

NATIONAL INCOME DATA

3 September 1954

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NATIONAL INCOME DATA

3 September 1954

COLONEL BARTLETT: General Niblo and gentlemen: It is difficult to realize that we are drawing close to the end of Unit I. After today's lecture you have only three more next week in the economics refresher course. Then you start on the executive development course.

I have heard some of you say this year about the economics refresher course that, as far as you personally are concerned, it is really your first course in economics. We have been very fortunate, I feel, in the caliber of the lecturers that we have had.

The topic this morning is one which is going to be extremely useful to you. You will find that the concept of national income is used constantly, and one which you can use, in measuring various potentials, or in comparing degrees of effort. It is a tool which you will be able to use through all the other units in the course. It will be extremely helpful to you if you understand it thoroughly.

We could have called on an outside lecturer for this; but, of course, we always run the chance that maybe we won't be lucky in getting a good one. For that reason we turned this lecture over to Dr. Kress, of our own faculty.

You probably know from reading his biography that, before he came here as a permanent member of our faculty, he was chairman of the Department of Economics at Georgetown University. Andy not only knows his subject, but he knows how to explain it, and knows how to explain it so you can understand it.

Andy, all you have to do now is prove that I am truthful.

DR. KRESS: General Niblo and gentlemen: Today we are to discuss national income data and their uses in times of national defense. Since we are talking about data, this becomes a technical discussion, involving some treatment of statistics. (I am reminded of Mark Twain, who long ago pointed out that there are liars, damned liars, and statisticians.)

I have prepared a set of handouts, which will be in your mail boxes during the day. It will include copies of all the important charts we will use this morning, plus two and a half pages of definitions. You will not need to take notes; you can just relax. Please do not lose these handouts. You will need them during the year. When you come to the Economic Potential unit, you will certainly use them. And last year, at least, there was a lot of activity among the students during the mobilization unit, refurbishing what was previously known about gross national product.

Let us get a two-pronged concept of what we are after. The broad question is: (1) How do you find out what the economy is doing and (2) having found out, can you get it to do something other than what it is presently doing?

We will develop our subject under six main topics:

1. National income, and its usefulness in the study of the national economy.
2. National wealth, and how it is measured.
3. Components of national income, and their interrelationship.
4. Use of indexes in measuring trends in national income.
5. Analysis of changes in national income components (as a guide to the functioning of the economy.)
6. National income analysis as a tool in economic mobilization.

I. NATIONAL INCOME AND ITS USEFULNESS IN THE STUDY OF THE NATIONAL ECONOMY

National income is the aggregate earnings of labor and property which arise from the current production of goods and services by the nation's economy, recorded in the forms in which they accrue to residents, inclusive of the taxes on those earnings. These earnings of the factors of production (land, labor, and capital), take the form of wages, profits, interest, and rental income.

Both the economist and statistician are interested in developing and using national income data. The general economist (and I must plead guilty to being one) is interested in developing these national income patterns as a guide to the way the economy is going. In connection with any problem under study the economist always wants to know "Why?"

The statistician is equally interested in national income data problems; but he is always defining and re-defining, not only his definitions, but his methodology as well. The general economist loses interest after developing the over-all concept, and has little patience with the fine points of statistical process. Since national income data rely so heavily for their development on the use of statistical and accounting procedures, procedures and practices which can become very technical, you and I, as amateur economists, will do better to keep our discussion on a non-technical level. We will seek to find the "why" answers, but leave to others the "how" technicalities.

At a convention of social scientists some time ago I learned that a social scientist can be identified as a person who cannot restrain himself from attempting to answer any question put to him. I recognize this as one of the identities of my group, but I shall try to resist the temptation to look learned by rushing in to attack tough problems during the question period. But I hope that during these recent days our acquaintance has caused you to decide that I am an "expert," defining that word from the meaning of its component parts: "ex" from the ancient Latin--a has been; and "spurt" from the modern idiom--a drip under pressure.

ECONOMICS AS A SCIENCE

The economist is always asking himself whether or not economics is a science. Some say it is not, because an economist doesn't enjoy the use of an experimental laboratory. Others say the economist's laboratory is the whole wide world. If you accept the latter, and some do, it is immediately necessary to say that this laboratory is peopled with human beings, who have the power to say "No" when all the data indicate the forthcoming answer to be "Yes."

Economics has espoused several approaches as means or methods of studying economic data during its 175-year history. One of the latest approaches, and the fairly current vogue, is the "mathematical-statistical" approach.

This approach digests--or attempts to digest--huge masses of statistics. For what purpose? It seeks to identify economic patterns--patterns of prior and of current economic behavior, which patterns may be useful in economic forecasting. Tracing these patterns is also most useful in providing a clear picture, or record, of what we have already lived through.

As I said before, if you can identify these patterns, if you can trace them and if you can understand them, you may know what action to recommend in connection with further developing or further restricting the current trend. Notice I say "you may know"; this mathematical-statistical method is still a young approach, in the attempt to make a science of economics. And, very important, you must still rely on human judgment as to what to do and when to do it.

DEVELOPMENT OF NATIONAL INCOME DATA

On 9 June 1932 the United States Senate, by resolution, asked the Secretary of Commerce to report to it on or before 15 December 1933 (giving him about 18 months time) two sets of estimates: First, a set of estimates showing the total national income of the United States for the calendar years 1929, 1930, and 1931, as well as an indication of the portions derived from agriculture, from mining, from transportation, from manufacturing, and from other gainful industries and occupations. Second, a group of estimates showing the distribution of this national income, in the form of wages, rents, royalties, dividends, profits, and other types of payments.

Thus was the United States given a national income accounting system. Some other nations had such an accounting system prior to this time. The same data are now collected by the United Nations and published periodically for all members.

II. NATIONAL WEALTH AND HOW IT IS MEASURED

This concept of national wealth, as distinguished from national income, is always, for me, a more or less static concept.

We are all accustomed to value our possessions as "worth" thus and so much; but we often get a rude awakening when we actually attempt to sell them, because we find that value-in-use and value-in-the-market-place are often of very different magnitudes.

But the concept has some uses, perhaps at least as a measure of investment. We say that the United States Capitol Building is worth "this" or "that" sum, when it is not for sale at all.

In 1806 Samuel Blodgett published a little book called "Economics. A Statistical Manual for the United States." It contained two sets of wealth estimates--an estimate of the value of real estate, and an estimate of the value of personal property.

In 1850 the Bureau of the Census became interested in this problem, and continued its interest until 1922. It published, in the Statistical Abstract of the United States, about two years after each decennial census, an estimate of the national wealth, using three categories: (1) real estate value (2) worth of personal property, and (3) stocks of consumer goods. For 1932 this study was left uncompleted following the 1930 census; and it was not even attempted following the 1940 decennial census.

More recently, the National Bureau of Economic Research, a non-profit scientific institute, and reliable for purposes of this kind, became interested in the problem. It published a study giving the estimates of national wealth for each year from 1896 through 1948. This study is more elaborate, and covers values for six wealth components: (1) residential structures (2) private non-residential structures (3) government structures (4) land (5) equipment (including both producers' durables and consumers' durables) and, (6) inventories.

For 1948 the bureau found the estimated wealth of the United States to be 800 billion dollars, without allowances for the values or worth of military assets, for consumers' semi-durables, for consumer perishables, for subsoil assets, or for collectors' items.

Now, from 1896 to 1928 the national wealth of the United States doubled, rising a little more than 2 percent per year. From 1928 to 1944, a depression and war period, it increased very little; and most of the increase, three-fourths of it, was accounted for by the construction of new government buildings. From 1944 to 1953, of course, there has been a sharp increase in production volume, particularly of producers' durable equipment and consumers' durable goods. The national wealth, then, of the United States has long since passed 1,000 billion dollars, without allowance for Korean price level increases. (That's a trillion dollars in the United States, if you are interested; in England it is not.)

III. COMPONENTS OF NATIONAL INCOME AND THEIR INTER-RELATIONSHIP

To develop this third topic, I have prepared a series of charts, which I will show you as slides. Copies of the more important ones, will be furnished you individually.

Before starting the visual aids, I wish to give you a definition for gross national product. GNP is the market value--note that, the market value--of all goods and services actually produced and before the deduction of depreciation charges.

We can approach this concept from two sides. First, using the so-called product approach, we can state these market values as the sums paid out for the products themselves--the expenditures for consumer goods and services, the expenditures for goods and services purchased by the Government, plus the sum of gross private domestic investment and net foreign investment.

The latter two terms need a little explanation. Gross private domestic investment includes newly produced capital goods, the value of the change in volume of inventories, and the value of private new dwellings, including those owner-occupied. Net foreign investment is the net change in international assets and liabilities growing out of foreign trade. It includes goods, gold, services, gifts, and contributions.

Second, we can state the gross national product in another way, using the "income approach." GNP is the total sum paid out as income to various recipients. It includes wages and supplements; unincorporated net income, (which simply means the incomes of small business men, of farmers, and of professional men); rents; interest; corporate profits; and indirect business taxes.

Three of these terms merit a definition.

1. Supplements to wages and salaries include employer contributions for social insurance, contributions to pension and welfare funds, for injury compensation, for directors' fees; and the pay of the military reserve.

2. Rents include imputed sums to cover the net rental value of owner-occupied homes.

3. Net interest includes imputed sums retained by life insurance companies and by mutual financial intermediaries.

Our first chart is a pictograph of national income concepts, using the income distribution approach. From this chart we can develop the five national income approach concepts or terms.

The first column shows the items that go to make up the gross national product. They include (1) wages and supplements (2) unincorporated net income (3) rents (4) interest (5) corporation earnings in the form of dividends, undistributed profits, and taxes (6) indirect business taxes, and (7) an allowance for depreciation.

At the foot of the column, encompassed in a broken line, you see the words "Purchases from Other Firms"---which must be deducted. Double counting--the fear of counting the value of the same thing more than once--is the bugaboo of the national income accountant. We must avoid counting in the value of the same thing twice.

An example: A farmer sells wheat to a flour manufacturer. The cost of the wheat is counted, once. To this cost is added only the additional value caused by the flour manufacturer's turning the wheat into flour. The value of the wheat is not added the second time. The same process holds for the baker, the wholesaler, and the retailer. Finally, when the cost of the loaf of bread is added up, it is 14, 15, or 16 cents, without the cost of wheat having been added in several times. The same thing would be true of the raw steel in an automobile.

The second bar on the chart is labelled "NNP," net national product. You will notice the column is composed of the same items, except the item of depreciation, at the bottom, which has been cut off. Depreciation is the amount of the national product that must be set aside each year to replace the current consumption of durable capital goods. A part of the product is retained as capital replacement. So gross national product, less depreciation, equals net national product. The rest of the items included are the same. (I might add that depreciation includes the depreciation charges against owner-occupied homes.)

Under the next column, you proceed in much the same way. From net national product, drop indirect business taxes to measure national income. Now, business taxes are "costs" of a kind. They include all sales taxes, some excises, and some real estate taxes. While they represent costs to business, they are not income to receivers.

CHART 1

NATIONAL INCOME CONCEPTS

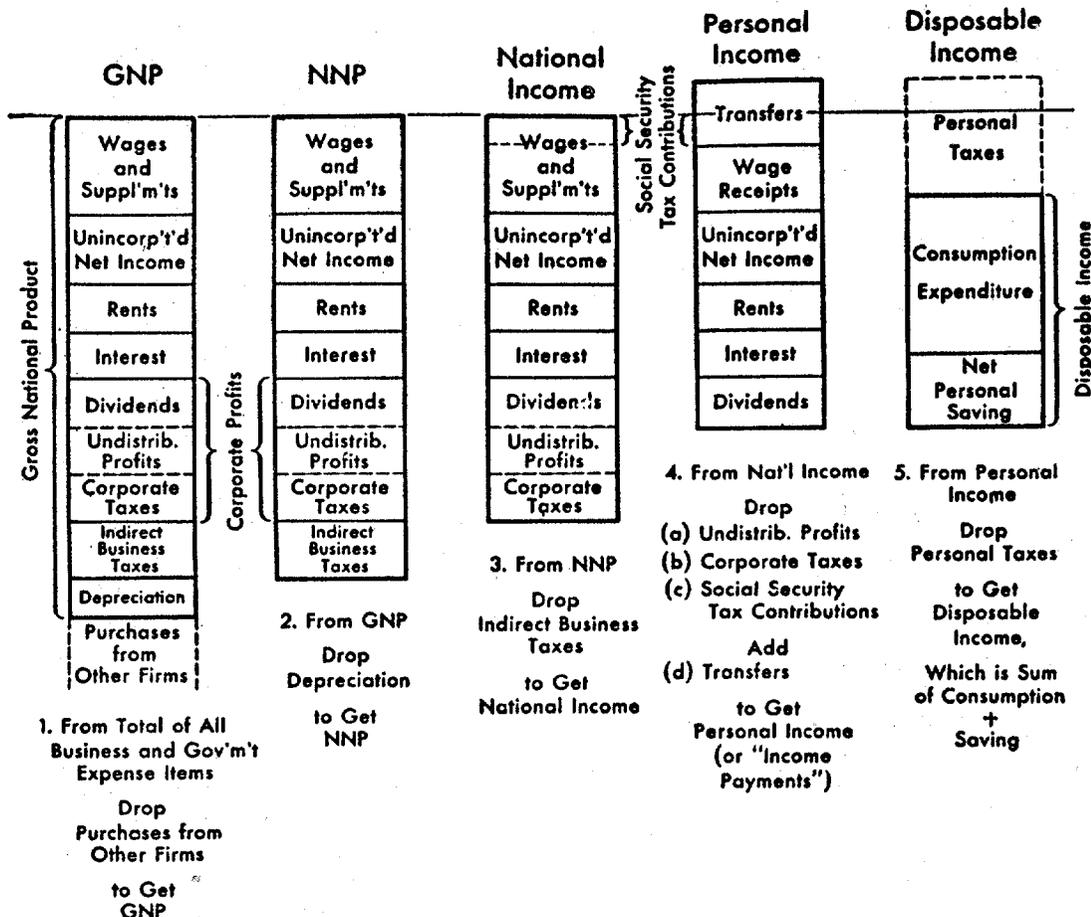


FIG. 7. This summarizes the relationships between gross national product, net national product, national income, personal income, and disposable income. (SOURCE: Department of Commerce revised concepts, adapted from Richard Ruggles, "Harvard Econ A Syllabus.")

From **ECONOMICS: An Introductory Analysis** by Paul A. Samuelson. Copyright, 1948. Courtesy of McGraw-Hill Book Co., pp. 242-44.

What about personal income? We carry the same items across, except to drop undistributed corporate profits, because they are not distributed as income. We also drop corporate taxes, because the Government gets them; income receivers do not. We retain corporate dividends, since they are distributed as income to individuals. Finally, we also deduct the amounts taken out of wages of individuals as social security contributions.

But we also add something extra to get personal income totals. You will notice the personal income bar extends upward, above the height level of the others. This is because extra or added transfer payments are included. These are social security payments to individuals, pension payments, and even gifts. These sums may not have been earned in the year in which they are being distributed, but they do increase the personal income total over that indicated by the annual gross national product.

Finally, we come to the last column, which is labelled "Disposable Income." After personal taxes are taken away, you save some and spend the rest. (Personal consumption expenditures include not only the market value of goods and services purchased, but also income in kind--an imputed value for food, clothing, housing, and financial services furnished. Disposable income includes the rental value of owner-occupied houses, but does not include purchases of new dwellings, which are classified as capital goods.)

You will notice that this chart is taken from "Economics: An Introductory Analysis" by Paul Samuelson, one of your collateral reading texts.

You may say: "It is all very well for economists to put a pretty drawing into a theoretical textbook, but what is its practical application? Let us see. (Chart 2, following page.)

Chart 2 illustrates these national income concepts statistically. This is the very same chart that we just saw, actually using United States Department of Commerce statistics for 1953. These columns are chopped off at the top, as items are eliminated from column to column.

Under the first column--Gross National Product--the first item is Capital Consumption Allowances (depreciation and economic obsolescence) 29.3 billion dollars for the year 1953. That was the last item in the column on the other chart. We deduct it from column two, and are left with Net National Product. Deduct 30 billion for indirect business

CHART 2

NATIONAL INCOME CONCEPTS, STATISTICALLY ILLUSTRATEDRELATION OF GROSS NATIONAL PRODUCT, NATIONAL INCOME AND PERSONAL INCOME, U. S., 1953
(billions of dollars)

	<u>Gross National Product</u>	<u>Net National Product</u>	<u>National Income</u>	
Capital Consumption Allowances, (Depreciation & Economic Obsolescence)	29.3			
		(GNP less (Depreciation))		
Indirect Business Taxes	30.0	30.0		
Business Transfer Payments	.9	.9		
Statistical Discrepancy	-.7	-.7		
			(NNP less In- (direct Bus. (Taxes & Transfers))	
Corporate Profits and Inventory Valuation Adjustment	42.4	42.4	42.4	
Corporate Taxes	23.6			<u>Personal Income</u>
Undist. Profits	10.4			(N. I. less Undist. (Profits & Corp. Taxes*)
Dividends	9.2			9.2
Inv. Val. Adjmt	-.8			
	<u>\$42.4</u>			
Interest	7.8	7.8	7.8	7.8
Rents	10.6	10.6	10.6	10.6
Unincorporated Net Income (Business, Professional, & Farm)	39.4	39.4	39.4	39.4
Wages and Supplements	<u>207.6</u>	<u>207.6</u>	<u>207.6</u>	207.6
Total	<u>\$367.2</u>	<u>337.9</u>	<u>307.7</u>	
				<u>PLUS*</u>
				Government transfer payments 12.8
				Net interest paid by Government 5.1
				Business transfer payments .9
				<u>LESS*</u>
				Social Security payments -8.9
				Total \$284.5
				Less Personal Taxes..... 36.6
				<u>\$247.9</u>
				Disposable Income (P. I. less (Personal Taxes)

Disposable Income equals Personal Consumption Expenditures, \$229.8 and Personal Savings \$18.1.

Source: Department of Commerce, Survey of Current Business, February 1954.
(See July issue for 1953 revised totals)

Discrepancies in addition due to rounding up.

taxes and add business transfer payments, and we are left with National Income. (A statistical discrepancy arises out of the differences in the two methods of computing GNP--the final products method over the income distribution method.) If we deduct corporate taxes and undistributed profits, leaving only corporate dividends, we have Personal Income. So the height of each one of those columns is exactly inclusive of the remaining number of items.

Personal income for 1953 was 284.5 billion dollars. Personal taxes took 36.6 billion dollars, leaving disposable income of 247.9 billions. Personal consumption expenditures, the line across the bottom, were 229.8 billion dollars; so we saved 18.1 billion dollars for the year 1953.

We see then, that somebody is working very hard at collecting and keeping these statistics, day after day. You can just imagine the number of clerks, statisticians, and the amount of equipment it takes to gather these data throughout the country and to keep track of them, largely in the Department of Commerce.

Previously, some thought the gathering of these data represented a luxury service, and that we were not to be criticized too strongly, as a nation, for not having provided national income data before 1932. Yesterday's luxuries are today's necessities. At a congressional hearing on 13 July 1954, users of these statistics appeared to testify wherein they were useful and in what ways they could be improved. Representatives of the economic foundations, the automobile and packing industries, labor, finance, agriculture, food, state and local government, construction, retail trade, and of the teaching professions were heard. In general, they wanted additional statistical material, they wanted the statistics for each period released more quickly, and they wished for some refinements in accuracy. But none suggested that the material be no longer gathered or no longer published.

Since our first statistical chart was rather crowded, I want to show you, briefly, several charts showing actual statistics for the year 1953. (Chart 3, following page.)

First, we have Gross National Product or Expenditures for 1953, Chart 3. This chart shows the breakdown of expenditures under the main sub-groups. Personal consumption expenditures of 229.8 billions went for durable goods, non-durable goods, and services. (This table is copied

CHART 3

GROSS NATIONAL PRODUCT OR
EXPENDITURE, 1953

(billions of dollars)

Gross national product	367.2
Personal consumption expenditures	229.8
Durable goods	30.1
Nondurable goods	121.2
Services	78.4
Gross private domestic investment	54.4
New construction	25.1
Residential nonfarm	11.8
Other	13.3
Producers' durable equipment	26.7
Change in business inventories total	2.5
Nonfarm only	3.2
Net foreign investment	-1.9
Government purchases of goods and services	84.9
Federal	59.7
National security	51.8
National defense	49.8
Other national security	2.0
Other	8.5
Less: Government sales	.6
State and local	25.2

Source: U. S. Department of Commerce, Survey of Current Business, February 1954. (See July issue for 1953 revised totals)

from a government report. It would be easier to read if the sub-totals were indented instead of appearing directly under the main totals.)

Gross private domestic investment of 54.4 billion dollars was divided between 25.1 billions for new construction and 26.7 billions for producers' durable equipment.

Net foreign investment shows a minus of 1.9 billion dollars. This simply means that more gold, goods, and gifts went out of the country than came in.

Government purchases of goods and services of 84.9 billion dollars was divided between Federal expenditures of 59.7 billions and state and local government expenditures of 25.2 billions. (Chart 4, following page.)

Next, National Income of the United States by Distributive Shares, for 1953. This chart repeats information already shown, but in a more detailed fashion. You may just read it for yourselves. Military wages and salaries, and government civilian wages and salaries are shown. (Some years this information is available, and for some years it is restricted.) Two additional concepts--personal income, and disposable income--are not individually illustrated, to save time.

You are naturally interested in historical statistics for comparison purposes. I have two charts on one slide, which may be helpful. (Chart 5, page 15.)

Both these charts illustrate our income data concepts for a series of years--1929, 1933, 1947, 1952, and 1953. You need only to read the totals for comparison purposes. 1929 was our best year up to that date; 1933 was a very bad year; 1947 a postwar year, and then the two current years. Each total represents current values at prices prevailing for that year. We had personal income in 1929 of 85.1 billion dollars. It dropped to 46.6 billion in 1933, but price levels were much lower. By 1947 we were at 191 billions, and last year enjoyed 284.5 billions.

It is possible to reduce these sums to constant-purchasing-power dollars, thus avoiding fictitious changes in the price level? Let us see.

CHART 4

NATIONAL INCOME OF THE UNITED STATES, BY DISTRIBUTIVE SHARES, 1953

(Billions of dollars)

			<u>Year 1953</u>
Compensation of employees			
Wages and salaries			
{ Private	\$164.1		
{ Military	10.4		
{ Government civilian	23.1		
Supplemental (largely social security and pension contributions)	9.9		
	<u>\$207.6</u>		\$207.6
Unincorporated enterprises			
Business and professional			
Farm	27.0		
	<u>12.4</u>	39.4	39.4
Rental income of persons			
			10.6
Corporate profits and inventory adjustments			
Corporate profits tax liability			
	23.6		
Corporate profits after taxes			
	19.6		
Corporate dividends			
	9.2		
Undistributed profits			
	<u>10.4</u>		
	19.6		
Inventory adjustment			
	-.8		
	<u>42.4</u>		42.4
Net interest			
			7.8
			<hr/>
<u>National Income</u>			\$307.7

SOURCE: U. S. Department of Commerce, Survey of Current Business, February 1954. (See July issue for 1953 revised totals)
 Details may not add to totals because of rounding.

CHART 5
(Table I)DISPOSITION OF PERSONAL INCOME
(billions of dollars - selected years)

	1929	1933	1947	1952	1953
PERSONAL INCOME	85.1	46.6	191.0	269.7	284.5
<u>Less:</u> a) Personal tax and Related Payments. b) Federal Taxes. c) Local Taxes.					
EQUALS: Disposable Personal Income	82.5	45.2	169.5	235.0	247.9
<u>Less:</u> Personal Consumption Expenditures					
EQUALS: Personal Saving	3.7	-1.2	3.9	16.9	18.1

(Table II)

RELATION OF GROSS NATIONAL PRODUCT,
NATIONAL INCOME AND PERSONAL INCOME
(billions of dollars)
(selected years)

	1929	1933	1947	1952	1953
GROSS NATIONAL PRODUCT	103.8	55.8	233.3	348.0	367.2
<u>Less</u>					
a) Capital Consumption allowances.					
b) Indirect Business Tax and Related Liabilities.					
c) Business Transfer Payments.					
d) Statistical Discrepancy.					
<u>Plus</u>					
Subsidies less current surplus of government enterprises.					
EQUALS: <u>National Income</u>	87.4	39.6	198.7	291.6	307.7
<u>Less</u>					
a) Corporate Profits and Inventory Valuation Adjustment.					
b) Contributions for Social Insurance.					
c) Excess of Wage Accruals over Disbursements.					
<u>Plus</u>					
a) Government Transfer payments.					
b) Net Interest paid by Government.					
c) Dividends.					
d) Business Transfer Payments.					
EQUALS: <u>Personal Income</u>	85.1	46.6	191.0	269.7	284.5

Source: U. S. Department of Commerce, Survey of Current Business, February 1954.
(See July issue for 1953 revised totals)

IV. USE OF INDEXES IN MEASURING TRENDS IN NATIONAL INCOME

Economists like to use market prices as a yardstick to measure the value of goods and services. But price levels have a way of shifting. If money incomes remain the same from one year to the next, while prices double, real income is actually halved. To compare national income over a period of years, we must correct money income by some standard of purchasing power.

CHART 6

INDEX NUMBER CONSTRUCTION

Commodity	1900		1901	
	Base Price (dollars)	100	Price (dollars)	Percentage to base
Iron	15 ton	100	20.00	133
Wheat	1 bushel	100	1.25	125
Cotton	.10 lb.	100	.10	100
Wool	.40 lb.	100	.36	90
Total		400		448
Average (arithmetic mean)		100		112

This slide illustrates index number construction. 1900 prices are the base, and 1901 prices are stated as some relative of the base. Iron sold for 15 dollars per ton in 1900 and for 20 dollars in 1901, a rise of 33 percent. Wool prices declined in 1901, the last item shown, giving us a price relative of 90.

Perhaps the best-known such standard is the monthly Consumers Price Index, a weighted-average index number issued by the Bureau of Labor Statistics. It covers various cost-of-living items. The combined index of consumer prices for the years 1947-49 is taken as the base year. The 1954 price index is stated as some percentage of the base year. Real income, then, equals money income divided by the price index. By comparing money national income and real national income, we can spot inflation periods and deflation periods. The elimination of fictitious changes in the price level gives a measure of real income, measured in terms of dollars of constant purchasing power.

Constant-dollar price index series for any considerable number of years are hard to find. Samuelson has constructed such a constant-dollar index for the United States since 1770. He uses it to illustrate price trends in war periods. You will find it on page 284 of the first edition of his book. (Chart 7, following page.)

I have constructed a table showing GNP in constant 1939 dollars, by 5-year periods, since 1910. The current dollars are also given. The third column shows the increase in industrial efficiency year by year, as reflected in sales values, measured in terms of 1939 dollars. You will note that real production has increased from 46.2 billion dollars to 154.3 billions since 1910, measured in constant-purchasing-power dollars. The second column indicates current-dollar price levels for each 5-year period, reflecting changes in the price level or value of the dollar.

V. ANALYSIS OF CHANGES IN NATIONAL INCOME COMPONENTS.

We have previously noted that the first step in the development and use of national income data came in 1932, when the Senate asked the secretary of Commerce to gather and furnish national income data estimates. The second step came in 1946, when the nation decided to make further use of such data. You will remember that in the 30's we got used to considering such topics as "economic maturity" and "economic stagnation." There was also the postwar question as to whether we would sink back into economic stagnation following the close of World War II.

Congress passed the Employment Act of 1946, approved in February. It is popularly known as the "full" employment act, since one of its objectives is to determine who has employment and who needs it. The stated purposes of the act are: (1) to foster and promote free competitive enterprise and general welfare conditions, under which there will be afforded useful employment opportunities; and, (2) to promote maximum employment, production, and purchasing power.

To accomplish this purpose, the President of the United States is required to send to Congress, within sixty days after the beginning of each regular session, an economic report (and such supplementary reports as he deems necessary.) (Actually, they have been coming out about each six months, but a report did not appear in July of this year.) This report is called "The Economic Report of the President."

CHART 7

GROSS NATIONAL PRODUCT IN CURRENT AND CONSTANT VALUE DOLLARSAND PRODUCT CHANGES PER MAN-HOUR

Selected Years

Billions of Dollars

<u>YEAR</u>	<u>GNP 1939 Dollars</u>	<u>GNP Current Dollars</u>	<u>PRODUCT PER MAN-HOUR (Non-Farm) 1939 Dollars</u>
1910	46.2	36.7	.61
1915	49.8	42.1	.66
1920	55.7	85.0	.72
1925	71.3	88.0	.87
1930	78.1	90.9	.87
1935	73.9	72.2	.94
1940	100.0	101.4	1.08
1945	153.4	215.2	1.29
1950	154.3	282.6	1.33

(Comparison of the two 1950 GNPs indicates a 54.6-cent dollar but product per man-hour has increased)

Source: *Varia*

The report must tell the Congress four things:

1. The levels of employment, production, and purchasing power obtaining in the United States, and such levels as are needed to carry out the policy declared in the act.
2. Current and foreseeable trends in the levels of employment, production, and purchasing power.
3. A review of economic conditions affecting employment in the United States, or any considerable portion thereof, during the preceding year; and the effect on employment, production, and purchasing power.
And --
4. A proposed program for carrying out the policy declared in the act, together with such recommendations for legislation as the President may deem necessary or desirable.

How does the President accomplish these four tasks? He has a Council of Economic Advisers to help him with the report. His report is then received in the Congress by the Joint Committee on the Economic Report. This committee consists of 14 members, 7 from each house. The Joint Committee has its own economic staff, and a group of consultants, housed in the Library of Congress. You will meet one of the most effective of these consultants next week--Dr. Piquet.

By May first the Joint Congressional Committee must file its own report on the President's recommendations, as a further guide to required legislation. Legislative attempts may be made to either augment or offset any indicated economic trend. (Chart 8, following page.)

The Council of Economic Advisers works up a yearly table known as "The Nation's Economic Account." The same information appears monthly in graphic form as the first chart in "Economic Indicators"--my Chart 8. The table shows an accounting of receipts and expenditures, by economic groups. This slide covers the year 1952. We are interested here in the type of items included in this balance sheet and not in the "currency" of the statistics. So, for economy reasons, I am using the 1952 slide.

We see the consumers' groups had receipts of 234.3 billion dollars, but expenditures of only 216.3 billions, resulting in an overage of savings of 18 billions.

CHART 8

THE NATION'S ECONOMIC ACCOUNTS, 1952

(Billions of dollars)

Economic group	Receipts	Expenditures
Consumers		
Disposable personal income	\$234.3	
Personal consumption expenditures (Personal savings (plus) \$18.0)		\$216.3
Business		
Retained receipts, current production	36.4	
Gross private domestic investments (Excess of investment (minus) -\$15.7)		52.1
International		
Net foreign investment \$.0		
Government (Federal, state, and local)		
Tax and nontax receipts or accruals less transfers, interest, and subsidies, (net receipts)	77.3	
Total Government expenditures, less transfers, interest and subsidies, (purchases of goods and services), (deficit on income and product account, minus \$-.1.4)		78.7
Statistical discrepancy (minus)	<u>-1.9</u>	<u>-1.0</u>
Gross national product:	\$346.1	\$346.1

Source: Midyear Economic Report of the President, January 1953, and the Department of Commerce.

The business groups show retained receipts from current production of only 36.4 billion dollars, but actual expenditures of 52.1 billions. The balance of 15.7 billions had to be borrowed from somewhere, but largely from the above savings.

Now, I do not need to rehearse this entire chart with you. I want only to point out that it is a balance sheet. The totals of the two columns covering receipts and expenditures must be the same; they must match. When they do not, there is added a little item for "Statistical Discrepancy."

Each of these monthly graphs and each annual or semiannual chart on the nation's economic accounts is regarded as a photograph of the prevailing, current national economic pattern. Each of these pictures is a photographic "still," not a movie or continuous picture. Each gives a recorded "glimpse" of the economy as it was on a certain day in each period.

Over a period of years this stock of economic photographs provides a recorded series of actually existing patterns, economic patterns, tracing the ups and downs of business and finance. If a former pattern, which had been followed by poor economic circumstances, is seen to be recurring, perhaps the Congress can do something in the way of legislation to alter the pattern.

You undoubtedly have already made up your minds as to whether or not you are sympathetic to the idea, or possibility, of managing the economy, and as to whether it is even possible to manage it. I will not dwell longer on the point, except to point out that there is the Employment Act of 1946.

All of the charts in the monthly Economic Indicator Series are designed to show economic trends, the trends about which we have been speaking. Our interest this morning is only in those charts which deal with national income. Let us look at a couple of examples taken from the June issue to see if we can interpret them; to see if we can detect the current trend of the economy.

Chart 9.--This is page 2, June 1954, Economic Indicators.

For the first quarter of 1954, as shown here, please read the totals from the right-hand axis. The gross national product, the first line shown, declined about 1 1/2 percent. A decline in inventory investment accounted

for most of the drop in gross private investment, the second line up from the bottom. Lower Federal expenditures, government purchases of goods and services, third line up from the bottom, were partially offset by a rise in state and local government expenditures.

Consumer expenditures, personal consumption expenditures, second line down from the top, were close to the level of the fourth quarter of 1953. The July preliminary estimates indicated a further decline in gross national product of three-tenths of one percent from the first quarter to the second quarter, 1954. Major changes in components were a decline of 2.8 billion dollars in Federal expenditures and an increase of 1.7 billion dollars in personal consumption expenditures. From your August issue you will note no further changes have occurred. The recession is now said to have "bottomed out."

Chart 10.--This is page 21, June 1954, Economic Indicators.

This chart reflects purchasing power. Compensation of employees--the lower shaded portion of the slide--and again reading totals in the right-hand axis--continued to fall moderately in the first quarter of 1954, as employment and hours continued downward. Proprietors' income--the next or second shaded portion upward from the bottom--showed little or no change. Neither did net interest show change. Corporate profits--the top shaded portion--increased, but inventory values were lower.

The July issue of "Economic Indicators" noted that compensation of employees in the second quarter fell somewhat below first quarter levels, Proprietors' income also declined in the second quarter, due to a fall in farm proprietors' income. The August issue showed no changes.

Chart 11.--This is page 23, June 1954, Economic Indicators.

Total personal income in April was measured at an annual rate of 282 billion dollars--reading again on the right-hand axis, top line--or 900 million dollars lower than in March. Farm income--the fourth shaded section down from the top--fell off at an annual rate of 800 millions, while the sum of all other incomes declined at a rate of 100 millions.

Wages and salaries--the bottom shaded section--extended their decline in May, while June showed a slight advance.

Chart 12.--This is page 25, June 1954, Economic Indicators.

Per capita disposable income dropped very slightly in the first quarter. In the second quarter it continued to decline slightly. The chart shows current prices and 1953 prices. The decline occurred in both categories. In June, consumer spending rose slightly at the expense of personal savings.

What of the future? In a lecture from this platform in January of 1953 Mr. Leon Keyserling, then Chairman of the Council of Economic Advisers, stated his belief that the national product could be raised by 1962 to 475 billion dollars, or even to 500 billions, measured in the same price level, without inflation. He labeled this total as an estimate and not a prediction. A year and a half later, in June of 1954, the chief economist of the Bank of Manhattan Company, Mr. Murray Shields, thought the value of national production by 1977 would approximate three-quarters of a trillion dollars, in terms of 1952 dollars--more than twice our current gross national product.

VI. NATIONAL INCOME ANALYSIS AS A TOOL IN ECONOMIC MOBILIZATION

The impact of war, of course, is felt in myriad ways. Manpower is diverted into the armed forces; there is a great increase in employment; labor is extensively retrained; large population movements occur; armament industries are expanded; raw material uses are curtailed in non-armament industries; new products are developed; synthetic materials supplement natural ones; and, finally, war goods production is expanded often at the expense of civilian goods.

Of what use, then, in time of mobilization are these huge masses of statistical data? They have at least five use classifications.

1. They become the base on which we make production decisions. A great deal of CMP work (the control of uses to which strategic and critical materials can be put in time of mobilization) is based on these figures, although much additional data direct from business itself are absolutely necessary.

2. They help to make possible computations by which business men can be compensated for cost changes. They help to make possible the adjustment of inequities brought about by price freezes and wage stabilization.

3. The disposable income data have some additional uses in furnishing clues as to how much more taxes you and I can pay. The rate of personal savings becomes known, and therefore the Treasury can determine the level at which it must pitch its "voluntary" bond sales campaign to get you to buy enough bonds from these savings.

4. The data on liquidity, which accrue during an emergency period, tell the decontrol planners the amount of financial backlog existing.

5. These statistical data are important in planning postwar production; and are of even greater importance in planning decontrol and re-conversion steps.

For 18 months all economists have been watching these indexes most carefully, seeking signs of inventory pile-ups, watching trends in the manufacture of producer durables, the building of new plants, and the number of new housing starts. We are now experiencing reconversion, following a limited mobilization.

SUMMARY

It only remains now to summarize what we have been told here this morning. (As you know, the prescription for successful preaching is first to tell your audience what it is that you are going to tell them; then tell them; whereupon you finish by telling them what it was that you told them.) We have reached the third step.

We have learned:--

1. That the United States instituted a national income accounting system in 1932; and we have become familiar with the five chief national income data concepts.

2. That the economist is interested in national income and product data as a series of economic photographs which have recorded various industrial and financial patterns. These earlier patterns can be compared with the currently unfolding pattern; and we have also tried our own hand with a few exercises to determine indicated trends.

3. That the national wealth of the United States has passed 1,000 billion dollars, even if the concept is somewhat sterile.

4. That an index number is a device for comparing data of various times and places, expressing the variables as percentages of some common base.

5. That we can develop constant-dollar purchasing power series, as a means of measuring real changes, independent of price level changes.

6. That the Employment Act of 1946 requires the President to recommend stabilization action to the Congress, based in part on a study of national income and product data.

7. And finally, that these data are useful in times of economic mobilization for planning wartime production, in fixing new tax rates, in indicating the expected volume of voluntary bond sales, and in connection with reconversion planning.

And there, gentlemen, is another five cents worth to add to your economics market basket.

COLONEL BARTLETT: I would like to emphasize again that this concept of GNP--what it is and its usefulness--is something that you should grasp during this unit of the course. You will find the term GNP used in practically every other unit of the course.

I am certainly not urging you to study over this three-day holiday, but I do say it is a very important concept, that you should thoroughly understand.

I am sure, from the rapidity with which the statistical tables were thrown at you, that there are a great many questions here--questions as to why certain groupings are there and what those groupings mean. Any questions that you have in your mind Andy will be glad to answer now.

QUESTION: The charts showing purchasing power in terms of 1939 dollars are quite useful. It seems to me that such a series in terms of 1933 dollars would overcome some of the fallacies of interpretation that you see in the newspapers.

DR. KRESS: You remember, yesterday Mr. Gainsbrugh said that subscription to "Economic Indicators" was the best device that you could have; and that the little statement at the top in his chart was the best and shortest interpretation of economic trends possible. All I was doing in my slides was to give you the statements in each chart, taken from June and July and August issues.

He is the chief economist to that very important foundation that he is with. He was not attacking in any way his old boss, Dr. Burns, Chairman of the Council of Economic Advisers at this time; but I think he was speaking very frankly yesterday.

Now, actually, some time back, several years back, some of the newspapers criticized some of the analyses of these indicators. The Department of Commerce was blandly stating that they gathered the statistics and they didn't interpret them; had no opinion or knowledge about how it was done. Well, at that time Mr. Keyserling, who was Chairman of the Council of Economic Advisers then--and he was the most political chairman they ever had in there. He proudly took the credit for interpreting the statements, saying: "I am very happy in my interpretations, and I hope you are."

Now, then, I am quite sure that this present chairman, who is of a different stripe altogether from that, may feel differently about charts and think the words in the August issue were a little bit extremely stated.

I think the only answer by and large is to say that politicians will always interpret things in their favor as much as they can. I use that word "politicians" advisedly. The word "politicians" is sometimes used in a nasty sense, but I don't believe it should be used in that sense. "Politicians" is a term that describes people in political life. They have lost their old jobs and given up their former professional practices; and so they must stay in politics. Besides, they have some obligation to their group to state things in the best possible light for that group. So I was using that term in that sense.

I think a politician is a combination of a lot of things. He has to be a statistician, an economist, a lawyer, and a philosopher. I think, when you have two sets of politicians offsetting each other, you can be sure you will get the best-informed people in the world; and that if one set says anything wrong, the other set will correct it mightly quickly.

So I think there has been very little political interpretation in those figures.

QUESTION: Concerning the validity of these data, would you briefly generally indicate the sources and the way in which the data are gathered?

DR. KRESS: Yes and no. There is in the lebrary a book with a green cover and these words "Economic Indicators" written across it. It is a publication of 50 or 60 pages. It goes into detail about how each one of these is made up, who makes it up, and just how it is done.

It is a pretty detailed process. The whole Business Section of the Department of Commerce does very little else than gather these things. The Bureau of the Census has a great group of people who have to make monthly predictions. There are groups in the Bureau of Labor Statistics and the Federal Reserve System who do it. As I said to my own discussion group, these things in these "Economic Indicators" are such standard things that the Council of Economic Advisers accepts them and publishes them in their monthly publication. The thing that is interesting is the graphic form and the little interpretations at the top as to what the council thinks they mean.

COLONEL BARTLETT: It would be correct to say, would it not, that the primary sources are very numerous? We have the reports of business and the Federal Government as a source. We have the decennial census collections. We have the annual census samplings as a source.

DR. KRESS: Yes.

COLONEL BARTLETT: We have open information, which companies themselves publish, such as annual corporation statements and stock market reports.

DR. KRESS: Yes. And we have the 5-year business censuses and the 2-year business censuses. The 5-and 10-year business censuses are called bench marks. Then in between the 5-and 10-year censuses we have the annual samplings.

COLONEL BARTLETT: Who makes those annual business censuses?

DR. KRESS: The Department of Commerce. I attended subcommittee meetings on July 12 and 13 of this year at which the censuses were discussed.

COLONEL BARTLETT: Those are the primary sources, are they not, of this information?

DR. KRESS: Yes. The 2-year, 5-year, and 10-year censuses are done by actual count. In between those estimates are made through the sampling processes. These sampling processes come in for their share of criticism. But, actually, the statisticians have their processes for small samplings and large samplings; and they do a right good job.

STUDENT: I am not at all convinced that the sampling processes are valid.

DR. KRESS: I studied what little statistics I have followed rather late in life, but I was advanced enough to tease the professor over the validity of his processes. He convinced me that he could do it.

QUESTION: We have heard that the gross national product of the United States is extremely important in our studies. We have also heard that the relationship that we have with other countries, both allies and potential enemies, is important. Do these other countries have equal or comparable systems of gathering data; and do they publish them and make them available to us in the way in which ours are made available to them?

DR. KRESS: Certain of them do. In fact, we are newcomers in this field, although, as in everything, when we get started, we are apt to make it more elaborate than any of the others.

England, France, and Germany all do it and publish the data. The United States Statistical Section published them each month. They are in the library too. Poland is the only country behind the Iron Curtain for which the United Nations publish figures.

COLONEL BARTLETT: I would like to augment that by saying that I recall in a seminar on manpower the seminar speaker was from the UN, engaged in the annual UN report on demography; and he admitted frankly that the only thing the UN did was to take the reports of a country, furnished by the government of that country, and publish them. They had no way to evaluate a report as to its accuracy. If the French, for instance, felt that a declining birth rate was a bad thing to publish and had given the UN a figure that did not reflect it, the UN had no desire to question the validity of the figures of the French government. They simply published them and it was up to you to determine the validity.

I am sure that for UN figures on national income and GNP, which come from the government of the country concerned or an agency of the government, it is up to you, based upon past experience and any other checks you can apply, or the advice of experts, to question the accuracy and the validity of the figures.

As Andy has said, in our own country you can question the interpretation of politicians, but the accuracy of the statistics themselves is perhaps subject only to the question of the statistical accuracy of the samplings as compared with a 100-percent tabulation. But I would caution you that, where other countries are concerned, you must evaluate the validity of the figures.

QUESTION: You mentioned that these estimates are really forecasts, extrapolations from the data collected. There seem to be differences of opinion on the Council of Economic Advisers, for example. What is their batting average? Have they been accurate in their forecasts recently?

DR. KRESS: The forecasting in that sense has not been done too much by anyone. The statisticians in charge of getting these statistics have been very careful about them. Sumner Schlichter, of Harvard, had been forecasting ever since 1945. He has forecast what would happen in two or three years from now, and in the next ten years. In many cases, as Dr. Gainsbrugh said, he agreed that he has been wrong.

COLONEL BARTLETT: I think maybe this is a good time to tell a little story that has to do with that. It seems that a businessman had returned to attend a ten-year reunion at his college. He dropped by the economics department and the dean of economics was there. This man said, "What do you ask your students today in your final examination? I can remember those final questions you asked me." The dean said, "Here are the final questions that we are going to ask." He looked at them and said, "These are the exact questions you asked me ten years ago." "Yes. We ask the same questions that we did then." "Don't you realize that the students will pass them on to the next year's class?" He said, "That's all right. In economics we change the answers."

The point I wish to make is that perhaps the standards by which you evaluate will change also over a period of year, and so, changing the answers is not necessarily as facetious as it sounds.

QUESTION: I gather that national income data are a sensitive indicator, or some of its components. Yesterday Dr. Gainsbrugh said that the index of private investments was the first signal of a downward or upward change. Will you discuss that?

DR. KRESS: Contrariwise to what you would expect, if you look for a recession--which you have been. Somebody on this platform last year, Dr. Burns, I think it was, said that if we had a recession, it would be the best-advertised one in the history of the world, the best-organized one.

Professor Burns, of the Council of Economic Advisers, indicated at these hearings on July 12th and 13th, as one of his private contributions to this scheme, that he has discovered these sensitive indexes. There were at least three or four; and I think sometimes there are as many as seven or eight. One of these has been private investments.

If a business man doesn't feel that the future is going to expand as far as his product is concerned, he naturally doesn't spend any more on capital goods. He retrenches. So we can watch these censuses of durable goods very closely as indicators. They have done very well indeed, especially for producer goods.

Now, new housing costs have stayed up far longer than anyone thought they would. They have not gone down much from what they were. Still the number of new houses continues to be very high.

Of course, it is always the people who build houses and plants who get out of work first, that is, construction people. They move around the country a lot to get jobs. While we think of them as getting high wages, actually they are subject to periodical unemployment, bad weather, and that sort of thing. Usually they cry very quickly when they are out of work. They are not crying at the moment.

I am sure that the economy is inherently strong and that these adjustments are probably just the end of one job and the beginning of another. It takes a little time to absorb these workers that are let out of defense plants into something else. So, judging by these indicators, it looks like the economy is all right. Businessmen apparently think things look all right. They are not canceling contracts or canceling plans for expansion.

COLONEL BARTLETT: Andy, I want to thank you for your address this morning. As far as I am concerned at least, you didn't let me down. I am sure the faculty and students feel the same.