

ECONOMICS U\$A LESSON #18

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

(MUSIC PLAYS)

Stasio: Economics U\$A, one of a series of programs designed to explore Twentieth Century micro and macro economic principles. The subject of this edition is economic efficiency under perfect competition. Our guests are Fred Sya, General Contractor in Buffalo, New York, and John Peterson, an economist for Wharton Econometrics. I'm Frank Stasio.

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Stasio: In theory, a free economy is supposed to work like this open-air market in Englishtown, New Jersey. Vendors try for the highest price. Buyers bargain to bring the price down. The price they settle on is the fair price for the product. It's the price that the customer could afford and was willing to pay and the price the seller could afford to charge because it's still allowed for a reasonable profit. Economists would call this an example of perfect competition and economic efficiency. As it turns out this sort of balance in the pricing system is rarely achieved even in a free economy, but economists like to study the mechanisms of perfect competition to better understand its deviations throughout the rest of the economy. Let's examine a real business that meets many but by no means all of the qualities of perfect competition.

Sya: All right Pops start unrolling the fence a little more. Okay, I'll lift it up a little bit. You got the come-along at the end? Stretch it! Stretch it a little more. All right, that's about tight. Okay, get the tie wires and we'll start tying the fence to the post.

Stasio: Fred Sya is a general contractor in Buffalo, New York who specializes in fence installation. He employs five people full-time and one part-time. For all of the to keep working, Sya has to keep his costs down and his prices in line with what his competition is charging. If his estimate for an installation is too high, he'll lose the job. If it's too low, he'll lose money.

Female: (PHONE RINGS) Good afternoon, this is Oneida.

Stasio: When a customer calls for an estimate, there is little margin for error.

Sya: Why sure. You know, we...we can do the job for you, but you know, you've got a hundred feet of fence. It'll cost you nine dollars and fifty cents a foot. So you got nine hundred and fifty dollars just for the fence. Now the double-drive gate you want, those are expensive, another three hundred dollars for the double-drive gate. I know it's a lot of money, but the...you know, you've got a ten-foot span, if you got to use six-inch posts instead of just the regular four-inch posts on it, and the gate hardware is now double.

You know, you can check around with the prices, but I don't feel you're gonna find a fairer price in anything with a...with a company that's been in business ten, twelve years.

You can check with the Better Business Bureau, you can do all that, but our price is fair.

You know, I'd ask you to check around though. Okay? And we'd be happy to do the job for you, but our price pretty much comes out to about twelve hundred and fifty dollars

with installation in your yard the way you'd like it.

Stasio: Because the start-up requirements are small, Sya finds himself in a very competitive business.

Sya: Anybody that can pound a post, can buy concrete and has a pickup truck can go to a local supplier and buy his fence, go up to your house, write a contract on a brown paper bag, collect cash from the customer and he's in business.

Stasio: To arrive at his price, Sya has to add up the costs of the labor and material it will take to do the job. These are the variable costs since they change from job to job. But in order to make a profit Sya must also consider his fixed costs like the lease and truck payments, bills he has to pay whether or not he lands a job.

Female: Fred, I need you to sign these checks. This one's a National Fuel, and I have a Mohawk Power Company, and New York Telephone Company.

Sya: Okay. Uh, what's this one here?

Female: That's our insurance policy.

Sya: Okay.

Stasio: Can you simply pass along increases in all of those costs?

Sya: No, you can't. Um, as an example, my insurance premium doubled this year. It went from twenty-two hundred dollars to forty-one hundred dollars. Okay? Now we're talking double...that's an average of ten percent in every job. Well, until everybody else...if I raise my prices ten percent, I've got give these people...I've got to become a better salesman to raise the price ten percent for one thing. To convince them to go with

this company why we're doing it, but if I can't do that I can't raise that ten percent. I've got to eat it. You know, we can't raise our prices so much right away. If you let them creep up one or two percent a year because your insurance is going up one or two percent a year no one notices. But all of a sudden you got to raise it, boom, ten percent tomorrow. My insurance premium came one day. It was twenty...it was a hundred percent higher. I had no warning. That was it. I didn't get a letter from the insurance man saying, we're gonna raise it two percent over the next three years. No, boom, all of sudden it's up high. I can't do that. I can raise it one or two percent and try and gain it that way, but if not, I'm just gonna have to make my profit lower till a point where if your profit gets too low, you got to start considering another field of work or, you know, get working for someone and getting a job.

Stasio: Sya has found that even if his competitors face the same cost increases, they must all absorb the loss for a while or risk losing business. This is because when customers are faced with industry-wide price increase, they may chose not to buy at all.

Sya: We used to put in humidifiers for a major retailer. Um, they've raised their prices so high that we went from putting forty humidifiers a month to three years later doing six or seven a month because they've raised their price. It wasn't a case where the price was raised for the manufacturer too much, but the retailer raised their price because all their other operating expenses were getting too high. So at that point they stopped advertis...well, they continued to advertise but the price was just too high and people said, I can live without it. I can find another way to humidify my home. So they stopped doing it, business drops off, so we're out of the humidifier business for the major retailer

because six jobs a month wasn't worth it for me to keep a guy around that was trained how to do this just to do that.

Stasio: So now, Fred Sya concentrates on selling and installing fences. On big jobs he can make a profit of about twenty-five percent. Right now he has two two-man crews working full time. You might think if he were to add more crews and take on more jobs he could increase his profits, but after eleven years in business, Sya has learned that that really isn't true.

Sya: We have found with some of the major contracts that we've taken, the more work you have, the less money you make 'cause your overhead goes up but your profit doesn't. All of a sudden, you've got to have that extra guy running up and down the line on the job to get the more work job. You got to have guy all of a sudden in a truck just delivering full time for you. Uh, your secretary is now...now working eight to five and then coming in on Saturdays. The customer complaints go up because you're doing more work, so now you need a guy to go out and just take care of the complaints. So uh...and that extra truck now costs another eight hundred dollars a year in insurance. So you do make more money but there's a gray area that with three or four guys you can more money than you have five or six guys. Okay, we had a major contract last year. I had four full-time crews working on my books. It turned out going over the jobs with my accountant at the end of the year we found...we wound up trading a lot of dollars. Our gross had maybe went up eighty thousand dollars, but my net profit didn't go up. So I did eighty thousand dollars worth of work and didn't make any more money.

Stasio: So Sya found that increasing the size of his business pushed up costs just as fast as revenues, but what if there was a sudden increase in demand? Wouldn't that push up prices? The answer is, yes it will, but the increased demand will also attract more competitors.

Sya: In the last two years there's been so much fence work that a guy working out of the back of his truck right now can make a nice living. So as you train these guys, they see what...they see so much work that they start doing a little work on Saturdays because they're off. The next thing you know you've trained this guy for a summer, next April he's your competition.

Stasio: But is Sya's business an example of perfect competition? We put the question to John Peterson, an economist with Wharton Econometrics.

Peterson: Well, in many ways Sya's business is very good example of perfect competition. Uh, it's extremely easy for a competitor to get into the same sort of business that Sya is in, as in economist's terms, it is an industry in which there are very low barriers to entry. It would be very simple to get the capital together to get the trucks and to get the materials and to organize a few laborers so as to be able to get into the business of putting up fences. But it's not an exact case of perfect competition because the product that Fred has isn't going to be exactly the same as the product that some other installer of fences is going to have. It's not the same as for example, if one farmer grows a certain type of wheat and another farmer grows another type of wheat, their product is exactly the same. It's homogeneous. Sya's fences won't be exactly the same as the

fences that some other firm will put up, so it isn't exactly a case of perfect competition, but it's very, very close.

Stasio: Well, Sya said he dropped two crews because he wasn't able to make any more money even though those crews all stayed busy and they allowed Sya to do more work. Now why wasn't he able to make more money?

Peterson: Well, what Sya hadn't noticed before but apparently did realize later on is that as he expanded his production, his costs for a job were increasing. Um, there could be various reasons for this as you have to organize more and more crews and get more and more work. It can...the administrative costs can go up. It's almost like an opposite of an economies of scale situation and diseconomies of scale. So the costs per job was going up but he was only allowed by the market to get away with charging about the same price that he was charging for the jobs when he had fewer crews. So his costs per job was going up, whereas the price was about the same, so he was finding in the end that he was really just barely covering costs or perhaps even losing money because of his increasing costs. What he really found out is that you can only expand production up to a certain point and that's the point at which the increased costs per job are not greater than the price that you can charge for a job. In that way he was able to maximize the profits from his business.

Stasio: Does that mean he has to stop at that point or could he actually grow past that point and once again enjoy economies of scale if he got to be a business twice as large as his?

Peterson: It's possible. It just depends on the nature of the business that he's in. If there was some point at which he got crews, let's say ten crews out instead of three or four, it could be that then it would pay him to have better secretarial support or marking support so that economies of scale would set in, but to just depend entirely on the type of business that his particular characteristics of the business that he was in.

Stasio: Now why was Fred able to take a loss or willing to take a loss in profits when his insurance rates doubled? I mean, how long can you keep that up?

Peterson: Well, when his costs were going up, he would obviously prefer to have passed them right on into the prices that he would charge his customers, but given the fact that the customers might have been dissuaded from going along with his business and might have gone to a competitor, he was reluctant to increase his prices right away. Ultimately though, he and all his competitors are going to have to raise their prices in line to cover their costs and he couldn't keep that up forever. Uh, he might do it in the short run just to maintain his market and as long as he was still covering his fixed costs he was doing better than if he actually shut down and didn't do any work at all.

Stasio: Now he wasn't able to sustain losses when his humidifier business dropped off and instead he got out of the business. Now what's the difference between what was happening in the humidifier business and his...the increased insurance costs?

Peterson: Apparently Sya saw that in the humidifier business that the increased price that he was having to pay to get the humidifiers, if he tried to pass that on to customers there'd be such reluctance to buy that he saw that in the long run the costs would just be much higher than the price that he'd be willing to sell...able to sell things at. So in the

long run he didn't see that there was any real profit in that...in that business, and he decided to get out of the business.

Stasio: Well, it sounds like Sya can make some money at this but he can't seem to get too far ahead. As soon as he does he attracts a lot of competitors, doesn't he?

Peterson: Well, that's the heart of perfect competition. That the producer or the firm can always make or strive to make enough to cover his costs to provide himself, the owner, with a good salary and so on, but if he is reaping windfall profits or economic profits, profits in excess of what you'd expect after all his costs and a decent return on his investment have been met, then competitors will see this and also be able to determine what costs Sya is having to pay, and they'll see that this is a profitable enterprise and they'll get in. They'll tend to bid down by increasing the supply. They'll bid down the price that Sya can charge and until you get to the point where Sya can only charge a price that's very close to his costs of production. That's one of the beauties of perfect competition when it exists is that the consumer knows that the price that he's paying is going to be quite close to the cost of production.

Stasio: We've seen how the market operates when left to itself, but what happens if something interferes with the pricing mechanism. How would profits and output be affected? For the answers, let's look back at one of the few times in history when the United States government has intervened directly to impose price controls.

President Nixon: The time has come for decisive action. Action that will break the vicious circle of spiraling prices and costs. I am today ordering a freeze on all prices and wages throughout the United States for a period of ninety days.

Stasio: Richard Nixon tried for two and a half years to fight inflation using fiscal and monetary measures, but by August of Nineteen Seventy-one, he felt the battle against spiraling prices would be lost if he didn't impose direct controls. But wages and prices stayed down only as long as controls were enforced. Once they were lifted inflation was back, prices skyrocketed, and by Nineteen Seventy-three consumers were organizing protests to register their anger.

Male Voice: This boycott is a perfectly reasonable free enterprise tool to use when meat prices are the highest in history and the federal government refuses to act until after the horse is out of the barn.

Stein: The question then arose, should go back into the initial freeze, which the President remembered as having been so popular.

Stasio: Former presidential economic advisor, Herbert Stein.

Stein: And uh, in a kind of uh, wise guy way I said it to him quoting Hericlitus, "you cannot step into the same river twice." And uh, he retorted uh, yes, yes you can if it's frozen, which I think is the best joke I remember Mister Nixon ever making, although he made others.

Nixon: What we need is action that will stop the rise in meat prices now and that is why I have today ordered the Cost of Living Council to impose a ceiling on prices of beef, pork, and lamb.

Stasio: Nixon wanted to control prices at the consumer level because inflation by now was feeding on the expectation of further inflation. If people believe that prices had

plateaued they might cool their wage demands and the upward spiral of prices and wages would be stopped. But the price controls on meat came at time when U.S. grain reserves had been depleted to aid the victims of a worldwide famine. Then nature dealt a blow to American farmers. A drought parched southwestern farmland devastating the winter wheat crop. Grain prices were not subject to controls and feed prices paid by cattle producers shot up as shortages continued. So, there was a cap on what meat producers would charge but no limits were placed on their costs. The hammer was cocked and cattleman were caught in the breach.

Ahald: Well, farmers uh, are a pretty independent group of businessmen and one of the first things that they try to do was to withhold their animals from markets.

Stasio: J. Dawson Ahald is a former member of the Cost of Living Council.

Ahald: And that had the effect of tightening up on supplies and actually putting real pressure on...on the whole system. Here was the government trying to hold down prices at a time when farmers were withholding marketings, so you began getting a very difficult situation.

Farmer: Oh, we're gonna hold out cattle on the farm definitely rather than sell, hold them.

Male Voice : Why:

Farmer: Well, the price should come back. You don't want to give them back. Just keep them and let them get old and that said but I...we feel like the cattle prices will come back.

Ahald: That's a rational thing for them to do. The problem with it, however, was that...that you cannot...you can only do that for a short period of time. Those animals eventually had to come to market. They were animals being fed for...for slaughter and what happened was that really made...really added to the dislocations of the program is...is they held back until finally controls...problems with the controls problem got so back that they were eventually relaxed because of the pressures and when the controls were relaxed, the animals came to market and down came the price. So it had a very serious and devastating effect on...on the prices and incomes to the...to the cattle feeders.

Stasio: Price controls forced many cattlemen to withhold their beef from the market, which produced shortages and higher meat prices for some time. By imposing wage and price controls on only a limited sector of the economy, the government brought on crippling distortions in the market system. If output is to reflect consumer demand, prices have to be set in the marketplace. Barry Bosworth is former chairman of the President's Council on Wage and Price Stability. He says, wage and price controls don't allow for changes in the relative value of some goods compared to others. This, he says, can lead to a misallocation of resources.

Bosworth: Even back say at Nineteen Sixty until Sixty-five when the U.S. really had essentially a zero rate of inflation, individual prices were changing at a great about that average. So you have to have some mechanism that does allow resources to...or prices to change at the relative level, otherwise you're really talking about something like the Soviet Union's economy. Here's the price of shoes, and the manufacturer says, well, I can't make any money...price at producing shoes at that level so I'm not gonna make

any, and then there's a shortage of shoes, and then consumers say, normally what we would do is...is at the point the price of the shoe would rise and that would induce somebody to come in and produce some. Prices are a signal from consumers to producers to tell them what they want, and if you interrupt that whole mechanism, then how are you gonna allocate goods in our society. So I don't think wage and price controls are any sort of long-term solution at all to the problem of inflation, but still people make the argument as a temporary shock treatment, they may be helpful. Well, they're the problem we face. Is the time in the public is interested in. It's like when there's excess demand pressures or oil prices are going up dramatically. Well, wage and price controls can't do anything to OPEC. Your real problem is we're gonna have to pay higher oil prices during the period. The problem is how do we manage our domestic economy in absorbing that burden? Who gets adjusted and who doesn't?

Stein: No, I think it is something to be avoided like the plague.

Stasio: Former Presidential Advisor, Herb Stein, also thought wage and price controls led to inefficiency in the market.

Stein: It did us no good at all. It uh, uh, probably gave us more inflation than we would have had if we hadn't gone through this, but uh, if you put them on at peacetime you tend to generate those uh, conditions in the economy which makes it very difficult to get rid of them but do you know that if they last there a long time, they're terribly destructive.

Stasio: Now let's review some of the main points in our discussion about economic efficiency under perfect competition. There are four general types of markets in the economy, perfect competition, monopoly, monopolistic competition, and oligopoly.

These market structures differ according to the number of firms in competition, the relative difficulty of starting a business, the control over the price by both the seller and the buyer, the type of product or service, and whether or not price is the only factor buyers consider when choosing the product or service. To be perfectly competitive, a market must deal in products that are the same from one seller to the next. They must have many buyers and sellers so that no one firm or consumer can influence the price. Also, the barriers to entering the field in a perfectly competitive market must be minimal, and finally, a perfectly competitive market must be able to switch all of its resources from one use to another quickly to respond to changes in demand. Few if any markets satisfy all of these conditions, but economists like to study the perfect competition model to get at some of the underlying structures that support the economy. It is particularly useful to understand how firms determine their prices and levels of output. To set the price for its products, a firm must consider the fixed cost and the variable cost of production. Fixed costs include those expenses which are incurred regardless of output such as rent or mortgage, utility bills, payments on plant and equipment, insurance, and the like. Variable costs are the expenses incurred in actually producing the product. Wages and material make up the largest part of variable costs. A perfectly competitive firm will set production at a level where the cost of producing each additional unit, that is, the marginal cost equals price. This presumes that there is an output rate at which price exceeds average variable costs. If not, the firm should not continue to produce. Perfectly competitive may be able to earn profits, but they may not earn profits about the ordinary rate of return made in average capital markets. Once a firm begins earning a profit higher than might be made by investing elsewhere, something economists call economic profit,

competitors will be attracted to the business increasing total output and driving down the price. Direct interference with the pricing mechanism through say mandatory wage and price controls robs the market of its most important signal for regulating output. Price controls distort the allocation of resources throughout the economy and often lead to shortages of some goods and over-supplies of others. Most markets in so-called free economies operate somewhere between perfect competition and direct government control. We'll see how those markets work in future editions of Economics U\$A.

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