

GEORGE REISMAN

A Theory Of Productive Activity, Profit, and, Saving

1. Basic Concepts

Definitions of such fundamental concepts as productive expenditure and consumption expenditure, capital goods and consumers' goods. Adam Smith's positive contribution to the concept of productive activity and his contradictory development of the conceptual framework of the Marxian exploitation theory.

2. The Marxian Exploitation Theory

Marx's version of the labor theory of value and the "iron law" of wages. How profits are made to appear as essentially the same as the gains of slave owners. The exploitation theory as the theoretical basis of the economic policies of the contemporary "liberals."

3. Böhm-Bawerk's Critique of the Exploitation Theory

Exposition of the leading critique of Marx as developed by a father of the Austrian school of economics. The time preference theory of profit/interest. Böhm-Bawerk's fundamental concessions to the exploitation theory.

4. Reisman's Theory of Profit/Interest vs. the Framework of the Exploitation Theory

How business in the aggregate generates sales revenues greater than costs. Profits, not wages, as the original and primary form of income. Businessmen do not deduct profits from wages, but are responsible for the creation of wages, which along with other costs, are a deduction from sales revenues, all of which were originally profit. Businessmen and capitalists as the primary workers in the economic system.

5. Specific Productive Functions in the Light of the Division of Labor

The division of labor as the explanatory principle of the specific productive functions of businessmen and capitalists, the financial markets and financial institutions, retailing, wholesaling, and advertising.

6. Further Development of Reisman's Theory of Profit/Interest

Say's Law II: not only does production create purchasing power, but also the productive process itself is what generates monetary profitability. Radical implications for the role of saving and technological progress in the process of capital accumulation.

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The Division of Labor and the Concept of Productive Activity

I. The Doctrine That Only Manual Labor Is Productive

1. manifestations
2. a carryover from production under primitive conditions
3. rests on ignorance of the requirements of a division-of-labor society, and is both far too narrow and, in one major respect, too broad in its view of what is productive activity

II. My definition of productive activity (in the economic context of a division of labor society): the making of goods, and the rendering of services, for the purpose of earning money.

III. Money Making and Productive Activity

1. need for money making for activity to be productive in context of a division of labor society--need to be able to obtain products of others as a result of one's labor. Must earn money to do so. Even manual labor not productive if doesn't earn money. In context of a division of labor society, economic activity is activity the purpose of which is the earning of money.

a. the significant difference, overlooked by the textbooks, between the housekeeper who works for money and the housewife who cleans the house without earning money

2. if activity is not for purpose of making money, it is inherently consumption--in that it starts with materials and equipment, which can't be replaced. Physical production, when purpose is not money making, is a consumptive production.

3. productive expenditure and consumption expenditure: expenditure for the purpose of bringing in subsequent sales receipts (implicitly at a profit) versus expenditure not for the purpose of bringing in subsequent sales receipts.

Practical significance of distinction: the one is self-sustaining and a source of wealth; the other is a using up of wealth. The case of the two brothers starting with an equal inheritance, one growing richer through productive expenditure, the other growing poorer through consumption expenditure.

4. Capital goods and consumers' goods; producers' labor and consumers' labor; producers' loans and consumers' loans. Purpose for which funds expended or advanced critical, not physical nature of the activity. Heavy machinery can be consumers' goods; food and clothing are capital goods when bought for business purposes.

Government expenditure is consumption expenditure.

The status of government borrowing.

5. Capital and wealth: capital is wealth reproductively employed--i.e., in a division-of-labor society, the wealth owned by business enterprises

6. Investment: the putting of money into goods for the purpose of making subsequent sales.
Capital value: the book value of existing goods in which money has been invested.

7. Answers to possible misconceptions of the concepts presented

8. Adam Smith correctly understood these issues (see Book II, Chapter II of The Wealth of Nations) even though he introduced a second, irrelevant criterion for distinguishing between productive and unproductive activity--namely, the question of whether or not there is a tangible, physical product. But Adam Smith very bad on the questions of the legitimacy of profits and interest and on the productive role of businessmen and capitalists

IV. The Smithian Framework of the Marxian Exploitation Theory

1. quote from Smith's chapter on wages in The Wealth of Nations
Claims labor is the source of all wealth; has right to the full produce or to full value of the produce. Claims income of labor is wages; profits, interest, etc. an unjust deduction that arises with the coming of capitalism and capitalists.

2. Marx: C-M-C--equivalent to Smith's early and rude state.
Allegedly no "surplus value" here; surplus value only under "capitalistic circulation"--M-C-M'

V. The Marxian Exploitation Theory

Marx's theory of profits (surplus value)--an attempt to explain the extent of the unjust deduction of profits from wages

1. the absolutist labor theory of value--exchange value of everything allegedly determined by congealed labor content and nothing else

2. implies all value added is proportionate to fresh labor added, since materials and machinery convey their labor content to the product--neither more nor less

Thus fresh labor allegedly adds all value--the sum of profits and wages

3. corresponding Marxian terminology of "constant" and "variable" capital

4. wages, the value of labor, allegedly determined by quantity of labor required to "produce" labor--i.e., subsistence. Wages put there by the arbitrary power of the capitalists--the Marxian "iron law of wages."
Subtraction of wage share of value added by labor, then leaves profit--"surplus value."

5. example and elaboration of Marx's theory:

i. 48 hours of labor in materials and machinery + 12 hours of fresh

labor yield product embodying 60 hours of labor.

ii. If \$1 of product value represents every hour of embodied labor, then the materials and machinery that pass into the product are worth \$48, while the product itself, embodying 60 hours of labor, is worth \$60. The 12 hours of fresh labor add the whole difference in value between the product and the materials and machinery used up to produce it. This value difference is the sum of wages and profits together.

iii. The division of the value added, between wages and profits, says Marx, is determined by the fact that the 12 hours of fresh labor can be purchased at a price representing the number of hours of labor required to "produce" that 12 hours. If, to use Marx's own example, the worker can work for 12 hours on the basis of necessities which require only 6 hours to produce, then, says Marx, he is paid a wage of only \$6. Thus the capitalist acquires 12 labor hours and the value added by 12 hours at a price corresponding to only 6 hours.

iv. Thus profits are made, says Marx, by the systematic underpayment of labor: the capitalist buys a full labor day, but pays only for the hours required to produce the worker's necessities. The hours the worker works over and above what are required to produce his necessities represent unpaid, "surplus labor time." Profits relative to wages, "surplus value" relative to "variable capital" are both expressions for "the rate of exploitation."

6. Marx's formula for the rate of exploitation:

$$\begin{aligned} \text{Rate of Exploitation} &= \text{profits/wages} \\ &= s/v \text{ (surplus value/variable capital)} \\ &= \frac{\text{surplus labor time}}{\text{necessary labor time}} \end{aligned}$$

7. the exploitation theory and the Marxian rhetoric: "wage slavery" and the capitalists as the heirs to the slave owners and feudal aristocracy--meant literally. Capitalists depicted as profiting on the same basis as slave owners--the capacity of the workers to produce more than is needed for their own subsistence. "Surplus labor time" is the excess of the actual amount of labor time over the time needed to produce the worker's subsistence or the value equivalent of his subsistence.

8. further implications of the exploitation theory:

i. all progress passes the workers by--improvements are either in things still beyond their reach, or, if within their reach, their wages are cut correspondingly. Thus, the workers are men without a country, with nothing to lose but their chains.

ii. things are still worse: the doctrine of progressive impoverishment: the capitalists more calculatingly greedy than earlier exploiters and the falling rate of profit leads them constantly to increase the rate of exploitation in an effort to offset it. The falling rate of profit inferred by Marx from a growing proportion of capital in the form of "constant" capital, which adds no value. Thus the surplus value added by fresh labor has to be spread thinner, with the result that the rate of profit falls unless the rate of exploitation is increased. Example: Total capital invested in whole economy initially equals $100 = 50v + 50c$. Rate of exploitation is initially 100%. Then $s = 50$. Rate of profit = $50s/(50v + 50c) = 50\%$. Now total capital grows to 200, and all the growth is in constant capital. Thus, now, rate of profit = $50s/(50v + 150c) = 25\%$. Capitalists need to step up the rate of exploitation to offset the fall in the rate of profit.

iii. the working day and child labor--step up the rate of exploitation by squeezing more labor out the workers for the same subsistence

iv. sweat the worker--reduce the labor time needed to produce necessities.

v. cheapen the worker's diet--implications for the financial pages under capitalism

9. the influence of the exploitation theory

i. assumed correct by almost everyone as a description of laissez faire capitalism; believed not descriptive of present-day world because of government intervention.

ii. the corresponding interpretation of modern economic history--things bad in the past because of the unrestrained greed of the capitalists; better now because of government intervention.

iii. the whole "liberal" program a reflection of the influence of the exploitation theory: laws to limit working day--only the capitalists lose; abolition of child labor--only the capitalists lose; boost pay above subsistence through unions and minimum wage laws--again, only the capitalists lose; the welfare state--progressive income and inheritance taxes, on the one side, plus social welfare spending, such as for public housing, public education, social security, socialized medicine, etc., on the other--this seen as simply taking back some of the loot from the exploiters and returning it to the victims.

VI. Boehm-Bawerk's Critique of the Exploitation Theory

Concentrates on a critique of the labor theory of value as applied to the prices of products. He does not criticize the so-called "iron law of wages"

as such, nor does he attack the basic framework of the exploitation theory laid down by Adam Smith. He points out:

1. temporary and permanent deviations of price from labor values based on scarcity as a determinant of value
2. the fact that a better case can be made out for prices being proportionate to wage costs than to labor quantities: Marx's equivocation on skilled labor; the case of international trade (both recognized by J. S. Mill, incidentally)
3. the profit-time factor (also seen and stressed by Ricardo)-- e. g., the case of \$1000 laid out over two years versus one year; the cases of wine and oak trees; the case of machinery and buildings
4. profits not made off of fresh labor, Boehm-Bawerk shows, but earned on the full capital invested--the pearl case: \$5000 profit/ (\$995,000 in raw pearls + \$5000 in wage payments) vs. \$5000 profit/ (\$5000 in raw material + \$5000 in wage payments); Marx's conclusion that the profits are the same in both cases because the fresh labor is the same is not possible because of uniformity of profit principle
5. thus exploitation at most limited to the wage portion of capital. But even the profits earned on capital invested in wage payments not an exploitation: the locomotive case
6. Boehm-Bawerk's positive theory of profit-interest: time preference. Present goods more valuable than future goods of same kind and number. Workers paid a justifiably discounted value of their future product. Capitalist performs the waiting function. Similar to Senior's abstinence theory.
7. Boehm-Bawerk's critique relatively weak--implies wage earners are the primary producers and that profits are a deduction from wages, though a justified deduction. And no critique of the Marxian "iron law".

VII. Introduction to The Net Consumption/Net Investment Theory of Profits

The best way to criticize the exploitation theory is by presenting a positive theory of wages and profits and of the productive activity of businessmen and capitalists. For the theory of wages and a refutation of every aspect of the Marxian iron law of wages, hear lectures 4-6 of my last series at TJS Introduction to Pro-Capitalist "Macroeconomics," which present what I call the productivity theory of wages. In some important respects, this is my own theory, inspired by the writings of the classical economists.

The concept of productive expenditure developed in Lecture I provides the basis for understanding how the aggregate amount and average rate of profit

in the economic system are determined. I call the theory I will present The Net Consumption, Net Investment Theory. (I arrived at this theory independently, over twenty-five years ago, on the basis of reading the Classical Economists and Von Mises. But I subsequently learned that the same formal determinants of aggregate profit--net consumption and net investment--were recognized earlier by a Polish Marxist, Michael Kalecki, in 1935, and then by Joan Robinson, a prominent British economist of recent decades, who was a supporter of the left-wing of the Labour Party. Nevertheless, my derivation of the determinants is entirely different from theirs, the emphasis and even the actual substantive meaning I assign to the two determinants is often very different, and so too are almost all of the applications I make of the theory.)

1. Productive expenditure tends to generate both equivalent costs and equivalent sales revenues in the economy as a whole: the expenditure for capital goods--the materials and machinery bought by business enterprises--sooner or later shows up as equivalent costs of production to the firms making the expenditures. So, of course, do wage payments. At the same time, the expenditure for capital goods constitutes an identical amount of sales revenues to the firms selling the capital goods; and the payment of wages is the source of a virtually equivalent amount of consumption expenditure on the part of the wage earners, which consumption expenditure constitutes sales revenues to the sellers of consumers' goods.

Thus, provisionally, for the sake of simplicity, productive expenditure in the economy as a whole can be taken as equivalent to total costs of production in the economy as a whole and as generating an equivalent amount of sales revenues in the economy as a whole.

2. An aggregate profit exists to the extent that there are sources of sales revenues that do not originate in productive expenditure. Such sales revenues are sales revenues, but do not have a counterpart in costs to be deducted from sales revenues.

3. The main source of such sales revenues is the consumption expenditure of the sellers of products, that is, the consumption expenditure of the businessmen and capitalists. This consumption expenditure is made possible largely by the payment of dividends and the draw of funds from their enterprises by partners and proprietors. These disbursements are sources of sales revenues, but are not costs deducted from sales revenues. Furthermore, if, as is usually the case, we want to explain an excess of sales revenues over costs specifically on account of the physical factors of production, viz., capital goods and labor, and thus to take profits prior to deduction of interest cost, then consumption out of interest payments also qualifies as a source of sales revenues which do not have a counterpart in costs deducted from sales revenues.

Figure 1, below, provides the basis for an elaboration of this discussion.

Figure 1
NET CONSUMPTION AS THE SOURCE OF AGGREGATE PROFIT

PRODUCTIVE EXPENDITURE 1. Spending to buy Capital Goods 2. Wage Payments OTHER SOURCES OF SALES REVENUES 3. Dividends, Draw, and Interest Consumed*	= = =	SALES REVENUES 1. Receipts from the Sale of Capital Goods 2. Receipts from the Sale of Consumers' Goods to Wage Earners 3. Receipts from the Sale of Consumers' Goods to the Owners and Creditors of Business Firms
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*To the extent that there is saving and productive expenditure out of these items, it is counted under items 1 and 2.

The term "net consumption" in the title of Figure 1 refers to the excess of consumption over wage payments. This is the source of the excess of sales revenues over productive expenditure and costs. The source of this consumption, of course, is dividends, draw, and interest payments.

To cement your understanding, make the following assumptions:

1. Spending to buy capital goods equals 500 units of money.
2. Wage payments equal 300 units of money and the wage earners' consumption also equals 300 units of money.
3. Consumption spending out of dividends, draw, and interest equals 200 units of money.

Now find:

1. Total productive expenditure.
2. Total sales revenues from all sources--i.e., total receipts from the sale both of consumers' goods and capital goods.
3. The excess of sales revenues over productive expenditure.
4. Aggregate profit, on the assumption that productive expenditure and aggregate costs are equal.
5. Net consumption, viz., consumption spending minus wage payments.
(Answers: 800, 1000, 200, 200, 200.)

Change the assumptions of the previous example so that wage payments and the wage earners' consumption fall from 300 to 200 units of money. In addition the demand for capital goods falls from 500 to 400 units of money. These are the results of a rise in the consumption of the owners and creditors of business firms from 200 to 400 units of money.

Again, find total productive expenditure, total sales revenues, the excess of sales revenues over productive expenditure, aggregate profit on the assumption that productive expenditure and costs are equal, and the excess of consumption over wage payments (net consumption).
(Answers: 600, 1000, 400, 400, 400.)

Continuing to assume that productive expenditure and costs are equal, find sales revenues and profit in the economy if total productive expenditure falls to 100, to 10, to 1, to zero, while the consumption expenditure of the owners and creditors of business rises to 900, 990, 999, 1000?

Answers:	<u>Sales Revenues</u>	<u>Profit</u>
	1000	900
	1000	990
	1000	999
	1000	1000

6. If productive expenditure is zero, because all sales revenues and incomes are consumed, what is the amount of capital invested in the economic system? (Answer: Zero.) What is the average rate of profit in the economic system? (Answer: Infinite.)

The theory of profit presented thus far is incomplete. There is a tendency for the costs deducted from sales revenues to equal productive expenditure, but the two do not in fact have to be equal in any given period of time, or in any period of time whatever if the quantity of money and thus the magnitude of productive expenditure continually grows from year to year. But this will be dealt with later. At its present level of presentation, the theory is already adequate to serve in the overthrow the foundations of the exploitation theory--namely, the Smith/Marx framework of the exploitation theory.

VIII. Critique of the Smith-Marx Framework--Implications of a Correct Positive Theory of Profits

1. under C-M-C--the early and rude state--all income is profits, not wages. Demand for commodities is not demand for labor--product sales revenues but zero costs of production because no M laid out to bring in M.
2. Capitalists don't deduct profits from wages; they create productive expenditure, wages, and costs, which reduces the profit share and raises the wage share of total income. (Hear the discussion of real wages and the economic degree of capitalism in Introduction to Pro-Capitalist "Macroeconomics.")
3. Producers in the pre-capitalist economy were profit earners, and the fundamental producers are now, too. The standard of the guiding and directing intelligence. Columbus and his crew. The President and the State Department employees. Ford and Rockefeller.

4. A Radical Reinterpretation of Labor's Right to the Whole Produce
This right is satisfied when the businessmen and capitalists sell THEIR products and dispose of the sales proceeds--a right which is satisfied every day in a capitalist economy.

The employees are the help in producing the businessman's products. The contradiction of Marxist complaints about the wage earners' alienation from the product and the claim that they are the producers of the product.

5. The incomes of the passive capitalists. If an exploitation, an exploitation of Ford and Rockefeller by widows and orphans. But not an exploitation, because of mutual gain. And these incomes too--dividends and interest--attributable to the labor of those who receive them, insofar as they give thought and study to their investments.

6. The problem of profits as a labor income and the variation of profits with the amount of capital invested. Adam Smith's denial of profits as a labor income. Variation of profit with capital not a contradiction of their attribution to the labor of businessmen--the capital is the means by which businessmen implement their ideas. Variation of results with the means employed does not contradict attribution to the intelligence which guides and directs the means.

Parody of Smith's argument.

Compound variation of profits with the passage of time also consistent with their attribution to the labor of the businessmen and capitalists.

IX. The Division of Labor and Specific Productive Functions

1. The specific productive function of businessmen and capitalists: to raise the productivity and remuneration of manual labor by creating and coordinating the division of labor and improving the efficiency of production under it.

a. create division of labor: found and organize business firms--the central units of the division of labor; provide capital, without which little or no vertical division of labor (and which creates and raises the wage share of consumption)

b. coordinate the division of labor: internal management, balance among the different branches of industry (uniformity-of-profit principle)

c. improve efficiency of production within the division of labor: introduce improved products and methods of production; achieve a sufficient proportionate production of capital goods to achieve economic progress; promote capital accumulation and economic progress by reducing the proportion of production needed to maintain the supply of capital goods

Socialism the true system of exploitation, which can't maintain its slaves in their slavery. The inherent exploitation of socialism based on the powerlessness of the plain citizen and on the status of the the rulers and their values. The chaos of socialism.

2. The productive function of financial markets and institutions and of passive capitalists: promote saving, investment out of saving, and the efficiency of investment.

- a. promote saving by providing opportunity to earn a rate of return
- b. investment the same way
- c. promote efficiency of investment by making it possible to provide use of one's saving to others who can use them more efficiently--e.g., small businessman and the electric utility
- d. contributes to height of proportionate production of capital goods and thus to economic progress. (Note: productive role here only in context of division of labor economy and role of capital in production)

3. The specific productive function of the stock market in view of the criticism that only the purchase of newly issued stock actually provides funds to business firms

- a. ability to sell shares encourages buying them in the first place
- b. holders of outstanding stock can use the funds from its sale for new business purposes--e.g., the small businessman who sells his shares of GM or IBM to obtain money to expand his store
- c. price of stock sets terms for sale of new shares
- d. stock market gives more power to stockholders--individually, can sell if investment bad or need the money; low stock price resulting from bad treatment of small stockholders by management makes corporate takeover more likely; compels the management to consider the interests of the small stockholders; also, low stock price makes new financing less favorable

4. The productive function of retailing and wholesaling:

need distribution system because of division of labor--the products originate in great concentrations, must be brought to all. This the basis of the need for retailing and wholesaling. These institutions lower distribution costs and achieve greater variety available to consumers. The problem of assembling the ingredients of breakfast. The case of the 100 manufacturers and the 1000 retailers: 1100 large transactions instead of 100,000 small ones.

5. Advertising--need information because of division of labor: the sellers and buyers separate parties.

- a. more benefit from the same production--toothpaste brand A and brand B; a gain even if costs higher. But extra cost always limited.
- b. more research and development--faster acceptance of new products; consequent encouragement of research and development
- c. promotes competition--new entrants need it to gain exposure. Going by experience alone favors the existing suppliers

d. works like a bond posted with public: usually pays to advertize only good products

X. The Net Consumption Theory and Classical Economics

Despite the fact that Adam Smith provided the framework for the exploitation theory, the net consumption theory and the critique of the exploitation theory are implicit in classical economics.

1. Smith's implied definitions of productive expenditure and consumption expenditure

2. Ricardo's doctrine on profits--that they rise as wages fall and fall as wages rise. This in a context of an invariable standard of value, i.e., of a fixed amount of sales revenues. Substitute productive expenditure and costs for wages, and you have exactly the kind of examples we considered earlier.

3. Ricardo's, J. S. Mill's, Smith's, and all the other classical economists' recognition that the wages of the employees of business are paid by the capitalists, out of productive expenditure and capital, not by the consumers out of consumption expenditure. This implies that if there are no capitalists, there are no wages paid in the production of products for sale. If no wages, then all must be profit, on the basis of Ricardo's theory.

4. At one point, Adam Smith even came close to grasping the actual nature of the productive role of businessmen and capitalists. In the statement quoted, he's even right about rate of profit in poor and rich countries as far as it depends on NC, but inexplicably doesn't see that an economy with zero capitalists and zero productive expenditure would be the poorest of all.

5. Even the labor theory of value, if understood with all the qualifications the classical economists made to it, especially Ricardo and J. S. Mill, can be made consistent with the productive role of businessmen and capitalists: their activity is what steadily reduces the quantity of labor required to produce goods and improves the quality of the goods produced. That is, it raises the productivity of labor and thus real wages. (Hear lectures 4-6 in Introduction to Pro-Capitalist "Macroeconomics.")

The one classical doctrine that must be totally abandoned is any notion that wages are determined by "subsistence." Even here, the usual view of the classical economists was that subsistence operated indirectly through the effects of rising population and the operation of the law of diminishing returns in agriculture, not by means of the arbitrary power of the capitalists.

XI. The Net Consumption Theory and the Time Preference Theory

Net consumption can be understood as reflecting the degree of time preference in a society. A society in which people were bent only on consumption

In the immediate moment, would be one in which all sales proceeds were consumed and none were saved and productively expended. Net consumption and profits would equal the total of sales revenues and the value of capital would be zero. In such a society, the rate of profit would be infinite. (In the words of Von Mises: "If one day the state of affairs were to return which was actual at the close of the first millennium of the Christian era when some people believed that the ultimate end of all earthly things was impending, men would stop providing for future secular wants. The factors of production would in their eyes become useless and worthless. The discount of future goods as against present goods would not vanish. It would, on the contrary, increase beyond all measure." Human Action, p. 527.)

In degree that time preference is less, people provide more for the future: they save and productively expend more; net consumption relative to sales proceeds is less and the value of capital is greater. Thus, the rate of profit, as far as it depends on time preference and the rate of net consumption, is lower.

XII. Further Determinants of Aggregate Profit and the Average Rate of Profit: Net Investment and the Increase in the Quantity of Money and Volume of Spending

1. The theory of profit must take into account the fact that productive expenditure and costs can be unequal. To the extent they are unequal, aggregate profit equals the sum of net consumption plus net investment. This becomes apparent if we conceive of the generation of the sum of all business income statements in the economic system in terms of activities describable in the sum of all business balance sheets in the economic system.

Figure 2
Hypothetical Sum of All Business Balance Sheets
Year I
(in billions)

ASSETS		LIABILITIES	
Cash:	1000	Sum of Owners' Equity Capitals Plus Borrowed Capitals:	10000
Inventories and Work in Progress:	3000		
Gross Plant and Equipment:	10000		
<u>less</u>			
Accumulated Depreciation Reserve:	4000		
<u>Net Plant and Equipment:</u>	<u>6000</u>		
Total Assets:	10000	Total Liabilities:	10000

Figure 3
Hypothetical Sum of All Business Income Statements
(in billions)

Sales Revenues:	12000
less:	
Selling, General, and Ad- ministrative Expenses:	3600
Cost of Goods Sold:	6000
Depreciation:	1200
Total Costs:	10800
Profit:	1200

2. The sales revenues of Figure 3 are the result of the spending and disbursements of the cash in Figure 2, month after month. This cash is used each month to make productive expenditures and disbursements to the owners and creditors of business firms. The whole 1000 comes back each month in the form of sales revenues and is repeatedly expended or disbursed, generating 12000 of sales revenues over the year.

3. What must be realized is that the costs deducted from sales revenues in the income statements shown in Figure 3 can be less or greater than the productive expenditures going on in the balance sheets shown in Figure 2 and contributing to the sales revenues in the income statements shown in Figure 3.

a. e.g., depreciation cost can be less than spending for plant and equipment: 1200 versus, say, 1300, over the course of the year. In this case, the Gross Plant and Equipment Account will be increased by 1300, the Accumulated Depreciation Reserve by 1200, and the Net Plant and Equipment Account, therefore, by 100. (See Figure 4, below.)

b. similarly, spending on account of inventory and work in progress might be 6500, even though cost of goods sold is only 6000. In this case, at the end of the year, the inventory and work in progress account will be increased by 500. (Again, see Figure 4, below.)

In this illustration, total productive expenditure is 11400 (the sum of 1300 for plant and equipment plus 6500 for inventory and work in progress plus 3600 for selling, general, and administrative expenses). Since sales revenues are 12000, net consumption is implicitly 600. Total costs in the income statements shown in Figure 3 are, of course, 10800. It will be seen that the aggregate profit of 1200 equals the 600 of net

consumption plus 600 of net investment--net investment being the difference between productive expenditure and the costs deducted from sales revenues in income statements.

Figure 4
Hypothetical Sum of All Business Balance Sheets
Year II
(in billions)

ASSETS		LIABILITIES
Cash:	1000	Sum of Owners' Equity Capitals Plus Borrowed Capitals: 10600
Inventories and Work in Progress: $3000+6500-6000=$	3500	
Gross Plant and Equipment: $10000+1300=$	11300	
<u>less</u> Accumulated Depreciation Reserve: $4000+1200=$	5200	
Net Plant and Equipment:	<u>6100</u>	
Total Assets:	10600	Total Liabilities: 10600

The reason that productive expenditure minus costs equals net investment is that productive expenditure in the form of spending for plant and equipment or inventory and work in progress represents additions to asset accounts. The corresponding depreciation cost and cost of goods sold represent subtractions from asset accounts. The difference is the net change in the asset accounts, i.e., net investment.

The fact that productive expenditure minus the income statement costs equals net investment can be demonstrated in terms of the following simple algebraic steps:

- B = total productive expenditure,
- B_1 = productive expenditure on account of plant and equipment, which constitutes additions to the gross and net plant and equipment accounts
- B_2 = productive expenditure on account of inventory and work in progress, which constitutes additions to the inventory and work in progress account
- B_3 = expensed productive expenditures, i.e., productive expenditures not added to asset accounts but written off as a cost deducted from sales revenues instantaneously. (These expenditures are the selling, general, and administrative expenses of Figure 3.)
- d = total aggregate costs deducted from sales revenues in business income statements
- d_1 = depreciation cost, which is a subtraction from the gross and net plant and equipment accounts

- d_2 = cost of goods sold, which is a subtraction from the inventory and work in progress account
 d_3 = expensed productive expenditures, which, in the nature of the case, are identical to B_3

Thus:

B	$=$	B_1	$+$	B_2	$+$	B_3
$-d$	$=$	$-d_1$	$+$	$-d_2$	$+$	$-d_3$
Total Net Investment = Net Investment in Plant and Equipment						
			$+$	Net Investment in Inventories and Work in Progress		$+$
						Zero

4. Algebraic derivation of the equality between profits and the sum of net consumption plus net investment:

1. profits = sales - costs.
2. profits = sales - productive expenditure + productive expenditure - costs
3. sales - productive expenditure = consumption - wages = net consumption
4. productive expenditure - costs = net investment
 Substituting equations (3) and (4) into (2), we obtain,
5. profits = net consumption + net investment.

Note: equation (3) rests on the fact that sales receipts include receipts from the sale of capital goods, while productive expenditure includes the exact same item in the form of the expenditure to buy capital goods. When this item is subtracted from sales receipts, only receipts from the sale of consumers' goods remain. When it is subtracted from productive expenditure (outlays for factors of production) only wage payments remain.

5. In an economy with a fixed quantity of money and fixed aggregate expenditure for goods, productive expenditure and costs would tend to be equal: annual depreciation cost rises toward annual outlays for plant and equipment. Cost of goods sold rises toward outlays on account of inventory and work in progress. At the same time, the growth in accumulated capital, which takes place so long as net investment continues, operates to raise net consumption. This reduces productive expenditure, driving it down toward costs, which are rising to meet it. When costs and productive expenditure equalize, net investment comes to an end.

Thus, in such an economy, the rate of profit would tend to equal the rate of net consumption alone--viz., the amount of net consumption divided by the sum of capitals invested.

6. What perpetuates the existence of net investment is the continuous increase in the quantity of money. This increases productive spending from year to year. Under these conditions, depreciation cost can never catch up to spending for plant and equipment, since it reflects the sum of fractions of expenditures for plant and equipment which took place in the past and

therefore were smaller. At the same time, the fact that this year's expenditure for inventory and work in progress is greater than last year's operates to make productive expenditure for inventory and work in progress greater than cost of goods sold.

7. In the last analysis, in an economy with a growing quantity of money and rising volume of spending, the rate of profit tends to equal the rate of net consumption plus the rate of increase in the quantity of money and volume of spending. This last tends to equal the ratio of net investment to the sum of capitals invested.

8. The rise in the rate of profit corresponding to the increase in money and spending can represent a real rate of gain--a gain in actual buying power--not just a monetary gain. It will, if the growth in money and spending does not exceed the growth in production and supply. If, e.g., money and spending rise by two percent a year, the rate of profit will tend to be approximately two percent higher. If production and supply also rise by two percent a year, prices will be stable. The additional monetary profit will thus be an additional real profit. (The addition to the real rate of profit is determined by the rate of increase in production and supply, not the rate of increase in money and spending. To the extent that the increase in production and supply are greater than the increase in money and spending, prices fall and the buying power of capital funds is correspondingly increased. E.g., a two percent annual increase in money and spending accompanied by a four percent annual increase in production and supply implies prices falling by two percent a year. The addition to the nominal rate of profit is 2%, while the addition to the real rate of profit is 4%.)

9. On the basis of the preceding, the opposition to profits and interest turns out largely to be an opposition to the increase in the quantity of money, and, in real terms, to the increase in production and supply.

10. A free and rational society has a low rate of profit insofar as the rate of profit depends on the rate of net consumption, because rationality makes people future oriented by making them able to conceive the future; freedom--the security of property--enables them to look forward to benefitting from provision for the future. But the more rapid increase in the ability to produce that such a society possess implies, as a partial consequence, a more rapid increase in the supply of precious metals, which would constitute its money. Thus, to a significant extent profits based on the increase in the quantity of money and continuous net investment take the place of profits based on net consumption. And these profits, being the by product of a process of rising production are real profits, not just monetary 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.)

