IlLUminate Blog Transcript: Phillip Coles on the Effects of Disruptions in the Supply Chain on the Holidays

Recorded October 15, 2021. Listen to it here.

ANNOUNCER: 00:01	[music] This podcast is brought to you by IlLUminate, the Lehigh Business Blog. To learn more, please visit us at business.lehigh.edu/news. [music]
ROB GERTH: 00:13	Welcome to IlLUminate. I'm Rob Gerth, director of marketing communications for Lehigh University's College of Business. And today is October 15th, 2021, and we're talking with Phillip Coles about how disturbances in the supply chain are going to affect the holiday season. Phil is a professor of practice in the Decision and Technology Analytics Department at Lehigh Business. He has an MBA from Lehigh and an MS from Cornell. And Phil has over 30 years of industry experience, including being vice president of strategic management at a multi-million dollar produce company. Welcome, Phil.
PHIL COLES: 00:47	Hello, how are you?
GERTH: 00:49	I'm good. So, let's start with what we're facing. Right now, when we go to the store, we're seeing less product and we're seeing it selling at higher prices. We're talking about everything from Halloween costumes to artificial Christmas trees to toys. And the story on the news channels are all about the toys, but it's not just toys, right?
COLES: 01:11	No, it's not just toys. There's a lot of different things that are being affected throughout all the different supply chains.
GERTH: 01:18	But there is supply and there is demand for these things, even for the toys. They've made the toys. That's not the problem. So how does the supply chain part of this figure into it?
COLES: 01:27	Well, it depends on what kind of industry you're talking about. The toys? Yes, they've been made. 85% of toys come from China, and they're sitting in warehouses in China. They're sitting in ships off the coast of California. They're sitting in warehouses right outside of the ports that are in California. Some of them were being shipped to other ports around the country because they can't take them through the Port of Los Angeles. There's a general problem with ports on the West Coast just because of the volume that's trying to come through there. There're also other issues in supply chain, too, because you've got the operations standpoint. For example, automobile sales are down significantly because of chip shortages. So with the toys, it's a shipping issue. When you're talking about automobiles, it's actually a production issue because of chip shortages.
GERTH: 02:24	And some of it is manpower issues, right? As far as any of these products, but particularly the toys that we're talking about.
COLES: 02:30	Yeah, there are shortages of labor and it's for various reasons. Some of it's because people have been sick due to the pandemic. They're not able to go to work. Sometimes it's the government, whether it's in China or in the US, forced them to shut down because they're concerned about transmission of the virus. There're people that are afraid to go to work because of the virus. There're people that can't go to work because they don't have childcare. And there's also a problem with people that aren't working because they're able to get the extended unemployment benefits

and they don't need to work. So there's a lot of different things that are driving the labor shortages throughout the world, again, not just in the US or China.

GERTH: 03:12 Yeah, that's what I wanted to say. So isn't just our country, right? It's all over the world.

COLES: 03:16 Absolutely.

GERTH: 03:17 When did the problem first show? When did people start panicking, I guess, about the holiday season in particular? When did people start figuring that out that, "Hey, it looks like there's going to be a problem." How long have we known about this?

COLES: 03:32 Well, the general public hasn't known about it for that long, but the people in the industry know. And this is a common problem. These are tradeoffs that we make in our supply chains. So, one the issues a lot of people conflate, and for whatever reason, lean manufacturing with globalization, and they are actually the opposite of each other. And with lean manufacturing, you're trying to reduce inventory, particularly in process inventory. So, when you think about a long supply chain, you got something coming from, say, Shanghai to the United States. It's a very long supply chain. You've got a lot of inventory that's on the water. So, we think about it as shipping, but it's also a way to hold inventory. It's not intentional, but there's inventory that's on the ships that are coming over. So, people in business, they make a trade off. There's truly no right answer. Everything is about tradeoffs. What risks are we willing to take on for whatever possible gains that we can get from it? So, if you can get products for less price or a better quality from somewhere far away, you say, "Okay, the risks of that long supply chain are worth it." So most of the time, it works out really well. But when you get these shocks to the supply chain and you've got a lot more risk with a long supply chain because a lot of things can happen, it can cause these disruptions. And we always know that there's the possibility. It's just that it rarely happens. So, we need to be prepared for when these things happen. And this was really something that kind of came out of left field. Nobody could anticipate this. But it's always difficult for the Christmas season because you got to order almost a year in advance. And it's hard to have a really good crystal ball and know what's going to happen within the next year.

COLES: 05:32 If you could order it today for tomorrow, it would be relatively easy, but when you got to order a year in advance, that really brings in a lot of risk.

GERTH: 05:41 So what kind of pressures are the various industries in, as far as trying to fix this fast?

COLES: 05:47 Well, the scrutiny is unhappy customers. So, Sam Walton said it the best, the customer can shut you down tomorrow by just not buying your product. So, they're in a panic. So, I always say to my students, the best way to go out of business is to not match your supply with demand. If you've got a lot of demand and you can't supply it, you're out of business. And you got a lot of supply and you have no demand, you're out of business. So, trying to match those two things up are very difficult. And just knowing what the problem is isn't enough, right? And say, "Well, I could have had it, but it's this other guy's fault." Well, that's great. They're going to write that on your tombstone, right? You know why you went out of business. But a lot of organizations, Walmart is doing this, and so is Home Depot, is they're getting their own ships, and they're getting smaller ships and they're bringing them to smaller ports and trying to find alternative ways to bring things in. And it costs more to do that, but at least you're able to get the products. And that's one of the reasons why things like price controls are so dangerous because it doesn't allow businesses to do what they have to do to bring the products in. And if we try to control those prices artificially, we're going to exacerbate shortages.

GERTH: 07:15

And you talked about how the pandemic is exposing problems. One of the things people have been saying about the pandemic from the beginning, "Yeah, that company went out of business, but it was going out of business anyway. The pandemic just sped up the timeline." So what portion of the supply chain problem that we have now can we blame on the pandemic or is it to be blamed-- and you started to touch on a little bit earlier, is it to be blamed on just how the system is?

COLES: 07:48

Yes. Well, you always have the weak players go out whenever you've got some kind of a shock, whether it's low prices, shortage issues or what have you. The better players are making more money in good times than the weaker players. But then when prices go down or there's not as many sales or whatever it's happening, that's when you're going to see the weak players go out. And that's also where you get the people that have the short-term horizons. So, we talked about sometimes companies making or the management of companies making poor decisions. Well, sometimes they make that decision, they say, "I can save a lot of money by not having fire insurance on my company." And you do really great because you don't have the insurance, until you have a fire, then you wish you'd had the insurance. So, any kind of risk management, that's what insurance is. It's risk management, is part of doing that. So, if you're flying without doing risk management, you're taking on a lot of risk. So, the simplest thing to do that everybody thinks of and everybody thinks is the issue, is to have some extra inventory, but it's much more important to have a flexible, responsive supply chain and do risk management where you have alternative suppliers and you have alternative products that you can use to replace them. So, I like to use the example of when there was a copper shortage in the 1970s and you couldn't get enough wire, copper wire. They went to aluminum wire. So, the companies that are having issues-- and I don't want to make it sound like this would have been easy. Nobody knew there was going to be a pandemic and then all the responses that happened. This is very difficult.

COLES: 09:46

I want to make sure that I make that apparent. But you always know that something's going to happen. You didn't know the virus was going to happen. We didn't know that the financial system was going to lock up in 2008. But you know something is going to happen. So that's why you have to make sure you have, like I say, alternative suppliers and other sorts of risk management in place. And there were also other mistakes that were made. So, for example, in the automobile industry, everybody assumed that the economy was going to be really bad. Nobody's going to be buying cars. They told the chip manufacturers, "Yeah, we have plenty of stuff. We have plenty of chips because sales are going to be down." And it turns out they were wrong and sales went up. And then the chip manufacturers had already switched over to producing chips for mobile devices and that sort of thing that are more profitable. So they've got them in trouble. Their crystal ball wasn't as clear as they thought.

GERTH: 10:49

And so the length of the supply chain is part of the problem. What if everything was made in America? Would that solve the supply chain problem? My follow up question is why won't that happen?

COLES: 11:05

Well, it won't happen because there's the tradeoffs, right? So why is it that we get 85% of our toys from China rather than produce them here? It's because they can produce higher quality and/or lower costs. So if you were-- I always like the-- there's a show called Doomsday Preppers. So yeah, the sky falls and the world comes to an end, those people will be prepared. But at what cost? That's the other side of it. So you're giving up the division of labor and the advantages that we have from globalization, where people are doing whatever it is that they're the best at, that they can give the best price. So there's a very, very high cost to producing everything in the United States. So think about people that would then be producing toys and we say, "Okay, well, that's great. We're producing all these jobs." But we already have a labor shortage. So where are we going to get the people to produce the toys? Well, they're going to have to come out of other industries, unless we can get people that are retired or in school, have a reason that they're not working, to start producing the toys, and that's fairly unlikely. So would we take it from automobile production? Do we really want to give up automobile production to produce toys? And there's no grand wizard that are making these decisions for us. These are all decisions we're making in our lives, day to day lives that we're choosing the place that we want to work based upon what the salary is and all the other things that go with making the decision to choose the job that we do. So yes, we could produce all those things ourselves. But what would we be giving up?

COLES: 13:03 And the costs would be much higher and, very likely, the quality lower because we've got people that are good at producing one thing that are now trying to produce something that they're not necessarily as good at.

GERTH: 13:18 So answer to the question that is on everybody's mind, can we save Christmas, Phil?

COLES: 13:24 Well, this is nothing new, just to put it in perspective. In 1983, the Cabbage Patch--

GERTH: 13:31 Oh, I remember it well.

COLES: 13:33 Remember those? Yeah, right? In 1982, we were mired in a recession. Nobody imagined what kind of a recovery we would have. In 1983, it came roaring back. Again, long supply chains. They thought, "Okay, we've got an order for Christmas of 1983, and it's early 1983, almost a year ahead of time." And they thought the economy was going to be bad. They didn't order enough. And there were all these conspiracy theories out there that they thought, "Okay, we have a shortage of Cabbage Patch Kid dolls because they want the prices to be higher." And they probably just screwed up. They didn't know. Their crystal ball wasn't that good. So I bring that up for some perspective. So if we compare what's happening in the supply chains to perfect, it's horrible. You compare anything to perfect and it's horrible. But if we compare how we've done in the past and take into consideration these tremendous shocks that our supply chains have taken, it's amazing that we have anything. It's really a tribute to how well they're doing. So we're going to have stuff for Christmas. You might not be able to get the exact thing that you want. You might not be able to get it for the price that you want. You're going to be able to get something. And some people may have to be a little creative. And I remember one of the things people were doing, they had little, tiny Cabbage Patch dolls that were like just the face and a flower and things like that. They would give it to their kids and with the promise of getting the real thing after Christmas. In January, February, they all started showing up. But yeah, we'll be okay, I think. It'll be a few disappointed people. But overall, I think we'll survive.

GERTH: 15:27 And saving Christmas isn't just about the toys, right? It's really about, like you had said earlier, the companies that don't produce right now, they're the ones that are in danger of going out of business. And then, of course, if they go out of business, then people lose their jobs. And that's the cycle we could fall into. So saving Christmas isn't just toys.

COLES: 15:44 Well, yes, absolutely. So I mentioned car sales, right? Typically, car sales are like 18, 19 million, and this is in the United States per year. We're running now less than 13 million. So, yeah. We're kind of okay in the sense that there's a worker shortage, but it is a little scary thinking, if this continues, it could cascade through the economy and people could lose their jobs. Absolutely. The key is letting markets work and letting these things sort themselves out.

GERTH: 16:25 And let me quote Transportation Secretary Pete Buttigieg, who said some of this is bigger picture, longer-term issues that's going to take years and years to address, but it goes to the very foundations of how trade works. But what we're seeing is that piled up next to the issue created by the recovery from the pandemic. So he's saying things are going to be-- there's some endemic problems and there's some problems that are exasperated by the pandemic. Are we headed to normal any time soon or is there a new normal?

COLES: 17:03 Well, I always warn people about listening to experts, right? So maybe I fall into that category.

GERTH: 17:10 As long as you're aware of that, that's okay.

COLES: 17:12 Yeah, no, I'm very aware of it. When the iPhone came out, I remember thinking, "Who'd want to go on the internet in their phone?" So but I don't feel too bad because Steve Ballmer, who was the CEO of Microsoft, said the same thing. So I figured I'm in good company. So it's like that old cliché, predictions are hard to make, particularly when they're about the future. So I always like to say, take anything like this with a grain of salt. So I mean, I don't know how long it'll take. What I do know is most of these problems are self-inflicted, right? So we made the decision to shut down our economy because of the virus and the pandemic. And that's a whole other discussion, whether it should or should not have been done. But it wasn't like an energy shock or a financial system meltdown, that typically would cause recessions in the past. This was a choice that we made. So and it was things that you can see several things happening here. Again, the government doled out a lot of money, at the same time, we weren't allowing people to go to work or to go to restaurants. So they weren't able to do anything in the service sector. So they started buying a whole lot more stuff when we weren't making a whole lot of stuff. So we increased a lot of artificial demand. So then a lot of things were coming from overseas, it jammed up the ports. And one thing I want to point out about whenever you have these ships that get backed up, ships are supposed to be for transportation, but they end up being inventory. So the ship is no longer doing transportation.

COLES: 19:07 So typically, I believe the time is for a ship to go between Asia and the West Coast, and I believe its roundtrip is around 14 weeks, and I believe it's up around 40 weeks, and that's because it's waiting at the port to become unloaded. So again, that now turned your ship into a warehouse and it's sitting there. And so now you've lost capacity to ship. And demand is up and they're backing up. And when we need transportation, we're losing transportation. And the same thing is happening on the other side of it, with the trucks. Even the materials that the toys and things we talked about, whatever it is, mobile devices, are sitting in warehouses in California because they've managed to get the ships unloaded and now they don't have truck drivers to drive the trucks to then deliver them to the stores. There's a lot of pieces to this, and it's a lot like we've all been in traffic jams, and the traffic will stop and then it starts going again, and we don't know why it's moving and we expect to see an accident on the other side. Sometimes we do, we say, "Oh, well, that's why there was a traffic jam." Very often we get to the other side and it's like, "Well, what was that about? We didn't see anything." And all that was a slug that's created that goes through the entire line of cars. And it works the exact same way in the supply chain. It's like somebody tapping the brakes. So one of these things that go wrong, like you can't unload a ship, you don't have enough truck drivers, and these things start backing up, just like cars on a highway. And that goes throughout the whole system, and it takes a while for that to go through and finally clear itself.

GERTH: 21:03 Now I've got to point out--

COLES: 21:04 But it'll do it if we don't do anything stupid.

GERTH: 21:07 Well, I have to point out-- because you said you don't like to predict things, but I do have to point out there was an editorial this week in The Wall Street Journal, and I'll spare you the reading of it, but it basically talked about what the White House was doing, what the Fed was doing and how that was causing the problems. And you and I had a conversation and emailed back in March, and basically you could have written this editorial back in March. You actually wrote this editorial back in March. That was very similar to what appeared in The Wall Street Journal just this week. So you've got to give yourself a little bit of credit for being able to predict things that are going to happen. But is there a government solution, though, because of the state of things that are happening? Can the government step in and fix it or is it just too toxic at the moment for anybody to get together and try to work something out?

COLES: 21:59 Well, to paraphrase Ronald Reagan, "The scariest words in the English language, I'm from the government and I'm here to help." What is it that makes us think that they actually know anything about it, right? So there's the people that are in the supply chain, that work for Walmart, that work for the ports, for the ships, these people do this every day and they're very good at it. So going back to what we talked about in March, there's always a limiting factor. There's something that holds back the economy. And the limiting factor I like is the labor shortage. And from a business standpoint, that sounds like heresy. But that means that everybody is employed and has a lot of leverage and can get their salaries rates. So everybody's doing really well. If the shortage is energy or the shortage is money, that the Fed is not producing enough money or something like that, we end up with unemployed people and businesses going out of business. So the key is the limiting factor. So what is the limiting factor that's producing shortages? And the limiting factor is lack of truck drivers. The limiting factor is lack of workers working in the warehouses and unloading the ships. The limiting factor is you can't get the ships into the docks to be unloaded. So they're suggesting things like leaving the ports open 24 hours a day, but they don't have people to work in them 24 hours a day. They're not even filling the slots that they have now. So things that sound like the obvious things to do, very often are not. You've got to look at what the limiting factors are.

COLES: 23:53 So that's why I think it's important to allow markets to work and the people that know what they're doing in these areas because it's kind of the problem we had before where when we had the recession, this last recession, it was because the government shut us down. So it was a decision that they made. So what we needed was people to be able to go back to work. And you can say, "Well, we don't want people to go back to work because of the pandemic." And I get that. But that was the problem. We had a worker shortage. And so the Fed starts printing money. We didn't have a money shortage. That was not the limiting factor. And it's the same thing that's happening here, is that we got to focus on what the limiting factor is. So it's generally better for the government to stay out of it. The regulations usually cause issues, and some of the new regulations is what's been causing truck driver shortages also. And you can say that there are good regulations, right? Some relate to safety and all that sort of thing. And I get that. But truck drivers have invested interest in safety also. They're the ones driving the trucks, right? They're the ones that are going to get hurt. So that's a wider discussion. But one thing we do know is that free markets work. That's what's given us all the wealth that we have. We're pretty good at doing whatever our respective jobs are.

GERTH: 25:23 Are there other things besides shortages we should worry about, like extreme weather? Is there anything that you see in your crystal ball, which is a pretty good one, I think, that we should be concerned with?

COLES: 25:34 Absolutely. We should always be concerned with all the risks to supply chain. So one of the big things that we didn't talk about is the trade war that's been raging for quite a while between the United States and China. So again, that's government intervention that's causing disruptions. So if you're a business person and you're dealing with somebody overseas, and suddenly you're not allowed to deal with them anymore or it becomes expensive to deal with them, that's a big shock. Again, you can argue, "Okay, well, we need to do this for national security reasons or whatever." I'm not saying that those things don't matter. They do. Those are the tradeoffs that I talked about before, and there's no right answer. So somebody arguing for a trade barrier from China and say, "Well, for this reason." But it's still going to hurt on the other side of it. That's like us being the doomsday preppers. There's a big price to being that independent. So that's the balance of all these things. So I guess from that standpoint, that is absolutely an area for government to be involved. There's a national security issue or something like that. But I'm just saying that we need to minimize it. But going back to what we're saying before, weather is the biggest issue that we have in risk management with supply chains. Most disruptions come from weather. So a longer supply chain, something that's coming from further away, there's more things that can happen in between, whether it's hurricanes and other weather events or other natural disasters, like earthquakes or even fires. Those are all the things you have to take into consideration whenever you're doing risk management.

GERTH: 27:32 And is there any long-term consequences for the consumer for this particular moment in time? Do you see changes happening that are going to be, "Well, there's going to be fewer discounts, there's going to be less sales, there's going to be less choices."?

COLES: 27:48 Yeah, I think long term, there's going to be a benefit because this is like anything. Whenever we get caught off guard and things don't go well, we always learn from that. When I was working in the private sector, there's many examples that I can give you that I got burned. And when you get burn, those things, they stick with you. So the consumer's not happy because he or she is paying a higher price or can't get a particular item that they want. So that's going to be an issue for them. But think about from the business perspective, the business person lost the sale and that really sticks with us as business people or we had to pay a higher price for something. So I had a commodity that I used to buy that was always $35 a ton. And it very suddenly went to $180 a ton. And I was so upset and it still bothers me. And I went out and I found alternative materials because nobody was ever going to do that to me again. And whenever there were fluctuations, I made sure that I was ready for the next time. So we learned and our supply chains will be more resilient for having had this experience because we're getting our street cred from it.

GERTH: 29:14 Well, that's a good up holiday place to end this, Phil. So thank you very much. Thanks for all your help today.

COLES: 29:20 Good. Thank you so much. Great to talk to you.

GERTH: 29:23 My guest was Phil Coles. When he's not teaching, Phil is assisting companies to increase efficiencies through improved plant layouts and balancing of assembly lines, in addition to aiding greenfields startups and company expansions. This podcast is brought to you by IlLUminate, the Lehigh Business Blog. To hear more podcast featuring Lehigh Business thought leaders, please visit us at business.lehigh.edu/news and follow us on Twitter at Lehigh Business. Thanks for listening. [music]