Chapter 2

THE ROLE OF PRICES

The wonder of markets is that they reconcile the choices of myriad individuals.

William Easterly

However much we may think of ourselves as independent individuals, we are all dependent on other people for our very lives, as well as being dependent on innumerable strangers who produce the amenities of life. Few of us could grow the food we need to live, much less build a place to live in, or produce such things as computers or automobiles. Other people have to be induced to create all these things for us, and economic incentives are crucial for that purpose. Prices are at the heart of these incentives in a market economy.

There are some relatively simple, but important, principles of economics which together help explain how a complex society of millions of human beings supply one another with the countless goods and services that sustain, enhance, and prolong their lives. Since we know that the key task facing any economy is the allocation of scarce resources which have alternative uses, the next question is: How does an economy do that?

Different kinds of economies obviously do it differently. In a feudal economy, the lord of the manor simply told the people under him what to do and where he wanted resources put: Grow less barley and more wheat, put fertilizer here, more hay there, drain the swamps. It was much the same story in twentieth century Communist societies, such as the Soviet Union, which organized a far more complex modern economy in much the same way, with the government issuing orders for a hydroelectric dam to be built on the Volga River, for so many tons of steel to be produced in Siberia, so

much wheat to be grown in the Ukraine. By contrast, in a market economy coordinated by prices, there is no one at the top to issue orders to control or coordinate activities throughout the economy.

How an incredibly complex, high-tech economy can operate without any central direction is baffling to many. The last President of the Soviet Union, Mikhail Gorbachev, is said to have asked British Prime Minister Margaret Thatcher: How do you see to it that people get food? The answer was that she didn't. Prices did that. Moreover, the British people were better fed than people in the Soviet Union, even though the British have not produced enough food to feed themselves in more than a century. Prices bring them food from other countries.

Without the role of prices, imagine what a monumental bureaucracy it would take to see to it that the city of London alone is supplied with the tons of food, of every variety, which it consumes every day. Yet such an army of bureaucrats can be dispensed with— and the people that would be needed in such a bureaucracy can do productive work elsewhere in the economy— because the simple mechanism of prices does the same job faster, cheaper, and better.

This is also true in China, where the Communists still run the government but, by the early twenty-first century, were allowing free markets to operate in much of that country's economy. Although China has one-fifth of the total population of the world, it has only 10 percent of the world's arable land, so feeding its people could continue to be the critical problem that it once was, back in the days when recurring famines took millions of lives each in China. Today prices attract food to China from other countries:

> China's food supplement is coming from abroad— from South America, the U.S. and Australia. This means prosperity for agricultural traders and processors like Archer Daniels Midland. They're moving into China in all of the ways you'd expect in a $100 billion national market for processed food that's growing more than 10% annually. It means a windfall for farmers in the American Midwest, who are enjoying soybean prices that have risen about two-thirds from what they were a year ago. It means a better diet for the Chinese, who have raised their caloric intake by a third in the past quarter-century.

Given the attractive power of prices, the American fried-chicken company KFC was by the early twenty-first century making more sales in China than in the United States. China's per capita consumption of dairy products nearly doubled in just five years. A study estimated that one-fourth of the adults in China were overweight— not a good thing in itself, but a heartening development in a country once afflicted with mass starvation.

The fact that no given individual or set of individuals controls or coordinates all the innumerable economic activities in a market economy does not mean that these things just happen randomly or chaotically. Each consumer, producer, retailer, landlord, or worker makes individual transactions with other individuals on whatever terms they mutually agree on. Prices convey those terms, not just to the particular individuals immediately involved but throughout the whole economic system— and indeed, throughout the world. If someone else somewhere else has a better product or a lower price for the same product or service, that fact gets conveyed and acted upon through prices, without any elected official or planning commission having to issue orders to consumers or producers— indeed, faster than any planners could assemble the information on which to base their orders.

You may not be able to locate Fiji on a map, or even be conscious of its existence, but if someone in Fiji figures out how to manufacture better shoes at lower costs, it will not be long before you are likely to see those shoes on sale at attractive prices in the United States or in India, or anywhere in between. After the Second World War ended, Americans could begin buying cameras from Japan, whether or not officials in Washington were even aware at that time that the Japanese made cameras. Given that any modern economy has millions of products, it is too much to expect the leaders of any country to even know what all those products are, much less know how much of each resource should be allocated to the production of each of those millions of products.

Prices play a crucial role in determining how much of each resource gets used where and how the resulting products get transferred to millions of people. Yet this role is seldom understood by the public and it is often disregarded entirely by politicians. Prime Minister Margaret Thatcher in her memoirs said that Mikhail Gorbachev "had little understanding of economics," even though he was at that time the leader of the largest nation

on earth. Unfortunately, he was not unique in that regard. The same could be said of many other national leaders around the world, in countries large and small, democratic or undemocratic. In countries where prices coordinate economic activities automatically, that lack of knowledge of economics does not matter nearly as much as in countries where political leaders try to direct and coordinate economic activities.

Misconceptions of the role of prices are common. Many people see prices as simply obstacles to their getting the things they want. Those who would like to live in a beach-front home, for example, may abandon such plans when they discover how extremely expensive beach-front property can be. But high prices are not the reason we cannot all live on the beach front. On the contrary, the inherent reality is that there are not nearly enough beach-front homes to go around and prices simply convey that underlying reality. When many people bid for a relatively few homes, those homes become very expensive because of supply and demand. But it is not the prices that cause the scarcity, which would exist under whatever other kind of economic system or social arrangements might be used instead of prices. There would be the same scarcity under feudalism or socialism or in a tribal society.

If the government today were to come up with a "plan" for "universal access" to beach-front homes and put "caps" on the prices that could be charged for such property, that would not change the underlying reality of the extremely high ratio of people to beach-front land. With a given population and a given amount of beach-front property, rationing without prices would have to take place by bureaucratic fiat, political favoritism or random chance— but the rationing would still have to take place. Even if the government were to decree that beach-front homes were a "basic right" of all members of society, that would still not change the underlying scarcity in the slightest.

Prices are like messengers conveying news— sometimes bad news, in the case of beach-front property desired by far more people than can possibly live at the beach, but often also good news. For example, computers have been getting both cheaper and better at a very rapid rate, as a result of technological advances. Yet the vast majority of beneficiaries of those high-tech advances have not the foggiest idea of just what specifically those technological changes are. But prices convey to them the end results—

which are all that matter for their own decision-making and their own enhanced productivity and general well-being from using computers.

Similarly, if vast new rich iron ore deposits were suddenly discovered somewhere, perhaps no more than one percent of the population would be likely to be aware of it, but everyone would discover that things made of steel were becoming cheaper. People thinking of buying desks, for example, would discover that steel desks had become more of a bargain compared to wooden desks and some would undoubtedly change their minds as to which kind of desk to purchase because of that. The same would be true when comparing various other products made of steel to competing products made of aluminum, copper, plastic, wood, or other materials. In short, price changes would enable a whole society— indeed, consumers around the world— to adjust automatically to a greater abundance of known iron ore deposits, even if 99 percent of those consumers were wholly unaware of the new discovery.

Prices are not just ways of transferring money. Their primary role is to provide incentives to affect behavior in the use of resources and their resulting products. Prices not only guide consumers, they guide producers as well. When all is said and done, producers cannot possibly know what millions of different consumers want. All that automobile manufacturers, for example, know is that when they produce cars with a certain combination of features they can sell those cars for a price that covers their production costs and leaves them a profit, but when they manufacture cars with a different combination of features, these don't sell as well. In order to get rid of the unsold cars, the sellers must cut the prices to whatever level is necessary to get them off the dealers' lots, even if that means taking a loss. The alternative would be to take a bigger loss by not selling them at all.

While markets coordinated by price movements— "capitalism" as it is called— may seem like a simple thing, markets are misunderstood more often than some other things that are considered much more complex. Although a free market economic system is sometimes called a profit system, it is in reality a profit-and-loss system— and the losses are equally important for the efficiency of the economy, because losses tell producers what to *stop* doing— what to stop producing, where to stop putting resources, what to stop investing in. Losses *force* the producers to stop

producing what consumers don't want. Without really knowing why consumers like one set of features rather than another, producers automatically produce more of what earns a profit and less of what is losing money. That amounts to producing what the consumers want and stopping the production of what they don't want. Although the producers are only looking out for themselves and their companies' bottom line, nevertheless from the standpoint of the economy as a whole the society is using its scarce resources more efficiently because decisions are guided by prices.

Prices formed a worldwide web of communication long before there was an Internet. Prices connect you with anyone, anywhere in the world where markets are allowed to operate freely, so that places with the lowest prices for particular goods can sell those goods around the world, and you can end up wearing shirts made in Malaysia, shoes produced in Italy, and slacks made in Canada, while driving a car manufactured in Japan, on tires produced in France.

Price-coordinated markets enable people to signal to other people how much they want and how much they are willing to offer for it, while other people signal what they are willing to supply in exchange for what compensation. Prices responding to supply and demand cause natural resources to move from places where they are abundant, like Australia, to places where they are almost non-existent, like Japan, because the Japanese are willing to pay higher prices than Australians pay for those resources—and these higher prices will cover shipping costs and still leave a larger profit than selling the same resources within Australia, where their abundance makes their prices lower. A discovery of large bauxite deposits in India would reduce the cost of aluminum baseball bats in America. A disastrous failure of the wheat crop in Argentina would raise the incomes of farmers in Ukraine, who would now find more demand for their wheat in the world market, and therefore higher prices.

The staggering number of economic transactions, on ever-changing terms as supply and demand vary almost continuously, is beyond the knowledge and capacity of any individual or any manageable-sized group of planners to direct in any economy, much less in the world market. But all that each of the billions of people involved in market transactions around the world need

concern themselves with are their own relatively few individual transactions, leaving the broader coordination of the national or world economy to the fluctuations of prices in response to changing supply and demand. When more of some item is supplied than demanded, competition among sellers trying to get rid of the excess will force the price down, discouraging future production, with the resources used for that item being set free for use in producing something else that is in greater demand. Conversely, when the demand for a particular item exceeds the existing supply, rising prices due to competition among consumers encourages more production, drawing resources away from other parts of the economy to accomplish that.

The significance of free market prices in the allocation of resources can be seen more clearly by looking at situations where prices are ***not*** allowed to perform this function. During the era of the government-directed economy of the Soviet Union, for example, prices were not set by supply and demand but by central planners who sent resources to their various uses by direct commands, supplemented by prices that the planners raised or lowered as they saw fit. Two Soviet economists, Nikolai Shmelev and Vladimir Popov, described a situation in which their government raised the price it would pay for moleskins, leading hunters to get and sell more of them:

> State purchases increased, and now all the distribution centers are filled with these pelts. Industry is unable to use them all, and they often rot in warehouses before they can be processed. The Ministry of Light Industry has already requested Goskomtsen twice to lower purchasing prices, but the "question has not been decided" yet. And this is not surprising. Its members are too busy to decide. They have no time: besides setting prices on these pelts, they have to keep track of another 24 ***million*** prices.

However overwhelming it might be for a government agency to try to keep track of 24 million prices, a country with more than a hundred million people can far more easily keep track of those prices individually, because no given individual or enterprise has to keep track of more than the relatively few prices that are relevant to their own decision-making. The over-all coordination of these innumerable isolated decisions takes place through the effect of supply and demand on prices and the effect of prices on the behavior of consumers

and producers. Money talks— and people listen. Their reactions are usually faster than central planners could get their reports together.

While telling people what to do might seem to be a more rational or orderly way of coordinating an economy, it has turned out to be far less effective in practice. The situation as regards pelts was common for many other goods during the days of the Soviet Union's centrally planned economy, where a chronic problem was a piling up of unsold goods in warehouses at the very time when there were painful shortages of other things that could have been produced with the same resources. In a market economy, the prices of surplus goods would fall automatically by supply and demand, while the prices of goods in short supply would rise automatically for the same reason— the net result being a shifting of resources from the former to the latter, again automatically, as producers seek to gain profits and avoid losses.

The problem was not that particular planners made particular mistakes in the Soviet Union or in other planned economies. Whatever the mistakes made by central planners, there are mistakes made in all kinds of economic systems— capitalist, socialist, or whatever. The more fundamental problem with central planning has been that the task taken on has repeatedly proven to be too much for human beings, in whatever country that task has been taken on. As Soviet economists Shmelev and Popov put it:

> No matter how much we wish to organize everything rationally, without waste, no matter how passionately we wish to lay all the bricks of the economic structure tightly, with no chinks in the mortar, it is not yet within our power.

This lesson proved hard for many others who lived in a centrally planned economy to accept. Mikhail Gorbachev was not the only leader raised in the Soviet Union who found the market's operations and results in the West baffling. During the last years of the Soviet Union, Boris Yeltsin, later destined to become Russia's first post-Communist leader, was equally struck by what he saw in a capitalist economy:

> A turning point in Yeltsin's intellectual development occurred during his first visit to the United States in September 1989, more specifically his first visit to an American supermarket, in Houston, Texas. The sight of aisle

> after aisle of shelves neatly stacked with every conceivable type of foodstuff and household item, each in a dozen varieties, both amazed and depressed him. For Yeltsin, like many other first-time Russian visitors to America, this was infinitely more impressive than tourist attractions like the Statue of Liberty and the Lincoln Memorial. It was impressive precisely because of its ordinariness. A cornucopia of consumer goods beyond the imagination of most Soviets was within the reach of ordinary citizens without standing in line for hours. And it was all so attractively displayed. For someone brought up in the drab conditions of communism, even a member of the relatively privileged elite, a visit to a Western supermarket involved a full-scale assault on the senses.

When he returned to Moscow, Yeltsin spoke of the pain he felt after seeing in Houston the contrast between American and Soviet living standards. He described what he had seen in America to what was described as "a stunned Moscow audience." Yeltsin's aide said that the Houston supermarket experience destroyed the last vestiges of Yeltsin's belief in the Communist system, setting the stage for his becoming the first leader of post-Communist Russia.

It should not be surprising that people in market economies have succeeded better at a more manageable task.* What we need to understand is how all the millions of individual economic decisions in a complex society are coordinated by prices in such a way as to allocate scarce resources which have alternative uses. Let us now look at that process more closely.

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* It might seem as if the central planners' task could be made more manageable by hiring more people to work as central planners. But the problem of setting millions of prices could not be solved by sharing out the work more widely, assigning some individuals or groups the task of setting some prices and assigning others to set other prices. The whole point is that these prices must be set and adjusted ***relative to one another*** if resources are to be allocated efficiently. If the prices of pelts have been set too high relative to the prices of undershirts, then both prices need to be adjusted, in order to provide incentives to transfer resources from one to the other. In fact, since thousands of other things use some of the same resources used in producing both pelts and undershirts, all these prices needed to be adjusted to one another simultaneously— something that happens automatically through price competition in the marketplace but which is an overwhelming task for a given set of human beings trying to manage a whole economy.

PRICES AND COSTS

Prices in a market economy are not simply numbers plucked out of the air or arbitrarily set by sellers. While you may put whatever price you wish on the goods or services that you provide, those prices will become economic realities only if others are willing to pay them— and that depends not on whatever prices you have chosen but on what prices other producers charge for the same goods and services, and what prices the customers are willing to pay. Even if you produce something that would be worth $100 to a customer and offer it for sale at $90, that customer will still not buy it from you if another producer offers the same thing for $80. Obvious as all this may seem, its implications are not at all obvious to some people— those who blame high prices on "greed," for example, for that implies that a seller can set prices at will and make sales at those arbitrary prices. For example, a front-page news story in *The Arizona Republic* began:

> Greed drove metropolitan Phoenix's home prices and sales to new records in 2005. Fear is driving the market this year.

This implies that lower prices meant less greed, rather than *changed circumstances* that reduce the sellers' ability to charge the same prices as before and still make sales. The changed circumstances in this case included the fact that homes for sale in Phoenix remained on the market an average of two weeks longer than the previous year before being sold, and the fact that home builders were "struggling to sell even deeply discounted new homes." There was not the slightest indication that sellers were any less interested in getting as much money as they could for the houses they sold— that is, that they were any less "greedy."

Competition in the market is what limits how much anyone can charge and still make sales, so what is at issue is not anyone's disposition, whether greedy or not, but what the circumstances of the market cause to happen. What was happening in Phoenix was happening across the country, as the inventory of existing homes on the market rose and the rising housing prices of previous years gave way to declining prices, due to supply and demand. It had nothing to do with less "greed," any more than the previous rises in housing prices were due to more "greed." Whether with housing or anything else, a seller's feelings tell us nothing about what the buyer will be willing to pay.

Resource Allocation by Prices

We now need to look more closely at the process by which prices allocate scarce resources that have alternative uses. The situation where the consumers want product *A* and don't want product *B* is the simplest example of how prices lead to efficiency in the use of scarce resources. But prices are equally important— or more important— in more common and more complex situations, where consumers want both *A* and *B*, as well as many other things, some of which require the same ingredients in their production. For example, consumers not only want cheese, they want ice cream and yogurt, as well as other products made from milk. How do prices help the economy to determine how much milk should go to each of these products?

In bidding for cheese, ice cream, and yogurt, consumers are in effect also bidding indirectly for the milk from which these products are produced. In other words, money that comes in from the sales of these products is what enables the producers to again buy milk to use to continue making their respective products. When the demand for cheese goes up, cheese-makers use their additional revenue to bid away some of the milk that before went into making ice cream or yogurt, in order to increase the output of their own product to meet the rising demand. When the cheese-makers demand more milk, this increased demand forces up the price of milk— to everyone, including the producers of ice cream and yogurt. As the producers of these other products raise the prices of ice cream and yogurt to cover the higher cost of the milk that goes into them, consumers are likely to buy less of these other dairy products at these higher prices.

How will each producer know just how much milk to buy? Obviously they will buy only as much milk as will repay its higher costs from the higher prices of these dairy products. If consumers who buy ice cream are not as discouraged by rising prices as consumers of yogurt are, then very little of the additional milk that goes into making more cheese will come from a reduced production of ice cream and more will come from a reduced production of yogurt.

What this all means as a general principle is that ***the price which one producer is willing to pay for any given ingredient becomes the price that other producers are forced to pay for that same ingredient.*** This applies whether we are talking about the milk that goes into making cheese, ice cream, and yogurt or we are talking about the wood that goes into making baseball bats, furniture, and paper. If the amount of paper demanded doubles, this means that the demand for wood pulp to make paper goes up. As the price of wood rises in response to this increased demand, that in turn means that the prices of baseball bats and furniture will have to go up, in order to cover the higher costs of the wood from which they are made.

The repercussions go further. As the price of milk rises, dairies have incentives to produce more milk, which can mean buying more cows, which in turn can mean that more cows will be allowed to grow to adulthood, instead of being slaughtered for meat as calves. As the price of wood rises, forestry companies have incentives to plant more trees. Nor do the repercussions stop there. As fewer cows are slaughtered, there is less cowhide available, and the prices of baseball gloves can rise because of supply and demand. As forestry companies plant more trees, they buy up more land on which to plant those trees, so that the price of land on which to build houses goes up. Such repercussions spread throughout the economy, much as waves spread across a pond when a stone drops into the water. By the same token, if someone figures out a way to produce cereal more cheaply, or how to create new foods that are cheaper or better substitutes for cereal, the repercussions of that spread out in all directions as well.

No one is at the top coordinating all of this, mainly because no one would be capable of following all these repercussions in all directions. Such a task has proven to be too much for central planners in country after country. Economists have won Nobel Prizes for figuring out these complex interactions throughout the economy theoretically, using higher mathematics— and reality is even more complex than theory. In the world of reality, even a modest and temporary set of government controls limited to the American petroleum industry in the 1970s led to thousands of individual regulations to deal with the repercussions of these policies and to innumerable official "clarifications" to deal with the confusion caused by the

regulations. The overwhelming complexity of economic repercussions throughout an economy is rendered manageable when millions of people each deal with only a relatively small number of transactions and leave the coordination of the whole economy to the fluctuations of prices.

Incremental Substitution

Since scarce resources have alternative uses, the value placed on one of these uses by one individual or company sets the cost that has to be paid by others who want to bid some of these resources away for their own use. From the standpoint of the economy as a whole, this means that ***resources tend to flow to their most valued uses*** when there is price competition in the marketplace. This does not mean that one use categorically precludes all other uses. On the contrary, adjustments are incremental. Only that amount of milk which is as valuable to ice cream consumers or consumers of yogurt as it is to cheese purchasers will be used to make ice cream or yogurt. Only that amount of wood which is as valuable to the makers of baseball bats or furniture as it is to the producers of paper will be used to make bats and furniture.

Now look at the demand from the consumers' standpoint: Whether considering consumers of cheese, ice cream, or yogurt, some will be anxious to have a certain amount, less anxious to have additional amounts, and finally— beyond some point— indifferent to having any more, or even unwilling to consume any more after becoming satiated. The same principle applies when more wood pulp is used to make paper and the producers and consumers of furniture and baseball bats have to make their incremental adjustments accordingly. In short, prices coordinate the use of resources, so that only that amount is used for one thing which is equal in value to what it is worth to others in other uses. That way, a price-coordinated economy does not flood people with cheese to the point where they are sick of it, while others are crying out in vain for more ice cream or yogurt.

Absurd as such a situation would be, it has happened many times in economies where prices are ***not*** used to allocate scarce resources. Pelts were not the only unsalable goods that were piling up in Soviet warehouses while people were waiting in long lines trying to get other things that were in

short supply.* The efficient allocation of scarce resources which have alternative uses is not just some abstract notion of economists. It determines how well or how badly millions of people live.

Again, as in the example of beach-front property, prices convey an underlying reality: ***From the standpoint of society as a whole, the "cost" of anything is the value that it has in alternative uses.*** That cost is reflected in the market when the price that one individual is willing to pay becomes a cost that others are forced to pay, in order to get a share of the same scarce resource or the products made from it. But, no matter whether a particular society has a capitalist price system or a socialist economy or a feudal or other system, the real cost of anything is still its value in alternative uses. The real costs of building a bridge are the other things that could have been built with that same labor and material. This is also true at the level of a given individual, even when no money is involved. The cost of watching a television sitcom or soap opera is the value of the other things that could have been done with that same time.

Economic Systems

Different economic systems deal with this underlying reality in different ways and with different degrees of efficiency, but the underlying reality exists independently of whatever particular kind of economic system happens to exist in a given society. Once we recognize that, we can then compare how economic systems which use prices to force people to share scarce resources among themselves differ in efficiency from economic systems which determine such things by having kings, politicians, or bureaucrats issue orders saying who can get how much of what.

During a brief era of greater openness in the last years of the Soviet Union, when people became more free to speak their minds, the two Soviet

* A visitor to the Soviet Union in 1987 reported "long lines of people still stood patiently for hours to buy things: on one street corner people were waiting to buy tomatoes from a cardboard box, one to a customer, and outside a shop next to our hotel there was a line for three days, about which we learned that on the day of our arrival that shop had received a new shipment of men's undershirts." Midge Decter, ***An Old Wife's Tale***, p. 169.

economists already mentioned wrote a book giving a very candid account of how their economy worked and this book was later translated into English.* As Shmelev and Popov put it, production enterprises in the Soviet Union "always ask for more than they need" from the government in the way of raw materials, equipment, and other resources used in production. "They take everything they can get, regardless of how much they actually need, and they don't worry about economizing on materials," according to these economists. "After all, nobody 'at the top' knows exactly what the real requirements are," so "squandering" made sense— from the standpoint of the manager of a Soviet enterprise.

Among the resources that were squandered were workers. These economists estimated that "from 5 to 15 percent of the workers in the majority of enterprises are surplus and are kept 'just in case.'" The consequence was that far more resources were used to produce a given amount of output in the Soviet economy as compared to a price-coordinated economic system, such as that in Japan, Germany, and other market economies. Citing official statistics, Shmelev and Popov lamented:

> To make one ton of copper we use about 1,000 kilowatt hours of electrical energy, as against 300 in West Germany. To produce one ton of cement we use twice the amount of energy that Japan does.

The Soviet Union did not lack for resources, but was in fact one of the most richly endowed nations on earth— if not ***the*** most richly endowed in natural resources. Nor was it lacking in highly educated and well-trained people. What it lacked was an economic system that made efficient use of its resources. Because Soviet enterprises were not under the same financial constraints as capitalist enterprises, they acquired more machines than they needed, "which then gather dust in warehouses or rust out of doors," as the Soviet economists put it. In short, Soviet enterprises were not forced to economize— that is, to treat their resources as both scarce and valuable in alternative uses, for the alternative users were not bidding for those

* ***The Turning Point: Revitalizing the Soviet Economy*** (New York: Doubleday, 1989).

resources, as they would in a market economy. While such waste cost individual Soviet enterprises little or nothing, they cost the Soviet people dearly, in the form of a lower standard of living than their resources and technology were capable of producing.

Such a waste of inputs as these economists described could not of course continue in the kind of economy where these inputs would have to be purchased in competition with alternative users, and where the enterprise itself could survive only by keeping its costs lower than its sales receipts. In such a price-coordinated capitalist system, the amount of inputs ordered would be based on the enterprise's most accurate estimate of what was really required, not on how much its managers could persuade higher government officials to let them have. These higher officials could not possibly be experts on all the wide range of industries and products under their control, so those with the power in the central planning agencies were to some extent dependent on those with the knowledge of their own particular industries and enterprises. This separation of power and knowledge was at the heart of the problem.

Central planners could be skeptical of what the enterprise managers told them but skepticism is not knowledge. If resources were denied, production could suffer— and heads could roll in the central planning agencies. The net result was the excessive use of resources described by the Soviet economists. The contrast between the Soviet economy and the economies of Japan and Germany is just one of many that can be made between economic systems which use prices to allocate resources and those which have relied on political or bureaucratic control. In other regions of the world as well, and in other political systems, there have been similar contrasts between places that used prices to ration goods and allocate resources versus places that have relied on hereditary rulers, elected officials or appointed planning commissions.

When many African colonies achieved national independence in the 1960s, a famous bet was made between the president of Ghana and the president of the neighboring Ivory Coast as to which country would be more prosperous in the years ahead. At that time, Ghana was not only more prosperous than the Ivory Coast, it had more natural resources, so the bet might have seemed reckless on the part of the president of the Ivory Coast. However, he knew that Ghana was committed to a government-run economy

and the Ivory Coast to a freer market. By 1982, the Ivory Coast had so surpassed Ghana economically that the poorest 20 percent of its people had a higher real income per capita than most of the people in Ghana.

This could not be attributed to any superiority of the country or its people. In fact, in later years, when a new generation of Ivory Coast politicians eventually succumbed to the temptation to have the government control more of their country's economy, while Ghana finally learned from its mistakes and began to loosen government controls, these two countries' roles reversed— and now Ghana's economy began to grow, while that of the Ivory Coast declined.

Similar comparisons could be made between Burma and Thailand, the former having had the higher standard of living before instituting socialism and the latter a much higher standard of living afterwards. Other countries— India, Germany, China, New Zealand, South Korea, Sri Lanka— have experienced sharp upturns in their economies when they freed those economies from many government controls and relied more on prices to allocate resources. As of 1960, India and South Korea were at comparable economic levels but, by the late 1980s, South Korea's per capita income was ten times that in India.

India remained committed to a government-controlled economy for many years after achieving independence in 1947. However, in the 1990s, India "jettisoned four decades of economic isolation and planning, and freed the country's entrepreneurs for the first time since independence," in the words of the distinguished London magazine ***The Economist***. There followed a new growth rate of 6 percent a year, making it "one of the world's fastest-growing big economies." From 1950 to 1990, India's average growth rate had been 2 percent. The cumulative effect of growing three times as fast as before was that millions of Indians rose out of poverty.

In China, government controls were at first relaxed on an experimental basis in particular economic sectors and in particular geographic regions earlier than in others, during the reforms of the 1980s, leading to stunning economic contrasts within the same country, as well as rapid economic growth overall. Before, back in 1978, less than 10 percent of China's agricultural output was sold in open markets, instead of being turned over to the

government for distribution. But, by 1990, 80 percent was sold directly in the market. The net result was more food and a greater variety of food available to city dwellers in China and a rise in farmers' income by more than 50 percent within a few years. In contrast to China's severe economic problems when there was heavy-handed government control under Mao, who died in 1976, the subsequent freeing up of prices in the marketplace led to an astonishing economic growth rate of 9 percent per year between 1978 and 1995.

While history can tell us that such things happened, economics helps explain *why* they happened— what there is about prices that allows them to accomplish what political control of an economy can seldom match. There is more to economics than prices, but understanding how prices function is the foundation for understanding much of the rest of economics. A rationally planned economy sounds more plausible than an economy coordinated only by prices linking millions of separate decisions by individuals and organizations. Yet Soviet economists who saw the actual consequences of a centrally planned economy reached very different conclusions— namely, "there are far too many economic relationships, and it is impossible to take them all into account and coordinate them sensibly."

In a society of millions of producers and consumers, no given individual or set of government decision-makers sitting around a table can possibly know just how much these millions of consumers prefer one product to another or how much of the ingredients that go into producing millions of products would produce if applied to millions of other products instead. In an economy coordinated by prices, no one has to know. Each producer is simply guided by what price that producer's product can sell for and by how much must be paid for the ingredients that go into making that particular product, while each consumer has to consider only those relatively few prices which are relevant to his or her own purchases.

Knowledge is one of the most scarce of all resources and a pricing system economizes on its use by forcing those with the most knowledge of their own particular situation to make bids for goods and resources based on that knowledge, rather than on their ability to influence other people in planning commissions, legislatures, or royal palaces. However much articulation may be valued by intellectuals, it is not nearly as efficient a way of conveying

accurate information as confronting people with a need to "put your money where your mouth is." That forces them to summon up their most accurate information, rather than their most plausible words.

Human beings are going to make mistakes in any kind of economic system. The key question is: What kinds of incentives and constraints will force them to correct their own mistakes? In a price-coordinated economy, any producer who uses ingredients which are more valuable elsewhere in the economy is likely to discover that the costs of those ingredients cannot be repaid from what the consumers are willing to pay for the product. After all, the producer has had to bid those resources away from alternative users, paying more than the resources are worth to some of those alternative users. If it turns out that these resources are not more valuable in the uses to which this producer puts them, then he is going to lose money. There will be no choice but to discontinue making that product with those ingredients. For those producers who are too blind or too stubborn to change, continuing losses will force their businesses into bankruptcy, so that the waste of the resources available to the society will be stopped that way. That is why losses are just as important as profits, from the standpoint of the economy, even though losses are not nearly as popular with businesses.

In a price-coordinated economy, employees and creditors insist on being paid, regardless of whether the managers and owners have made mistakes. This means that capitalist businesses can make only so many mistakes for so long before they have to either stop or get stopped— whether by an inability to get the labor and supplies they need or by bankruptcy. In a feudal economy or a socialist economy, leaders can continue to make the same mistakes indefinitely. The consequences are paid by others in the form of a standard of living lower than it would be if there were greater efficiency in the use of scarce resources.

The many products which remained unsold in stores or in warehouses in the Soviet Union, while there were desperate shortages of other things, were a sign of the fatal weakness of central planning. But, in a price-coordinated economy, the labor, management, and physical resources that went into producing unwanted products would have had to go into producing something that could pay its own way from sales revenues. That means

producing something that the consumers wanted more than they wanted what was actually produced. In the absence of compelling price signals and the threat of financial losses to the producers that they convey, inefficiency and waste in the Soviet Union could continue until such time as each particular instance of waste reached proportions big enough and blatant enough to attract the attention of central planners in Moscow, who were preoccupied with thousands of other decisions.

Ironically, the problems caused by trying to run an economy by direct orders or by arbitrarily-imposed prices created by government fiat were foreseen in the nineteenth century by Karl Marx and Friedrich Engels, whose ideas the Soviet Union claimed to be following. Engels pointed out that price fluctuations have "forcibly brought home to the individual commodity producers what things and what quantity of them society requires or does not require." Without such a mechanism, he demanded to know "what guarantee we have that necessary quantity and not more of each product will be produced, that we shall not go hungry in regard to corn and meat while we are choked in beet sugar and drowned in potato spirit, that we shall not lack trousers to cover our nakedness while trouser buttons flood us in millions." Marx and Engels apparently understood economics much better than their latter-day followers. Or perhaps Marx and Engels were more concerned with economic efficiency than with maintaining political control from the top.

There were also Soviet economists who understood the role of price fluctuations in coordinating any economy. Near the end of the Soviet Union, two of these economists, Shmelev and Popov, whom we have already quoted, said: "Everything is interconnected in the world of prices, so that the smallest change in one element is passed along the chain to millions of others." Adam Smith, the most famous of all free market economists, could not have said it better. The Soviet economists were especially aware of the role of prices from having seen what happened when prices were not allowed to perform that role. But economists were not in charge of the Soviet economy. Political leaders were. Under Stalin, a number of economists were shot for saying things he did not want to hear.

SUPPLY, DEMAND AND "NEED"

There is perhaps no more basic or more obvious principle of economics than the fact that people tend to buy more at a lower price and less at a higher price. By the same token, people who produce goods or supply services tend to supply more at a higher price and less at a lower price. Yet the implications of these two simple principles, singly or in combination, cover a remarkable range of economic activities and issues— and contradict an equally remarkable range of misconceptions and fallacies.

When people try to quantify a country's "need" for this or that product or service, they are ignoring the fact that there is no fixed or objective "need." The fact that people demand more at a lower price and less at a higher price may be easy to understand, but it is also easy to forget. Seldom, if ever, is there a fixed quantity demanded. For example, communal living in an Israeli kibbutz was based on its members' collectively producing and supplying each other with goods and services, without resort to money or prices. However, supplying electricity and food without charging prices led to a situation where people often did not bother to turn off electric lights during the day and members would bring friends from outside the kibbutz to join them for meals. But, after the kibbutz began to charge prices for electricity and food, there was a sharp drop in the consumption of both. In short, there was no fixed quantity of "need" or demand for food or electricity.

Likewise, there is no fixed supply. Statistics on the amount of petroleum, iron ore, or other natural resources seem to indicate that this is just a simple matter of how much physical stuff there is in the ground. In reality, most natural resources are available at varying costs of discovery, extraction, and processing from one place to another. There is some oil that can be extracted and processed from some places for $20 a barrel and other oil that cannot repay all its production costs at $40 a barrel, but which can at $60 a barrel. With goods in general, ***the quantity supplied varies directly with the price***, just as the quantity demanded varies inversely with the price.

When the price of oil falls, certain low-yield oil wells are shut down because the cost of extracting and processing the oil from those particular wells would exceed the price that the oil would sell for in the market. If the

price later rises— or if the cost of extraction or processing is lowered by some new technology— then such oil wells will be put back into operation again. Certain sands containing oil in Venezuela and in Canada had such low yields that they were not even counted in the world's oil reserves until oil prices hit new highs in the early twenty-first century. That changed things, as the *Wall Street Journal* reported:

> These deposits were once dismissed as "unconventional" oil that couldn't be recovered economically. But now, thanks to rising global oil prices and improved technology, most oil-industry experts count oil sands as recoverable reserves. That recalculation has vaulted Venezuela and Canada to first and third in global reserves rankings. . .

The Economist magazine likewise reported:

> Canada's oil sands, or tar sands, as the goo is known, are outsized in every way. They contain 174 billion barrels of oil that can be recovered profitably, and another 141 billion that might be worth exploiting if the oil price rises or the costs of extraction decrease— enough to give Canada bigger oil reserves than Saudi Arabia.

In short, there is no fixed supply of oil— or of most other things. In some ultimate sense, the earth has a finite amount of each resource but, even when that amount may be enough to last for centuries or millennia, at any given time the amount that is economically feasible to extract and process varies directly with the price for which it can be sold. Many false predictions over the past century or more that we were "running out" of various natural resources in a few years were based on confusing the economically available current supply at current prices with the ultimate physical supply in the earth, which is vastly greater.*

Natural resources are not the only things that will be supplied in greater quantities when their prices rise. That is true of many commodities and even workers. When people project that there will be a shortage of engineers or teachers or food in the years ahead, they usually either ignore prices or

* This confusion is explained in Chapter 12 under "Natural Resources."

implicitly assume that there will be a shortage at today's prices. But shortages are precisely what cause prices to rise. At higher prices, it may be no harder to fill vacancies for engineers or teachers than today and no harder to find food, as rising prices cause more crops to be grown and more livestock to be raised. In short, a larger quantity is usually supplied at higher prices than at lower prices, whether what is being sold is oil or apples, lobsters or labor.

Price fluctuations are a way of letting a little knowledge go a long way. Price changes guide people's decisions through trial and error adjustments to what other people can and will pay as consumers, as well as what others can and will supply as producers.

The producer whose product turns out to have the combination of features that are closest to what the consumers really want may be no wiser than his competitors. Yet he can grow rich while his competitors who guessed wrong go bankrupt. But the larger result is that society as a whole gets more benefits from its limited resources by having them directed toward where those resources produce the kind of output that millions of people want, instead of producing things that they don't want.

Rationing by Prices

There are all kinds of prices. The prices of consumer goods are the most obvious examples but labor also has prices called wages or salaries, and borrowed money has a price called interest. In addition to prices for tangible things, there are prices for services ranging from haircuts to brain surgery and from astrology to advice on speculating in gold or soybeans. Prices provide incentives to conserve. That is why the Israeli kibbutz used less electricity and less food after it began to charge its members for these things, and why German and Japanese enterprises used less input for a given output than their Soviet counterparts, whose managers did not have to worry about prices or profits— or losses.

In so far as prices— whether of soybeans or surgery— result from supply and demand in a free market, they effectively allocate scarce resources which have alternative uses. So long as people are free to spend their money for what they see fit, price changes in response to supply and demand direct

resources to where they are most in demand and direct people to where their desires can be satisfied most fully and cheaply by the existing supply. Simple as all this may seem, it contradicts many widely held ideas. For example, not only are high prices often blamed on "greed," people often speak of something being sold for more than its "real" value, or of workers being paid less than they are "really" worth— or of corporate executives, athletes, and entertainers being paid more than they are "really" worth.

To treat prices as resulting from greed implies that sellers can set prices where they wish, that prices are not determined by supply and demand. It may well be true that some— or all— sellers prefer to get the highest price that they can. But it is equally true that buyers usually wish to pay the lowest price they can for goods of a given quality. More important, the competition of numerous buyers and numerous sellers results in prices that leave each individual buyer and seller with very little leeway. Any deal depends on both parties agreeing to the same terms. Anyone who doesn't offer as good a deal as a competitor is likely to find nobody willing to make a deal at all. Obvious as all this may seem, it was literally front-page news in the *New York Times* when rising apartment vacancy rates in cities across the United States led to lower rents, both directly and in the form of gifts to prospective tenants:

> Waiting for the tenants in some building lobbies around Memphis every morning are free cups of Starbucks coffee. In the Atlanta suburbs, people who move into one garden-style apartment building receive $500 gift certificates to Best Buy, the electronics chain. In Cleveland, Denver and many other cities, landlords have been giving new tenants gifts worth $1,000 or more: one, two or even three months of rent-free living.

The reason for all this apparent generosity? "The portion of apartments sitting vacant this summer rose to 9.9 percent, the highest level since the Census Bureau began keeping statistics in 1956." Blaming high prices on "greed" or crediting low prices to generosity would be assuming that sellers can set and maintain prices by an act of will. But supply and demand explain most price changes far better than any assumption of volitional pricing. Where there are monopolies or cartels, higher prices are often possible compared to prices in a competitive market but, fortunately, monopolies and cartels are the exception rather than the rule.

Competition is the crucial factor in explaining why prices usually cannot be maintained at arbitrarily set levels. But even people who would not deny this may nevertheless forget it when asking such questions as: "Will lower production costs be passed on to the consumers in lower prices?" Those producers who do not pass on these cost savings in lower prices can find themselves losing customers to those who do. This is not a matter of generosity on the producers' part nor a matter of faith in free market capitalism by economists. Karl Marx, who could certainly not be accused of having faith in free market capitalism, was nevertheless an economist who pointed out that cost-lowering new technology not only ***enables*** the capitalist to charge lower prices but also ***compels*** him to charge lower prices,* as a result of market competition.

Nor is technology the only reason for prices to be forced down by competition. When the airline industry in the United States went several years after 2001 without a single major plane crash, competition among insurance companies forced the premiums charged to airlines to decline.

Competition is the key to the operation of a price-coordinated economy. It not only forces prices toward equality, it likewise causes capital, labor, and other resources to flow toward where their rates of return are highest— that is, where the unsatisfied demand is greatest— until the returns are evened out through competition, much like water seeking its own level. However, the fact that water seeks its own level does not mean that the ocean has a glassy smooth surface. Waves and tides are among the ways in which water seeks its own level, without being frozen at that level. Similarly, in an economy, the fact that prices and rates of return on investments tend to equalize means only that their fluctuations, relative to one another, are what move resources from places where their earnings are lower to where their earnings are higher— that is, from where the supply is greatest, relative to the demand, to where there is the most unsatisfied demand. It does *not* mean that prices remain the same over time or that some ideal pattern of allocation of resources remains the same.

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* See Karl Marx, ***Wage Labor and Capital***, Part V. See also Karl Marx, ***Capital***, Vol. III, pp. 310–311 (Kerr edition).

When huge nations like China and India— whose combined populations are more than eight times that of the United States— experienced rapid economic growth in the early twenty-first century, their increased demand for petroleum drove the price of petroleum in the world market up to unprecedented heights, and with it the price of gasoline to new highs beyond anything that American consumers were used to. The reaction in much of the American media and among politicians was anger at oil companies. The notion of volitional pricing has never died out completely, however inconsistent that is with supply and demand.

"Real" Value

The fact that prices fluctuate over time, and occasionally have a sharp rise or a steep drop, misleads some people into concluding that prices are deviating from their "real" values. But their usual level under usual conditions is no more real or valid than their much higher or much lower levels under different conditions.

When a large employer goes bankrupt in a small community, or simply moves away to another region or country, many of the business' former employees may decide to move away themselves— and when their numerous homes go on sale in the same small area at the same time, the prices of those houses are likely to be driven down by competition. But this does not mean that people are selling their homes for less than their "real" value. The value of living in that particular community has simply declined with the decline of job opportunities, and housing prices reflect this underlying fact. The new and lower prices reflect the new reality just as well as the previous prices reflected the previous reality. A survey of home prices in a number of upstate New York cities that were losing population in the 1990s found that home prices were falling in those particular communities, while home prices were rising elsewhere in the same state and around the country. This is exactly what one should expect on the basis of elementary economic principles. The rising prices were no more "real" than the falling prices.

The most fundamental reason why there is no such thing as an objective or "real" value is that there would be no rational basis for economic

transactions if there were. When you pay 50 cents for a newspaper, obviously the only reason you do so is that the newspaper is more valuable to you than the 50 cents is. At the same time, the only reason people are willing to sell the newspaper is that 50 cents is more valuable to them than the newspaper is. If there were any such thing as a "real" or objective value of a newspaper— or anything else— neither the buyer nor the seller would benefit from making a transaction at a price equal to that objective value, since what would be acquired would be of no greater value than what was given up. In that case, why bother to make the transaction in the first place?

On the other hand, if either the buyer or the seller was getting more than the objective value from the transaction, then the other one must be getting less— in which case, why would the other party continue making such transactions while being continually cheated? Continuing transactions between buyer and seller make sense only if value is subjective, each getting what is worth more subjectively.

Prices and Supplies

Prices not only ration existing supplies, they also act as powerful incentives to cause supplies to rise or fall in response to changing demand. When a crop failure in a given region creates a sudden increase in demand for imports of food into that region, food suppliers elsewhere rush to be the first to get there, in order to capitalize on the high prices that will prevail until more supplies arrive and drive food prices back down again through competition. What this means, from the standpoint of the hungry people in that region, is that food is being rushed to them at maximum speed by "greedy" suppliers, probably much faster than if the same food were being transported to them by salaried government employees sent on a humanitarian mission.

Those spurred on by a desire to earn top dollar for the food they sell may well drive throughout the night or take short cuts over rough terrain, while those operating "in the public interest" are more likely to proceed at a less hectic pace and by safer or more comfortable routes. In short, people tend to do more for their own benefit than for the benefit of others. Freely

fluctuating prices can make that turn out to be beneficial to others. In the case of food supplies, earlier arrival can be the difference between temporary hunger and death by starvation or by diseases to which people are more susceptible when they are undernourished. Where there are local famines in Third World countries, it is not at all uncommon for food supplied by international agencies to the national government to sit spoiling on the docks while people are dying of hunger inland.* However unattractive greed may be, it is likely to move food much faster, saving more lives.

In other situations, the consumers may not want more, but less. Prices also convey this. When automobiles began to displace horses and buggies in the early twentieth century, the demand for saddles, horseshoes, carriages and other such paraphernalia declined. As the manufacturers of such products faced losses instead of profits, many began to abandon their businesses or were forced to shut down by bankruptcy. In a sense, it is unfair when some people are unable to earn as much as others with similar skills and diligence, because of innovations which were as unforeseen by most of the people who benefited as by most of the people who were made worse off. Yet this unfairness to particular individuals is what makes the economy as a whole operate more efficiently for the benefit of vastly larger numbers of others. Would creating more fairness among producers, at the cost of reduced efficiency and a resulting lower standard of living, be fair to consumers?

The gains and losses are not isolated or independent events. The crucial role of prices is in tying together a vast network of economic activities among people too widely scattered to all know each other. Will Rogers said, "We couldn't live a day without depending on everybody." Prices make that dependence viable by linking their interests with ours.

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* The same thing can happen when the food arrives by land. See "Death by Bureaucracy," on page 40 of the December 8, 2001 issue of ***The Economist***, for examples of Afghan refugees dying of starvation while waiting for paperwork to be completed by aid workers.

Chapter 3

PRICE CONTROLS

The record of price controls goes as far back as human history. They were imposed by the Pharaohs of ancient Egypt. They were decreed by Hammurabi, king of Babylon, in the eighteenth century B.C. They were tried in ancient Athens.

Henry Hazlitt

Nothing makes us understand the many roles of electricity in our lives like a power failure. Similarly, nothing shows more vividly the role and importance of price fluctuations in a market economy than the ***absence*** of such price fluctuations when the market is controlled. What happens when prices are not allowed to fluctuate freely according to supply and demand, but instead their fluctuations are fixed within limits set by law under various kinds of price controls?

Typically, price controls are imposed in order to keep prices from rising to the levels that they would reach in response to supply and demand. The political rationales for such laws have varied from place to place and from time to time, but there is seldom a lack of rationales whenever it becomes politically expedient to hold down some people's prices in the interest of other people whose political support seems more important. However, in addition to laws putting a "ceiling" on how high prices will be allowed to rise, there are also laws establishing a "floor" below which prices will not be allowed to fall.

Many countries have set limits to how low certain agricultural prices will be allowed to fall, sometimes with the government being legally obligated to buy up the farmers' output whenever free market prices go below the