

Preface

The rapid rise of manufacturing capability in China is turning that country into a dominant player in the world economy. In the meantime, the largest homogeneous market on Earth is emerging. Few businesspeople can afford to ignore a new market of more than 1.3 billion individuals with one common language, a similar cultural background, and rapidly increasing living standards. These and other critical but less visible forces are significantly changing the landscape of global competition. They affect not only the way businesses operate from day to day but also the very models on which businesses are based. It is difficult to find a major U.S. company that does not have a presence in China. At the same time, almost every major Chinese company has a growing presence around the world. Companies worldwide are all facing complex challenges in their global value chain spanning from strategy to design, production, logistics, supply chain, information technology, sales, and marketing. It is clear that we need a new cadre of business professionals to help companies thrive in this new economic order.

Since 1994, both Stanford University and Hong Kong University of Science and Technology have recognized the necessity for education programs to address this need by partnering with businesses. We, the authors of this book, along with our esteemed colleague Hau Lee of the Stanford Graduate School of Business, foresaw China's rapid economic rise as well and, also since 1994, have been working with industries on various projects and

interacting with students of various levels. We have developed a revolutionary project-based course based on the following specific objectives:

- To articulate a global vision, with emphasis on synergies between the United States and China
- To serve as a bridge between the needs of industry and the skills and experience of academics with extensive industry background
- To facilitate global value chain problem solving for companies' stakeholders
- To learn to work with people of different cultures

This book is a collection of solutions for various companies' global value chain challenges. We have written it with assistance from teams of graduate students from both Stanford University and Hong Kong University of Science and Technology. The companies profiled here were selected on the basis of their needs and the issues they were facing. Our diverse global industry and consulting experience, together with Hau Lee's credibility in supply chain management, opened up many challenging and exciting projects for us. The graduate students who participated in our global project coordination program were chosen through a highly selective and rigorous process in which their research expertise, relevant work experience, and analytical skills played a key role. These factors were also considered in placing them on a particular project team. All of the cases presented articulate detailed solutions to our global clients' real-world problems. In a few cases, as per the client's request, the actual name of the firm is not revealed.

The cases are organized into chapters that deal with a particular facet of the firms' value-chains, thus highlighting the comprehensive breadth of the work that has been accomplished. From waste management issues in an apparel production company to suggestions for strategic expansion of a niche player in supply chain management, we first clearly identified the problems and then provided thorough suggestions and solutions to address the issues. In this way the cases are exceptional in their clarity in stating the problem and demonstrating appropriate solutions. In addition, much of the material presented reflects on the growing industrial might of China. Each case involves a firm that does business with China or with Chinese firms, demonstrating how China has emerged as a major outsourcing location for electronics and apparel production and manu-

facturing. Conversely, the book also presents an unbiased and realistic picture of the business environment in China and will help readers become aware of the challenges in outsourcing to China, such as communication and language barriers, lack of transparency in transactions, and transportation issues (applicable mostly to inland regions). In some of the cases, such challenges have had enough impact to influence the firm to outsource somewhere besides China. The book also illustrates the growing sophistication of business processes in many Chinese firms and, more surprisingly, an increasing trend among Chinese manufacturers to address and respond to the demands of the sophisticated North American market.

Chapter Organization

Taking a top-down approach to a firm's value chain, the book starts by discussing strategy. Chapter 1 looks at the strategy as a part of the value chain. To garner long-term growth while maintaining profitability in the short term, firms need to have clearly defined short-term and long-term goals as well as specific plans of action to accomplish these goals. This chapter presents two cases with focused suggestions on expansion strategies appropriate for two competitive companies operating in different industries, both doing business with China: PCH International, an outsource supplier of computers and consumer electronics; and Lil Lawton, a manufacturer of children's garments.

Chapter 2 is concerned with sales and marketing operations. Sales and marketing are the functions most closely related to a company's realized cash flows and they are the operations most visible to the outside world. The supporting case explores how HKS Products strives to reach customers by using a new tool, providing an example of how innovative, technology-driven solutions can aid the sales and marketing process.

Globalization of operations has allowed many firms to benefit fully from the competitive advantages that exist among countries. However, spreading operations across the world and sourcing component supplies thousands of miles away have introduced a whole new set of problems for today's global firm and have exposed its operations to complicated risk factors. Logistics and supply chain issues can have dire impacts on a business's bottom line. Late arrival of an order in a seasonal industry, for

example, translates into lost customers, reduction of the firm's market share, and deprivation in the firm's current and future cash flows. An inefficient supply chain for parts and components can have serious ramifications for the firm's production capacity. The cases in Chapter 3 focus on companies that deal with logistics issues and supply chains. The first case analyzes the value added to a fast-growing supply chain management company by deploying radio frequency identification (RFID) across its supply chains to provide for better service and increased efficiency. The second case provides an in-depth look at the necessary strategic decisions and risk analysis in designing the supply chain. In this case, the firm chooses to source its production in a higher-cost region because of reduced risk.

In Chapter 4, the focus changes to information technology (IT) system capabilities. IT is a crucial part of the value chain because of its role in supporting crucial business processes. Managing the growth of the IT organization through optimal allocation of resources and by creating IT applications that have clear business targets (such as aligning IT with business processes) is of great importance to any firm that plans to leverage IT to enhance its operations and derive value from the technology. These two points are the underlying themes of the cases presented in this chapter. In the case of GTP America, the firm was dealing with governance issues in growing and aligning its IT organization. The case provides concrete suggestions that address these issues. The second case, about a region in China that is seeking to utilize a Web-based IT platform to assist non-Chinese companies that are planning to invest, depicts the crucial role of IT applications in providing mission-critical services to clients. The case analyzes the impact of such a comprehensive IT platform and provides a detailed functional analysis of such a system.

The final chapter deals with the most fundamental value-generation step in a manufacturing firm's value chain: the production process. Production has a pronounced impact on a company's underlying profitability because of its close association with value creation; however, most of the fixed and variable costs are incurred during the production process as well. As a result, minimizing waste, implementing industry best practices to create efficient processes, and introducing innovative methodologies that leverage advances in technology are of utmost importance for a manufacturing firm. This chapter presents three cases. The first two in-

volve Esquel Group, a world leader in garment manufacturing. The first case analyzes applications of RFID in the company's spinning mills and provides suggestions for process reengineering across the entire value chain as a result of deploying RFID. The second Esquel case involves cost minimization through waste management. The case looks in detail at Esquel's production process and carries out statistical analysis to clarify sources of wastage. The third case focuses on Sterling Products Ltd., an apparel manufacturer, and examines how it can improve its processes to shorten production prototype lead time.

The Intended Audience

Instructors who would like to inject real-world practice into educating future managers and decision makers will find this collection of chapters a helpful guide to the scope of problems that are reasonable to tackle in a twelve-week period. Furthermore, the cases presented can provide benchmarks or examples to follow for ongoing efforts by student teams. This book may prove to be the perfect educational tool, especially in a graduate engineering curriculum, for making students realize the underlying nature of business problems in an increasingly global environment.

Industry practitioners will find the cases offered here to be of high quality and a great source of many analytical tools and best practices. In some cases, our team of experts applied their own research expertise to the solution of problems, adding depth and innovation in creating tools to solve business problems.

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