times, because whenever there was a shortage of buying power the government would stand ready to make up the difference.

Indeed, to my way of thinking the fundamental reason prices have become less and less responsive to downturns is that the businessman has come to regard the maintenance of his stability more a public responsibility than a private responsibility. To be sure, the response to a recession is to find ways to reduce costs; because only by improving productivity can the rate of price increase be brought under control. Nevertheless, there is

a real danger that if the government goes much further in guaranteeing stability it will weaken even this response, with the consequence that in depressed times the rate of inflation will be even greater.

What, then, should be done to deal with this dilemma? Frankly speaking, I am not very optimistic about the possibility of convincing economists and politicians that stability and feedback are intimately related. Before this is understood, we undoubtedly will have to experience more serious downturns than we have witnessed to date. In the meanwhile, if one can think of himself as a temporary visitor from Mars, then it must be acknowledged that this is a fantastically interesting period of history.