

# ECONOMICS U\$A

## LESSON #1

(MUSIC PLAYS)

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Stasio: Economics U\$A. One of a series of programs designed to explore Twentieth Century micro and macro economic principles. The subject of this edition is Resources and Scarcity. What is Economics All About? Our guest is Nariman Behraves, Vice President of U.S. Services for Wharton Econometric. I'm Frank Stasio.

Stasio: Economics is about choices. The kind of choices we make almost every day. How do we decide what to do with our money? When we look at our bills for food, clothing, and shelter, it would seem we have very little discretion. Still we do exercise some choice of the kind of place we live, the sort of food we eat, and the style of clothes we wear. What do we do with a windfall like a bonus or inheritance? Spend it to fix up the house, take a trip to Europe, put it in the Bank. As individuals we make these decisions consciously or otherwise based on our income, our tastes, our needs, and our desires, and in the end each of us tries to make the best use of our money. As far as that goes, societies are not much different from people. They too, try to make the best use of all of their resources. The forces that guide these choices form the very heart of

economics. Nariman Behraves is Vice President for U.S. Services at Wharton Econometrics.

Behraves: Economics is a study of how we meet essentially unlimited needs and unlimited wants on our part with a limited set of resources, and by resources we mean things like labor, capital, that's machinery and factories and so forth, and land, like oil and timber and so forth uh, and these all in limited supply throughout the world and in the U.S. and given our needs, the question is how best can we meet those needs given these limited resources?

Stasio: In the Nineteen Seventies, the American people had a choice to make about what to do with the rich resources of Alaska. Should Alaska be kept open for the harvesting of valuable minerals like oil or chromium, or should commercial activity be restricted to preserve the environment? The debate centered on the Alaska Lands Bill, which would protect one hundred seventy-five million acres of land from private development. For conservation lobbyist like Doug Scott of the Sierra Club, the answer was obvious.

Scott: People in future generations will be outraged if we destroy everything natural about this planet in our shortsighted rush to develop everything for short-run economic gain, and almost everybody in this country agrees with that. That's why when we said to the American people, "Write your Congressman. He is about to make a decision of extraordinary importance. You may never be able to go to that national park, but you can dream of it, and you may be able to go. But it's important as a part of our culture, write your Congressman and tell him you care." And millions of people responded to that and that's why the Congress rose to this historic conservation challenge.

Stasio: Preserving a frontier environment like Alaska has...may have been a compelling argument for some people, particularly those who identified with conservationist causes, but for others like Alaska Congressman Don Young withholding valuable natural resources was unconscionable.

Young: How selfish and how ridiculous can we be when we think that this world...that we can live within ourselves when we have so many billions of people in Asia alone and at...in the European countries old and retired, and South American suf...suffering the starvation, and we're gonna set aside a hundred and seventy-five million acres of land for a playground that has all the minerals and oil and resource of timber and hydropower. That's the most asinine thing I've ever heard of.

Stasio: The Alaska Lands Bill passed, but that by no means settled the debate over the value of harvesting natural resources versus preserving the natural environment. Also environmental resources are not the only cause of economic debate. While the Alaska case may seem like an extreme example, policy-makers must grapple with similar tradeoffs everyday. Never is this more apparent than in the budget process. Alice Rivlin is Director of Economic Studies at the Brookings Institution and former director of the Congressional Office. Rivlin says the federal budget reflects the competing interest within the economy.

Rivlin: We elect our congressmen to represent uh, their districts and uh, what they view as the best thing not only for the nation but for their piece of it, for their city or their state, or their district. Um, the budget process is designed to compromise those various interests and uh, get a budget uh, which reflects uh, what the Congress in the aggregate,

the...thinks is the best thing to do about uh, fiscal policy. A budget is conflict. A budget is a process of putting together conflicting claims and uh, desires and fitting those into the total that uh, the government uh, wants it to spend which is consistent with its fiscal policy. A budget is always a process of uh, adjudicating conflicting claims.

Stasio: At times the government runs into trouble trying to make these tradeoffs and may encourage the production of more goods and services than the economy can produce. In such a situation, we may think we're getting more, but we're not. Nariman Behravesesh.

Behravesesh: Let's take the example of what we have to face, the choices we have to face in the Vietnam War period. We had a desire on the part of the administration to fight the war there. Uh, that's the Johnson administration. We had a desire by the same administration to uh, improve the social infra-structure and by that I'm referring to the great society programs, um, and the question, was could we do both of these? And the answer was essentially no, we could not. The problem was that neither the administration nor the Congress at the time faced up to this fact uh, and specifically what...what the proposal on the table was that they really had to increase taxes to uh, to finance either the...the additional war spending or the additional spending on welfare programs. They didn't and the consequence was higher inflation and problems down the road for the U.S. economy.

Stasio: There are a few questions to bear in mind when considering how tradeoffs are made. Is the economy operating at full speed and is it operating efficiently? And how much more of one good or service do we sacrifice to get increasing quantities of another. Again, if we compare the economic conditions during the Vietnam War with the

economy at the beginning of World War Two, we find that the nation did not face the same choices in the early Nineteen Forties that it did in the late Sixties. This is partly because during the Vietnam War the economy was operating near full capacity. That is, unemployment was low and factories were turning out about all they could produce. Not so at the start of the Second World War.

Behraves: When we started in World War Two uh, we were nowhere near full capacity, so the initial conditions were quite different. So initially in World War Two we were able to produce both guns and butter. Now after a while, and this is sometime in Nineteen Forty-two tradeoffs had to be made even there. The specific examples are that automobile production stopped completely so that the uh, production lines could be switched to producing tanks. So even there eventually we had to make some tradeoffs, but in the Vietnam War period we entered that...that era, especially around Nineteen Sixty-five operating already at full capacity, so to then layer on top of that additional defense spending and then additional spending on social programs was asking the economy to do too much. In other words, asking the economy to produce more than it could given the resources that it had available.

Stasio: It is not only how thoroughly we use our resources but how efficiently they are used that determines the point where tradeoffs begin.

Behraves: There are inherent mechanisms in a free market economy that promote efficiency. Uh, perhaps, the...the foremost of those is the...is the market system itself uh, because of what it does is it promotes and rewards the most efficient use of resources and penalizes the least efficient. Uh, to give you an example, uh, if a producer of uh,

let's say autos uh, can produce efficiently and uh, uh, you know, at a cost of maybe two thousand an auto, but there's another producer who's less efficient, more wasteful if you will um, but produces a car at let's say, three thousand dollars an auto, then it's clear that in time the market will buy the two thousand dollar auto and the...the producer of cars who's producing less efficiently will go out of business. So there's those kinds of mechanisms that will, as I said, reward the uh, the efficient producer and...and really penalize the inefficient.

Stasio: Economists argue that policy-makers must take into account the fact that when a society wants more of one particular good or a service, it must give up proportionately more of other goods and services.

Behravesch: Let's take an example for example of...of uh, an industry that has to...is...is forced to comply with some kind of pollution regulation, um, and they're...let's say they're asked to...to reduce their pollutants, air pollutants, by some fifteen or so percent. Well, that first fifteen percent is relatively uh, cost less or...let's put it this way, is not terribly expensive for them to reduce pollution by that much, um, but if they're asked to reduce their pollution by even more, then the tradeoffs start to worsen. Uh, the next fifteen percent or so is a little more expensive and as you try to reduce pollution by larger and larger amounts, then the incremental costs uh, starts to rise dramatically. So as you move along in this tradeoff process, uh, and this is true not only in this example but in other examples too, is that in time that tradeoff becomes more and more and more costly. In fact, increasingly more costly to the point where at some point it becomes prohibitively costly to go the extra additional incremental reduction in pollution.

Stasio: As Behravesch suggests, society makes tradeoffs even the area of health and safety. Joel Schwartz conducts economic analysis for the Environmental Protection Agency. His job is to compare the cost of controlling health and safety hazards against the benefits.

Schwartz: There are both health reasons and we generally lump together and call welfare reasons um, materials damages, crop damages, and things to control the pollutant. The problem is how much should we control the pollutant given that it does cost some money? Um, and you can't just say control it absolutely because of two reasons. One, there may not be that much money in the world, and two, because if you look at tradeoffs between spending money on environment and on other things um, it may be a bad deal. For example, it may be that putting more money into getting heart attack victims to the hospital sooner would lead to a much more important improvement in health for your dollar than on the margin tightening an environmental standard or it may not and that's why you want to look and see what people are willing to pay to avoid health risks, in general in the economy and measure our environmental regulations against that.

Stasio: While there will always be a debate over how to divide the economic pie, with economics it is possible that over the long run everybody's share may increase through economic growth.

Behravesch: We can expect growth to continue for...for a number of reasons. One is that certain resources are increasing. The most obvious one is population. The number of people who are working in the economy is increasing, so you'd expect that what they produce is also increasing. Assuming let's say, just...just hypothetically that everybody

produces uh, the same amount even. But what...there's another factor playing here and that is that over time the U.S. workers and other workers have become even more productive, so that let's say between the Nineteen Hundreds and the Nineteen Eighties, the output per hour of the typical U.S. worker has increased quite a bit. Uh, this has come from a number of uh, different sources, better education, uh, better equipments, uh, technological improvements. So all of these play into a situation in which not only are we getting growth, but we're also getting growth per capita. In other words, growth uh, even uh, if you discount the fact that the population is growing.

Stasio: Economists and policy makers eager to promote full and efficient use of resources and economic growth try to understand and describe the way a complex economy works. This involves the construction of models.

Behraves: An economic model is a representation of economic behavior. It can be a mathematical representation. It can be a graphical representation, like a supply and demand curves or it can be just a verbal representation of...of economic behavior.

Usually what's involved is some simplification to make this model a little easier to understand and easier to manage, because if you try to model everything that was going on then the model would be far too complex. So usually a model involves some kind of simplification.

Stasio: Behraves says that economists must use a variety of models each designed to fit specific economic conditions.

Behraves: Some models are used, in fact, to explain what has already happened. Some are used to explain what is happening now, and some are used to explain what might

happen in the future and sometimes they're the same model, sometimes they're not, sometimes they're different models, and part of this may have to do with changes in behavior, changes in the structure of the economy. For example, a model that was good in explaining uh, what happened in the depression is not terribly good at explaining what happens in a...in an inflationary period, for example. So we, therefore, might want to change our model to...to conform to the changing structure of the economy.

Stasio: Economists usually try to construct as accurate a model as possible. That is, one that most closely reflects the actual forces behind economic activity. So to create a broad picture, experts must study the economy in detail. The trick in creating useful models is deciding which details to include and which to ignore.

Behravesh: For example, let's...let's take supply and demand. Primarily the way the graphs are drawn we're interested in how supply and demand respond to changes in things like income and prices, and tastes and so forth. Well, there are...there are kinds of factors that would influence supply and demand like weather and uh, you know, fashions and advertising. We typically leave those out because they tend to complicate the picture too much. So it's a question of focusing on those key issues that are most relevant to the sector or to the kind of behavior that you want to study.

Stasio: It is important to distinguish between a model and a case study. Case studies are examples of actual situations that illustrate an economic principle. These examples sometimes referred to as anecdotal evidence may underscore a concept that applies to many situations, but the details of each story are unique.

Behraves: The idea behind a model is that it's uh, it's supposed to explain a general set of behaviors whereas you can never be sure where...whether an anecdote is...is specific to that particular example or, in fact, is representative of a more general trend, and the idea behind building a model is that hopefully you really are picking up uh, a general set of behavioral relationships and...and uh, the good models are, in fact, the ones that are quite general and succeed in...in picking up that kind of behavior.

Stasio: There are actually times when models serve their purpose by painting an unrealistic picture.

Behraves: A model, in fact, uh, that...that fits that category of...of being one that's not terribly realistic but on the other hand really helps you understand certain ways the markets behave is the...is the perfectly competitive model. There are very few markets in the U.S. that conform to that. On the other hand, what's interesting is to study how markets differ from that model, how far away they are from being perfectly competitive 'cause that's really where the interesting information is. Not so much whether a market is perfectly competitive or not, but really how far away are they from them.

Stasio: Behraves and other economists stress that good models are flexible.

Behraves: In order to build a model or to specify a model you have to make some basic assumptions, simplifying assumptions. Uh, if any of these turns out to be wrong or incorrect or outdated as often happens, then the model will lead you astray and the key in building a good model is to make reasonable assumptions that are robust, if you will, that...you know, that will survive a lot of different situations, and as long as you've built

a model based on those assum...those kinds of assumptions, then you can fair...be fairly sure that the model will...will stand the test of time fairly well.

Stasio: Of course economic models can break down and learning why they fail can be instructive. For instance, in Nineteen Sixty-eight, President Lyndon Johnson imposed an income tax surcharge in the hope of controlling inflation. A widely held economic theory at the time predicted that higher taxes would curb consumer spending and slow the rise and the cost of living, but the surcharge failed.

Behraves: That really was a classic case in which uh, the underlying assumptions behind the models that were being used to predict what was gonna happen to the economy proved to be false. The specific assumption was that uh, consumers would react to any and all income changes. Uh, whereas an alternative or competing theory that had been posed and wasn't that widely accepted at the time was that consumers would only react to permanent changes in income. So the idea was that the uh, Nineteen Sixty-eight surcharge would not have a big effect on consumer spending because essentially they would view it as being temporary. They would draw down their savings and it would not affect consumer spending. This is, in fact, what happened and the prevalent view uh, the prevalent Keynesian view at the time uh, was that in fact the surtax would slow down consumer spending and as we well know that did not happen. So that was uh, a case in which the assumption uh, about consumer spending proved to be wrong.

Stasio: Not all models try to predict economic behavior. Some simply try to describe economic activity or point out the kinds of choices that we face.

Behravesh: An example of a model that's useful uh, for analytical purposes but not terribly useful for predictive purposes is the production possibility frontier which is that bowed out kind of curve that's uh, that shows the tradeoffs that you have to make between let's say guns and butter, uh, and this model is useful because it does highlight those tradeoffs. In other words, that you...in order to get guns or butter, you have to give up one or the other, uh, and it's also useful for uh, pointing out how if you're on the uh, frontier of this uh, this curve, that you're really operating very efficiently in the economy, but if you're somewhere inside the curve that you're not operating terribly efficiently. So, this...this particular concept, this model if you will, is...is very useful to analyze these issues but it is not useful for predictive purposes and has not been typically used by economists for prediction uh, because it really doesn't lead you anywhere.

Stasio: Descriptive or predictive models require a certain amount of objectivity and suspended judgment. This kind of model making is called positive economics. Specific economic policy decisions however, are based only partially on these economic models. The value judgments of a society as a whole also play an important role. Economic decisions that depend on value judgments are considered normative economics.

Behravesh: The positive approach is uh, an approach that does not uh, impose any specific values. Uh, it's uh, an objective approach that says, okay, let...let us uh, look at the...the framework. Let us consider different types of behavior and see where that takes us. The normative approach on the other hand comes at it with some values. Uh, this is what we think should be happening rather than this is what we think is going to happen, and so it's...it's a different perspective and it imposes the uh, the values of the person making the statements or...or the person looking at...at the particular economic problem.

Stasio: It is important too to realize that complete objectivity in any kind of analysis is almost impossible.

Behravesh: Inevitably uh, when you put together a model, you are making assumptions and even though you might try to be objective in one's own judgment and biases and so forth, prejudices enter in the...in the formation of those assumptions. So I think in...in reality it's never possible to get a perfectly objective uh, model or a perfectly positive analysis. Uh, so in...inevitably some of that creeps into the analysis. Uh, but I think most economists, most serious economists will try as hard as possible to at least be honest about where their own biases are creeping in, where they think uh, you know, there's room for judgment, and so at least you can identify uh, where that may be happening.

Stasio: While economists do agree on some of the very general principles at the foundation of a free market economy, there is often lively debate over economic goals and how to achieve them.

Behravesh: The disagreements come about as to when uh, that which choices uh, are...are the most uh, reasonable, which choices make the most sense uh, and...and often the disagreements break down on issues of...of equity for example and uh, issues uh, that revolve around the more difficult choices. Um, so I think those are the kinds of considerations that you...those are the kinds of questions where you'd see economists disagree on. Often economists do disagree on questions of degree uh, in the sense that uh, you know, I...I may feel that uh, six percent unemployment rate is unacceptable and somebody may feel a seven percent uh, unemployment rate is unacceptable. So it's largely those kinds of questions that come about and...and a lot of it has to do with

values. Some people may be much more troubled by inflation than unemployment, others uh, are much more concerned about unemployment than inflation. Uh, but again, those are largely questions of value and not so much questions of underlying behavior in the economy.

Stasio: Let's review some of the key points in our program on Scarcity and Resources and what economics is all about. Since our resources are limited and our demands are infinite, societies must make choices about how their resources are used. Economists try to describe those tradeoffs and the forces that influence society's decisions. Economic tradeoffs become more acute when the economy is using its resources fully and efficiently. An important aspect of these tradeoffs is that as a society tries to increase the production of one good, it must sacrifice increasing quantities of other goods. While debate may continue over the distribution of economic resources, it is possible that everybody's share of those resources may increase through economic growth. Economic resources fall under three basic categories. Land, which includes all natural resources. Labor, which is all human work and effort, and capital, which includes buildings, equipment, tools and other non-natural resources used in production. Economists use economic models to analyze economic activity and predict economic behavior. An economic model is a verbal or mathematical representation that tries to create a simplified explanation of economic activity. Economic analysis falls under two basic categories, positive economics and normative economics. Positive economics attempts to paint a dispassionate picture of economic activity without imposing values on the results of the research. Normative economics blends value judgments with objective analysis and offers recommendations on what course of action should be taken. While there is

general agreement on the fundamental principles of a free market economy, there are lively debates over the specific questions of determining economic goals and how best to achieve them. Out of these debates rises much of our understanding about the way our economy works. They will be examined in detail throughout the rest of this series on Economics U\$A.

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Stasio: You've been listening to Economics U\$A, one of a series of programs on micro and macro economic principle. Our guest has been Nariman Behraves, Vice President for U.S. Services at Wharton Econometric. Economics U\$A has been produced by the Educational Film Center in Annandale, Virginia. I'm Frank Stasio.

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