MITOCW | 13. Developing Profitable Strategies

RICHARD SCHMALENSEE: So today what we're going to talk about, we're going to move from the descriptive discussions of organizational decision-making to a couple of prescriptive sessions, which is if you're running an energy business, how do you do it? One of the things, as this indicates that we talked about you should do, you should be doing present value analysis, net present value analysis of investment opportunities. But that's not strategy.

So today and next time, we're going to be talking about strategy. We'll talk about industry attractiveness briefly, kinds of strategies and niches within industries, and then the Husky case. Wednesday, Don Lessard's going to be here and explore with you business models, particularly in innovative segments.

So project by project, net present value isn't strategy. If a firm accepts every proposal with a net present value, a positive net present value, the result is likely to be very incoherent and unmanageable. The Brealey piece is sort of a finance person's skepticism. The first thing you note is you only see proposals with positive net present value. If someone likes a project, it turns out it has a positive net present value.

So what they propose, and we'll explore a little bit, is thinking about disequilibria, thinking about will it last. It has a net present value because we're cheaper than they are. OK, why are we cheaper than they are?

We can buy materials more cheaply than they. Why? Will it last? Will it last? Annika and I saw, before vacation, a very detailed analysis of US versus Chinese photovoltaic manufacturing costs. It concluded that the big Chinese advantage was they could get materials and supplies 25% cheaper.

And the first question is, why? Is that going to last? The people who'd done the study hadn't quite inquired into that, and said it was superior bargaining power. Superior bargaining power doesn't last.

So first point in the Brealey et al. piece is skepticism about present value. Porter's paper is in a way more profound, and really does deserve a serious read. Strategy is what you won't do.

What is it you won't do as a company? Someone walks in the door with a project with a positive net present value. When do you just say, no, you're right, that's a positive net present value. We're not going to do it.

The argument is this-- if you're doing the same thing your competitors are, and there are a bunch of them, you're in a wonderful world of perfect competition. We all enjoy that. It's in the textbooks. It's easy to analyze.

And it's no fun. You don't make any money, particularly if there are opportunities to innovate. You have to innovate just to cover your cost of capital.

There's a little quote from Warren Buffett, which I think still holds true, that since the dawn of aviation the total profits earned by airlines adds up to zero. Airlines have gotten enormously more efficient. They've done enormous things for transportation for the country as a whole, but they haven't made any money, because mostly they're all doing the same thing.

And there are a bunch of them. And there's no differentiation or stickiness. So the first lesson is, if you're running a company you don't want to be there.

As Porter points out, if you're in that situation-- I mean, airlines have improved efficiency enormously over the years. Fuel costs are down. Electronic reservation systems, baggage handling-- much more efficient than they used to be, and they're still not making any money because they're all doing it.

And if you don't innovate and improve, you lose. Andrew?

AUDIENCE: I was just--

RICHARD SCHMALENSEE: Just drying your nail polish? OK, good. It's important to have it dry.

So lesson one is you don't want to do that. Lesson two is sort of the obvious counterpoint, which is when you set up a business, you'd like to be doing something that's of value to somebody that can't be easily imitated.

The buzzword is "sustainable advantage." So the notion that Chinese photovoltaics will always be cheaper because Chinese bargaining power enables them to get silicon 25% cheaper than US firms-- that doesn't wash. If that's what's going on, that's not sustainable.

If there is some cost advantage in silicon production, that's more interesting. But if all you know is it's cheaper, and all you hear is "bargaining power," that's not sustainable. So if strategy is what you don't do, and it needs to be something that can't easily be imitated, how about the question I posed there-- does MIT have a strategy?

If so, what is it? Or what are elements of it? Yeah.

AUDIENCE: Hands-on learning.

RICHARD SCHMALENSEE: Hands-on learning. OK, what does that rule out? It's an element of what MIT is about, absolutely.

AUDIENCE: [INAUDIBLE] You have to limit the amount of people that you let in, because you can't have 50,000 people [INAUDIBLE].

RICHARD SCHMALENSEE: OK. So it's a high cost strategy. What does it say about the kinds of things you teach? Medical school has hands-on learning. And MIT doesn't have a medical school.

Simpler question-- Caroline, what's Wellesley's strategy? Does Wellesley have a strategy?

AUDIENCE: Yeah, to educate women.

RICHARD SCHMALENSEE: Educate women in everything? Does Wellesley have a big engineering school? Liberal arts-- focuses on women, focuses on liberal arts, doesn't offer graduate degrees, stay small.

That's pretty easy. What about MIT? It's more than just hands-on learning. MIT doesn't have a law school.

Harvard has a law school. Harvard has had a law school for a long time. Presumably those are strategic differences.

Yes, somebody actually sat down and said, should MIT have a law school? No, MIT shouldn't. That decision has been looked at several times in history. Why do you think?

AUDIENCE: So they can focus on being the best in science and engineering.

RICHARD SCHMALENSEE: It focuses on science and engineering, and things that complement and work with it. So does economics make sense? Yeah, it does, historically it does.

One of the early presidents of MIT was the founder of the American Economic Association, so somebody thought it made sense. We've done business for a long time, almost since the start of the institute. How about linguistics? Why do we do linguistics?

AUDIENCE: I've heard it's largely because of Noam Chomsky, because he developed the [INAUDIBLE].

RICHARD SCHMALENSEE: Yeah, I think that's the right answer. I mean, my sense is a whole bunch of decisions have been made that a whole bunch of areas will be basically service departments, so that we can actually give a rounded education. And into that-- history, we don't do advanced degrees in history. And sociology we don't have. Psychology is very focused.

But into languages and linguistics stumbles Noam Chomsky, and you say, oh, my god, what an opportunity this is, and so you build on it. But it's not a big department, and it's pretty focused. And we don't have a lot of modern languages.

We don't have a French department. We don't have a Spanish department. There's probably a French department at Wellesley, yes? Yeah. We don't have one.

So MIT does have a strategy. It's not perfectly-- not easily written down, but the strategic descriptions have to do with science, engineering, and related fields, and complementary fields. Wellesley's is pretty clear. Harvard's is we do almost everything. We're a full-service supplier.

It is interesting, Harvard doesn't have a veterinary school. I'm not quite sure why, but they have just about everything else you could think about. I don't think they have Library Science, but just about everything else.

So those are strategies. MIT has faced the possibility of a law school. MIT could make money with a law school, has decided not to do it, has decided not to have a medical school. That's a harder call. That's a more interesting call, but has decided not to do a medical school.

Strategy is, to an important extent, what you won't do. And you could certainly do a net present value calculation for the MIT Medical School and come out with a positive and also social impact. You could also talk about a law school with heavy focus on patent law and related intellectual property fields, which does, to a certain extent, complement, but also distracts. And that's a strategic choice.

So universities, like all kinds of other organizations, need to make strategic choices. Another strategy might be we'll do almost anything that will turn a profit. And you see some places look like that. MIT very much doesn't.

So if you're really thinking about a sustainable advantage of some sort, a coherent strategy, you have to consider the next bullet, or not. What the next bullet says is, when the slide works, you have to think about complementarities or fit among investment projects. Meantime, I'm going to figure out why this works or this doesn't work.

The nice piece that we had-- tech support, please. I have a frozen machine at the moment. There are nice examples in Porter about IKEA and about Southwest Airlines, and they're great examples of taking on things that fit together.

Southwest Airlines doesn't offer food. Southwest Airlines flies out of small airports. Southwest Airlines flies one kind of airplane.

All those things fit together-- low cost, convenient. You could make a case that gee, if we had more-- oh, and you don't book through online services. You had a hammer?

AUDIENCE: No, I have to [INAUDIBLE].

RICHARD SCHMALENSEE: OK, thank you. All right, we're going to try to do this without slides. It's going to be good. The examples there are things that fit together.

You could imagine Southwest doing a calculation, and saying, well, if we used online booking services, we'd get more volume. And that'll cost us x percent. And you could imagine saying, well, it'll increase our costs a little bit, but it'll pay off.

They have a relentless focus on costs. We're not going to do it. We're not going to have assigned seats-- that takes time and extra gate personnel.

We're not going to do online reservations, because that'll increase our costs. We're going to be low cost, convenient. We're not going to have different kinds of planes, even though on some routes we might want to fly larger planes, because that'll increase our costs. So Southwest thinks about how its decisions fit together.

Similarly, the example of IKEA, which you all probably know better than I do, but you go into a traditional furniture store, you can get all kinds of different things. You order them-- many fabrics, many styles. It takes six to eight weeks. Some slave in North Carolina makes it, and it's shipped up.

IKEA doesn't offer that, doesn't offer the customization. It offers cost, convenience, and a certain look. That's what it focuses on. All of its decisions aim for that.

So that's a coherent strategy. You don't just take anything with a positive net present value. You ask how does it fit with what we're trying to do? How does it fit with what we're trying to do?

An MIT law school might have positive benefits. How does it fit with the main focus? How would the law school faculty interact with other faculty? Would it be the kinds of people who will fit well on the campus? How would law students relate?

That's not to say that that's an obvious question. I always think a more interesting strategic choice is, should MIT invest more in public policy? We have STS and so forth. We don't have the Kennedy School.

You could imagine a case being made for a serious public policy school focused on science and technology. That case hasn't been made. And that's a money loser, by the way, but it might have other strategic value. Any hope?

AUDIENCE: They have to reboot the machine [INAUDIBLE].

RICHARD SCHMALENSEE: They have to reboot the machine. OK. We now go to blackboard for the next slide. The next slide has to do with-- and I can't do blackboard with a jacket on.

So the next slide has to do with industry attractiveness. So as I said, this is about thinking about what activities you are doing. What are you offering customers?

If you're offering customers the same things as a lot of competitors, then you can be really good, but unless there's some way you're better that can't be imitated, you've got a problem. So if you look at an industry and you ask what things affect profits, one thing is the intensity of competition. Another thing is pressure from suppliers-- I'll give you examples in a minute.

Another thing is pressure from buyers, substitutes, and entry. This is an ugly version of the famous Mike Porter Five Forces. If you understand this fully, you're a third of the way through the MBA course in strategy. So let me try to do it quickly. It's not very hard-- maybe only a quarter of the way through.

Regardless of what the supply conditions are, and whether they're entrants or not, if the industry is perfectly competitive, nobody makes any money. That's sort of the definition. And obviously, competition runs along some sort of spectrum between a lot of small firms beating each other's brains out and one monopoly taking everything there is to be had.

So this is one force that can affect competition, can affect profits, is the intensity of competition within the industry. Another force is the existence of close substitutes. We all make wax paper, and we're great wax paper manufacturers, but plastic wrap is eating our lunch.

And so there may be only two or three of us making wax paper, but with the availability of cheap plastic wrap, it means we have probably declining demand. It means we probably have a highly elastic demand curve. And even with a monopoly, we can't make any money, so close, good substitutes erode profits.

Please have at it. I'm a wax paper manufacturer. There's only one of me, but anybody and his kid sister can make wax paper. That's not quite right, and it could be his kid brother, too, don't mean to be sexist. But if it's really easy for competitors to come in if anybody's making any money, nobody can sustain high profits.

So you look at entry when you do an industry analysis, is it easy for outsiders to come in? What are the obstacles? Do you need specialized knowledge? Do you need huge capital?

What are the problems? If there aren't any obvious barriers-- we're making furniture in North Carolina. What do you need to make furniture in North Carolina? You need to hire good carpenters, and get a supply of wood, and have some design skill.

Are those high barriers to entry? Probably not. So would you expect, even if there are only a small number of furniture manufacturers, would you expect them to make a lot of money? Probably not.

OK, suppliers-- my favorite example here really is airlines, because one of the things that characterized airlines, particularly under regulation, is very strong unions. So while the airlines didn't make any money, airline employees did. Pilots earn very high salary for relatively little work. Flight attendants-- this is, again, in the days of regulation-- flight attendants earned very high salaries.

The regulators pushed prices up, and most of the rent, most of the profit, went down here to the unionized suppliers because there was pretty heavy competition up here. So we had competition here, the ability here to earn rent. You see this in a lot of industries where there's relatively little competition in the industry-- competition within the industry, substitutes, buyers, entrants, suppliers.

Is injection molding a good business to be in in 1995? Julian, why not?

AUDIENCE: Because China does it cheaper.

RICHARD SCHMALENSEE: Well, not in 1995, they didn't. Let's stay within the bounds of the case if we can. Anybody else? Charlotte.

AUDIENCE: No, because at that point, competitors are thinking of ways to do things cheaper to [INAUDIBLE] money and also because the buyers were these people using the machines that they were making, and the materials they needed were in high demand, so prices are going up.

RICHARD SCHMALENSEE: That's the resin. We'll come to that. But this thing, you're saying there's just a lot going on here within the industry-- very intense computation.

What's interesting about this is that's right. It doesn't look like most of that industry is very attractive, even though it's growing like crazy. The industry is growing like crazy-- it's a great example of everybody having to run fast to stay in the same place, because there's a lot of innovation, as Charlotte says, and if you're not doing it, you lose.

So industries that look like that are not uncommon. You think about the early days-- again, Warren Buffett-- the early days of automobiles. There were hundreds of people making automobiles. And they were all making great progress, and innovating like crazy, and automobile sales were taking off like a rocket, and most of them died because they were offering more or less the same kind of product, doing more or less the same things as everybody else, and had to run to keep in place.

So I think in terms of we hear a little bit about buyers-- only a little bit. One of the big bottle makers is mentioned as a powerful buyer. We don't know much about that.

Substitutes, we seem to be pretty good. This looks like an industry people can enter. This does not look like a high barrier industry. We're not told much about that, but we don't see much of a problem there.

There seem to be lots of mold makers and lots of suppliers of components. So we don't seem to have a problem here. The real problem in this industry is here, where there's just very intense competition, even though there's high growth, even though there's innovation.

Everybody is innovating. Everybody is moving. And everybody's running very fast to stay in the same place.

So how do you beat this? Well, let me talk generically, and then we'll go to Husky. So generically, stepping way back, you've got to both create value and capture it. So if you think about suppliers, what would you get for airplanes and airline personnel?

What would you have to pay to get a pilot to fly as opposed to what you do pay to get a pilot to fly-- again, in the great old days of limited competition. There may well be a gap between the suppliers' opportunity costs-- what else could they do with their capital and labor-- and what they sell for. That's captured by the supplier.

There better be some gap between what buyers are willing to pay and what they actually pay. And the difference is what you get to take home, the difference between what it actually costs you and what you can sell. And this is, like, yeah. This is pretty straightforward and pretty obvious.

But you really do need to think through-- and I love the animation-- you do need to think through who captures it. If you go to the airlines, there's anomalous value created by the airline industry, historically. Imagine it going away.

It's not captured, by and large, by the airline companies. Where does it go? Well, with the decline of airline unions, less of it gets captured by suppliers, and more of it's captured by us.

If you think about the alternative way of-- I was in Florida last week. And driving to Florida, which I have done, is not much fun. So I would have been willing to spend a lot more than it cost me to fly.

I got a huge surplus. I don't have the impression that the folks supplying the airline were getting a lot of money. And I know the airline wasn't getting much in terms of captured surplus.

So the basic strategic question is, in any kind of industry-- attractive or unattractive-- can you do this? So where Porter is pointing, and where this case points us, is to ways to not do the same thing your competitors are doing. What can we do differently?

Well, the first basic-- this is sort of the Southwest strategy. This says, we are going to drive down costs and in a way that's hard to imitate. We'll talk about what makes it hard to imitate.

We're going to drive down costs, and maybe we supply a somewhat different product. Southwest's product is not very useful for somebody who-- not very interesting to somebody who always flies first class and cares about it. They don't do first class. They've written that off.

They don't do frequent flyer, I don't think. Maybe they do. But for a whole set of business travelers, they're not that attractive.

They're cheap, yeah, but if somebody else is paying my airfare, that's not too attractive. They're not convenient because I can't book online. I think about my own travel. Usually somebody else is paying and I book online for simplicity. I never fly Southwest because the fare difference doesn't bother the people who are paying my airfare, and online booking is so enormously convenient that I just do it.

So I'm not in the set of consumers they're aiming at. So what? There are enough of them. There are enough people and enough travel occasions-- and I can imagine occasions when I would check Southwest just to see if they're cheaper.

That's a strategy. That issue there is what makes it hard to imitate. What makes it hard to imitate?

As Charlotte pointed out in the injection molding business, everybody's innovating, and in the airline business everybody does electronic reservations, and everybody does this, and everybody does that-- lots of innovation, everybody driving down costs-- more fuel efficient engines, no barriers to imitation. United can copy what American does. American can copy what United does.

There are seminars on industry best practice. Everybody does industry best practice. You don't make any money doing industry best practice. You may avoid losing money.

So that's strategy one. Can I somehow get low costs? And I highlight this "some consumers," because Southwest and IKEA are nice examples of picking a piece of the market which a low-cost strategy makes sense.

Not everybody goes to IKEA. I've never been in an IKEA, as it happens. But lots of people do, and that's enough to make them a lot of money.

The other strategy, not too surprisingly, is to go the other direction, is to find a way to increase perceived quality, willingness to pay for some buyers to justify higher prices. What can we do to justify higher prices? And again, there are examples-- Mercedes Benz is a high quality. They don't do the same thing that everybody else does, not the same kind of car.

It costs more. It absolutely costs more. In this example, the cost is the same, but you could still make a lot of money if those costs were a little higher as long as the differentiation is effective.

So this kind of strategy, you pick something that somebody values. Actually, the online bookings-- well, not quite. That's an interesting story.

You meet the needs. You add costs. You get premium prices-- terrific story, but it has to be cost effective. That is to say, you can raise the price, but if your costs go up by more than the price, you lose.

And you come down to the same issue-- is imitation difficult? Is imitation difficult? Again, we're going to see this in Husky-- is imitation difficult?

There's sort of-- nice diagram-- there's sort of three kinds of stories about ways that imitation can be difficult. The first is sort of the IKEA/Southwest up on top, the integration, that if you have to build the company to deliver on a strategy effectively, that's, again in Porter, the Southwest Airlines versus-- what was it, Continental Light.

So Continental decides they can compete with these low-cost carriers. They'll offer a low-cost carrier. They won't serve meals and they won't do assigned seats, but they do baggage interchange with other airlines because they're Continental.

They do online booking because they're Continental. They do a variety of other things because they're Continental. And they can't get the cost down that low.

To get the cost down that low, you've got to integrate the whole thing. You've got to build an IKEA to deliver IKEA. You can't have an IKEA tacked on to something else, which means it's hard for an existing firm to copy-- the notion that you have to integrate the whole system.

I guess another sort of example like that would be Jiffy Lube or one of the quick lube places that used to-- you don't see them as much as you used to-- that offers cheap oil change. That's all they do or all they did. And could you imitate that?

Yeah, you could, but you'd really have to have the company focused on doing just that. You can't do cheap oil change as part of a full service repair shop that does other things because you've got all that overhead and all of the systems to handle everything.

If you just do oil change, it's a simple business. You could do it very cheaply. If you do more, you've got to hire different people, you've got to have different systems, you've got to have different inventory.

So one reason it could be hard is that everything is integrated. Everything is integrated. It would be hard-- well, interestingly enough, if you think about General Motors, historically, Cadillac was focused on luxury cars and was sort of kept separate from the rest of GM. In the glory years, Cadillac delivered luxury cars.

You couldn't have the Cadillac operation closely integrated with the Chevrolet operation. You have different philosophies, you have different purchasing, you have different design approaches. Cadillac, everything was focused on a certain kind of car-- integrated, built to deliver. You have to build a system-- as many people did, it turns out-- to compete.

The second-- there on the right-- capture model is cost. You have a cost advantage. How can you have a cost advantage?

Well, there might be economies of scale. You might have learning advantages. You might have other kinds of advantages. There are lots of ways you could have an advantage in cost. Yeah, Andrew.

AUDIENCE: I just had a question regarding integration. These might be really bad examples. I'm just curious where they fit in. Like, a company like Walmart or like Toyota that are quite large scale, but then again, I've heard many things about the way they, for example, figured out how to have a really integrated system from the supplier to the end product and all that thing. I'm just curious, are they simply exceptions? Or are they doing some other things also that I've not seen?

RICHARD SCHMALENSEE: Well, Toyota is a great case. And others may know that system better than I do. They combine a number of things, but it is an example of a system built to do a couple of things well.

First, they built a product development system. It was much quicker than American manufacturers, and indeed, much quicker than European manufacturers. So they could go from concept to model on the street quicker. So that's the innovation speed down there in the left.

Could you imitate it? A lot of people tried. There were no obvious barriers to imitating that.

They also had some clever ways they did manufacturing-- just in time, and the whole Kanban and quality circles. There was a whole manufacturing system. Could you copy it? Well, a lot of people tried.

And that's what's interesting. There was the Toyota-General Motors joint venture that produced-- what was it that they produced in California? NUMMI, yes. And General Motors was going to learn the Toyota system and copy it.

Well, the cultures were different. And the GM workforce-- you've been doing something some way for 30 years, and somebody says, now we're going to do it this other way, that's hard. And you have to change the inventory control system and your purchasing system.

Then you go to your designers, and you've got to change the speed at which you produce new products by changing that system. I mean, I'd say Toyota was successfully copied over a long time. I wouldn't say GM has successfully copied them.

It wasn't that Toyota was bigger than anybody else. They were doing a better job when they were smaller, certainly smaller than the American companies. So they got cost by developing a manufacturing and design system that was simply better, and the advantage held because even though it looked like you could copy it, and there were articles and books written on how you do the Toyota, the Japanese system, it turned out to be harder to put it in place because you had to do it all.

And again, over time, there are lots of studies where you see companies now that have that approach. But it was sustainable. And Toyota's not in great shape.

It was sustainable in part because of the fact that it was a system. You had to do the whole thing. You couldn't just change inventory. You couldn't just change design.

You had to take the whole thing, and that meant bringing people along. Could you do a startup that way? Yeah, much easier to do a startup, much easier to take people who've never built or designed automobiles, and say, here's how we're going to do it, but then you've got a whole bunch of people who've never built or designed automobiles.

So it's a nice example. Thank you. Anything else? Any other comments?

OK, let's do Husky. What's Husky's strategy? What is it that-- we're '95-- what is it historically Husky wouldn't do? Mary.

AUDIENCE: So they stuck to some of the core values, like professionalism and dedicated hard work. They also devoted a lot of stuff to the health and--

RICHARD SCHMALENSEE: So that's a good description of the culture, of how they went about doing what they did. What did they do? What were their activities?

Did they focus? Were they trying to do all kinds of injection molding, some kinds of injection molding, low end, high end, middle of the market?

AUDIENCE: They focused on the PET system.

RICHARD SCHMALENSEE: PET and the thin-wall business, so they focused on two segments. They didn't do everything. And as you say, they had this very interesting culture.

So we got that one. Don't freeze again. What distinguished those segments from other segments? How were the PET and the thin-wall segments different from other parts of the business, other segments? Any obvious way? Yeah.

AUDIENCE: I think they were trying to-- sorry, I forgot my name tag.

RICHARD SCHMALENSEE: Yeah, but you do remember who you are. We're good there. OK. Yes.

AUDIENCE: I think they were trying to find segments where a technological advantage is sustainable, but it actually makes a difference. Like the thin-wall business, it's like there's probably more technological know-how to make it, and allows you to make the walls thinner, and you can machine it faster and stuff like that, where it hadn't been really monetized yet, [INAUDIBLE].

RICHARD SCHMALENSEE: What about the PET bottle business? How is that different?

AUDIENCE: It seemed like-- I wasn't really sure. It seemed like they kind of wound up in that by accident sort of. They're, like--

RICHARD SCHMALENSEE: Well, think about. I mean there's some nice description of-- suppose you're doing Coke bottles, and you're running this incredibly rapid bottling apparatus. And you produce the bottles and you fill the bottles under pressure. What matters a lot? Quality, maybe, defects, maybe, because when a bottle explodes and you've got to stop the line, that's terrible. So performance and technology matter in those segments.

AUDIENCE: They're not making the blow molded machines, only the preformed.

RICHARD SCHMALENSEE: Yeah, but you want to make those free of defects.

AUDIENCE: Because when you blow them up--

RICHARD SCHMALENSEE: When you blow them up, yeah. I think there's a number in the case about sort of typical defects in one of theirs versus typical defects in competitors. And it's a big difference.

And the story is when you blow them up, and then you fill them under pressure, and they explode and stop a bottling line, that's terrible. So if you can deliver product that won't do that, you've got an advantage. OK. So it's segments where performance matters, where technology is useful.

One of the things that comes out in the case-- you have to read it kind of closely to get this, but it buys a lot of stuff. It makes the molds, but it buys a lot of inputs, more than its competitors. Any obvious reason? Catherine.

AUDIENCE: Well, doesn't the case that their campuses are very centralized. And it goes back to the culture, their employees are generally very happy there. So it said that they buy a lot of their molds from people who generally were former employees so [INAUDIBLE].

RICHARD SCHMALENSEE: So they buy a lot from former employees, yeah. So that's part of the ecosystem, as the phrase goes. But as focused as they are on technical excellence of their machines, could they do that for everything, all the inputs?

AUDIENCE: Instead of trying to just manufacture products, they have a focus on service and the entire--

RICHARD SCHMALENSEE: They focus on--

AUDIENCE: --package, basically. So they try to specialize more because then they can provide more services throughout the company so that [INAUDIBLE].

RICHARD SCHMALENSEE: So they have technical people out in the field. So they can provide a great deal of service, and sort of co-engineering with their clients. And they're in segments where that matters.

And trying to do that for all of the components, and trying to hyper-engineer all of their components would spread them a little thin, I think. And I think that's one reason why they make fewer inputs than their competitors, because they've decided to focus on the parts of the business where performance and quality and technology matter. What's the answer to that?

They make some molds, particularly for PET. They offer hot runners, and a variety of other things that competitors don't. Any reasons why? Wyatt.

AUDIENCE: It said in the reading with the hot runners was they were selling the hot runners to Gillette or whatever, but Gillette wasn't using their actual mold machines. They're using hot runners. And then later on, they were able to grab a contract with Gillette before the actual [INAUDIBLE].

RICHARD SCHMALENSEE: So it's part of the system. Being good at that adds to performance and gives you a business edge. And they're very tightly focused on these two segments.

So you want to make everything you can for those segments. You want to not worry about the inputs. And it's made a lot of money.

The case makes it clear-- it's grown like gangbusters. It's got a return on equity of something like 40%. Why, at least until recently, hasn't anybody copied them?

What are the barriers to imitation? What has made this strategy sustainable, at least for a while. Nothing's forever. Brendan.

AUDIENCE: They have a huge technological advantage. Their machines are a lot more expensive. There's a deep knowledge base there. So it's hard to copy the kind of quality machines that they produce.

RICHARD SCHMALENSEE: But you could imagine they don't-- nobody talks about patents, though. We don't hear patent barriers. So you could imagine they have the only advanced manufacturing center.

They've set up a little think tank-- I don't know how little it is. They set up a think tank to do R&D. Why don't other people do that?

AUDIENCE: They don't want to invest the money. They'd rather spend the money elsewhere, not have that cost.

RICHARD SCHMALENSEE: So this is part of-- well, let me push you on that a little bit, because they're making so much money. They're growing like gangbusters. They're making so much money.

Wouldn't you imitate them if you could? I mean, so yeah, you got to set up a manufacturing center. These are big companies. Mannesmann is a big company.

AUDIENCE: That's why companies eventually did kind of get into the markets that they were selling.

RICHARD SCHMALENSEE: They saw it, yeah.

AUDIENCE: They sold cheaper machines that can do the same job, maybe not to the same quality but close.

RICHARD SCHMALENSEE: And try to come in on price. Yeah.

AUDIENCE: Isn't the kind of customer, though, that's concerned about quality and is willing to pay more for it, like it would make more sense it would go with the company that had been doing it for longer and kind of has the history and reputation, rather than a company that has just copied their technology and is getting that niche of the market and doesn't have the reputation.

RICHARD SCHMALENSEE: And they really sort of built the company to do this, haven't they? [INAUDIBLE].

AUDIENCE: Well, my guess would be that if you try to imitate, you're effectively increasing competition that does make the business not as profitable as it would be otherwise.

RICHARD SCHMALENSEE: So the segment may not be that big, you're saying. And so you'd have to do the numbers to say, is there room for two of us to play this game? Maxwell.

AUDIENCE: I think also it has a lot to do with the culture of the company and you needed that culture to make machines. It's hard to switch an entire culture.

RICHARD SCHMALENSEE: Yeah, the culture is sort of part of it, is an intriguing part of it, isn't it? They've got a peculiar culture. I want to come back to that. Charlotte.

AUDIENCE: Also, the fact that we said they're only focusing on this one thing, whereas other companies that were also in the mold-making business focused more widely. Even when they started to come into this area, they sort of added onto machines they already had, instead of actually changing into the same company. Nobody shut down all their other manufacturing and focused specifically on these two things. They just incorporated it into what they were already doing. Maybe companies [INAUDIBLE] they calculated what it would take for them to get to the point where Husky was. It would just have changed their [INAUDIBLE].

RICHARD SCHMALENSEE: So this would sort of be a little bit of the reverse of Continental versus Continental Light. This would be like, well, they tried it. This would be like grafting a luxury car business onto Volkswagen, or as Toyota did, doing Lexus, which they set off to one side because you really couldn't do the mainstream Toyota business and the Lexus business under the same management.

So part of it is they really built it for this. Do you think it has higher or lower than average costs? That's pretty clear, I think. Matthew, what do you think? You think Husky's a high cost operation or a low cost operation?

AUDIENCE: Well, they're high in the sense of charging--

RICHARD SCHMALENSEE: No, not in terms of high price but in terms of their cost. Even though they've got this lab on the side, they've got this advanced manufacturing center. They've got day care. They're very ecologically good.

AUDIENCE: They're charging high scores that nobody can produce. [INAUDIBLE] So I'm saying low in comparison to what they're charging.

RICHARD SCHMALENSEE: That may be, but in comparison to their competitors?

AUDIENCE: They're higher, because they're producing higher quality.

RICHARD SCHMALENSEE: They're producing higher quality. And if you think about the culture and everything else, this is not a company that skimps. This is not a company that skimps.

They invest in R&D. They invest in technology. They invest in their people. Do you think that's important, the culture? Is that a key part of the story, do you think? Not sure I know the answer to this, but yeah.

AUDIENCE: I think it is. Just you mentioned before, it's something you can get up in the morning and go to work for. It keeps people motivated, keeps your workforce working hard.

RICHARD SCHMALENSEE: Even getting your T-square-- imagine T-squares-- even getting your T-square straightened on your desk, you think? I mean, neatening your code when you're gone. It's an interesting culture, I have to say. Matthew, you're raising your hand. Yeah.

AUDIENCE: I mean, they said in there that whenever they extended day care hours, it was a kind of thing to make them work harder, not just for extended day care hours for the kids.

RICHARD SCHMALENSEE: Well, they're not doing charity, are they? But they have a particular culture of we value our people. We value the environment. We value excellence, which would be a tough culture to sustain if they were aiming for the low end of the market.

If you're aiming for the low end, that's tough. If you're aiming for the high end, it's like Ritz-Carlton Hotels aim for a particular kind of service. And their code is ladies and gentlemen served by ladies and gentlemen.

If you're going to treat your people like ladies and gentlemen, you're going to have higher costs than if you treat them like pond scum. You will also, with some luck, get better service. So this is a culture that really does aim high.

Would you like to work there? Show of hands-- who'd like to work for this company. OK, who would find it really awful?

Charlotte would not like her T-square straightened. Neither would Maxwell. I mean, it's for some people and not for others.

It's autocratic. The boss runs it. One of the questions that's suggested for discussion is, could you do this company without Shapp in charge, Schad, rather. Could you do this without an autocrat in charge, such a strong culture, such a tight focus? Not obvious.

OK. What else do I want to do? This is some numbers, which I don't expect you to have done. And I should have made this clear because you can do a fair amount of work on the numbers.

And I'll illustrate this kind of analysis. For products like this, it is often useful-- and energy products, a lot of them come into this category, like light bulbs-- you can do the demand analysis by simply turning yourself around and thinking about this as a buyer. If you were a buyer producing bottles, what would you be willing to pay for a Husky system versus some other system, given the parameters?

And that gives you a sense of what Husky can charge, given other people's. It's easier when it's something like we're making bottles. It's a little harder when we're making Priuses, because you don't know what the willingness to pay for intangibles is, or hardwood interiors in a car. That you can't sort of read off the process figures.

But for something like light bulbs, for something like injection molding machines, you can say, OK, I'm running a factory. What would I buy at different prices, and turn the analysis around. And I'll just show you the results.

These aren't my numbers, these are somebody else's numbers, but it's useful for this kind of analysis. You basically want to say, start with the rival. What would it cost in terms of the machine, maybe the fact that you've got to get more machines because it's not as productive, the fact that maybe it takes more energy, the fact that it takes more raw materials-- what would it cost you-- this is called p star-- to do what you'd get out of a Husky system for price p?

There's enough in the case you can do this, if you're very ambitious, for thin walls and for PET systems. This is a calculation for thin wall. The competitors-- use margarine containers-- the competitor's system has a longer cycle time, it produces heavier components, a heavier weight container.

It costs less. So to get the same output, again, this assumes you have a large factory, you'd need 1 and 2/3 competitor machines to get as much as out of a Husky machine. That means 1 and 2/3 times 350 is 408.

There's also a resin saving, because the Husky container is lighter. So to replace a $400,000 Husky machine, you'd have to do $408,000 worth of competitor equipment plus extra resin per year. That's a willingness to pay analysis.

So that says Husky could, depending on how the competitor discounted, and depending on how much the competitor produced, Husky could charge even more than $400,000 and would still be the machine of choice. This is the kind of analysis you would expect a buyer to do, deciding what kind of machine to buy. And it's the kind of analysis you'd expect Husky to do in thinking about price.

In the past, I've taught a pricing course here at Sloan. And my favorite case is a case about contact lenses for chickens. And it's a great pricing case because the contact lenses for chickens cost nothing.

You put them in the chicken for about $0.25 a chicken. They cost about a penny. And they keep the chickens, if they work, from pecking each other to death.

And if you do the calculation, you find those lenses are worth about $4 apiece-- made up number, but very, very high. And most people in the class immediately say, well, it cost $0.25, so what we'll do is we'll market up to $0.30. And the answer is no.

If you do the willingness to pay answer, you can mark it up to $3 as long as you've got the patent monopoly on it. The buyer would be willing to pay $3 rather than do without it. And in fact, if it's worth $4 on this kind of analysis, you charge $3 and they're happy.

So this is a kind of analysis you can do for industrial products. That's a great case, except as it turns out, the contact lenses fell out of the chickens. The chickens plucked each other to death and the firm went broke. But still, it's a great case to teach. It fails only the realistic test.

This says the more containers somebody wants to produce, and the lower their discount rate, the better the Husky system is. This is a similar analysis, a willingness to pay analysis, for a PET preform system. And again, the Husky container weight is lower.

The cost is lower, takes up-- well, I'm going to have to go back. The key things you see will turn out to be the energy savings and the resin savings. So what you get here is it produces a lighter container, so there's a resin saving.

It's more efficient, so there's an energy saving. There's also a little floor space saving. So it's the same thing-- to replace a Husky system costing $1.2 million, you'd need to spend more capacity and more yearly cost.

So again, when you think about an industrial product, this is the sort of analysis you go through. When you're a buyer you do it, and when you're a seller you do it. Now again, the analysis may be different for different customers.

This is a case where you're assuming that, again, I can-- where have I got it? Yeah, I need 1.34 rival systems to replace a Husky system because the Husky system is more productive. Well, depending on how big the factory is, that may or may not make any sense because they don't come in fractions.

If it's a large thing, yeah. If the typical customer has one system, then the analysis is going to be different. OK, any questions about this kind of analysis?

Folks with an engineering background, this sort of ought to come pretty naturally, just working out on a spreadsheet. What would you do if you didn't buy ours? How would you do it? What would it cost? Is there a gap?

So the answer to this is, at least as of 1995 before troubles begin, Husky systems are worth-- I mean, we're charging $1.2 million for the system, but to replace it, you'd have to spend $1.3 plus $500,000 a year. So in one sense, we are leaving a little money on the table. In another sense, you have to leave a little money on the table because these are approximate calculations.

But the answer is, Husky's systems justified their premium price going into 1995. The electricity savings were not a trivial part of the reason, at least for PET preform. Is this reasonably straightforward, how you would think about doing it-- just engineer it one way, engineer it the other way, and check the costs, all the costs?

We're now in 1995. What's gone wrong? It's the summer of '95. They had a great year. They're depressed. Yes.

AUDIENCE: Resin costs are increasing.

RICHARD SCHMALENSEE: OK, resin costs are increasing. That's leading to a decrease in demand. Is that likely to be a temporary or a permanent situation, do you think?

Temporary, yeah. It's going to be disequilibrium. We've seen it before.

It's a commodity chemical. They just have a capacity shortage. So we wouldn't get too twitchy about that. Anything else, Matthew?

AUDIENCE: A lot of competing companies have noticed their success and are starting to step in and try to take some market share.

RICHARD SCHMALENSEE: Now we got a problem. That's more serious. And these guys have been through resin shortages, and they don't have a lot of debt, and they'll probably get through this one. In fact, I think it fixed itself within a year, maybe two.

But the lower cost competitors going after your prime customers with lower costs-- that's troublesome. So let's look at this two ways. Let's look at it from the point of view first of a competitor. Suppose you're one of those low cost competitors.

You know Husky's going to do something. What do you think Husky is going to do? One question is what will they do, and what would you think they would do as a competitor? And the other is what would you recommend they do?

Those may be the same if they're as smart as you are. But they may not be. Any thoughts about you're a competitor. What do you think Husky does? Sam.

AUDIENCE: Talk to their customers and stress the quality of the product. Because these guys are new, and they're doing low cost, but the only way they do that is they're cutting corners. Like, our product's more expensive, but you've worked with us for years. You know it's trustworthy, and just [INAUDIBLE]

RICHARD SCHMALENSEE: So you think what they would do would be to-- because they've always been about technology, and technological leadership, and quality, they're just going to double down on that. They're going to do more communication. They're going to do more innovation.

AUDIENCE: [INAUDIBLE]

RICHARD SCHMALENSEE: They're going to ride the same horse.

AUDIENCE: That's what I think they should do.

RICHARD SCHMALENSEE: What do you think they will do?

AUDIENCE: Probably, I feel like the first thing they may try and do is lower their costs, drop their prices a little bit. I don't think that's what they should do, but that's what [INAUDIBLE].

RICHARD SCHMALENSEE: Why do you think they will do it? You had me sold. You had me sold that given their whole culture, and given the way the company's been built, that they would double down on innovation.

AUDIENCE: Yeah, I feel like it's easier to lower [INAUDIBLE].

RICHARD SCHMALENSEE: It's easier to lower price in response.

AUDIENCE: I don't think that's the right thing at all.

RICHARD SCHMALENSEE: Philip, what do you think they will do?

AUDIENCE: They'll probably lower the price, because [INAUDIBLE] willingness to pay of the buyers is probably going to decrease because of these low-cost competitors--

RICHARD SCHMALENSEE: Because what?

AUDIENCE: Because the low-cost competitors arising. So the cost of replacing their product is less of an issue.

RICHARD SCHMALENSEE: So you think if you're a competitor, the first thing you expect them to do is a price cut.

AUDIENCE: Yeah.

RICHARD SCHMALENSEE: OK. OK. Anybody else have any expec-- because that's the natural response to a low-cost entrant is to come down a bit anybody else? David.

AUDIENCE: I would not expect them to cut their prices, just because that kills them. That's like a slippery slope thing, where their customers will not be willing to pay the higher prices. And they can't afford to sustain their competitive advantage.

RICHARD SCHMALENSEE: Well, are you saying what they should do or what they will do?

AUDIENCE: I'm saying as someone, as a competitor, especially if I'm part of the larger corporation like the Mann Group, I would not expect them to come down to my price, rather they try to stay high, maybe that person will buy a little into--

RICHARD SCHMALENSEE: So you think that Schad would say, I can't play a price game with these guys. I'm going to play my long suit. I'm going to stick with technology, and high price, and communication, and all of those good things.

OK, we're going to get-- at least the analysis in the teaching note on this case says, given what Schad did to get through the '70s, you might expect him to double down on technology, to keep innovating. But what should he do? I mean, there are a whole set of things he could do.

He could cut prices. He could cut them generally. He could cut them selectively.

He could cut them in different markets. He could cut them in different segments. He could enter their segments.

Husky is a little small in terms of production capacity. They might try to get scaled by counterattacking. They could cut costs given they're facing low-price competition, but they've got this culture that's not a cost-focused culture.

It's a quality-focused, people-focused culture. So if you do that, then for sure Charlotte won't want to work there, because not only do they straighten your T, they cut out child care. They do all kinds of other things to cut costs.

You could either raise or lower all this stuff-- the service, the technical people in the field. They've got probably a high-priced sales force because they're all technical people. You could go back to plain, old salespeople.

You could cut out this advanced manufacturing center, which nobody else has got. You could stop working on research, or you could do more of all of those. Whoa, that was cute-- bad button.

You could decide that there really are scale economies in building your own inputs instead of buying them. You could try to integrate upstream. Or you could do things I haven't thought of.

So instead of what would they do, what should they do? Sam, you had were doing a should. You were saying--

AUDIENCE: I was saying they should focus on communicating advantage to customers. And I also think they probably should raise spending on technology.

RICHARD SCHMALENSEE: And quality and all that.

AUDIENCE: Yeah.

RICHARD SCHMALENSEE: Because that's what they're good at. OK. Max, where are you going?

AUDIENCE: I think they should do an analysis of who their main customers are. And they only make a couple 100 machines a year. So if all of those machines are going to the same customers or similar customers and they can probably bank on loyalty, then they should focus on communicating the advantages because they can sell that. But if a lot of those machines are going to new companies that are trying to look to reduce costs initially, then they might want to think about cutting costs to stay competitive in that market.

RICHARD SCHMALENSEE: So that's interesting. So if it's the same customers, then it's an advantage to the customer to have only one supplier, to have Husky machines throughout. So if the growth is coming from sales to customers that already have Husky machines, you could stress the fact that look, you've got one supplier.

You've only got to have one set of spare ports. You've only got to call one person when it breaks down. Be a Husky shop.

But you're right-- it might be different if they were new people and they worry more about upfront cost. OK. Anybody else? Any other approaches? Erica.

AUDIENCE: Would it be unusual to look into cutting costs while maintaining quality? So I guess investing research into cutting cost but maintaining high quality.

RICHARD SCHMALENSEE: Well, can you cut manufacturing costs or you cut out the daycare center? You wouldn't cut out the daycare.

AUDIENCE: No, no. [INAUDIBLE] manufacturing costs, like how to produce things more efficiently.

RICHARD SCHMALENSEE: So you'd focus on manufacturing costs. Would you also raise-- this is a fair amount of cost in here, having this high-priced field force, this advanced manufacturing center, the spending on innovation. That's a cost. Would you cut costs there or would you cut costs to focus on manufacturing cost?

AUDIENCE: I mean, I guess I was focusing on manufacturing costs. I mean, those--

RICHARD SCHMALENSEE: Daycare center stays, but we're going to really try to get these things built more cheaply.

AUDIENCE: Yeah.

RICHARD SCHMALENSEE: OK. And then would you use that to cut prices?

AUDIENCE: You could. I mean, if cutting prices reflects lower quality--

RICHARD SCHMALENSEE: That would be bad.

AUDIENCE: Yeah. But you could also stress that you have better quality machines or--

RICHARD SCHMALENSEE: Jacqueline.

AUDIENCE: I was going to say I agree with that, that you could use that to cut prices, but at the same time still highlight the quality of the product and that advantage. You could do both strategies.

RICHARD SCHMALENSEE: OK. Anybody has-- yeah.

AUDIENCE: I'd say increased services at point of purchase, so they offer free installation or servicing of full Husky machines or whenever you buy new ones, or something like that, to focus when they're going to buy a machine, they're going to have it for a while. So focus right on that point.

RICHARD SCHMALENSEE: So that's costing me money. So how am I going to get it back? Or am I not?

AUDIENCE: Customer loyalty-- you're going to sell those machines. I guess you have to weigh that kind of back and forth, but hopefully end positive.

RICHARD SCHMALENSEE: Yeah, I mean, one approach here is to say, "Game over." I made a lot of money before people came into my segment, and I'm not going to make that kind of money again. So what I want to make sure is that I maintain a position through high service and whatever, and don't get swamped. I kind of niche myself even a little more. Charlotte.

AUDIENCE: Well, I think that they are a very different company than their competitors. They're focusing on this kind of assembly line manufacturing that allows them to specialize products for what their consumer wants. So they can focus on that, and even take that a little bit further.

And maybe if there's a huge price difference than what their competitors are now charging to modify their machines. And what they have been charging, they could cut price a little so they're still a high quality company, higher, more luxury, but not as much. Because they were charging really, really high premiums, too. They could just change that.

RICHARD SCHMALENSEE: They could come down a bit. I mean, although the premiums seem to be justified based on that analysis. Everybody over here? Pedro. I tend to look left. So you need to wave your hand.

AUDIENCE: At the beginning, I was also thinking of the manufacturing costs of the machines. Are those more energy efficient? So that's [INAUDIBLE] production costs. That's what I was thinking. But then I was also thinking, just thought of maybe expanding the market a little bit. Because the other companies produce more types of plastics.

RICHARD SCHMALENSEE: So maybe go into some other segments, OK. Let me give you a few thoughts. They have a lot of choices here. And it's interesting.

Looking at this whole menu, one of the things I must say that struck me is before 1995, this is a great example of how all the pieces fit together. They focused on a segment. They figured out that that segment cares about performance.

They're all about performance and technical excellence. They got a culture that fits with that. All the pieces fit together. It's IKEA. It's Southwest Airlines.

And comes now this difficult time. Can you make the things fit together? So a couple of choices-- their basic options-- I mean, you can try to can try to increase-- Netstal is one of the entrants, you will recall. You can try to increase willingness to pay.

You can think about more service, more R&D. The question Schad has to ask himself, one of the questions, is, is there room for that? Differentiation makes you money if it's cost effective.

So the question is, how much more service-- what would you get from increased service? The question of thinking about who your customers are-- are they repeat? Is this the same people expanding? Is it new people?

What's the return to that? You could improve the cost position. Remember these two basic approaches-- you can differentiate, you can lower cost.

Can you cut cost and still deliver? If you cut the perks, cut the sales force, will you affect the culture? Can you continue to deliver if you do an aggressive cost cut?

And you can cut margins. They've got pretty good margins. They've got room to cut margins. But to become the low-cost producer-- probably not.

They could go after other segments. They only serve part of the business. They could grow by going to other segments. But given that they're a high-cost company and have a particular culture, the question you'd have to ask is, does that fit? Can we do that?

And then you'd like the whole package to fit. And at this point, how old was Schad? Schad was 67 in 1995.

So someone in that age bracket, let me just say-- he obviously has to think about what am I handing off? Am I going to create something that's going to go on? Because he's not going to be leading it. Well, one assumes he's not going to be an active participant for another 20 years.

So what he did was actually quite drastic. I don't know whether this is right or wrong, but this is what he did. They went into other niches.

They moved out. They increased their manufacturing capacity substantially. They thought they were too small for scale, so they added capacity.

They cut prices dramatically in response to low-price entrants. Probably isn't going to keep them out. They worked to cut costs.

Cutting prices, it was argued, was a way to put pressure on costs and hope you can keep the culture. You basically say to your people, look, we're getting killed on price. We've got a match, and the only way we're going to make any money is if we can find a way to get the cost down.

But they didn't decrease R&D. They didn't decrease the manufacturing center. They didn't decrease the sales force.

They began to build more in-house. And they had an IPO, sold off the company in 1968. How well do you think this package worked? Say in words-- not so well.

AUDIENCE: Yeah. I mean, also in hindsight, I would argue that if you'd have an organization in the [INAUDIBLE] as well. So I would argue that the low-cost manufacturers in the US get undercut by Chinese manufacturers. And the best way to stay competitive was to stay high cost, high quality.

RICHARD SCHMALENSEE: Yeah. I mean, it's a curious mixture, isn't it? Because the company was built for high cost, high quality. And they tried to position themselves as the high cost, high quality firm across the market in all of these niches, even though in a bunch of the niches, quality wasn't that important.

So I've seen numbers through 1999, and they continue to grow because the business grew. Their profitability was not terrific. It was pretty erratic because they're changing the company rather dramatically.

And you can't get any more numbers because they went private last year. So their website now is just an advertisement for their technology. There are no numbers available because they're a privately held company.

They're still in Bolton, Ontario. Questions, comments, reactions, thoughts? Yeah.

AUDIENCE: Did they go private by some sort of buyout because of poor performance?

RICHARD SCHMALENSEE: Their website doesn't say, we went private because we were performing poorly. The website just says, such and such a private equity firm bought them. I don't think that's implausible, but I don't know.

It's not implausible that this strategy-- that a private equity firm said this strategy is a loser, and we can make this firm more profitable by changing strategy. But I don't know that. OK, see you all next time.