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NATIONAL INCOME AND THE NATIONAL DEBT

229

13 September 1950

CONTENTS

	<u>Page</u>
INTRODUCTION--Colonel E. E. Barnes, USA, Chief, Mobilization Branch, ICAF.....	1
SPEAKER--Dr. A. J. Kress, Member of the Faculty, ICAF.....	1
GENERAL DISCUSSION.....	15

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NATIONAL INCOME AND THE NATIONAL DEBT

13 September 1950

COLONEL BARNES: Gentlemen, we seem to have timed this lecture just about right from the interweaving that it has with the material you have been getting from speakers in the first hour, in the National War College program.

"National Income and the National Debt" is a subject that you have encountered in your reading--true. But we felt it was so important as a part of our national economy that we ought to have a separate lecture on it to supplement your reading.

We chose Dr. Kress to give this lecture because of his eminent qualifications for the job. At that time, he actually was a member of our faculty. That was short-lived, however. You will remember, when I introduced the members of the faculty who were assisting you in this first few weeks, I told you that Dr. Kress should be seated down there with the rest.

Dr. Kress has helped us out here at the Industrial College for many years, as a part-time instructor and then full-time instructor during the Procurement Course. This year we talked him into giving up his full-time work at Georgetown University, where he has been for about 20 years, and occupied the chair as head of the Economics Division. But shortly after he got here and got bedded down, they had an earthquake or something over there, personnelwise, and they had to call him back. So, again, his status here is that of part-time instructor.

Dr. Kress is eminently qualified for this subject. He has written numerous publications in the field of economics and has been a great contributor to the college on a lot of research projects. You will find their titles listed in your "Catalog of Publications."

It is with great pleasure that I present Dr. "Andy" Kress for this lecture.

DR. KRESS: General Holman, gentlemen: I am glad Colonel Barnes mentioned my name at the end of all that; otherwise, I would not have recognized myself. It is a pleasure to be here and to be called by my first name. I hope it is a pleasure that I will continue to have part time for several more years.

In taking lunch down here yesterday, I talked to several of the students. Not recognizing me, they spoke out a little more freely. They said they did not quite know what some of these economists were

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trying to tell them; that they always apologized for not knowing anything. One man said he wondered why he should be asked to listen to people who did not seem to know what they were trying to say.

Well, I thought about that for a little while and decided that some of this is false modesty. You see, the economist--or any other speaker, for that matter--is told when he comes here that this is the sister top college of the whole military service. They do not want to appear otherwise. I think that is what happens.

The economists have long since learned to poke fun at themselves; they have had to. They have gotten spanked for various difficulties--some their fault and some not--so they have learned to say that if all economists were laid end to end, they would never reach a conclusion.

They have become specialists. A specialist is a man who knows more and more about less and less until finally he knows everything about nothing.

Then, again, they have learned to call themselves "experts." An expert, as you all know, is a stuffed shirt away from home.

Economists are agreed upon about 90 percent of the material that they use. They have written up this agreed-on material in the "Principles of Economics" book. There is no argument about that. As for the other 10 percent, they have not yet made up their minds. They argue about it with each other so vociferously that the public gets the impression they do not agree about anything.

This little talk we have here this morning is strictly out of the "Principles" book, so it should not be subject to much dispute. I want to say, though, that this idea of the national income "approach" to economics is fairly new--within the last 10, 12, or 15 years; something like that--and is one of the newer methods by which economists attack their task.

We shall develop our topic under four headings:

Part I, the Nature and Components of the National Income, with two subheads: National Income as the Tool of Economic Analysis; and, National Income Analysis in the Formulation of Public Policy. We will also use in a few moments a 12- to 15-minute film strip to illustrate the national income material as developed in one of your recent texts by Samuelson. I put in your boxes, yesterday, several sheets of material for your notebooks taken from the Samuelson book which will serve to recall the things that are in the "film strip"--after you have forgotten what the film strip contained. (See page 20 for notebook material.)

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Part II deals with the Concept of a National Income Budget.

Part III deals with the American Public Debt, the Effect of It on an Expanding Economy, and the Obstacles to its Retirement.

Part IV, which will conclude the discussion, deals with the Debt Program for a Future War.

Nature and Components of the National Income

The important concept of national income or net national product can be summarized most simply by saying it is nothing more nor less than the final sum total of all labor and property incomes earned in producing the national output.

Only in the past decade or so have we had any adequate statistical data on periodic changes in this all-important field. Here in the United States we are fortunate in having national income estimates from the Department of Commerce, a branch of the Federal Government, the National Bureau of Economic Research, a nonprofit scientific institute; and the National Industrial Conference Board, a research organization financed by business.

Paul A. Samuelson points out, in comparing the efforts of the three groups just mentioned, that "their estimates are in very good quantitative agreement, so long as they claim to be using the same definitions, so we may have considerable confidence in the national income statistics." (See his book on "Economics, and Introductory Analysis," page 225.)

Prior to 1929 such studies were made by academic economists and economic foundations. Some exceptions, of course, were the Bureau of Labor Statistics and the Federal Reserve Board. In the 1930's, at the request of the Congress, the Government expanded its statistical studies.

National income concepts and measurements provide the framework within which the current operations of the economy can be recorded. Essentially, the national income accounts can be looked at as a system or classification that provides a descriptive and factual account of what was happening in the economy. National income accounts are built up from and summarize the operations of individual enterprises. An understanding of the nature of the individual-enterprise-account is necessary to a comprehension of the basis of national income accounts and measurements. It is a considerably detailed study.

National income concepts in recent years have proved useful in understanding and explaining what takes place in the economy. This development is not a greater refinement in the collection of statistics

but represents a marked change in the manner in which the measurements and their relation to each other have been envisaged. Masses of unrelated statistics add little to our understanding of the economic system. Only by careful reasoning can the highly detailed data be combined in such a manner that the final set of statistics will present a related picture. (Consult Richard Ruggles, "National Income and Income Analysis," for further analysis on the use of statistical data.)

National income data when used in conjunction with theoretical analysis can substantially further our understanding of economic processes. These data have practical uses. They are used by the President in presenting the facts in his annual report to the Congress; the Treasury Department to estimate future tax receipts; the Labor Department to gauge wage payments and employment levels; the Agriculture Department in two ways—studying the demand for agricultural products and studying the effects of farm-aid programs. Business uses these data to study the economic condition of the country so their decisions will have more relevance.

Now let us turn for further instruction to a film strip prepared by the McGraw-Hill Book Company expressly to illustrate the material in the economic text to which I have referred. I will read the title or caption of each picture as a means of timing the exposure. You will note that these concepts remain simple. No attempt is made to introduce the more complicated idea of a national input-output account. You may advance to this stage by personal reading.

(The commentary on this film strip, each strip bearing its own number, was as follows:)

Part I

1. The economic pulse of the Nation may be felt by measuring its income.
2. Statistics on national income reflect economic fluctuations and growth as well as standards of living.
3. Behind national income are the real goods and services produced in a given period. The problem is one of measurement.
4. From one simplified viewpoint, national income is the sum total of all incomes earned: wages, rents, interest, profits.
5. From another viewpoint, national income is the net value of all final goods produced. (Net National Product or NNP)

6. From either simplified viewpoint, it is the same and can be represented as a circular flow between business and the public.
7. Business pays out dollars to the public for the productive services of labor and property.
8. The public pays dollars to business for the purchase of consumption goods and services.
9. In the upper loop, national income is in terms of earnings; in the lower, in terms of goods produced. The loops match.
10. Estimates of earnings are built from tax returns, business data, and government reports.
11. Employees' wages and salaries generally comprise about two-thirds of the total, in good or bad times.
12. The remainder of the national income total is made up of:
 - (1) net income of incorporated business---
 13. (2) net interest on private bonds, mortgage and other loans---
 14. (3) net rents, including estimates for owner occupied homes---
 15. (4) and net corporate earnings, whether distributed as dividends, kept as surplus, or paid in corporate income taxes.
16. Excluded from national income are "Transfer Payments," such as gifts, veterans' allowances, and social security checks.
17. To estimate national income in terms of goods and services (NNP), we must find a yardstick of value.
18. Economists use money value, specifically the market prices of goods and services.
19. NNP items must be final, not intermediate goods. When counting in a loaf of bread, we must not "double count" its ingredients.
20. We must think in terms of value added at each stage of production. Suppose the farmer sells his wheat for two cents.
21. Next, the miller who bought wheat for 2 cents sells his flour for 5, having added 3 cents of value.
22. Then, the baker who bought flour for 5 cents sells his bread for 7 cents, wholesale, having added 2 cents of value.

23. The grocer who bought the loaf of bread for 7 cents sells it to the consumer for 10, having added 3 cents of value.

24. The final 10-cent price of the loaf is not the sum of the sales price of each stage. It is the sum of the values added.

25. These values added are production costs earned as income by the productive factors in the bread-making process.

26. Official government statistics of NNP include all purchases of goods and services by Federal, state, and local governments.

27. Indirect taxes--such as sales taxes--are also included in NNP.

28. In a growing economy, new capital formation--domestic and foreign net investment--is counted in NNP.

29. National income and product are counted in money terms. Real income, however, is not dollars, but the goods they buy.

30. If money incomes remain the same from one year to the next while prices double, real income is actually halved.

31. Thus, to compare national income over a period of years, we correct money income by some standard of purchasing power.

32. One such standard is the consumers price index--a weighted average of the prices of various cost-of-living items.

33. If the index for 1929 as a base year is 100, then the 1932 index would be stated as a percentage--80.

34. Since real income equals money income divided by price index--

35. We can compute real national income for 1929 and 1932. The real decline is less than the money drop.

36. By comparing money national income and real national income we can spot inflation and deflation periods.

The film was originally in two parts for use in two classes. You will note that the first caption or two repeat ideas which you already have.

Part II

1. National income may be viewed as income earned or as net national product.
2. From the first viewpoint, national income is the sum total of incomes earned: wages, rents, interest, and profits.
3. From the other viewpoint, net national product (NNP) is the net value of all final goods produced.
4. Estimating the value of NNP, however, raises problems. How shall we treat taxes? Government expenditure? Depreciation?
5. The answers vary, but one widely accepted NNP estimate is that used by our government and the UN.
6. Official government statistics on NNP include all indirect business taxes, such as sales taxes.
7. Now, a sales tax paid to government by a businessman is an expense, like wages or interest.
8. This expense is not paid to any productive factor, such as labor or capital.
9. Indirect business taxes are, however, part of the actual market price of final goods.
10. By including such taxes, therefore, NNP statistics reflect the market prices of final goods.
11. National income, on the other hand, is geared to the earnings of productive factors and not to market prices.
12. Thus, national income falls short of NNP by the amount of indirect business taxes (other than corporate profits taxes).
13. Official NNP statistics include all purchases of goods and services by Federal, state, and local governments.
14. Government expenditures may be for current consumption—ammunition that is blown up or office supplies that are used up.
15. Or government expenditures may be for investment—bridges and battleships that last for many years.
16. An important problem is how to determine which government expenditures are final and which are intermediate values.

17. For example, government-built roads seem to provide an intermediate service for final commercial products.

18. The same roads, when used by joy-riding motorists, seem to provide a final service.

19. Since the line between intermediate and final government expenditures is so hazy, all are now included in NNP.

20. In a growing economy, new capital formation--domestic and foreign net investment--is counted in NNP.

21. The principal types of capital goods come under the heading of Producers' Durable Equipment--

22. --New Construction--

23. -- and changes in business inventory.

24. Normally, in a growing economy, consumption is less than production. The gap represents an increase in real capital.

25. In a stationary economy, consumption equals production: the stock of real capital remains unchanged.

26. In a "disinvesting" economy, consumption exceeds production: capital declines through lack of replacement.

27. Investing the surplus from current production in new capital goods--

28. -- makes possible our rising standard of living. Capital formation may be thought of as "postponed consumption."

29. Gross capital formation or investment includes those items needed to replace capital goods used up in production.

30. Gross investment, plus consumption, plus government expenditures on goods and services equals gross national product (GNP).

31. To determine net investment and NNP, we must measure depreciation--the amount of capital used up in production.

32. Once depreciation is estimated, we subtract it from Gross National Product to find Net National Product.

33. This is how net national income and net national product balanced in a recent year.

34. Let us summarize the relationships between income concepts: Starting with gross national product and its components--

35. We drop depreciation to get net national production. From NNP--

36. -- We drop indirect business taxes to get national income. How do we get personal income? Disposable income?

These last two questions are not answered on the film, but we will continue our two definitions: From national income we drop undistributed profits, corporate taxes, social security tax contributions and add transfers to get personal income. From Personal Income we drop personal taxes to get Disposable Income, which is the sum of consumption plus saving.

We have now completed the film strip. I am sure your concepts of national income analysis are much broader. The notebook material will serve to recall these concepts to mind whenever you wish.

I want to consider the matter of national income a little further before we turn to a discussion of the budget and the debt. I want to consider, then, national income as a tool of economic analysis.

National Income as a Tool of Economic Analysis

Even in conjunction with sound economic theorizing we must not look to statistical facts for miracles. All of us would like very much to develop a set of facts which would "prove" theories on which to build policy proposals. Unfortunately, facts cannot really prove theories. They can only reject hypotheses with which they are not consistent. Hypotheses which are not rejected may live to fight another day.

If these hypotheses survive a number of such ordeals, by fact, and if they tie in logically with other surviving hypotheses we may begin to develop confidence in their truth.

There is little use in talking about the ups and downs of business in a vacuum. Facts are essential. On the other hand, a complete description of fluctuations is out of the question. Economists have put many hundreds of man-years into collecting data on fluctuations and more hundreds into analyzing them. The results are still fragmentary but they already make up a rather large library of published books and papers.

The prediction of the future is always a hazardous affair. In the sphere of economic and social history, it seems to be especially dangerous. But the Director of the National Bureau of Economic Research

points out that we do not stop forecasting simply because the forecasts go awry. We try to profit by our own and other people's mistakes. There is little else we can do. Prediction is inseparable from life. The choice before man is not whether to engage in forecasting or to abstain from it, but whether to base expectations on hunches or on lessons carefully distilled from experience.

National Income Analysis in the Formulation of Public Policy

National income analysis in the formulation of public policy is our next topic. What is the possibility of using national income statistics and their analysis in the formulation of public policy? What has been implied in this paper, but not stated, is that current interest in national income analysis stems from the concentration of modern economics on the problem of full employment. This problem assumes more and more importance as our population increases, as it shifts to the cities, and as more and more individuals are dependent on the sound of a factory whistle for their well-being.

The problem of national income analysis is tied closely to the problem of understanding the ups and downs of the business cycle, and speculation as to whether or not we are facing a general or secular stagnation of the economy. If, over the years, we can develop a sufficient body of national income statistics, we may be able to find and trace therein patterns covering the upswings and downswings of the business cycle which will give us reliable enough information on which to take a series of corrective actions on the part of business or government, or both. These actions would tend to accelerate desirable trends and decelerate undesirable ones.

Whether national income analysis data can help in the formulation of public policy is not so certain. Public policy matters are concerned with much more than political economy. They are concerned with political science also and, more particularly, with the personal leanings and inclinations of the individual policy makers. Some people are more pessimistic by nature in their outlook and some are more optimistic. Much of the policy maker's final decisions stems from his own inner feelings. The economist can only observe the facts, make them available, and call attention to trends which may become troublesome. He can also hope that he will not be personally called on to formulate such policies. Dr. Albert Gailord Hart, a Columbia University economist, has considered and written on this problem as much as most men. After thoroughly considering all phases of the possibility of achieving economic stabilization he concludes in a recent book, "Money Debt and Economic Activity." My recommendation would be what I have called a 'gong-and-whistle' system. The 'gong' would be set off by a rise of unemployment beyond a moderate minimum---perhaps 4 million workers, as measured by the monthly Census labor-force estimates.

The 'whistle' would be set off by a price rise in excess of some fairly moderate rate: say, a rise exceeding 4 percent in six months as measured by the cost-of-living index. So long as neither sounded, control could be left to the automatic stabilizers. But the "gong" would be the signal for reducing excises, for a temporary cut amounting to 1 or 2 billion dollars per annum in individual income tax rates, and so forth. The 'whistle' would be the signal for tightening bank credit and for temporary tax increases." (See A. G. Hart, "Money, Debt and Economic Activity," p. 513.) The automatic stabilizers on which Hart would rely so long as neither bell nor whistle sounded, include pay-as-you-earn tax collections--corporate income taxes--social security payments, both unemployment benefits and old-age pensions--farm price supports and veterans' benefits, particularly unemployment compensation and benefits to student veterans.

Now we will go to our second topic, namely, the concept of a national income budget. These topics are related but somewhat separate.

The Concept of a National Income Budget

The Employment Act of 1946 requires the President of the United States to submit periodically a new type of message--the Economic Report of the President. In the first of such reports to the Congress on 8 January 1947, Part III was devoted to a discussion of "The Nation's Economic Budget." The monthly report of the Council of Economic Advisers, called "Economic Indicators," contains a table bearing the title, "The Nation's Economic Budget." This is an attempt to make daily practical use of national income data. In this first report the President contrasts the Nation's economic budget during the last pre-defense year (1939) with the budget during a war year (1944) and with the budget during the transition year (1946). The changes in composition of the Nation's economic budget were carefully traced.

To paraphrase the President's report, the Nation's "economic budget" is primarily a device for the measurement of our economic activity. It is a convenient way of summarizing the main trends in the flow of goods and purchasing power and of relating these trends to possible future development. The President pointed out that the use of this device is not wedded to any particular economic theory. The "economic budget" is an objective summary statement of our economy in action at a given time, as reflected by the income and expenditures of its major parts. It reflects the aggregate actions of millions of consumers and businesses; also the actions of Federal, state, and local governments.

The volume of employment and production in any given period depends upon the volume of expenditures. These expenditures are chiefly consumer buying, business buying, foreign buying, and government buying--Federal, state, and local.

The Nation's economic budget shows the distribution of income and expenditures among consumers, business and the Government; also imports and exports. It sheds light upon whether price and wage policies and other public policies are encouraging an alignment among these four component parts which is favorable to a sustained high level of economic activity, which threatens us with an economic decline. The "economic budget" also indicates whether a given level of economic activity is being achieved mainly by private expenditure or by public expenditure, and in what proportions. By comparing budgets for different periods we can discern favorable and unfavorable trends.

The American Public Debt

We change now to Part III--The American Public Debt. This is a subject of interest to each and every one of us and important as well. In dealing with this portion of our discussion--the public debt--we will touch on the evolution of the American debt, the effect of the debt on the economy, and some of the obstacles to its retirement. We will not dwell at all on the ownership of the debt or on changes in that ownership and only very lightly on its management. Any one of the topics mentioned is the subject for a long book. The question period will surely revolve around the debt question. For all of these reasons the treatment will be brief and will not introduce notes on a contradictory character.

You have been given a table showing the public and private debt for selected years, and also showing the national income for more recent years. (See table page 13.) These statistics will suggest many items for comparison or contrast. We also have a chart or visual aid which is a graphic description of what you already have in the table. It is among our stock of charts.

But, gentlemen, this is the one (pointing to chart) to which I wish to invite your attention. This chart shows the public debt at the beginning and end of our three great wars. The percentage of change for the Civil War period is many times greater than that for either World War I or II. In addition, much of the Southern debt was simply wiped out. A great burden was carried by the Southern States for many years in providing for disabled war survivors, soldiers' widows, and children.

Net public and private debt, selected years 1916-1948
(in billions of dollars).

End of year	Total, public and private	Public			Total private	National Income
		Total	Federal	State and Local		
1916	82.1	5.6	1.2	4.4	76.5	
1919	128.0	30.8	25.6	5.2	97.2	
1929	191.1	29.7	16.5	13.2	161.5	87.4
1933	169.7	41.0	24.3	16.7	128.8	39.6
1937	183.3	55.3	39.2	16.1	128.0	72.5
1941	212.6	72.6	56.3	16.3	139.9	103.8
1945	407.2	266.5	252.7	13.7	140.7	182.8
1946	398.7	247.3	229.7	13.6	155.5	180.3
1948	429.4	232.7	216.5	16.2	196.7	223.5

Source: Survey of Current Business, October 1949, p. 6; Federal Reserve Bulletin, July 1950, p. 886

Evolution of the Debt

The Federal Government began its existence in debt and has been out of debt in only one year, namely, 1835-1836. The Revolutionary War, the War of 1812, the Mexican War, the War Between the States, each caused debt. After each war, retirement of the debt began but could not be completed except in the single instance of the period following the War of 1812.

In the period before World War I--these figures will not remain in your mind but perhaps it won't do any harm to point them out--the national debt was about 1 billion dollars. The debt rose to nearly 26 billion dollars in 1919 and in the 1920's the retirement began once more. By 1930 the debt had fallen to 16 billion dollars. In June 1940 it was 43 billion dollars, having grown during the depression decade by almost as much as during World War I. The increase during World War II was to nearly four times the size of the existing debt in the middle of calendar year 1940. All of these changes can be traced in the table which you have.

Alarmists on the public debt and its effects often go in for absurdities. If you could locate all the debt contracts in the United

States at any one time and strike a total you would get a figure larger than the national wealth. In the same way, an input-output table of income analysis gives you a total many times the annual national income.

Does this mean we are bankrupt?

The Effect of the Debt on the Economy

The alarmists often forget that every debt has two aspects: Every debt payable is also an account receivable for somebody. Thinking in accounting terms, debts add as much to the asset side of the national balance sheet as to the liability side. There are some who attempt to reassure us by saying that the Nation cannot be bankrupted by some Americans owing debts to some other Americans. However, this answer is not altogether reassuring. The importance of the debt does not lie in its amount but in its structure: Who owes whom? How much? On what terms? The question of liquidity is involved also but is too complicated a problem for discussion here.

But we do wish to point out that many types of government debt have a great deal of "moneyness" about them. Savings bonds may be cashed at any bank without notice and they bear interest up to the last interest date previous to the time they are cashed. Tax notes held by corporations are almost as liquid. Even long-term Treasury bonds have a very reliable market and consequently enjoy fairly high liquidity.

The securities which constitute the national debt are assets to their owners, that is, banks, insurance companies, corporations, endowment funds, and individuals. This obvious fact is not to be overlooked. If it were somehow possible to retire all the debt at once, a calamity would ensue, for the present owners of the debt would then have money instead of Federal securities on which they earn interest; there would be no alternative securities to buy with the same degree of safety. The banking system would be completely disrupted since a major portion of the bank's earnings is interest on government activities.

Retirement of the Debt

Now for the retirement of the debt. Obstacles to the retirement of the debt do exist. The annual tax collection and payment of about 5 billion dollars in interest may adversely affect other Federal activities. Should Congress be willing to levy in any one year only some given amount in taxes, other appropriations for welfare, public works, and agricultural and even defense programs might suffer. On the other hand, if the level of national output grows secularly because of population and productivity increases, the relative burden of the debt will steadily diminish. Some repayment of principal is to be expected. Furthermore, if the long-term trend of prices is upward, as

seems to be the case, considered together with the tendency of labor unions to push wages upward faster than technical efficiency increases warrant, there is an additional reason for the burden to shrink in relative terms. It will be easier to pay interest on the debt if the purchasing power of the dollar continues to fall while the number of dollars in circulation continues to increase over a long period.

A Debt Program for a Future War

So far as I am concerned, there is no magic process for financing a war. Many feel that the tax rate was not sufficiently high in World War II; others say it was as high as it could have been. It does seem, however, that our continuing defense appropriations in peacetime should be put on a pay-as-you-go basis. Continuous deficit financing must eventually reach an end through lack of confidence in the ability of the Government to repay, in which case the Nation would be faced with the necessity of a capital levy, a printing-press inflation, or a denouncement of the present currency, or perhaps all three. Rigid controls in time of emergency enable the consumer to pay higher taxes, since without them he would pay out the same funds in increases in the cost of living, only a part of which would return to the Treasury as excess profits taxes.

In a recent book entitled "National Debt in War and Transition," a former official of the Treasury Department, H. C. Murphy, finds the war-borrowing program for World War II a success beyond doubt (see page 287). Throughout the entire period, he says, war finance was, as it always should be, the servant of all industry and not its master. There were no financial bottlenecks to the mobilization of the country's human and industrial resources. When resources were available to be purchased, money was always there to pay for them. The financial markets were orderly and the credit of the Government was never questioned in the slightest.

Summarizing then, I might conclude with the statement that there is no immediate breakdown of our financial system in sight.

Thank you.

QUESTION: A few years ago a man could look forward to retiring on about \$150 a month. Now he would be lucky if he could retire on twice that amount.

In the last few years, it seems to me, the Government has been pursuing a policy of what some people like to call "legalized confiscation of property." In other words, we have been encouraging the farmers to produce more and more--and we pay them to produce it--then we find we cannot use it. We keep encouraging people to work less and less and get more. As a result, our debt has risen to 250 billion dollars.

Now, the point I would like to raise is this: What is the logic of all this? How far can we go? And where will it all end?

DR. KRESS: Well, I have worried for years over those same problems. Actually, the wholesale price level stands today at just under 180, letting the 1935-1939 average price equal 100. This means you are paying \$1.79 or \$1.80 for what you used to pay a dollar for in 1939-1940. So your wages should be almost double what they are. They are somewhat more than they were, true, but they are not double. Yet, when you check over your personal purchasing power with what it was in 1940, I think most of you will be constrained to admit that you are better off now than you were in 1940.

In addition to that, you have more take-home pay at the end of the month. You have less worries as to what tomorrow is likely to bring. There is practically full employment for everyone. And as some real-estate man said only yesterday, we must be able to get the materials because the demand for houses is here; the demand is in existence. So we have to get the material some way in order to build houses for people.

In an expanding economy, that is the thing you get over the years. I remember when wages went from \$3 to \$8 a day after World War I, everyone asked: How long can this artificial situation exist? But it was not an artificial situation. It represented, in part, a decrease in the purchasing power of the dollar and an increase in efficiency due to production increases. We did the same thing in World War II and are likely to do the same come a third world war. It is just a question that does not answer itself very well on the statistical side. Over a period of years the American economy, in actual number of goods produced, and made available to the lowliest of our people, has expanded. That is the real test and not the number of dollars it takes to buy them.

Now about your war bonds. I know you are worried about their value going down over the years. The only consolation I can give you is something my father-in-law, who will be 92 years old next month, said. When war broke out in 1941, he said to me, "What do you think of conditions?" I said, "Well we will just get another inflation and money in the bank won't be worth anything?" I was feeling very pessimistic about the whole business. He said, "The value of money always comes back. It always has over the years."

That is only a partial answer, I know, but it is the best I can do.

COLONEL BARNES: I might add, from my own thinking, in order to get a complete answer to that question you must ask not only an economist but also a politician.

QUESTION: Dr. Kress, aren't we dealing here with two separate problems, that is, the individual problem of the man retiring on \$150 a

month vs. \$300, or more than that? Your answer would indicate that most of the people in the country are better off now than they were in 1935. I am afraid it may not be true of this particular group because most of us are either government employees or military personnel where the wage levels have not gone up in accordance with the rise in prices.

So, from the point of view of this particular audience, if I had been answering the question, I would have said I am not better off than I was 10 years ago except for the fact that I am 10 years older and in any community, in any society, people, as they grow older and more experienced, do get a higher income and have greater responsibilities.

I think there are two questions there. The first is in terms of whether the individual is better off in our economic life in this changing price and debt structure; and the second question, which is an entirely different one, whether, as a matter of national policy, in order to get the greatest good for the greatest number, which may not include ourselves, this type of financing or this relationship between national debt and the price structure is a good or a bad thing.

DR. KRESS: Well, when college professors were being encouraged to come into the Government in the early 1940's, the bait was \$3,800. Today they offer that same type of people \$6,500. So they have had an increase.

The military people have had an increase recently, but not anything like twice their former pay. There are many more colonels today than there were in World War I. When you increase a man's rating as well as his wages, you help him in that way too.

Now for the second part of your question. The Bank of England was founded on the Napoleonic debt, until the government took it over. That was, incidentally, the debt that could not be paid in 1815. Today, in spite of England's very bad condition in many ways, there are many Englishmen who could pay off that Napoleonic note out of their own pockets.

So I have to rely on my other explanation--these things are relative. They, somehow, do not quite correspond relatively to the price index. It is a useful device, but it is not always the explanation. I think that as long as an economy can be kept expanding, as shown in this film strip, the debt is easier to pay. How long can you keep an economy expanding? You can keep it expanding just as long as you increase its technical efficiency which, for the last 25 years, has been close to 3 percent a year. That is your limitation. But we

are doing a little bit more than that. Sumner Slichter has pointed out several times that labor is aware of this 3 percent increase in technical efficiency and manages to collect about, shall we say, 4 percent.

QUESTION: Most of the increase in the national debt occurred throughout a period of five years, 1940-1945, roughly. Those bonds will become due this year. So in the next five-year period the majority of the national debt will have to be paid off to the citizens who own the war bonds. What kind of an impact will that have on the national economy?

DR. KRESS: Unless there are recession or even depression times, it will have no effect. The Treasury of the United States recently answered that question by saying, "All you have to do is set up your bond selling campaign to sell new ones." They said they can do that easily.

COLONEL BARNES: In other words, refinance the debt.

DR. KRESS: There is no attempt to repay it at this time.

COLONEL BARNES (to Student): Did you want an answer as to who would pay it off? Was that your question?

COMMENT: I just wondered what impact it would have on the national economy, the fact that you will have to pay off those bonds. I'm just wondering to whom they are going to sell them.

DR. KRESS: To you and to me.

QUESTION: Doctor, excluding foreign loans, what is the national wealth of the United States?

DR. KRESS: In dollars or in actuality?

QUESTION: In dollars.

DR. KRESS: That is a figure that does not stick in my mind, sir. I just do not know. It is computed, though. The figure does exist. Those things have such little meaning that I don't carry them with me.

COLONEL BARNES: Can you tell us any place to get that information, Doctor?

DR. KRESS: The Department of Commerce has that. And I think there is a table in the Federal Reserve Board Monthly Bulletin that gives something of that sort.

COMMENT: In the study we have had recently of the economic position of the country, so much weight was placed on these various statistics that are collected on the gross national product, the national income, and so forth. I wonder if you would comment upon the percentage of error that is possible in those figures. It is a little difficult for me to conceive of those figures being accurate to, say, even 75 percent.

DR. KRESS: The National Bureau of Economic Research, in New York, says the figures are quite accurate. The four big groups working with them always come up with the same answer. I think the statisticians in the Department of Commerce and also in the Labor Bureau would be able to reassure you that their work is fairly well done. There is some percentage of error but not anything like 25 percent.

What I thought you were going to say was, "What good is that information?" You will notice the tense of the verb I used in my talk was "this was what was happening in the economy," and not what is happening.

COLONEL BARNES: That is all we have time for this morning, Andy. Thank you very much. I am sure everyone appreciates your coming over.

(15 Jan 1951--350)S.

NATIONAL INCOME

SUMMARY

1. National income may first be looked at from the standpoint of the costs of output payable as earnings to the factors of production. It is thus equal to the sum: wages and supplements to employees / net income of unincorporated enterprise / net interest and rents / net corporate profits.

2. Or we may look at net national product as a flow of goods and services evaluated and made comparable by the use of market prices. Hence, NNP can be split into consumption expenditure on goods and services / government expenditure on goods and services / net private investment (domestic and foreign).

3. To eliminate fictitious changes in the price level, money income must be deflated by some index of changing prices. This gives a measure of real income, measured in terms of dollars of constant purchasing power.

4. Pure transfer items and windfall capital gains must be excluded from national income. Also, we must be careful not to double-count intermediate along with final product. Instead, we must concentrate on the value-added approach which cancels out at every stage all purchases of intermediate goods by one firm from another.

5. Net product is correctly reached only after we have taken account of net capital formation or net investment. Private and public consumption will fall short of net national product if resources are being used to build up the community's stock of capital goods.

6. Gross national product, which includes gross rather than net investment, involves some deliberate double counting in comparison with net national product. Because of the difficulty of evaluating capital consumption or depreciation, GNP is often used instead of--or along with--NNP.

7. All indirect business taxes must be included in NNP if goods are to be evaluated at their market prices and cost to government. But indirect business taxes are not included in national income, since this concept is to represent factor earnings (before personal and corporate income taxes).

8. The problem of indirect business taxes should not be confused with the thornier problem of what part of government expenditure on goods and services is to be treated as intermediate services rendered.

to business. The statistician refuses to judge this question. Instead, he warns his readers that all goods and services purchased by government have been arbitrarily included in the NNP figures.

9. International trade introduces one new problem of definition. National income is defined as income accruing to all permanent residents of a country. To arrive at this, we cancel off in the international balance of payments all purchases and sales of goods and services until we arrive at a figure for net foreign investment (\neq or -). This is added algebraically into investment and into national income.

There are many philosophical problems of defining national income. Once a definition has been agreed upon, the statistical estimates do not differ by a great deal, and the resulting data give a pretty good picture of changes over time. Therefore, the analysis of business cycles and unemployment, as discussed in Part Two, is enormously aided by the improvements in the national income data of the past decades.

NATIONAL INCOME CONCEPTS

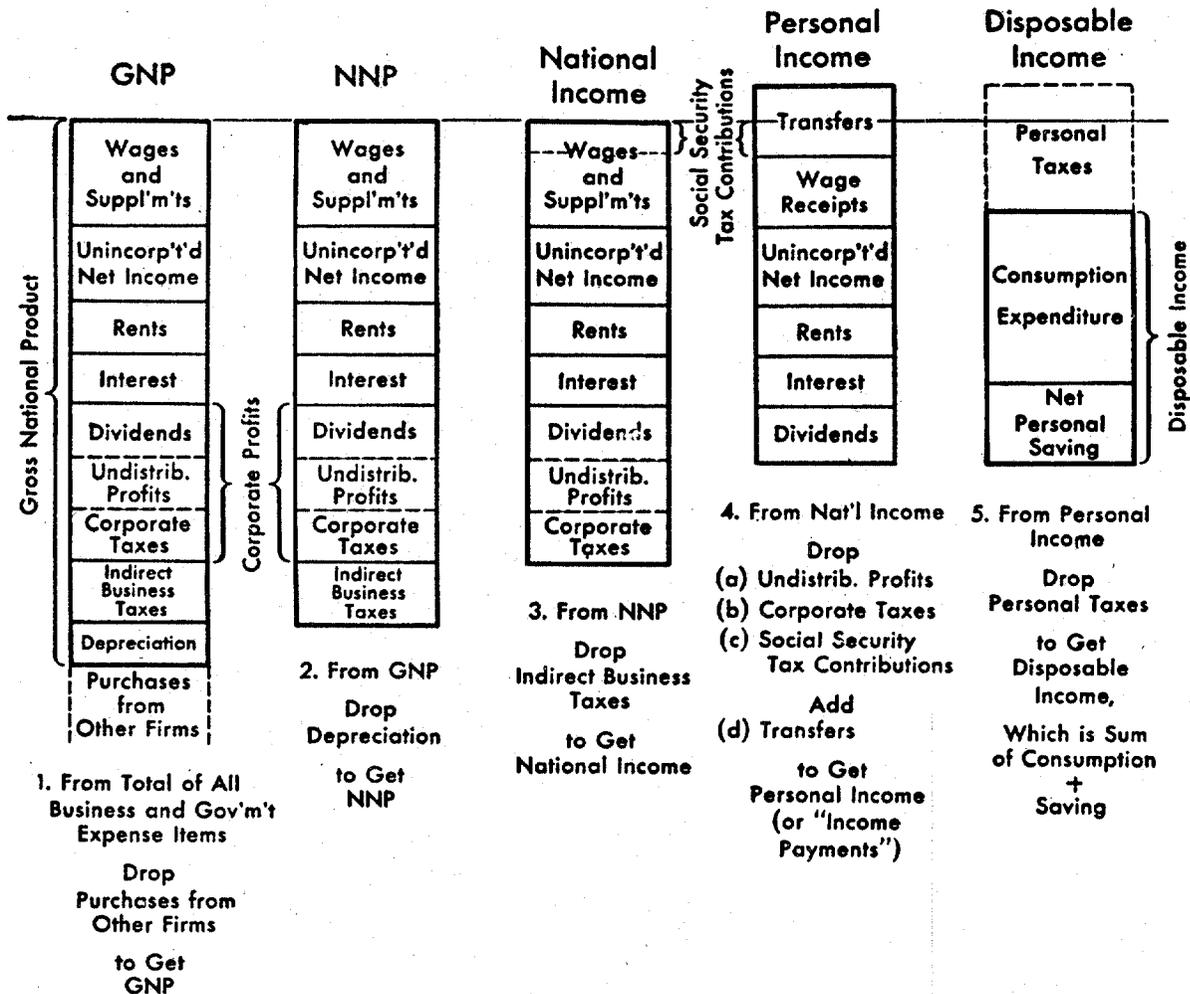


FIG. 7. This summarizes the relationships between gross national product, net national product, national income, personal income, and disposable income. (SOURCE: Department of Commerce revised concepts, adapted from Richard Ruggles, "Harvard Econ A Syllabus.")

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