

ECONOMICS USA
PBS PROGRAM #1

RESOURCES AND SCARCITY:
WHAT'S ECONOMICS ALL ABOUT?

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AIRSCRIPT
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1. WHAT IS ECONOMICS ALL ABOUT: HOW SHOULD WE USE OUR RESOURCES?

PURPOSE:

To illustrate how unlimited wants and scarce resources lead to trade-offs and choices, and to show how the economic cost of using resources to produce a good is the value of the goods that could have been produced with those same resources.

OBJECTIVES:

1. The amount of goods and services available for consumption in an economy depends on the quality of the economy's productive resources, how well those resources are used, and whether all resources can be kept employed.
2. Productive resources are: land, labor, machinery, structures, and technical and managerial knowledge of various types and qualities. These resources are called "scarce" resources because they are never able to produce everything that everybody wants.
3. Resources tend to be more suitable for producing one type of good than another. Therefore, as more and more of a nation's resources are devoted to the production of a specific good, there will be diminishing marginal returns.
4. The cost to society of producing a certain good (i.e. shifting productive resources into the production of that good) is the value of the goods that those resources could have otherwise produced.

KEY ECONOMIC CONCEPTS:

scarcity of resources
choices, tradeoffs
substitution

marginalism
diminishing returns
opportunity cost

ILLUSTRATIVE EVENTS:

1. a zoning dispute is used to illustrate how land use is determined
2. the Reagan administrations effort to increase defense spending and reduce social services
3. the extent to which we allocate our resources for the provision of health care

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Final Transcript
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Annenberg/CPB Project (Logo and Music)

TEASER

DAVID SCHOUMACHER: 1979. While Americans stewed in gas lines Congress argued over what to do with 150 million acres of Alaskan land. Which would we choose...wilderness or mineral development? In 1939 one American in six was out of work. By 1942 we were fighting the greatest war in history and living better than we had in years. How did the United States increase production of both guns and butter during World War II? In 1978 a troubled textile industry was told to spend 2 billion dollars to combat brown lung disease. By 1980 the Supreme Court was asked to choose between saving lives or jobs and profits. How much is a life worth? And who should bear the cost? Wilderness or minerals...guns or butter...jobs or safety? We always face choices. Resources and Scarcity: What's Economics All About? With the help of economic analyst Richard Gill we'll examine that question on this edition of Economics U\$A. I'm David Schoumacher.

(MUSIC PLAYS – OPENING TITLES)

(RESOURCES AND SCARCITY: WHAT'S ECONOMICS ALL ABOUT? appears on screen.)

PART 1

DAVID SCHOUMACHER: What is economics all about? Well, there have always been theoretical answers to that question, but reality has a way of complicating even the most elegant theories. Economics USA is about both theory and reality in 20th century America and how people and events have shaped the economic decisions that continue to affect our daily lives. Those decisions almost always involve tradeoffs. For example, in 1980, the United States Congress designated more than 100 million acres of land in Alaska as National Parks and Wilderness Areas. Why did Congress make that decision? And how much did it cost the nation? In 1867, when the United States purchased the territory of Alaska from Russia, the acquisition was derided as a waste of money. A century later Alaska had survived two gold rushes and was braced for a third. This time the gold was oil and millions of barrels of it lay beneath the permafrost. During the 1970s, when skyrocketing prices of foreign oil threatened to devastate the American economy, oil from Alaska seemed to promise hope for American energy independence. Then along came 1979...Shock waves of revolution spread through the Islamic world. Iran cut off its exports of petroleum to the United States. Americans felt their nation was being held hostage by its dependence on foreign oil. As gas lines grew and the price of a gallon of gas passed a dollar, Congress began to debate a measure to close off a hundred million acres of Alaskan land to mineral exploitation. The bill would double our national park system. Alaska Congressman Don Young was outraged.

DON YOUNG: “How selfish and how ridiculous can we be when we think that we can live within ourselves...when we have so many billions of people in Asia along and in the European countries...old and retired...and South America suffering starvation...and we’re going to set aside 175 million acres of land...for a playground...that has all the minerals and oil and resources, timber and hydro-power? That’s the most asinine thing I’ve ever heard of.”

DAVID SCHOUMACHER: But others in Congress saw the issue in more personal terms. Arizona Congressman, Mo Udall...

MORRIS UDALL: "The most important thing to someone like myself is that it's there...that you get a spiritual feeling and you get a real lift from getting out of the artificial world that man has made and be able to be with nature in its raw state once in a while."

DAVID SCHOUMACHER: It was not only oil that lay beneath the tundra. Chromium, manganese and other minerals vital to our national defense were being imported from the Third World while unknown quantities waited in Alaska. The amounts were assumed to be vast, but nobody knew for sure and the Alaska Lands Act would prevent further exploration.

DON YOUNG: "Within those borders there's probably the potential of providing for this nation those 31 minerals which we're importing now from the Third World in economic quantities. And someone will say, "Well, why weren't they developed economically before this?"...Because the need was not there...because it is expensive."

DAVID SCHOUMACHER: But if there was room for debate on the mineral riches of Alaska, there was no debate on the wilderness...It was vast...And it was the last wilderness in America...The last wild home for many species of plants and animals. We could import minerals, but we could not import wilderness. We could not have both...We would have to choose. Doug Scott was the chief lobbyist for the environmentalists...

DOUGLAS SCOTT: "People in future generations will be outraged if we destroy everything natural about this planet in our short-sighted 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 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 history conservation challenge."

DON YOUNG: "They sold this issue on the national interest of preserving the lands for the future. That's why they sold it on. And very frankly you can go down any street and you ask anybody, 'Do you support wilderness?'...They do. 'Do you support the parks?'...They do. But if you ask them, 'Do you support parks and wilderness to the jeopardy of your job or the dependency upon minerals and oil from overseas?'...They say, 'no.' But we were never able to convey that message to the general public. The second thing is, regardless of what people say, there is going to be a loss of jobs in Alaska through this action. When we're faced with unemployment in this great nation of ours..."

DAVID SCHOUMACHER: Don Young's eloquence was in vain. The Alaska Lands Act was passed by the House of Representatives in 1979, passed by the Senate in 1980 and signed into law by President Carter in the waning days of his administration. With the stroke of his pen the President doubled the national park system...doubled our national wildlife refuges and closed the door on mineral development on these lands. The true economic cost of the Alaskan Lands Act is measured in terms of the resources we chose not to develop...the oil, the chromium, the minerals that still lie beneath the permafrost. Was it worth it? Well, you can still get an argument in Anchorage on that question. We asked economic analyst Richard Gill what the Alaskan Lands Issue tells us about economic questions in general.

(MUSIC PLAYS – COMMENT & ANALYSIS I)

(ECONOMICS U\$A LOGO)

RICHARD GILL: The Alaskan Lands Issue is ultimately an issue of limits. One of these limits actually has to do with the field of economics itself. What is the true value to

society of preserving our natural wilderness? Like most citizens, economists will have personal views on this matter. But, alas, we can make no claim to special wisdom. This is a question for society to decide. Having been appropriately modest, we can now ask what economics and economists can do. The first and most important lesson in all of economics is that we usually can't have everything we want. Our desires for material goods may be virtually unlimited. Our resources for fulfilling those desires are not. They are limited and scarce. Consider the following diagram. Along this horizontal axis, we measure the number of acres of Alaska preserved as wilderness. If we preserved the maximum amount of Alaskan wilderness, we might end up here, say, with 150 million acres of unspoiled, natural terrain. On this vertical axis, we measure what we take to be the valuable resources...say, minerals...in those 150 million acres. If all those acres were turned into oil fields and chromium mines, we would get, say, 13 billion dollars worth of minerals. And what the notion of limits in economics tells us in this case is that you can't be in both places at once. If you want all wilderness you will have zero minerals. If you want some minerals, moving up here, you will characteristically have to give up some of your wilderness, here. You would end up at a point like this. You now have \$5 billion worth of minerals and you are left with 120 million acres of wilderness. And so it goes. More minerals here. Less wilderness here. Still more minerals...still less wilderness...until finally we have a whole curve traced out. Economists call it the "production possibilities" curve. It expresses the possibilities that realistically lie before us: The fundamental limits on our range of choice!

PART II

DAVID SCHOUMACHER: In 1943, American servicemen were fighting a war on two fronts while American civilians were living better than they had in years. How did the United States increase its production of both guns and butter during World War II? The 1930s had been bitter years for America. The Depression, which began with the Great Stock Market Crash of 1929, dealt a severe blow to our national self-confidence. For almost a century the United States had boasted of the most productive farms, the most modern factories, the limitless natural resources to fuel those factories, and the best and

the smartest workers in the world. But the Great Depression brought the country to its knees. A nation which thought itself wealthy found itself impoverished by the inability to mobilize its resources. Leon Keyserling remembers that time of national torment.

LEON KEYSERLING: “Industry was in collapse, banking was in panic, agriculture was in ruins and labor was in despair. You had 13 to 15 million unemployed out of a labor force of 46 million people... You had bank failures right and left... And you had people who wondered how long life could be saved or property safe in the face of fathers who couldn’t meet the cries of their children for food.

DAVID SCHOUMACHER: After 10 years of Depression, one American in six remained out of work. Factories were closed. It was a tight and vicious circle and it took a world-wide explosion to break it. In 1939, German armies marched into Poland, igniting World War II. The United States vowed to stay out of the conflict, but it was clear from the start that the Allies would need our economic resources. But what were these resources and how would we mobilize them? Robert Nathan was on the War Production Board.

ROBERT NATHAN: “And so as early as the early fall of 1940, at the Defense Advisory Commission we began to come up with what we could see as bottlenecks under a total mobilization effort... total mobilization of the economy, a fully employed economy. And it was clear we needed a lot more aluminum and we needed more steel. And I remember, very distinctly, when some of these results came out and we confronted the steel industry with the idea that a fully mobilized United States would need more steel, they said, ‘You’re crazy! We’ve gone through a decade when we’ve had phenomenal portions of our steel capacity totally idle.’”

DAVID SCHOUMACHER: In the depths of the Depression, the American steel industry was limping along at 20% of its capacity. By 1941, the mills were working overtime, pouring out steel for tanks, guns and planes. Soon we would have to build new steel mills, open new factories, create new jobs... The American economy had gone to war.

The Japanese attack on Pearl Harbor brought America into the shooting war. Americans left their homes and jobs to fight overseas and still the explosive economic growth continued.

ROBERT NATHAN: “Everybody that could work worked. Young people worked, wives began to move into the labor force, older people stayed on and didn’t retire early...and the result was that our productive capability expanded very very rapidly...So that our production was so phenomenally higher by 1944 than what it had been in 1939, that the per capita consumption was very very high...and still over 40% of the total production of this country...some 42-43% at peak...went totally to the military.”

DAVID SCHOUMACHER: With full employment came a demand for consumer goods which had unaffordable during the lean years of the 1930s. The country was producing and consuming more of everything. For a while the United States kept increasing its production of both guns and butter...both military and consumer goods...but eventually choices had to be made.

ROBERT NATHAN: “So what we did, along with setting high mobilization efforts...beginning very soon after Pearl Harbor, you began to cut back on the civilians, and by the spring of 1940...early summer, late spring of 1942...no more new automobiles were produced...none. And oh, how many people screamed about that! Look, even the auto industry, which did a wonderful job in World War II producing tanks and airplane parts and all kinds of guns and anti-aircraft guns and the like...in these big auto factories, they even resisted cutting off production.”

DAVID SCHOUMACHER: When the last automobile assembly line switched to military production, most civilian cars were already off the road. Gas was rationed, tires were rationed, meat, butter and cloth were rationed. Americans began to feel the pinch of wartime scarcity. But the tweak of rationing was mild compared to the misery of the Depression. Americans cheerfully accepted the hardships as necessary to win the war.

ROBERT NATHAN: “And the result was that in ’42-’43 it was just almost a magical consequence how the factories and plants and manpower and management in this country just poured it out and really saved the free world.”

DAVID SCHOUMACHER: By 1945, the United States had confounded its enemies and amazed the world by mobilizing resources we’d barely understood we had back in 1939. Our ability to quickly and completely mobilize these resources brought final military victory and economic recovery. We asked analyst Richard Gill how economists explain this increase in guns and butter at the same time.

(MUSIC PLAYS – COMMENTS & ANALYSIS II)

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RICHARD GILL: More guns and butter? But didn’t we prove just a few minutes ago that limits always exist in economics? More Alaskan wilderness, fewer minerals. Of course, the main answer to the paradox is pretty obvious. There is a production-possibilities curve for guns and butter and it would look very much like our similar curve for Alaskan wilderness and minerals. But no one ever said we always had to be on the curve! And, in fact, during most of the 1930s we were operating way inside the curve, here. Because of massive unemployment, we were not exploiting our production possibilities. Had all our workers had jobs and all our steel plants and other factories been producing at capacity, we would have had much more “butter”...civilian goods...than we did. But we weren’t out there. We were way back here. And what this meant was that when the war effort got serious...when everybody went back to work and our factories were all running to capacity...we could increase our gun production massively, to here, and still have more civilian goods than before. In fact, we did even better than that. Because we developed new technologies of production and because everybody was working overtime, we actually managed to shift the whole curve outward during the war years. This, too, enabled us to increase both military and civilian production. Economics is fundamentally concerned with scarcity, limits. But we do not always produce to our limits. And those limits can and do change over time.

PART III

GERTRUDE BROWN: “When I first went in there, they would fan the frames out with cardboard fans and we had to stay there...and they’d say, ‘Don’t let that lint get in those ends and that yarn...we don’t want that lint in our yarn.’ And they didn’t care about it going in our lungs and our breath and all. And when I left, no one ever tried to find out what was wrong with me...The company never asked.”

DAVID SCHOUMACHER: Gertrude Brown is a victim of viscinosis...more commonly known as “brown lung” disease. 20% of her fellow textile workers, perhaps as many as 150 thousand Americans, suffer from the same ailment. The disease is brought on by inhaling the particles of cotton dust and fiber that are a by-product of textile manufacturing. Growing public awareness of “brown lung” disease was a prime force behind the passage of the Occupational Safety and Health Act in 1970. But throughout the next decade, as competition increased and profits shrank, businessmen, workers and the government wrestled with the question of how much more should we spend to protect our workforce? Throughout the 1970s, the American textile industry was locked in a fierce struggle against foreign competition. Asian competitors were undercutting American mills. The American textile industry was spending millions to protect worker health. The Asian textile industries spent almost nothing. Faced with this competition, the U.S. industry looked for ways to cut costs. Then, along came OSHA...The Occupational Safety and Health Administration...telling business it had to spend more money, not less. OSHA proposed tough new standards for cotton dust in the mills. W.O. Leonard recalls the industry’s reaction.

W.O. LEONARD: “We wanted a reasonable standard established...not one that was impossible to reach. We also were very interested in the time frame for implementation. We knew that technology was not all in place to achieve compliance. We wanted enough time for that to be developed and to become commercially available.”

DAVID SCHOUMACHER: Industry claimed that the new regulations would require them to spend 2 billion dollars on new equipment and that they could achieve almost the same result by spending \$1.45 per worker on dust masks. The Amalgamated Clothing and Textile Workers Union disagreed. Workers were still dying from “brown lung” disease and dust masks would eliminate the risk. The union argued fiercely for the tougher standards, but many in Washington sided with the industry. Eric Frumin remembers the arguments.

ERIC FRUMIN: “Well, there were forces within the Carter Administration, particularly the economists, who took the view that the money spent to protect workers’ health was in a sense not worth it...and that if workers could just be forced to wear those intolerable dust masks which...after all, they don’t look that uncomfortable, especially if you never wore one all day...If workers could just be forced to wear these dust masks, then we’d be saving everybody a lot of money and somehow that would be to society’s benefit. Well, that view fortunately did not prevail.”

DAVID SCHOUMACHER: The textile industry sued OSHA, arguing that the new regulations would impose a relatively high cost to protect a relatively small number of lives. They argued that eliminating all risk of “brown lung” disease would destroy the ability of the industry to survive against overseas competition...that the most effective dollars already had been spent.

W. O. LEONARD: “You do considerably more out of the first dollar you spend rather than the millionth or the last dollar you spend, because usually improvement is achieved very early in making progress toward reaching a standard. For example, you lower your dust levels quite significantly on new equipment that is put in. But then if that does not meet the standard...just putting in that equipment...finding the answer to reach that final stage of compliance can be very expensive.”

ERIC FRUMIN: “The fact is that there is no real cost-benefit analysis allowed under the OSHA Act. Cost-benefit analysis is a nice thing to do if you have a problem where you

can put dollar signs here and dollar signs there and somehow weigh them and decide, okay, it's worth it for me to go out and buy a new car. But, when lives are on one side, it's not so easy to make that decision. And the Congress understood that when they passed this law in 1970. The Senators got up on the floor of the Senate, one after another, and said, 'You know folks, this may cost us some money, but it's worth it because we don't believe that society should allow business to run at the cost of workers' health.'

DAVID SCHOUMACHER: Late in 1980, the Supreme Court heard arguments from both sides. In June, 1981, the Court agreed with the union that Congress had intended the question of worker health be considered first, above all other considerations of cost. By 1985, most American textile companies had installed the new equipment to meet the cotton dust regulations. Brown lung disease had virtually disappeared, but so had 300,000 jobs in the textile mills.

W.O. LEONARD: "We feel that most of that has come about because of the foreign imports, but mixed in there, of course, has been some failures due to the inability to meet these standards...principally by smaller companies.

DAVID SCHOUMACHER: How much more should we spend on a worker's health and safety?...clearly a lot according to the Supreme Court. But spending more, protecting a worker's health may mean ever-increasing costs in the form of higher prices and lost jobs. We asked analyst Richard Gill if all this is typical of economic problems.

(MUSIC PLAYS – COMMENT & ANALYSIS III)

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RICHARD GILL: The situation in the textile industry is indeed typical of most economic problems. The first relatively small expenditures for worker protection were able to produce large improvements in worker health. To improve health still further required quite massive expenditures. The further we go in any one particular economic direction,

the higher the costs usually are. You may have been wondering why I've always drawn the production-possibilities curve with a bowed-out shape. Here I've done it again in the textile case. And what this shape expresses is exactly the principle I've just mentioned. The more of one economic good you produce, the more it usually costs in terms of some other economic good you have to give up. Our two goods here are, for simplicity, units of cotton textiles and units of worker health. The more we divert our resources from producing textiles to producing protection devices...dust control machinery, and the like...the healthier our workers will be. That is to say, we will be moving along the curve in this general direction. But notice the difference between the move from A to B and the move from B to C. In both cases, we get the same improvement in worker health: these two lines are equal. At the beginning, however, we can get this improvement with only a small diversion of our resources away from textiles production, here. To move from B to C, however, requires a massive diversion of resources and loss of textile production. Economics is concerned with limits, scarcity, with costly choices between this or that. Society must ultimately make these choices...But only with a knowledge of fundamental economic principles can the full consequences of our choices be understood.

DAVID SCHOUMACHER: Jobs or safety...Which would you choose? Parklands or oil...Which would you choose? National defense or consumer goods...Which would you choose? Economists recognize that in a world of scarce resources somebody wins and somebody loses...rarely can we have it all. But how do we decide? This series will bring you face to face with the decision-makers, the men and women who have shaped the economic events and theories of the 20th century. For Economics U\$A, I'm David Schoumacher.

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