

## ECONOMICS U\$A LESSON #3

(MUSIC PLAYS)

Announcer: Funding for this program was provided by the Annenberg CPB Project.

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Stasio: Economics U\$A. One of a series of programs designed to examine Twentieth Century micro and macroeconomic principles. The subject of this edition is The Gross National Product, or GNP. Our guest is Robert Nathan an earlier pioneer in the days of GNP and John Peterson an economist with Wharton Econometrics. I'm Frank Stasio.

Male Radio Voice: The foreign trade column put a drag on the GNP as exports of American made products were down and imports of foreign made goods were dramatically higher.

Female Radio Voice: A lower third quarter GNP was widely expected, and in fact some economists welcome it. They say a lower rate of growth is more manageable and...

Male Radio Voice: Government analysts optimistically described a third quarter GNP increase as moderate, but the report shows the nation's economy is advancing at less than one-third the rate seen in the robust first quarter.

Stasio: What is GNP? When you come down to it, it's nothing more than a number. A number representing America's economic growth, and yet it is one of the most carefully

watched and calculated numbers in the world. It provides government with a sound basis for establishing future economic policymaking, allowing economists to compare the nation's economic performance from year to year. GNP accounts provide the foundation for all modern macroeconomic policy. And yet in Nineteen Thirty-two in the midst of America's greatest depression it didn't even exist.

Stasio: Without doubt, the Great Depression was a national calamity. Millions suffered, businesses went bankrupt, farmers lost their land, and people went begging for food. The Hoover Administration struggled mightily with the problem, and yet no one knew just how bad the economy really was. There were no statistics to measure what was happening on a national scale. Senator Robert LaFollette of Wisconsin called for action.

LaFollette: The greatest economic crisis in our history is a grave national emergency which makes it imperative that we fight the Depression on all fronts. Congress must formulate a sound program to this end (applause).

Stasio: In Nineteen Thirty-two, the nation brought a democrat, Franklin Delano Roosevelt, into the White House. Roosevelt called in Professor Simon Kuznets. Kuznets had been studying something he called National Accounts at Wharton School of Economics. Robert Nathan was a young graduate student with Kuznets at Wharton. He recalls those early days when he came to Washington to join Kuznets.

Nathan: Well the department was very smart in bringing Kuznets down to do this job because he had been working with the concepts and...and ideas of measurements. So he was, I think, the best expert there was and luckily he asked the head of the division I was

in if I could be assigned to him. And they said, “Yes,” and so I enjoyed tremendously the next six months working under Kuznets because he had such a phenomenal mind.

Stasio: In fact, six months was all it took to produce the very first figures. The national income, Nineteen Twenty-nine to Nineteen Thirty-two, was something of a best seller when it was published. But surprisingly it also created some suspicion.

Nathan: It’s strange how businessmen who in their own businesses have to plan to be successful think it’s horrible to have government plan. And this was very true even back fifty years ago, even in the Depression one would have thought in the Nineteen Thirty, Thirty-one, Thirty-two, three deep Depression business and say look we’ve got to plan to get out of this. But it was amazing how Roosevelt was maligned so much. The problem was...was what does all this mean. And I think there were some in those days who probably had some misgivings about these measures from the point of view it might be used for a planned economy.

Stasio: The gross national product turned out to be very important for government and business in planning ahead. But how exactly is GNP defined?

Nathan: It’s the most comprehensive measure of the performance of our economy. It seeks to measure the total output of all goods and all services. In other words it includes the production of...of agricultural products, mineral products, the services of the barber and the restaurant and the doctor and the lawyer so that it...it truly does tend to measure what kind of levels of activity we’re having. And levels not just in terms of number of men working and things of that nature but rather in terms of the product of our economy.

And as such, therefore, it is a significant indicator of how we’re doing compared with

past times, how we're doing from one country to another. So its comprehensive nature gives it a meaningful and a value that is unique.

Stasio: An important point about GNP is that it gives us an indication of how the economy is doing from year to year and tells us how America's economy compares with other countries. In fact, it's a monumental task to calculate such a comprehensive statistic especially in Nathan's day when computers and calculators were not available. They relied on adding machines which painstakingly computed numbers from punched cards. Although there are several ways of arriving at GNP figures, the usual method of calculating is by the output approach. This means we take the retail value of all final goods and services produced by the economy over a fixed period, usually one year. But this is not quite as straightforward as it might seem. For example, how do we define a finished product?

Nathan: ...because what is a finished product to some is a material for others. Uh, seeds may be a finished product is bought by a gardener but in the farmers it's a raw material that's bought and therefore it has an added value added on to it that gets into the national income. It's...it's not simple but an effort is made to really measure total output, unduplicated so you're not adding together the same thing twice or three times.

Stasio: Another difficulty is making sure that goods do not show up twice in the calculations.

Nathan: The one thing that is important is that the gross national product is unduplicated. In other words you don't...you don't add the iron that comes out of the ground. You don't add that to the steel mills fabrication into sheets and billets and bars. And then you

don't add that on to the steel that goes into the automobile and...and add it all together because you'd get duplication on stages of fabrications.

Stasio: Some economists would rather talk about net national product. It's a more accurate figure because it takes into account some of the losses incurred in production.

Nathan: Well the net national product is really nothing more than the gross national product minus the capital that that is consumed in the process of production. You see when you...you turn out say so many automobiles a year and that is a measure of the gross product but one must realize that in that process you're wearing out machinery and you're wearing out equipment and that have to be replaced over a given period of time so that the depreciation or the amortization of that equipment has to be reduced from the gross national product to arrive at, oh, what has been called the net national and common net national product.

Carter: We are quite concerned about the pressures of inflation. The advisors to me on economics are trying to assess all government programs and private actions that contribute to inflationary pressures. When this analysis is done, I will use every means that I have available to me to express these concerns and possibly corrective actions to the American people as well.

Stasio: President Jimmy Carter and his economic advisors struggled through for four years of rising inflation in the late Nineteen Seventies. The figures used to analyze the problem were mostly derived from the GNP. Simon Kuznets understood that the GNP itself would have to be corrected for inflation in order to prove a useful tool. A tool that would compare the country's past against its present economic performance.

Nathan: Okay you can have an inflation rate say of ten percent, and the GNP goes up ten percent. That...that means you're not producing any more than you did before. Now, uh, it's...it is very important to know what is happening to real income. In other words are we producing more or not? Uh, and to just look at the dollar figures can be terribly misleading because even in the recession that we had in the mid Seventies and the early Eighties, the dollar gross national product rose but the real gross national product did not rise in one or two of those recession years because what you had is you had so much unemployment and so much idle capacity and so much sort of stagnation in the economy that we didn't produce any more than we did the year before. But the dollar numbers went up because of inflation. So you produce ten items this year and say at ten dollars, well it's a hundred dollars production. Next year prices went up say five percent so you had a hundred and five dollars but you were still producing only ten items. So that to get the meaningfulness of...of the real output, how much the quantity is, you have to adjust for price changes.

Stasio: Economists usually allow for inflation by what they call constant dollars. That is they value goods and services at a base year price. John Peterson, an economist with Wharton Econometrics, explains.

Peterson: Well take gasoline for example. In Nineteen Seventy-six drivers in the United States consumed about forty-four billion dollars worth of gasoline. In Nineteen Eighty-three this more than doubled to ninety billion dollars. Does that mean we bought twice as many gallons of gas? No. The increase in price makes it look as if we're consuming much more than we are. In fact, when the price change is taken into account, the number

of gallons of gasoline purchased actually fell. So constant dollars is a way of adjusting GNP numbers so that price increases don't get confused with quantity increases.

Stasio: Another way to measure inflation is to use price indices. The best known and most widely used is the Consumer Price Index or CPI. It's a way of showing how consumers are affected by price changes, and it's based on a typical group of goods and services that affect an ordinary family. In fact, GNP is such a comprehensive statistic that a great combination of price indices are used.

Nathan: This is a very difficult adjustment because in the gross national product you have producers' goods, wholesale goods, retail goods, services and goods. Now when, for instance, we use the consumer price index what we're doing is the price index, what you as a consumer buy or what I as a consumer buy. But what about the producers' goods, the machinery and the equipment? That's different. Now they do call—have an index of producers' goods as well. But part of this gross national product, is, also services, financial services and the like. So what the...the measure...measurement group in the Department of Commerce, namely the Income Division there, they do, they try to develop price series that apply to different segments of the output of gross national product. And they call that the...the GNP deflator. Namely the measure of prices that can be used to deflate, to translate the dollar GNP into real GNP.

Stasio: As Robert Nathan explained, there are price indices also known as deflators for all of the different components of the GNP. John Peterson goes into more detail.

Peterson: A deflator is simply a measure of how the prices of a group of goods have changed over time. Such measures are constructed for consumer goods, producers'

goods, for government expenditures and the like. Now each of these deflators are given a certain weight because some components make up a greater share of the GNP than others. After they're weighted, they're added together and become a price index for the entire economy. That's what's known as the GNP deflator.

Stasio: But while GNP can give us a real idea of what's going on in the economy and allow for inflationary changes, there are quite a few items it cannot include because they're so difficult to measure. One of these items is household chores. You might be surprised to hear that when Simon Kuznets, Robert Nathan, and the design team first devised GNP they tried very hard to find a way to include the contribution a housewife makes.

Nathan: Say the wife cuts the husband's hair, that's not included. But if the husband goes to the barbershop and the barber does cut his hair, then the price the ga—barber charges, the value of the product, namely the haircutting process alone, does get into the national income. Another very good example is cleaning the house. Housewife may do all her own cleaning, all her own cooking, all her own laundry and that service never gets counted into the gross national product. But if a husband, uh, takes his wife out to dinner and they eat in a restaurant, that is included because the proceeds of the restaurant and the value of its services, uh, are included in the gross national product. And you see if it doesn't go through the marketplace, it is not counted.

Stasio: In fact, it's next to impossible to put a price on household services. Although attempts are still being made, it's proved too difficult so far to put a dollar value on jobs like washing dishes or cleaning floors.

Stasio: Another item in GNP economists find it difficult to account for is undeclared income derived from tipping in restaurants, hotels, and taxicabs.

Nathan: The underground, uh, economy is...is really a misstatement of...of facts by those who report or for illegal or other purposes. For instances, you take, um, taxicab rides. Most riders in taxicabs give the driver a tip. Well he may or may not report that tip. Uh, chances are that a lot of them do not report it. Well that is true of a lot of other things. Barbers get tips and I don't know how many of them report. Those are understatements and I guess it's a...an ethical element what people are going to do. But there's more serious than that is the illegal.

Nathan: You take the drugs, uh, and that cash is laundered by some less than scrupulous bankers. They're not allowed to do it but they do. And, uh, you get a...a regrettably a tremendous amount of income that's...that's lost, never reported. Then you have a...a lot of illegal payoffs in criminal underground world, the gangsters, uh, the mafia and things of that nature. So that we do have a...a sizable, uh, market that isn't caught and I think it's quite big.

Stasio: In Nineteen Eighty-four GNP stood around four trillion dollars, and many experts believe that illegal activities may account for several billion more. But criminal activities are not counted in GNP not just because economists don't approve of them but because they simply can't put a dollar value on them.

Nathan: One has to be careful not to try to mix up the economic concepts with a moral concepts or...or with, uh, social values. And there're a lot of people who think that cigarettes oughtn't be in...in the GNP because they hurt health and they're damaging.

But in a market economy, cigarettes are counted just as much as essential foods, uh, because they are an output which people are willing to spend money on. And if people want to see X-rated films and if they're going to pay for it and they're going to be produced, the actors and the directors and the photographers, all are getting income which reflect the value of their services. One shouldn't try to think too precisely in moral terms, uh, in...in judging or measuring what should or shouldn't be in the GNP.

Stasio: Robert Nathan estimates that over the last fifty years our standard of living has quadrupled. Clearly, some people are doing much better than others. But what GNP gives us is an overall picture. It says nothing about how wealth is distributed between rich and poor sections of the community nor about changes in the quality of a product. For example, a firm may discover a new way of making a better bagel. Now they may not want to increase the price for fearing of losing customers. So everyone is happy with the better bagel, but in GNP terms the improvement in quality is different to measure. The same applies to all goods and services whether it's cars, haircuts, or computers. Well GNP figures don't make easy reading today so imagine the confusion on Capitol Hill when they were first introduced.

Nathan: Now I had a call one time from the office of Senator Claude Pepper of Florida – he...new Senator. And he said he wanted somebody to come down and explain to him what this national income business was. And so we made an appointment, and I went down. And, uh, I guess I was probably then twenty, uh, seven or eight years old. I was tremendously impressed going to see a Senator. But, uh, he asked me a lot of questions and I went off and to tell him what we were trying to measure and what it meant and how it could be used and what its significance was. And, uh, I thought he was very perceptive

and listened but the only thing I thought was so amusing is he'd get excited about certain concepts of measure and you get up and almost make a political speech walking around the room. And it...it...it took time to get across this concept that it was an unduplicated measure of production in flows of income.

Stasio: You notice Nathan referred to national income rather than GNP. What's the difference? John Peterson explains.

Peterson: Well there are two ways to arrive at the GNP figure. You can sum up all output, all goods and services produced, or you can sum up all the income earned in the production of those goods. This would include all wages and salaries, rental income, corporate profits, interest payments, and the like. Summing up the GNP from the income side equals the same number when GNP is calculated from the product side.

Stasio: Businesses are interested in a particular aspect of national income called disposable income. That's the part you and I have to spend on goods and services. How can you determine disposable income from national income? John Peterson explains.

Peterson: Disposable income can be calculated from the national income quite easily. First, we simply eliminate all income not actually paid out to individuals by subtracting corporate profits and business contributions to social security. What we're left with then is personal income. From that we deduct all taxes not repaid in the form of unemployment benefits, interest payments, or social security payments. And what remains is disposable income.

Stasio: You can see that while the gross national product may be a simple number, arriving at that number can be a complicated affair. Briefly, let's recap how the GNP is calculated and what must be considered to make the GNP a useful figure. Remember there are two ways of computing GNP. One is to add up the total of all goods and services. The other is to sum the total income earned in the production of those goods and services. Economists must be careful not to count goods and services twice.

Analysts avoid double counting by considering how the product is used and only finished products are counted. When the cost of machinery and other capital goods used up or depreciated in the course of production is subtracted from the GNP, the resulting figure is called the net national product. Also, inflation must be considered so that higher prices are not misinterpreted as increased production. Price indices, or deflators, are used to convert GNP numbers into real GNP. And there is a certain amount of economic activity that is not measured by the GNP including illegal transactions, unreported income, changes in quality, the social desirability of a product, and how wealth is distributed.

Roosevelt: Our war program for the coming fiscal year will cost fifty-six billion dollars or, in other words, more than half of the estimated annual national income. We shall produce sixty thousand planes. We shall forty-five thousand tanks. We shall produce fifty-five thousand anti-aircraft guns. We must convert every available plant and tool...

Stasio: Simon Kuznets devised the GNP statistics during the Depression and it proved to be an invaluable aid to Franklin Delano Roosevelt. At the onset of World War Two, GNP figures were used to judge how much of an arsenal America could provide and how quickly the country could prepare for battle. Since then it's become so widely used that financial experts, businessmen, and the press gather every month for the release of the

new figures. For a truly significant achievement in the field of economics, Simon Kuznets was awarded the Nobel Prize.

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Stasio: You've been listening to Economics U\$A, one of a series of programs on micro and macroeconomic principles. Our guest has been Robert Nathan, celebrated economist and President of Robert Nathan Associates in Washington, DC, and John Peterson, an economist with Wharton Econometrics. Economics U\$A has been produced by the Educational Film Center in Annandale, Virginia. I'm Frank Stasio.

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