

OID 697/397 Retail Supply Chain Management
Tuesday/Thursday 10:30am-11:50am and 1:30pm-2:50pm

Course Outline and Assignments

Instructor

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This course will examine how retailers understand their customers' preferences and respond with appropriate products through effective supply chain management. Supply chain management is vitally important for retailers and has been noted as the source of success for many retailers such as Amazon, Walmart, and Zara.

Retailing is a huge industry (40% of the U.S. economy and the largest employer) that has consistently been an incubator for new business concepts. In the 80's and early 90's Walmart pioneered new approaches to supply chain management and human resource management, and also influenced major established firms like P & G to change their approach to supply chain management. Starting in the mid 1990's, Amazon.com lead the way in transforming the Internet from an academic toy to the primary technology influencing business today. More recently, a number of fast fashion retailers such as Zara have forged a strategy based on a highly flexible supply chain that can respond quickly to fickle consumer demand.

The course is highly recommended for students interested in careers in

- Retailing and retail supply chains
- Businesses like banking, consulting and information technology that provide services to retail firms

- Manufacturing companies that sell their products through retail firms

Even if you don't expect to work for a retailer, this course can be useful to you in two ways. First, because retailers are such dominant players in many supply chains today, it is important that the processes they follow be understood by manufacturers and distributors, and by the consultants and bankers that service retailers and their suppliers.

Second, the problems retailers face (e.g., making data accessible, interpreting large amounts of data, reducing lead-times, eliciting the best efforts from employees, and so forth), are shared by firms in many other industries. It's easier to understand these issues through case studies in retailing because we all experience the industry as consumers and can readily relate to chronic problems such as stock outs and markdowns.

The course class sessions will deal with the following major themes: 1) planning the assortment of products a retailer should carry in each store, 2) optimizing the inventory carried of each SKU (Stock Keeping Unit) in each store, 3) within store execution and 4) supply chain design. In addition, we will consider a broad range of issues facing two retailers, Aldo and Urban Outfitters, when we are visited by senior executives from these firms.

A number of the sessions will be based on research of the instructor with Professor Ananth Raman of Harvard Business School and others. An early description of this research is in M. L. Fisher, A. Raman and A. McClelland, "Rocket Science Retailing is Almost Here – Are You Ready," *Harvard Business Review*, July/August 2000 and a full coverage in the book The New Science of Retailing by Marshall Fisher and Ananth Raman, *Harvard Business Press*, 2010, five chapters of which will be assigned reading.

CASES AND GUEST SPEAKERS

The course will be highly interactive, using case discussions in more than half of the classes. All retail formats will be considered – bricks and mortar, e-tailing and bricks and clicks. A variety of product segments will be considered, including grocery, convenience, shoes, apparel, fast food, and hardware. We will have senior executives from the retail industry in a number of the class sessions. In some cases, the guests are protagonists in the case being discussed that day and will serve as a resource during our class discussion and make remarks and answer questions for about 20-25 minutes at the end of class. In other cases, the entire class will be devoted to a discussion lead by the guest about their company.

Industry guests will be available between the morning and afternoon class sessions for an informal lunch with a group of us. We can accommodate up to 25 students at each lunch. Bios of visiting executives and a lunch sign up sheet are available on the course web site. Lunch will be provided and we will meet in JMHH F36.

COURSE MATERIALS

We will use the book The New Science of Retailing by Marshall Fisher and Ananth Raman, *Harvard Business Press*, 2010, as a text for the course and five chapters of this book are assigned reading. The book is available from the Penn Bookstore. Cases and readings are in

the course pack available on study.net. In addition, copies of key overheads, readings, and some cases will be available for download on the course website. The website has a Files tab and within this I'll place general course information as well as a folder for each class session with slide decks and other information related to that class session.

GRADING

Grades are based one-third each on class participation, individual write-ups of the discussion questions for designated class sessions and 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 “dumb questions” if an idea or technique is not clear.)
- Are comments based on insightful analysis of the case data?
- Are the points made relevant to the current discussion and linked to the comments of others?

I grade class participation each day after 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 some of the class sessions and include this as a component in the class participation grade.

Individual write-ups of class discussion questions

Classes 3, 4, 5, 7, 8, 10, 11, and 12 are eligible for an individual hand in write-up. For class 11 the assignment is a quantitative inventory buying exercise. The other classes are case discussions for which you should submit a 2-3 page write up of the discussion questions. The case write ups count one point each, while the quantitative exercise for class 11, being somewhat more time consuming, counts 2 points. You should submit a total of 3 points, i.e. 3 case write-ups or the class 11 quantitative exercise and 1 case write-ups. **There is no way to “catch up” if you miss the opportunity to complete three points for these assignments.** If you wish to submit more than 3 points of writeups, we'll count your best three towards your grade.

Write-ups should be submitted through the course website (in the "Assignments" section of Canvas) **prior to 10:30am on the day of the class** (even if you are in the 1:30 section, you still need to submit by 10:30) in which the case or subject is discussed (no late submissions

accepted). The 3 page limit will be enforced. The font should have a standard size (10 points or more) and the text can be single-lined and, preferably, not justified.

Where appropriate, you are encouraged to visit a store of the company being discussed in class and one of their competitors and to include observations from these visits in your write up and in class discussion.

Individual assignments are given grades of 1, 2 or 3. In retailer parlance, you may think of this scale as “good, better, best”. You will not receive detailed and specific feedback on these individual assignments. However, we will post on the course website a general memo for each hand-in outlining the elements of an excellent answer and indicating generally how 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:

- As a general rule, use as much information from the case (text and exhibits) as possible.
- In some of the cases there may have been recent developments that can give us 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 submit your paper as a Microsoft Word document and include a word count of the text of the paper (do not include exhibits, footnotes or end notes in the 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 delve more deeply into any issue within the realm of the course (such as particular aspects of assortment planning, store execution, inventory management, the evolution of omni-channel, etc.) or compare two retailers that compete head to head in the same product segment.

If you elect to compare two competing retailers, I'd recommend the following steps.

- Choose two competing retailers with stores accessible to you for a visit. Ideally they should be publicly traded or else it will be harder to get information.
- Compare their stock performance over the last few years.

- Scan their financial reports and gather information on as many of the metrics discussed in class as you can. Here are the most important ones.
 - Sales growth = % increase in sales year to year
 - Comp store sales increase = % increase in sales at stores open at least one year
 - New store openings
 - Acquisitions
 - Productivity measures
 - Return on Assets (ROA) = Operating profit/total assets
 - Gross margin % = Gross profit/sales as a percent
 - Inventory turns = COGS/Inventory valued at cost
 - Gross margin return on inventory (GMROI) = gross profit/inventory valued at retail
 - Sales per square foot = total store sales/total store square footage
 - SG&A %
 - Asset turns = Sales/total assets

Identify major differences between the two retailers on these metrics and try to explain these differences based on your observations of the retailers operating practices. You may not be able to get information on all of these, but compare the two retailers on as many metrics as you can.

- Browse each company's web site, read articles about them and scan their annual reports.
- Visit one or more stores of each retailer. One of the great advantages of studying retail supply chains is that many aspects of a retailer's supply chain are on public display in their stores. Here are some suggested issues on which to compare the two retailers.
 - Product: Number of SKUs and average amount of inventory in each SKU. (You will only be able to approximate the number of SKUs in the store e.g. do an exact count for a small section of the store and extrapolate from there or compare two departments of the two stores.) Which retailer has the broader selection in each category? Which has the deeper inventory? How do prices compare?
 - Store associates: Talk to store associates (you need to decide whether to play 'mystery shopper' or to identify yourselves as Wharton students doing a project – each has advantages) and gauge their level of motivation, knowledge and friendliness. Learn what you can about incentives. Ask the store people what they do to drive sales. I find asking broad questions like 'What are you struggling with' can be highly fruitful.
 - Customers: Observe customers and their shopping behavior.

- Execution: How frequently can you not find what you are looking for? Ask store people how frequently they stock out of hot products and what they do about it. Conversely, how frequently do they worry about excess inventory and what do they do about that. How frequently do they receive deliveries? What responsibility do they have for ordering?
- Store design: Square footage, is there a back room, signage, etc. Pictures and diagrams are a useful way to convey this information in your final report.
- Please view these as suggestions and feel free to explore whatever issues you think interesting.
- Conclusions. Which of the two retailers do you believe is more successful and what explains their success i.e. what are they doing differently than the other retailer? Could this be copied? What advice would you give to the laggard?

PLEASE SUBMIT A ONE PAGE PAPER PROPOSAL BY 3 PM MARCH 30. I will respond with comments. The finals paper is DUE BY 9AM MAY 2.

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 Penn's Code of Academic Integrity <http://www.upenn.edu/academicintegrity/index.html> and proper citation and paraphrasing to avoid plagiarism http://www.upenn.edu/academicintegrity/ai_paraphrasing.html.

A solid paper summarizes uncritically information from a reasonable number of articles on a topic. A great paper poses an interesting question and answers it using both course materials and articles. An important feature of a great paper is that it has the author's or authors' point of view on the subject of the paper.

COURSE SCHEDULE

Date	Class	Topic or case	Guest(s)
14 Mar	1	Course Overview; Retail Lifecycle	
16 Mar	2	Aldo	Bryan Eshelman , Chief Operating Officer, The Aldo Group
21 Mar	3*	Store Level Execution at Wawa	Jim Morey , COO, Wawa Inc.
23 Mar	4*	Amazon.com's European Distribution Strategy	Scott Lescher , Director, US Operations, Prime Now
28 Mar	5*	Supply Chain Management at World Co. Ltd.	
30 Mar	6	Urban Outfitters One page paper proposal due	Richard Hayne , CEO and founder, Urban Outfitters
4 Apr	7*	Zara	Jesús Echeverría , Managing Director, Inditex
6 Apr	8*	McDonald's Corporation: Launching McCafe	Robert Marshall , former Vice President, U.S. Operations, McDonald's Corporation
11 Apr	9	Store Execution	
13 Apr	10*	Home Depot and Interconnected Retail	Mark Holifield , Executive Vice President, Supply Chain & Product Development, The Home Depot, Inc.
18 Apr	11*	Forecasting and inventory optimization	
20 Apr	12*	Mercadona	
25 Apr	13	Assortment optimization	
2 May		FINAL PAPER DUE BY 9am	

* Candidate for individual write-up

DETAILED DESCRIPTION OF COURSE SESSIONS

Class 1

14 March

Course overview; Retail Lifecycle

This class will provide an overview of the course and then consider how retailers need to adapt their strategy as they go through a lifecycle from high growth to maturity. Successful retailers can grow quickly in their early years simply by opening new stores. But what happens when they run out of geography for new stores and growth inevitably slows? Are they doomed to a slow death or is there a strategy that would allow them to prosper with modest top line growth?

To answer this question, I'll report findings from 37 publicly traded retailers that were continuously active during 1993-2014. Their top line growth in the first five years of this period averaged 14.1%, but declined to 4.8% in the last 5 years. Most of these retailers saw their bottom line decline even faster. In pursuit of top line growth, they continued opening new stores to the point where they diluted solid financial performance and significantly underperformed the S&P total market return. But some of these retailers have outperformed the S&P, achieving an average return of 21.9% over 2011-15. To understand how they did it, we interviewed senior execs at these performance stars and examined publicly available data. In this class I will describe the elements of their successful strategy.

Readings:

M. L. Fisher, A. Raman and A. McClelland, “Rocket Science Retailing is Almost Here – Are You Ready?” *Harvard Business Review*, July/August 2000.

Marshall Vishal, Vishal Gaur, Herb Kleinberger, “Curing the Addiction to Growth,” *Harvard Business Review*, Jan/Feb 2017.

Class 2

16 March

Live case study 1: The Aldo Group

The Aldo Group is a Montreal based shoe and accessory retailer with 1,600 stores and annual revenue of about \$1.5 billion. The company was founded in 1972 by Aldo Bensadoun. Our guest Bryan Eshelman will give an overview of the company, background on the decision to move to direct sourcing, the economics involved, and how they have approached it from a vendor perspective.

Guest: Bryan Eshelman
Chief Operating Officer
The Aldo Group

Questions:

Prior to class, visit <http://www.aldogroup.com>, review the description of the company, and come to class with good questions.

Class 3
21 March

Store execution: The role of the store manager

Excellent supply chain plans are often blunted by mediocre execution at the store level. This case will let us see what goes on in a retail store, what are the execution challenges and how to overcome them, and how a retailer can best harness the brain power of their store associates.

Case: Store Level Execution at Wawa

Guest: Jim Morey
COO
Wawa Inc.

Questions:

- (1) Imagine you are a Wawa store manager. What are your goals and how would you achieve them?
- (2) Compare and contrast the styles of the three store managers described in the case. Is one style the best? If so, how would you encourage others to follow the best managers approach?
- (3) What harm is done by the store execution failures described in the case? What would you do to reduce these problems, either as a store manager or VP of Store Operations for Wawa?

Class 4
23 March

Network design: configuring the network of distribution centers

This case will allow us to understand in depth the supply chain operations of the world's most famous e-tailer. After reviewing how their supply chain has evolved over time, we'll consider an issue they faced concerning how to configure the network of distribution centers through which they serve the European market.

In the second half of class, we'll hear about a very recent Amazon initiative, Prime Now, that provides a 1-2 hour delivery lead time in selected urban areas.

Case: Amazon.com's European Distribution Strategy

Guest: Scott Lescher
Director
North America Prime Now Operations
Amazon.com

Questions:

- (1) Review the evolution of the Amazon U.S. network during 1995-2002. What performance metrics were they using, what choices did they make and what environmental factors drove those choices? What might have gone wrong during this period and how did they avoid those potential pitfalls?
- (2) Do the same network rollout review for Europe: metrics, choices, and environmental factors. What were the major differences between Europe and the U.S.
- (3) What European distribution network strategy would you recommend to Tom Taylor? In particular, should they continue to decentralize fulfillment by country, centralize fulfillment, or some blend of the two? What implementation challenges do you foresee?

Class 5
28 March

Supply chain design: achieving speed and flexibility

Most apparel retailers have a 4 to 11 month supply lead time. By contrast, World can replenish existing products in two weeks and design and supply new products in six weeks. World has also adopted a number of novel techniques in their planning process. We will use this case to understand the factors affecting lead time and the inner connections between lead time management and forecasting/inventory planning.

Case: Supply Chain Management at World Co. Ltd.

Questions:

- (1) Use information in the case to compare World with Gap, Limited and average U.S. specialty apparel retailers on gross margin, inventory turns, markdowns and SG&A. You will find useful the graphs described in the first class and available on Canvas showing gross margin, turns and SG&A for apparel retailers.
- (2) General impressions of World: what does World do that you find impressive or unimpressive?
- (3) Which aspects explain the company's remarkably short lead times (relative to U.S. apparel supply chains)?
- (4) Identify other key aspects of World's supply chain focusing on the processes for manufacturing, new product design, demand forecasting, and inventory planning.

- (5) Consider Exhibit 6, which describes a SKU for which the demand forecast for the season is 2,200. Suppose the season is 11 weeks long, you are 3 weeks into the season and sales in the first 3 weeks has been 600 units. What actions would you take? How about if sales in the first 3 weeks are 300 units? 900 units? For simplicity, assume products sell at an even rate during the 11 week season.
- (6) Could World's supply chain processes be replicated at other apparel companies? Identify potential barriers.

Class 6

30 March

Please submit your paper proposal by 3 PM today

Live case study 2: Urban Outfitters

Urban Outfitters was founded in 1970 by Richard Hayne with their first store on the University of Pennsylvania campus. Today, Urban is a \$2.7 billion retailer whose stellar financial performance makes them a darling of Wall Street. The company maintains six brands – Urban Outfitters, Anthropologie, Free People, Terrain and BHLDN - each of which focuses on a well-defined customer segment with whom they strive for an emotional connection.

Guest: Richard Hayne, CEO and founder
Urban Outfitters, Inc.

Questions:

Prior to class, visit <http://www.urbn.com>, review the description of the company and come to class with good questions.

Class 7

4 April

Supply chain flexibility; growth and global expansion

Fashion retailer Zara experienced significant growth over the period from 1975 to 2010. The case reviews the history of the Inditex Group and its expansion of both brand concepts and number of stores. In this class we'll seek to understand the Zara business model and then consider some specific challenges faced by Zara related to global expansion.

Our guest for this class Mr. Echeverría is based in Spain, but will join us via video conference for an optional briefing and Q & A session from noon to 1:20 in F36.

Case: Zara: Staying Fast and Fresh

Guest: Jesús Echeverría, Managing Director, Inditex

Questions:

- (1) Exhibit 5 in the case shows phenomenal revenue growth for Inditex, especially relative to other retailers such as Gap. How did Inditex, and their leading brand Zara, achieve this impressive success?
- (2) Using the information in the file GM vs turns vs SG&A on Canvas, compare Inditex to publicly traded apparel retailers on these metrics.
- (3) Why haven't more retailers adopted elements of the Zara model?
- (4) Where are the competitive threats to Zara likely to come from? Will Zara's strategy scale once the network of stores grows beyond the 2,000 mark?
- (5) China is Zara's fastest growing and second largest market. Moreover, much of Zara's supply is produced in China, shipped to Spain and then back to China. Yet Zara continues to manage worldwide operations from their headquarters in Spain. Should Zara establish a Distribution Center and an additional command and control center in China that would replicate for China the planning process they currently use at corporate headquarters in Spain?

Readings:

Chapter 4 Flexible Supply Chains, M. L. Fisher and A. Raman, *The New Science of Retailing*.

“Zara, Spain’s most successful brand, is trying to go global,” *The Economist*, 24 March 2012. (on course website)

Class 8
6 April

Store Execution: the role of store design

An important aspect of store execution is how the store is designed and this case will let us explore that issue in a context where it is arguably the most complex, a fast food restaurant, which combines all the traditional retail processes with the ‘manufacturing’ processes associated with a restaurant.

Simplicity was a key feature of McDonald's original menu – hamburger, cheeseburger, fries and a few drink choices, a total of 9 items. Yet despite this simple menu, McDonald's grew quickly through geographic expansion, because of the appeal of their fast service, low prices and tasty food. When rapid growth finally slowed in the early 1990's, new menu items were added to sustain continued growth. As a result, by 2007, the average McDonald's restaurant had more than 100 items on their menu. As menu complexity grew, it became harder and harder to deliver on the ‘fast’ component of ‘fast food.’ McDonald's solution was a new production process, called ‘Made for You’ in which they cooked components such as

hamburger patties and chicken to inventory, and then assembled sandwiches and other menu items to order. Now they are contemplating the introduction of a new product and face important process design choices on how to deliver on this new process.

Case: McDonald's Corporation: Launching McCafe

Guest: Robert Marshall, former Vice President, U.S. Operations
McDonald's Corporation

Questions:

- (1) What characteristics of McDonald's production system have been most important in building its record of success and growth in the industry?
- (2) What are the advantages and risks/potential problems of McCafe for customers, franchisees and McDonald's corporation?
- (3) If you were Bob Marshall, responsible for implementing McCafe, what concerns would you have?
- (4) Which of the alternative new product processes for McCafe should McDonald's adopt? Would you offer at Drive Thru and where would you locate the McCafe Station?
- (5) The McDonald's Innovation Lab represents a substantial investment in R&D. Should other retailers spend more on R&D? McDonald's focus is on store processes. What else might other retailers seek to learn about through R&D?

Class 9
11 April

Store execution

In this class I'll present results from research projects conducted with several colleagues and retailers to understand what store level operating policies drive outstanding store execution, customer satisfaction and financial performance. These projects have sought to address questions such as the following.

- (1) What can a retailer do to improve sales and customer satisfaction? Which of these potential action steps have the biggest impact?
- (2) How to allocate an additional \$1 of store expense for the highest return?
- (3) How to set store staffing levels to trade off the positive impact on revenue against payroll cost.
- (4) How to increase store associate knowledge. Do more knowledgeable store associates increase sales?
- (5) How can methods from manufacturing, such as the lean production system, be applied to a retail store.

Reading:

Chapter 6 Store-Level Execution, M. L. Fisher and A. Raman, The New Science of Retailing

James Surwiecki, "How Hiring Makes Uniqlo and Successful Retailer," *The New Yorker*, 26 March 2012 (**available on course website**).

M. Fisher, S. Gallino and S. Netessine,
Setting Retail Staffing Levels: A Methodology Validated with Implementation, March 2017
(**available on course website**).

Class 10

13 April

Store execution; links between operations and finance

In November 2011, just days before the holiday shopping rush, the senior leadership team of The Home Depot, Inc., (Home Depot), the world's largest home improvement chain, discussed how best to navigate the new interconnected world of retail. Retailers across the board faced a rapidly changing environment with the growing acceptance of on-line retailing that empowered customers by providing greater price transparency and more options. Marketing channels and communication touch points continued to shift. Home Depot's leadership grappled with the challenges of operating in an interconnected world, how best to leverage Home Depot's brick-and-mortar success in the new environment, and continuing to build and sustain lasting emotional connections with customers.

Case: Home Depot and Interconnected Retail

Reading:

Chapter 1 Retail Valuation, M. L. Fisher and A. Raman, *The New Science of Retailing*

Guest: Mark Holifield,
Executive Vice President, Supply Chain & Product Development
The Home Depot, Inc.

Questions:

- (1) How did Home Depot deliver high levels of service and low prices to consumers before 2000 (pre-Bob Nardelli era)?
- (2) Why were the founders replaced?
- (3) Was Bob Nardelli a success? Why was he fired?
- (4) Many regard Frank Blake as the best retail CEO of recent years. Do you agree? Why or why not.
- (5) Who is HD's biggest competitor/threat today? Why?

- (6) What examples have you personally seen of retailers coordinating between their store and internet channels. Which would you recommend for Home Depot? How would you use the information in Exhibit 17?

Class 11
18 April

Forecasting and inventory optimization

Retail products have a life cycle that can be divided into three stages: new product launch, mid life replenishment and end of life exit, dominated by price markdowns to clear remaining inventory. In this class we focus primarily on the first stage: new product launch.

If you are doing the written hand-in exercise for this class, please do the following.

- (1) Download the Excel file *Catalog Data.xls* from the folder for this class on the course web site. The sheet Catalog data contains regular price, salvage price (the end of season markdown price charged for left over inventory), cost, forecast and standard deviation of the forecast for a set of items offered in a single book by a cataloger. The scenario relates to the example discussed in Chapter 3 Product Life Cycle Planning, that is the assigned reading for this class. The sheet 2 Period News Vendor Model allows application of a buying algorithm discussed in Chapter 3.
- (2) Your challenge is to devise a buying rule for an initial buy, Q_1 , and a second buy, Q_2 . The amount Q_1 is decided before the season starts, using only the forecast and standard deviation. The amount Q_2 is decided two weeks into the season, after observing initial demand. This second order will not arrive until the end of the seventh week (and before the eighth week begins).
- (3) Half the items have actual demand data given. You can use these to test and evaluate various rules for setting Q_1 and Q_2 . Bear in mind that each decision has to be made only with the information available at each moment (e.g. Q_2 cannot be decided based on the demand of the first seven weeks).
- (4) The other items have forecasts but no data on actual demand. For these, you will determine initial buys (Q_1). As part of grading your write-up, we'll evaluate your initial buys against the actual demand, making an optimal second buy for you and determining results.
- (5) Using the items for which actual demand is given, apply the 2 Period News Vendor Model and at least one other buying rule of your own invention. Compare performance of the methods.
- (6) Which method would you recommend and why?
- (7) Apply your recommended method to the items for which actual demand is not given to determine Q_1 values.

- (8) Please submit a 2-3 page write-up describing the analysis you did and the logic of the method you are recommending and together with an excel spreadsheet showing your results and calculations. The write-up could enumerate and describe the options that you have considered and then clearly identify and justify your final choice, giving recommended initial buys for this choice on the items with no demand data.

Reading:

Chapter 3 Product Life Cycle Planning, M. L. Fisher and A. Raman, *The New Science of Retailing*.

Class 12
20 April

Total quality management; work force management

The case for this class presents the predicament of Mercadona, a retailer trying to do right by its customers and its employees as the economic crisis of 2008 hits home. Fifteen years earlier, this Spanish supermarket chain had adopted its own version of total quality management, called the Total Quality Model, switching from the industry's traditional high-low pricing to "always low prices" and continuous improvement. These changes called for a well-trained, empowered, and enthusiastically engaged workforce dedicated to providing the best products and service to their customers, who were always and seriously referred to as "the Bosses." The Total Quality Model had been a success in terms of company growth and profitability, sustained by the success of Mercadona's unusually high investment in employee training and satisfaction. Nevertheless, when sales growth slowed down in 2008, CEO Juan Roig concluded that Mercadona had let its customers down by not keeping prices low enough for such hard times. Mercadona set about lowering its prices, reducing product variety, and lowering its financial targets for 2009. Of the 9,200 SKUs in an average store, the company decided to eliminate 1,000. But Roig still had to decide what to do about employee bonuses. Since Mercadona did not meet its 2008 targets, the company policy was that no one--not even top management--would get a bonus. But Roig knew that his employees worked hard and well in 2008 and could not be held totally responsible for the downturn or for management's failure to react quickly enough.

Case: Mercadona

Reading:

Marshall Fisher, "To you it's a store; to me it's a factory," *ECR Journal International Commerce Review*, Vol. 4, No. 2, Winter 2004 (**Available on course website**)

Questions:

- (1) Compute Gross Margin Percent and inventory turns for Mercadona. Using the information in the file GM vs turns vs SG&A, compare Mercadona to publically traded grocery retailers on these metrics.

- (2) How is Mercadona able to provide the lowest price to customers and at the same time spend heavily on store employees and technology? What are some of the strategy, supply chain, and operations choices they made that allows for this to happen?
- (3) Compare Mercadona's approach of using largely full-time employees and fixed employee schedules, which are provided one month in advance, versus the traditional heavy use of part timers and providing schedules one week in advance.
- (4) What are the downsides of the Mercadona business model?
- (5) What is your recommendation for employee bonuses for 2008?
- (6) What are the advantages and disadvantages of their narrow assortment? Should Mercadona reduce product variety further, and if so which products should be eliminated and by what criteria? Please use Exhibits 14 and 15 to provide examples of your logic. What are the risks in eliminating SKUs? In exhibit 15, CC in the 3rd column under FORMAT means cubic centimeter, which equals .01 liters.

Class 13

25 April

Assortment optimization

This class will consider tools and techniques retailers use for deciding what assortment of products to carry in each store at each point in time.

Readings:

M. L. Fisher and R. Vaidyanathan, “What Products Should You Stock?” *Harvard Business Review, November 2012.*

Introduction and Chapter 2 Assortment Planning, M. L. Fisher and A. Raman, *The New Science of Retailing*

Ann Zimmerman, “To Boost Sales, Wal-mart Drops One-Size-Fits-All Approach,” WSJ September 7, 2006.

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