

# GEORGE REISMAN

## An Introduction To Procapitalist “Macroeconomics”

This series was delivered at the Jefferson School's 1985 summer conference at the University of California, San Diego. It is accompanied by Dr. Reisman's pamphlet "Production Versus Consumption," which is included at no additional charge, plus a 19 page supplement for following along with him. Each of the six lectures is approximately 90 minutes long, including a question and answer period. Topics include:

### 1. Production Versus Consumption

The fundamental problem of economic life is how to increase human productive ability so that more wealth can be produced by limited labor. It is *not* how to increase the need for wealth or to create employment. The contrasting implications of these conflicting premises for the assessment of the economic effects of machinery, war, government spending, population growth, and advertising.

### 2. Say's Law

Purchasing power—real demand—is created by supply. And on a gold standard, so too is monetary demand—the ability to spend money. A general overproduction is impossible and can never be the cause of depressions. No matter how much production increases, overproduction can at most be a phenomenon confined to just part of the economic system and is always accompanied by a precisely equivalent underproduction elsewhere. When it does occur, it can usually be eliminated by an increase in production in other industries. Falling prices caused by rising production do not represent deflation.

### 3. Government Intervention as the Cause of Unemployment

Unemployment is not caused by any lack of need or desire for wealth or for the labor to produce it, but by wages and prices that are held too high relative to the quantity of money and the volume of spending that the quantity of money can support. Government intervention is responsible for the creation and perpetuation of the imbalance. Why World War II was accompanied by full employment and why such full employment represented a major economic loss for the great majority of American workers.

### 4. The Productivity Theory of Wages

A critique of the exploitation theory: why both workers' needs and employers' "greed" are irrelevant to the wages workers actually have to accept. Money wages are determined mainly by the relationship between the quantity of money and the supply of labor. *Real* wages are determined mainly by the productivity of labor.

### 5. The Role of Businessmen and Capitalists In Raising Real Wages

Real wages as the product of the productivity of labor and of wage payments relative to consumption spending. How the saving and productive expenditure of businessmen and capitalists increase the economic system's concentration on the production of capital goods, which in turn raises the productivity of labor. How their competitive quest for profits achieves the same result. How their saving and productive expenditure raises wages relative to consumption spending. How the activities of businessmen and capitalists, in turn, depend on the existence of a free and rational society.

### 6. Application of the Productivity Theory of Wages to the Interpretation of Modern Economic History

The low standard of living of the early years of capitalism was the result of a low productivity of labor, inherited from centuries of stagnation under feudalism. The rise in the standard of living, increasingly evident as the nineteenth century wore on, was the result of a rising productivity of labor achieved by the activities of businessmen and capitalists. The higher real wages brought about in this way were responsible for the elimination of child labor, the shortening of the working day, and the improvement in working conditions. Government intervention, far from being the cause of the average person's economic gains, as is usually believed, necessarily operated to hold down the rise in real wages and the benefits resulting from it.

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SUPPLEMENT TO LECTURES

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I. Some Important Formulas

1. The Quantity Theory of Money Equation:

Where

M = the quantity of money (currency plus checking deposits, i.e., "M<sub>1</sub>"),

V = the number of times the average dollar is spent in a year in buying goods or services (usually called the velocity of circulation of money), and

D = total spending,

$$M \times V = D.$$

(Currently, M = approximately \$600 billion, GNP [basically consumer demand] = \$4000 billion, and the corresponding V = 6.67.)

2. Formulas for the General Consumer Price Level and the Average Level of Money Wages:

$$\frac{\text{Demand for Consumers' Goods (i.e., Spending)}}{\text{Supply of Consumers' Goods Produced and Sold}} = \text{General Consumer Price Level.}$$

$$\frac{\text{Demand for Labor (i.e., Payrolls)}}{\text{Supply of Labor Employed}} = \text{Average Money Wage Rate.}$$

## II. Diagrammatic Exposition of the Consumptionist and Productionist Views on the Relationship Between Demand and Supply

Figure 1  
The Consumptionist-Keynesian View of the Economic World

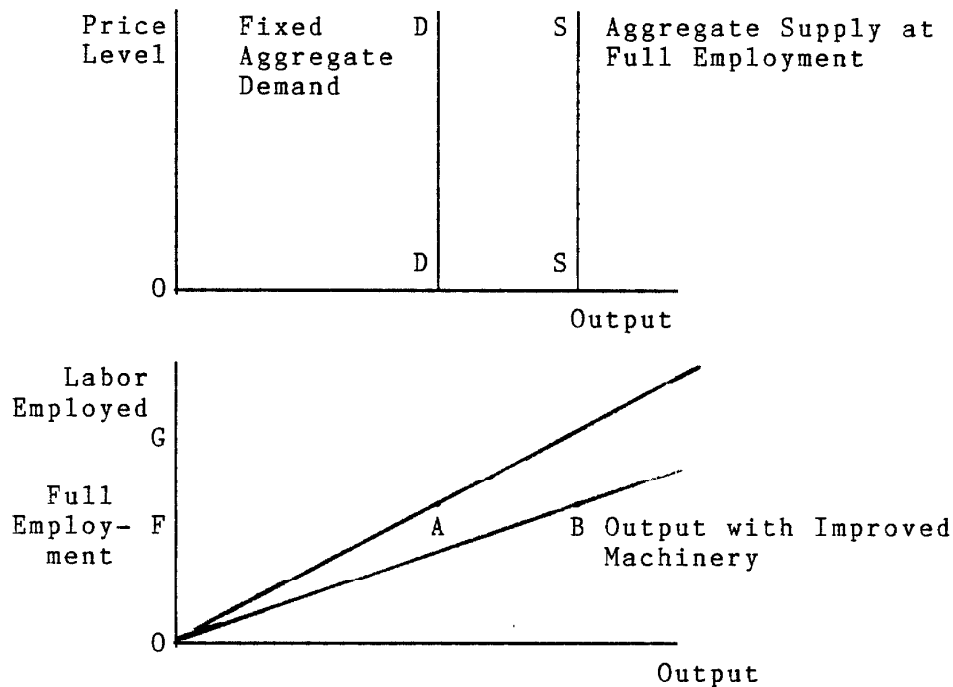


Figure 1. Full employment with improved machinery means a rise in output from A to B in the lower diagram, which allegedly causes supply to exceed demand in the upper diagram. The same result would follow from an increase in the number of workers seeking work from the initial full employment point F to a higher full employment point G. In both cases, employment is held down to the point dictated by the limited aggregate demand. In this way, the effect of machinery is allegedly to reduce the supply of work available for people to do, and the effect of new and additional workers going to work is allegedly to deprive workers who already are employed of their jobs. Consumptionism claims that it is necessary to move the fixed aggregate demand curve with war, government spending, fraudulent advertising, a larger population of non-producing consumers, and a policy of imperialism.

### More on Productionism and Consumptionism

1. Consumptionism and imperialism; the alleged gains from exports and the alleged harm of imports.
2. Consumptionism and socialism.
3. Why the willingness to consume always exceeds the willingness and ability to produce: the desire to consume costs nothing but an act of imagination and is as boundless as the imagination; production costs physical effort and is always physically limited.

4. A possible philosophical misunderstanding: the desire to consume is not an innate passion. It depends on the philosophical convictions people hold. Under the influence of an irrational philosophy, it can be deficient relative to the satisfaction of man's vital needs, with the result that people starve to death. But in such circumstances the willingness and ability to produce is even more deficient than the desire to consume. The influence of a rational philosophy is necessary to strengthen the desire to consume to the point where it results in rising production, never to make the desire to consume adequate to an existing willingness and ability to produce.
5. Why the objective need for wealth by rational beings has no limit.
6. The fundamental scarcity of labor and the virtually limitless amount of work to be done in the world.
7. Why the scarcity of labor is ineradicable.

Figure 2  
Productionism and Say's Law  
Determination of Aggregate Real Demand by Supply

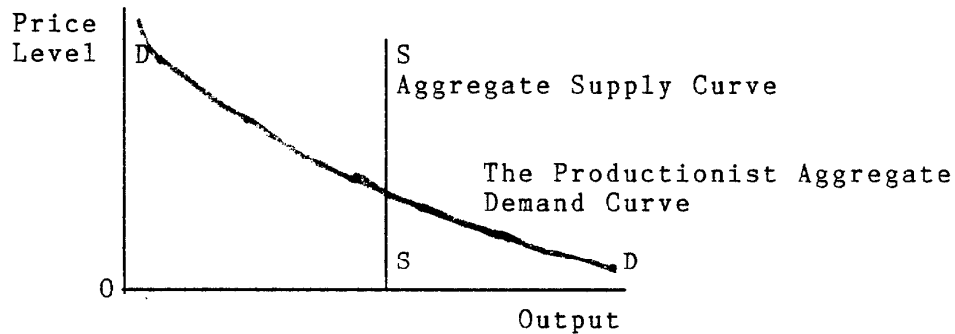


Figure 2. The above diagram shows that demand is limited only by the willingness and ability to produce. In the diagram, it is supply that determines aggregate real demand. The demand curve DD represents a given total expenditure of money to buy products, corresponding to a given total quantity of money in the economic system. The curve shows that the same expenditure of money can buy any volume of goods, depending only on the price level. The curve is asymptotic—it never crosses the horizontal or vertical axis. (For economics students, it can also be noted that it is unit elastic.) The quantity of goods actually purchased is determined by the supply line SS, which, in the face of a given expenditure to buy goods, and under the freedom of competition, determines the price level and thus how much the given expenditure buys. The larger the supply, the larger the quantity of goods demanded for the given total expenditure of money. Thus, more supply creates more real demand. There is no inherent limit to aggregate real demand. As stated, it depends only on the willingness and ability of people to produce. If they are willing and able to produce more, and free to compete, then, given the quantity of money and the monetary demand, the price level will drop and the real demand will be increased. Unlike the case in Figure 1, no increase in efficiency or in the number of people seeking work need cause unemployment. The larger output will be purchased at a lower price level.

### III. More on Say's Law

#### A. Real Demand.

1. Real demand is different than monetary demand, which is simply the monetary expenditure for goods and services. It is the monetary demand adjusted for changes in the price and wage level--it's the goods and services the monetary demand actually buys.

2. A smaller monetary demand at one time can constitute a larger real demand than a larger monetary demand at another time, if prices are sufficiently lower. E.g., a 200 monetary demand can constitute a larger real demand than a 400 monetary demand if prices are lower by more than fifty percent.

3. Real demand has been defined as the will combined with the power of purchasing. On this definition, it's obvious that the only thing which can make possible more real demand is more supply. (The willingness to purchase can be taken for granted if the power is there--our mere desire for wealth exceeds our ability and willingness to produce it as the power of our imagination exceeds the capacity of our arms.)

a. More monetary demand without more supply just means higher prices and thus no additional real demand--it is not sufficient to create additional real demand.

b. It takes more supply to make a larger monetary demand into a larger real demand. Thus, more supply is necessary for the creation of more real demand.

c. But it doesn't take more monetary demand to create a larger real demand. More supply will do it with the same monetary demand, by way of reducing prices (and, if it's a larger supply of labor that is in question, wages).

Thus, more supply is both necessary and sufficient to the creation of more real demand. Supply, not more monetary demand, is what counts for real demand. More monetary demand is neither sufficient nor even necessary for more real demand. Only more supply creates more real demand.

#### B. The Referents of Say's Law.

Say's Law refers to aggregate--economy-wide--demand in real terms. It does not mean that if the supply of some product is increased, the supply of that particular product will necessarily be accompanied by more monetary demand or even by more real demand. That may happen, but need not happen. An increased supply of a particular product can actually be accompanied by a lower monetary, and by a lower real, demand for that particular product. What Say's Law actually means, and which is brought out in such a case, is that the larger supply of a product itself constitutes a larger real demand in the economic system as a whole.

#### C. The Confirmation of Say's Law by Cases Apparently Contradicting It.

To confirm Say's Law, let us consider the strongest kind of case against it: an increase in the supply of something additional quantities of which have a very low marginal utility, and which therefore experiences a disproportionate fall in its value when its supply is increased. E. g., goods like potatoes or bread in a society in which people are already comfortably supplied with such goods.

1. Initially let's assume, as the classical economists often did, a state of barter--of the direct exchange of goods against goods. Now there is a larger supply of potatoes produced. Say's Law shows that aggregate real demand in the economic system as a whole will be increased to exactly the same extent as the increase in the supply of potatoes, even though the demand for potatoes themselves decreases as the result of the increase in their supply. Actually, it will turn out that the larger supply of potatoes is itself the larger real demand--for other goods, like shirts, shoes, etc.

To work with simple numbers, let's assume that because of an improvement in the productivity of labor of the average potato grower, the supply of potatoes doubles, and that the effect is to reduce the exchange value of a bushel of potatoes to 1/3 of its previous amount. This means that the potato growers collectively receive only 2/3 the quantity of other goods that they used to receive. This appears to contradict Say's Law, because we have a larger supply of potatoes, and at the same time the demand for potatoes in terms of other goods has fallen, not risen. Nevertheless there is an increase in economy-wide, aggregate real demand precisely equal to the additional supply of potatoes.

The reason for this is, first, to whatever extent the producers of goods other than potatoes now offer less of their goods to potato growers, they have that much more goods to exchange with one another. E.g., the shirt producers give 2/3 the previous quantity of shirts for twice as many potatoes; the shoe producers give 2/3 the quantity of shoes for twice as many potatoes, and so on, with all other goods. The 1/3 of the shirts, shoes, etc. no longer given to potato growers are now traded by the producers of goods other than potatoes among themselves. The shirt producers have shirts left over to trade for shoes, etc.; the shoe producers have shoes left over to trade for shirts, etc. And so on. Thus the decline in the demand for potatoes in terms of other goods is fully compensated for by a rise in the demand for other goods in terms of other goods.

Up to this point, we have a wash. What constitutes the net increase in aggregate, economy-wide demand is the fact that the demand for goods other than potatoes has doubled in terms of potatoes. In a barter economy, each person's "currency" is the supply of his own good. The potato growers are "spending" twice the quantity of potatoes everywhere. That's the net increase in aggregate demand.

We can summarize these results as follows:

- i. The other goods demand for potatoes falls by 1/3.
- ii. The other goods demand for other goods rises to exactly the same extent.
- iii. The potato demand for other goods doubles.

Items (i) and (ii) are a wash. Item (iii) is the net increase in aggregate real demand in the economy as a whole. To whatever extent the doubled supply of potatoes represents an increase in aggregate supply, that's the extent to which aggregate real demand has increased. If the doubled supply of potatoes represents a .1% increase in aggregate supply, then aggregate real demand increases .1%. If it represents a .5% increase in aggregate supply, then aggregate real demand increases .5%. The net increase in the volume of goods offered for goods is the increase in the supply of potatoes, and in a barter economy the volume of goods offered for goods is all that's meant by demand.

2. Results are the same in a monetary economy, even though aggregate monetary demand (the expenditure to buy goods) remains the same. We can assume that the doubling of the supply of potatoes reduces the money price of potatoes to  $1/3$  and thus that the potato growers collectively receive only  $2/3$  the money revenue and income they used to receive. Here we have a larger supply of potatoes and a smaller monetary demand for potatoes. But the money people save from buying potatoes they spend in buying other goods. The monetary demand for goods other than potatoes rises to the same extent as the monetary demand for potatoes falls. The net effect is the same aggregate monetary demand and a larger aggregate real demand--because the same aggregate monetary demand now buys more goods in toto, namely, the additional potatoes. Again, the aggregate real demand increases to exactly the same extent as aggregate supply--to the same extent as the increase in the supply of potatoes constitutes an increase in aggregate supply.

#### D. Say's Law and Economic Adjustment.

1. In the preceding case, there is a drop in the money income of the potato growers and a rise in the money income of producers other than potato growers. (Plus, there is a rise in the buying power of money, which reflects the net gain from the increase in production--i.e., the producers other than potato growers gain more than the potato growers lose, when it is taken into account.)

2. This inequality in income leads some of the potato growers to give up potato growing and to move into other lines, where incomes have risen. The effect of this, in turn, is to raise up the depressed incomes of the potato growers and to reduce the premium incomes of the non-potato growers. If the quantity of money and the total volume of spending and money income remained the same, the ultimate effect would be that potato growers and non-potato growers would both tend to end up with the same money incomes they had before the increase in the production of potatoes. The incomes of those who remained in potato growing would rise as the number of potato growers was reduced. The incomes of those who left potato growing would rise, as they found better jobs. The incomes of those who were initially outside potato growing would fall, as they experienced the effects of the competition of ex-potato growers. The tendency would be for the average member of all three of these groups to end up earning the same money he initially earned. The one permanent--and very important economic difference--would be that the buying power of everyone's income would now be larger, thanks to the improvement in the ability to produce potatoes. Everybody would get his potatoes cheaper and have money left over for the purchase of more of other things, which the economy would have the physical ability to produce because of the release of some of the labor previously used in potato growing.

The following arithmetic example describes the full state of affairs:



Table 1  
Say's Law and Economic Adjustment

	Revenue and Income of Po- tato Growers	+ Revenue and Income of Rest of Economy	= Revenue and Income of Econ- omy as a Whole
I. Initial Equilibrium (price = 1)	10	990	1000
II. Doubling of Potatoes (price = 1/3)	6.67	993.33	1000
III. New Equilibrium (quantity = 3/2; price = 1/2)	7.5	992.5	1000

Condition I exists before the increase in the supply of potatoes. Condition II exists immediately following the increase in the supply of potatoes. In Condition II, the initial number of growers is each producing on average double the supply, and the price of potatoes is 1/3. Double the supply times 1/3 the price accounts for the decline in total revenue and income in potato growing to 6.67 from 10--a drop of 1/3. Revenue and income in the rest of the economic system are up equivalently. Revenue and income in the economy as a whole remain unchanged.

Condition III comes about after enough potato growers have left the field to bring the price of potatoes up from 1/3 of its initial level to 1/2 of its initial level. At this point, if the average potato grower is producing double with the same effort that he previously produced his initial quantity, he earns the same revenue and income and is monetarily just as well off as before. The price will be brought up to 1/2 by a reduction in the quantity produced to some amount less than double but more than the initial amount. For the sake of arithmetical convenience, we assume that this amount is 3/2 times the initial amount.

Condition III further implies that we end up with 3/4 the initial number of potato growers remaining in the field (3/4 the growers x twice the output per grower equal 3/2 the output). The 1/4 of the initial growers who leave the field increase the supply of goods other than potatoes. The average potato grower, ex-potato grower, and non-potato grower from the beginning, now receives three halves the potatoes at 1/2 the price, for 3/4 the expenditure of money. The average person in all groups now has 1/4 the funds previously expended for potatoes, to purchase other things, which can physically be produced with the 1/4 of the labor released from potato growing.

#### E. Relative, Partial Overproduction, But Never General or Absolute Overproduction.

Using Condition III as a standard by which to appraise Condition II, we can say that in Condition II there is an overproduction of potatoes. But this is merely a partial overproduction, not a general overproduction. For, by the

same standard, there is a perfectly corresponding underproduction in the rest of the economic system. There can never be a general or absolute overproduction in the economy as a whole. Even if, by some miracle, the production of everything without exception, from matches to swimming pools, suddenly doubled overnight, it would be found that there was fully as much underproduction as overproduction. There would be some goods--the so-called necessities--that people would want little or no more of; some even--namely, goods of an inferior type--that they would want less of; but there would be others--the luxury goods and the better quality goods--that they would want so much more of that a doubled ability to produce could easily be taken off the market. The test of how much more we would be willing to consume can be found in how much more income we would be able to live up to in terms of current buying power.

Potatoes, bread, and table salt represent cases in which the demand for a particular good might be fully sated. But in most cases of partial overproduction, the overproduction doesn't represent a satiation, but merely a relative overproduction. E.g., the case of automobiles and its interpretation in terms of real income: A doubling of automobile production (certainly, if we allow for upgrading in quality) is desired. But only if real incomes roughly doubled. If all that happens is that auto production doubled, that would be equivalent to an increase in real income of perhaps ten or fifteen percent. People would not want to concentrate such a limited increase in real income on a doubling of just one good. Thus, merely a doubling of automobiles would represent a relative overproduction. It would be called for only if we could double production, and thus real income, in general.

#### F. Say's Law and the Fallacy of Composition.

Any industry can be in the position of relatively overproducing and have low profits or losses as a result. But to the extent that some industries are in this position, others are correspondingly underproducing and have correspondingly high profits. It is the fallacy of composition--of assuming that what is true of part of a system is automatically true of the whole--to believe that the generally low profits, or losses, found in a depression are the result of overproduction.

The error involved can be seen by examining a modification of our table concerning the potato growers. (For ease of analysis, we assume full vertical integration--e.g., that GM owns its own steel mills, iron mines, etc., etc., and similarly for all other companies. On this assumption, the only sales revenues in the economic system are those constituted by consumer spending, and the only costs are those generated by wage payments.)

Table 2  
The Overproduction Doctrine and the Fallacy of Composition

	Profit in Po- tato Industry	+	Profit in Rest of Economy	=	Profit in Econ- omy as a Whole
<b>I. Initial Equilibrium</b>					
Sales Revenue (Consumption):	10		990		1000
Costs (Wages):	8		792		800
	<hr style="width: 50%; margin: 0 auto;"/>		<hr style="width: 50%; margin: 0 auto;"/>		<hr style="width: 50%; margin: 0 auto;"/>
Profit:	2		198		200
<b>II. Doubling of Potatoes</b>					
Sales Revenue (Consumption):	6.67		993.33		1000
Costs (Wages):	8		792		800
	<hr style="width: 50%; margin: 0 auto;"/>		<hr style="width: 50%; margin: 0 auto;"/>		<hr style="width: 50%; margin: 0 auto;"/>
Profit:	(1.33)		201.33		200

Table 2. Profitability in the particular industry falls as the result of an overexpansion in its production relative to the rest of the economic system. But profitability in the rest of the economic system correspondingly rises. There can be no fall in general profitability, no matter how great the increase in production. The general profitability of the economic system as a whole is independent of the level of physical production. It depends, basically, on consumption spending minus wages, while the level of physical production acts only on the general price level and on the buying power of wages.

G. Falling Prices Caused by Increased Production Are Not Deflation. This is an implication of the preceding with respect both to profitability and the general ability to repay debt. The average seller has no greater difficulty in repaying debt, when prices fall because of more production. If he increases his production in accordance with the average increase, the supply he has available for sale increases in inverse proportion to the drop in selling prices, leaving his ability to earn a given sum of money unchanged.

H. A test of your powers of imagination and economic reasoning: Try to explain how the supply of potatoes can increase and those who bring about the increase, increase their revenues and incomes, even though the effect is to reduce the revenue and income of potato growers as a group.

I. A question for thought and discussion: "One of the evils of capitalism, and a good reason for having labor unions, is that under the piecework system, which would prevail much more often in the absence of unions, the competition of workers can result in piece rates being driven down to the point where the workers work harder and actually receive less as a result."

## IV. Unemployment

A. Wants are limitless, and production is limited only by labor. Thus labor is implicitly scarce. And purchasing power is limited only by production. All of the ingredients for full employment appear to be present. Why is there unemployment?

B. Answer: an inappropriate relationship between prices and wages on the one side and the quantity of money and volume of spending on the other--especially in the context of a depression.

1. inflation--artificial money creation--raises  $V$ , sets stage for later drop in  $V$  and reduction in  $M$ , too. When this happens, spending drops, including spending for labor. Unemployment develops.

2. unemployment could be eliminated by a drop in wages and prices--the lesser spending could buy all that the previously greater spending bought if prices and wages were lower. The formulas for the wage and price level show this.

Table 3

The Achievement of Full Employment Through a Fall in Wages and Prices  
(Asterisks denote fixity.)

Demand for Labor\*

$$\frac{\text{Demand for Labor}^*}{4/3 \text{ Supply of Labor Employed}} = 3/4 \text{ Average Money Wage Rate,}$$

Demand for Consumers' Goods\*

$$\frac{\text{Demand for Consumers' Goods}^*}{4/3 \text{ Supply of Consumers' Goods Sold}} = 3/4 \text{ General Consumer Price Level.}$$

For ease of analysis, we again assume full vertical integration--e.g., that GM owns its own steel mills, iron mines, etc., etc., and similarly for all other companies. Thus wages appear as the only cost and consumer demand as the only sales revenue. For purposes of illustration, assume that initially, as the result of a great depression, the demands for goods and labor both fall by twenty-five percent, creating twenty-five percent unemployment. Full employment and full production could be restored at the reduced levels of spending, if wages and prices fell by twenty-five percent.

a. the same aggregate money demand for labor can be stretched to pay an indefinitely larger number of workers at inversely proportionate wage rates

b. further: the fall in wage rates and rise in employment reduces prices--output is expanded and prices fall as the result of the larger supply; also the larger supply is produced at lower unit costs because of the fall in wage rates. Thus prices fall both because of more supply and lower production costs.

c. major implications: i. average business profitability is not reduced by virtue of the fall in prices, since it is preceded by a fall in unit costs to

the same extent. Roughly speaking, total business profits equal the demand for consumers' goods minus the demand for labor. If these demands are stable at the lower levels, total profits are not affected by changes in employment and output and wages and prices.

ii. if the productivity of labor (the output per unit of labor) stays the same, average real wages also do not fall, and, indeed, actually increase, because prices fall as much as wages, and the burden of supporting the unemployed is eliminated. (Note: this refers to average real wages, not real wages in each and every case. In many individual cases, the fall in wages can exceed the fall in prices. They will be the more likely to do so, if the fall in wages is artificially confined to just a few industries and is prevented elsewhere. Such industries would be put in the position of having to undertake an undue expansion relative to the rest of the economic system.)

d. sequence is: lower wage rates permit more employment, by stretching the ability of the same total payrolls to employ labor. More employment means more production and lower prices. Profitability is not reduced because unit costs are cut to the same extent as prices. Real wages are not reduced because prices fall and the burden of supporting the unemployed is eliminated.

An important complication: In a depression, a fall in prices can precede the fall in wages, by virtue of the unemployment being concentrated in the production of capital goods, which makes it possible for the supply of consumers' goods to fall less than the supply of labor employed. In this case, there is a rise in the gross real wages of those lucky enough to keep their jobs. (The burden of supporting the unemployed makes it doubtful that there could be a rise in real "take-home" wages, however.) Such a situation entails capital decumulation and a wiping out of profitability. Starting from this point, business recovery requires a fall in wages greater than the fall in prices, and will be accompanied by a resumption of capital accumulation and a restoration of profitability.

C. The requirements for a fall in nominal wages: the pursuit of self-interest by the unemployed workers and by employers, and the freedom of competition in the labor market. Under these conditions; either the unemployed would go in and offer to work for less or employers would see the unemployment situation and confront their present workers with the choice between wage cuts or replacement. The resulting wage cuts would stretch the funds for the employment of labor and thus create new job opportunities, i.e., the purchasing power of payrolls would be increased enabling more workers to be employed. Thus the competition among the workers for jobs has the effect of enlarging the total number of jobs employers offer.

Note: the fall in wages would not produce proportionately more employment in each and every company or industry, but in the economy as a whole. One of the effects of the inflationary boom that produces the depression is that the pattern of investment and employment is distorted: some industries are artificially encouraged at the expense of others. Recovery from the depression thus has to be accompanied by a change in the pattern of employment compared with the days immediately preceding the depression.

D. The obstacles to the fall in nominal wages:

1. minimum wage laws--violation of freedom of contract. Two parties see their advantage, want it, and are stopped.
2. government-backed labor unions: must deal with the union and workers must be paid union scale--NRA, Wagner Act. Also direct coercion or intimidation by unions themselves: mass picketing, violence. Norris-La Guardia Act eliminated ability to get injunctions against this.
3. easy relief or unemployment insurance--reduces incentive to compete for employment
4. employer altruism backed by desire to please government, so don't take advantage of the unemployment to reduce wages. This was crucial under Pres. Hoover--White House Conferences to keep wage rates up. Idea widely accepted in 1920's that wage cuts reduce demand, so keep them up. This was basically Keynes' view too.

E. Failure of wage rates to fall intensifies depression: investments postponed, awaiting the fall in wages. Holding back of investment funds reduces spending further, causes more business failures and more bank failures, further reducing the quantity of money and requiring an ultimately greater fall in nominal wage rates to achieve full employment. Average wage rates dropped less than 3% in 1930, less than 7% in 1931. This led to further spending collapse and deeper depression. In '32, wage rates fell almost 14%, which might have been enough in 1930, but in '32, owing to banking collapse and reduction in quantity of money, spending for labor fell 22%, with the result that unemployment further increased.

F. Major unemployment remained throughout the 'thirties, despite large-scale increases in the quantity of money. This was because of growing union power and rising wages rates from 1933 on. (Note: where wage rates are prevented from falling and achieving full employment by that means, the same factors are likely to operate to make wage rates rise in the face of an expanding quantity of money and volume of spending, and thus to prevent the achievement of full employment by means of inflation.) Much of the additional employment that did take place in the 'thirties was government created employment and represented a loss to those who had jobs, since part of their output now had to remunerate the reemployed, whose own output was of little or no value to anyone. It was a case of A employing B and sending the bill to C. C necessarily loses. (See George Reisman, "Who Pays For 'Full Employment'?", The Commercial and Financial Chronicle, March 5, 1964.)

G. Full employment achieved in World War II because of combination of massive inflation raising the demand for labor, and wage controls limiting the rise in wages. The result of wage and price controls is shortages and economic chaos. (See George Reisman, The Government Against the Economy.) The full employment of the war was accompanied by a sharp drop in the general standard of living, because of massive diversion of output to the war effort. No new private homes, automobiles, or major appliances were produced. There were shortages of many goods, such as red meat, gasoline, sugar, fats, candy bars, tires, nylon stockings, and so on. People worked

longer and harder, to supply the war effort and to support the previously unemployed supplying the war effort, and had less for themselves. The belief that WW II was a time of prosperity rested on the delusions created by higher money incomes and the ease of selling goods or becoming employed in the face of shortages.

H. Full employment with prosperity was achieved only with the return of peace, which made possible the massive redirection of production from the war effort to civilian production. The return of 12 million soldiers and sailors to production from mere consumption also powerfully contributed to post-war prosperity.

#### V. The Productivity Theory of Wages

Figure 3  
The Irrelevance of Worker Need and Employer Greed in Wage Determination

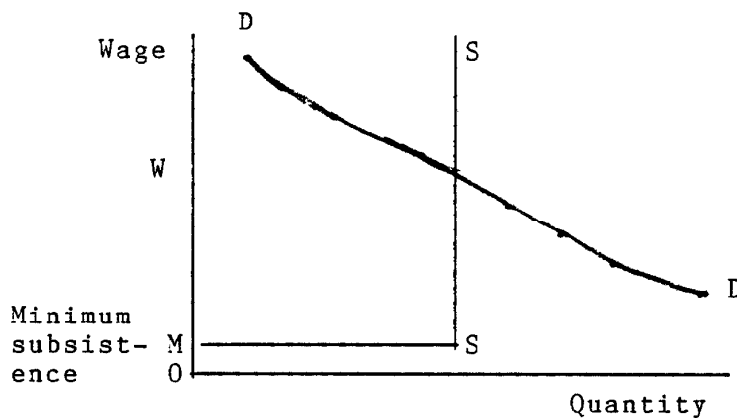


Figure 3. The vertical line SS denotes the fact that workers are willing to sell their labor at any wage from minimum subsistence, M, on up to as much as they can get. The price (wage) in a case of this kind is determined by the limitation of the supply of the good or service, together with the demand for it. It is determined by the competition of the buyers for the limited supply. In Figure 3, it is determined at point W, which represents the intersection of the vertical supply line with the demand curve. The fact that the workers are willing to work for as little as M, minimum subsistence, is no more relevant to the wages they actually have to accept than the fact that the sellers of used cars may be willing to give them away for free or pay to have them taken off their hands.

The diagram also shows that if wage rates were below their market equilibrium of W, a labor shortage would exist, with the quantity of labor demanded greater than the quantity available. In such a situation, employers willing and able to pay the wage of W would lose their labor to employers not willing or able to pay as much as W. They would be in exactly the same situation as the person at the art auction who let the painting get away from him because his bid was too low. The self-interest of these employers lies with bidding wages back up to W. Their self-interest does not lie with the lowest wages they can imagine, or with subsistence wages, but with the lowest wages that are simultaneously too high for other potential employers not able or willing to pay as much.

A. Plausibility of widely held exploitation theory based on ideas of worker need & employer greed, both of which are irrelevant to the actual determination of wage rates. The cases of the used car and the art auction.

B. Labor useful & scarce. Money wage rates fall no lower than corresponds to full employment point (occupation by occupation, place by place). Then the scarcity of labor is felt.

C. If it is necessary for wages to fall, in order to achieve full employment, this doesn't mean subsistence by the back door--the elimination of unemployment that the fall in wage rates brings about means more production and a fall in costs of production. Both mean lower prices. As shown, real wages actually rise with the elimination of unemployment: not only lower prices corresponding to the lower wages, but also the elimination of the burden of supporting the unemployed--thus take home pay drops less than prices.

D. Real Wages Depend on the Productivity of Labor--the output per worker.

Exercise 1. A demonstration that real wages always vary with the productivity of labor.

1. money supply (and thus monetary demands for labor and goods) constant, population constant, productivity of labor doubles
2. money supply and thus monetary demands double, population and productivity constant
3. money supply and productivity both double, population constant
4. money supply and productivity constant, population doubles
5. money supply constant, productivity and population both double
6. money supply, productivity, and population all double
7. money supply quadruples, productivity and population double

The following equations provide the framework for the demonstration:

$$1. \text{ Average Real Wage} = \frac{\text{Average Money Wage}}{\text{General Consumer Price Level}} .$$

$$2. \text{ Average Money Wage} = \frac{\text{Demand for Labor}}{\text{Supply of Labor Employed}} .$$

$$3. \text{ General Consumer Price Level} = \frac{\text{Demand for Consumers' Goods}}{\text{Supply of Consumers' Goods Produced and Sold}} .$$



Here is the solution for Case 1, which can serve as a pattern (asterisks denote no change):

$$\text{Average Money Wage}^* = \frac{\text{Demand for Labor}^*}{\text{Supply of Labor Employed}^*} .$$

$$\frac{1}{2} \text{ General Consumer Price Level} = \frac{\text{Demand for Consumers' Goods}^*}{2 \times \text{Supply of Consumers' Goods}}$$

$$2 \times \text{Average Real Wage} = \frac{\text{Average Money Wage}^*}{\frac{1}{2} \text{ General Consumer Price Level}} .$$

The remaining cases can be worked through on the equations on the preceding page.

#### E. Algebraic Demonstration of the Determination of Real Wages by the Productivity of Labor.

$$1. \text{ Average Real Wage} = \frac{\text{Average Money Wage}}{\text{General Consumer Price Level}} .$$

$$2. \text{ Average Money Wage} = \frac{\text{Demand for Labor}}{\text{Supply of Labor}} .$$

$$3. \text{ General Consumer Price Level} = \frac{\text{Demand for Consumers' Goods}}{\text{Supply of Consumers Goods}} .$$

$$4. \text{ Average Real Wage} = \frac{\text{Demand for Labor}}{\text{Supply of Labor}} \cdot \frac{\text{Demand for Consumers' Goods}}{\text{Supply of Consumers' Goods}} ,$$

by substituting equations (2) and (3) into equation (1).

Next, by the arithmetical rule of inverting and multiplying, when dividing by a fractional expression, we obtain:

$$5. \text{ Average Real Wage} = \frac{\text{Demand for Labor}}{\text{Supply of Labor}} \times \frac{\text{Supply of Consumers' Goods}}{\text{Demand for Consumers' Goods}} .$$

On the basis of the fact that quantities can be multiplied in any order, equation (5) is equivalent to:

$$6. \text{ Average Real Wage} = \frac{\text{Demand for Labor}}{\text{Demand for Consumers' Goods}} \times \frac{\text{Supply of Consumers' Goods}}{\text{Supply of Labor}} .$$

The supply of consumers' goods relative to the supply of labor reflects the productivity of labor. The demand for labor relative to the demand for consumers' goods can be called the "distribution" factor. It represents the extent to which wage payments are the source of consumption expenditure versus other sources of consumption expenditure, such as dividend and interest payments. Thus, mathematically, real wages appear as the product of the productivity of labor times this "distribution factor."

F. Real Wages and the Economic Degree of Capitalism--viz., the ratio of productive spending to sales revenue. (Productive spending is spending for factors of production to produce products to be sold.) The higher is the economic degree of capitalism, the higher is the demand for labor relative to the demand for consumers' goods, and the higher is the demand for capital goods relative to the demand for consumers' goods. Thus the higher are wages relative to consumption and the more rapidly rising the productivity of labor.

1. the increase in the supply of capital goods and the rise in the productivity of labor also depends on the efficiency of the economic system--specifically, on the productivity of capital goods. The higher the productivity of capital goods, the lower is the proportion of output required to replace them, and thus the more rapid the accumulation of capital for any given higher proportionate production of capital goods.

2. wages relative to consumption, the proportionate production of capital goods, and the productivity of capital goods all depend on the security of property and economic freedom--to provide incentives to save and to be efficient

G. The Futility of Anything but a Rise in the Productivity of Labor as a Cause of Higher Real Wages--specifically, the futility of attempting to force increases in nominal wages

1. increases in the quantity of money
2. less population
3. demand for labor up at the expense of the demand for capital goods
4. less consumption on the part of non-wage earners. Limited non-repeatable rise in real wages possible, but can't obtain by force--same issue as in redistributionism, below. (Capitalists quit if they lose their ability to consume. Can only get higher wage share by voluntary inducement to save more, which requires security of property.) Cut in government spending and taxes might increase the demand for labor in a more more potent way, but would also be of a non-repeatable nature. Its main contribution to higher real wages would be through raising the productivity of labor. Rise in productivity the only source capable of large, continuing increase in real wages.

H. Uselessness and Harm of Redistribution: almost nothing to redistribute; attempt to seize it cuts production: less saving, incentives, and capital accumulation, lower demand for labor by business relative to consumption; chaos of socialism

I. The productivity theory of wages explains why the standard of living was low in the past, including long hours, child labor, and bad working conditions.

J. It explains how all these things improved--a higher productivity of labor based on respect for private property rights--thus, higher saving and higher productivity of capital goods, thus capital accumulation and rising productivity of labor; also wages higher relative to consumption. All in degree of respect for private property rights.

1. hours shortened and child labor eliminated by virtue of rising real wages based on higher productivity of labor--people could then afford to work less and keep their children at home longer. How the desire for shorter hours then made it profitable for employers to offer shorter hours.
2. improvements in conditions achieved in the same way--more of them pay for themselves and workers are able to bear the cost of more of those that can't pay for themselves, because now they have higher real earnings.

K. The harm of maximum hours and child labor legislation and of forced improvements in working conditions

1. forced reductions in amount of labor--to understand effects, use equations for wages and prices, above, to judge consequences of cutting work week from forty hours to thirty hours, as an illustration. Calculate the effect on hourly and weekly nominal wages, and on output and the price level, taking the monetary demands and the productivity of labor as constants.
2. child labor laws and the further impoverishment of poor families
3. forced improvements in conditions equivalent to forced wage increase: unemployment, higher prices; workers who keep jobs lose, because while prices go up, their take home pay the same; to avoid unemployment, the take home wages must drop to offset the rise in the cost of the improvements. Either way, they are at the expense of the workers, who can't afford them.

## L. Labor unions

1. artificial wage inequalities if unions limited to raising wages in just a few industries
2. unemployment if raise wage rates through whole system
3. lower productivity of labor because of unions' opposition to labor-saving machinery and worker competition, and because of featherbedding practices and misallocation of labor
4. the unions' wrong idea of how to raise the standard of living--they seek to raise money wages, when actually the standard of living rises only through improvements in the productivity of labor, which they fight. The unions' idea that increases in productivity should raise wages industry by industry. Money wages, free competition of individuals, and the fallacy of composition.

M. Effects of minimum wage laws: unemployment, lower skill and lower pay long-term, because the unemployed workers don't gain experience. Preventing the less skilled from competing with the more skilled.

## VI. The Generation of Aggregate Profit by the Productive Process Itself

## A. The Addition to the Nominal Rate of Profit (i.e., the Money Rate of Profit) by Virtue of Increases in the Quantity of Money and Volume of Spending

1. The meaning of the rate of profit (rate of return on capital): the amount of monetary profit, gross of interest costs, divided by the amount of capital invested. a. the rate of profit contrasted with profit margins.
2. How increases in the quantity of money and volume of spending raise the nominal rate of profit
3. Increases in production as the source of an addition to the real rate of profit
4. Increases in production as the source of more money (under a commodity money standard) and thus of an addition to the nominal, as well as the real, rate of profit

## B. The Nominal Rate of Profit Apart from Increases in the Quantity of Money: Net Investment

1. Outlays for factors of production by business (i.e., productive expenditure) as the source of business' receipts from the sale of products:

Outlays:

- a. the outlays for capital goods;
- b. wage payments.

Revenues:

- a. receipts from the sale of capital goods;
- b. receipts from the sale of consumers' goods to wage earners. (Provisional assumption of wage earners' savings having counterpart in consumer loans; thus all wages directly or indirectly consumed.)

Table 4  
 Spending For Factors of Production by Business  
 Equals Spending For Products of Business

Spending for Factors of Production by Business (Productive Expenditure)		Receipts from the Sale of the Products of Business
1. Spending to buy Capital Goods	= (by identity)	1. Receipts from Sale of Capital Goods
2. Wage Payments	=	2. Receipts from the Sale of Consumers' Goods to Wage Earners
Total Outlays for Factors of Production by Business	=	Total Receipts from the Sale of the Products of Business

2. The existence of an aggregate profit in the economic system by virtue of the difference between outlays for factors and costs deducted from revenues in computing profits: a. the outlays for buildings and equipment versus depreciation cost; b. the outlays for materials, parts, and labor versus cost of goods sold

3. The difference between outlays for factors and the costs deducted from revenues in computing profits is net investment

4. In an economic system with a constant quantity of money and volume of spending, an aggregate profit can still exist, equal to net investment. See Table 5, below.

Table 5  
 Profits Equal Net Investment

Spending for Factors of Production by Business (Productive Expenditure)		Receipts from the Sale of the Products of Business
1. Spending to buy Capital Goods	= (by identity)	1. Receipts from Sale of Capital Goods
2. Wage Payments	=	2. Receipts from the Sale of Consumers' Goods to Wage Earners
Total Outlays for Factors of Production by Business	=	Total Receipts from the Sale of the Products of Business
less:		less:
Costs		Costs
Net Investment	=	Profits

RECOMMENDED READINGS

1. Henry Hazlitt, Economics in One Lesson, New Edition, New York, Arlington House, 1979. Brilliant introduction to economics centering on the question of unemployment and all the things mistakenly believed to cause it.
2. Frederic Bastiat, Economic Sophisms, Irvington-On-Hudson, New York, 1964. A translation of a nineteenth century French classic on economic fallacies, especially mistaken ideas about free trade as a cause of unemployment.
3. James Mill, the chapters "Consumption" and "Of the National Debt" in Commerce Defended, which is reprinted in Donald Winch, editor, Selected Economic Writings of James Mill, University of Chicago Press, 1966. These two chapters provide the best exposition of Say's Law extant. Say's Law should more appropriately be called James Mill's Law. The chapters also contain excellent material on saving.
4. Ludwig Von Mises, Planning For Freedom, Fourth Edition, Libertarian Press, South Holland, Illinois, 1980. Many excellent essays on Say's Law, profits, saving, inflation, gold, and more.
5. Ludwig Von Mises, Human Action, Third Edition, Contemporary Books, Chicago, 1966, Chapters XVII - XXI, Chapter XXXI. Advanced discussions of money, interest, the business cycle, and wages. Indispensable reading for every serious student of economics, as is the rest of the book.
6. Eugen von Boehm-Bawerk, Capital and Interest, Huncke and Sennholz translation of the third German edition, 3 volumes in one, Libertarian Press, South Holland, Illinois, 1959. Presents a detailed history and critique of interest theories and Boehm-Bawerk's own positive theory of time preference and productivity.
7. For elaboration of the net consumption, net investment theory, see George Reisman, The Theory of Aggregate Profit and the Average Rate of Profit, Doctoral Dissertation, Graduate School of Business Administration, New York University, 1963; available in microfilm or xerox form from University Microfilms, Ann Arbor, Michigan.
8. Adam Smith, The Wealth of Nations, Cannan Edition, Book II, Chapter III; Book V, Chapter III. Important reading on saving and capital and government deficits.
9. David Ricardo, Principles of Political Economy and Taxation, Third Edition. Very difficult reading, often contradictory and open to misinterpretation of supporting Marxism, but contains many brilliant insights on demand, saving, capital accumulation, and, most surprisingly, profits. Should be read in conjunction with George Reisman, "Classical Economics Versus the Exploitation Theory" in Kurt Leube and Albert Zlabinger, editors, The Political Economy of Freedom, Essays in Honor of F.A. Hayek, Philosophia Verlag, Munich and Vienna, 1984.)