Alothough economists use theory and observation like other scientists, they face an obstacle that makes their task especially challenging: In economics, conducting experiments is often impractical. The Scientific Method: Observation, Theory, and More Observation To find a substitute for laboratory experiments, economists pay close attention to the natural experiments offered by history. Assumptions can simplify the complex world and make it easier to understand. The art in scientific thinking -- whether in phusics, biology, or The Role of Assumptions economics -- is deciding which assumptions to make. Economists use different assumptions to answer different questions. Mostly consist of diagrams and equations. **Economics Models** Economic models omit many details to allow us to see what is truly important. In this model, the economy is simplified to include only two types of decision makers -- firms and households. Firms produce goods and services using inputs, such as labor, land an capital(buidlings and machines). These inputs are called the factors of production. Households own the factors of production and consume all the goods and services that the firms produce. Households and firms interact in two types of markets. In the markers for goods and services, households are buyers, and firms are sellers. In particular, households buy the output of goods and services that firm produce.In the *markets for the factors of production*, households are sellers, and firms are buyers. In these markets, households provide the Our First Model: The Circular-Flow Diagram inputs that firms use to produce goods and services. A more complex and realistic circular-flow model would include, for instance, the roles of government and intenational trade. production possibilities frontier: a graph that shows the combination of output that the economy can possibly produce given the available factors of production and the available production technology The Enonomist as Scientist With the resources is has, the economy can produce at any point on or inside the production possibilities frontier, but it cannot produce at points outside the frontier. An outcome is said to be efficient if the economy is getting all it can from the scarce resources it has available. Points on(rather than inside) the production possibilities frontier represent efficient levels of production. If the source of the inefficiency is elimiated, the economy can increase its production of both goods. Once we have reached an efficient point on the frontier, the only way of producing more of one good is to produce less of the other. The cost of something is what you give up to get it. This is called the Our Second Model: The Production Possibilities Frontier opportunity cost. The opportunity cost of a car in terms of the number of computers is not constant in this economy but depends on how many cars and computers the economy is producing. This is reflected in the shape of the production possibilities frontier. The production possibilities frontier shows the trade-off between the out puts of different goods at a given time, but the trade-off can change over A technological advance in the computer industry enables the economy to produce more computers for any given number cars. As a result, the production possibilities frontier shifts outward. If the economy moves from point A to point G, the the production of both cars and computers increases. Microeconomics is the study of how households and firms make decisions and how they interact in sprcific markets. Macroeconomics is the study of economy-wide phenomena. Microeconomics and macroeconomics are closely interwined. Because changes in the allover economy arise from the decisions of millions of individuals, it is umpossible to understand macroeconomics Microeconomics and Macroeconomics developments without considering the associated microeconomics Desipite the inherent link between miceoeconomics and macroeconomics, the two fields are distinct. Because they address different questions, each field has its own set of models, which are often taught in separate courses. Positive statements are decriptive. They make a claim about how the world is. Statements about the world come in two types Normative statements are prescriptive. They make a claim about how the world ought to be. Positive and normative statements are fundamentally different, but within a person's set of beliefs, they are often interwined. In particular, positive views about how the world works affect normative views about what policies are desirable. Positive versus Normative Analysis Yet normative conclusions cannot come from positive analysis alone: they involve value judgements as well. Thinking like an Economist Much of economics is positive: It just tried to explain how the economy works. Yet those who use economics often have normative goals: They want to learn how to improve the economy. When you hear economists making normative statements, you know they are speaking not as scientists but as policy advisers. Economists at the Office of Management and Budget help formulate spending plans and regulatory policies. Economists at the Department of the Treasury help design tax policy. Economists at the department of Labor analyze data on workers and those looking for work to help formulate labor-market policies. Economists at the Department of Justice help enforce the nation's antitrust laws. Economists are also found outside the administrative branch of The Economist as Policy Adviser government. To obtain independent evaluations of policy proposals, Economists in Washington Congress relies on the advice of the Congressional Budget Office, which is staffed by economists. The Federal Reserve, the institution that sets the nation's monetary policy, employs hundreds of economists to analyze economic development in the United States and throughout the world. Throughout this text, whenever we discuss economic policy, we often focus on one question: What is the best policy for the govenment to pursue? We act as if policy were set by a benevolent king. Once the king figures out the right policy, he has no trouble putting his ideas into In the real world, figuring out the right policy is only part of a leader's job, sometimes the easiest part. communications advisers press advisers Why Economists' Advice Is Not Always Followed Other advisers for related input legislative affairs advisers political advisers After hearing and weighing all this advice, the president then decides how to proceed. Economics is a young science, and there is still much to learned. Economists sometimes disagree because they have different hunches about the validity of alternative theories or about the size of important parameters that measure how economic variables are related. Differences in Scientific Judgements For example, economists disagree about whether the government should tax a household's income or its consumption(spending). Differences in Values The First proposition in the table is about rent control, a policy that sets a legal maximum on the amount landlords can charge for their apartments. Why Economists Disagree Almost all economists believe then rent control adversely affects the availability and quality of housing and is a costly way of helping the neediest members of society. Nonetheless, many city governments ignore the advice of economists and place ceilings on the rents that landlords may charge their tenants. The second proposition in the table concerns tariffs and import quotas, two policies that restrict among nations. For reasons we discuss more Perception versus Reality fully later in the next, almost all economists oppose such barriers to free trade. Nonetheless, over the years, prosidents and Congress have chosen to restrict the import of certain goods. The broken window fallacy is perpetuated in many forms. Whenever job creation or retention is the primary objective I call it the job-counting fallacy. Economics majors understand the non-intuitive reality that real progress comes from job destruction. It once took 90 percent of our population to grow our food. Not it takes 3 percent. Pardon me, Willie, but are we worse off because of the job losses in argriculture? The wouldhave-been farmers are now college professors and computer gurus. Let's Get Going We will occasionally hit a soft spot when we have a mismatch of supply and demand in the labor market. But that is temporary.