

PUBLISHER'S CHOICE OPERATIONS MANAGEMENT CASES

Recommended Operations Management Cases

9B19D016

Gati: Achieving Quality Excellence in Shipment Delivery

Soumyajyoti Datta; Rohit Kapoor

The general manager at Gati, a well-known logistics services company in India, was worried about the number of complaints the company had received. The popular supply chain solutions and logistics service provider had introduced a premium express service scheme five months ago and, since then, had 231 complaints concerning the late delivery of goods. This new scheme charged a considerable markup and guaranteed shipment of goods within 72 hours. Being dedicated to ensuring quality, the general manager had to decide whether the process was under control and if the company was operating within tolerable error limits. Could he find a solution to streamline the delivery process and achieve a target defect of 0.0005 per cent? Using MS Excel, statistical techniques were used to unravel the multi-faceted dilemma and help in decision-making.

Learning Objective: This case is suitable for graduate-level courses on operations management, service operations management, and quality management for full- and part-time students in an MSc program in management or MBA program. The case is also applicable to executive development programs or short-term courses for practitioners in the field of quality management, quality engineering, and logistics and supply chain management. After completion of the cases students will be able to understand the functioning of a large-scale logistics service provider from various managerial dimensions; assess the notion of statistical quality control through a p-chart using Microsoft Excel; understand the concept of cause and effect relationships using a fishbone diagram; use a Pareto chart to identify the important causes responsible for the defects and then construct a Pareto chart using Microsoft Excel; and examine and connect the concepts of process capability, capability index, and defect percentage using Microsoft Excel.

Publication Date: August 23, 2019**Discipline:** Operations Management; Entrepreneurship; International Business;**Issues:** Quality management; Statistical process

control; Process capability; Pareto chart

Industry: Transportation and Warehousing;**Setting:** India, Large organization, 2017**Difficulty:** MBA/Postgraduate

9B19D013

Walmart: Supply Chain Management

P. Fraser Johnson; Ken Mark

This case focuses on the supply chain strategy of Walmart. Set in 2019, it provides a detailed description of the company's supply chain network and capabilities. Data in the case allows students to compare Walmart's source of competitiveness with those of other retailers—both online including Amazon.com and traditional brick-and-mortar retailers, such as Target—to develop insights into the management of a large, complex, global supply chain network. As competition between Walmart and its online and offline competitors heated up, a key challenge for the company's president and chief executive officer was deciding what changes made to Walmart's expanding supply chain would best support its strategic objectives. What supply chain capabilities would Walmart need as its business model continued to evolve?

Learning Objective: This case can be used in an undergraduate or MBA course in supply chain management, operations management, business strategy, international business, logistics, purchasing, or marketing. It can provide an introduction to supply chain management using a company with which most students are familiar. In doing so, it allows students to learn how Walmart has built up its supply chain capabilities over the past five decades, and how the company leveraged these capabilities to become the world's largest retailer. Combining the Walmart case with the "Amazon.com: Supply Chain Management" case (Ivey 9B18D017) in back-to-back classes provides a powerful illustration of the differences between two leading companies and demonstrates the importance of alignment of supply chain competencies with organizational strategy. After completion of this case, students will be able to:

Assess Walmart's supply chain and identify its key competitive advantages.

Quantify Walmart's ability to generate value from its supply chain.

Identify potential opportunities and challenges for Walmart

to improve its supply chain.
Analyze the effects of the opportunities and challenges facing Walmart on its growth and evolution.

Publication Date: July 08, 2019

Discipline: Operations Management;

Issues: Supply chain management; Operations and processes; Logistics; Purchasing

Industry: Retail Trade;

Setting: United States, Large organization, 2019

Difficulty: Undergraduate/MBA

9B18D017

Amazon.com: Supply Chain Management

P. Fraser Johnson; Ken Mark

By early 2018, Seattle-based Amazon.com Inc. (Amazon), one of the world's most valuable companies and the largest online retailer in the world, had grown dramatically since its beginnings in 1994. The company that had started as an online bookseller now sold merchandise and digital content in more than 30 categories, including electronics, clothing, books, furniture, and streaming music and video. It sold its own products and listed products for sale by over two million third-party sellers. It provided on-demand cloud-computing services and offered fulfillment and shipping services to businesses, and it had recently entered grocery retailing through its purchase of Whole Foods Market. With 2017 shipping costs that exceeded \$21 billion, the company was working to establish greater control over its supply chain network and capabilities. Amazon was selling a huge variety of products in many formats, and the chief executive officer needed to determine how to structure the company's supply chain in order to support its strategy and growth objectives. What supply chain capabilities would Amazon need as its business model continued to evolve?

Learning Objective: This case can be used in an undergraduate or graduate course on operations management, supply chain management, logistics, business strategy, or marketing. After completing the case, students will be able to
assess Amazon's supply chain, and identify its key competitive advantages;
quantify Amazon's ability to generate value from its supply chain;
identify potential opportunities and challenges for Amazon in improving its supply chain; and
analyze the effects of the opportunities and challenges facing Amazon on its growth and evolution.

Publication Date: July 26, 2018

Discipline: Operations Management; Marketing; Information Systems; Entrepreneurship;

Issues: supply chain management, e-commerce, distribution, logistics

Industry: Information, Media & Telecommunications;

Setting: United States, Large organization, 2018

Difficulty: Undergraduate/MBA

9B17D016

Agarwal Automobiles: Fuel Station Forecasting and Inventory Management

Saurabh Chandra; Aditya Agarwal; Sanjay C. Choudhari

On June 1, 2016 a student was preparing for a summer job with Agarwal Automobiles, a vehicle fuel station owned by his father. The student had taken courses that covered supply chain management, including inventory management and forecasting. His father had suggested that, as a summer project, the student examine the fuel station's retail inventory management practices with the intention of replacing the current simple rules with a more rational and complex planning model. The student needed some ideas to use as a guide toward a better ordering policy. The available data for the previous six months suggested that the company held an average ending inventory of ₹2.1 million worth of fuel products to maintain average daily sales of ₹0.52 million. The challenge was to reduce the inventory levels, while maintaining a high customer service level in fuel sales.

Learning Objective: This case is suitable for a postgraduate level production and operations management course that discusses item level forecasting as well as the formulation of inventory management policies and models in a joint-product-ordering scenario. It can also be used in a graduate level quantitative technique or management science course to demonstrate the use of the mixed integer linear programming model for complex inventory planning problems, using a spreadsheet-based optimization tool like OpenSolver. The case provides opportunities to explore analytical techniques in a real business scenario. After completing the case, students should be able to do the following:

Perform quantitative business forecasting, including model selection and decomposition methods used in seasonality and trend analysis.

Manage the inventory of multiple products in a retail scenario, including economic order quantity and periodic review policy for joint ordering, under maximum order size and separation constraints.

Apply the mixed integer linear programming technique, using a spreadsheet-based solver to formulate and solve an inventory management problem dynamically by using the forecast data, under capacity and separation constraints.

Publication Date: October 20, 2017

Discipline: Operations Management; Entrepreneurship; International Business;

Issues: inventory management, forecasting, retail

Industry: Retail Trade;

Setting: India, Small organization, 2016

Difficulty: MBA/Postgraduate

9B17D005

DHL Global Forwarding: Consolidation Program

Kedar P. Joshi; Debmallya Chatterjee

On October 13, 2015, the regional director of DHL Global Forwarding (DGF) was reviewing reports in preparation for a team meeting in Bengaluru, India. DGF provided air and ocean freight forwarding services. In September, the regional director's team had successfully rolled out a new consolidation program in three Indian cities: Hyderabad, Bengaluru, and Chennai. While glancing through the respective consolidation teams' reports, however, several questions occurred to the director: Was DGF paying more to airlines on specific days of the week in these three cities? Should the company continue to run the consolidation program in these locations? How could DGF consolidate its clients' requirements across these cities? Would such consolidation benefit the company? The director had just one day to come up with a new plan for presentation at the next team meeting.

Learning Objective: This case can be used to teach students about integer linear programming (ILP) or transshipment models in an operations research course; it can also be used to address consolidation problems in post-graduate courses on supply chain or logistics management. After completing the case, students will be able to do the following:

Understand the benefits and challenges of consolidating shipments in the global freight forwarding environment.

Build a mathematical ILP model for a consolidation program.

Develop a cost-effective consolidation program by comparing different possibilities.

Publication Date: March 29, 2017

Discipline: Operations Management; International Business;

Issues: forwarding, integer linear programming, ILP, consolidation, freight

Industry: Transportation and Warehousing;

Setting: India, Large organization, 2015

Difficulty: MBA/Postgraduate

9B16D026

Blockchain: A New Solution for Supply Chain

Integrity

Xin (Shane) Wang; Xin Xu; Min Pan

In 2016, blockchain, the technological innovation behind the cryptocurrency bitcoin, was gaining traction as companies began to integrate blockchain-based technology into their existing business models. While blockchain technology was still in its infancy, it could potentially transform the US\$40 trillion global supply-chain industry. Ultimately, the emergence of blockchain would challenge market positioning in established businesses. Some advantages would become obsolete with the introduction of blockchain into the supply-chain network. How would vertically integrated companies compete with multiple participants that specialized in a particular task linked by blockchain? Would the key to future businesses be providing value-added services rather than seeking information asymmetry in the market? What kinds of firms could leverage this technology to better position their brands and value creation?

Learning Objective: This case is appropriate for introductory courses in marketing and strategy at undergraduate and MBA levels. It can also supplement a course that discusses information technology in businesses. After completion of this case, students will be able to understand how technological advances can solve current business issues; understand how disruptive innovation can change a business's competitive advantage; and understand the impact of new sources of innovation in existing industries.

Publication Date: December 21, 2016

Discipline: Operations Management;

Issues: new technology, supply chain, innovation

Industry: Other Services;

Setting: Canada; United States; China, 2016

Difficulty: Undergraduate/MBA

9B15D011

3M Canada: The Health Care Supply Chain

P. Fraser Johnson

In 2015, a global science and technology company's Canadian national manager of channel markets is evaluating a potential change to the company's distribution strategy for its innovative health care products to hospitals. The company currently relies on value-added resellers to distribute its products to Canadian hospitals. Recently, however, customers have been pressuring the company to ship products directly to hospitals, expecting that major cost savings could be achieved through a "direct distribution" model. The channel markets manager needs to assess the quantitative and qualitative issues related to direct distribution versus maintaining its current supply chain structure.

Learning Objective: This case can be used in undergraduate or graduate courses on marketing strategy and business management to discuss supply chain management, logistics and distribution channels.

To explore the financial and strategic trade-offs of distribution channel alternatives.

To analyze issues related to distribution channel strategy and disintermediation.

To consider the logistical capabilities required of an organization to support alternative supply chain strategies.

Publication Date: December 09, 2016

Discipline: Operations Management;

Issues: distribution, logistics, supply chain management, health care

Industry: Health Care Services;

Setting: Canada, Large organization, 2015

Difficulty: Undergraduate/MBA

9B16D013

Nissan: Recovering Supply Chain Operations

Shikha Aggarwal; Manoj Kumar Srivastava

Nissan's resilience strategy had been considered an exemplary response to the triple disaster in Japan in March 2011. The Japanese automobile industry made their respective recovery efforts to resume production and delivery of vehicles after suffering damage from an earthquake, tsunami, and a nuclear crisis, but it took months before they could reach pre-disaster levels of operations. Nissan's resilience practices and supply chain disruption management were acknowledged as superior to those of their peers and were appreciated by experts and analysts. Nonetheless, it took Nissan more than a month to resume production, and each day of lost production cost Nissan \$25 million.

Learning Objective: The case can be used in graduate-level business courses in supply-chain management, operations management, and strategic management. It can also be used in a post-graduate course on risk management. The case provides an opportunity for students to understand the concept of supply-chain resilience; identify potential disruptions in a global supply-chain network; analyze the best design-disruption fit in a supply chain; understand operations strategies to manage supply-chain disruptions; formulate improvement strategies for building robustness; and understand reconciliation of supply-chain capabilities with vulnerabilities.

Publication Date: May 31, 2016

Discipline: Operations Management; International Business;

Issues: Global supply chain network, supply chain resilience, operations strategy, business continuity planning, disruption, improvement strategy, automotive, 3/11 disaster

Industry: Manufacturing;

Setting: Japan, Large organization, 2011

Difficulty: MBA/Postgraduate

9B15D018

Walmart China - Supply Chain Transformation

P. Fraser Johnson

In late September 2015, the senior vice-president of supply chain management at Walmart China was preparing for a meeting in Bentonville, Arkansas, where she was expected to make a presentation detailing plans for Walmart China's network of distribution centres. The investment in infrastructure would be the next major step in the organization's supply chain transformation. The case provides an opportunity to explore issues related to supply chain strategy in the context of an evolving economic environment in China. Students are expected to assess pending investments in supply chain infrastructure, including evaluation of the quantitative and qualitative aspects related to two competing distribution centre models.

Learning Objective: This case can be used in an elective in supply chain management or logistics, in either an undergraduate or MBA program. It provides an opportunity to examine the financial and strategic trade-offs of two distribution centre models as part of the evolution of Walmart China's supply chain strategy. The instructor can delve into issues related to supply chain strategy and the role of distribution centres in global supply chains. The backdrop of a supply chain transformation at Walmart China provides an especially interesting context.

Publication Date: November 25, 2015

Discipline: Operations Management; International Business;
Issues: Supply chain management, distribution, operations strategy, logistics, China
Industry: Retail Trade;
Setting: China, Large organization, 2015
Difficulty: Undergraduate/MBA

9B15D014

Benevento Foods: When the Rubber Hits the Dough

David Wood; Stephan Vachon; Micheline Singh

For the past 30 years, the president of Benevento Foods, a food processor located in northern New York State, has overseen unprecedented growth. In June 2014, the family-owned company has 90 full-time employees and provides baking mixes and bases to both small stand-alone bakeries and national grocery chains across the United States. It has plans to expand distribution to Mexico and Japan and to develop new product lines, especially for gluten-free items. However, it faces a serious quality failure: one of its customers has discovered pieces of rubber in the latest delivery of baking mix. Is this an isolated event or indicative of a bigger issue? Is it symptomatic of a poor quality culture, lack of accountability on the shop floor and/or a misallocation of resources? What can be done to solve the current problem and make sure it does not happen again?

Learning Objective: This case is suitable as an introduction to quality in undergraduate and graduate level courses on operations management. Its objectives are:

Understanding the systemic nature of quality management.
Gaining an appreciation of different facets of an effective culture of quality in an organization.
Appreciating the role of preventive maintenance in a manufacturing setting.
Determining the best course of action to sustain improvement in quality.
Contrasting quality management and business growth (including new product development).

Publication Date: September 29, 2015

Discipline: Operations Management; International Business; Entrepreneurship;

Issues: Root cause analysis, quality issues, control processes, culture, fishbone diagram, Five Whys, 8Ds of Problem Solving

Industry: Manufacturing;

Setting: United States, Small organization, 2014

Difficulty: Undergraduate/MBA

9B15D010

Ashmark Corporation: Dealing with a Supply Disruption

Brent B. Moritz; Christopher W. Craighead

When Ashmark Corporation's largest supplier, Red Star Castings (Red Star), was forced to declare bankruptcy, Ashmark had to develop and implement a contingency plan, while also appeasing its customers, who were growing increasingly impatient for their parts to arrive. Since Red Star closed, Ashmark had been late on 200 units of production due to missing components. Although this figure represented less than 1 per cent of the company's total monthly shipments, things were likely to get more difficult, especially with the loss of key employees due to the stressful situation. In addition, the new supplier was having trouble bringing the tooling online, there were delays in the qualification and testing process, and the modest amount of inventory built up in advance of the bankruptcy had diminished. As Ashmark looked to move forwards, it would need to develop a much better sense of how to manage supply chain risk.

Learning Objective: Using the case, students will:

Discuss the tradeoffs of single versus multiple sourcing, and in particular, when supply consolidation can increase risk. Examine and define risk in a supply chain management context, and how factors can increase (or decrease) either the likelihood or impact of a disruptive event. Evaluate how differing incentive systems can lead to positive outcomes for the firm and for individual managers in the short term, but can lead to increases in long-term systematic risks to the firm and, in turn, affect supply chain continuity and resiliency.

Understand the issues facing original equipment manufacturers in managing Tier I, Tier II and Tier III suppliers, where there is limited (or no) visibility to the supply base.

Publication Date: August 17, 2015

Discipline: Operations Management;

Issues: Supply chain management; risk management; procurement

Industry: Manufacturing;

Setting: United States, Large organization, 2005

Difficulty: Undergraduate/MBA

9B15D003

Toffee Inc.: Demand Planning for Chocolate Bars

Jitendra R. Sharma

The inventory manager of sales and distribution for Toffee Inc., a confectionery company, had just concluded a meeting with all relevant personnel. The meeting had not been entirely positive. The words of the production manager still echoed in his ears: "If the ingredient inventory is not re-examined and re-worked to the firm's advantage then [soon] the final products based on these ingredients will cease to yield the kind of profits that the firm expects." The inventory manager needed to prepare a comprehensive forecasting and inventory management plan with a view to minimize the cost of managing the supply chain by judicious use of resources, better forecasting, and improvement in the ingredient inventory purchasing and management systems.

Learning Objective: The following techniques and concepts can be addressed using this case:

Quantitative forecasting — especially the use of seasonal forecasting with seasonal factors and linear trend line. Inventory management, which includes the simple economic order quantity (EOQ) concept, in terms of deterministic and probabilistic approaches.

Basic concepts of holding cost, ordering cost, lead time, service levels, safety stock, demand during the lead time, re-order point and most importantly, when and how much to order.

EOQ with quantity/bulk discount — keeping in mind the cost of managing the inventory throughout the year.

Publication Date: May 07, 2015

Discipline: Operations Management; International Business;

Issues: Forecasting; inventory; service levels; quantity discounts; India

Industry: Other Services;

Setting: India, Medium organization, 2012

Difficulty: Undergraduate/MBA

9B13D016

A-CAT Corp.: Forecasting

Jitendra R. Sharma

A-CAT Corp., a company that produces domestic electrical appliances in a poor region of India, largely caters to the price-sensitive rural market. During the past several months, there has been an alarming dip in sales of its major product, a voltage regulator that is used for varied purposes but most commonly as a protective device for refrigerators and television sets, to protect the latter from the vagaries of load fluctuations and/or frequent power failures, which are a very common phenomenon in the region. At the same time, the production department has been complaining about shortages of spares and components. Placing orders beyond a certain limit for the vital transformers used in most of its products has also stretched the system — whereas the company previously had access to four suppliers of transformers, now there is only one. The vice president has asked the chief operations manager to look into the problem. The operations manager traces the production planning process and its reliance on accurate forecasts. The manager's job is to collect the data, analyze the data patterns, use forecasting methods, carry out back-testing and submit recommendations to management to solve the problem.

Learning Objective: This case can be used in a core course in quantitative techniques, decision sciences and/or production and operations management at the graduate level, preferably during or after a basic statistics module of the course. It can also be effectively utilized in elective courses on sales and marketing, managerial economics, econometrics and financial engineering (techno-economic feasibility analysis).

To grasp the basics of the forecasting process and to discuss the choice of proper forecasting methods.

To illustrate and highlight the significance of various patterns in the historical data.

To understand the relationship between a dependent and an independent demand for a product.

To quantitatively analyze forecasting data and provide forecasts of the following year.

To use various accuracy measures in assessing.

Publication Date: September 13, 2013

Discipline: Operations Management;

Issues: Forecasting; back testing; errors; India

Industry: Manufacturing;

Setting: India, Medium organization, 2012

Difficulty: Undergraduate/MBA

9B12D011

Agile Electric: Quality Issues in a Global Supply Chain

Dhruv Dar; Sanjay Kumar; Vijay Aggarwal

The case describes the evolution of a global multi-tiered supply chain involving one of the world's largest automotive original equipment manufacturers (OEMs), its tier 1 supplier — Automek, a U.S.-based global corporation — and the tier 2, tier 3, and tier 4 suppliers based in India.

With Automek's engineering support, India-based Agile Electric had successfully developed many parts for the OEM in the past. Based on this experience, Automek buyers placed an order with Agile for a new product — an actuator assembly. In developing this product with little support from Automek, Agile was concerned due to its lack of knowledge concerning the suppliers for the actuator assembly components and the critical requirements. To allay its concerns, Automek promised to locate suppliers and assess and validate the suppliers based in India. Agile then invested in the assembly line and developed the actuator assembly. When supplies started, the OEM reported many quality problems, traceable to the tiered suppliers.

Along with quality and parts supply issues, the issues of subsequent liability in the case of a recall by the OEM were faced by members of the supply chain. Agile felt that since Automek had selected or approved the suppliers, and since Agile had had no original product expertise, that Automek should take responsibility for resolving the quality problems.

Learning Objective: The case is designed for a course in operations management. It can also be used for a short-term training program on supply chain management. The instructor can focus on the risks that both buyer and supplier face in a global supply chain and the various factors that should be considered by both sides before committing to a relationship. The case can also be used to analyze the necessity, significance, and methodologies for the transfer of (process) knowledge between buyer and supplier.

Specifically, the following objectives can be accomplished: Understand the risk of incurring major liabilities in an international supply chain, resulting from Western business practices of passing on liability, field failures, warranties, delivery defaults, and carefully worded legal contracts. If a supplier were to understand these risks and incorporate them in the costs, product costs would move upwards significantly.

Highlight the consequences of subverting established procedures such as advanced product quality planning in developing new sources of supply.

Understand the importance of process knowledge and the

internal quality practices of members in a supply chain. This includes the importance of supplier assessments and protecting oneself through enhancement of controls at suppliers' end and/or one's own end.

Highlight the importance of supplier development and the willing participation of both parties (buyer and seller) in the development process. The case discussion may be used to emphasize the concept of long-term co-prosperity as essential to supplier development.

Publication Date: July 18, 2012

Discipline: Operations Management; General Management/Strategy; International Business;

Issues: Global Sourcing; Supply Chain Management; Quality Management; Cross-cultural Differences; Developing Countries; India

Industry: Manufacturing;

Setting: India, Medium organization, 2010

Difficulty: Undergraduate/MBA

9B12D003

Material Requirements Planning at A-Cat Corp.

Jitendra R. Sharma; Tinu Agrawal

Material requirements planning (MRP) systems have been widely used by manufacturing firms to maintain an optimum flow of inputs for the best production results. By using an MRP system, a firm can prepare a production plan that specifies the number of sub-assemblies that go into a final product along with the exact timeline of an order, from placement to completion.

In the case, an A-CAT employee is assigned the task of preparing an operating plan for the next eight weeks for a product. She has to decide how much to produce to be able to meet the requirements economically, taking into account the forecasted demand. The case examines the intricacies of procurement, warehousing, and processing costs of various material components by critically evaluating different techniques in practice. Using situational scenarios, the case presents lot-sizing techniques — including lot for lot, economic order quantity, least total cost and least unit cost — for balancing costs such as set-up costs, ordering costs, and inventory-holding costs.

Learning Objective: This case can be used in a core course on production and operations management for topics such as material requirements planning or inventory management. It can also be effectively utilized in courses on inventory management, materials management, or similar topics. The case is intended to help students learn the basics of MRP systems and use lot-sizing techniques in assessing the scope of cost reduction. It provides a good illustration of a small industry in an undeveloped region that has proactively taken several innovative steps to improve its competitiveness. In this way, the case

demonstrates how a small/medium-sized organization, even with resource constraints, can achieve cost reduction by way of inventory management. The case also asks readers to take a holistic view of products and their sub-assemblies, and to identify the opportunities for cost reduction. Techniques and concepts that can be used to address the issues in this case include MRP systems and lot-sizing techniques (lot for lot, economic order quantity, least unit cost, and least total cost).

Publication Date: April 12, 2012

Discipline: Operations Management;

Issues: Material Requirements Planning; Inventory Management; Lot-sizing Techniques; Bill of Materials; Electrical Appliances; India

Industry: Manufacturing;

Setting: India, Small organization, 2010

Difficulty: Undergraduate/MBA

9B11M106

Mahindra & Mahindra in South Africa

Jean-Louis Schaan; R. Chandrasekhar

Mahindra & Mahindra Ltd. (M&M) is a manufacturing leader in the utility vehicles (UVs) segment in the Indian automotive industry. Since 2004, M&M has been exporting UVs to South Africa, the only country in the African continent with a significant middle-class population. M&M has set up a fully owned subsidiary in South Africa, which enjoyed the growth wave in the South African automotive industry up to 2007, then fell into a three-year slump, largely as a result of a recession in the global automotive industry. Now on the verge of industry renewal in 2011, the subsidiary needs to plan its next steps. The case is positioned in May 2011, when M&M's subsidiary must choose from four alternatives. M&M can continue with its prevailing business model of importing completely built units (CBUs) from its Indian operations to meet local demand while using South Africa as a re-export hub for the burgeoning markets in sub-Saharan Africa. It can also choose to collaborate with a local vendor to assemble vehicles locally from completely knocked down (CKD) components imported from India. Alternatively, M&M may choose to set up its own manufacturing facility in South Africa, like many of its competitors. Lastly, M&M can choose to wait and watch until it notes definitive signs of revived demand. The case provides an opportunity for students to examine each alternative and make a decision on M&M's way forward in South Africa.

Learning Objective: The case provides students with opportunities both to explore alternative growth scenarios for a company interested in expanding into Africa and to gain a sense of how a multinational company can integrate its African strategy with its global strategy. A takeaway from the case is that a company's managerial decisions are often made in a context characterized by changing

economic trends, the competitive nature of the industry, the strategic direction set by the board of directors, the competencies built up over time, and the ground realities of the local market. Students will also gain a sense of the classification of automotive products, the segmentation of automotive customers, the role of government incentives, consumer aspirations in African markets, and motivations to go global even in light of increasing domestic demands.

Publication Date: December 01, 2011

Discipline: Operations Management; General Management/Strategy; Organizational Behaviour/Leadership; International Business;

Issues: Globalization; Market Expansion; Contract Assembly; Re-export Hub; Customer Segmentation; Automotive; India; South Africa

Industry: Manufacturing;

Setting: India, Large organization, 2011

Difficulty: MBA/Postgraduate

9B08D006

Introductory Note on Operations Management

John S. Haywood-Farmer

This note explores four fundamental aspects of all organizations in order to help students develop an effective operating point of view and decision-making skills related to operations. The basic components of operating systems are outlined as well as key tasks for operations managers, types of operations systems and tools to help diagnose and solve common operations problems.

Publication Date: October 24, 2008

Discipline: Operations Management; Introductory Business;

Issues:

Setting: 2008

Difficulty: Introductory

9B08D001

Paediatric Orthopaedic Clinic at the Children's Hospital of Western Ontario

Robert Klassen; Kellie Leitch; Manpreet Hora

The chief of paediatric orthopaedic surgery was very concerned by the long times that the young patients (and their parents) were experiencing in the orthopaedic clinic. Long wait times tended to aggravate the already pent-up distress and concern that the patients were facing. The chief glanced at recently collected data on service times and wondered how the process could be improved, while continuing balancing budgetary pressures to reduce costs. Moreover, any changes couldn't be done in isolation, as her clinic shared resources with other departments. A monthly executive meeting was fast approaching and expectations were starting to run high that her efforts might be able to spur improvements in other departments too.

Publication Date: May 06, 2008

Discipline: Operations Management;

Issues: Process Design/Change; Service Operations; Health Administration; Process Analysis

Industry: Health Care Services;

Setting: Canada, Large organization, 2007

Difficulty: Undergraduate/MBA

9B06D017

Wilkins, A Zurn Company: Aggregate Production Planning

Eric Olsen; Carol Prahinski; Jenni Denniston

The general manager of the Wilkins plant in Paso Robles, California has received instructions from head office to reduce inventory by 30 per cent in the next quarter. Although inventory had been accumulating over the past years, this has been seen as a benefit to the company for a couple of reasons. One is that the cost of raw materials has risen in the past year. The second is that the company has a policy of no layoffs, so having inventory in stock allows the company to minimize the use of overtime and temporary workers. The general manager wondered whether revising the production planning process would be enough to solve Wilkins' inventory problems.

Publication Date: October 12, 2006

Discipline: Operations Management;

Issues: Manufacturing Strategy; Inventory Planning/Control; Logistics; Operations Management

Industry: Manufacturing;

Setting: United States, Medium organization, 2005

Difficulty: Undergraduate/MBA

9B06D006

Wilkins, A Zurn Company: Demand Forecasting

Carol Prahinski; Eric Olsen

The newly promoted inventory manager wonders if there is an easier, more reliable means of forecasting the sales demand. Currently forecasts are based on the plant manager, sales/marketing manager and inventory manager's knowledge of industry trends, competitive strategies and sales history. He must decide if using statistical forecasting methods would ease the forecasting process and make the forecast more reliable. Students are exposed to different forecasting techniques, including executive opinion, linear regression and time series. The data characteristics include seasonality, trend and random fluctuations.

Publication Date: August 21, 2006

Discipline: Operations Management;

Issues: Sales Forecasting; Demand Analysis; Planning Information; Uncertainty

Industry: Manufacturing;

Setting: United States, Medium organization, 2005

Difficulty: Undergraduate/MBA

9B05D014

Multiple Sclerosis Society of Canada: London-Grand Bend Bicycle Tour

Carol Prahinski; Thomas K. Yeung

The senior manager of the Multiple Sclerosis Society of Canada, Ontario Division is working on the next fundraising event, the bicycle tour. She must plan the routing activities, while also concerned about cyclists' safety and enjoyment while participating in the event. Students will apply project management tools such as PERT/CPM diagrams and critical path while recognizing and managing for uncertainty in task duration times.

Publication Date: October 13, 2005

Discipline: Operations Management;

Issues: Critical Path; Uncertainty; Project Management; Planning

Industry: Social Advocacy Organizations;

Setting: Canada, Small organization, 2005

Difficulty: Undergraduate/MBA

9B02D003

Grocery Gateway: Customer Delivery

Operations

P. Fraser Johnson

As Canada's largest direct online grocer, Grocery Gateway provided home delivery to approximately 125,000 customers in the Greater Toronto area, which covered a territory of approximately 3,200 square kilometres. Grocery Gateway's management staff was concerned that the company had been met only 67 per cent of its target of making four deliveries per hour. Consequently, the vice-president of industrial engineering and operations had been asked to make some recommendations aimed at improving delivery operations. These recommendations would be presented at Grocery Gateway's next weekly management meeting. There are a number of options that were worth considering. The vice-president's job was to pinpoint those options and assess how each one might affect the company's existing operation. The final choice would have to reflect and maintain Grocery Gateway's focus on low cost and high service.

Publication Date: March 28, 2002

Discipline: Operations Management;

Issues: Transportation; Distribution; E-Business; Logistics

Industry: Administrative, Support, Waste Management and Remediation Services;

Setting: Canada, Medium organization, 2001

Difficulty: Undergraduate/MBA

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MacPherson Refrigeration Limited

John S. Haywood-Farmer; Bill Rankin

Linda Metzler, newly-appointed production planning manager, is drafting an aggregate production plan for the company's refrigerators, freezers and air conditioners for the next year. She has considered three plans. Students are asked to devise better plans and to evaluate the quantitative and qualitative factors favouring them. Ultimately, the use of linear programming to construct aggregate plans will be introduced.

Learning Objective: To expose students to the trade offs involved in the aggregate planning process. Many of these are quantitative, but there are some qualitative ones, as well.

Publication Date: October 02, 1993

Discipline: Operations Management;

Issues: Aggregate Planning; Linear Programming; Tradeoff Analysis

Industry: Manufacturing;

Setting: Canada, Large organization, 1993

Difficulty: Undergraduate/MBA

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Ivey Publishing
Ivey Business School at Western University
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