I Introduction

In our economy production is carried on for profit and prices simultaneously cover costs and yield profit. Money prices are also the vehicle by which a current surplus is generated. Prices assure that "workers cannot buy back what they produce." Furthermore, prices provide the vehicle for decisions with respect to owning and financing capital assets and yields.

Real cash flows that constitute part of the financing for investment

Inflation is a persistent rise in the general level of prices. Therefore inflation is related to the currency costs and the way the surplus is funded.
In a money-using economy only that which is financed can happen. Production was undertaken because it is anticipated that sales proceed will finance labor and other current costs that vary with production. Consumer goods are usually financed by wage income whereas to a significant extent business investment goods and capital equipment are financed by placing financial (debt or equity).

And yield a profit which validates the past and enables expenditures that look to the future to be undertaken.

Instrument: Such placement as possible because it is anticipated that in the future bonds will carry a profit. Inflation is possible only if production and purchases...
at higher prices can be financially inflations always has a financial side. This is not to say that financial -- or monetary -- changes are the cause of inflation, and monetary changes can be induced. In an economy with a sophisticated and complex financial structure, the financial system has the capability to adjust to the demand for financing. New instruments and new ways of using old instruments often occur in complex financial systems, enabling the financial system to accommodate demand. Inflation occurs when the demand for finance due to higher prices is unsatisfied. If sales receipts equal cash flows, and cash flows are financed by income and the sale or placement of financial instruments, then the demand for finance is 
\[ P = W \cdot V + W \cdot P + W \cdot Q \]
Sales receipts \( P \) are financed by wages from various sources. However, wages are financed by the sales proceeds of consumer goods, whereas investment goods are financed by the sales proceeds of consumer goods whereas investment goods. Wages are financed profits and the instrument used for both are interest and the net financing. When the sales proceeds formula is transformed to the price level of consumption goods, we have
\[ P_2 = \frac{W_2}{W_1} (1 + \frac{W_2}{W_1} + \frac{W_2}{W_1} + ...) \]
which means that price as a way
Choosing cost $\frac{w_{n+1}}{w_n}$ and in Chapter 2

$$n-1, T \left( 1 + \frac{w_{n+1}}{w_n} \right) \frac{\text{arelevant}}{w_{n+1}}$$

If we assume that all wages are spent on consumption goods then a rise in wages in consumption goods production will increase demand that will "buy back" the output at the higher price. However, as rises in the investment and government wage bills and in transfer payments will reduce the margin up and thus limit profits. As profits do not finally determine consumer prices, there will be a shortage of demand for the consumption goods unless consumers buy the old quantity at the price that maintains the higher rent or make up.

The threat of a deep depression following the business "case" 1963/7, 1969/70 and 1974/75 were averted by a combination of lender of last resort intervention and a massive rise in the deficit. The rise in the deficit sustained and even increased before to the point formula this leads to a rise in the cost of goods. As the repercussions of the financial crisis meant that business
livered inventories and productivity increased profits were achieved by a higher mark-up on the unit of consumer goods produced. Because in each episode the unemployment trough lasted over two to three quarters there were no significant declines in incomes or in the rate of increase of money wages. Thus during the downturn — and in the recovery — both money wages in the unit mark-up tended to increase. The only lesson from 1965 was that the savings out of disposable income increased during the recession; hence it tends to outstrip the increase in the mark-up.

The inflation since 1965 is different from the inflation in the first decades after World War II. First, it is at a higher rate but it is now linked to the cyclical process whereas in the earlier period significant inflation was very episodic.
From an extended discussion it seems evident that prices behaved quite differently since the mid-sixties than in the post-war period. The nature of inflation has changed.

Prior to 1964, inflation was mild and episodic, since 1970 it has become "severe" and quite clearly follows a regular cyclical pattern.

The contours of the two cycles of the 1970's "Cavitewell" with parallel. The inflation cycle that ended in 1969 ended with the credit expansion, while the 1974-75 Great Inflation was more of a crisis. There was the 1973-74 oil price rise, and of course the 1974-75 "Nixon/Beard" inflation was the first of Pennsylvania "buriaxing". Since the 1974-75 inflation, of recent years, seems to be linked to the financial crises that have regularly occurred. Financial instability which historically was linked to deep depression must seem to be linked to cycles of associated in inflation.
The run up in prices between 1969 and 1973 was large by then standards. There was monetary restraint in 1967 and the credit crunch and virtually no inflation in 1968. The inflation expansion of 1967-69 ended with a liquidity squeeze and a modest cost-push inflation. In 1970 the first of two serious inflation cycles began. The first ended with the Franklin National / REIT crisis and a sizable reduction in inflation. (Although the low point in this cycle, which was achieved with the aid of wage and price controls, was an unacceptable rate as recently as 1968.) The second inflation cycle began in 1975 and culminated in the Hunt/Becher bail-out and the refinancing of First Pennsylvania and Chrysler in early 1980. The associated inflation of recent years seems to be linked to the financial crises that have periodically occurred. Financial instability, which historically was linked to deep depressions, now seems to be linked to cycles of associated inflation.
In Chapter II we examined how prices in our economy are found so that the surplus is forced zero. We showed that assets are for financial flows that validate the liability structure and the prices that were paid in the past for capital assets. The mark-up on unit labor cost in prices were shown to depend upon the demand for output that were financed and those which were carried over each year from 1948 to 1957 as both the validity of past financing and new financing possible to the analysis is absolute (i.e. money). Prices were what the market processes generated and relative prices i.e. the terms on which alternatives are available amount of the process by which absolute prices are generated.

In Chapter III we found "skewed" price equilib
can was

\[ P_L = \frac{\text{W}_L}{\text{AV}_L} \left( 1 + \frac{\text{W}_M - \text{W}_L}{\text{W}_M} \right) \]
\[ \frac{\Delta p}{p} = \frac{\Delta w}{w} - \frac{\Delta v}{v} + \frac{\Delta m}{m} \]

The rate of change of consumer prices (\(\Delta p / p\)) is equal to the difference between the rate of wage increase and the rate of increase in labor productivity plus the rate of increase in the money wage. All of this imposes on the effect that wage increases in excess of productivity increases leads to inflation. Demand with a relation such as the one above is a simple statement of the wage-price relation ignoring the independent effect of the money wage on prices.
The determination of the course of consumption prices by the composition of demand that is financed and spend non-wage incomes on consumption is a theory of price level determination that is compatible with the emphasis upon financial flows in the economics of Keynes, whereas a view that prices are determined by money supply is not. For it is the government and investment demands that are financed at prices which reflect money wage rates in investment goods production and government employment that generate the wage flows that finance demand and for consumer goods that are supplied at prices that reflect the money wages in consumer goods, it is true that the money wage rate sets a normal supply price of output, but if a rise in money wages is to be achieved, then the amount of investment financing (and government) demand must rise along with the money wage rate.

The money wage rate sets a normal supply price of output but if a rise in money wages is to occur then investment (and government) demand at these higher "cuts" must be financed.
The view that prices and wages start with the profit calculation of business men and bankers is in sharp contrast to that of neoclassical (monetarist) theorists, which holds that the "real" economic results -- employment, its allocations, various outputs, relative prices, including wages, and the real interest rates -- would be ground out by the Walrasian system of general equilibrium equations, provided there is embedded in them the actual structural characteristics of the labor and commodity markets, including market imperfections, stochastic variability in demands and supplies, the cost of gathering information about job vacancies and labor availabilities, the costs of mobility, and so on. 

In my view, the real results are determined independently of money market phenomena; then the only thing left for the rate of growth of money to do is to affect the price level.


Professor Friedman's assertion as to what the Walrasian System of general equilibrium equations tells us is a great big "hand wave." First of all, "the Walrasian System of general equilibrium equations" does not grind out outputs, employment and relative prices -- market processes determine economic reality. The Walrasian System of general equilibrium equations is an attempt to model reality and the existence of a consistent
Monetarist inflation theory rests upon

The quantity theory of money, which

since in its neoclassical theory

became one into commodity prices. A usual

statement is

4) \( MV = P Q \)

which becomes

5) \( \frac{\Delta M}{M} + \frac{\Delta V}{V} = \frac{\Delta P}{P} + \frac{\Delta Q}{Q} \).

In it, however, \( \frac{\Delta V}{V} \) is assumed to be zero

and \( \frac{\Delta Q}{Q} \) increases only because \( Q \) a higher

average productivity of labour \( \frac{\Delta Q}{Q} = \frac{\Delta V}{V} \) is

the same proportionate as commodity) so that

6) \( \frac{\Delta P}{P} = \frac{\Delta M}{M} - \frac{\Delta Q}{Q} \)

In neoclassical theory the commodity

level is fixed so that the makeup

down would displace from a jump \( \frac{\Delta P}{P} \) yielding

7) \( \frac{P_c}{P_l} = -\frac{\Delta w_c}{w_c} \) \( \Delta M \) \( \frac{\Delta V}{V} \)

or combining 6 and 7

\( \frac{w_c}{w_c} = \frac{M}{M} \) \( \Delta V \) in the neoclassical "equilibrium" money
Bankers are in business to accommodate customers — which means that a rise in the demand for financing will lead to a rise in bank holdings of assets and in bank liabilities outstanding. Thus, a rise in $\frac{\Delta W}{W_C}$ will mean a rise in bank credit outstanding which implies that bank liabilities outstanding will increase. Furthermore, a rise in $\frac{\Delta W}{W_C}$ will mean that consumer goods producers are using more bank credit. The causality chain which starts with $\frac{\Delta W}{W_C}$ increasing has $\frac{\lambda}{\lambda} + \frac{M}{M}$, and $\frac{\hat{M}}{M}$, drawing forth an increase in $\hat{M}$, that is,

$$\frac{\lambda}{\lambda} + \frac{W_C}{W_C} + \frac{\hat{M}}{M}.$$  

In this endogenous money path, the normal processes which determine investment demand and wage bargaining lead to a demand for financing. If the supply of financing is responsive — and it is responsive — then money supply will accommodate the needs of demands and costs.
Money Wages and Price Deflated Wages

In professional and public discussions of economics, "real" wages and interest rates are distinguished from nominal -- or money -- wages and interest rates. This distinction and terminology are legacies of and make sense within the neo-classical synthesis. This is so because in this theory, labor supply and demand are determined by the output that can be exchanged for labor and the output that labor can produce. Thus, the "price system" generates wages only in relation to the prices of what wages buy and what labor produces.

The proposition that labor supply and demand depend upon the ratio of wages to prices is not a conclusion of the analysis. It is there by assumption. In order to prove that a decentralized market leads to a coherent result, neo-classical theorists find it necessary to assume that the labor supplied and demanded is governed by price-deflated wage rates. It is convenient for neo-classical theorists to assume that labor is supplied only because labor income leads to command over consumption goods and that an increase in the supply of labor will be forthcoming only in exchange for relative to prices.

Increases in price-level-deflated wages. Neo-classical theory is wedded to a simplified "Benthamism" in which good is identified with commodities and services received and evil is identified with work. Any conception of "man" which goes contrary to the Benthamite view -- in particular, a conception which recognizes that the market only delivers a part of what "man" aims for -- does not fit into neo-classical theory.

Even if the Benthamite blinders as to what motivates labor are accepted, the narrow focus on wages relative to prices is not sufficient to
explain how wages affect what happens in an economy in which there are financial contracts that are denominated in money. In such a world, money wage rates and money profit flows determine whether payment commitments on debts can be fulfilled. The ability of workers with mortgage and consumer durable debt to fulfill outstanding contractual obligations can improve when money wages rise, even if the price level of current consumption rises with money wages, and the ability to fulfill contractual obligations can diminish when money wages fall or when prices of price-inelastic current consumption items rise relative to wages. In a like manner, business with money payment commitments are concerned about their flow of gross money profits and net with the ratio of profits per unit of output to wages per unit of output. A rise in money wages means that the same or even a slightly smaller percentage mark-up will yield a larger money flow. If the gross money profits in consumption goods production equals the wages paid in investment goods production, then the gross profits in consumption goods will rise when money wages in investment goods rise. Symmetrically, a fall of money wages in investment goods production, even if employment is sustained, leads to a reduction in the ability of consumption goods producers to meet financial obligations. Prior to the development of various price support programs, the relation between the fulfillment of commitments on debt and prices was
clearly exhibited in agriculture. A fall in demand for agricultural output or an increase in supply would lead to a fall in the price of products, which was quickly transformed into an inability of the farmers to fulfill debt commitments.

In a world with inter-temporal contracts denominated in money, the course of money wages and money prices helps determine whether financial contracts will be fulfilled. If money wages and prices increase by the same percentage, the real wage does not change but the money cash flows per unit of output available to meet payment commitments increase.

A labor compensation system need not be all wages and salaries in money. Employees receive at least some of their compensation in goods and services. In a contemporary labor contract in the United States, the package of health services provided for in the contract is often set in terms of the services to be provided, not the costs to be borne.

When employers agree to provide employees a packet of goods and services, then a rise or a fall in output prices relative to those of the prices of goods and services the employer has undertaken to provide, has an amplified effect upon the cash flows of the employer. In current labor-market contracts the agreement to provide medical services makes the employer vulnerable to increases in medical costs unless prices can be raised in medical costs can be passed on in product prices, in order to be able to pass on such costs, the employer either needs to have a reserve of monopoly power which can be exercised if needed, the rise in costs need
apply to all units in an industry, or demand for consumption output needs to rise. If we consider medical care payments by employers as the equivalent to an allocation of profits to finance consumption, then demand and prices need rise by the amount necessary to increase the "gross profits" so that medical care can be financed.

One peculiarity of employer-provided medical care schemes is that a rise in medical care prices shows up twice in the price index: once in the price of medical care as such and a second time in the price of the products which furnish the sales revenues that pay for employees' medical care. The extraordinary inflation in medical care costs has not only raised the price of an appendectomy, but it has also raised the price of a Chevrolet. One effect of wide area trade unionism is to make the costs of all producers move in the same direction. Devices such as the exemption of employer-provided medical care from the tax base of the employee, which encourages the provision of this fringe benefit, may be interpreted as ways of assuring that all employer labor costs move in the same direction when medical costs increase.

However, given that most, although not necessarily all, labor renumeration is in money terms, the well-being determined by commodity wages depends upon what this money income will buy. Whereas wage bargains between employees and employers are struck in money terms, what the wage will buy is determined by the way prices behave. Individual wage contracts and government actions that affect labor compensation determine money wages; the command over goods and services does.

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The Wall Street Journal of May 10, 1978 reported that some automobile companies are ready to begin experimenting with closed panel health maintenance organizations in lieu of the insured "fee for service" medical care system. As international competition in the automobile market increases, the ability of companies to pass through higher medical costs in prices diminished, for not all companies have the same "cost of medical service" input.
money incomes provided is determined by market adjustments. Inasmuch as wage negotiations often lead to contracts that involve a large number of workers and affect the supply price of significant outputs, it is important to recognize that changes in money wages and other terms in labor contracts set a process in motion; a labor contract does not establish a result. Between a wage contract and the standard of life delivered to a worker stands economic adjustments that are triggered by wage contracts. Instead of starting, as neo-classical theory does, with the "economic process" determining relative prices, including the wage-price ratio, and money and financial markets setting nominal prices, it is best to begin with money wages being determined by bargaining and market interactions, on the inherited. Money wages, in turn, set off market adjustments which determine money prices. Thus, changes in the bundle of goods delivered by changes in money wages depend upon the way prices react to changes in labor costs and particular demands.

A similar distinction applies to government actions, whether legislated or administrative. Government actions do not determine an outcome; government actions start a process. What is actually "delivered" and to "whom" is not determined by the government decision alone; it also depends upon the way markets interact. Many government actions turn out not to deliver that which they were designed to deliver and not to affect the intended target in the desired manner.

To understand the effect of money wage changes and government interventions, it is necessary to understand how markets behave. Major trade union contracts are like government policies in that they start interactive market processes. The end result that a
union contract delivers can be far different from the intended result.

A confusion between what can and cannot be delivered by negotiations and government interventions permeates both labor negotiations and government. Neither legislation nor collective bargaining can mandate a result -- all that can be done is to start a process that operates within the institutional set-up that rules.

The price level of consumption goods relation for the skeletal specification of the economy is

\[ P_C = \frac{W_C}{A_V} \left( 1 + \frac{N_I}{N_C} \right), \]

where \( \mu \) is the ratio of wages in investment goods production to wages in consumption goods production \((W_I/W_C)\). We therefore have that

\[ \frac{W_C}{P_C} = \frac{A_V}{1 + \mu \frac{N_I}{N_C}}; \]

the purchasing power of the wages of labor depends "directly" upon the average productivity of labor and inversely upon the ratio of employment in investment goods production to employment in consumption goods production.

Inasmuch as \( A_V = Q_C/N_C \), the above reduces to

\[ \frac{W_C}{P_C} = \frac{Q_C}{N_C + \mu \frac{N_I}{N_C}}. \]

An implication of the above is that the purchasing power of wages will increase if the output of consumer goods increases faster than employment as modified by the relative wages in investment and consumption goods, industries. If employment in investment goods industries increased and the relative wages in investment goods production increased fast enough.
then the purchasing power of wages in consumption decreases. If the output of consumption goods, $Q_C$, is proportional to employment producing consumption goods, then the purchasing power of money wages in consumption goods industries will decrease whenever the product of the wage ratio and employment in investment goods increases faster than employment in consumption goods.

If investment increases the average productivity of workers in consumption goods industries, then $Q_C$ will increase even if $W_C$ does not change. A rise in $Q_C$ with $W_C$ constant will tend to raise $W_C/Q_C$.

Phrased another way, in a regime with constant money wages, if investment increases productivity in consumer goods production, then prices will tend to fall. There is an internal mechanism in a technologically progressive economy that tends to make prices fall: normal functioning of a progressive economy is associated with a downward pressure on prices.

The skeletal model also yields the result that

\[(P_C - \frac{W_C N_C}{Q_C}) = \frac{W_I N_I}{Q_C}\]

The unit profit margin in the production of consumer goods is the wage bill in investment goods divided by the output of consumer goods. As productivity rises, the profit margin per unit of consumption goods decreases even as labor costs per unit of output (faster than unit labor costs) falls. The price of output $P_C$ falls. The gross profits may remain constant, but only because quantity increases. However, if the increase in productivity is a result of an increase in capital assets used in the production of consumer goods, then physical profit per unit of capital assets declines. Gross profits need to increase or the capitalization rates of profits need increase, if capital asset prices are to be maintained. This can occur if WPC increases as per
investment takes place or if the risk premium in the capitalization rate for realized and prospective profits decreases so that the capitalization rate increases.

If the sum of the 'depreciated' value of the inherited stock of capital assets—valued at the price that drew forth investment—and the new investment at its purchase price is to be validated then, unless capitalization rates increase, either money wages or employment in the production of investment goods would increase. If there is slack in the economy, investment goods production can increase. If there is no slack, the nominal value of the capital stock in nominal terms can be maintained by increasing money wages in investment goods production or by shifting workers from the production of consumption goods to the production of investment goods.

Inflating out downward pressure on prices due to productivity increases by wage increases on net prices, including the nominal price of investment goods, do not fall, helps sustain the viability of debt financing.

The more important the external financing of investment and positions in capital assets in an economy, the more important it is to have rising wages due to productivity increases that offset the tendency for prices to fall in a technologically progressive economy. As the external financing of capital asset ownership increases whenever the complexity and expense of capital assets increases, a capitalist and whose authorities are abroad in a depression economy which uses capital intensive modes of production will tend to have an "inflationary" bias.
A number of propositions follow from the above. The way to slow down and stop inflation is by production of consumer goods. If an economy's output of consumer goods increases rapidly, the price level will tend to decline. Such a flood of consumer goods will occur if consumer goods output increases at a faster rate than the wage bill. Investment in investment goods and investment employment lends an inflationary bias to an economy. Furthermore, if this investment emphasis occurs in a world where relative wage rates reflect either market excess demands or union bargaining strength, an emphasis upon investment as the source of employment and economic growth tends to increase the demand for specialized production. In an economy in which labor in investment goods industries is engaged, such an increase in demand will increase the bargaining strength of those unions whose members produce investment goods. This will tend to increase investment goods wages relative to consumption goods wages. This rise in investment goods wages will tend to raise the price of consumer goods beyond that required by the increase in investment goods employment. An expansion of investment lowers the purchasing power of workers in consumption goods production because of the combined effects of increased employment in investment goods production and higher wages in investment goods production upon the price of consumer goods relative to wages in consumer goods production. If money wages in investment goods rise relative to money wages in consumption goods, it is possible for $W_1/W_1 > P_1/P_1C > W_1C$. This means that the purchasing power of money wages in investment goods increased even as the purchasing power of money wages in consumption goods decreased. A third implication is that if the effect of increased labor productivity is not offset by an increase in the wage bill in the production of investment goods, then the profits per unit of output will decrease. In these circumstances, gross profit flows may not be sufficient.
to sustain the market value of the capital stock, that has been augmented by investment flows.

The above propositions about the relations between money and wages, prices and profits in consumption goods production are based upon the skeletal model of price and profit generation. If the more complex price formation relations which allow for government, consumption out of profits and savings out of wages, are examined, we get:

\[
P_C = \frac{W_C}{A} \left( 1 + \frac{W_I N_I}{W_C N_C} + \frac{D_f}{W_C N_C} + \frac{\tau_{II}}{W_C N_C} + \frac{\xi \Pi^*}{W_C N_C} - \frac{s^*}{W_C N_C} \right)
\]

or

\[
\frac{W_C}{P_C} = \frac{A V}{Q_C} \left( 1 + \frac{W_I N_I}{W_C N_C} + \frac{D_f}{W_C N_C} + \frac{\tau_{II}}{W_C N_C} + \frac{\xi \Pi^*}{W_C N_C} - \frac{s^*}{W_C N_C} \right)
\]

The purchasing power of money wages is inversely related to the size of the demands for consumption goods that are financed by other than the income derived from the production of consumer goods. Inasmuch as

\[A_V = \frac{Q_C}{N_C}\]

the equation could be written as

\[
\frac{W_C}{P_C} = \frac{Q_C}{N_C \left( 1 + \frac{W_I N_I}{W_C N_C} + \frac{D_f}{W_C N_C} + \frac{\tau_{II}}{W_C N_C} + \frac{\xi \Pi^*}{W_C N_C} - \frac{s^*}{W_C N_C} \right)}
\]

It is evident that an increase in the output of consumer goods without a proportionate increase in employment in consumer goods production will tend to increase the purchasing power of money wages in consumer goods.

\[1\] In these equations, we have \(D_f\) = the government deficit, \(\tau_{II}\) = taxes on profits, \(\Pi_c\) = profits from producing output for the government, \(\xi \Pi^*\) = consumption out of after-tax profits and \(s^*\) = savings out of after-tax wages. These can be further expanded and elaborated.
production. Furthermore, if the wage bill in consumer goods production increases because \( N_c \) and \( Q_c \) increase in (approximately) the same proportion, then, because the various ratios in the denominator such as \( \frac{W_i}{W_c N_c} \), \( \frac{D_i}{W_c N_c} \) and \( \frac{C_i}{W_c N_c} \) will tend to decrease, the price deflated wage will tend to increase. A rise in \( W_c N_c \) which decreases \( \frac{C_i}{W_c N_c} \) will tend to raise \( \frac{W_i}{W_c N_c} \). Symmetrically, if any of the numerators of these ratios (once again excepting \( C_i \)) tends to fall, the ratio \( \frac{C_i}{W_c N_c} \) will tend to rise. The course of the purchasing power of wages in the production of consumer goods depends upon the behavior of income sources other than wages in the production of consumer goods that finance spending on consumer goods. These other sources are wage incomes in the production of investment goods, government employment, and the provision of ancillary services, transfer payments, and profits that are distributed and thus available to finance consumer goods and spending.

From the above equations it is evident that a rise in \( W_c N_c \) will raise prices. But we have identified \( W_c \) as consumption spending that is financed by an allocation of profits -- not only to dividends, but also to "business-style" spending on labor. Increased spending by firms can be interpreted as an allocation of profits on medical care, advertising, product development, etc., both raise average cost curves that rest on the technologically determined marginal cost curve and thus demand for consumer goods, as the wages and other costs of these activities become consumer income. As such expenditures both raise unit costs and raise prices, they are in the nature of self-fulfilling prophecies. Unless there is a strong increase in \( W_c N_c \) increases in these incomes which can be interpreted as allocations of profits will lead to inflationary pressures.
There are two types of inflation. In one type, inflation has two facets: one is the rise in prices even as money wages remain fixed or increase but slowly; the second is a rise in prices as money wages increase rapidly. These two facets are related. Whenever the determinants of the rise in the "numerator" in the denominators of equations 15 and 16 (W/P, Df, etc.) are relative to the rise in the output of consumer goods, then the purchasing power of wages in the production of consumer goods falls. If this fall is sufficiently great, then the expectation is that some combination of union militancy, union aborting procedures on the part of employers or government intervention (such as raising minimum wages or legislated indexing) will occur. In these circumstances, the economy will tend towards the second type of inflation. The ability of an economy to experience a fall in the purchasing power of money wages without triggering increases in money wages depends upon the institutional arrangements in the economy, the size of the fall, and whether inflation is a regular, anticipated and continued, or an "occasional" phenomenon, that is expected to soon stop. Once inflation becomes a regular phenomenon, that is, expected to continue, then labor market organizations will evolve towards an institutionalized arrangement, with or without formalized procedures.

The fact that a modest and irregular fall in W/P will not trigger a rise in prices means that there is a barrier in the social organization of labor markets against inflation. This barrier basically means that small and tiny changes in prices relative to W/P, within an environment in which transfer payments and consumption out of profits are small, will not necessarily lead to increases in money wages. However, marked
changes in the demand for consumer goods that are financed by incomes that do not lead to consumption goods output will tend to break through the inflation barrier, and thus lead to the inflation associated with increases in money wages.

Prior to World War II, capitalist economies were characterized by ineffective or nonexistent contra-cyclical policy. Not only was government a small part of the economy, but there was little conscious effort to use monetary and fiscal policy to control business cycles. During those days, business cycle expansions were characterized by a rise in investment goods employment and in the proportion of the total wage bill that was derived from investment goods production. As a result, the purchasing power of money wages would fall. This fall in the purchasing power of money wages was accompanied by increased hours and steadiness of work and by opportunities to upgrade status on the job for those who had jobs as the expansion started. Thus, the prior employed were better off. The new additions to the employed were better off, because they now had jobs. The declining purchasing power of the money wage rate during a business cycle expansion was accompanied by a widespread improvement in the purchasing power of workers' income during expansions. As long as upgrading, increased jobs and increased hours accompanied expansion so that most workers gained, the upward pressures on money wages were not strong.

Furthermore, in the age of unconstrained business cycles, expansions were relatively short-lived, so that the rise in prices relative to wages was accepted as transitory. Because of the gold standard, the elasticity of finance during a business cycle expansion was...
Investment "boomlets" quickly led to rising interest rates which tended to constrain the rate of increase of investment. Once investment financing constrained the rate of increase of investment, there were no fiscal stimuli available to sustain or increase profits. The rise in interest rates, combined with the slowdown in the expansion of profits, tended to generate a turn-around in investment activity -- which tended to remove the upward pressure on prices. The resultant price stability and even price declines removed the pressures for wage increases to offset price increases.

The peacetime inflations of the capitalist epoch prior to World War II were heavily associated with business cycle expansions. As experience showed that cycle expansions were of limited duration, the rise in prices did not lead to expectations of continued rise in prices. Only if it is believed that the fall in the purchasing power of money wages will continue will institutions appear which have the effect of "indexing" wages.

Four factors in the numerators of the denominators of equations 16 and 17 are of special importance in determining the purchasing power of money wages and thus the course of inflation. These are the wage bill in investment goods production, the government deficit, consumption out of after-tax profits and savings out of after-tax wages. There is nothing to add at this point about the effect of the wage bill in the production of investment production beyond what was learned in the exposition of the simple model. That government wages and transfer payments tend to generate demand for, even as they do not augment the supply of, consumption goods that enter into price indices is evident.
Any increase in the ratio of such spending to the wage bill in consumption goods is inflationary. The way in which transfer payments affect consumption demand is obviously inflationary.

Any rise in the ratio of consumption out of profits to the wage bill in the production of consumer goods will tend to lower the purchasing power of wage income in consumer goods. In a simple sense, this involves the consumption spending of profits, financed by dividends, interest and capital gains. However, in our economy a large proportion of profits -- in the sense of revenues minus technologically determined labor and material costs -- is distributed in the form of wages to workers involved in administration, marketing, advertising and other ancillary business functions. The spending of this wage income on consumer goods shows up in a reduction in the purchasing power of wages of labor that is required by the technique of production of consumer goods.

Savings by workers out of these wages, that are technologically necessary to produce consumer goods -- as well as the savings out of those wages that are technologically needed to produce investment goods -- decrease the spending on consumer goods and thus tend to decrease the price of consumer goods.

The most important determinants of the course of prices, therefore, are the "way" the economy is "run" (in the sense of the ratio of incomes that are available for spending on consumer goods relative to the wage incomes which arise in the production of consumer goods), and the course of money wages in the production of consumer goods. In particular, the money wages in the production of consumer goods may or may not react to a decline in the purchasing power of such wages as the other sources of financing demand for consumer goods increase. Each economy has an "inflation barrier,"
in that a decline in the purchasing power of money wages in consumer goods beyond some point will lead to a rise in money wages. The price determinants of the "inflation barrier" are of major importance in determining whether, or at what stage, money wage increases will become a dominant factor in the determination of the course of prices. One specific determinant of the transition to an "open inflation" in which money wages and prices "chase each other" is the existence of large and growing demands for consumers' goods that are financed outside of incomes received in the normal "productive channels". War always leads to such demands: a generous system of transfer payments that are indexed and government policies to induce investment also lead to such demands.

The course of money wages is an important determinant of inflation but it is not the essential cause of inflation. Inflation is first of all the result of financing too many claims on the supply of consumer goods at the inherited set of prices. Any restriction on the supply of consumer goods -- such as occurs in wartime or as the result of a draught -- or any expansion of incomes that will be available to finance consumer goods demand without any concomitant increase in supply will lead to rising prices.

The behavior of money wages in an open inflation of rising money wages and rising consumer prices is more defensive than aggressive. When the financing of consumer demand by way of investment spending, government spending, transfer payments or "business style expenditure" increases the demand for goods relative to the supply, then prices rise so that the price level deflated wage decreases. Such inflation occurs when employment is relatively full and business profits are high. These conditions are conducive to rising money wages. Trade unions make the money wage response
quicker, and, according to the available evidence, seem to make the money wage increase greater for their members when this occurs.

The "new thing" that has been added in the past decade is the phenomenon of inflation -- including increases in money wages -- persisting in times of relatively high unemployment. However, these "new"
"stagflations" have taken place in an era in which transfer payments have been increasing rapidly, government deficits have been larger during periods of cycle expansions relatively full employment and exploded when unemployment increased, and government wages and wage bills have been increasing rapidly. Thus, business gross profits and prices were sustained and even increased during the recessions of the late 1960's and early 1970's. Government policies which perhaps quite inadvertently sustained profits enabled business and the banks to survive the financial trauma of 1966, 1969-70 and 1974-75.

The fall in price deflated money wages during recessions, because of profit inflation that effectively halts the thrust towards debt deflation after the financial trauma, together with the prior success of trade unions in raising money wages in the relatively tight labor market of the boom prior to the financial trauma means that the institutionalized strong unions will apply pressure to raise money wages during periods of high as well as low unemployment. This money wage effect is especially likely to occur once government commitments to full employment are established. Thus, open inflation in periods of labor market slack is due to the persistence of profit-generating government deficits which lead to demand-generated price increases in periods of unemployment, the unemployment in these recessions is dominated by unemployment in investment goods production.
If the open phase of inflation is halted, because money wages are restrained but the basic pattern by which the demand for consumer goods is financed by other than money wages of the labor required in the production of consumer goods remains in place, then inflation will persist. True, the rate of inflation will be lower and the distribution of the gains and losses in price level deflated incomes will be different, but a basic inflation that reflects a short fall of consumer goods relative to the financial demands for consumer goods that are being directly and indirectly financed will persist. The roots of inflation are systemic. Where restrictions on money wage increases without affecting the structure of incomes available to finance demand for consumer goods will enjoy at best a transitory success in bringing inflation under control.
Money Wages

Soon after World War II it became clear that the standard version of Keynesian theory had a logical hole in that it did not explain prices.

This logical and intellectual vacuum was filled by A.W. Phillips who, on the basis of numbers published by Phelps Brown, argued that there was an inverse relation between money wage changes and the unemployment level. This was quickly transformed into an inverse relation between the unemployment rate and the price level.

This Samuelson/Solow argument was enshrined in the doctrine of the trade-off; a proposition that a "price" has to be paid in terms of higher development and lower unemployment for stable prices. In various ways, the unemployment rate


associated with a stable price level has been identified as a 'natural' rate of unemployment. Friedman and Phelps have developed arguments to the effect that this natural rate of unemployment will be the actual rate whenever inflation at a steady rate is both ongoing and fully anticipated. The natural rate theorists hold that the trade-off only exists for transitory and "surprise" rates of inflation.

rate of inflation increases. The natural rate of unemployment hypothesis holds that the "trade-off" of Samuelson and Stiglitz depends upon a bluff; in the long run, which realistically the unemployment will tend to the rate that would rule with stable price expectations and the absence of policies to reduce unemployment.


example, a zero rate of price inflation may be associated with a 5% unemployment rate (when stable prices are anticipated) and a 4% unemployment rate may be associated with a 2% unanticipated inflation rate.

After 'policy' -- monetary and fiscal -- leads to a 4% unemployment and a 2% inflation rate, the anticipation of a 2% inflation rate will be built into the system. As this expectation is building, the unemployment rate will creep up to 5%; additional fiscal and monetary stimulus is needed.

if a "surprise" inflation rate in excess of 2% is to yield an unemployment rate of 4%. For example, such stimulus may lead to a 4% unemployment rate and a 4% inflation rate. Thus, the natural rate of unemployment theorists hold that the inflation rate associated with an unemployment rate below the natural rate will tend to increase as the anticipated-
Thus there are "two" standard views about unemployment and prices. One, which reflects a longer-run historical generalization, is that there is a

drive YB between inflation and prices.

The other is that the "real" unemployment
data reflects preferences and productivity
relationships, so that there is no trade

cy except as a transitory phenomenon.

This second view is consistent with the
classical system in which wages, preferences
and productivity determine employment and the
money supply and demand determine prices.
Chart III

The attached diagram relating the rate of inflation as measured by change in the consumer price index and unemployment rates during calendar years 1957-1977 shows that no obvious consistent relation exists between the rate of inflation and unemployment rates over the entire period.

During the 1960's (1961-1969), the years characterized by the Kennedy-Johnson expansion, there is a nice inverse relation between unemployment rates and inflation; an inverse relation which seems to assert that unemployment rises lead to accelerated inflation, with a maximum inflation when the unemployment rate is at or below 4% unemployment, the cost of slight improvements in the unemployment rate will be a substantially higher inflation.

If we identify the vertical barrier on the back of the consumer price index chart with the "inflation barrier" then in 1957-58 and 1966-67 the barrier was at 4% unemployment with a low inflation rate in 1955-57.

In 1972-74 it was at 5% and in 78-79 it was at 6%. This shift to the barrier unemployment inflation line is to explain both the higher unemployment rate associated with accelerated inflation and the overall higher rate of inflation need to be understood. The chart also shows that a wide range of inflation rates are compatible with any particular unemployment rate.
The seeming corroboration of the Phillips hypothesis by British data over the long time span of 1862 to 1957 and the apparent contradiction of the hypothesis by the data for the United States in the post-war period constituted a challenge to econometricians. The challenge to develop a theory which indicated that sometimes there is a trade-off of the kind that Samuelson and Solow announced and that sometimes there is no trade-off. Furthermore, it seems almost self-evident from the data that, over the thirty years since World War II, but particularly in the years since 1966, there has been a marked increase in the tendency for prices to rise; an inflationary thrust seems to be characteristic of our economy.

The data upon which Phillips based his argument was drawn from trade union records in Britain over a long period that encompassed many business cycles. Aside from war times and in spite of the effects of the British Empire and the essentially free immigration that ruled, the business cycle expansions saw a rise in wages even as contractions saw wages fall. Inasmuch as the business cycle expansions were characterized by increases in investment and business cycle contractions by decreases,
The price level changes that occurred reflected both the changes in money wages and the changes in the composition of output.

In the price formula of the skeletal model

\[ p_t = \frac{w_t}{A} \left( 1 + \frac{w_t' y_t}{w_t y_t} \right) \]

are increases in investment payrolls, while labor markets in slack will result in both employment and output of consumer goods producers increasing. When this happens a rise in consumption prices would reflect increases in productivity-adjusted wages. As much as the productivity adjustment usually out during early stages of expansion, prices would not increase very much if at all as an expansion gets under way. Once labor markets tighten, an increase in employment investment will not be associated with an increase in employment in consumption and as a result the wage up will increase and inflation is longer when expansion leads to labor shortages.

The inflation process, therefore, depends in part upon the nature of market organizations. If price flexibility is the dominant characteristic.
of the market for consumer goods, then a rise in investment will lead to increase demand and higher prices of consumer goods. This will lead to precipitate wage pressures from the suppliers of labor to augment the effects of increased labor demand upon wage rates. On the other hand, if supplies of consumer goods tend to increase as demand increases, then the model will only be meaningful in the absence of strong price increases that lead to increased unit mark-up and higher wages. Labor demand conditions are conducive to wage increases.

The formulation of the trade-off between unemployment and inflation is reflected upon the behavior of wages and prices in an institutional set-up that differs markedly from the current set-up. Three "institutional" differences can be noted. The present United States economy is characterized by: (1) the existence of effective partial trade unionism; (2) the existence of a big government, along with the acceptance of the responsibility of the government for maintaining some approximation to full employment; (3) a great weight in the economy of industries that use expensive and relatively long-lived capital assets. All of the above were missing or took quite different forms in the period in England when the Phillips curves were formulated. Point 1 means that periods of slack will tend not to be associated with falling money wages and therefore the downward pressure on prices will be attenuated. The demand-creating aspects of "big government", which is one aspect of point 2, tend to maintain and may actually increase the mark-up on unit labor costs that can be realized during slack periods. However, big government has another aspect in that the tax schedules that are used to finance big government result in a rise in the supply prices.
of outputs.

As government, either in its profit or output taxes or through legislation and social programs, mandates costs; it also, through its expenditures, generates the income that will validate the costs. If, for example, the government raises Social Security taxes and Social Security and other benefits, then the rise in the supply price of output due to the rise in labor costs is matched in the aggregate by expenditures out of the Social Security receipts. Because of the possibility that Social Security recipients might save some of their receipts, the simultaneous impact on supply price and demand is attenuated. A type of Say's Law applies to government expenditures. Every time government taxes raise the supply price of output, government spending generates incomes which tend to validate the higher price. It is not just the government deficit that generates inflation. Even a balanced government budget, if total government expenditures are rising relative to incomes, will result in rising prices. Thus, as the reaction to rising unemployment in the years following the middle 1960's has taken the form of increased transfer payments followed by increased Social Security taxes, a chronic inflationary bias has been associated with the way our big government operates in a cyclical environment.

The United States economy has been more unstable in the years since the credit crunch of 1966 than in the years before the credit crunch. It is also true that the years since the mid-1960's have been years in which transfer payments have increased relative to
the economy — and the special Social Security tax has increased especially fast. Fundamentally, aggregate demand has been sustained since the middle 1960s even when financial market conditions and the prospective profitability of investment in a stable price environment indicated that a recession — if not a depression — was due. The sky did not fall in 1966, 1969-70 and 1974-75 exactly because the government's fiscal position sustained aggregate demand and profits. However, these profits that were sustained and increased appeared as a reflection higher per unit mark-ups on smaller volumes; i.e., inflation resulted from the way we staved off deflation. A full employment commitment in a financially unstable economy means that the combination of unemployment and inflation rates will drift upwards, and to the right, the Phillips Curve of an economy with our peculiar big government shows that there is a positive association between unemployment rates and inflation rates.

The third point, institutional difference between our economy and the economy of the era from which Phelps-Brown drew his data is the increased significance of capital intensive modes of production in the economy. Increase the importance in

This means that the normal functioning of the economy requires "stability" in the cash flows that are generated by mark-ups on labor costs, which in the basic profit and price formation, the wage bill in investment goods is important. If the wage rate in investment goods is increased even if investment employment is maintained or increased, then the mark-up on unit labor costs in consumption will tend to increase. This means that it is easier for firms in general to validate their debts. Once the "increased" mark-up in wages in consumer goods forces a decline in the purchasing power of wages in consumption, the "stage is set" for an inflationary process that includes increases in money wages.

As money wages increase, even if the mark-up due to \( \frac{W}{P-I/C} \) does
not increase, the cash flow per unit of output available to validate debt increases. The inflation of a business-cycle expansion eases the cash payment commitments due to debts, and thus tends to induce further investment. An expansion tends to generate conditions that are conducive to further expansion, until feedbacks from expansion and wage increases affect the costs and financing terms of investment. If in accord with long-term money contracts, money wage increases are either unexpected or, if expected, are expected to be reversed quite soon in a downturn, then the wage and price increases of an expansion will not induce further investment spending and further wage and price increases. In these circumstances, wage and price increases will be associated with increased investment and a lower unemployment rate.

However, if money wage increases are not only expected but it is also expected that they will continue, then investors -- and, in particular, investors in financial instruments -- will begin to seek out those investments -- whether they finance output or not -- which are expected to maintain their capital value. Various "commodity" and "artifact" bubbles will ensue -- be it housing, gold, stamps, diamonds, or what you will -- and financing terms will begin to be modified to allow for anticipated inflation. Once interest rates fully reflect anticipated inflation rate, then realization of inflation at the anticipated rate will not ease financial obligations. The inflationary process will not lead to further investment. Fully anticipated inflation -- or even partially anticipated inflation -- means that the connection between investment activity, employment and price increases is ruptured; the rate of inflation is no longer inversely related to the unemployment rate. Inflation can accelerate even as
unemployment increases if money wages have a built-in momentum and
transfer payments not only sustain, but increase the mark-up on money
wages.

The Phillips Curve of Phillips and Phelps Brown was a valid generaliza-
tion of historical observations. It reflected the institutional condi-
tions of a specific era. For it to be valid, the institutional changes
that occurred could not break the profits, employment and investment
connections. In the big government/trade unionized economy we now have
the link between inflation and investment spending has been broken. As a
result, inflation has become a secular rather than a cyclical phenomenon.
The Phillips Curve generalizations are no longer valid.

The significance of the money wages and mark-up analysis of the in-
f lationary process is that it allows for a variety of types of inflation:
inflation can be an "open" wage increase phenomenon; it can reflect the
composition of demand; and it can be due to an exercise of previously
unused or newly uncrushed monopoly power. This view of inflation is in
sharp contrast to the simple assertions that inflation is everywhere a
monetary phenomenon - that inflation is the result of wage increases
exceeding productivity increases. Both the monetary observation and the
wage/productivity observation may be true of most, or even all, observed
inflations, but both phenomena are parts of processes or measures of
results; they are not the driving mechanisms. Furthermore, the
central control of money supply and of money wages may be inefficient ways of
controlling inflation, for money supply and money wages are, but symptoms,
rather than causes, of the ailment.
VI. The Financing of Wages

In a decentralized market economy, the general level of compensation of workers employed in the production of consumer goods and services and of those employed in the production of investment goods is composed of a myriad of wages and other conditions of employment which are determined in particular bargains or contracts that are struck between employers and employees. In our economy, a large proportion of such bargains or contracts are struck between "collectives," such as trade unions and organized bargaining units of employers in an industry, rather than between individual workers and atomistic "employers," who deal with each other in one-on-one negotiations. Furthermore, more, these set limits on the wage and conditions of employment every legislation dealing with wages, hours of work, legislation and legislation dealing with safety, supplements, and various "conditions in the shop." In addition, inasmuch as labor has to be "trained" to fit into a firm's production process (this is a counterpart to the existence of highly specialized capital assets), it is often in the interests of employers to make working conditions "pleasant" in order to minimize quit rates.

The cost of labor covers not only the pre-tax pay pocket of workers but also the employment costs that make, whether they are mandated by government, trade union contracts or the "employers'" interest in constraining turnover. Items like medical care supplement to wages which ties medical care to employment with a particular employer are likely to be a "preferred" situation for some employers over an equal or even lower cost scheme that makes medical care independent of the particular employer or even whether the beneficiary is employed.

The level of wages that enters into discussions of inflation is an average
of many different items. Any change in the level of wages is usually made up of quite disparate movements in different wages and different items.

Our model of price and profit determination allows for various wages in consumption goods production, investment goods production and government employment are specifically identified. In this model the possible disparate movement of different classes of wages and the factors causing such disparate movements are natural focus of attention. The way various labor costs are determined is important to determining the course of the costs that must be recaptured in prices.

In a decentralized market economy, an increase in the general level of money wages will start with increases in money wages in the particular portion of the economy where the contracting workers and employers have reason to believe that funds to pay higher money wages will be forthcoming.

As higher money wages implies higher and technologically determined average and incremental costs, the dominant expectation has to be that prices will be higher, per unit flow of each will be forthcoming from sales proceeds.

Furthermore, because every employer has money costs which are mandated by liability structures and business styles, the expectation has to be that rising prices will not seriously compromise the excess difference between sales revenues and technologically mandated costs. Wage increases will rarely be agreed upon which are "guaranteed" to bankrupt the employer.

In addition, there is an expectation that a rise in prices of a product is expected to decrease sales. The condition that a money wage and the resultant price increase not seriously impair the viability of an employer implies that a rise in the technologically determined costs, and
let us assume an equal proportional rise in the mark-up will lead to a percentage fall in sales that is at most equal to, and hopefully smaller than, the rise in the offer price. The condition that the quantity demanded shall not fall by a percentage greater than the rise in the offer price implies that product demand must be inelastic or at most of unit elasticity.

If the fall in the quantity demanded exceeds the percentage rise in mark-up over technologically determined costs, then the gross flow of profits to validate the liability structure, the price paid for capital assets, and the business style of the affected firms will fall; i.e., unless demand is inelastic, the gross profit flows of firms or on industry which raises wages and prices will be compromised.

If we exclude the special case in which profit flows are so large initially that an anticipated fall in unit profits has been built into the anticipated profits that go into determining capital asset prices, a rise in wages leads to a lower output that lowers output appreciably will lead to a fall in the anticipated profit flows that are capitalized to yield asset prices, and thus to fall in the market valuation of the firms. Firms cannot be expected to cavalierly accept such developments. The ruling situation in market economies in which increases in money wages take place cannot conform to the elastic demand assumptions that are typically made for individual units in competitive markets. The propositions that money-wage payments of both capital goods and consumption goods producers are usually funded from sales proceeds and that firms will not readily compromise the cash flows that are needed to validate (1) debts, (2) the market valuation of their capital asset, and (3) business style implies either that the individual demand curves are inelastic or that
individual demand curves have risen, are rising or are expected to rise.

A classic demand curve representing a particular firm's price elasticity.

An inelastic demand curve confronting a particular firm defines a "monopoly" or "oligopoly" situation. If a firm is a constrained monopolist, it has some unexploited monopoly power and the rise in wages relaxes the constraint, then the rise in money wages will be accompanied by use of previously unexercised monopoly power. Thus, firms will agree to a rise in money wages when there is some unused market power or if some increase in market power is anticipated. Simple wage push inflation can only occur in market structures where the exercise of monopoly power is constrained and where the wage increase relaxes the constraint. The fact that wages are costs which private business must recover in prices indicates that a symbiotic relation exists in industries which are dominated by a few firms, between firms and trade unions; wage increases are grounds which can be advanced for exercising monopoly power in situations in which the existence of monopoly power has to be camouflaged.

Higher money wages will not compromise gross profit flows if output demand curves are shifting to the right or upward. Such rightward or upwards shifting demand curves exist when a particular output is gaining market acceptance.

A new product whose market is increasing will require both more labor and will have prospects for increased total revenue. This can be a source of money wage increases. Firms which are enjoying the benefits of the market acceptance of an innovation enjoy both rising demand curves for their output due to the acceptance of their product and inelastic demand curves. If the innovation enjoys a monopoly position, however transitory, new firms enjoying success in
the marketplace require additional labor if they are to exploit their market advantages. Higher wages and other terms of employment are ways to attract labor from other firms and industries. The "classic" example of the "expanding" dimensions of the economy is the shift of labor from agriculture to industry.

Money wage increases also reflect the increase in particular demand curves that accompanies a business cycle expansion. A business cycle expansion is never a simple multiplicative expansion of all demand curves (i.e., a business cycle expansion does not mean that all demand curves shift so that λ% more output would be bought at a constant money price or that λ% more would be paid for any particular output). Every business cycle expansion is characterized by some particular set of strong increases in demand. Cyclical money wage increases will radiate from the wages of labor that produce those products whose demands are increasing strongly or which are expected to increase strongly. This implies that the dispersion of the rate of increase in money wages will reflect the differences in the increase in demand for particular types of output. In big government capitalism the dimensions of the economy that lead in the expansion of income often reflect policy measures and are not infrequently associated with institutional changes. Economic policy and changes in financial and other economic institutions cause differential changes in money wages and employment during

The eras of relative tranquility (1952-1965) and of relative turbulence (1966 to date) since World War II have witnessed shifting patterns of
government intervention, spreading programs "start up and fade away," and the spread of institutions and usages that reflect governmental benevolence towards particular outputs, industries and incomes. These shifting patterns of government impact upon the private economy affect what expenditures can be financed and thus have tended to generate variations in relative wage rates. The leaders in the movement of overall wages have often been employments that benefit most from the impact of the proximate government intervention. In our system of decentralized wage determination, the skills or industries that gain an advantage because of government programs become the leading sectors in the propagation of inflation, both in the supply price of outputs by way of labor costs, and in generating demand that leads to wage and profit increases. Wage and income increases are often the result of government policies that have objectives other than increasing the wages of some employments. For example, Medicare and Medicaid were not overtly designed to increase the market power of the sellers of medical service.

In private businesses, the demand for output funds the wages paid in producing output. If the output is a consumption good, then wages will be recovered by the sales revenue from the output, which in turn is mainly derived from wage income. If the output is an investment good, then the wages paid will be initially financed by the interim instrument financing and then by the "take out" financing scheme of the buyer. Wages paid in the production of investment goods are financed because it is anticipated that profit flows will validate the debts and equities of the firm that acquires the investment good. This need to recapture labor costs in sales revenues or in profits over time sets a limit to the price of capital assets, and thus to wage rates in producing investment output.
Wages in the production of consumption goods are financed by the wages that are paid to consumption and investment goods workers and by the portion of incomes from profits, government employment and transfer payments that finance demand for consumption goods. In a similar manner, wages in the production of investment goods are limited by the amount of financing of investment—both interim and take-out financing—that is available. Both interim and take-out financing break down into internal and external financing. The rise of the wages in investment goods production is limited by the price that business can pay for capital assets, which in turn is limited by available financing. But available financing is limited by bankers' views as to the cash flows that the investment goods, once they become capital assets, are expected to generate.

In a business cycle expansion the demand for investment goods increases, which leads to the right of the demand curve for labor to produce investment goods not only increases employment but also allows wage, profit, and price increases to take place. Once investment goods employment increases, the demand for consumption goods, consumption goods output, employment in consumption goods production and the gross profits of consumption goods producers increase. An initial increase in investment goods employment and wages fans out and leads to rising employment, wages and prices in consumption goods. But this process is limited by exact financial market reactions which lead to first increased financial layering and then to fragile financial structures that are conducive to cyclical downturns. These cyclical downturns may or may not be associated with a financial crisis.
Because of the limitations of finance, the leading sector in wage increases—the wage rates in investment goods production—have only a limited power to sustain a strong inflationary thrust is not possible in a simple market economy because the cash flows to finance open-ended expansion of investment are not forthcoming from the banking system. This lack of available finance reflects both the inelasticity of banking resources and the lack of faith needed by bankers and financeers that cash flows to validate higher price investment output will be forthcoming.

From time to time in the history of capitalism the natural skepticism of bankers and financeers has been overcome by a belief that a new era has dawned. The belief in the dawning of a new era has usually reflected the emergence of new financial instruments. When such a "new era" mentality emerges, the expansion of investment financing may be carried so far that open inflation, in which money wages and prices chase each other, appears. However, the feedback from open inflation to the demand for financing has typically resulted in higher interest rates, increased financial layering and a stripping of liquidity from firms and business; i.e., in the emergence of a fragile financial structure with all of the consequences for economic instability that have been chronicled. Innovation in finance—including "government" developments such as the emergence of central banking and the discovery of fiscal policy—have been associated with the emergence of instability and have been precursors of threats, if not of realizations, of financial crises.

This interpretation of inflation as the result of increased private investment spending leading to both higher profits and larger demand for labor
is not valid for the United States in the recent past, especially in the years since the middle 1960's. The classical investment cycle inflation, which produced the evidence for the Phelps-Brown and Phillips research, was essentially a self-limiting process. The fundamental price pressure in the world studied by Phelps-Brown was a downward pressure on prices due to technological progress.

Prior to World War II, two types of downward pressure on prices were evident. One reflecting technological progress that led to increased productivity and the other reflecting both insufficiency of total demand and the pressure on asset prices when debtors attempt to fulfill their liability payments by selling assets. During the 1920's, downward pressures on prices due to technological progress were evident even as an unstable and fragile financial structures was created. In the years following 1929, the downward trend of prices due to technological progress was joined by downward pressure on wages and output prices because of insufficient total demand and of the widespread attempts to "make position" by selling financial and capital assets.

Since World War II, the downward pressure on prices due to technological progress has been offset by money-wage increases and increase in the mark-up on technologically determined costs. Even in the successful years of the post-war period, such as the first five years of the 1960's, there was some slight upward pressure on prices. Mainly because of big government, in the guise initially of defense but now increasingly in transfer payments and state and local government expenditure, no period of substantial duration with large-scale insufficiency of aggregate demand has occurred since World War II. The cash flows associated with the
government deficits during recessions have sustained profits, thereby minimizing the need to try and make position by selling assets.

The increased portion of state and local government in the economy and the veritable explosion of transfer payments over the post-war period have tended to raise the mark-up on wages in the prices of consumer goods. Over the past decade this increase has been sufficient to disappoint the expectations of blue collar workers that the purchasing power of the take home pay packet will rise. As a result, a pressure to raise money wage rates in excess of the money wage increases induced by higher aggregate demand has become evident. Thus, the self-limiting inflation that mirrored the private investment cycle has been replaced by an open-ended inflation that reflects the explosion of demand for private output due to a combination of government spending and rising money wages.

The growth of demand for consumer goods that is not directly financed by wages derived from the production of consumer goods and indirectly financed by sale proceeds or business debts (to banks or on take-out instruments) can be illustrated in many ways. One simple illustration of what is involved is in the growth of state and local government receipts, especially as Federal Grants-in-Aid have grown.
has been financed by debts, just as investment spending is financed by debts.

Government intervention in the economy is not limited to the purchases of goods and services and transfer payments. Government intervention also takes the form of encouraging particular outputs by means of endorsements and special tax treatment. The encouragement of single family housing by means of special tax treatments, by endorsing mortgages and by protecting "deposits" in specialized financing institutions is one example; the tax exempt status of business spending on medical insurance for employees, as well as Medicare and Medicaid, are others. One attribute of such programs and interventions is that they often set specific numerical targets: a number of housing units to be built; a particular set of medical services to be delivered; a man to be put on the moon by a particular date.

Whenever such "numerical" targets are set then, in the jargon of economics, an inelastic and rising demand curve for outputs or services is generated. This leads to inelastic and rising demand curves for particular labor. Whenever an inelastic demand curve for output exists, then the ability of producers to raise the price of their output in response to higher wages or in response to an increase in monopoly power due to government policy is enhanced. In effect, government quantitative targets, together with the belief that the
government will finance whatever is necessary in order to achieve these targets, are a grant of "monopoly power" to the suppliers of these outputs and to the labor that produces these outputs. Our history indicates that such monopoly power will not go unused, especially if the government does not intervene to set the price at which it will purchase outputs or what suppliers can pay labor, even as it sets quantitative targets for outputs.

In the simple skeletal price and profit relation that is central to our argument, the mark-up on labor costs in the production of consumer goods depends upon the ratio of the wage bill in investment goods output to the wage bill in consumer goods output. This ratio breaks down into the factors of the relative employments and the relative wages. A business cycle expansion begins with a rise in the relative employment in investment goods industries which implies that the demand for the labor skills that are specialized to the production of investment goods will increase. This will lead to an initial increase in the wages of investment goods workers.

If the increase in investment goods output and wages is modest and transitory, then the pressure on consumption goods wages is not very great: improved workers' purchasing power through more jobs, longer hours including overtime and more rapid upgrading of experienced and skilled workers will lead to an improvement in the individual worker even though the wage structure does not change. This tendency for wage rates in consumption to lag as the employment picture improves is reinforced by the lower prices that ruled during a business contraction, an expansion begins with higher price deflated wages.

However, if a business cycle expansion, sustained by means of further increases in investment demand, leads to increases in both
employment and wages in investment goods output, then a combination of falling purchasing power of the labor income of workers in consumption goods production and the decline in the number of workers who are out of work and seeking work will set up a situation in which inflation accelerates and becomes open, as money wages in consumption begin to rise. Thus, inflation has two phases: one in which prices rise because mark-ups improve as investment goods spending rises relative to consumption goods spending, and another, second phase, in which wages in consumption goods output increase as labor market conditions become tight and as the purchasing power of wages in consumption goods declines. If the increase in money wages in consumer goods production takes place even as the demand for labor in investment output increases, then the rise in consumer goods prices due to the rise in demand and costs that follows from the rise in consumer goods wages will lower the price deflated wages in investment goods production. A process in which wages in both investment and consumer goods output increase, even as the relative employments do not change in any appreciable manner, is an open inflation; it is the inflation that takes place once what Joan Robinson, with her gift for evocative language, has called the "inflation barrier", has been broken.

However, in a market economy, there are reactions that limit this process. True, rising wages in consumption and investment goods will finance higher supply prices and profits. However, in every capitalist and pre-capitalist economy, there are a substantial number who live on fixed or money incomes such as pensioners and rentiers, and who live on politically determined incomes, such as teachers, the military, and civil servants in general. If pensions and government employee salaries do not rise with
private wages, then a rise in wages in both consumption and investment goods production will cut demand for current consumption output and lower the profits that will be forthcoming to validate capital asset prices. This leads to doubts that the profits will be forthcoming to validate investment being purchased or ordered at the current high prices. These effects, in particular, the investment validating effect, tend to make open inflation a self-limiting process in a private economy.

Furthermore, the ability of the banking system to finance investment in process and positions in capital assets is not unlimited. Only in rare circumstances is the supply of bank financing ever infinitely elastic. Rising interest rates not only affect the supply price of investment output and the value of investment output as capital assets, but they also tend to induce an economizing of liquidity by households, firms and banks. There are endogenous and systemic limits on the ability of a private banking system to finance an extended investment expansion. However, these limits are flexible. The limits depend upon the efficacy of financial innovations in stretching the financing available to business by banks and non-bank financial institutions and the course of bank reserves in determining the financing that is available to banks. A central bank that is conscious of the potential instability of a financial structure in which units have been largely stripped of their liquidity is often reluctant to slow down the rate of growth of bank credit. The central bank is often confronted with a choice between possibly triggering a financial crisis or fueling an inflation. Because of the limits due to private financing of investment activity and capital assets, a strong
expansion with considerable price increases (only) occur as the memory of past debt deflations became dimmed by time. The succession of minor and major business cycles reflects this financing limitation.

Finances and wages are essentially monetary phenomena. The rise in the volume of employment and in the price of labor in investment goods leads to an increase in the demand for current, interim and interim take-out financing will occur. Given the portfolio preferences and institutional history of the financing organizations, an increase in the volume of financing needed will lead to a rise in financing costs as measured both by overt interest rates and by covert costs and risk classifications of financing contracts. Thus, the conditions that investment outputs must fulfill as they become capital assets become more constraining even as the likelihood that there will be short falls in cash increase as the financing horns rise, the ability to purchase fixed income recipients declines. Financial markets will put a damper on the wage and price increases in investment goods production by restricting the amount of investment that will be financed.

The internal feedbacks in the quantity demanded, financing terms, and debt validation processes will set a limit to an open inflation in an economy with small and passive government. For an open inflation to be more than a transitory phenomenon, the constraining feedbacks due to financial relations have to be overridden. In war time and in revolutionary aftermaths of wars, the constraining feedbacks are overridden by the government's insatiable demand for output and the use of negotiable assets to finance current consumption by pensioners, rentiers and government employees. In our current economies, the phenomena that override the constraining feedbacks are the various and sundry government programs that subsidize and sustain...
investment output and the various ways in which the income of direct and indirect government civil servants -- who have become an increasing proportion of the total -- are indexed. When government undertakes to supply some fixed quantity of either "diet" in the form of food stamps, "medical care" in the form of Medicaid or Medicare, or defense in the form of sophisticated systems without setting limits in supplier prices, then the potential for government financed expenditure to sustain and even lead an open inflation is limited only by the extent of these government undertakings and the willingness and ability of the government to run a deficit.

Similarly, when a fixed bundle poverty line is defined, then the need for the government to support a dependent population at something close to or above the poverty line will improve the prospects of open inflation. Perhaps the worst legacy of the poorly conceived and ill-fated "War on Poverty" of the Johnson years is the development of statistical measures of poverty in terms of fixed bundles of goods and the propositions which emerged as a corollary that it is a government responsibility to deliver an ability to buy such a bundle of goods to almost all, independent of labor market participation.

Open inflation is largely the result of a shortage of consumer goods relative to the demand for consumer goods. If inflation is to be broken, the output of consumer goods needs to be increased. A simple catechism, which holds that the output of consumer goods is deflationary, whereas investment and most of government activities as they are now constituted are inflationary, is the key to successful policy to constrain inflation.
Open inflation is a signal that the structure of output is wrong: too much investment goods and government output is being produced and too little in the way of consumers goods. The attempts to control inflation by means of monetary policy are attempts to rectify this fundamental cause of inflation by attacking the supply conditions of interim and take-out financing. The attempts to control money wage rate changes also attack a symptom—trade union militancy—and not a cause of inflation.

Attempts to control inflation through control of the money supply or money wage rates can enjoy but transitory success in a market economy where the sustaining of a reasonable approximation to full employment is a proximate policy aim.

Our discussion of how the financing of demand by means of Federal Government grants-in-aid was illustrative of the way in which one type of government financial relations imparted an inflationary thrust to our economy. We will look at how other aspects of government have become engines of inflation in recent years.
VI. Government as an Engine of Inflation: The Recent Experience

The limitations upon the external financing of ever-increasing private investment made peacetime inflations of the era of small government capitalism self-limiting. However, the limits to expansions were flexible; depending upon the innovations in finance that were "working their way" through the economy, the "accidents" of gold discovery and production, and whether a spirit of speculation infected businessmen and their bankers. Because

The upward instability of the capitalist investment-financing-profits and value of capital asset interrelations meant that the way investment and asset positions were financed led, from time to time, to fragile financial structures. The emergence of fragile financial structures depended upon the mixture of speculation and enterprise that motivated businessmen, bankers and asset holders. As a result, when limitations upon the supply of finance due to the nature of the financial system became effective, the inflationary stimulus to investment spending halted. Both the inflation and investment powered good times came to an end. Sometimes in a small government capitalism, the end came with a whimper -- and a recession resulted -- at other times the end came with a bang followed by a financial crisis and a deep depression.

Small government capitalism was immune to protracted, prolonged and chronic inflation, but it was susceptible to debt deflations and deep depressions.

The era since World War II can be characterized as big government capitalism. This era has been characterized by an absence of prolonged debt deflations and deep depressions. The first part of the era since 1946 was characterized by an exceptional financial robustness; there was
A fragile financial structure may lead to a combination of chronic inflation and persistent unemployment. When levels of debt result refinancings and massive government deficits crowd out debt, deflation and sustained deflation may also sustain the stability of the financial system to finance spending at higher prices. The inflationary implications of increased government deficits are augmented by the inflationary consequences of an increased government deficit. Thus the limits times on inflation as by the need for elastic finance that validating profit are overridden by the financial and profit repercussions of the government intervention to prevent deep depressions.

In order to understand why the big government capitalism we now have exhibits inflation we need look at the components of big government. There are three basic components to our big government: (1) Federal government purchases of goods and services; (2) state and local government purchases of goods and services; and (3) transfer payments to individuals.
There is no substantial batch of motorized industries in the United States, although an increasing number of firms and industries are recently in earnest subsidized.

The electric bicycle furnished abroad averaged 5.6% in 1966. It was largely the result of increased spending in the war in Vietnam.
was almost an ideal use of fiscal expenditures to turn around a debt-deflation threat. In the years since the crunch, the major change in the Federal government's impact upon the economy has been through transfer payments and Federal grants-in-aid to state and local governments. The grants-in-aid in turn have facilitated a rapid growth of state and local government spending.

In explaining inflation, it is necessary to direct much ado can be made about economic growth, and much of what is said about economic growth and economic well-being or the prosperity of nations is palpable nonsense. What is true is that, if a substantial part of the whole increases at a rate that is substantially greater than the rate of increase of the whole, then the rate of increase of the whole is greater than it would have been in the absence of this rapid increase of the part.

In Table XII, the level of Gross National Product in selected years since 1952 is given, as well as the rates of increase of Gross National Product between 1952 and 1966 -- the pre-crunch era -- and 1966 and 1977 -- the years since the crunch.

Over the twenty-five year period between 1952 and 1977, Gross National Product in current dollars has grown at a 6.76% annual rate. Over this same period, current dollar Federal Government purchase of goods and services has grown at 4.08% per year, the Federal Government as a buyer of goods and as an employer of labor has been increasing at a slower rate than the rate of increase of Gross National Product. The Federal Government's purchase of goods and services has not been a driving force in the expansion of the economy. The only period during which the Federal Government as a
purchaser of goods and services grew faster than Gross National Product was in the years 1964-68, when the escalation in Vietnam was taking place. On the other hand, state and local government purchases of goods and services expanded at a faster rate than Gross National Product in every four year period between presidential elections. However, the rate of increase of state and local government spending has been faster in the years since 1966 than prior to 1966; As a result of these differential growth patterns, state and local expenditures have increased from being 7.34% of Gross National Product in 1952 to 11.20% in 1966 and 14.11% in 1977.

However, the "big" postwar story of government expansion is in the multitude of programs that go under the rubric of transfer payments. In 1952, transfer payments were 3.49 percent of Gross National Product; some 4.5% of Personal Income could be imputed to transfer payments. Transfer payments increased from 3.49% of GNP to 5.52% over the fourteen years from 1952 to 1966. Transfer payments increased substantially faster than GNP over those years. However, the rate of increase of transfer payments accelerated in the years since the crunch; in the eleven years between 1966 and 1977, government transfer payments to persons increased at an annual rate of 14.2%. In four years of the Nixon-Ford regime, 1972 to 1976, government transfer payments increased at an annual rate of 15.5%.

If something small relative to GNP increases at a rate that is far in excess of the rate of increase of that Gross National Product, it cannot be said to have a significant effect upon the overall rate of increase of Gross National Product. However, if something is large relative to GNP and increases at a rate that is substantially faster than the rate of increase
of G.N.P., then it can be said to have a significant effect upon the observed rate of increase of Gross National Product. At the beginning of our time period, 1952, state and local government purchase of goods and services were 6.7% and government transfer payments to individuals were 3.5% of Gross National Product. By 1976, state and local government purchase of goods and services was 13.6% and transfer payments were 10.8% of Gross National Product. Thus, the two rapidly growing sectors grew from having a 10.2% weight to a 24.4% weight in the overall determination of G.N.P. If some components of G.N.P. are increasing at a rate that is significantly faster than the rate of growth that G.N.P. can experience in the absence of inflation, then these rapidly growing sectors will both increase their significance in the economy and impose an inflationary bias upon the economy. Markets will adjust to the expansionary effect of the extraordinarily rapid growing dimensions of the economy by inflation. If we think of the rapidly growing sectors as reflecting attempts by government or markets to shift resources or command over resources in particular directions, then the price inflation reaction to rapidly growing sectors is a market reaction that attempts to offset the shift of resources. The larger the sector, the greater the command over resources that a given rate of increase implies -- and the greater the market's inflation response that reflects the response of potentially losing parties in the shift of resources.

Thus, the chronic inflation over the 1952-1977 period as well as the accelerated inflation of the years since 1966 can be explained by the rapid growth of transfer payments and state and local expenditure. The two factors are now as large relative to G.N.P.
that a return to non-inflationary economy can only be achieved if there are to be "increases" at approximately the rate at which nominal G.N.P. can grow in the absence of inflation.

Inflation

The expansionary effect upon the economy and upon prices of a rapidly growing government dimension does not depend upon the government being in deficit. If the budget is to be balanced, government spending increases revenue must increase. However, unless there are levied in a pure residual element (which really doesn't exist) or any increase in taxes which have no effect upon the supply labor taxes will enter directly into prices. If "a close approximation" to full employment is to be achieved then expansionary monetary (and fiscal) measures are required to offset the effect of taxes on demand. But the "effect" is limited by the fear of inflation. Other fiscal effects 3
Unemployment and inflation that is sustained results.

Government tax/Government spending is equivalent in its effect upon prices to the financing of consumption by profits. In the consumption case, profits rise so that after spending profits are at the target level. In the tax case, prices need rise so that after tax, profits equal the level needed to sustain real and real debt and capital debt prices.
If the budget is to be balanced as a deficit or having a balanced budget, government spending on goods and services or on transfer payments increase then if the budget is balanced, taxes revenues must increase. But taxes show up in supply price unless taxes are levied on a pure residual claimant or if personal income taxes do not have any significant negative affect upon labor supply. All other taxes are costs which must be reflected in price.

If the government budget is balanced then, to the extent that the taxes lower consumption expenditures, prices will be lower. But business will be concerned about which reduce the per unit taxes, corporate income taxes, property taxes on single family homes all affect investment will raise prices enter the supply price of output and sales and value added taxes obviously enter price. A government tax spending scheme is equivalent in many ways to the financing of consumption out of profits in that prices rise so that do not decrease and tax are covered in revenues.

In 1952 Federal Government purchases were 15.1% of GNP in 1966 it was 19.5% and in 1977 it was 7.97.
State and Local government purchases were 7.27% 7.5% in 1952 11.2 in 1966 and 14.11 in 1977. In Ferries 7 summarizing an investment, State and Local government have become "big" while the Federal government "shrunk" on the other hand but was 20x. The main reason for the shrinkage of the Federal government
has been the relative decline in
National Defense spending from $4.58 billion in 1952 to $347.2 billion in 1957 to $94.3 billion and to $70.6.5 billion in 1977.
However, in the early years, federal government expenditures dominated the total, running 15.1% of G.N.P. to state and local government expenditures' 7.3%. By 1966, state and local government expenditures on goods and services had grown to 11.2% of G.N.P., while such federal government expenditures had fallen to 10.5% of G.N.P. In 1977 the story is almost the inverse of that of 1952. State and local expenditures were 14.1% of G.N.P., while federal government expenditures were 7.7%.

At the same time as total expenditures on goods and services has remained constant, government transfer payments to persons has grown from 3.5% of G.N.P. in 1952 to 7.5% in 1966 and was 10.5% in 1977. However, as a percentage of G.N.P., transfer payments are cyclical, reaching a peak during recessions. Thus, in 1976 transfer payments to persons was 12.4% of G.N.P.

One explanation of the growth of state and local government expenditures is the growth of federal grants-in-aid. Such grants financed 10.2% of state and local expenditures in 1952 and 17.08% in 1966. In 1977, such grants-in-aid financed 25.5% of state and local government expenditures. A peculiar aspect of this source of financing is that available grants-in-aid are usually tied either to the use of funds for some purpose or to tax effort (as in the case of generalized revenue sharing). The "free" money in the form of grants-in-aid have been a source for incentives for increased state and local spending.

In 1952 total government purchase of goods and services was $75.6 billions, of which $45.8 billions were National Defense purchases. State and local government purchases of goods and services at $23.2 billions was 6.68% of G.N.P. -- a smaller percentage of G.N.P. ruled in 1929 when
state and local purchases of goods and services were 7.16% of G.N.P. By 1966, total government purchases of goods and services were $158.7 billions of which $60.3 billions were national defense and $79.8 billions were state and local government. In 1977 total government purchase of goods and services were $395 billions, of which $94.3 billions were national defense and $249.5 billions were state and local government spending.

If we combine the above evolution of national defense and state and local government spending with what happened to transfer payments, it is clear that the way in which government sustains the private economy has changed dramatically. In 1952, the data supported the contention that armament expenditure was a "decisive" element in sustaining income and employment. In 1977 national defense spending on goods and services had fallen to 23% of government spending on goods and services and was but 5.0% of Gross National Product (national defense was 13.2% of G.N.P. in 1952). State and local government spending on goods and services far exceeded the national defense spending in 1977, as did transfer payments to persons. Instead of being an economy propped up by defense spending, American capitalism's essential support against debt deflations and deep depressions has become the vast amount of spending by state and local governments and the huge system of transfer payments.

The explosive inflationary thrust of the years since 1966 can be largely imputed to the explosive growth of transfer payments and state and local government expenditures.
### Table: State & local purchases of goods and services

<table>
<thead>
<tr>
<th>Year</th>
<th>1966</th>
<th>1977</th>
<th>1977/66</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchases</td>
<td>79.8</td>
<td>249.5</td>
<td>3.13</td>
<td>10.36</td>
</tr>
<tr>
<td>Transfer Payments to persons</td>
<td>41.6</td>
<td>197.8</td>
<td>4.75</td>
<td>14.17</td>
</tr>
<tr>
<td>Total</td>
<td>121.4</td>
<td>447.3</td>
<td>3.6842</td>
<td>11.86</td>
</tr>
</tbody>
</table>

**Instead of American capitalism's prosperity resting upon defense and war spending, the evidence is that the economy can offset its tendencies to breed deep depressions by means of state and local government purchases of goods and services and transfer payments.** The proportion of total G.N.P. allocated to these users far exceeds the portion that was ever allocated to national defense, if we except the years of great wars, such as World War II. It is just not true that the prosperity of capitalism depends upon wars and preparation for war; state and local expenditures and transfer payments have provided us with an economic equivalent to war and preparation for war.

Inflation has accompanied wars. The government's ability to comrade resources for war, so that the proportion of demand for goods that is financed by other than income derived from the production of consumer goods rises, is the basic cause of wartime inflation. Transfer payments and state and local expenditures also involve a comandeering of resources which leads to increases in the ratio of the financed demand for consumer goods to the technologically determined costs of producing consumer goods. It does not matter if the budget is balanced during wartime: the real resource costs of the war lead to inflation. Symmetrically, there are real resource costs to state and local government spending and transfer payments and these real resource costs will show up in inflationary price pressures.
Components of the Make-up

In order to dig deeper into inflation we have to go to the extended formula

\[ P_c = \frac{W_c}{AV} \left( 1 + \frac{w_c N_c}{W_c N_c} + \frac{S_{SPending} - \gamma x}{W_c N_c} + \frac{\pi^*}{W_c N_c} - \frac{\delta}{W_c N_c} - \delta \frac{W_N}{W_c N_c} \right) \]

which in turn can be written as

\[ P_c = \frac{W_c}{AV} \left( 1 + \lambda \right) \]

As we have taken up the role of government and investment we now turn to the other components of the make-up \( \lambda \).

Basically inflation is the result of the sum of productivity-adjusted wages \( w_c \), AV, and the make-up \( \lambda \). The realized make-up depends upon how nominal spending on the items that lead to various wage-bits and non-wage incomes that finance consumption, depends on the rate of expected saving out of wages will affect the price level.
In the price-profit-formula, consumption spending is financed by profits. This must be true as long as profits, net of taxes and the spending of consumption spending financed by profits, are the only "ex post" source of savings. Inasmuch as after the free-profit-net of taxes and consumption financed by profits must equal investment, the theorem holds.

However, the difference between revenue and technologically determined labor costs is always "high on the hog," which is a capitalist economy that is characterized by capitalists living high on the hog. The commodities in which these differences occur will be far from the book stores. Labor income determined in unadjusted labor income.
breakdown of total employment between technologically determined labor
and labor that is used for overhead, ancillary and business style
purposes is not available in precise terms. However, the breakdown of
total employment in manufacturing between production and non-production
workers is available. For want of anything better, we can assume that the
higher the proportion of non-production workers to total employment, the
higher the mark-up on technologically determined costs that is required to
finance such spending.

Furthermore, whenever the ratio of non-production to total employment
increases, the higher the mark-up on technologically determined labor costs
that is needed if the cash flows from output sales are to furnish the
funds that are needed to pay the overhead, ancillary and business style
costs. Thus, an increase in the ratio of non-production workers to total
employment will lead to a rise in the mark-up unless the higher mark-up

market power the consumer is financed by
the distribution of profits as wages will lead
to an increase in the gap between
price and technologically determined costs.
Thus if there is a "trend" in the proportion
of the total wage bill that goes to "workers" who are most mandated by the technology of production, there will
be upward pressure on prices for
any given measure of productivity
depicted money wages.
Recall that the "technological progress" associated with investment in labor productivity. In a competitive economy, this would impart a downward trend to prices. A doctrine that emerged was that money wages should rise by some productivity coefficient each year. This doctrine reflected a widely held belief that for firms with market power increased productivity will not lead to falling prices, but only the purchasing power of wages can improve if money wages rise as prices remain constant.

However, if money wages do rise in this way and if the percentage of workers employed in overhead, ancillary or business style activities increases, then the price level must increase if prices are to serve as a means of acquiring cash to cover expenses.

It is obvious from Table XII D (page 97) that the percentage of non-production...
workers to total employment has increased within manufacturing. In every industry listed, the percentage of non-productive workers increased in the interval from 1952 to 1966. In all but Motor Vehicles among the durables and Food and Kindred Products and Petroleum and Coal among the nondurables, the percentage "non-productive" increased in the decade since 1960. The relative tranquility of 1952/1966 was conducive to the increase in the ratio of non-production workers to production workers. In the aggregate, if the "non-production" workers spend all their income on consumption goods, the mark-up on technologically determined costs in consumption goods production will increase to reflect this increased demand. Inasmuch as these "overhead and ancillary" laborers are employed in the production of both consumer goods and investment goods, the profits net of technologically determined and overhead, ancillary and business type labor in the production of consumer goods will rise. That is, in the production of consumer goods, we have:

\[
\text{Consumption Goods, Total Revenue} = \text{Technologically determined labor in the production of consumer goods} + \text{overhead labor in the production of consumer goods} + \text{technologically determined labor in the production of investment goods} + \text{overhead labor in the production of investment goods};
\]

\[
\text{Out of Pocket Costs} = \text{Technologically determined labor in the production of consumer goods}.
\]

Gross Profits in consumer goods production equals technologically determined labor plus overhead labor in the production of investment goods.
For investment to take place, the valuation of the income that is expected from the ownership of capital-assets must exceed the supply price at current labor costs of investment output. The above is a necessary condition for investment; the necessary and sufficient condition for investment to take place is that the valuation of future expected incomes must exceed the cost of the investment output and financing must be available. In an age of relative tranquility, the market valuation of future incomes increases as uncertainty is attenuated. Tranquility changes the attention of uncertainty also implies that the portfolio preferences of banks and private owners of financial assets change so that financing is available for increased investment. A rise in investment activity financed in this way leads to a rise in the mark-up on labor costs in the production of investment goods.

The allocation of part of investment goods produces profits to the wage-earner, overhead, ancillary functions (research, development, sales and marketing) and business-style labor leads to a rise in profits in the production of consumer goods that exceeds the profit increase that would follow from the rise in the physical volume of investment output. Similarly, in an era of rising capital-asset prices and rising stock market valuations of firms, the tendency for profits to increase because of overhead and ancillary labor consume out of their incomes is augmented by the way "family fortunes" are being made by the appreciation of assets. The consumption behavior of profit receivers and recipients of labor income from overhead and ancillary functions of investment goods producers tends to increase the prices of consumers goods and profits made in consumer goods production.
The rising mark-up on technologically determined labor costs lends an inflationary bias to a tranquilly expanding economy such as ruled in 1952 up to 1966. However, the shift in the ratio of non-productive to total employment was a slow process in those years. The rise from 19.2% to 25.8% for non-durable manufactures took 14 years. Thus, part of the inflationary pressure in the 1952-66 period can be imputed to the changing structure of costs, but the shift in the ratios was not so great that an increase in the output productivity of the technologically required labor could offset the inflationary thrust.

In the years of financial turbulence since 1966, the percentage of non-production workers in durable goods production rose to 28.7% and to 27.7% in non-durable goods production, rose to 27.4%; these increases represented a significant slowdown in the shift towards "overhead and ancillary labor". However, by the very nature of overhead, ancillary and business-style labor, the amount of such labor employed is not rapidly increased and readily adjusted to changes in production. Thus, as the downward instability of private output and employment increased as the 1970's progressed, the variability of the ratio of fixed to variable labor costs increased. In particular, the greater downward instability of employment and output means that the "break even" price—the price at which a firm can cover all cash payment commitments and earn some normal "net" profits per unit of output—increases; the mark-up on unit technologically determined labor costs increases to compensate for the expected downward instability of output. For such "perverse" price increases in the face of declining output to be possible, it is necessary that either the selling
organizations have some unused monopoly power or that the rise in profit margins in the face of elastic demands be offset by a general rise in demand stimulated by the government’s fiscal posture.

The recessions of the years since 1966 have been associated with turbulent conditions in financial markets. Such turbulent conditions have a quick adverse effect upon investment demand. Investment spending, therefore, would not offset a higher mark-up per unit of output unless there was a significant further fall in output. However, in recent recessions the fall in investment demand has been offset by huge increases in government deficits. The government deficits enabled the higher price to be attained without little or no fall in output, because government deficits had the effect of sustaining and shifting upwards the various demand curves.

The increase in the ratio of non-production to production workers has increased the instability of the manufacturing industries because it increased the cash payments that do not decline as output declines. The structure of employment makes business much more dependent upon the continued maintenance of income and employment than the 1952 structure. Our economy is hooked on big government. Furthermore, the structure of employment, together with the almost automatic response of government demand to sustain business profits, means that inflation is sustained during business cycle contractions.
The mark-up on unit labor costs in the production of consumer goods reflects the wages that are paid in the production of investment goods and in government employment. In the American economy, the course of money wages in the various segments of the economy and thus the course of the various price level deflated wages depends upon what can be financed by product prices, taxes and debts. The various money and price deflated wages did not move in the same proportion over the years 1952 to 1976. Both over all and various segments of money wages moved at different rates in the period of relative tranquility prior to 1966 and the more turbulent years since 1966. 

In the relatively tranquil era, 1952-1966, the average annual rate of increase in the consumer price index was 1.44%. Given that all prices do not rise in the same ratio, this modest rise meant that some prices were falling. Over this period, the largest annual increase was 3.6% in 1957 and the smallest was a -0.7% in 1955. In the transition year 1966, the Consumer Price Index rose by 2.9%. In the decade after 1966, the annual rate of increase in the consumer price index was 5.62%. In this decade the largest annual increase in the C.P.I. was the 11.0% of 1974 and the smallest was the 2.9% of 1966 and 1967. Even the year of wage and price controls (1972) saw a 3.3% rise in the price level. By the standards of recent years, the American economy did not experience "inflation" in the 1952-66 period.

As is evident from the accompanying tables, the era of relative tranquility, 1952-1966, was characterized by smaller changes in money wages and larger changes in price deflated wages than the relatively turbulent decade
that has followed. Average spendable weekly earnings (as a "concept" of income that allows for the "tax take" from the pay packet) in the 1952-1966 period, the average spendable weekly earnings for the private economy rose at an annual rate of 3.05%, whereas in the 1966-76 period average spendable weekly earnings rose by 5.68% per year. However, once the money incomes changes are adjusted for price level changes, the rate of increase of weekly earnings in private industry was 1.61% per year in 1952-1966 and 0.06% per year in 1966-76. Over the 14 years from 1952-66, the ability of a representative worker to command goods and services increased by 25.3%, whereas in the decade from 1966 to 1976 the American economy did not deliver any significant improvement to workers, in spite of the much greater rate of increase of money wages.

Among the private industries listed in the table, the highest rate of increase of spendable earnings in 1952-66 was for contract construction; in contract construction, spendable weekly earnings per worker in current dollars increased at 3.47% per year in 1952-66, which was translated into a 2.30% per year increase in price deflated weekly earnings per year. Average weekly earnings (a different concept than spendable earnings) in machinery increased 3.80% per year in 1952-66 -- on a price level deflated basis, this translates into a 2.36% per cent per year increase. Both contract construction and machinery production are investment output. In the tranquil period of 1952-66, financing for investment was readily available. The ready availability of financing for investment led to a strong demand for construction and machinery producing labor which leads to the observed phenomenon.
The sector which lagged most of those we have listed is apparel: although wholesale and retail trade and finance and insurance also fell behind. In the period 1952-66 a dispersion of nominal and price deflated wages took place, contract construction, and machinery increased more rapidly than apparel. Even so, there was a significant 1.14% annual increase in the price deflated earnings in apparel.

In the 1966-72 period, only mining among the private components showed a "significant" increase in price deflated weekly earnings. Using 1966 as an initial date and 1976 as the end date, wholesale and retail trade showed a decline in price deflated earnings per week. The period of financial turbulence and inflation has seen an end to the steady, quiet across the board improvements in earnings that characterized the immediate after-the-war period.

During 1952-66, average weekly earnings in contract construction and in machinery increased at a significantly faster rate than in consumer goods such as apparel. Unless labor productivity was increasing more rapidly in contract construction and in machinery production than in other industries, the differential wage movements meant that the price level of capital assets was rising relatively to the price level of consumer outputs. But the prices paid for capital- assets must be validated by profits earned in the production of both capital assets and consumer output. The differential rates of growth of wages and therefore presumably prices, when compounded over a 14 year period implied a significant change in price ratios (3.47% per year translates in 1.612, whereas 2.56% per year translates 1.42%; if productivity increases in investment goods production and consumption goods production were the same then the price of investment goods would rise some 13 1/2% relative to the
price of consumption goods. This means that the flow of profits would have to be greater if the prices being paid for capital assets are to be validated.

In the period since 1966, average spendable earnings in contract construction has continued to increase at a rapid rate in nominal terms (6.26% per year); however, this translates into a 0.66% rate of increase in price deflated incomes. This rapid rate of increase in contract construction wages has continued the relative increase in the price of capital assets relative to that of other outputs. However, in the era where financial instability has become an apparent characteristic of the economy, this relative rate of increase has been associated with episodes of severe decline in construction activity.

It is difficult to get data on the per capita compensation of government employees — whether they be state and local or Federal. Using the national income accounts data on compensation of civilian employees and the President's Employment and Training Report data on government employment, annual and weekly compensation per employee can be derived. By using the consumer price index, these data can be transformed into price level deflated values. This enables us to derive growth rates of compensation/employee. (Inasmuch as 1952-76 was an era in which fringe benefits rose relative to other parts of workers' compensation, the numbers that follow might exaggerate the relative improvement in the income of civilian government employees.)

Over the 24 years (1952-76) period, the average compensation of a civilian employee of the Federal Government increased by an annual rate of 5.94%; this is the result of Federal Government compensation increasing at 4.74% per
year in the 1952-66 period and 7.62% per year in the decade from 1966-76. When deflated by the consumer price index, compensation per Federal Government employee grew at a 3.30% annual rate in 1952-66, a 2.00% annual rate in 1966-76 and a 2.67% annual rate over the entire period.

In 1952-66, the rate of increase of price level deflated spendable weekly earnings of a worker in the private economy was 1.61% per year. During this period, average compensation of a federal employee increased at a 3.30% year -- the rate of increase was twice as great. In the 1966-76 period, the compensation of a federal civilian employee after allowing for price level changes increased at 2% per year; spendable weekly earnings in the private economy for a worker with three dependents increased at a 0.06% per year rate. The price deflated earnings of a federal government employee increased 30 times faster than that of a worker in private employment.

A similar, though a trifle more moderate, story is told of state and local compensation. The compensation of state and local government employees, after allowing for price inflation, increased at 2.89% per year in 1952-66 and 1.44% per year in 1966-76. The rate of growth of price deflated state and local government employee compensation was 80% greater than that of weekly spendable income in private employment in 1952-66 and 24 times as great in 1966-76.

Throughout this period the rate of growth of Federal Government and state and local government compensation per employee has been substantially greater than that of spendable weekly earnings of workers in private employment. However, in the first "age of tranquility" the spendable weekly earnings of workers in private employment rose at a "respectable" 1.6% per year, whereas
in the second "age of turbulence" the spendable weekly earnings in private employment virtually ceased to increase even as price deflated average compensation of government employees continued to increase.

In a sense, "government" has put a "triple whammy" on the spendable, price level deflated earnings of workers: Government compensation has increased at a faster rate than weekly earnings in private business, has increased relative to wages and transfer payments, which financed demand for consumption goods, and taxes which automatically increase as inflation puts workers into higher brackets. Whether it is by way of taxes -- such as the rising social security taxes -- or by way of inflation, whatever improvement that has been achieved in the lot of the poor or of the government civil servant in recent years has seemingly been at the expense of the near poor. The price deflated

When we increase relative to
we have only increased increasing the price of consumption goods. If we are
are increasing relative to we even so we push them harder for what we
falsely refer to as more
homosexuality will lead to a rise in the productivity of deflated wages. Any time we begin to increase even for

inflation accelerates to
seem to try to do is to protect their members—i.e., some of the workers—from the effects of those policy and system behavior attributes, such as increased investment with long gestation periods and transfer payments, which tend to cut workers’ price deflated incomes. The persistence of investors and government in financing their activities determines how far the inflationary process will go.

The turbulent decade that has followed 1966 has seen a sharp rise in government spending. Transfer payments, compensation for Federal Government employees, and the total expenditures of state government have increased more rapidly than Gross National Product. But these rapidly growing portions of the economy do not directly finance higher wages in consumption goods production: what they do finance higher mark-ups in the production of consumer goods. Similarly, the higher ratio of non-production workers in the total labor force does not directly affect the technologically determined costs; they affect the gross mark-up. The easy imputation from a change in money wages to prices just will not do. "Inflationary" money wages increases—i.e., money wage increases in excess of some expected rate of increase in productivity—are part of an inflationary process, but they are not in any fundamental sense the cause of inflation.

If trade unions in private employment are responsible for the recent inflation, they have not been successful in exploiting inflation in order to raise the price deflated spendable income of production workers. It is clear that the classes of workers in private employment who are typically represented by unions did much better in terms of the rate of growth of their price deflated spendable income in the era which saw money wages increase at a relatively moderate rate than in the turbulent inflationary era since 1966.
of particular importance because it is often argued that excessive wage settlements in trade union contracts are responsible for the inflations since the middle 1960's. Government policies to constrain inflation have often taken the form of pressure to constrain money wages—whether the pressure takes the form of talk, wage and price controls, or incomes policy. However, inflations have occurred in economies with no effective trade unions and price stability has ruled in economies with comprehensive trade unions. For money wage settlements to lead to inflation the employment of labor at higher money wages must be financed. Money wage settlements lead to changes in the required financing for various activities. Whether the money wages called for in a trade union settlement can in fact be paid depends upon how the funds to pay the wages can be obtained.

The arguments of economic theory tend to blame trade unions for various types of malfunctioning of the economy. A standard line of argument in the neo-classical synthesis is that unemployment, especially persistent and chronic unemployment, is due to the lack of flexibility of money wages. Unemployment, in this argument, is due to the inability of money wages to adjust downwards fast enough whenever demand for labor slackens. This argument, which blames wage stickiness for unemployment, runs counter to views which ruled during the great depression, which were that the wage and price deflation of 1929-1933 had exacerbated the depression. This view found theoretical support when Keynes showed how falling wages and prices make things worse during a depression by lowering the money prices of capital assets, increasing the burden of debts and raising the relative value of liquid assets, in particular, money. Keynes' argument is that the effects of price deflation cannot be understood without an examination of the financial prerequisites and implications.
Just as standard presentations of the neo-classical synthesis tend to hold downward wage rigidity responsible for the persistence of unemployment, so many economists tend to hold that excessive increases in money wages are responsible for price inflation. Both downward wage rigidity which causes persistent unemployment and excessive money wage increase which cause inflation are blamed upon trade unions. Trade unions seemingly are damned on both scores. However, just as the understanding of how money wage flexibility in a depression makes things worse depends upon an understanding of the financial interconnections of a capitalist economy, so an understanding of the effect that trade union wage settlements, or the movement of money wages in the absence of trade unions, depends upon an understanding of the financial prerequisites and implications of money wage increases.

If money wage increases are not accompanied by a rise in unemployment, then, because money wages finance consumption spending, prices will rise with money wages. Higher money wages raise both the supply curves and the demand curves for consumer goods. But for the rise in money wages not to be accompanied by a fall in employment, it is necessary for the dollar value of investment and government spending that is financed to rise in money wages. This is so because the demand for consumer goods is financed by the wages from consumption, investment and government employment. As a result, wages in other than consumption goods production need rise along with the wages in consumption goods production if revenues from consumption goods production are to validate both consumption goods wages and yield profits that validate the higher supply price of investment.

On the other hand, if a rise in financial investment and government spending takes place in a situation that closely approximates full employment, rules
a rise in profits and prices in both investment and consumption production will occur. This will raise the employment that firms are willing to offer and thus will lead to a rise in money wages.

For inflation to persist, the dollar amounts of investment and government spending that are financed must increase. Such increased dollar amounts of investment and government spending that are financed is a necessary condition for the persistence of inflation. It is also a sufficient condition if the high and rising demand for labor lead to higher money wages. If price inflation due to the financing of investment and government activity do not lead to a rise in money wages, then the inflation will be broken as either "workers" accept the lower consumption allowances for workers that is implied by the government and investment spending or the higher prices lead to a decline in quantity which tends to generate unemployment and a failure of profits to validate investment programs and output asset prices.

If a rise in money wages due to "trade union" settlements leads to the financing of the correct increase in investment and government spending, then inflation will occur. If government wages are indexed to private wages, if government purchases are heavily cost plus contracts, and if transfer payments are indexed to the cost of living, then a rise in money wages in trade union settlements will quickly lead to a rise in government spending. In contrast, as to date the Federal Government has had any difficulty in financing its expenditures, a part of the necessary conditions for transforming money wage increases into inflation is built into our economy.

The weak link in the financing of expenditures that validate negotiated money wage increases is investment: there is no built-in guarantee that financed investment will increase along with money wage increases. However,
if the money value of investment that is financed does not keep up
with the rise in money wages, then the wage-deflated demand for labor
will fall - unemployment will result. In the existing government budget,
the fall in employment leads to a rise in government spending and a fall in
revenues. The effective government demand that is financed increases to
offset at least part of the shortfall in investment that is financed. The
ability of negotiated wage settlements to be transformed into price increases
depends upon the validation of such increases by government and investment
demand. A government budgetary posture that automatically indexes expendi-
tures to wage and price changes and legislative/executive reactions to
unemployment that routinely increases programs to expand the economy
whenever investment decreases and unemployment increases makes the validation
of inflationary trade union wage increases into price level changes an
almost automatic reaction. It is possible for the price level determination
initiative to lie with the wage determination process, but for this to
be true, a very special set of institutions and reactions must exist. Un-
fortunately, we seem to have built a system with just these reactions and
institutions during the post-war period.
A major effect that trade unions seem to have is in effecting significa-
ent increases in money wages in situations in which investment, government
spending on goods and services and transfer payments are increasing rapidly,
and thus tend to lower the price-deflated money wage rate by raising the
mark-up on unit labor costs. That is, trade unions resist declines in the
purchasing power of money wages that would tend to occur in relatively fully
employed economies when the incomes available for spending on consumer goods
from other than the production of consumer goods increases. What trade unions
1966. Because private employment earnings have not sustained the price
deflated rate of increase they enjoyed in the earlier era of relative price
stability, it seems best to think of the trade union wage settlements of
the inflationary era since 1966 as mainly defensive.

Large "inflationary" wage increases sometimes occur when organized
workers have an "opportunity" to exploit some rapidly rising demand curve.
But the ability to achieve such large wage increases depends upon the
existence of rising demand to finance higher wages or some new found tech
ical advantage.

An investment boom will lead to rising wages in construction, and a
collapse of an investment boom will see an increase in the proportion of
non-union labor in construction. Medicare, Medicaid and third-party (Blue
Cross and Shield) payment schemes have more to do with the rising cost of
medical care than the trade union organization of hospitals, nursing homes
and doctors' offices. Over the road teamster wages rose rapidly when the
interstate highway system dramatically increased the efficiency of trucking.

Trade union wage bargains can exacerbate an inflationary thrust.
The basic inflationary thrust comes from the excessive demands placed upon
the economy from spending that is financed and therefore effective and which
is not derived from income earned in the production of consumer goods.
Such an inflationary thrust would be blunted if workers in consumption goods
production passively accepted a reduction of their real wages that occur-
as investment goods workers, government employees, recipients of transfer
payments and profit "earners" who consume bid for consumer goods.

The rate of increase of price level adjusted consumption expenditures
was 2.06% per year in 1952-66 and 2.47% per year in 1966-76. Over 1952-66 the rate of increase of average spendable weekly earnings in private employment of a standard production worker family was 1.61% per year; in 1966-76 the rate of growth of spendable income was 0.06% per year. Production worker ability to buy consumption goods fell below the rate of increase in consumption goods purchases in both periods, but especially in the 1966-76 period.

In 1952-66, when consumption spending grew at 2.06% per year, the spendable income of contract construction workers grew faster and mine workers' grew about as fast (1.91% per year). Compensation in Federal Government employment and in state and local government employment grew substantially more rapidly than the overall growth in consumption per capita.

In the 1966-76 period, the rate of increase in price deflated private employment spendable income fell to virtually zero even though price deflated per capita consumption increased at 2.47% per year. The only private group of those listed whose spendable earnings increased at a substantial rate was mine workers; Federal Government and state and local government compensation increased at a substantial rate in 1966-76, but even these leaders in workers' compensation fell behind the rate of increase of overall consumption.

Consumption per capita increased at an accelerated rate in 1966-76 even as the purchasing power of workers' income lagged far behind the rate of increase of consumption expenditure. This means that consumption financed by other than the rise in after price adjusted wage incomes rose rapidly. Consumption financed by additions to the labor force -- the decade following the middle 1960's saw a large increase in labor force participation
by women and consumption financed by transfer payments are part of the explanation of the growth in consumption per capita at a rapid rate, even as wage income per worker tended to stagnate.

Table XII K
Per Capita Personal Consumption Expenditure 1952, 1966, 1976

<table>
<thead>
<tr>
<th>Year</th>
<th>Current Dollars</th>
<th>1972 Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952</td>
<td>1383</td>
<td>2236</td>
</tr>
<tr>
<td>1966</td>
<td>2365</td>
<td>2982</td>
</tr>
<tr>
<td>1976</td>
<td>5084</td>
<td>3817</td>
</tr>
</tbody>
</table>

Rates of Growth per Year (%)

<table>
<thead>
<tr>
<th>Period</th>
<th>Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952 - 66</td>
<td>3.83</td>
</tr>
<tr>
<td>1966 - 76</td>
<td>7.65</td>
</tr>
<tr>
<td>1952 - 76</td>
<td>5.42</td>
</tr>
</tbody>
</table>

Money wage increases that are negotiated in collective bargaining can be realized only if the increase is financed. If no accompanying increase in the amount of financing available for investment goods for wage incomes increases due to government employment takes place, such a negotiated rise in money wages will be accompanied by a decrease in employment and a decrease in the profit margin adversely, thus, without some additional inputs to the inflationary processes, inflationary money wage increases set up processes which weaken the ability of trade unions to keep
the existing money wage increases and to negotiate further wage increases.

Negotiated money wage increases can be an initiating and leading force in an inflationary process if the policy environment sets some target unemployment rate or some target investment output. In such a case, monetary and fiscal policies will be used to finance expenditures or offer inducements to invest in an effort to achieve the targets. Only in the complex sense that the government will take the action called for by fiscal and monetary policy if the system moves away from the employment and output targets can there be an "autonomous" excessive money wage increase cause of inflation. In a world where the "government" is committed to the building of some targeted number of homes or the achievement of some unemployment rate, the possibility exists that increases in money wages will trigger the financing of government and investment spending. Once monetary and fiscal policy are formalized and there is a commitment to maintaining employment levels or output at some target levels, then an autonomous rise in money wages can be expected and even lead to inflation.

Any attempt to deal with inflation by constraining wage bargains without simultaneously constraining those demands that increase the mark-up on unit labor costs can enjoy at best a transitory success. Inflation, which has a "positive" effect inasmuch as inflation leads to cash flows that validate prior debt, results from the demands for various types of output that are placed upon the economy, rather than from simple avarice of trade union members.
X. Big Government as a Blessing and a Curse

Big government is largely responsible for preventing the fragile and unstable financial system that has ruled since the middle 1960's from erupting into a full-fledged financial crisis, debt deflation and deep depression. Even so, the financial trauma of 1966, 1970 and 1974/75 are associated with pauses and recessions of increasing severity. Bad as the recession of 1974/75 was and as serious as its lingering consequences may be, the fact that a big depression did not occur is a good thing. Big government is a blessing when it prevents debt deflations and deep depressions.

Our combined government, both state and local and federal, as an employer and as a dispenser of transfer payments, is not only big, but is growing rapidly. Not only has the proportion of the labor force in federal and state and local payrolls increased, but their compensation has increased faster than other employees. Transfer payment schemes have not only proliferated but are effectively indexed. The reactions to the slowdown in 1966 and the recessions of 1970 and 1974/75 increased the size of government. Big government that is increasing faster than the output of the economy induces inflation; inflation induces inefficiency in investment decisions and is a cruel tax. Big government is a curse when it leads to inflation.

Out economy has successfully avoided a deep depression over the forty years since the Great Depression in the 1930's. This success is due to the way in which big government both sustains demand, sustains profits, and feeds secure assets into portfolios whenever income and employment fall. However, the very process by which big government prevents deep depressions sustains
the momentum of inflation. Furthermore, the feeding of government liabilities into portfolios as the deficit is financed during recessions means that an ability to finance investment by means of portfolio adjustments is being stockpiled.

Financial instability is a deep-seated characteristic of a capitalist economy with sophisticated financial systems. However, this does not mean that all capitalist economies are equally unstable. There are a wide variety of existing and historical capitalist economies and there are an infinite number of possible capitalist economies that our fancy can construct. Although all capitalisms are subject to financial instability, not all historical and possible capitalisms are equally unstable.

If we are to do better, we have to attenuate the thrust towards instability of our economy. This implies that the institutional framework and the policy operations have to be changed. There is no "magic bullet": doing better will involve serious reforms that are undertaken with an appreciation that no matter how we modify our economy, any economy with private ownership of production, private investment and a complex financial system will be unstable.
Chart I
Changes in Consumer Prices
(Percent Change)
All Items
Year-to-Year: 1950 through 1959

Source: Table B-52 p.263 Economic Report of the President January 1980
Government Printing Office
# Inflation and Unemployment

1948 - 1977

<table>
<thead>
<tr>
<th>Year</th>
<th>ZCPI, Year to Year</th>
<th>Unemployment Rate, % Civilian Labor Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948</td>
<td>7.8</td>
<td>3.8</td>
</tr>
<tr>
<td>1949</td>
<td>-1.0</td>
<td>5.9</td>
</tr>
<tr>
<td>1950</td>
<td>1.0</td>
<td>5.3</td>
</tr>
<tr>
<td>1951</td>
<td>7.9</td>
<td>3.3</td>
</tr>
<tr>
<td>1952</td>
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<tr>
<td>1953</td>
<td>.8</td>
<td>2.9</td>
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<td>1954</td>
<td>.5</td>
<td>5.5</td>
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<tr>
<td>1955</td>
<td>- .4</td>
<td>4.4</td>
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<tr>
<td>1956</td>
<td>1.5</td>
<td>4.1</td>
</tr>
<tr>
<td>1957</td>
<td>3.6</td>
<td>4.3</td>
</tr>
<tr>
<td>1958</td>
<td>2.7</td>
<td>6.8</td>
</tr>
<tr>
<td>1959</td>
<td>.8</td>
<td>5.5</td>
</tr>
<tr>
<td>1960</td>
<td>1.6</td>
<td>5.5</td>
</tr>
<tr>
<td>1961</td>
<td>1.0</td>
<td>6.7</td>
</tr>
<tr>
<td>1962</td>
<td>1.1</td>
<td>5.5</td>
</tr>
<tr>
<td>1963</td>
<td>1.2</td>
<td>5.7</td>
</tr>
<tr>
<td>1964</td>
<td>1.3</td>
<td>5.2</td>
</tr>
<tr>
<td>1965</td>
<td>1.7</td>
<td>4.5</td>
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<tr>
<td>1966</td>
<td>2.9</td>
<td>3.8</td>
</tr>
<tr>
<td>1967</td>
<td>2.9</td>
<td>3.8</td>
</tr>
<tr>
<td>1968</td>
<td>4.2</td>
<td>3.6</td>
</tr>
<tr>
<td>1969</td>
<td>5.4</td>
<td>3.5</td>
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Inflation and Unemployment
(continued)

<table>
<thead>
<tr>
<th>Year</th>
<th>ZCPI, Year to Year</th>
<th>Unemployment Rate, % Civilian Labor Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>5.9</td>
<td>4.9</td>
</tr>
<tr>
<td>1971</td>
<td>4.3</td>
<td>5.9</td>
</tr>
<tr>
<td>1972</td>
<td>3.3</td>
<td>5.6</td>
</tr>
<tr>
<td>1973</td>
<td>6.2</td>
<td>4.9</td>
</tr>
<tr>
<td>1974</td>
<td>11.0</td>
<td>5.6</td>
</tr>
<tr>
<td>1975</td>
<td>9.1</td>
<td>8.5</td>
</tr>
<tr>
<td>1976</td>
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<tr>
<td>1977</td>
<td>6.5</td>
<td>7.0</td>
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<tr>
<td>1978</td>
<td>7.7</td>
<td>6.0</td>
</tr>
<tr>
<td>79</td>
<td>11.3</td>
<td>5.8</td>
</tr>
</tbody>
</table>


For Unemployment and Inflation.
Table XII-13

Non-Production Workers as a Percent of Total Employment
Manufacturing

1952, 1966, 1976

<table>
<thead>
<tr>
<th>Industry</th>
<th>1952</th>
<th>1966</th>
<th>1976</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durable Goods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ordinance</td>
<td>27.1</td>
<td>51.2</td>
<td>54.8</td>
</tr>
<tr>
<td>Lumber and Wood</td>
<td>8.9</td>
<td>12.7</td>
<td>16.1</td>
</tr>
<tr>
<td>Furniture and Fixtures</td>
<td>14.4</td>
<td>17.1</td>
<td>17.9</td>
</tr>
<tr>
<td>Stone, Clay and Glass</td>
<td>14.9</td>
<td>19.7</td>
<td>20.4</td>
</tr>
<tr>
<td>Primary Metals</td>
<td>15.4</td>
<td>18.6</td>
<td>21.6</td>
</tr>
<tr>
<td>Fabricated Metal</td>
<td>19.3</td>
<td>22.2</td>
<td>24.6</td>
</tr>
<tr>
<td>Machinery, except Electrical</td>
<td>23.3</td>
<td>29.7</td>
<td>35.4</td>
</tr>
<tr>
<td>Electrical Equipment</td>
<td>23.3</td>
<td>30.6</td>
<td>33.9</td>
</tr>
<tr>
<td>Motor Vehicles</td>
<td>20.4</td>
<td>22.2</td>
<td>22.2</td>
</tr>
<tr>
<td>Aircraft</td>
<td>26.1</td>
<td>40.7</td>
<td>48.4</td>
</tr>
<tr>
<td>Instruments</td>
<td>25.4</td>
<td>36.2</td>
<td>39.1</td>
</tr>
<tr>
<td>Miscellaneous Manufacturing</td>
<td>15.5</td>
<td>20.2</td>
<td>23.5</td>
</tr>
<tr>
<td>Nondurable Goods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food and Kindred</td>
<td>20.2</td>
<td>25.3</td>
<td>27.4</td>
</tr>
<tr>
<td>Tobacco Manufacturing</td>
<td>27.2</td>
<td>33.6</td>
<td>31.9</td>
</tr>
<tr>
<td>Textile Mill</td>
<td>8.0</td>
<td>14.8</td>
<td>17.0</td>
</tr>
<tr>
<td>Apparel</td>
<td>7.8</td>
<td>10.9</td>
<td>12.7</td>
</tr>
<tr>
<td>Paper and Allied</td>
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