

FEDERAL RESERVE BANK OF ST. LOUIS

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REVIEW



CONTENTS

Spending, Prices, and Employment in Early 1973	2
The Usefulness of Applied Econometrics to the Policymaker An Address by Darryl R. Francis	7
Food and Agriculture in 1973	11
Meat Prices	17

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Spending, Prices, and Employment in Early 1973

TOTAL SPENDING in the economy rose at a sharply accelerated rate in the first quarter of this year, as both output and prices registered large increases. Following a pattern established early last year, output of goods and services has continued to increase substantially faster than the estimated long-run trend of productive capacity. The rapid growth of production in the first quarter had only a moderate effect, however, on reported rates of capacity utilization. The rate of unemployment in the labor force, for example, averaged 5 percent during the quarter, compared to 5.3 percent in the fourth quarter of 1972. Although the unemployment rate and the capacity utilization index appear to indicate continued excess capacity in the economy, the rate of overall price increase rose in the first quarter, reflecting a substantial increase in the prices of consumer items within the quarter.

The combination of a stubbornly high rate of reported unemployment and an accelerated rate of inflation in the first quarter resulted in pressure from citizen and Congressional groups to reimpose some form of price controls in the economy. The apparent argument on which such recommendations have been based is that stimulus to aggregate demand is required to reduce the rate of unemployment, but the emergence of inflationary pressures requires additional government action to restrict price increases.

The experience in the first quarter of this year must be interpreted with caution. The problem of growing

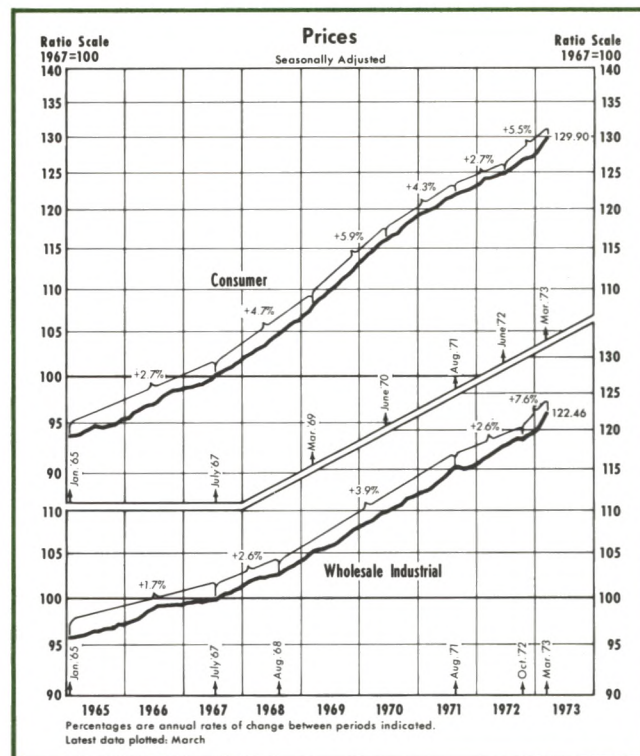
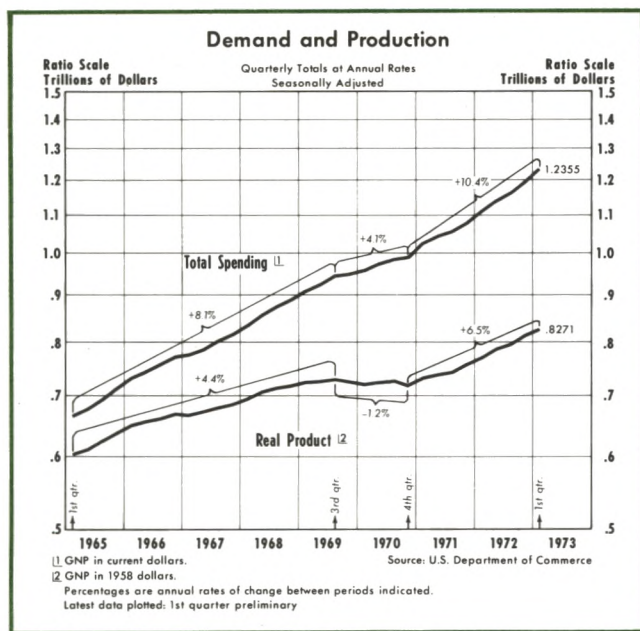
inflationary pressures is real, but the severity is probably overstated by the recent price data. The price rise in the first quarter was partially a one-time increase resulting from a combination of random and non-recurring events. Similarly, the report that an average 4.5 million people cannot find jobs to which they aspire is distressing, but several factors caution against interpreting these data as indicative of substantial excess capacity in the economy.

RECENT TRENDS

Spending

Total spending on all goods and services (Gross National Product) increased at an exceptionally brisk 14 percent annual rate in the first quarter of 1973, following a rapid 11 percent increase during the previous year. By comparison, spending increased 7.2 percent during the early stage of economic recovery in 1971, and at an average annual rate of 7.5 percent from 1964 to 1971, a period of relatively strong inflationary pressures. In the 1957 to 1964 period, when inflation was relatively mild, on average, total spending rose at a 5.3 percent average annual rate.

The accelerated growth of spending in the first quarter of this year reflected a sharp increase in expenditures for consumer items, especially automobiles (a 39.6 percent rate of increase over the fourth quarter) and food products (17.8 percent). Purchases of consumer items rose at a 16 percent annual rate in the



first quarter, reflecting a 35 percent rate of increase in expenditures for durables and a 13 percent rate of rise in nondurables. Over the previous year, total consumer spending had increased 9.6 percent.

Real product in the economy rose at a 7.9 percent annual rate in the first quarter, continuing the rapid rate of growth experienced in 1972. Output rose 7.6 percent during 1972, and has increased at an average annual rate of 6.3 percent since the first quarter of 1971, the first quarter of the current expansion. This rapid growth of production has resulted in a substantial gain in employment. Total civilian employment increased at a 3 percent rate from early in 1971 to March of this year.

Prices

Prices, as measured by the GNP price deflator, rose at an accelerated 6 percent annual rate in the first quarter of this year, compared to a 3 percent rise experienced during 1972 and a 3.6 percent increase in 1971. The recent accelerated rate of price increase reflected, in large part, both a sharp increase in consumer prices which began late last year and a pay increase for Federal employees. This latter item is treated in the national income accounts as an increase in the price of goods and services purchased by the Federal Government. Excluding this item from the price index yields a 5.6 rate of price increase in the quarter.

Consumer prices, as measured by the implicit price deflator for consumption expenditures, increased at a 5 percent annual rate in the first quarter, compared to

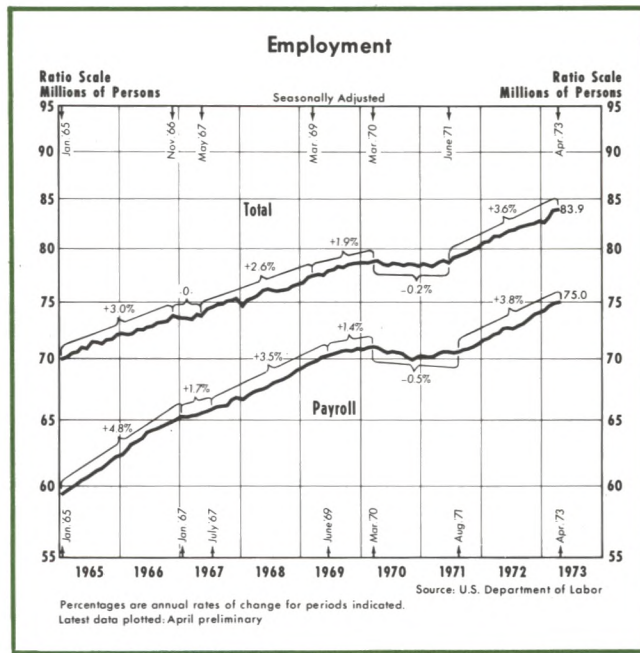
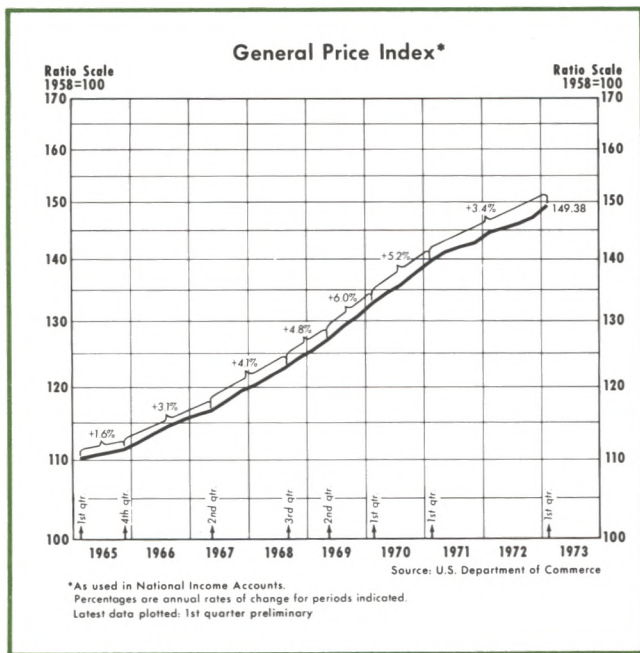
a 2.6 percent increase during 1972. The rise in consumer prices, in turn, was largely reflective of increases in food prices. The food component of the consumer price index increased at a 21.6 percent annual rate from November to March, compared to a 5.4 percent rise over the prior twelve months.

Some perspective on recent price developments is appropriate at this time. Inflation in this country reached a peak rate in late 1969 - early 1970, with average prices rising at about a 6 percent annual rate. During most of 1970, and until the "freeze" in August 1971, the rate of price increase generally declined. On average, since the control program began in August 1971 price increase have been more than 3 percent per year, despite three months of little change during the freeze. The accompanying table presents several measures of price developments by years.

Table 1

	PRICES (Annual Rates of Change)	
	Consumer Price Index	Implicit Price Deflator
1969	5.8%	5.3%
1970	5.7	5.3
1971	3.5	3.6
1972	3.4	3.0

NOTE: Data reflect fourth quarter to fourth quarter changes. Consumer price index computations were based on quarterly averages of monthly data.



The increase of prices began to accelerate late last year. For example, from October to March this year, wholesale prices of farm products and processed foods and feeds increased at an exceptionally rapid 51 percent annual rate. To a significant extent, this jump was related to an unusual supply situation, and may be partially reversed at a later time.¹ It also may be a reflection of an excessive total demand that price controls on other goods in 1972 diverted to food products.

In the first eight months of last year, consumer prices rose at a 3.2 percent annual rate. From August to December, these prices rose at a 3.8 percent rate. From December 1972 to March 1973 this year consumer prices rose at an even faster 8.8 percent rate. The most recent jump probably will not be sustained, however, since it reflects both an unusual agricultural situation and some catch-up price increases following the termination of Phase II of the price-wage control program.

Employment

Employment has been rising rapidly in response to the recent increases in demand for goods and services. From the end of 1971 until March 1973, total employment rose at a 3.8 percent annual rate. Population of working force age is estimated to have risen at about a 2 percent rate in the same period. In 1971 employment rose 2.1 percent, and the trend growth since 1952 has been at a 1.5 percent rate.

Although employment is now at a record level and rising at a rapid pace, there remains a significant number of people who report that they are seeking but are unable to find jobs. In recent months unemployment has been averaging about 5 percent of the labor force, down from the 6 percent level of 1971 and early 1972, but substantially higher than the 4 percent or less that was observed in the late 1960s.

Given the current state of the arts, widespread disagreement would be expected as to the minimum sustainable level of unemployment which is consistent with relatively stable prices. For that matter, any such minimum is likely to change over time as the composition of the labor force, as the pattern of production, or the structural obstacles to employment change.

In only six of the fifteen years since 1957 did unemployment average less than 5.2 percent; these were the years 1965 through 1970. During this six-year span, unemployment averaged about 4 percent. In this period the increase in consumer prices accelerated from 1.2 percent in 1964 to 5.5 percent in 1970. In another six of the years since 1957, unemployment was between 5.2 and 5.7 percent of the labor force (1959, 1960, 1962, 1963, 1964, and 1972). On average, during these six years the rate of increase in consumer prices remained virtually unchanged. In the remaining three years, 1958, 1961, and 1971, unemployment was 5.9 percent or higher, and in each case the rate of inflation declined.

The current level of unemployment probably reflects a normal turnover, as businesses adapt to

¹See "Food and Agriculture in 1973", pp. 11-16 of this Review.



changing consumer demands, as new workers enter the labor market, and as others search for better job opportunities. Latest data indicate that 45 percent of those unemployed had been seeking work for four weeks or less and about 76 percent had been seeking work for less than three months. Also, at any one time there are some highly productive workers who are voluntarily unemployed while searching for better opportunities. This is probably explained by recognizing that one can usually engage in more intensive search for a job when not burdened by current employment responsibilities. In addition, search time has probably been extended by unemployment benefits² and, for many, by the fact that other members in the household are working.

Demographic changes in the labor force seem to have been operating in recent years in such a way as to raise the minimum attainable level of unemployment. Since 1965 participation of women (16 years of age and older) in the labor force has risen from 39 percent to about 44 percent, while participation of men of the same ages has declined from about 82 percent to 79 percent. Since unemployment among women usually has been about 1.7 percentage points higher than for men since 1965, this shift in composition of the labor force probably has tended to raise the minimum level of unemployment attainable without intensifying inflation. Also, since 1965, the proportion of teenagers in the labor force, where unemploy-

²In a recent United States Department of Agriculture publication, it was noted that "A Tennessee father who is eligible for food stamps and the unemployment insurance maximum gains only \$4 a week by taking a part-time job paying \$75 a week. In New Jersey the job must pay over \$100 a week before a similar man receiving unemployment benefits and food stamps gains anything at all by working." [Alair A. Townsend, "National Issues in Welfare Reform," *Outlook* 73, U.S.D.A.].

ment rates are also relatively high, has been growing substantially.

This shift in the structure of the labor force reflects, in part, the short-run effect of expectations of increased prices on the supply of labor. Families committed to a stream of payments, such as for prior purchases of durables, or families which have become accustomed to a given stream of income, would be expected to attempt to maintain their real income through wage increases or more intensive employment. The latter is achieved by moonlighting and having additional members of the family holding jobs.

THE IMPLICATIONS FOR FUTURE ACTIVITY

The general pattern of economic activity in 1971 and 1972 was one of increasing production and employment, and deceleration in the rate of inflation. However, the rate of unemployment, while declining over the period, remained substantially higher than that experienced in the late 1960s. Similarly, the rate of inflation in late 1972 was just slightly more than half of that realized in 1969, but still above the less than 2 percent average rate of inflation during the early to mid-1960s. This slow adjustment in both inflation and unemployment is evidence bearing on the strength of inflationary pressures which have been allowed to develop in the economy over the last half of the 1960s.

Inflation, in terms of a persistent rise in the average level of prices, is fundamentally a problem of excessive aggregate demand. In a growing economy, inflation results from a continuing stimulus to demand sufficient to outstrip the growth of production flowing from improved technology, increased productivity, and expansion of the stock of factors of production. This does not imply, however, that an immediate end to inflation can be secured by a restriction of aggregate demand. The longer an inflation is allowed to persist and the more severe it becomes, the more difficult it is to eliminate. The experience since 1970 reflects this unfortunate fact of life.

Economic activity is conducted on the best estimates by economic units of current and future market conditions. During a period of inflation, economic behavior becomes progressively more responsive to expectations of further inflation and less responsive to current conditions. Contract obligations are made, long lead-time projects are undertaken, and resources are allocated on the basis of expected future inflation. Once committed, economic units would be expected

to resist the wealth losses which would result from an unexpected decline in the rate of inflation. Also, given the experience of the period since 1965, economic units probably now respond more quickly to protect themselves from rising prices.

If the growth of aggregate demand were to slow abruptly, then further increases in inflationary pressures might be avoided, at least in the longer run. However, experience has shown that sharp cutbacks in demand have their initial effects on production and employment. Some reduction in the rate of growth of production is necessary, of course, as the economy approaches capacity. But an abrupt decline in the

growth rate of demand and real output during an adjustment period would not seem to be desirable.

If the reduction in the rate of increase of aggregate demand were gradual, the adverse effects on production might be avoided, or at least moderated greatly. But a gradual slowing which occurred only after production reached full capacity would probably be accompanied by a substantial build-up of inflationary pressures over the transition period. Later, then, the economy would be faced with the dilemma of either accepting the higher rate of inflation or enduring another period of sluggish real growth as expectations of inflation are reduced.



The Usefulness of Applied Econometrics to the Policymaker

An Address by DARRYL R. FRANCIS, President, Federal Reserve Bank of St. Louis,
at the National Association of Business Economists Seminar,
Chicago, Illinois, April 4, 1973

I AM DELIGHTED with the invitation to be with you today and have this opportunity to present a few of my views regarding the role of applied econometrics to the policymaker.

Since I am not a builder of econometric models or a practicing econometrician or statistician, I shall speak today as a consumer of the results of econometric models. In broad terms I shall discuss what I expect from my research staff and how I fold the products of their labors into my policy recommendations.

Policymakers' stabilization actions are arrived at through their judgment about the general course of economic activity and the effectiveness of various tools available to them. All policymakers have some view of how the economy operates and how their actions affect the economy. This concept or hypothesis is usually based on years of experience and generally is not formulated as rigorously as an econometric model.

I believe that the concepts policymakers form about the operation of the economy should be constantly subjected to rigorous scientific analysis. Econometric models provide a valuable means of formulating and testing our hypotheses about the economy which can then be subjected to statistical analysis. In other words, we can determine whether our beliefs hold water or have big holes in them.

Before getting into specifics, let me make a few general remarks about the context within which I see a role for scientific research. Most of what has been done by our staff over the years has begun with the formulation of testable, and therefore deniable, statements or hypotheses. Specifically, we frequently be-

gin merely with the statement of a policymaker to the effect that if a specific event should occur, then certain subsequent events will occur. We then seek to formulate such a statement into a hypothesis in such a way that it is not a truism. To do so, we state the conditions which would be acceptable as a denial or rejection of the hypothesis.

Let me illustrate the importance of this by doing the opposite. Suppose someone makes a statement such as "More rainfall may or may not result in a larger corn crop." That statement is empty of content since there is no event which would falsify it. In a nutshell, to engage in worthwhile research, we must be willing to be wrong. This has been the underlying philosophy of our research efforts. We seek to pursue our theoretical formulation and empirical testing in a professional manner, and then to present our results for all to examine. If subsequent events should prove us wrong, then we will accept it. In this manner economic knowledge is advanced.

As a Federal Reserve policymaker I must live in the real world. Therefore, advice from my staff that I should support a policy that would shift the LM curve is of very little use to me. As a member of the Federal Open Market Committee, I know that the actions I can vote for are changes in Federal Reserve holdings of Government securities. As President of a Federal Reserve Bank, I can recommend to our Board of Directors that they should submit a change in our Banks' discount rate. I cannot recommend to the Open Market Committee that the LM curve should be shifted one way or another. I can only recommend actions in terms of the instruments at hand. The justification for my position must be couched in terms of the probable effects on prices and employment.

In recent years, especially with the advent of computers, there has been a great surge in the amount of mathematics and statistics used by economists. Although the mathematical trappings of economics may not seem too impressive to trained mathematicians, to most policymakers who have only a limited background in math, they pose a formidable barrier to understanding how economists derive their results. The bewildering struggles that occur between model builders over specification errors, structural versus reduced-form models, recursive versus non-recursive systems, etc., are meaningless to most policymakers.

This is not meant to deny the usefulness of math and statistics. These are very powerful tools, and their use has helped to advance knowledge in many fields of science. However, math is not an empirical science. When it comes down to the time of making a policy recommendation, I must still have a concrete interpretation in terms of open market operations. Also, beyond being told what to expect from a given policy action, I want to have some understanding of how the results are obtained.

The type of economic models that policymakers use depends largely upon the goals of their business. For example, the goal of General Motors is to produce and sell automobiles in order to maximize the net wealth of their stockholders. Therefore, GM policymakers would be interested in understanding the factors influencing the demand for autos and being able to forecast such demand.

The goal of the Federal Reserve, at least as I view it, is to promote high-employment growth without inflation. As a monetary policymaker, I am interested in what the Fed can do to achieve these goals. Therefore, I have directed our research staff to investigate the process by which Federal Reserve actions influence economic activity.

First, I wanted to determine what measure of Federal Reserve actions was most closely related to aggregate economic activity. Through extensive research we have concluded that changes in the money stock provide a highly reliable means of gauging the effect of monetary actions on total spending. However, recognition of this fact alone was only half the battle. To be at all useful in policy recommendations, it was necessary to determine whether, with its available policy instruments, the Federal Reserve could control the growth rate of money. Study of other economists' work, as well as our own investigative efforts, have proved conclusively that the money stock *can* be controlled with a relatively high degree of accuracy.

I think it is important at this point to make a distinction between monetary *actions* and monetary *policy*. For my purposes I am not solely interested in a measure of the intentions of policymakers. I am primarily interested in the results of their actions. If the effect of monetary actions is to accelerate money stock growth and hence accelerate inflation, that is of interest to me even if the *intent* of policy was to keep interest rates from rising.

If his research is to be of use to a policymaker, an economist must be able to tell me the results to be expected from a particular course of action. For example, if the Open Market Committee takes some action, such as directing the Trading Desk at the New York Federal Reserve Bank to slow money stock growth, I would like to know what this means in terms of the growth of total spending, output, and prices. There are two extreme situations which are not very useful to policymakers. One involves magnitudes which they control absolutely, but which have no effect on, or any relationship to, an ultimate policy objective. The other involves magnitudes which seem to be good causal predictors, but which are completely outside the control of the policymakers.

An economist must state his recommendations in a form that has empirical content. I am not primarily interested in statements that express relationships in abstract terms. I want to know what operations to direct the Desk to perform and how and when the performance of these operations will affect the prices people pay for goods and services and the number of people employed.

Therefore, it is not enough for my research staff to tell me that the Fed *can* control the money stock. As a member of the Open Market Committee, I know the Federal Reserve buys and sells Government securities; it does not fly a blimp across the land dumping out money. The assertion "the Fed can control the money stock" must be given empirical content in terms of what the Fed can directly control. The result of this demand for an operational procedure has led us to the use of the monetary base concept and the development of a procedure for determining the effects of a growth rate of base on growth of the money stock.

Here, I feel it necessary to say that I think it should be required of others who recommend that the Federal Reserve control different variables, such as interest rates, that they also provide policymakers with an operational means of achieving this control. It is wrong to accept at face value the statement the

"Fed can control interest rates" without the corresponding explanation of *how* the Fed can do this, and what the consequences would be of doing so.

As a policymaker, I am primarily concerned with projection of where the ultimate goals are tending and what will be the effect on these goals if, for instance, the rate of growth of the money stock is altered. Therefore, we build models to help us understand the effect of growth of the money stock on policy goals.

As an example of our attempts to use models to understand the effects of monetary policy on the economy, I could mention the so-called "St. Louis Model." The original equation of this model was developed to test competing conjectures about the relative strengths of the growth of the money stock and fiscal actions. How do monetary and fiscal policy actions interact? Does money matter? Can the Fed continue an expansionary policy and force fiscal policy to bear the burden of restraint? As you can see, these are questions of great importance to a policymaker.

Once the computers have stopped running and my research staff has analyzed the results, I consider these results in my policy recommendations, keeping several points in mind. First, I am aware that no model is the absolute truth. All models have had their hours of glory in addition to their periods that their creators would prefer not to mention. Second, when attempting to see into the future, it is useful to compare the results of more than one model. When the results diverge substantially, this is frequently of more value than when all models give pretty much the same results. A divergence forces us to examine the reasons for the discrepancies and carefully think about the implications of the causes of these differences. Third, all the results of models must be examined to see if they are consistent with our accumulated evidence from history, theory, and practical experience.

My personal preference is for small models, rather than large models. This stems partly from my view that the Federal Reserve should be concerned with the aggregate effects of policy, and should leave the allocative effects to the operation of the market place. Also, not being a practicing econometrician, I prefer models whose operation I can understand. I am willing to trade some so-called "structural richness," much of which refers to matters I do not consider to be the proper concern of monetary policymakers, for an ability to understand the process by which the model arrives at its results. I have never been willing to simply accept the results of any model. As a policy-

maker, I want to know as fully as possible the basis for my policy recommendations.

In addition to forecasting, policymakers are also interested in planning. Forecasts give us some idea of where the economy is headed, given past policy actions. However, our job does not end with attempts to analyze the effects of policy actions on the economy and to forecast subsequent events. We must also engage in planning. This involves determining desired future values for prices and employment and deciding how to achieve these goals. At the planning stage, both understanding of the economic process and forecasting future developments must blend together. When we seek to influence the course of prices and employment, our research staff is required to use all of its knowledge about forces influencing the economy in order to monitor forecasts of the effects of changes in policy.

These forecasts, upon which we depend in deciding our course of action, involve some assessment of the pattern of developments to be expected following a certain action. Let me be more specific. It is not sufficient for an economist to tell us that a slower growth in money will eventually result in a slower rate of price increase. As a policymaker, I would like to have better information as to the specific open market transactions that would achieve, with a high probability, a desired growth of money. I am also vitally concerned with the time distribution to be expected with regard to changes in prices and output for a given change in the rate of growth of money. Then I want to know how some tangible results can be expected with regard to prices and output, and how the pattern will appear in the data subsequently reported.

Economic research can never tell policymakers what are "good" or "just" policy goals. However, by giving the policymakers an indication of the expected results of different policy actions, economic research can provide a valuable service.

As much as politicians hate to admit it, we live in a world of trade-offs. One of the gravest diseases afflicting rational policymaking is the refusal to accept the fact that we cannot always "have our cake and eat it too." I well remember a couple of years ago the recommendation of the Joint Economic Committee of Congress that called for the attainment of a 2 percent rate of inflation and a 3 percent unemployment rate in a short period of time. All accumulated economic research indicated that these two goals were mutually incompatible in the foreseeable future.

Frequently in the past six years we at the Federal Reserve have found ourselves perched on the horns of a dilemma where failure to slow money growth meant accelerating inflation, but slowing money growth meant rising interest rates. Unfortunately, rather than recognize the short-run trade-off implied by economic research, we have ended up with both accelerating inflation and higher interest rates, rather than less inflation *and* lower interest rates which longer-range policy planning could have provided.

Monetary policy cannot "fine-tune" out all fluctuations in economic activity. However, given the current state of economic knowledge, monetary policy can avoid inducing a high rate of inflation or a recession in the economy. Thus, I would like policy to remain neutral with regard to cyclical movements in economic activity rather than run the risk of reinforcing them. I believe econometric models have been an aid to policymakers in outlining the available alternatives, and, therefore, have added to rational policymaking.

I would like to conclude my remarks by liberally paraphrasing from an article that appeared in the *Quarterly Journal of Economics* some years ago.*

It seems that in a certain kingdom there was a school for the education of princes approaching manhood. Since the king and his court spent much of their time playing chess, it was decided that the subject called "games" should be added to the curriculum of the school. A wizard of the school was assigned to develop the course.

Since the wizard had never played chess, he corresponded with wizards in other kingdoms who told him that the main concern was that the course in "games" should be rigorous and intellectually challenging. Long ago the wizards concluded that chess, as actually played, was so complicated it was impossible to develop the principles and rules necessary to teach it in the classroom. Therefore, they introduced a number of simplifying assumptions which tidied-up the game and made it much easier to teach and give exams.

*Permission to excerpt passages was granted in April 1973. The original article appeared in the May 1965 *Quarterly Journal of Economics*, pp. 209-211.

Having received a copy of the rules of this game the wizard began teaching it to his students, passing those who learned it well, and failing those who did not adequately master all the rules. The wizard maintained an active correspondence with wizards in other kingdoms, gradually modifying the rules of this game. For convenience, they referred to the game as chess, although it was taken for granted that everyone knew their game was not quite the same as the chess played in the real world.

One day the king summoned the wizard and asked him to describe the method used to teach chess in school. The king was naturally amazed to hear that, in classroom chess, all pieces moved in straight lines and the wizard used terms like "jumping men" and "double jumping" which were Greek to the king; the wizard never referred to things the king was familiar with such as queens, rooks, bishops, pawns, and knights.

Somewhat puzzled, the king asked the wizard if he had ever observed chess being played in the real world. The wizard replied, "no, but I do carry on correspondence with other wizards. This is better since everyone knows wizards are smarter than chess players."

Then the king asked "After finishing your course, are the princes better chess players because of what they learned in your class?"

The wizard replied, "No offense, sir, but we wizards view the purpose of our courses as being to teach the princes to think, not to prepare them for a mere vocation."

The moral of this little tale for the economics profession is: "An education in checkers does not prepare one for a life of chess."

The moral for the businessman is: "A consultant who wants to play his own game, rather than yours, is worthless."

Like the king in the fable, I too want to be a better chess player. However, I do not just want to learn the abstract rules of the game — I must play in the real world.



Food and Agriculture in 1973

by CLIFTON B. LUTTRELL

REPRESENTATIVES of the U.S. Department of Agriculture have predicted higher food and farm commodity prices for this year and a record realized net farm income of \$21 billion. The volume of food and farm products is expected to increase somewhat, but demand, both foreign and domestic, is expected to rise even faster, resulting in substantially higher prices. This article summarizes reports given at the 1973 National Agriculture Outlook Conference held in February and in later Department of Agriculture releases, and discusses some of the basic forces underlying the sharp food price increases in late 1972 and early 1973.

OUTLOOK FOR FOOD

Prices and Expenditures

Retail food prices are predicted to average significantly higher this year than in 1972. Most of the average year-to-year increase may have already occurred, however, as food prices have increased sharply in recent months and farm commodity prices have apparently turned down following a steep six-month upswing ending in March. The seasonally adjusted average price of food for home use rose 9.5 percent from October 1972 to March this year. Relatively stable prices, however, are expected to prevail throughout the rest of the year.

While average food prices may not change much during the rest of the year, prices of a number of food items are expected to decline from their current levels. Poultry and egg prices are expected to decline somewhat in the spring months, and pork prices are expected to average lower in the second half of the year than in the first half. Somewhat lower prices are also predicted for fresh fruit and vegetables as the 1973 crop is marketed.

An expected sharp increase in crop production this year will probably not have much immediate impact on the prices of meat and other animal products. A larger feed crop and the elimination of export subsidies will result in lower feed prices, thus providing greater incentive for livestock feeding. In the long run, farmers and ranchers will expand their herds and flocks and

produce additional animals for slaughter, milk, and eggs. In the short run, however, the number of animals available for feeding is relatively fixed, and only moderate increases in production of meat and other products per animal are possible.

Food expenditures for home use are expected to increase about 10 percent this year, following a 6 percent increase last year and a trend rate of 5 percent from 1965 to 1972. Total disposable income, however, is expected to rise sharply, and food expenditures as a percent of the total will probably be about the same as a year ago and well below that of earlier years.

Table 1

FOOD EXPENDITURES AS A PERCENT OF DISPOSABLE PERSONAL INCOME

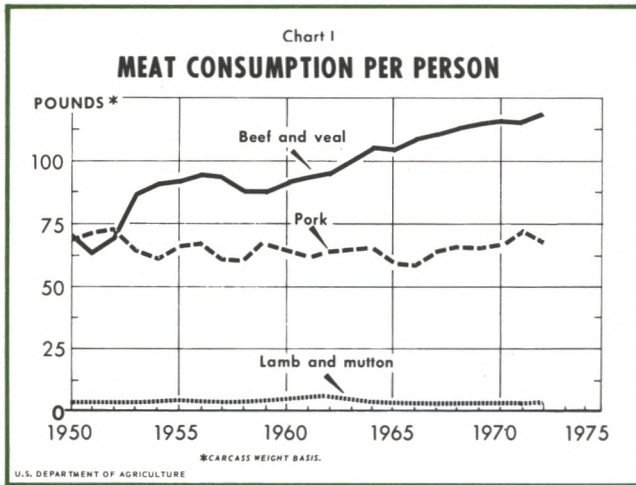
Year	Percent
1950	22.2%
1960	20.0
1965	18.1
1970	16.6
1972	15.7
1973	15.5*

*Projected in February on the basis of somewhat lower than current levels of farm prices.

Source: U.S. Department of Agriculture, *U.S. Food Consumption, National Food Situation, and Outlook for Food Prices, Consumption and Expenditures (1973)*.

Production and Consumption

The quantity of food available for domestic use this year is expected to rise somewhat from the 1972 level and new records in total and per capita consumption are likely. Per capita consumption of red meat last year totaled 188 pounds, nearly two percent below the 1971 level. This decline reflected a sharp reduction in pork consumption and a continued downtrend in veal which was only partially offset by small increases in beef, lamb, and mutton (Chart 1). Despite the decline, per capita red meat consumption was still higher last year than in any other year except 1971. Red meat consumption, while below year-ago levels in the first quarter, is expected to total 2 or 3 pounds per person more this year than in 1972, with beef accounting for most of the increase. Production is ex-

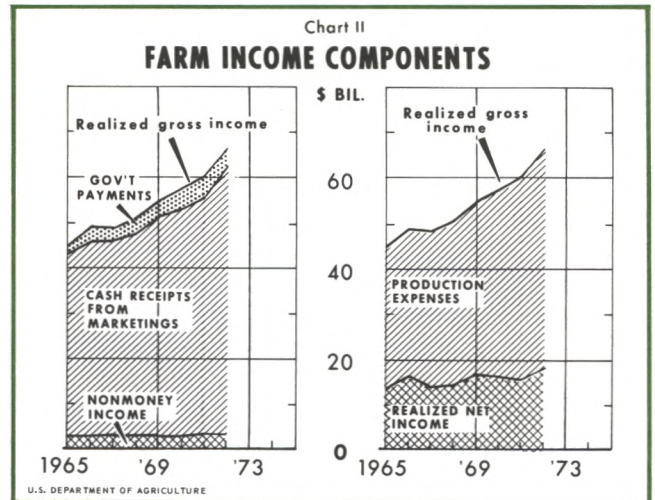


pected to rise moderately. The uptrend has apparently begun and is expected to continue through 1973. Meat imports may also rise moderately with the removal of most import restraints last year.

Per capita output of poultry is expected to increase as the year progresses, and production of fish and vegetable oils may average somewhat higher than last year. Production of dairy products may be down slightly, however, from the 1972 level, and egg production will likely be down for the second consecutive year. The quantity of fresh fruit and vegetables produced in late 1972 and early 1973 was down from year-earlier levels as a result of unfavorable growing conditions for grapes, pears, tomatoes, and sweet corn. However, as the year progresses the quantity available for consumption will be increasingly determined by 1973 crops which, with normal growing conditions, will likely be larger than a year ago.

OUTLOOK FOR AGRICULTURE

Farmers are expected to realize about \$21 billion net income from farming this year, almost 10 percent above that realized in 1972, and far above that for any other year (Chart II). The prospective net income of \$7,500 per farm is about \$700 above the 1972 level. Total farm production is expected to be up and farm commodity prices to average at least 5 percent higher than last year (Charts III and IV). Realized gross income is projected to rise 11 percent to \$74 billion (Table II). Cash receipts from farm commodity sales are expected to total more than \$67 billion, about 15 percent above the 1972 level, but direct Government payments are expected to decline about \$1 billion from last year as a result of reduced payments under the feed grain program. A sharp increase in production expenses is anticipated, however, which will partially offset the realized gross income gain.



The volume of livestock and livestock products marketed this year may rise slightly while prices received for these products are expected to average significantly higher than last year. Crop production controls have been relaxed and the volume of crops marketed is expected to rise sharply. With rising demand for crops both here and abroad, crop prices may still average significantly higher than in 1972.

Table II

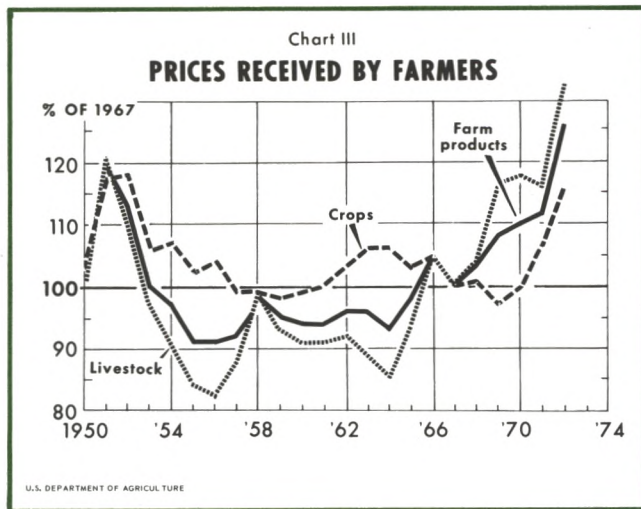
	FARM INCOME			
	(Billions)			
	1965	1970	1972	1973*
Cash Receipts	\$ 39.3	\$ 50.5	\$ 58.5	\$ 67.3
Government Payments and Nonmonetary Income	5.6	7.4	7.9	6.7
Realized Gross Income	\$ 44.9	\$ 57.9	\$ 66.4	\$ 74.0
Production Expenses	30.9	41.1	47.2	53.0
Realized Net Income	\$ 14.0	\$ 16.8	\$ 19.2	\$ 21.0
Net Income Per Farm (Dollars)	\$4,190	\$5,757	\$6,800	\$7,500

*Projected

Source: U.S. Department of Agriculture, *Farm Income Situation*.

Livestock

Livestock and livestock product sales are expected to total \$5 billion more this year than in 1972. Farmers are expected to market a few more cattle and about the same number of hogs at higher prices. Output of dairy products may be down slightly, but the decline will be more than offset by higher prices resulting in somewhat higher gross receipts for dairy farmers. Broiler chick replacements in recent months have been lower than a year earlier, and broiler production will be somewhat less during the spring months. Production is expected to rise to year-earlier levels during the summer, and prices for 1973 will average



somewhat higher than last year. Egg production is predicted to be moderately less than a year ago as a result of a substantial decline in the laying flock last year. The size of the laying flock is expected to increase as the year progresses, and egg production to approach 1972 levels near the end of the year. Egg prices for 1973 are expected to average well above year-ago levels, and cash receipts from egg sales will be somewhat larger.

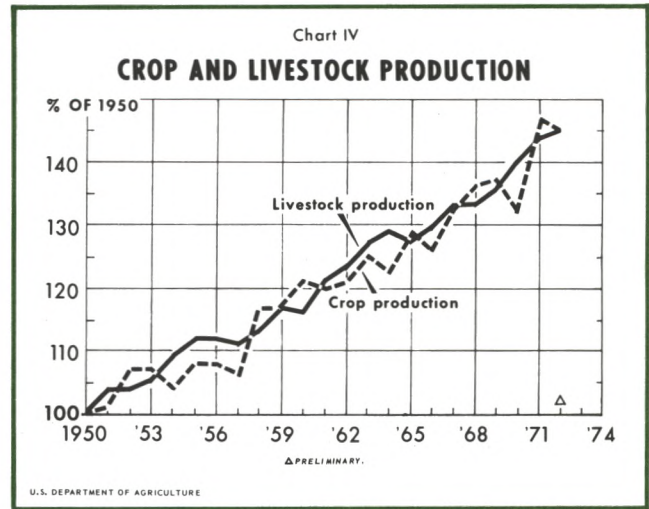
Crops

Crop receipts are forecast at almost \$4 billion higher than a year ago, with both prices and volume of marketings up significantly. Production controls have been relaxed and with the incentive provided by higher prices, farmers have indicated that they intend to plant 8 percent more acres to major crops. Major increases in production are in prospect for feed grain, food grain, and soybeans.¹

On March 1 farmers indicated plans for planting 6.5 million more acres of feed grain this year than a year ago, an increase of 6 percent. The quantity of feed grain available in the current marketing year is somewhat greater than a year ago despite the smaller 1972 crop.² The 1972 crop plus carryover stocks at the beginning of last year's harvest season totaled 246.4 million tons — 5 million tons above the year-ago level. However, domestic and foreign usage of U.S. feed grain is expected to total 210 million tons — 17 million more than a year ago — and carryover into next year may be down to about 36 million tons — 10 million less than a year ago.

¹Feed grains include corn, grain sorghum, oats, and barley. Food grains include wheat and rice.

²The current marketing year for each crop began with the harvest season for the 1972 crop. For example, the current marketing year for corn began October 1, 1972.



Government stocks of feed grains are almost exhausted. Domestic use this year is expected to total 177 million tons, up 7 percent from a year ago and exports will be up about 22 percent to 33 million tons. Reduced grain production in the Soviet Union, Mexico, India, and Mainland China and sustained growth of demand in Japan and Western Europe account for most of the increased exports. Prices of feed grains have risen sharply since October and are expected to remain well above 1972 levels during the current marketing year.

Food grain acreage is expected to increase about 6 percent to 60.2 million acres this year. Wheat plantings, which account for most of the food grains, are expected to total 58.2 million acres. If normal weather conditions prevail, production of wheat is expected to exceed the 1,545 million bushels last year by about 12 percent.

Production plus carryover stocks of wheat in 1972 totaled 2,409 million bushels, the largest quantity available for utilization in any marketing year since 1962-63. Utilization, however, appears headed for a record 1,968 million bushels, 23 percent above the previous peak, as a result of a sharp increase in export demand. Exports are predicted to total 1,150 million bushels, a third more than the previous record. Larger sales than previously have been made to those nations which regularly import U.S. wheat. In addition, the USSR has purchased about 400 million bushels, and some purchases have been made this year by the People's Republic of China. Nearly all the Government-held inventory of wheat may be exhausted by the close of the current marketing season on July 1.

The rise in wheat prices during the past marketing year was the sharpest on record — from \$1.32 per bushel last July to \$2.38 in January. Prices had de-

clined somewhat in April and some further decline is expected as the harvesting season approaches, but prices will probably remain 40 to 50 cents above the Government price support level of \$1.25 per bushel.

The rice acreage allotment has been raised 10 percent this year in anticipation of strong world demand, and on March 1 growers indicated plans for an equal increase in acreage seeded. Rice utilization is expected to exceed the 1972 crop of 85.2 million cwt., resulting in an August 1, 1973 carryover well below the levels of recent years. Prices for the season are likely to average more than a dollar above the loan rate of \$5.27 per cwt.

Soybean plantings, on the basis of farmers' indicated plans on March 1, will exceed the 1972 acreage by 14 percent. With normal yields, production will exceed 1.5 billion bushels, up 17 percent from a year ago. The 1972 crop plus carryover stocks totaled 1.35 billion bushels, 6 percent above the year-earlier total despite some weather damage to the crop during harvest season. However, substantially higher usage is forecast for this year and carryover stocks this fall may not exceed 60 million bushels. Domestic crushings of soybeans are forecast to increase about 4 percent from last year to 750 million bushels, and exports are forecast to rise more than 14 percent to 475 million bushels.

Chief factors contributing to the sharp increase in soybean exports are a world shortage of high-protein feeds stemming from reduced Peruvian fish meal production and a general expansion of livestock feeding in Western Europe, the Soviet Union, and Japan. The output of animal products is rising throughout the world and soybean meal is a leading source of protein for animal feed. Prices of soybeans have advanced sharply in recent months—from \$3.30 per bushel in October to about \$6.00 in mid-April—and the price paid farmers for the 1972 crop may average about \$4 per bushel,—\$1 per bushel higher than for the 1971 crop.

Tobacco production is forecast at 8 percent above year-earlier levels. Surplus stocks of flue-cured tobacco in the current marketing year have been reduced, and basic marketing quotas for the 1973 crop have been increased. The burley tobacco stocks, however, are up somewhat and the marketing quotas are slightly less than last year. Government price supports, which largely determine the prices received by farmers, will be up 5.3 percent, and gross returns to farmers should be significantly higher than a year ago.

Cotton production this year is projected to be somewhat less than the relatively large 13.6 million bale

crop of 1972.³ The national base acreage allotment for 1973 was reduced 13 percent, but farmers in early March indicated plans to plant 13.1 million acres, somewhat more than the allotment, and only 7 percent less than in 1972. Production is expected to decline to about 12.2 million bales, 11 percent less than a year earlier. The large 1972 crop boosted cotton inventories, and the carryover on August 1 this year may total about 4.75 million bales, up from last year's 20 year low of 3.4 million. Exports in the current marketing year are expected to total about 4.5 million bales, up from 3.3 million last year, but domestic mill consumption may decline about 5 percent to 7.8 million bales, the smallest since 1948-49. The use of man-made fibers continues to expand both here and abroad at the expense of cotton. The relative proportions of cotton and man-made fibers in total fiber use in the U.S. have reversed during the past twelve years. Use of man-made fibers rose from less than one-third the total in 1960 to almost two-thirds the total in 1972, while use of cotton in this period declined from almost two-thirds to one-third of the total. Cotton prices have increased sharply since last October, but in mid-April they were still below year-ago levels.

BASIC SUPPLY AND DEMAND FORCES

From October 1972 to March 1973 wholesale farm commodity prices and retail prices of food used at home rose at annual rates of 82 and 24 percent, respectively.⁴ In comparison, these prices rose only 2.8 and 2.6 percent per year, respectively, from 1955 to March 1973. Furthermore, since 1955 all consumer expenditure items less food have increased at a 2.7 percent annual rate. Of the major consumer expenditure groups, which include food, housing, apparel and upkeep, transportation, and health and recreation, only transportation and apparel and upkeep have increased at a slower rate than food during this period (Table III). Only since 1970 have food prices increased faster than the other categories, and a major portion of this increase occurred during the past year.

Despite this slower trend growth rate in food prices, the recent sharp increases have been accompanied by protests, demonstrations, parades, and a national meat boycott. Farmers, meat packers, wholesalers, and supermarkets have all been blamed for the higher food costs. In consequence, President Nixon in late March imposed price ceilings on beef, pork, and lamb. The ceilings were set at the highest price received for

³Bales of 480 pounds net weight.

⁴These rates do not reflect long-term trends because of the volatile nature of farm commodity prices.

Table III

PRICES OF FOOD AND OTHER CONSUMER ITEMS

(Annual Rates of Change)

	Food ¹	All Items Less Food	Housing	Apparel & Upkeep	Transportation	Health & Recreation
1955-1960	1.3%	2.2%	1.9%	1.3%	3.0%	2.9%
1960-1965	1.3	1.3	1.0	0.9	1.4	1.9
1965-1970	3.6	4.3	4.6	4.4	3.3	4.5
1970-1973 ²	5.7	3.2	3.6	2.4	2.5	3.4
1955-1973 ²	2.6	2.7	2.7	2.2	2.5	3.1

¹Food used at home²The 1973 data are for March only.

Source: U.S. Department of Labor

at least 10 percent of the seller's sales in the previous 30 days. If the ceilings were below the long-run equilibrium price they would reduce future output and tend to widen the gap between the quantity of meat supplied and the quantity demanded. The current ceilings, however, may not be so low as to reduce meat production. They are probably well above long-run equilibrium prices, and at this level they probably will not interfere with the incentive for increased output.

Most of the recent increase in food and farm commodity prices probably reflected short-run supply and demand forces in the food industry rather than general inflation or other long-run factors. The wholesale price index for industrial commodities rose at an annual rate of 8.1 percent during the October-March period.

In the short run food output is relatively fixed by the volume of crops both planted and in storage and the number of animals on farms. Thus, random and cyclical factors which cause abrupt changes in output from planned levels or changes in demand may cause sharp changes in prices.

The recent sharp increases in food prices can be traced to a series of such factors which led to a reduction from the trend growth rate in food output. Part of the increase can be attributed to an unexpected rise in export demand for livestock feed. Grain production failures abroad and sharply reduced production of high-protein Peruvian fish meal led to unforeseen export demands for U.S. grains and protein feed supplements. As a result of this increase in export demand, plus some growth in domestic demand, domestic feed prices rose sharply. The average price of purchased feed rose 31 percent from October 1972 to March this year. Higher feed costs tended to reduce the incentive for feeding at existing prices; the supply conditions for livestock products have changed such that at each price a smaller quantity would be produced than heretofore.

Additional factors contributing to the food price increases were adverse weather conditions and the downswing phase of the hog cycle. Unfavorable autumn and winter weather contributed to somewhat smaller than anticipated feed and soybean crops and a smaller quantity of fresh fruit than was produced a year earlier. The hog production cycle was on the downswing last fall in response to low profits in pork production in late 1970 and 1971. Pork production per capita declined about

12 percent from the third quarter of 1971 to the third quarter of 1972, a major factor in the 2 percent reduction in all livestock products.

At current price and output levels, however, the food industry will increase its productive capacity. Farmers have already made plans for increased production. Output of farm products will tend to expand as farmers expand crop acreage, breeding herds, flocks, and other inputs. Prices of farm products declined somewhat from mid-March to mid-April after rising at an annual rate of 54 percent during the previous six months. They are expected to decline further as larger quantities of farm products are marketed late this year and in 1974.

Food prices, however, are not likely to decline much this year despite some possible decline in prices paid to farmers. It is questionable whether all the increase in farm commodity prices has as yet been reflected in retail food prices. If not, some further rises in retail food costs are in prospect as a result of the lagged effects of the farm commodity price increases. There are also other factors which will tend to prevent a major reduction in food prices this year, such as rising real income and population, and increased use of Government food stamps and other food subsidies. In addition, costs of domestic food production tend to rise during a period of general inflation. Furthermore, rising world demand for food and livestock feed is expected. These factors tending to increase food prices may offset, at least through 1973, most of the increased production stimulated by the higher prices.⁵

If there is a sharp increase in crops produced and sufficient price incentive after the fall harvests for farmers to expand livestock production, food prices

⁵For a more thorough discussion of most of these factors, see Clifton B. Luttrell, "Meat Prices - Too High or About Right?," this *Review* (October 1972).

may decline in 1974. Part of the upward pressure on prices will be offset by the reduction of Government restrictions on crop production, the relaxation of import restrictions, the elimination of export subsidies, technological change, and perhaps some decline in foreign demand for domestic livestock feed.

SUMMARY

In summation, food supplies per capita are projected to be larger, and average food prices and expenditures for food substantially higher this year than a year ago. However, disposable personal income is expected to rise sharply again this year, resulting in consumers spending about the same percent of their income on food.

Gross farm income is expected to be significantly higher this year than a year ago, reflecting both increased output and higher average prices for farm products, but somewhat lower Government payments to farmers. A sharp increase is predicted for farm production expenses; however, total realized net income is projected to be well above the year-ago level. Furthermore, the total will be shared by fewer farm

operators as some further decline in number of farms is anticipated.

The sharp increase in food and farm product prices during the late fall and winter months of 1972-73 largely reflected short-run supply and demand forces such as the unfavorable harvesting season, a cyclical downturn in hog production, and an unexpectedly large increase in export demand for feed grain and protein supplements. Farmers are responding to the higher prices by planned increases in production. As production of farm products and food rises, prices may decline from current levels.

Food prices, however, are not likely to decline much this year as a result of the lagged effects of the recent sharp increases in farm commodity prices. In addition, rising population and incomes, Government food subsidies, and general inflation will tend to increase demand for food and prevent a major price decline despite the somewhat higher production anticipated. Food prices are expected to level off in the late spring and remain fairly stable for the rest of the year and if larger crops this fall result in lower feed prices and further expansion of livestock production, some decline in food prices from current levels is likely next year.



Meat Prices

The price of food remains a topic of much concern to consumers, Government officials, and the food industry. In the past six months food prices have increased at an exceptional 20 per cent annual rate. Since meat purchases represent a substantial portion of consumer expenditures on food, it seems reasonable that meat price increases would receive more attention than price increases for other items. The persistence of this situation has prompted publication of the following abridged and updated version of an article which appeared in the October 1972 issue of this REVIEW.

One can only distribute and consume what has been produced, this is an elementary truth.¹

The sharp increases in retail meat prices in recent months have been the subject of much discussion. The increases have had a major impact on total consumer outlays since meat expenditures account for about one-third of the average family food budget. Reflecting their disappointment at these higher costs, some people have accused farmers, meat packers, and grocery stores of "gouging consumers" by forcing meat prices up. These views are generally stated without a full understanding of the underlying economic processes involved in price determination.

This note presents an economic analysis of the forces which have led to meat price increases. The analysis emphasizes the function of the market system in pricing meat, in allocating meat products to consumers, and in allocating resources to meat production.

ECONOMIC ANALYSIS OF PRICE DETERMINATION

An economic approach to determining prices of meat or any other commodity holds that changes in meat prices at grocery stores result from a series of market factors rather than arbitrary decisions by farmers, meat packers, wholesalers, and retailers. Behind retail price increases is often found greater consumer demand as indicated by a rising volume of sales. When the demand for a commodity increases, the first change one typically observes is a higher sales volume which results initially in a reduction of inventories. In order to restore depleted inventories re-

¹Leonid I. Brezhnev, First Secretary of the Soviet Communist Party (*New York Times*, May 29, 1971).

Table 1

Estimated Meat Expenditures as Percent of Total Consumer Outlays

(Dollar Amounts in Billions)

	Total Personal Consumption Expenditures	Total Meat Expenditures	Meat as Percent of Total
1950	\$191.0	\$14.2	7.4%
1955	254.4	16.4	6.4
1960	325.2	20.0	6.2
1965	432.8	24.1	5.6
1970	616.8	35.0	5.7
1971	664.9	36.5	5.5
1972	721.0	43.3	6.0

Source: Calculated from U.S. Department of Agriculture and U.S. Department of Labor data

tail grocers increase their meat orders from packers hoping to continue selling a larger volume at the prevailing price. Upon receiving increased orders for meat the packers in turn increase their rate of meat slaughter and seek to restore meat animal inventories by additional purchases from farmers. Since the prevailing price only provides sufficient incentive for producing the current number of animals, additional animals are not available for immediate delivery at current prices. As packers compete among themselves in an attempt to obtain more animals, they raise their offering prices to farmers.²

In the short run the number of animals available for marketing is relatively fixed. The number of animals on farms cannot be increased rapidly and the increase in meat production per animal is relatively limited.

²See Armen A. Alchian and William R. Allen, *University Economics*, 3rd ed. (Belmont, California: Wadsworth Publishing Company, Inc., 1972), pp. 95-97.

Table II
Importance of Meat in the Food-At-Home Budget
(Percent of Food-at-Home Outlays)

	Red Meat	Poultry	Fish	Total
1960	28.3%	4.1%	2.9%	35.2%
1965	27.8	4.1	2.9	34.7
1970	31.1	4.3	3.3	38.7
1971	31.3	4.2	3.4	38.9
1972	27.9	3.4	3.1	34.4

Source: Calculated from U.S. Department of Agriculture and U.S. Department of Labor data

In other words, the supply of meat is "inelastic" with respect to price in the short run; only a small percent increase in quantity will be forthcoming with a relatively large percent increase in price.

Over the longer run, however, the supply of meat is more "elastic," meaning that with each incremental increase in price, a larger quantity will be offered than in the short run. Given sufficient time, farmers and ranchers find it profitable to expand their meat animal breeding herds and produce additional animals for slaughter. The fact that the long-run meat supply is more elastic than the short-run supply means that a given increase in demand for meat has a smaller impact on prices after passage of some time. Nevertheless, any increase in the demand for meat involves a rise in the price paid by consumers. The higher price equates the larger amount demanded with the amount supplied.

Conversely, declines in meat demand, or advancements in production technology which tend to increase supply, result in lower prices. More meat animals are offered to packers and more meat to consumers than can be sold at previous prices. Prices are thus marked down by retail grocers until the quantity of meat demanded by consumers equals the amount supplied.

DEMAND FOR MEAT HAS INCREASED

Demand for meat has increased substantially in recent years, as evidenced by the fact that consumers have purchased larger quantities of meat at higher prices. Factors contributing to the greater demand include rising per capita incomes, increased food subsidy programs, and a larger population.

Both Consumption and Prices Have Risen

During the period of rapid increase in average meat prices from 1964 to 1972, total meat consumed rose from 42 to 52 billion pounds. Per capita consumption rose from 224 to 253 pounds. The rise in per capita

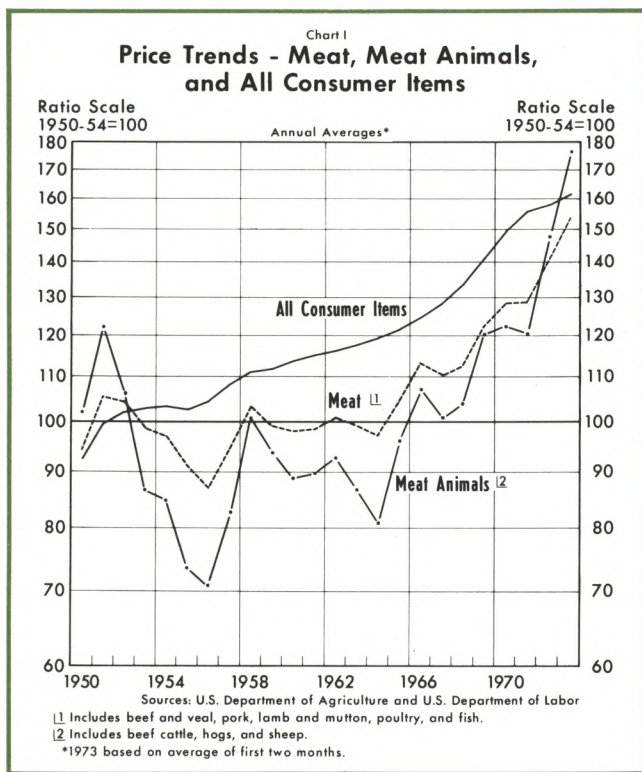
consumption was at a faster rate during this period of rapid price increase than during the previous 14 years (1950-64) when prices were relatively stable.

The fact that meat consumption has increased reveals little about meat demand without information on prices.³ Meat consumption, like consumption of any other commodity or service, depends in part upon its price. Given no change in the demand, a decline in meat prices will induce consumers to purchase a larger quantity. For example, a larger volume of meat production caused by livestock cycles or by unusually favorable weather conditions will increase the supply and result in lower prices. The lower prices will induce some consumers to purchase larger quantities of meat. Conversely, a cyclical or seasonal decline in meat output will cause an increase in meat prices, which will in turn cause some consumers to substitute other types of food for meat and reduce their meat purchases. These short-run changes in supply can cause price changes without a change in demand. Such short-run changes in supply have no doubt been a factor in the irregular upward course of meat prices since 1964. However, consumers have purchased larger quantities of meat at higher prices per pound indicating that demand has increased.

Food Subsidies Have Increased

Larger Government issues of food stamps to the lower income groups and increased donations of meat products to schools, institutions, and low-income families occurred during the recent upswing in meat prices. Total issues of food stamps rose from \$0.7 billion in 1969 to \$3.6 billion in 1972. Federal outlays on the school lunch program have more than tripled during the last three years, rising from \$227 million in 1969 to \$788 million in 1972. Food distributions to low-income families, institutions, and others also have increased, but at a lower rate than the school lunch programs. Total Government outlays for the Federal food programs, including food stamps, food distribution, and money donated for food purchases, rose from \$1.2 billion in 1969 to \$3.5 billion in 1972. In 1969 Government outlays for these programs amounted to only 1.4 percent of the total costs of food used at home by all consumers. By 1972 these outlays amounted to more than 3.6 percent of total food-at-home costs.

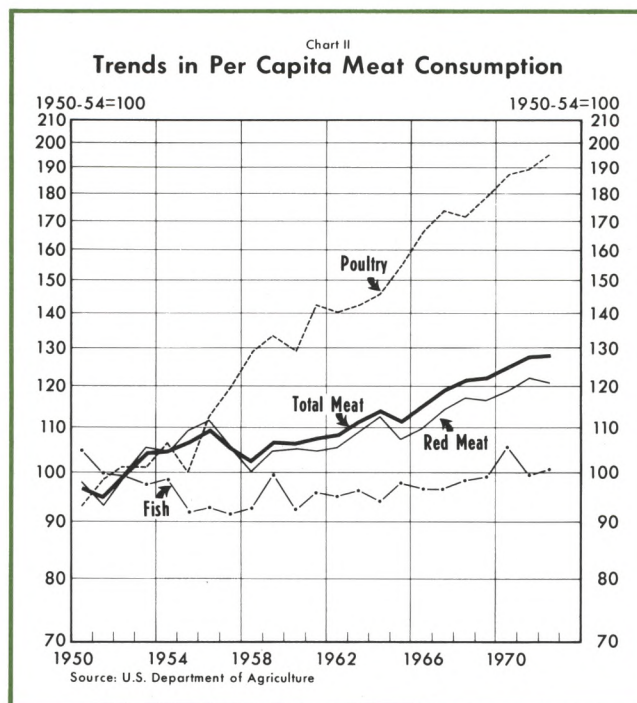
³Economists explain a larger quantity of a good being purchased in two different ways. One way is for the *demand schedule to shift* to the right, indicating a *greater quantity* will be taken at *each price*. The other way is a *movement along a given demand schedule*, indicating that price changes are the result of a shift in the supply schedule. The latter means that *larger quantities* are purchased *only at lower prices*. Both schedules may also shift simultaneously.



MEAT SUPPLY

Over the longer run, production technology and imports have tended to increase the nation's meat supply and offset part of the impact on prices of the rising demand for meat. As shown in Charts I and II, meat production plus net imports have risen at a sufficient rate to provide consumers with increasing quantities at less than average price increases for other consumer items. From 1950 to 1972, red meat and poultry production combined rose from 25.9 to 48.1 billion pounds, a 3 percent annual rate of gain. Production of red meat rose from 22.1 to 37 billion pounds, an annual rate of 2.4 percent, while output of chickens almost tripled. Meat imports in 1972 were equivalent to 6 percent of domestic red meat production, whereas imports were insignificant in 1950. Meat import controls were relaxed last year, and if they are not reimposed, rising meat production in other nations, along with rising domestic meat production efficiency, should have an even more favorable impact on the nation's meat supply in future years.

Between 1950 and 1972, when meat consumption was increasing rapidly, prices of meat animals rose 1.7 percent per year, and red meat prices rose 2.1 percent per year. Broiler prices declined 1.6 percent per year. In comparison, the consumer and general price indexes rose at average annual rates of 2.7 and 2.9 percent, respectively.



CONCLUDING COMMENTS AND SUMMARY

The data indicate that meat prices in recent years have been determined largely by basic supply and demand conditions. With the exception of the Government crop control and price support programs and import restrictions, the meat industry has generally operated in a competitive, free enterprise atmosphere.

The meat industry meets a major competitive test of easy entry and exit. The industry is not hampered by rules and regulations such as chartering, licensing, or long periods of apprenticeship. Virtually all are free to enter all phases of meat production and distribution. It has numerous participants in all stages of production and distribution. The efficient prosper and the inefficient fail. This incentive has permitted the price mechanism to bring into equality the quantity of meat supplied and demanded at a relatively high level of consumption per capita and at prices which have risen only moderately compared with other consumer items.

If people want more meat they will bid up the price and the higher prices of meat will provide the incentive for increased production. Productive resources will flow freely to this sector when anticipated returns are attractive. The higher meat prices in recent years have been necessary to attract the additional resources used in producing the larger volume of meat demanded by consumers. If prices had been

set arbitrarily at a lower level, a smaller volume would have been produced and some consumers would have had less meat. Therefore, in the absence of a responsive price system in which the quantity supplied and the quantity demanded are equated, the available quantity must be rationed among consumers by some other means.

In summation, the fact that meat prices have increased sharply in the past year, and have generally risen since 1964, is not a sufficient reason for the belief that the consumer is being taken advantage of or that the meat industry is callous or inefficient. The meat industry is reasonably competitive and takes advantage of developing technology. Meat production has increased at a high rate since the upward trend in

meat prices began in 1964. Consumers have demanded a higher level of meat production per capita, and have paid a higher price for the increased output.

The higher prices were necessary to provide incentive for producers to supply the amount of meat demanded. Without the higher prices output would have been less. Unforeseen events such as livestock cycles and unusual weather conditions may cause livestock and meat prices to fluctuate around their long-run equilibrium levels. However, given the generally competitive conditions in the industry, the market price of meat is always near that level required to match production with consumer demand. The recent price increases were probably no exception to this general rule.

