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The Wharton School
The University of Pennsylvania

Quarter 2
Fall 2020

OID 673 Global Supply Chain Management
Monday/Wednesday 10:30am-11:50am and 1:30pm-2:50pm

Course Instructor

Professor Marshall Fisher
OID Department
542 Jon M. Huntsman Hall
Tel: 215-898-7721
E-mail: fisher@wharton.upenn.edu
Office Hours: By appointment

Course TAs

Kateryna Kharenko
Email: kharenko@wharton.upenn.edu
Office Hours: By appointment

Canberk Ucel
Office: 527.5 Jon M. Huntsman Hall
Email: ucel@wharton.upenn.edu
Office Hours: By appointment

This course will study the design and management of global supply chains, including

- Which design and production activities to do in house and which to outsource?
- Where to locate various activities around the world?
- How to forecast the many factors that influence these decisions, including inflation in cost factors such as labor and freight and the likelihood of future government regulation or political instability?
- How to keep the supply chain flexible so as to adapt to the factors listed above?
- How to manage a geographically disbursed supply chain, including what relationships to have with vendors to insure not only low cost but high quality, flexibility, safety, humane labor practices and respect for sustainability of the environment?
- How do these decisions intertwine with country political and economic considerations?
- How should companies react to developments like Brexit in the UK and tariffs in the U.S.?
- And most importantly recently, how will COVID-19 impact global supply chains and how should companies react to this impact?

The products covered include apparel, auto, consumer electronics, shoes, furniture, personal protective equipment, pharmaceuticals, toys, food and vaccines.

The course is highly interactive, using case discussions in more than half of the classes. We will have senior supply chain executives in a number of the class sessions. Sometimes the

guests are protagonists in the case being discussed that day and will serve as a resource during our class discussion and then make remarks and answer questions for about 20-25 minutes at the end of class. Other times, the entire class will be devoted to a discussion lead by the guest about their company.

According to the World Bank, in 1960 merchandise trade as a percent of the world's GDP was just 5%. By 2008 this number had grown to just over 50% and led to a global supply chain in which products are produced in multiple countries, often far from the markets in which those products are consumed. This globalization of supply chains has been driven by many factors including access to low cost labor in previously closed regions (China and Eastern Europe are prime examples), improved transportation, and new information technology that dramatically reduces the cost of communication.

Since 2008, global merchandise trade fluctuated between 44% and 50% and it currently sitting at 44%. Recently the media has been filled with articles advocating for less globalization in favor of economic nationalism e.g Neil Irwin, "It's the end of the world economy as we know it," *New York Times*, 16 April 2020. One issue we'll want to explore in this course is do these arguments make sense and what is the future of global supply chains.

This course was first taught in 2009 and has evolved each year in responses to changes in global supply chains. This year the changes in both content and delivery will be huge, due to the impact of COVID-19. Seven of the 13 class sessions will be newly added to address the impact of COVID-19 on supply chains. Moreover, five of the remaining class sessions will have visiting executives, and I will encourage them to comment on how COVID-19 has impacted their supply chain and how they are dealing with that impact.

The course will be delivered completely online. For some of the class sessions, a portion of the content may be pre-recorded video to be viewed prior to the live portion of the class. For the case discussions I plan to use Zoom since it allows display of 49 head shots. There are currently 2 80-minute class sessions at 10:30 and 1:30. If there is sufficient interest, I plan to add a 3rd class session at 9am so as to have a manageably small size group for the Zoom sessions, especially for case discussions. I was planning to schedule this at 9am, a time intended to be more convenient for those in China or similar time zones.

COURSE MATERIALS

Cases and course readings are contained in the course pack available from Study.Net and in the Cases and Readings folder on the course website. In addition, copies of key overheads, readings and other notes of interest will also be available on the course website. The website has a folder dedicated to each class into which I'll place material relevant to that class.

GRADING

Grades are based one-third each on (1) class participation (2) individual write-ups of the discussion questions for 3 of the class sessions and (3) a course paper.

Class Participation

Most managers spend little time reading and even less time writing reports. This is especially true for managers in operations-intensive settings. For this reason, the development of speaking and listening skills is given a high priority in this course. The classroom should be considered a laboratory in which you can test your ability to present your analyses and recommendations clearly, to convince your peers of the correctness of your approach to complex problems, and to illustrate your ability to achieve the desired results through the implementation of that approach. Some of the criteria that we will use to judge effective class participation include:

- Is there a willingness to participate? We especially encourage you to ask questions if an idea or technique is not clear.
- Do the comments show clear evidence of appropriate and insightful analysis of the case data?
- Are the points made relevant to the current discussion? Are they linked to the comments of others? Do comments clarify and highlight the important aspects of earlier ideas and lead to a clearer statement of the relevant concepts and issues?

I grade class participation immediately after each class based on the extent to which comments reflect preparation, analysis, and thoughtfulness. Although this process is subjective, it is highly reliable, as your grade is based on lots of data (13 observations).

We will also take attendance in many classes. Obviously, step one in class participation is to show up; step two is to speak up.

Individual write-ups of class discussion questions

You should submit a 2-3 page (single spaced, and font of 10 points or greater) write up of the discussion questions for 3 of the class sessions in which a case is discussed. Write-ups should be submitted via the "Assignments" section of Canvas by 9am on the day of the class in which the case is discussed (**no late submissions accepted**).

There is no way to “catch up” if you miss the opportunity to complete three assignments on time. If you wish to submit more than 3 write-ups, we’ll count your best three towards your grade.

Individual assignments are given grades of 1 (low), 2 or 3 (high). You will not receive detailed and specific feedback on these individual assignments. However, you will receive a general memo outlining common strengths and weaknesses and generally how the write-ups were graded. You can discuss the cases with classmates as much as you would like, but the write up should be your own work.

Here are some considerations when you are preparing your write-ups:

- Base your analysis on information from the case (text and exhibits), but don’t simply regurgitate case facts.
- In some of the cases there may have been recent developments that can give hints about whether certain decisions were sound or not. It’s ok to reference those, but you cannot build your analysis exclusively on a future that, at the time of the case, was still unwritten.

- It is fine to complement your analysis with your own experience, but that should not be at the expense of key ideas of the case.

Course paper

A paper of about **3,000 words of text** and some exhibits is due at the end of the course. Please include word count when you submit your paper. Papers can be done in teams of 2 or 3 students, although the length guidelines would be proportionately greater for team papers, **4,500 and 6,000 words of text** respectively for 2 and 3 person teams. Teams can span the 10:30 and 1:30 sections of the course.

The paper can deal with a specific company and how they have designed and managed their supply chain, compare two or more companies in their approach to supply chain management, or delve more deeply into any issue within the realm of the course. The research on the paper should include scanning the business press, information sources on particular companies and annual reports.

Please submit a paper proposal, no more than one page long, by 5pm November 6. The proposal should list the topic you plan to study and the research you'll conduct for the paper. I'll then provide comments on your proposal. The final paper is due 9am December 18. The paper proposal and paper should be submitted over the course website, in the "Assignments" section.

In writing your paper, be sure to respect the Wharton and Penn rules on plagiarism; see the Wharton MBA Code of Ethics on page 5 and 6 of the MBA Resource Guide http://spike.wharton.upenn.edu/mbaprogram/publications/mba_resource_13-14.pdf and Penn's Code of Academic Integrity (<http://www.upenn.edu/academicintegrity/index.html>).

Course Schedule

Date	Class	Topic or case	Guest(s)
26 Oct	1	Introduction to the course. Supply chain risk management and flexibility	
28 Oct	2	Impact of COVID-19 on the consumer electronics supply chain	Tom Linton, former Chief Procurement and Supply Chain Officer, Flex, Inc.
2 Nov	3*	The Hong Kong Research Institute of Textiles and Apparel (HKRITA): The Cu N99 Mask+ Project	Edwin Keh, CEO, Hong Kong Research Institute of Textiles and Apparel (HKRITA)
4 Nov	4	PVH global supply chain	Bill McRaith, Chief Supply Chain Officer, PVH Corporation
9 Nov	5*	New Balance	Duncan Scott, Vice President for External Products, New Balance
11 Nov	6*	IKEA's Global Sourcing Challenge: Indian Rugs and Child Labor (A) PAPER PROPOSAL DUE BY 5PM	Pernille Spiers Lopez, former President and CEO, IKEA North America
16 Nov	7	Patagonia	Doug Freeman, COO, Patagonia
18 Nov	8*	Unsafe for Children: Mattel's Toy Recalls	
23 Nov	9*	Creating supply chains for COVID-19 vaccines	Kimberly A. Fisher, MD, UMass Memorial Medical Center; Stephen J. Gluckman, MD, Professor of Medicine, Hospital of the University of Pennsylvania; Prashant Yadav, Affiliate Professor of Technology & Operations Management, INSEAD and Lecturer, Harvard Medical School
30 Nov	10*	BMW Mini: Big Decisions under the Brexit Cloud	
2 Dec	11	Impact of Covid-19 on the food supply chain	
7 Dec	12*	111, Inc and the supply of Personal Protective Equipment	Gang Yu, Chairman and Cofounder, 111, Inc. (via video)
9 Dec	13	The Future of Global Supply Chains	
18 Dec		FINAL PAPER DUE BY 9am	

* Candidate for individual write-up

DETAILED DESCRIPTION OF COURSE SESSIONS

Class 1

26 Oct

Introduction to the course. Supply chain risk management and flexibility

This session will review the current state of global supply chains, including how they are being impacted by COVID-19. Of course, COVID-19 is not the first time supply chains have been disrupted. Earthquakes, fires, other epidemics, and financial crises have all disrupted supply chains in the past. I'll review the measures companies have historically taken to insure the integrity of supply in the face of disruptions and consider how well these measures are working in the face of COVID-19.

Many products, especially new products, have highly unpredictable demand. Thus, having a supply chain that can respond quickly to actual sales can be extremely valuable in reducing lost sales due to stock-outs and reduced margin from end of season closeouts. Yet the pursuit of low labor costs has led to supply chains that stretch halfway around the globe, making rapid response to sales more challenging. We'll discuss how leading companies are achieving flexibility and use these examples to formulate principles for achieving supply chain flexibility.

Readings:

Fisher, Marshall "What is the Right Supply Chain for Your Product?" *Harvard Business Review*, March/April 1997

Hau Lee, "Aligning Supply Chain Strategies with Product Uncertainties", *California Management Review*, Vol. 44, Number 3, Spring 2002

Chapter 4 Supply Chain Flexibility, M. L. Fisher and A. Raman, *The New Science of Retailing*, HBS Press, 2010 (available in the Case and Readings folder on the course website).

Class 2

28 Oct

Impact of COVID-19 on the consumer electronics supply chain

Flex Ltd. (previously known as Flextronics) is a multinational electronics contract manufacturer with operations in over 40 countries, about 200,000 employees and \$25 billion in revenue. Until his retirement last year, our guest Tom Linton was a C-suite exec in the sourcing area at Flex, and in this role he's ideally qualified to comment on how COVID-19 has impacted both Flex and the consumer electronics industry.

Guest: Tom Linton, former Chief Sourcing and Chief Supply Chain Officer, Flex, Inc.

Class 3

2 Nov

The Hong Kong Research Institute of Textiles and Apparel (HKRITA): The Cu N99 Mask+ project

The Hong Kong Research Institute of Textiles and Apparel (HKRITA) (<https://www.hkrita.com/about-people.php>) is a public research institute in Hong Kong. It was established in April 2006 and is funded by the Innovation and Technology Commission of the Hong Kong government to act as a focal point to enhance technological innovation in textiles and apparel industry for the development of highly competitive industrial clusters in Hong Kong and the Pearl River Delta region.

When COVID-19 hit China the Hong Kong city government asked HKRITA to leverage their expertise in textiles to develop a mask that would be distributed for free to all Hong Kong city residents. The result was a mask with outstanding performance attributes: rated N99 (vs currently best N95 masks), is comfortable to wear (many people can't wear an N95 mask because they are so uncomfortable) and can be washed at least 60 times, vs most masks are single use.

After achieving their initial mission, HKRITA is now planning to market and supply the mask worldwide. The case will ask you to comment on several issues they face in this mission.

Case: Launch of a Superior Mask by HKRITA

Guest: Edwin Keh, Chief Executive Officer, HKRITA

Questions:

- 1) With breakdowns in traditional global supply chains, what made it possible for a non-traditional face mask production process to happen in the middle of a pandemic?
- 2) What could HKRITA done differently/better to save time? Many decisions they made involved tradeoffs e.g. cost vs speed of delivery. How did HKRITA approach these tradeoffs and what could have been done better?
- 3) Should Personal Protective Equipment (PPE) supply chains be changed to ensure supply security in a global pandemic? What is a better arrangement? Or is this a 'once in a century' event that we can't plan for?
- 4) Are there lessons from this project applicable to other supply chains?
- 5) HKRITA developed their mask initially to protect the citizens of Hong Kong from COVID-19. Do you think there is a market for this mask beyond Hong Kong and post COVID, and if so, how should HKRITA pursue this market?

Class 4

4 Nov

PVH Global Supply Chain

PVH Corp., formerly known as the Phillips-Van Heusen Corporation, is an American clothing company which owns brands such as Van Heusen, Tommy Hilfiger, Calvin Klein, IZOD, Arrow, Warner's, Olga, True & Co., and Geoffrey Beene. Revenue in 2018 was \$9.7 billion. In this class session we will hear from Bill McRaith, Chief Supply Chain Officer for PVH Corporation. Bill will discuss PVH's overall global supply chain, with a particular emphasis on their pioneering entry into Ethiopia. Africa is being viewed as the next frontier of low-cost production, and within Africa, Ethiopia is viewed as an attractive country.

Guest: Bill McRaith
Chief Supply Chain Officer
PVH Corporation

Readings:

(available in the Cases and Readings folder on the course website)

Looking Beyond the Horizon: A case study of PVH's commitment to Ethiopia's Hawassa Industrial Park, Mamo Mihretu and Gabriela Llobet, June 2017, World Bank Group

(In course pack)

The Next Factory of the World: How Chinese Investment Is Reshaping Africa – Introduction chapter, pp. 1-13.

Class 5

9 Nov

Deciding Which Countries to Source From

As many companies consider 'reshoring' their manufacturing operations to the U.S., New Balance is famous for never having left the U.S. Indeed, it was only recently that they began to source from China, Vietnam and Indonesia. Now they are considering what other countries they might add to their sourcing mix. Gabriella Wortmann has just conducted an extensive study to evaluate the capabilities of many different countries and must determine how to interpret this data. New Balance is also thinking about how to best leverage its U.S. factory.

Case: New Balance (available in the Case and Readings folder on the course website)

Guest: Duncan Scott, Vice President for External Products, New Balance

Questions:

- 1) What qualities would make a country an attractive sourcing location? Are there any attributes you would add to Exhibits 15 and 16 that are relevant in a production location decision?

- 2) This question asks you to conduct a mini version of Gabriella Wortmann's study, so as to understand better where the information in Exhibit's 15 and 16 comes from. Visit the following three web sites.

<https://ilostat.ilo.org/data/country-profiles/>

<http://databank.worldbank.org/Data/Home.aspx>

<http://lpi.worldbank.org/international/global>

In addition to getting a general impression about the types of information they provide, use these sites as well as you can to compare and rank order China, Mexico, and Turkey (typical sourcing countries on three different continents) on average monthly earnings in U.S. dollars, GDP per capita (current US\$), and LPI (Logistics Performance Index) Score. If New Balance were considering sourcing in one of these countries, based on the data you gathered, which would you choose and why? Browse the World Bank site and suggest other data they provide that might be useful in deciding where to produce.

- 3) Suppose New Balance wants to choose one of the 12 countries listed in Exhibit 16 to enter next. Based on the data in Exhibit 16, which country would you recommend and why?
- 4) Producing in market to be more responsive to unpredictable consumer demand is a growing trend. Could New Balance use their U.S. factory for quick response to the U.S. market?

Class 6

11 Nov

Global Supply Chains and Child Labor Risks

This case traces the history of IKEA's response to a TV report that its Indian carpet suppliers were using child labor. IKEA's growth strategy depended on close relationships with suppliers in developing countries and IKEA's strong culture and values included a commitment "to create a better everyday life for many people." In response to regulatory and public pressure, IKEA developed a set of environmental policies that grew to encompass a relationship with Greenpeace and WWF on forest management and conservation. Then, in 1994, Marianne Barner, a newly appointed IKEA product manager, is surprised by a Swedish television documentary on the use of child labor by Indian carpet suppliers, including some that supply IKEA's rugs. She immediately implements a strict policy that provides for contract cancellation if any IKEA supplier uses child labor. Then Barner is confronted by a German TV producer who advises her that he is about to broadcast an investigative program documenting the use of child labor in one of the company's major suppliers. How should she react to the crisis? How should the company deal with the ongoing issue of child labor in the supply chain?

Case: IKEA's Global Sourcing Challenge: Indian Rugs and Child Labor (A)

Guest: Pernille Spiers Lopez, former President and CEO, IKEA North America

Questions:

- 1) On the first floor of Huntsman Hall there is a wall display giving the history of Wharton. Back when you were in Huntsman, did you ever notice anything related to child labor on this history wall?
- 2) How would you define child labor? What regulations do you think countries should have with respect to child labor? What does doing what is “in the best interest of the child” imply?
- 3) Why does IKEA care about eliminating child labor?
- 4) How should Marianne Barner respond to the invitation for IKEA to have a representative appear on the upcoming broadcast of the German video program?
- 5) What actions should she take regarding the IKEA supply contract with Rangan Exports?
- 6) What long-term strategy would you suggest she take regarding IKEA’s continued operation in India? Should the company stay, or should it exit? (Be prepared to describe the impact of such a decision and how you would manage it.)
- 7) For those recommending that IKEA continue to source carpets in India, would you suggest that she:
 - a. Continue IKEA’s own monitoring and control processes or sign-up to Rugmark?
 - b. Continue to focus only on eliminating the use of child labor in IKEA’s supply chain or engage in broader action to address the root causes of child labor as Save the Children is urging?

Class 7
16 Nov

Patagonia

Patagonia was founded in 1973 by Yvon Chouinard and is regarded as a leader in sustainability. In preparation for this class session, please browse their website <https://www.patagonia.com/home/> and compare with good questions for our industry guest.

Guest: Doug Freeman, COO, Patagonia

Class 8
18 Nov

Insuring product safety in an outsourced supply chain

In August and September 2007, Mattel made a series of product recalls, totaling more than 20 million toys. The recalls were for excessive lead and for magnets that could become loose. All of the recalled toys had been made in China. The Mattel recalls followed on the heels of a number of high-profile safety problems with Chinese imports, including contaminated pet food and toothpaste, defective tires, and lead-painted toys. The recalls sparked intense criticism of Mattel and its Chinese supply chain.

This case will provide a basis for discussion of outsourcing and the appropriate use of inspection and testing. It also provides the opportunity to examine response to a crisis situation, and the relationship between a company and government.

Case: Unsafe for Children: Mattel's Toy Recalls and Supply Chain Management

Reading:

Thomas Y. Choi and Tom Linton, "Don't Let Your Supply Chain Control Your Business," *Harvard Business Review*, December 2011

Questions:

- 1) What were the primary causes of Mattel's recall problems?
- 2) Consider the various players involved: Mattel, 1st tier suppliers, higher tier suppliers, retailers, Chinese government, the US government and state governments. How would you rate each of these players as to a) their responsibility for insuring product safety and b) how well they discharged that responsibility, both before and after the recall?
- 3) Assume you are VP of Product Safety at Mattel. Describe the program you would put in place to prevent lead paint in toys in the future. Would you use any of the ideas in "Don't Let Your Supply Chain Control Your Business"?
- 4) Before class, search the web for current instances of lead paint in toys and bring examples you find to class. Do you think the lead paint in toys problem described in this case has been solved?

Class 9 **23 Nov**

Creating supply chains for COVID-19 vaccines

Merck & Co. Chief Executive Officer Kenneth Frazier, in an interview on Leadership Live with David Rubenstein, Bloomberg Television, July 8, 2020, stated "Often people are talking about the scientific conundrum of coming forward with a vaccine that works. In some ways, maybe even a harder problem is ... distribution. None of us are safe until all of us are safe, so it's got to be given broadly to humanity. We need a vaccine that we can make and distribute around the world."

In this class we'll consider the challenges to making and distributing a vaccine worldwide, and the proposed approaches to dealing with these challenges. To achieve herd immunity globally it has been estimated that at least 5.6 billion people need inoculations, meaning development of a lot of vaccine doses in a short amount of time. The vaccine supply chain involves manufacturing the vaccine contents, storing and packaging components, and cold chain transit.

Case: Creating supply chains for COVID-19 vaccines

Readings:

Kimberly A. Fisher, MD, Sarah J. Bloomstone, Jeremy Walder, Sybil Crawford, Hassan Fouayzi, and Kathleen M. Mazor, "Attitudes Toward a Potential SARS-CoV-2 Vaccine: A Survey of U.S. Adults," *Annals of Internal Medicine*, 4 September 2020

Rebecca Weintraub, Prashant Yadav, and Seth Berkley, "A Covid-19 Vaccine will Need Global, Equitable Distribution," *Harvard Business Review*, 2 April 2020

Guests: Kimberly A. Fisher, MD, UMass Memorial Medical Center;

Stephen J. Gluckman, MD, Medical Director, Penn Global Medicine,
Professor of Medicine at the Hospital of the University of Pennsylvania;

Prashant Yadav, Affiliate Professor of Technology & Operations Management,
INSEAD and Lecturer, Harvard Medical School

Questions:

- 1) Normally the pharma industry would identify a vaccine proven to work in clinical trials, then build a plant to produce it at scale, a process taking years. But we don't have years, so factories are being built speculatively, for the most promising vaccine candidates. What criterion should be used in deciding whether to invest in vaccine factories build before we know a vaccine will work? Who should pay for this investment? What would be the risks associated with government grants and advance purchases?
- 2) Second generation, improved vaccine developed after an initial release tend to be significantly superior and safer. How should governments and international organizations incentivize further development once some initial vaccines are out on the market? What changes in supply chain strategy is required to allow for second generation vaccines?
- 3) After manufacturing, vaccines need to be transported, often at extremely low temperatures. How would you manage this?
- 4) Shortage of apparently minor components can trip up this process. For example, it has been suggested that there is a shortage of the sand used to make glass vials used to store the vaccine so it will take **two years** to produce the necessary vials. Similar problems exist with needles and syringes. How would you deal with this problem?
- 5) One way to economize on use of glass vials is to put more than one dose in a vial. For example, putting 10 doses in a vial reduces the required vials, and glass consumption, by a factor of 10. This vial can then serve 10 different patients provided it is used within 24 hours of opening. Any vaccine left in the vial after 24 hours is discarded. What size vial would you use and why?
- 6) How would you insure equitable vaccine distribution, balancing supply chain restrictions, herd immunity needs, people's willingness to take the vaccine, and risk factors?

Class 10

30 Nov

Impact of a potential Brexit

In April 2017, BMW AG (BMW) faced a big decision regarding which plant should receive the mandate to produce the first electric version of BMW's iconic Mini car. The leadership team of BMW's UK operations was determined to keep the Mini at its historical home base in the United Kingdom. However, given the uncertainty arising from the United Kingdom's decision to leave the European Union - a move commonly known as "Brexit" - how would the team be able to convince corporate headquarters?

Case: BMW Mini: Big Decisions Under the Brexit Cloud

Questions:

- 1) Why exactly is the UK leaving the EU of concern to the UK automotive industry?
- 2) What are the relevant decision criteria regarding the production line for the electric Mini?
- 3) What are the pros and cons of the alternative options for BMW regarding the production of the electric Mini?
- 4) As UK country manager for BMW, how would you advocate for the production mandate to go to Cowley?
- 5) As chief executive officer (CEO) of BMW globally, how would you proceed?

Class 11

2 Dec

Impact of COVID-19 on the food supply chains

Many aspects of COVID-19 have disrupted the food supply chain. The closing of restaurants and school cafeterias shifted that food demand to grocery stores. It turns out that in many cases different facilities supply grocery stores vs restaurants and institutions, and with differentiated products. That's why we see shortages of milk, just as other farmers are being forced to dump excess milk. Add to that outbreaks of COVID-19 in meat packing plants and migrant farm workers unwilling to come to the US due to the high per capita COVID-19 rate results in a food supply chain under great stress.

In this class we'll review how the supply chain for food has been disrupted by COVID-19 and how companies are coping with these disruptions.

Class 12

7 Dec

111, Inc and the supply of Personal Protective Equipment

111,Inc. (<http://corporate.111.com.cn/en.html>), co-founded by Gang Yu and Junling Liu in 2010, is a leading digital and mobile healthcare platform in China. By applying advanced Internet and information technology, 111,Inc. is devoted to online medical services and online pharmacy. Their 2019 revenue were \$568 million, and they are growing at more than 100% per year. This case will describe their efforts to supply the huge demand for PPE in China and the US and you will be asked to comment on some of the issue they faced.

Gang Yu did his PhD in the OID Department in 1990, and after stints at the University of Texas, VP of Supply Chains for Amazon and Dell, cofounder of Yihaodian, he is now Chairman of 111.

Case: 111, Inc. Meets the PPE Challenge

Guest (possibly via video, given time zone differences): Gang Yu, Chairman, 111, Inc.

Questions:

- 1) Critique 111, Inc.'s handling of the supply of Covid-19 related medicines and Personal Protective Equipment. What did they do well and what could they have done better?
- 2) What challenges did 111, Inc. face and how did they handle them?
- 3) Compare the handling of Covid-19 in China and the U.S. What were the differences and what explains them?

Class 13

9 Dec

The future of global supply chains

As we faced shortages in everything from toilet paper to PPE, many are suggesting that this is due to the complex global structure of supply chains. For example, see "It's the end of the world economy as we know it," by Neil Irwin, THE NEW YORK TIMES, APR 19, 2020. In the extreme this becomes economic nationalism, suggesting a return to the world as it was in 1960, when 95% of production occurred in the country where the products were consumed.

While it's understandable that localizing supply would have an emotional appeal in the stressful environment we're currently living in, this idea is not well supported by the facts. For example, this idea would not fix the shortage of toilet paper in the US, which has been very much in the news, because toilet paper for the U.S. market is made on U.S. soil by U.S. companies. So why is there a shortage of toilet paper? Because when schools and restaurants closed all of the toilet paper consumed within them was now consumed at home. Residential and commercial toilet paper are made in different factories, so suddenly the factories supplying the residential market were overloaded. Factories making paper are expensive and highly capital intensive, so they are designed to run 24-7, and it's hard to expand capacity to meet a demand surge.

So in this case the issue was an imbalance between factory capacity and demand. While sourcing globally can put supply at risk of supply disruptions due to governments and transport problems, by opening up more sources of supply it can help with capacity-demand balancing.

Much of the call for nationalizing product relates to PPE, ventilators and future vaccines. There may be a case here, but the huge stockpiles of Tamiflu, created in case of a flu pandemic, but now useless for COVID-19, illustrates that this approach can fall victim to 'fighting the last war.'