NATIONAL INCOME DATA AND THEIR USE IN NATIONAL DEFENSE

10 September 1952

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COLONEL BARTLETT: Admiral Hague, gentlemen: After today you have only two more lectures and Unit I will be completed. Now you have been told that Unit I is the background for all the other units which are to come. Part of that background is a refresher course in economics. In your reading on the subject, I am sure you have come across the words "national wealth" and "national income."

Our speaker today upon these two concepts is a member of our own faculty, Dr. Andrew J. Kress, and because he has the ability to describe a complicated concept in simple words which we can understand, the college sometime ago prevailed upon him to leave his position as chairman of the Department of Economics at Georgetown University and become a full-time member of our own staff.

I know as a student last year that he has a complicated topic to get across and I am not going to take any more of his time. Andy, it is a pleasure to introduce you to the Class of 1952-1953.

DR. KRESS: Admiral Hague, gentlemen: I am glad Colonel Bartlett mentioned my name at the end of that because I don't know whether I can live up to all he said or not.

We are to discuss national income data and their use in national defense. Let me hasten to say at once that we are not talking about the general idea of national income. We are talking about national income data. So this is a technical topic. I suppose it is something like castor oil; it is good for you but it is not so easy to swallow. I have, therefore, prepared as handouts, copies of the statistical charts that we will use here this morning, plus two and one-half pages of official definitions for these national income concepts. They will be in your mail boxes during the day. So you can relax a bit because you won't have to take notes, except when we come to topic four, which is not in the handout. The material is on that little hidden blackboard there and at that time you will probably want to take a note or two. Otherwise you need not worry.

Now let me give you an over-all concept right quick of what we are after. As I say, this is a technical discussion. What is all the technicality about? The question is: How do you find out what the economy is doing and, having found out, can you get it to do something other than what it is presently doing?

We will develop our subject under six 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. The use of indexes in measuring trends in national income.

5. An analysis of changes in national components as a guide to the functioning of the economy.

6. National income analysis as a tool in economic mobilization.

We begin then with a definition. I have to keep these definitions accurate, so you will please permit me to read them.

Topic one.--"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 taxes on those earnings." They take the form then of wages, profits, interest, and rental income.

Now the economist is interested--and I hasten to plead guilty to being a member of that iniquitous group bearing the title of "general economist." A general economist is interested in these national income patterns as a guide to the way the economy is going and then in connection with any problem being studied, he always wants to know "Why?"

But the statistician is also interested in this problem and he wants to know "How?" He is always refining his definitions and always refining his methodology. The general economist loses interest after he develops the general concept. What I am leading up to is this: If you ask me too finely drawn questions in the question period, I shall simply have to say that I will have to look them up for you, because I am not a statistician. I learned the other day at a convention that a social scientist is one who cannot refrain from attempting to answer a question put to him. I recognize that as one of the identities of my group and I shall try to resist during the question period, when the questions get too finely drawn.

The economist is always asking himself whether or not economics is a science. I think one of the men on this platform this week said it is not because it doesn't have a laboratory. Some people say that the economist's laboratory is the whole wide world. Well, if you

accept that, and some people do, then I immediately say that this laboratory is peopled with human beings who have the power to say "no" when all the data indicate that the forthcoming answer will be "yes."

The Oxford English Dictionary gives one of its definitions of science as: "A branch of study which is concerned with a connected body of truths, or with observed facts, systematically classified and more or less colligated by being brought under general laws and which includes trustworthy methods for the discovery of truth within its own domain." Notice that last sentence, "which includes trustworth methods for the discovery of truth within its own domain."

I want to rehearse for you, very briefly in time, some of the schools or approaches to economics and indicate how they tried to discover truth.

First, of course, we have the classicists or the classical approach, led by the great Adam Smith. His "Wealth of Nations," although written in 1776, is very good reading today. I recommend it to you. Smith studied the economics of the free market. He used a system of inductive-deductive logic to establish the truth of his findings. His followers became interested in "economic man."

The historical or realist school (largely German), said the proper study of economics was not man but men, and men under sundry aspects and in several areas. So they made their contribution along those lines.

They were followed by the pure economy school. You have also heard from this platform that no "pure economy" can exist, in that man's opinion. The pure economy school tried to discover the laws of science, not to create them. They thought that economics was an exact science and if they could find its laws, they would know what steps to take to operate within those laws.

They were followed by the welfare school, which develops the institutional approach. Two English leaders in this group, Pigou and Keynes developed somewhat contradictory findings.

Now, and finally, we come to the mathematical-statistical approach. This mathematical-statistical approach digests, or attempts to digest, huge masses of statistics. For what reason? Seeking patterns of economic behavior. As I said before, if you can gage those patterns, trace and understand them, maybe you will know what to do in connection with developing or restricting current trends. Notice I said "maybe." This is still a young approach to the science of economics.

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--gave him about 18 months--two sets of estimates: First set was estimates of the total national income of the United States for the calendar years 1929, 1930, and 1931, and to indicate the portions derived from agriculture, mining, transportation, manufacturing, and other gainful industries and occupations. The second group of estimates was the distribution of this national income in the forms of wages, rents, royalties, dividends, profits, and other types of payment.

Thus was the United States given a national income accounting system. Other nations had one before us; it is now a series kept by the United Nations for all its members and published periodically.

What are the general uses or practical aspects of this approach? These national income statistics provide a basic statistical framework required for the study of (1) long-term economic trends, (2) of business fluctuations, (3) for the formulation of business and government economic policies, and (4) they provide data to help the businessman judge the market for his own product and help the Treasury estimate government tax revenues.

Now I want to talk about "national wealth." I am talking about national wealth merely to distinguish it from national income.

Topic two.--National wealth is a sort of static concept. All the things you have are "worth" so-and-so much, unless you want to sell them quickly. Whereas gross national product is distributed each year. You get your part; I get my part. That is a dynamic concept, switching from day to day; that is how we find what the country is doing.

In 1806 Samuel Blodgett published his "Economics, A Statistical Manual for the United States." It contained two sets of estimates, an estimate of the value of real estate and 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, two years after each decennial census, an estimate of the national wealth in three categories: (1) real estate, (2) personal property, and (3) stocks of consumers' goods. For 1932 this study was left incompleted; in 1942 not even an attempt was made on it.

Topic three.--The National Bureau of Economic Research, which is a nonprofit scientific institute and reliable for purposes of this kind, became interested in the problem after World War II and published a study giving the estimates of national wealth for each year from 1896 down through 1948. That study is a little more elaborate. Its six components are:

1. Residential structures.

2. Private nonresidential structures

3. Government and institutional structures

4. Land.

5. Equipment, (a) producers' durables and (b) consumers' durables.

6. Inventories.

For 1948, then, the Bureau found the estimated wealth of the United States to be 800 billion dollars if several things were left out--military assets; consumer semidurables and perishables; subsoil assets; and collectors' items.

Now if you want to include military items at anything like their full valuse or replacement value, you would add 10 percent to that 800 billion dollars. But if you included them only at their liquidation value, what someone else would give you for them, you would add only 1 percent. If you add something for consumer durables and subsoil assets you would add 5 percent.

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 it increased very little, and three-fourths of that increase was accounted for by new government buildings. From 1944 to 1948, of course, there was a sharp increase, particularly in producers' durable equipment and consumers' durable goods. It is estimated the national wealth of the United States has now passed 1,000 billion dollars. That is a trillion dollars, in the United States; in England it isn't.

Now we come to the part where technical difficulties arise. I have here a series of charts. Most of them, as I said, will be in your mail boxes before the day is over.

Chart 1, National Income Concepts, following page.--Now the first is a bar chart and shows national income concepts under five heads. If I give you a definition for the first one, the others will follow almost automatically. "Gross national product or expenditure is the market--value--note that 'market value'--of the output of goods and services produced. It comprises the purchases of goods and services, gross private domestic investment and met foreign investment," including depreciation, It is made up of wages and supplements; it includes bonuses and subsidies of various sorts in the way of salaries and unincorporated net income--income from businesses which are not incorporated.

CHART 1

NATIONAL INCOME CONCEPTS

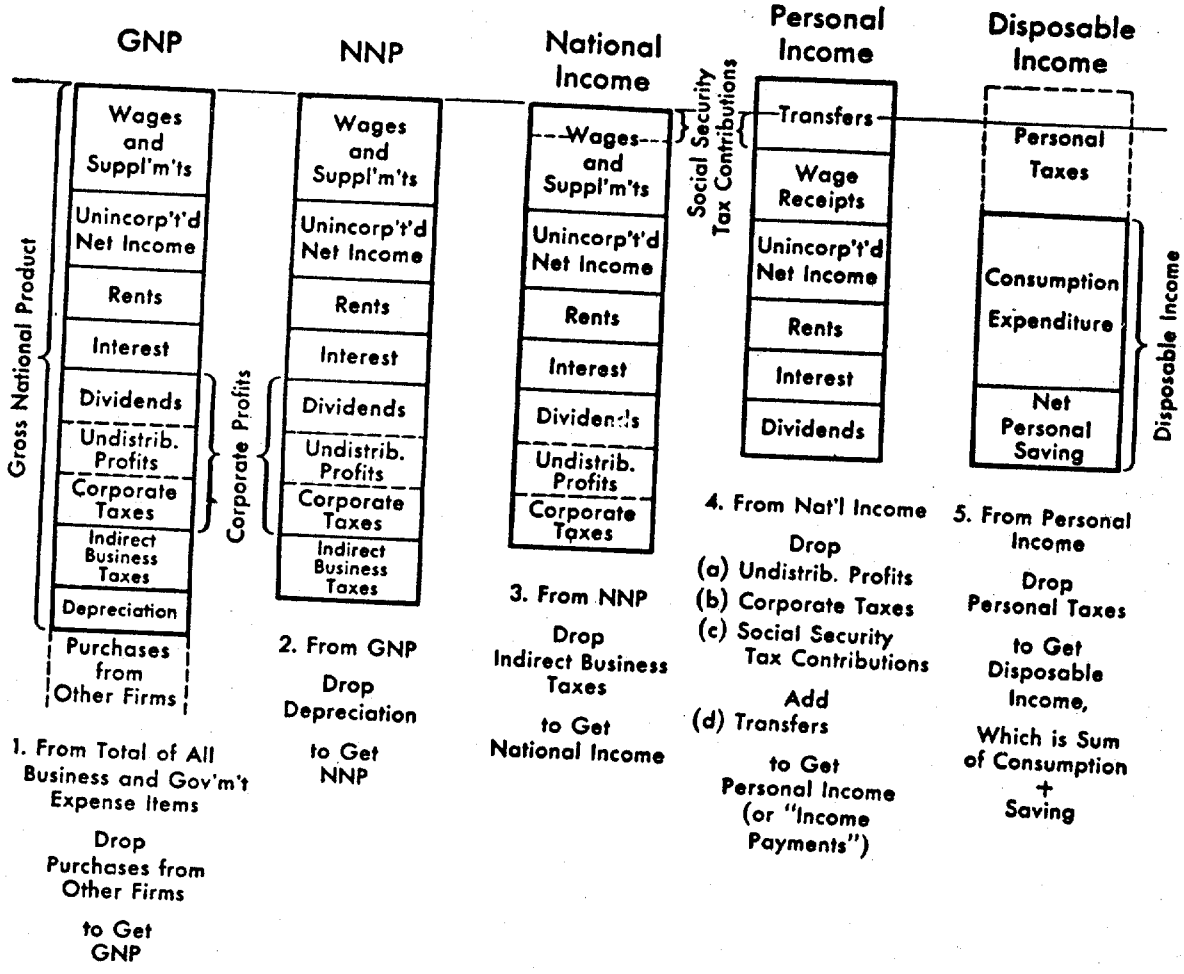

FIG. 7. This summarizes the relationships between gross national product, net national product, national income, personal income, and disposable income. (SOURCE: Department of Commerce revised concepts, adapted from Richard Ruggles, "*Harvard Econ A Syllabus.*")

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

It also includes technical incomes, professional incomes, and farmers' incomes; rents; interest; corporate profits, subdivided into three heads --dividends, undistributed profits, and corporate taxes; indirect business taxes and depreciation.

Now underneath, in a broken line, you see the words, "Purchases from Other Firms." Double counting is the bugaboo of the national income accountant. We must avoid counting the same thing twice.

An example is a farmer who 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 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 the wheat having been added in several times.

The second bar of the chart is called NNP, net national product. You will notice this is exactly the same as the first one, except for the item of depreciation which has been cut off. Depreciation is the sum of the national product that gets used up each year in manufacturing the gross national product. So gross national product less depreciation equals net national product.

In the next column you proceed in much the same way. Net national product and national income have the same items except that in national income we have dropped indirect business taxes. Now taxes are costs of a kind. They take the forms of excises sales taxes, and some real estate taxes. They represent a cost to business but do not represent income to receivers.

Now what about personal income? You carry the same items across, except that you drop "undistributed corporate profits" because they were not distributed as income. You drop "corporate taxes" because the government got them, income receivers didn't. But you do keep corporate dividends because they were distributed to individuals.

You will notice the cap at the top of the column is a little higher on the personal income bar, above the levels of the others. That is because there are some extra payments included. There are included social security payments, payments to older individuals, retired individuals, pension payments, and even gifts. That money may not have been earned in the year of which we are speaking, and increases the amount of personal income over that indicated by the gross national product. You also deduct the amounts that are taken out of your wages for future social security.

Finally, we come to the last column which is disposable income. After your personal taxes are taken away, you save some and spend the rest.

You will notice this chart is taken from "Ecomomics: An Introductory Analysis," by Paul Samuelson. Some of you have been assigned that book to read and the library has copies. You may say, "That is all very well for something theoretical but what is its practical application?" Let us see.

Chart 2, National Income and Product of the United States, 1951, following page.--Here is the same chart actually using United States Department of Commerce figures.

Under the first column, gross national product, the first item is "Capital consumption allowances" (depreciation and economic obsolescence) 23.5 billion dollars. 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 25.4 billion dollars for indirect business taxes and we are left with national income. 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 current number of items.

Disposable income for 1951 was 251 billion dollars. Personal taxes were 28.4 billion dollars and personal consumption expenditures were 205.5 billion dollars, so we saved 17 billion dollars that year.

We see, then, that somebody is working very hard at keeping these statistics day after day. You can just imagine the number of clerks, statisticians, and equipment it takes to gather those data throughout the country and keep track of them in the Department of Commerce. It is something of a luxury service perhaps and maybe we are not to be criticized too much if we didn't have it before 1932.

The next thing the national income accountants do is to break national income down by distribution shares. The accounting is accomplished by an entirely separate process and makes a double check on the other sets of figures.

Chart 3, National Income of the United States, by Distribution Shares, 1951, page 10.--So you have national income as it is distributed: Compensation of employees; unincorporated enterprises--business, professional, and farm; rental income of persons; corporate profits and inventory adjustments; and net interest. So the national income total is the same.

CHART 2

NATIONAL INCOME AND PRODUCT OF THE UNITED STATES, 1951

(Billions of dollars)

		Gross national product	Net national product	National income	Personal income
Capital consumption allowances (depreciation and economic obsolescence)		23.5			
Indirect business taxes		25.4	25.4		
Statistical discrepancy		3.2	3.2		
Corporate profits and inventory valuation adjustment				National income	
		42.8	42.8	42.8	
Corporate taxes	25.3				Personal income
Undistributed profits	9.5				9.4
Dividends	9.4				
Less inventory	44.2				
Valuation adjustment	1.4				
	42.8				
Interest		5.7	5.7	5.7	5.7
Rents		8.3	8.3	8.3	8.3
Unincorporated net income (business, professional, farm)		40.6	40.6	40.6	40.6
Wages and supplements		178.1	178.1	178.1	178.1
		327.8	304.3	275.5	242.1
Plus					
Government transfer payments					11.7
Net interest paid by Government					4.9
Business transfer payments					.8
					259.5
Less					
Social security payments					8.5
					251.1
Disposable income	251.1				
Less personal taxes	28.4				
	222.7				
Personal consumption expenditures		205.5			
personal savings		17.2			
		222.7			

(Discrepancies in addition due to rounding up)

Source: Survey of Current Business, May 1952.

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CHART 3

NATIONAL INCOME OF THE UNITED STATES, BY DISTRIBUTION SHARES, 1951

(Billions of dollars)

Compensation of employees			
Wages and salaries			
Private	140.3		
Military	9.1		
Government civilian	20.0	169.4	
Supplemental (largely social security and pension contributions)		8.7	
		178.1	178.1
Unincorporated enterprises			
Business and professional	23.7		
Farm	16.9	40.6	40.6
Rental income of persons			8.3
Corporate profits and inventory adjustments			
Dividends	9.4		
Undistributed profits	9.5		
Corporate profits tax liability	25.3	44.2	
Inventory adjustment (deduct)		1.4	
		42.8	42.8
Net interest			5.7
National income			275.5

Source: Survey of Current Business, May 1952.

You will notice that the source of these data is the "Survey of Current Business" of the United States Department of Commerce, which is a monthly publication that treats of many things. In the back are these tables and they are kept up to date monthly and quarterly. Every once in a while the Bureau makes a special supplement on national income alone. Practically all the charts you will see here in a moment have come out of the Supplement for 1950. All are in the library and you may study them as much as you like.

Topic four.--This is the part where there aren't any notes in your mail boxes. You may want to remember this concept of index numbers and their uses.

The thought immediately suggests itself to you that if we can find ways to compare production with income and keep these statistics over the years, they will be a very valuable set of economic tools. We do this by constructing a set of "index numbers." An index number is a means by which data gathered at various times and places may be readily compared. The process of comparison may be facilitated by expressing the variables as percentages of some common base, either at a given date, a given period, or a given place.

To get a summary expression of the general trend or index of prices, resort is had, as I said, to the method of index numbers. An example will best explain how an index number is constructed.

Suppose that on 1 January, 1900 the price of iron was 15 dollars a ton, wheat 1 dollar a bushel, cotton 10 cents a pound, and wool 40 cents a pound--these are called "base" prices. Later prices are expressed in relation to them, usually by stating them in terms of a percentage. Suppose that a year later, the prices of these four commodities have come to be 20 dollars for iron, 1.25 dollars for wheat, 10 cents for cotton, and 36 cents for wool--then the actual prices and the percentage relationship would stand as exhibited on the blackboard. The 1901 percentage relationship of iron to that of 1900 would be 133 percent, or 20 divided by 15.

Commodity	1900 Base price (dollars)	100	1901 Price (dollars)	1901 Percentage to base
Iron	15.00	100	20.00	133
Wheat	1.00	100	1.25	125
Cotton	.10	100	.10	100
Wool	.40	100	.36	90
Total		400		448
Average (arithmetic mean)		100		112

In this example, the index number shows a rise in prices of 12 percent.

We will talk very briefly about four types of index numbers. The first one is "a simple index number"--divide each given number by the number in the base year and express the result as a percentage, that is, multiply the dividend by 100; we usually omit the percentage mark. Thus the simple index number for iron in our table in 1901 is 133.

The second type of index number is the "composite index number." Several commodities may be averaged for a given period. The average may then be compared with a similar average for the same commodities but for a different period. The arithmetical average in the table is 100 against 112.

The third type of index number is the "weighted index number." Of course there are thousands of ways to weight any index series. For example, if bread is twice as important as iron, you multiply the price of bread by 2, or count it twice. You may weight the components in an index series in many, many ways.

Then there is the "common aggregative index number," used by the Bureau of Labor Statistics. It multiplies each one of the same items in a series by a common quantity, say 1,000 bushels of wheat. This is for technical statistical reasons. It gets away from certain biases in handling numbers.

Indexes and index numbers are of great value in deflating a price series. We can use them to achieve a constant value series in terms of purchasing power. Let us take an example or two.

Chart 4, page 13.--In 1950 the average wage was 3,024 dollars compared to 1929 when it was 1,421 dollars. But if we compute a constant value series and report the 3,024 dollars in terms of the purchasing power of 1929 dollars, we had only 2,155 dollars. Per capita real personal income was 1,053 dollars in 1950 compared to 699 dollars for 1929. But because of higher taxes in 1950, real disposable income was only 957 dollars.

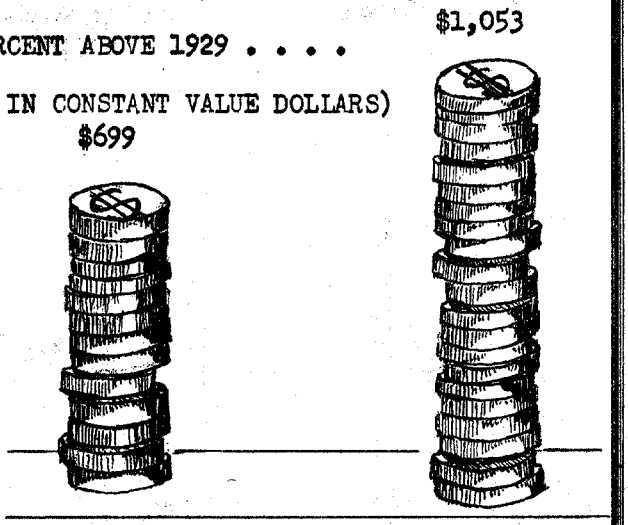
From 1929 to 1950, Chart 5, page 14, shows the national output of the United States increased in dollars 172 percent.

Chart 5, From 1929 to 1950 the National Output of the United States, page 14.--The actual increase in volume, in the number of shoes, boots, and so on produced, was only 80 percent, whereas the per capita volume dropped to 44 percent because there were more persons to divide among. Of the increase in the total volume of national output of 80 percent from 1929 to 1950, consumers got two-thirds, the Government took one-fifth, and investment required one-seventh.

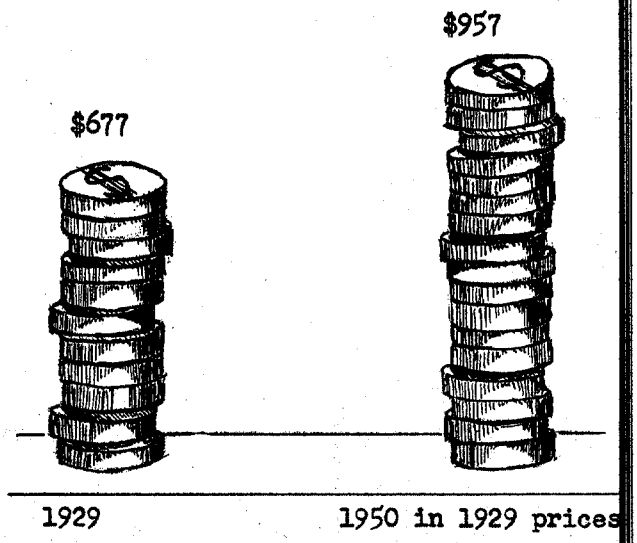
CHART 4

PER CAPITA REAL PERSONAL INCOME IN 1950 WAS 50 PERCENT ABOVE 1929 . . . .

MEASURED IN CONSTANT VALUE DOLLARS)

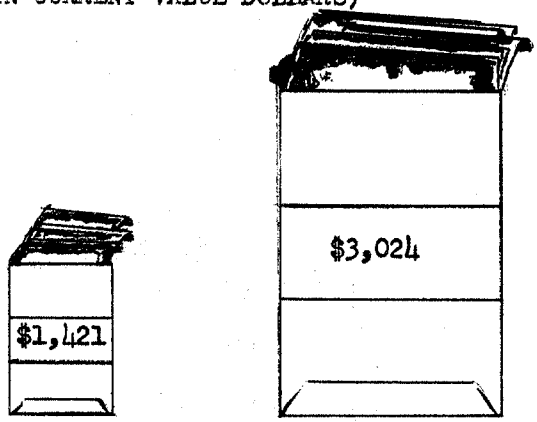


BUT BECAUSE OF HIGHER TAXES IN 1950, PER CAPITA REAL DISPOSABLE INCOMES WAS 41 PERCENT ABOVE 1929

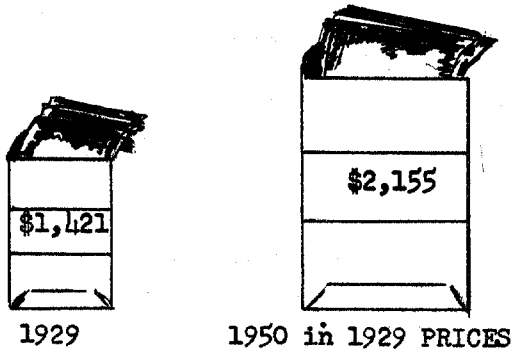


EMPLOYEES ON A FULL-TIME BASIS IN ALL INDUSTRIES EARNED AN AVERAGE OF 113 PERCENT MORE IN 1950 THAN IN 1929 . .

(IN CURRENT VALUE DOLLARS)



AND AFTER ALLOWANCE FOR HIGHER PRICES THE PURCHASING POWER OF THIS INCOME WAS 52% LARGER.



Source: National Income, 1951 Edition; A Supplement to the Survey of Current Business.

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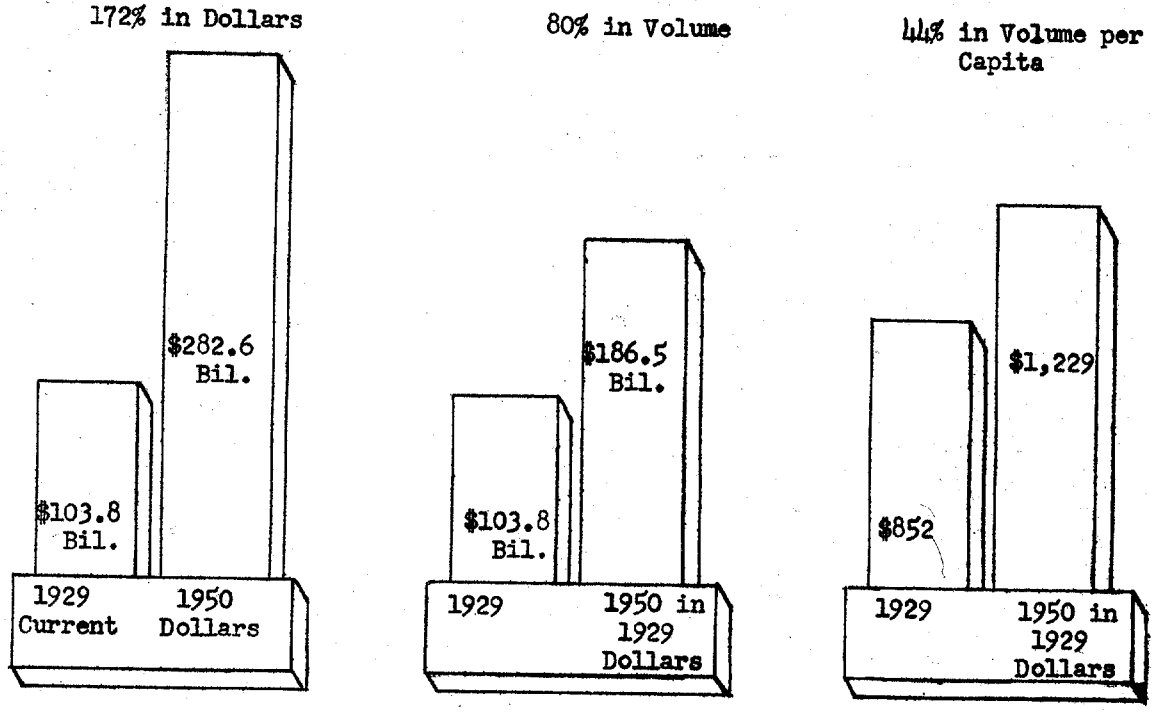
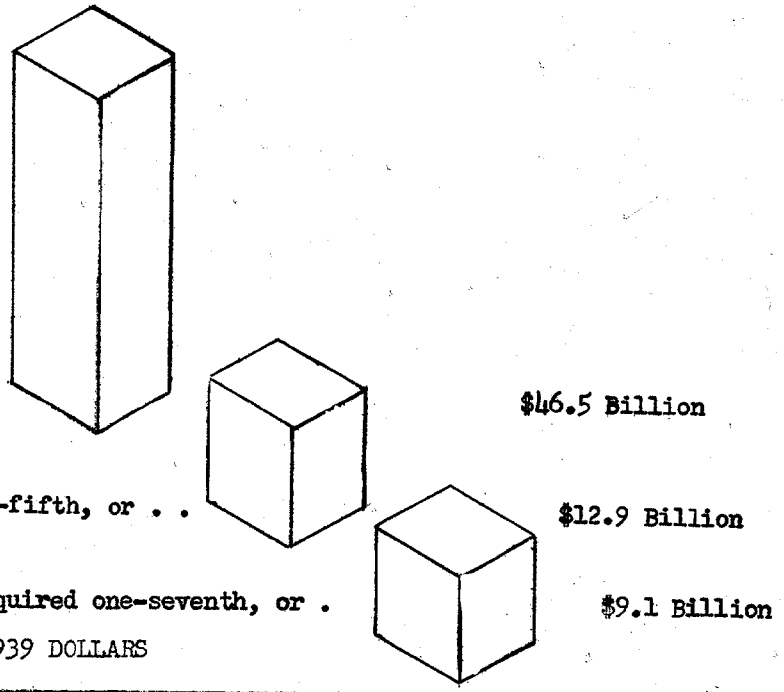
CHART 5

FROM 1929 to 1950 THE NATIONAL OUTPUT OF THE UNITED STATES

INCREASED . . .



OF THE INCREASE IN THE TOTAL VOLUME OF NATIONAL OUTPUT OF 80 PERCENT FROM 1929 TO 1950 . . .



IN 1939 DOLLARS

Source: National Income, 1951 Edition; A Supplement to the Survey of Current Business.

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Topic five.--Our next topic, and a very important one, is the analysis of changes in national income components as a guide to the functioning of the economy. I have said that in 1932 the Senate asked the Secretary of Commerce to gather and furnish national income data estimates. That was step one; number two came in 1946 when Congress passed the Employment Act of 1946, approved in February of that year. Its stated purpose is to foster and promote free competitive enterprise and general welfare, conditions under which there will be afforded useful employment opportunities and to promote maximum employment, production, and purchasing power.

To accomplish these purposes, the President of the United States is required to send to Congress within 60 days after the beginning of each regular session an economic report (and such supplementary reports as he deems necessary) called "The Economic Report of the President." This report must tell the Congress four things:

1. The levels of employment, production, and purchasing power obtaining in the United States and such levels 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 the economic program of the Federal Government and a review of economic conditions affecting employment in the United States or any considerable portion thereof during the preceding year and of their effect upon employment, production, and purchasing power.

4. A 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 he do this? He has a "Council of Economic Advisers" to help him. The report is received in the Congress by the Joint Committee on the Economic Report; this committee consists of 14 members, 7 from each House. They have their economic staff too, housed in the Library of Congress. You saw one of their most able staff members here on Monday, Dr. Piquet. By May first, the Joint Committee must file a report on the President's recommendations as a guide to legislation. Legislative attempts may be made to either augment or offset an indicated economic trend.

Each six months the Council of Economic Advisers works up a table called "The Nation's Economic Account." It used to be called "The Nation's Economic Budget," and you will run across that title in your studies.

Chart 6, The Nation's Economic Accounts, 1951, page 17.--We have here an accounting of Receipts and Expenditures by economic goups. We have the consumers' group: receipts, 225 billion dollars; expenditures, 208 billion dollars; a minus of 17 billion dollars. That is what they didn't spend. Business group: retained receipts from current production, 32 billion dollars; expenditures, 58 billion dollars; -- minus, 25 billion dollars. I don't need to rehearse the entire chart except to point out the totals of these two columns covering receipts and expenditures must match. When they don't, we have to put in a little item for "statistical discrepancy."

I promised one of the branch chiefs to talk a little bit more about that "business group." These statistics are an indication of how business feels about the current prospects for the economy. If they are optimistic, they are expanding their plants and adding equipment; if they are pessimistic, they are not expanding. This is a good set of clues as to what business is thinking.

Retained receipts under business accounts for 1951 were undistributed corporation profits of 9 billion dollars plus and capital consumption allowances of 23.3 billion dollars; a total of 32.9 billion dollars. They expended on new construction (residential and other private construction) 23 billion dollars; on producers' durable equipment, 24 billion dollars; and then added 10 billion dollars to their wealth by allowing for upward changes in inventory values in current price values. The value of their inventories was increased because the current price level had gone up and it would cost that much more to replace them.

By the way, Congress has given the Joint Committee the task of publishing a report called "Economic Indicators." It is published monthly and distributed to all Congressmen. It is a monthly copy of this same chart, plus a lot of other ideas, but issued in graphic form. However, you will note the statement on the cover sheet: "Prepared for the Joint Committee on the Economic Report by the Council of Economic Report by the Council of Economic Advisers." So you still have the Council's interpretation of these statistical items.

Now these reports on the Nation's Economic Accounts are regarded as photographs of the current economic pattern. Each of these pictures is a "still," not a movie, giving you a glimpse of the economy on a certain day, over a period of years. If you acquire enough of these stills and study them carefully, you may be able to discern different patterns here and there. Later, if you detect the reappearance of a former pattern and had found certain things were good about that pattern, perhaps Congress can do something to make that incipient pattern stronger. Or if you found the previous pattern was not a desirable one, supposedly you can do something to alter it. You know whether you think the economy can be managed or whether you want it to be managed.

CHART 6

THE NATION'S ECONOMIC ACCOUNTS, 1951
(Formerly the Nation's Economic Budget)

(Billions of dollars)

Economic group	Receipts	Expenditures	Plus or minus
Consumers			
Disposable personal income	225.0		
Expenditures for goods and services		208.0	
Personal savings (plus)			Plus 17.0
Business			
Retained receipts from current production	32.9		
Gross private investments		58.5	
Excess of investment (minus)			Minus 25.6
International			
Surplus of exports of goods and services	5.1		
Net unilateral transfers		4.9	
Net foreign investment			
Excess of receipts (plus) or investment (minus)			Plus .2
Government			
Receipts from public and abroad	69.9		
Payments for goods and services and foreign investment		62.6	
Excess of receipts (plus) or expenditures (minus)			Plus 7.3
Statistical Discrepancy	1.1		Plus 1.1
Gross national product	334.0	334.0	.0

Source: U. S. President, The Midyear Economic Report of the President, July 1952.

Chart 7, Percentage Distribution of Private Nonagricultural National Income, page 19.--This chart compares two economic patterns, for the years 1929 and 1950. The total manufacturing and mining production increased over 1929. Wholesale and retail business expanded to take care of it. There was not very much change in the amount of new contracts for construction. The transportation and communication industry declined a little. The financial portion declined a great deal.

There is some explanation for that. You remember that business in 1951 retained 23 billion dollars of annual earnings; not distributed as dividends. In 1929 business was much more liberal in distributing its earnings and then borrowed them back from financial groups. Then, too, interest rates have been practically halved during that period and during the greater part of that period rents have been frozen. So we have compared two patterns and attempted a very, very brief interpretation of them.

Topic six--National Income Analysis as a Tool in Economic Mobilization.--It is not a very long discussion but I think it is important.

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 materials uses are curtailed in nonarmament 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 the following uses:

1. They become the base on which we can make production decisions. A great deal of CMP work is based on them, although much direct data from business are also required.

2. The data helps to make possible needed adjustments in price and wage levels. They help to make computations possible by which businessmen can be compensated for cost changes. They help to make possible adjustments of inequities, brought about by price and wage freezes.

3. The data are important in planning production and of greater importance in planning decontrol and reconversion steps.

The disposable income data have some additional uses in furnishing clues to the amount of increased taxes possible for you and I to pay. The extent of personal savings is known and therefore the Treasury can determine the level at which it must pitch its voluntary

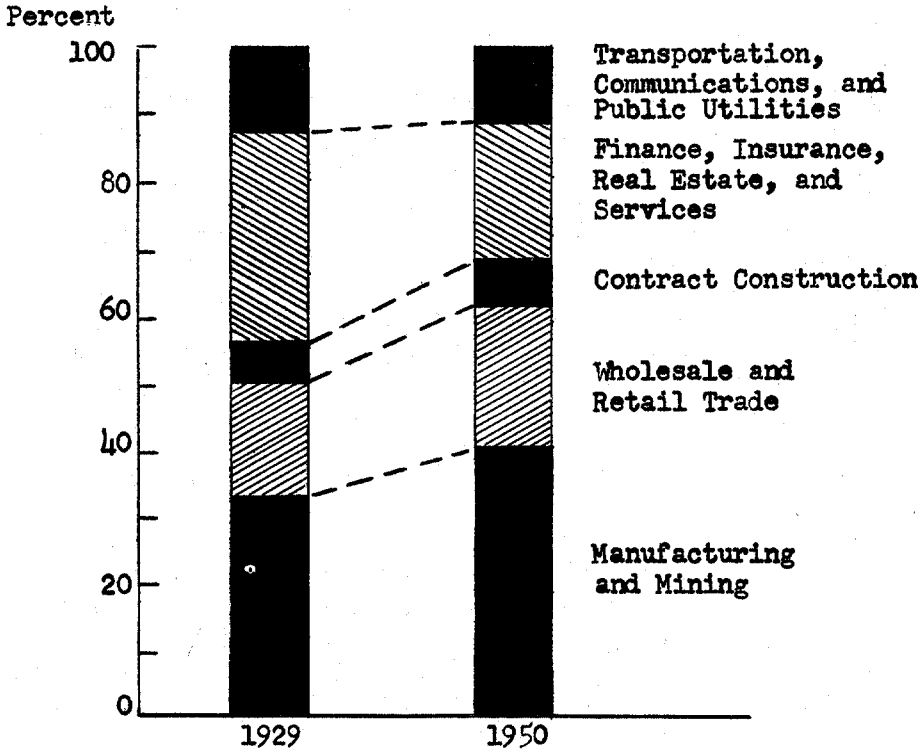
CHART 7

PERCENTAGE DISTRIBUTION OF PRIVATE

NONAGRICULTURAL NATIONAL INCOME . . .

Since 1929, some industries - notably manufacturing and trade - have grown markedly in relative importance. . .

while others - such as finance, insurance, and real estate - have not kept pace with the general expansion



Source: National Income, 1951 Edition; A supplement to the Survey of Current Business.

bond sales campaign. The data on liquidity which accrue during an emergency period tell the decontrol planners the amount of financial backlog existing and may help to direct postwar production. So we have found some uses for national income data in time of emergency. It only remains now to tell you what you have been told, as follows:

1. We have learned that the economist is interested in national income and product data as a series of photographs preserving the economic patterns which prevailed at stated intervals. He can compare these patterns with the currently unfolding pattern in an effort to detect indicated trends and to develop procedures and policies intended to augment or to offset the incipient trend.

2. That the national wealth of the United States now approaches 1,000 billion dollars, even if the concept is somewhat sterile.

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

4. That the Employment Act of 1946 requires the President of the United States to recommend action to Congress, based in part on a study of national income and product data. (I should have said that the Council uses the same data as the Department of Commerce but it does reserve the right to interpret it. Sometimes there is a slight difference of opinion about the interpretation.)

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

And so you can add another nickel's worth to your economic market basket.

QUESTION: I noticed in this morning's paper that a new adviser to the President, a comptroller of some sort, has announced that there will be a leveling off of expenditures for defense. Two possibilities occur to me: This could be a lack in statistical accumulations to base decisions upon or it could be that the statistical accumulation is accurate and progressive and that a distinct inflationary trend is impending and action has been taken to offset it to some extent. Could you comment along those lines?

DR. KRESS: Yes, sir, I can comment but I can't add any information. That was the newest member of the Council of Economic Advisers in his first report to the President. What he said is directly opposite to

what was said in the 1 July 1952 report. The question is, has something happened so that he was briefed to say that or did he get his wires crossed? That hasn't been told to us as yet. He came from the Middle West, my own good state of Indiana. The supposition is that like all good Hoosiers, who are born politicians, he never hesitated to wade in. I really can't say.

MR. POLUHOFF: May I throw in a reference here, Andy? There is a study put out by the National Bureau of Economic Research, in which it set out several hundred index numbers and classify them by running along the business cycle those that lag and those that are ahead. If anybody is interested in that book, I have it; there is another copy in the library. Incidentally, the best indicator was bank debits, our old friend--wholesale prices, business failures; and also retail sales which is the only one that has given us any bearish indication so far.

DR. KRESS: Mike knows a thousand times more about that than I ever will. The market lost a billion dollars in values yesterday, too. When you get those tables in your mail boxes, you will find they are based on the May 1952 report of the Department of Commerce. In July they revised them a bit, so you may find a little discrepancy between my figures and those you pick up in various references. They have to do that in order to get them as accurate as possible. The handouts contain the best information available when the charts were made.

QUESTION: You mentioned that the Council of Economic Advisers is drawing on statistical data prepared by the Department of Commerce but that at times they differ in interpretation. Would you kindly comment on the types of things on which they differ?

DR. KRESS: I will tell you what I had in mind, but I didn't mean to take a controversial attitude. There was a series of "letters to the editor" in a Washington newspaper, maybe a year ago, in which some Department of Commerce people said in their personal but not official capacities, they couldn't recognize the base for some of the Council's graphic data. A statistician is very serious about a half or a tenth of a point. It was something of that sort.

(By the way, you engineers may have noticed that some of the totals on those charts don't quite add up. That is because of "rounding" for ease of handling. We lop off the hundreds and let the millions stand.)

QUESTION: You showed the gross national product and all its components and you showed depreciation. To my confused mind, I don't see depreciation as a positive factor. All the other things seem to be something that is done or is created. Will you explain how depreciation becomes a positive factor?

DR. KRESS: It is that amount of gross national product that gets used up in making the other product, making the total; so you are left with the net. That much of the current production has been used up.

QUESTION: I am afraid this question is elementary, but I don't understand why corporation taxes are included in national income where other taxes don't seem to be. Will you explain that?

DR. KRESS: Both are eventually taken out. Corporate taxes are taken out of national income to get personal income. Personal taxes are taken out of personal income to get disposable income. Indirect business taxes are included in GNP and NNP because they represent cost.

Now there is a great deal of arbitrary decision in this national income accounting and since 1932 there has been considerable discussion among the experts. They have finally arrived at a modus operandi in dispute cases. They know the method has defects; it is not perfect. It is the best they can do. There are other defects I hope you won't think about and require an explanation.

QUESTION: Is there any use to the concept of national wealth?

DR. KRESS: Only as you stick your thumbs in your vest and look over your expansive acres to see if you can do anything with them. It has no value in determining the economic trend. At the moment it has value as an indication of the standard of living and all that, but it is not directly tied to the economic studies that are made from national income data. But I should say, too, that simply by accumulating national income data, we will gradually acquire an estimate of national wealth. So you will probably see the Department of Commerce coming out with an estimate of national wealth one of these days.

QUESTION: By comparing statistical data of the national wealth of various countries, would it assist you in determining the economic potential of various countries?

DR. KRESS: Only in the sense that you can take commercial trucks and use them for military trucks, for liaison work, or things of that sort. You can convert them. You might even put a tin top on a truck and have some poor kind of tank; certain things like that you can do.

DR. HUNTER: Andy, coming back to the item of depreciation, would you say that the depreciation in the gross national product column is the amount set aside to cover depreciation of machinery?

DR. KRESS: For that current year. Each year the calculation is made once more. Of course, a machine has a life of 10 years; a factory 25 years, but a certain portion gets used up. It should be only what you used up of this year's production.

DR. HUNTER: But it is part of the income which is set aside to cover actual physical deterioration?

DR. KRESS: Yes.

QUESTION: Sir, will you cite some instances of practical use of these data--other than the amount of bonds the Treasury wants to sell--some place where it has actually been used?

DR. KRESS: Yes, to determine the amount by which your personal income taxes can be increased without interfering too much with your standard of living. During wartime, the production authorities know what civilian type goods they deprived you of, whether you will need a new car, an ice box, or radio. They know the sum of liquid savings built up. They can shunt materials in the postwar period directly to those who will produce items to get the economy on its feet on a reconverted scale as rapidly as possible. Although the national income data are stated in terms of dollars, they necessarily get a record of the number of tons and pounds of this or that, which data are available for making CMP programs.

QUESTION: I understand that a measure of business efficiency is the amount of return made on capital investment. So to relate that a little further, if the price of so-called national wealth is built presumably on fixed things, or whatever you put a price on, is the land in which a gold mine, or a copper mine, lies, rated as worth so much or is that even considered in the national wealth?

DR. KRESS: Well, the study of the National Bureau of Economic Research left subsoil assets out and then said that if you wish to include them, together with consumer perishables on hand, you would add 5 percent. The Bureau didn't break it down as to which were perishables or subsoil assets. It was inclined to leave out subsoil assets.

QUESTION: My point was, taking the Mesabi Range as depleted, presumably that will affect the national income for some years to come, on the basis that you must go farther and pay more for iron ores.

DR. KRESS: It is my understanding that the 5 percent includes only proved assets.

QUESTION: Is any attempt made to include irregular accumulations of wealth in this thing?

DR. KRESS: I really don't know how the Bureau does that.

MR. POLUHOFF: I don't believe it does just on a guess.

QUESTION: We have read and it has been said that these very high taxes on corporate and personal incomes have tended to reduce venture capital for expansion in industry. Now is it possible by means of these statistical data to determine precisely how that has diminished by comparison with venture capital in the past and now in comparison with income?

DR. KRESS: Yes, it is. In the study of income groups, we know what part of the earnings of business groups is retained and how much more they borrow for expansion. If you had a series of those pictures and knew what the tax rates were in each of those years, you very likely could trace the cause and effect.

QUESTION: In looking at this index, the thought occurs to me as time changes, the items which go into an index would change. For instance, I am referring to cotton and wool. We read now that dacron, items of that type, may become an important part of our economic scheme of things. Cotton may be replaced entirely by rayon. What is done to the items that go into the index to take care of such changes?

DR. KRESS: I will attempt to answer that, based on my personal ideas of what items go into it. The labor people here might challenge it. I have an idea that they were a little slow about doing anything about it. The Bureau of Labor Statistics publishes a monthly national cost of living index; it has several hundred items in it. Upward and downward trends tend to offset each other. The index does change but it is sluggish.

Now during World War II, the big labor unions attacked that index as being unrealistic. The American Statistical Association appointed a group of people to study the matter. They came to the conclusion there was nothing wrong with the make-up of the index. The labor unions insisted, whereupon the Bureau of Labor Statistics announced its intention to revise and modernize the items going into it. This has been done.

QUESTION: Would you care to explain a little more about the National Bureau of Economic Research? What is its value to Government agencies? Is it recognized as an absolute authority on the business cycle today?

DR. KRESS: No, it is simply a group of social scientists that gets its money from individuals, associations, and business. The scientists make the studies they think necessary and pertinent. They are somewhat beholden to business for their existence, but, so far as I know, there has never been the slightest suggestion that they are biased in any way. They are considered by economists to be a very reliable group; people who can be relied upon practically 100 percent--no bias, no axes to grind.

QUESTION: Does the term "depreciation" as used in the charts include obsolescence?

DR. KRESS: There is a rather broad definition in all these representations and there is with that one.

COLONEL BARTLETT: I think when we get the handouts and get a chance to sit and study these columns, you will have a good many students calling at your desk, so I suggest you curtail your golf periods.

On behalf of the class, I thank you very much for the presentation.

(27 Oct 1952--750) S/ibc