

Chapter 2: Strategic Use of Information Resources

Chapter Overview

A long-standing management topic for information systems courses is the use of information and information systems for strategic advantage. The triangle model of chapter 1 sets up this discussion by making the link between IT and business strategy. This chapter explores some of these concepts, building on the classic Porter models.

Discussion Opener: On the PowerPoint slides, there are questions from the Zara case.

Alternate Discussion Opener: Why are we concerned with the alignment of business, organizational, and information strategies? How can that knowledge be helpful to you in your career?

Key Points in Chapter

Innovative use of a firm's information resources can provide companies with substantial advantages over competitors. The introduction to this chapter explores Zara, a global retail and apparel manufacturer based in Spain that has successfully implemented this idea by having a continuous flow of new products that are typically limited in supply. Zara has created a system that draws its clientele into its stores, on average, 17 times per year as compared to 4 times per year for most stores. This is made possible by aligning its IS model with its business model. The conclusion is that a company can achieve substantial advantage over its competitors through innovative use of its information resources.

The evolution of information resources for business advantages is explored. Building on the **eras** model of Harvard Business School professors Applegate, McFarlan and McKenney, this model succinctly summarizes how IT has been used to create efficiency, effectiveness, strategic gain, and value. This model is useful to show how leading edge companies have engaged IT for more than just automation of activities and removal of paper from the business. The model also incorporates the economics of information vs. the economics of things that was discussed in Chapter 1. The text explains some of the key components of each era. Students might be engaged in discussion as to what a business's objectives are and how IT can help achieve those objectives, based on the

targets and models discussed in Figure 2.1. Students should explain how the current Era is different from the previous one, and the implications for these changes.

The term **information resources** is defined as the data, technology, people, and processes available to perform business processes and tasks. Information resources can be either assets or capabilities. *IT asset* is anything, tangible or intangible, that can be used by a firm in its processes for creating, producing and/or offering its products (IT infrastructure is an asset). *IT capability* is something that is learned or developed over time in order for the firm to create, produce, or offer its products. Figure 2.2 shows these resources with a definition and an example. Students would do well to understand the difference between an asset and a capability.

Crafting advantages using information resources is the job of the manager. Information resources include the technical systems, as well as the people and processes associated with the systems. To evaluate the business advantages of using a particular information resource, five questions are asked:

- What makes the information resource valuable?
 - **Network effects** occur when benefits increase as the network grows.
- Who appropriates the value created by the information resource?
- Is the information resource equally distributed across firms now and in the future?
- Is the information resource highly mobile?
- How quickly does the information resource become obsolete?

Information resources can be used strategically. They can influence competitive forces (see Porter's model in Figure 2.3). For example, the potential threat of new entrants is influenced by using information resources to build barriers to entry. The bargaining power of buyers is influenced by using information resources to build switching costs. The bargaining power of suppliers can be influenced by using information resources to integrate backwards or to reduce costs of linking with other suppliers. Substitute products are more difficult to create if information resources are used to add value to a business's product and service offerings. And, industry competition can be influenced by information resources when these resources are used to differentiate products or services and to build new markets such as net markets. In Figure 2.4 the 5-forces model evaluates how Zara was able to gain competitive advantage through the strategic use of IT resources and services.

Information resources can be used to alter the value chain of a business, creating strategic advantages through lower costs and/or increased value. Porter's value chain suggests primary and support activities a business can use to create value. Information resources lower activity costs, which may create an advantage for the firm. Information resources add value only if a firm has accurate information regarding customers. By extending Porter's model to include supply chains of business partners, information resources are useful to create advantages through innovative linking of a business's supply chain and distribution channel chain. Students often fail to apply the value chain to business partners. Figure 2.5 shows Porter's Value Chain model of the firm, and Figure 2.6 applies the value chain model to show the extended value system and the interconnected

relationships between organizations, including suppliers and buyers. **SCM** and **CRM** are introduced, showing how they are applied to the value chain. Figure 2.7 describes the value added to Zara's primary and support activities by its innovative IS. The main focus is on the value added to Zara's processes, but it also shows how its suppliers and customers realize this value.

Sustaining competitive advantage is discussed next, and Figure 2.8 describes the elements of the Piccoli and Ives framework.

Next there is discussion on the **Resource-Based View (RBV)**. It is a useful approach to identify two subsets of information resources: those that enable a firm to *attain* competitive advantage and those that enable a firm to *sustain* the advantage over the long term.

Information resources can support the strategic purposes that drive the use of the business's resources or strategic thrusts. While not discussed in this chapter, a lecture on this topic might include a discussion of Wiseman's theory of strategic thrusts. There are four types of thrusts: differentiation, cost, growth, and alliance. To find specific strategic opportunities, this model suggests asking three questions:

- What is the mode of the thrust?
- What is the direction of the thrust?
- What is the strategic target of the thrust?

Figure 2.9 indicates the extent to which the attributes of each information resource may add value to Zara. In the table you will notice that the resources are categorized by asset and capability and then by value creation and sustainability. The new edition includes Relationship Skills – Externally Focused and Relationship Skills – Spanning under the IT Capability dimension. A discussion on this table may be useful to have students provide their own experiences and frame of reference on each of these resources.

Social Business Lens: Social Capital – **Social capital** is created through relationships. Three types of value potentially created are: structural (pattern of relationships), relational (nature of the relationship), and cognitive (thoughts of people in the network).

Next in the chapter is a discussion of **strategic alliances**. **Supply chain management (SCM)** is used as an example. Facebook's IPO and the partnership with Zynga is used to illustrate this concept. A discussion of Brandenburger and Nalebuff's **co-opetition** theory demonstrates that some virtual corporations are formed with competitors. Basically, companies both cooperate and compete in the same industry.

The last section in this chapter includes a discussion of risks of information systems. This discussion, which describes information systems that failed, is necessary to balance the discussion of competitive advantages afforded by information systems. Instructors are encouraged to have a discussion about the risks and to challenge students to come up with additional risks.

Geographic Box: Mobile-Only Internet Users Dominate Emerging Countries – This vignette outlines the common practice of emerging countries to bypass traditional computing, opting for completely mobile connectivity. Malaysia is called a “test case.”

The chapter concludes with the concept of co-creating IT and business strategy. The focus of the chapter has been on how IT strategy is aligned with business strategy. It discusses how information is increasingly a core component of the product or service offered by the firm, that IT strategy *is* business strategy – they cannot be created without each other. FedEx is considered as an example; since its main product is information, the company cannot function without IT even though it is primarily a package delivering company. Business models cannot be built without consideration of information systems.

Illustrative Answers to Discussion Questions

1. How can information itself provide a competitive advantage to an organization? Give two or three examples. For each example, describe its associated risks.

Ans: There are many appropriate responses to this question. This chapter explores some of them, such as building barriers to entry, creating switching costs, reducing operating costs, opening up new markets, and creating time-based advantages. Encourage students to give specific examples from companies they know about. For each example, explore the risks (i.e., awaking a sleeping giant, demonstrating bad timing, implementing IS poorly, failing to deliver what users want, or running afoul of the law). Discuss their answers in the context of Zara and FedEx.

2. Use the five competitive forces model as described in this chapter to describe how information technology might be used to provide a winning position for each of these businesses:

- a. A global advertising agency
- b. A local restaurant
- c. A mobile applications provider
- d. An insurance company
- e. A web-based audio book service

Ans: The five forces are substitutes, supplier, buyer, new entrants, and inter-industry. The question asks the student to pick a force and describe how each of these 5 types of business might use information resources to reduce the threat of that force. An example of analyzing the substitute force is given below:

- Global advertising agency – A substitute for a global ad agency could be the use of local ad agencies in various locations. Another possibility would be using in-house

personnel to fashion ad campaigns. IT resources might provide better coordination among different global locations, or even automatic translation to other languages.

- Local restaurant – Substitute services might be using a chain restaurant, or cooking at home. Information resources might be useful to create switching costs using a frequent customer card, or to provide customers with information about the ingredients in their foods with connections to their health monitoring device (such as a FitBit™). Note that these ideas might also be useful to reduce the threat of other forces, too.
- A mobile applications provider - A substitute service might be employing a desktop/laptop application provider, or bringing applications development in house. The firm can reduce the threat of substitution by increasing the reliability and emphasizing the superior features of the mobile apps.
- Insurance company – A substitute service that might threaten an insurance company is a trend with large firms to “self-insure.” More specifically, using health insurance as an example is quite interesting. A health insurance company substitute might be to make use of an HSA (Health Savings Account), which is another form of self-insurance, but tax authorities in the USA require putting money into a special savings account so that healthcare expenditures are covered. A partial substitute would be to concentrate resources on healthy living or eating practices, which would presumably reduce healthcare expenses later. Insurance firms might use their information resources to offer a larger variety of options to customers. The IT would be required to track all the chosen options right on the spot when service is required. Other services of value to the customer such as quick and easy plan application and approval, extra incentives for longevity in accounts, links with medical practitioners, and closer links with preferred providers.
- Web-based audio book service – A substitute service might be a brick and mortar audio book store where customers could actually listen to selected portions of any book prior to buying. Another might be placing a kiosk in a bookstore or department store where the customer has instant access to the books after listening to the sample (if desired). The web-based audio book service might use IS to offer a broader array of books with more helpful information on the background of the book or its author, and feedback from customers on each audio book along with expert recommendations. Also, the web-based retailer could create value by setting up discussion forums for customers where they could interact with others interested in their particular selections.

3. Using the value chain model, describe how information technology might be used to provide a winning position for each of these businesses:

- a. A global advertising agency
- b. A local restaurant
- c. A mobile applications provider
- d. An insurance company
- e. A web-based audio book service

Ans: The advertising agency has primary activities (inbound logistics, operations, outbound logistics, marketing and sales, and service) and secondary activities (organization, human resources, technology, and purchasing). The question asks the student to describe how each of these 5 businesses might use information resources to

add value to the activities to their company (and possibly to partners in their supply chain). An example of analyzing a particular value chain stage is:

- Global advertising agency – (operations) An agency could use automatic translation to get a head start on providing a web site for each country in which a particular client operates. The system could improve on those already available by tailoring certain phrases that would occur globally. For instance, the word “Sale” might be treated in a special way to provide the best term in each target language; the word might more closely match the typical way to introduce a special deal.
- Local restaurant– (marketing) An information system could take various factors into account (such as season, holiday, or even weather) to determine specials to run each day or even new selections to feature.
- A mobile applications provider – (human resources) An information system can be used to keep track of employee skills and development of those skills. This adds value for customers, because many applications require particular database or development training.
- Insurance company – (outbound logistics) An information system may support all communications with customers for Electronic Funds Transfers for all transactions from premiums to claim payments.
- Web-based audio book service – (outbound logistics) A system could be set up where the book service delivers books in any desired format, from mp3 to physical CD, depending on the wishes of the customer. This flexibility could build loyalty among customers because these idiosyncratic preferences are sometimes quite strong.

4. Use the resource-based view as described in this chapter to describe how information technology might be used to provide and sustain a winning position for each of these businesses:

- a. A global advertising agency
- b. A local restaurant
- c. A mobile applications provider
- d. An insurance company
- e. A web-based audio book service

Ans: The Resource-Based View (RBV) looks at gaining competitive advantage through the use of information resources. Two subsets of information resources have been identified: those that enable firms to attain competitive advantage (rare and valuable resources that are not commonplace), and those that enable firms to sustain competitive advantage (resources must be difficult to transfer or relatively immobile). The question asks the student to describe how each of these 5 businesses might use information resources to add value to the activities of their company.

- Global advertising agency – The agency could utilize its global relationships to market strategically to customers through a CRM system that would be difficult to imitate because of the firm’s global reach. IT talent could be utilized from all parts of the world to create ads that are innovative and strategic in nature.

- Local restaurant – In conjunction with a frequent dining card, a customer preference system could be set up which markets to customers that have not utilized the restaurant recently. Perhaps offer coupons to these customers, etc.
- A mobile applications provider – An IS system could be used to track interactions with customers (along with their usage of the applications), thereby developing sustainable relationships and generating more customer loyalty. Competitive advantage can be attained by innovative IT embedded in the features of the phones. IT can sustain that competitive advantage through superior customer service, facilitated by a CRM system.
- Insurance company – Provide a new service through their websites that takes advantage of a service that is unique to that company and difficult to emulate.
- Web-based audio book service – Take advantage of its online presence to offer other services like book recommendations, limited samples, and other services that would enhance its services.

5. Some claim that no sustainable competitive advantages are gained from IT other than the capability of the IT organization itself. Do you agree or disagree? Defend your position.

Ans: This is, of course, a very open-ended question. As the chapter discusses, sustainable advantage is hard to come by. The sustainability framework provides some food for discussion. Because almost any advantage gained by a company can eventually be copied by another at some point in the future, it is an important issue for discussion.

Students who agree with this statement might argue that the key to sustaining any advantage comes from the way all business resources are organized and used, and ultimately that comes down to how the managers and the people are able to perform. Students who disagree with this statement might argue that even the capability of the IT organization is not a sustainable advantage because people come and go, they can be bought by another organization as a move to create the capability elsewhere, and their skills and knowledge atrophy over time, when new capabilities arise. Witness IT organizations who excelled at managing mainframe applications, who are now struggling to keep up with web-based applications.

6. Cisco Systems has a network of component suppliers, distributors, and contract manufacturers that are linked through Cisco's extranet. When a customer orders a Cisco product at Cisco's Web site, the order triggers contracts to manufacturers of printed circuit board assemblies when appropriate and alerts distributors and component suppliers. Cisco's contract manufacturers are aware of the order because they can log on to Cisco's extranet and link up with Cisco's own manufacturing execution systems. What are the advantages of Cisco's strategic alliances?

ANS: Cisco is linked via its extranet to contract manufacturers who print circuit board assemblies. The circuit boards can be provided when the order is made, or shortly thereafter. This reduces the circuit board inventory that Cisco needs to maintain. Similarly, since it is linked to component suppliers, it can be anticipated that Cisco's

inventories for component supplies can be maintained for several days (or less) of manufacturing needs, instead of for weeks or months. The distributors linked via the extranet can be alerted that a customer order is being processed. This can help them schedule the delivery and complete the paper work so that the customer order can be completed more speedily. By making the processing more efficient, inventory and processing costs may be reduced. Ultimately this may result in reduced prices and speedier delivery to the customer.

b) What are the risks to Cisco? To the suppliers?

ANS: Cisco Supply Chain Management can improve the way a company finds raw components it needs to make a product or service, manufactures that product or service, and delivers it to customers. But sharing that information might increase the risk of a security breach, which would open up sensitive data to attack. Both Cisco and suppliers are vulnerable. Further, Cisco's long-term needs would be immediately known to suppliers, and they could be tempted to increase prices on some products that are to be in higher demand. Suppliers might also count too heavily on that information, and if it is not accurate, they might be caught short on particular items.

Further Discussion Questions

1. Social networking, used strategically, can be viewed as an information resource. Select a firm to analyze. Explain how SN can be used as an IT Asset and how the skills acquired by corporate staff can be viewed as an IT Capability.
2. Apple's iPad is saturating the market, commanding huge market share. Use Porter's five competitive forces model to analyze how Apple has attained a competitive advantage in the tablet market.

Cases

Case Study 2-1: Groupon

Students might not be familiar with Groupon. They should visit the website (<http://www.groupon.com/>) and visit the entry on Wikipedia. From the case in the textbook and this additional information, they should be able to answer the questions posed.

1. How does information technology help Groupon compete?

Ans: IT creates the network and communicates daily deals to participating potential consumers. The deals are e-mailed to the public. The system also tracks acceptance of the offers, determining when constraints are satisfied.

2. Do you agree or disagree with the statement that “Groupon has no sustainable competitive advantage”? Please explain your point of view.

Ans: Student responses might support or oppose the statement. The important point is for them to justify their positions with logical arguments. The case seems to agree with the statement, since there are a number of competitors entering the market, and Groupon’s service is not truly unique. However, Groupon could continue to innovate in order to establish itself as the premier service for this type of market. Branding its product will be critical, so that consumers only think of Groupon for this activity. The Piccoli and Ives framework will provide useful discussion material.

3. How does Groupon add value to the companies whose offers are sold on the site?

Ans: The value created for companies is both direct and indirect. As stated in the case, a large number of companies realize a loss from the volume of coupons redeemed. However, they increase their visibility by appearing on Groupon’s site and the coupons get the target customers to visit the company. Getting new customers through the door creates the opportunity for up-selling and cross-selling.

4. What impact, if any, will Groupon Now have on Groupon’s competitive position? Explain.

Ans: Groupon Now will create an immediate competitive advantage by making use of the geographical location-based systems and the pervasiveness of mobile devices. However, it would not be sustainable since Groupon’s competitors will likely duplicate that feature quickly. More features must be developed to remain ahead of the competition.

5. What would you advise Groupon leaders to consider as their next application?

Ans: Student responses should be creative and reflect serious possibilities. One obvious extension would be to capitalize on the social networking phenomenon. Another possibility is to create an application designed specifically for entrepreneurs. Third, there might be an application that could limit the number of coupons based on quantity or time. This would encourage more members to respond with urgency and mitigate the negative financial losses of companies offering coupons.

6. Analyze the business model of Groupon using Porter’s five forces model.

Existing competition: Considering Groupon’s industry as the paid couponing industry, there is not very much competition. But considering their industry as couponing in general, there is quite a bit of competition. Newspapers, emails, websites, and several other publications provide coupons. The unique factor here is having higher customer commitment because they must purchase a voucher for future use.

New entrants: Others who duplicate their business model have appeared, and switching costs would be unlikely to build on the end-customer's (the diner's) side. However, providing special deals to restaurants with increased use could provide switching costs.

Buyer power: Groupon provides entertaining, colorful ads to the end customers (the diners), and has preemption impacts (as the first such service). Therefore, customer loyalty might increase switching cost.

Supplier power: Considering restaurants as suppliers, this is a difficulty in Groupon's model. Without restaurants, Groupon would not be able to operate. Groupon therefore has a high threat in supplier power. However, if customer loyalty is high, Groupon would be able to reduce supplier power somewhat, so restaurants might find Groupon campaigns to be more successful than those of other similar firms.

Substitute products: This depends on how the industry is defined. If it is defined narrowly (paid couponing), there are many substitutes. If it is defined broadly (couponing in general), then substitutes might include restaurant "specials" that might be offered without a coupon at all. Also, a substitute might be to choose a less expensive restaurant (such as a fast food outlet).

Students will likely have different assessments of the individual elements. They should be able to explain their decisions, describing the forces experienced by Groupon.

Case Study 2-2: Zipcar

This is an interesting, short case about how a new type of rental car company is able to operate in a completely new business model, as compared to other rental car companies, and embrace **Web 2.0** technologies to gain further competitive advantage.

1. Apply the resource-based view to Zipcar's business model to show how information resources may be used to gain and sustain competitive advantage.

Ans: Zipcar has created a model that would be difficult for other companies to imitate with its technology infrastructure and low overhead. Zipcar has a valuable set of agreements in place with various agencies, businesses, and city governments that enabled them to achieve desirable positions for parking spaces. They have population and transaction information that allows them to reallocate their supply. Their model would be difficult for traditional car rental companies to model due to their existing infrastructure and model. Customers could utilize other rental companies, but they would lose the convenience offered by the Zipcar model of hourly rental agreements and convenient locations.

2. Discuss the synergy between the business strategy of Zipcar and information technology.

Ans: There is tremendous synergy between Zipcars business and IT strategy. Zipcar is heavily dependent upon an automated process and supports social networking of its clients so that they can freely provide feedback on the company and its products and services. IT completely supports what Zipcar is trying to accomplish.

3. What *network effects* are part of Zipcar's strategy? How do they add value?

Ans: Through their use of social networking, they provide value to the customer by providing an open exchange of ideas and feedback to Zipcar.

4. As the CEO of Zipcar, what is your most threatening competition? What would you do to sustain a competitive advantage?

Ans: The most threatening competition has not yet been identified. Existing rental agencies have not been successful in adopting Zipcar's model (a web-based one with distributed locations). However, this situation is likely to change over time in unpredictable ways. To sustain their advantage, they should continue to innovate through the use of IT and by listening to customer feedback on the social network sites. Look for strategic partnerships with suppliers or other potential providers of services that Zipcar could leverage to improve its service or add extra value.

Supplemental Cases

Groupon by Chatterjee, S., O'Keefe, S., and Streiff, A., Richard Ivey School of Business. W12674, 15 pages, 2012 (industry: retail trade)

This case study provides a foundation for the "collective buying industry," a new business model. As discussed in the case, the future is uncertain, relying on the innovative decisions of the market leaders. This case is a good compliment to the mini-case provided in the chapter. Students will be asked to recommend a course of action for the company to maintain the incredible growth trajectory.

Apple Inc. in 2010 by Yoffie, D.B. and Kim, R., Harvard Business School. 9-710-467, 25 pages, 2011 (setting: California)

Apple launched the iPad to the market in April 2010, on the heels of the incredibly successful iPhone and iPod products. This case study explores the competitive challenges Apple faced worldwide, particularly with struggling sales of the Macintosh personal computer. Students will investigate the growth potential for this new product, suggesting ways to build market share into the future.

Carnival Cruise Lines by Applegate, L.M. & Robert J Kwortnik, Gabriele Piccoli, Harvard Business School Publishing; 07/07/2005; (33 pages)

Highlights the potential value of customer data and the choices and challenges the firm faces when attempting to capture this value. Carnival collects a significant amount of individual-level behavioral and demographic customer data. Senior management must now decide how to leverage such a wealth of data.

Information Systems at FirstCaribbean: Choosing a Standard Operating Environment by Beaubien L & S. Mahon, Ivey School of Business; 3/22/2005; (12 pages)

The Canadian Imperial Bank of Commerce and Barclays Bank PLC were in advanced negotiations regarding the potential merger of their respective retail, corporate, and offshore banking operations in the Caribbean. Currently there are four systems in operation in the region. All are carry-overs from the pre-merger operation of the bank. Each of the systems has different pros and cons consisting of degree of fit with the organization strategy, likely impact on organizational culture, and functionality.

Kemps LLC: Introducing Time-Driven ABC by Robert S Kaplan. Harvard Business School Publishing; 08/03/2005; (10 pages)

Managers use the information to enhance process efficiencies, negotiate new terms with customers, and attempt to win new business. The company now faces some crucial decisions about how to forge new relationships with key customers.

Change Management of People & Technology in an ERP Implementation by Edwards, H. E., Humphries, L. P. Idea Group Publishing; 2005

Eighteen months after adopting an enterprise resource planning (ERP) system, the chief executive officer wanted an investigation into the performance of the system. The results of the investigation reported here reveal problems with the acquisition and implementation process.

Lands' End case: Ives, B., & Piccoli, G. (2003). Custom made apparel and individualized service at Lands' End. *Communications of the Association for Information Systems*, 11(1), 3.

This case is somewhat old but I still use it as the first case because (1) it is free and I can put it on the course website, and (2) it is a classic one that fits well with the sustainability framework.

Developing Inter-Organizational Trust in Business-to-Business E-Commerce Participation – Case Studies in the Automotive Industry, P. Ratnasingam, Idea Publishing Group Case, 11 pages, IT 5610 (setting: Australia)

The case study describes the process involved in an EDI implementation in the Australian automotive industry. Buyer-supplier interactions during EDI implementation and its impact on technical, political, behavioral, and trading partner trust aspects are discussed

in this case study between Ford Australia (manufacturer) and Patents, Brakes and Replacements Limited (their first tier supplier).

Analyzing the Evolution of End User Information Technology Performance: A Longitudinal Study of a County Budget Office, J. Sacco and D. Hackler, Idea Publishing Group Case, 14 pages, IT 5611 (scope: U.S.)

This case study examines end-user information technology evolution from microcomputers to World Wide Web applications in a large county budget office over a fifteen-year period. The study evaluates end-user information technology performance and comments on organizational, technical, and social issues that accompany information technology implementation.

Risk in Partnerships Involving Information Systems Development: Lessons From a British National Health Service Hospital Trust, G. Harindranath, J.A.A. Sillince, and R. Holloway, Idea Publishing Group Case, 22 pages, IT 5619 (setting: UK)

This case study presents a UK-based project that promised new healthcare service delivery by redesigning healthcare procedures and developing sophisticated new information systems through a unique partnership between public and private sectors. The case study concentrates on one of the more important determinants of success or failure of such partnerships involved in information systems development, i.e., 'risk.'

Success and Failure in building Electronic Infrastructure in the Air Cargo Industry: A Comparison of the Netherlands and Hong Kong SAR, E. Christiaanse and J. Damsgaard, Idea Publishing Group Case, 13 pages, IT 5645 (setting: worldwide)

This case describes the genesis and evolution of two IOSs in the air cargo community and provides information that lets students analyze what led one to be a success and one to be a failure. The two cases are from the Netherlands and Hong Kong SAR.

Success in Business-to-Business E-Commerce: Cisco New Zealand's Experience, P. Ratnasingam, Idea Publishing Group Case, 19 pages, IT 5649 (setting: New Zealand)

The case study about Cisco New Zealand permits students to learn about the factors that influence the successful trading partner relationships in business-to-business e-commerce participation among other pertinent issues.

The Role of Virtual Organizations in Post-Graduate Education in Egypt – The Case of the Regional IT Institute, S. Kamel, Idea Publishing Group Case, 13 pages, IT 5653 (setting: Egypt)

This case reports on the experience of Egypt's Regional IT Institute in the field of education and training. The Regional IT Institute was established in 1992 targeting the formulation of partnerships and strategic alliances to jointly deliver degree (academic)

and non-degree (executive) programs for the local community capitalizing on the enabled processes and techniques of virtual organizations.

Supplemental Readings/Articles

G. Piccoli and B. Ives, “IT-Dependent Strategic Initiatives and Sustained Competitive Advantage: A Review of the Synthesis of the Literature,” *MIS Quarterly*, 29(4), pp. 747-776, 2005.

The authors present a thorough review of the literature, focusing on the IT-dependent strategic advantage literature. This interdisciplinary literature presents a clear picture of the value of these initiatives on corporate success.

Gary, Loren “Network vs. Network: The New Arena of Competition,” *Supply Chain Strategy*, Harvard Business Publishing, 2005.

As companies increasingly build value through often far-reaching relationships with other firms--through alliances, outsourcing, deep supplier relationships, and other partnerships--more and more leaders are facing a new reality: to succeed, they and their partners must address the market as one competitive unit.

Martin J. Garvey, “IT helps utilities stay competitive” *Information Week*. (803): 375-383. 2000 Sep 11.

For years, the specter of deregulation hung over the utility industry, threatening to bring major changes to what traditionally had been a slow-moving market. Now that the specter has become reality, utilities are using IT to reduce the trauma of deregulation, compete more effectively and efficiently, improve customer service, and boost profits.

Books

Ward, J. & Griffiths P. M. *Strategic Planning for Information Systems (Wiley Information Systems Series)* NY: John Wiley & Sons, 1996.

This book takes a clear, practical, and comprehensive look at the impact of information systems (IS) on business performance and its contribution to the strategic development of organizations. It provides the tools, techniques, and management framework for identifying and implementing the opportunities offered and shows how IS/IT helps organizations achieve a competitive advantage.

Boar, B.H. *Strategic Thinking for Information Technology* NY: John Wiley and Sons, 1996.

This book shows managers how to apply strategic thinking about information technology to their business process to create and maintain aggressive, competitive, and productive computer systems. A special chapter reviews forty strategic ideas and shows IT managers how to directly apply them to their system

Evans, P. & Wurster, T. *Blown to Bits*. MA: Harvard Business School Press, 2000.

This book examines how the new economy is "deconstructing" industries such as newspapers, auto retailing, and banking while creating new opportunities for others. They write that the "glue that holds today's value chains and supply chains together" is melting, and that even "the most stable of industries, the most focused of business models and the strongest of brands can be blown to bits by new information technology" (this is also a good book for the e-business chapter).

Carr N.G. *Does IT Matter? Information Technology and the Corrosion of Competitive Advantage* MA: Harvard Business School Press, 2002.

This could spark some debate in the class, but it is dated.

Websites

www.cio.com

CIO and CIO.com are published by CXO Media Inc. to meet the needs of CIOs (Chief Information Officers) and other information executives. CIO is read by more than 140,000 CIOs and senior executives who oversee annual IT budgets in excess of \$175 million. CIO.com serves over 12 million pages annually.

www.groupon.com/

The Groupon web site provides details on the company and the service provided. In particular, students should visit the "How It Works" tab. This is a good reference site when discussing the case study.

www.zipcar.com

The ZIPCAR web site shows how they function, rates, etc. This can be a good tool when discussing the case study.

www.uber.com

The Uber web site shows how they function, rates, etc. This can be a good tool when discussing interesting business strategies enabled by IT.

<http://www.zara.com/>

The website is aesthetically pleasing, presenting many samples of their products. Their mission statement page is devoted to the company's eco-friendly environmental focus. This can be used to supplement the textbook discussion of strategic use of IT at Zara.

News:

August 17, 2015: Uber, Lyft, and Gett are fiercely competing in New York City, according to an article in CNN at <http://money.cnn.com/2015/08/17/technology/gett-nyc-campaign-uber/index.html>

Ask students to read that article and answer the following: (1) Before anyone imagined ride-sharing systems, if you had to answer intuitively (without doing research) about Porter's forces on the taxicab industry, what would you estimate was the force of (a) Buyer power, (b) substitutes, and (c) new entrants? (2) Without smartphones, what would it be like to try and implement an Uber-like business? (3) How would you evaluate for forces of (a) buyer power, (b) substitutes, and (c) new entrants now that Uber and others are on the scene? (4) Does the practice of surge pricing address any of those three forces? Which? How does it address any of those forces?