

Association for Information Systems AIS Electronic Library (AISeL)

ICIS 1997 Proceedings

International Conference on Information Systems
(ICIS)

December 1997

An Information Company in Mexico: Extending the Resource-Based View of the Firm

Sirkka Jarvenpaa

University of Texas at Austin

Dorothy Leidner

INSEAD

Follow this and additional works at: <http://aisel.aisnet.org/icis1997>

Recommended Citation

Jarvenpaa, Sirkka and Leidner, Dorothy, "An Information Company in Mexico: Extending the Resource-Based View of the Firm" (1997). *ICIS 1997 Proceedings*. 26.

<http://aisel.aisnet.org/icis1997/26>

This material is brought to you by the International Conference on Information Systems (ICIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICIS 1997 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

AN INFORMATION COMPANY IN MEXICO: EXTENDING THE RESOURCE-BASED VIEW OF THE FIRM

Sirkka L. Jarvenpaa
University of Texas at Austin

Dorothy E. Leidner
INSEAD

Abstract

This paper extends the resource-based view of the firm to a less developed country situation by challenging three boundary conditions associated with the theory: first, the theory assumes attractive local markets; second, the theory applies to firms in relatively stable environments; third, the theory assumes that the manager's influence on creating sustained advantage is limited. The El Norte case illustrates the ability of local managers to shape their external environment to pioneer an information industry where no industry existed and to do so under highly turbulent conditions. The findings bring forward the power of political connections, strategic foresight, and flexibility as key organizational competencies in an emerging market.

Keywords: Competitive use of IS, international IS, case study, computing in developing countries, resource-based view.

1. INTRODUCTION

In less developed countries, the environmental factors present much greater obstacles to IT adoption and diffusion than in the developed countries (Montealegre 1994). However, little has been written about how a local firm overcomes these environmental factors and creates competitive value from deploying information technology (IT). This paper will explore how El Norte, a pioneering firm in an information industry in Mexico, was able to create an apparent sustainable advantage over large foreign competitors. The El Norte case will be interpreted through the lens of the resource-based theory of the firm. The article is organized as follows: section 2 reviews literature on the resource-based view of the firm, section 3 presents the methodology used, section 4 presents the case and its analysis, section 5 discusses the theoretical implications of the results, and section 6 concludes the article.

2. THE RESOURCE BASED VIEW OF THE FIRM

The resource-based view of the firm sees a firm as a bundle of resources that are either tangible (e.g., financial assets, technology) or intangible (e.g., managerial skills, reputation) (Barney 1991, 1997). Resources are heterogeneous across firms and some resources are valuable, yet rare, difficult to imitate, or nonsubstitutable by allowing those firms who have them to have core capabilities that distinguish them from others. Resources that provide sustainable advantage tend to be (1) *causally ambiguous* (e.g., transformational leadership), (2) *socially complex* (e.g., culture), or (3) *rare* (firm specific) (Barney 1997). In information systems, the resource-based view of the firm has been used

to explain how firms can create competitive value from information technology assets (Ross et al. 1996) and how sustainability resides more in the organization's managerial skills to leverage IT than in the technology itself (Mata et al. 1995).

The extensive literature on the theory suggests three boundary conditions. The first is that a firm has access to attractive markets (Collis and Montgomery 1995; Levinthal and Myatt 1994; Porter 1990). Second, the firm operates in a relatively stable environment and third the manager's influence on creating sustained advantage is limited (Barney 1997). The El Norte case provides an opportunity to extend the resource-based view of the firm to a less developed country by challenging the three boundary conditions.

3. RESEARCH METHOD

The case study method was chosen because the interest in this research was in broad issues of "how" the firm had used IT and "why" it had succeeded in doing so despite a seemingly poor fit with the local environment for launching an information, and particularly a real-time information, business. No hypotheses nor theories were developed before data collection; rather, it was desired that the data analysis drive the theoretical lens used for interpretation rather than vice versa (Galunic and Eisenhardt 1996).

3.1 Data Collection

Data collection took place in the spring and summer of 1995, and then again in the spring of 1997. The majority of the data was collected through semi-structured interviews with open-ended questions focused on what, how, and why innovations had taken place. Interviews were conducted with 12 El Norte employees in Monterrey and 20 employees in Mexico City, five academics with collaboration/consulting relationships with El Norte, and three former residents/business people of Mexico City who had been customers of El Norte's products. Within El Norte, the interviewees represented a mix of levels and functions: these included business unit heads, the research and development (R&D) manager, the head of advertising, editors, reporters, a production manager, a circulation manager, an information technology manager, delivery staff, and several members of the clerical staff.

Two-thirds of the interviews were conducted in English, the rest in Spanish via a translator. Many of the interviews (mostly with the senior management) were scheduled in advance. These interviews lasted from one to three hours and were tape recorded and transcribed. The interviews started with broad questions on the Mexican business environment, industry, competitors, the interviewees' personal history and experience at El Norte, and their roles in the key innovations at El Norte since the mid-1980s. The specific questions varied by the person's current position as well as their past roles.

In addition, other interviews (for example, the ones with reporters, production staff, delivery staff, and clerical staff) were conducted as informal discussions on an ad-hoc basis as the researchers toured various facilities. Additional data was gathered from annual reports, newsletters, marketing and other promotion information on products and services, senior management speeches, strategy plans, mission statements, trade journals, local newspapers, the Internet, newswires, and electronic mail messages.

3.2 Data Analysis

The analysis of the data was conducted in several steps. First, the transcripts were read through while listening to the tapes to verify their accuracy. Then, notes were taken that enabled a broad picture of the organization's background, of the organization's key products, and of the organization's major decisions over the past several years. Notes were taken on themes that arose during the interviews and as other interviewees made supporting comments, these were added under a general theme. From these themes, the initial case analysis was written. Finally, transcripts

were analyzed for specific factors that supported, refuted, or extended the resource-based theory of the firm. In particular, the research looked for comments pertaining to the firm's history, social complexity, causal ambiguity, or information technology that were perceived as enabling sustainable advantages. In addition, the research looked for other factors that were not captured in these four factors that are thought to enable sustainable competitive advantage.

In summary, the research method used could be broadly classified under an interpretive epistemology (Barrett and Walsham 1995; Orlikowski and Baroudi 1991; Walsham 1993) using a single case study. The case description is provided next.

4. THE EL NORTE CASE STUDY

4.1 The Case Description

Headquartered in Monterrey, Neuve Leon, El Norte currently has three main outlets: *El Norte*,¹ the number one newspaper in Monterrey, *Reforma*, the number two newspaper in Mexico City and the only global Mexican newspaper, and Infosel, a Monterrey-based provider of on-line, real-time information for businesses. The managers in El Norte consider the company to be “an information company with different channels to distribute the information.”

El Norte first began publishing a Monterrey newspaper, *El Norte News*, in 1922. By 1993, *El Norte News* held between 90% and 95% of the newspaper market in Monterrey, a city of roughly five million inhabitants, and considerable power to shape city politics. As the economy began to show signs of change in the early 1980s, El Norte's senior managers began planning for the future.

In 1985, CEO Alejandro Junco made a decision to redefine the company—to become an information company rather than a newspaper company. He concurrently decided that technology would be the most important competitive weapon, coining the motto: “Information technology provides the way for market advantage.” As early as 1981 when the IBM PC appeared on the market, Junco started thinking about the PC as a potential media to deliver information. In 1985-1986, Junco established Infosel (Informacion Selectivo—selective information) as the company within El Norte that would handle the electronic information aspect and would work very closely with the IT department in developing information. The first project was to make a large electronic database of everything that was being published on paper around the world about Mexico. This database also included government-based statistical information on the economy. The electronic archive project was started on January 1, 1986. By April of 1987, Infosel launched its first on-line service, Infosel Onlinea, consisting of on-line access to the archived information and to the *El Norte News*. The service allowed subscribers to dial into Infosel's system and perform searches of the information.

Soon after, Junco began pushing for a real-time financial information product in part as a reaction to the financially paralyzing stock market crash of 1987. The top managers at El Norte believed that one of the reasons for the crash in Mexico was simply a lack of information: “It was a market operating without information,” said the head of Infosel business unit. Individuals were blind investors and foreign investment was both risky and limited. Several US firms already had entered the electronic financial information market, including Reuter's, Dow Jones, Knight-Ridder, and Telerate, but the market in Mexico for real-time financial and market information had been heretofore

¹To avoid confusion, we will henceforth refer to the El Norte newspaper as *El Norte News*.

very weak. Infosel thus began working to get stock information from the Mexican Bolsa (the stock exchange). Getting the Mexican Bolsa to agree to provide them stock information entailed what one manager describes as a three year battle. Finally, in November 1990, after having successfully persuaded the Bolsa to provide them access to information, Infosel launched Infosel Financiero even as it canceled the Infosel Onlinea project. Although the need for on-line access to information was burgeoning, technical problems had vitiated the Infosel Onlinea product. Inadequate telephone lines in Mexico introduced so much static and noise that customers quickly became frustrated and the project eventually failed.

By contrast, Infosel Financiero was created as an on-line financial information service that did not rely on telephone lines. Instead, El Norte invested in satellite dishes and FM broadcast stations throughout Mexico. Prior to El Norte's Infosel Financiero project, companies could only subscribe to satellite services via a government agency that would provide a connection. El Norte successfully convinced the government to allow them to have their own satellite dish and El Norte was able to provide access to its Infosel Financiero product via the satellite dish and FM stations in each city in Mexico.

Unlike Infosel Onlinea, Infosel Financiero experienced success and growth almost from the day of its inception. By 1993, Infosel was earning \$8 million in revenue from Financiero which grew to \$10 million in 1994 and \$12 million in 1995. In 1993, Infosel launched a network product that would allow subscribing organizations to have one subscription but many users. In 1995, Infosel developed a financial wide area network and a billing system—so that subscribers could not only receive financial information, but could immediately make and implement buying and selling decisions and take actions on-line.

As of today, the Infosel Financiero product contains information from NYSE, NASDAQ, the options and equities markets, the fixed income, commodities, and futures markets. Infosel also develops information for CD-ROM applications such as legal information, accounting information, and library information. The current growth is coming from these market niches. Infosel has a presence not only in Monterrey, Mexico City, and Guadalajara (the largest three cities in Mexico), but also in San Luis, Montilla, and many places throughout the country, as well as around the world.

Even as Junco's vision of the electronic distribution of real-time information was flourishing, he made the decision in 1993 to launch a new newspaper in the already flooded Mexico City market. Mexico City, a city of 25 million and the second largest city in the world, had a plethora of existing papers and many people suggested that Junco was "crazy" to enter into the Mexico City market. But Junco's vision was about change: changing the nature of information delivered so that the information was trustworthy and so that the presentation of the information was superior. El Norte invested heavily in technology to enable *Reforma* to be the most colorful and graphical newspaper in Mexico, to enable *Reforma* to maintain the image created by *El Norte News* of objective information, and to enable *Reforma* to invest in human resources and training.

On November 20, 1993, El Norte produced the first *Reforma* newspaper. By 1995, *Reforma* had a daily circulation of 86,000 newspapers and 39,000 subscribers. Also in 1995, in conjunction with Infosel, *Reforma* opened a web site to distribute news from its *Reforma* newspaper on the Internet and received 16,000 inquiries the first day. *Reforma* currently has the largest market share in the upper segments of Mexico City, which are the most important for advertisers. *Reforma* engages in regular customer surveys, encourages letters from readers, and has editorial boards comprised of individuals from the community.

Table 1. Environmental Challenges and Example Responses by El Norte

Environmental Challenges	Solutions
Cultural Constraints	
<ul style="list-style-type: none"> • Work ethic and values among Mexican journalists • Lack of trust in information • Absence of market need for objective, real-time information 	<ul style="list-style-type: none"> • Hire fledglings and create a strong culture • Pay reporters a good salary and eliminate bribery • Separate functions of writing stories and selling ads • Refocus product on a leading industry segment (financial services industry)
Political Constraints	
<ul style="list-style-type: none"> • Government’s control of key resources and distribution channels 	<ul style="list-style-type: none"> • Develop private delivery infrastructure • Exploit powerful position of the CEO in city-politics
Technical Constraints	
<ul style="list-style-type: none"> • Weak national IT infrastructure • Technology use lagging among customers 	<ul style="list-style-type: none"> • Redesign product around less modern media • Free seminars to customers

4.2 Environmental Challenges and El Norte’s Solutions

El Norte’s rise to the summit of the information business in Mexico has not been without challenges. Interviews with managers in El Norte revealed several key constraints imposed upon them by their environment that had to be carefully managed (Table 1).

4.2.1 Overcoming Cultural Constraints

Among the cultural constraints were (1) a work ethic among journalists that was inconsistent with El Norte’s aspirations to nonbiased information and (2) a lack of market for on-line information.

One major cultural challenge entailed recruiting journalists with profoundly different *work attitudes* than the typical journalist in Mexico at that time. It had become common practice in Mexico City for journalists to partake of “the on-going system of selling favors and expecting something in return.” In order to maintain this high standard in the face of growth and the move to a new market (i.e., Mexico City), El Norte decided that it was not possible to “erase that culture” so they decided to take “fresh, new people that had never been journalists and train them so they could work within our own ethics code and our own standards.” El Norte went to universities to recruit, a practice very rare in Mexico, and solicited applications. They received 2,800 applications for the first 100 positions. The 100 graduates were sent to a six week training program where they were to learn about company culture and ethics, writing styles, aggressiveness, and techniques. The typical employee of El Norte is described as young (in comparison to equivalent employees in other newspaper companies), health-conscious (few smoke and many exercise regularly), and hard-working. The starting salaries are higher than the industry average and outstanding individual performance is rewarded with sharp pay raises. By carefully selecting graduates and training them, El Norte was able to create a culture that encouraged innovation, inculcated hard-work, and pushed technological limits.

A second cultural roadblock was the seeming absence of a perceived market need for real-time financial and market information. The Mexican culture was not ready to use on-line information and was certainly not ready to pay for it. One manager referred to Mexico as “an information poor country.” Here the challenge was to teach the potential users about the benefits of this kind of information and why it was worth paying for. The general attitude was that one paid a peso or two for a newspaper—why would anyone pay \$500 for an information product. The concept of “real time” was not easy to understand nor was the concept that information is an important tool for decision making. One manager stated that “even more difficult than the technology was the culture.” To respond to this problem, Infosel learned from the Onlinea product that a general product was ahead of its time and refocused instead on the financial industry with its Financiero product. The financial industry was the easiest to penetrate since these markets were becoming global and to survive, firms needed trustworthy, real time information.

4.2.2 *Overcoming Technical Constraints*

El Norte faced two technical roadblocks: (1) a weak national technology infrastructure prevented effective rollout of information products and (2) customer technology lagged behind that of El Norte. The initial Infosel on-line product was canceled because the telephone infrastructure could not support point-to-point operations. The second product used a broadcast wireless transmission wherein information was sent to FM radio stations and distributed via local stations. The second major technical constraint was that as Infosel continued to innovate and expand, they constantly found themselves ahead of their customers technologically. When they first introduced CD-ROM products for legal information, their clients did not have the CD-ROM drives. When they first introduced material on the Internet, clients had not yet heard of the world wide web. Infosel provided free seminars to educate its clients.

4.2.3 *Overcoming Political Constraints*

All single copy newspaper stands in Mexico City were unionized. The union (Union de Voceadores) was affiliated with the ruling party—the PRI. These unions resented the fact that *Reforma* would be printed and sold every day of the year except for Christmas and New Year’s (all the other newspapers did not print on official holidays, of which there are many in Mexico). Moreover, because *Reforma* was defined as an independent newspaper, conservative PRI members were opposed to criticism coming from outside their traditional means of control and used the unions as a means to attempt to suppress sales of *Reforma*. In response to *Reforma*’s pressure to sell even on holidays, sellers withdrew *Reforma* posters and tried to stop distribution of *Reforma* altogether. After attempting to negotiate with the unions, El Norte decided that it would be more efficacious to bypass the unions. El Norte thus made the decision to create its own distribution channel. This was a very costly decision but worked in the favor of El Norte. Many within El Norte attribute the rapid growth in sales to the private distribution system. This was another attempt by El Norte to shape its environment.

The government also contributed to the infrastructure problems in two ways: (1) government resistance to allow access to market information and (2) government resistance to allow private firms access to advanced technologies. One of the first delays encountered by El Norte as it pushed forward with Infosel was that the Mexican Bolsa did not want to yield information and regarded El Norte as a competitor. The negotiations took three years to complete. In the interim, Infosel established what they referred to as the real-time newsgroup. This group collated daily information on markets as well as relevant stories for business readers. This group would therefore gather the information that the Bolsa refused to deliver. Perhaps in part because the Bolsa realized that the information would be obtained even if they did not cede, an agreement was reached. El Norte encountered a similar problem when it tried to create a wide-area network based on satellite technology. The government wanted to maintain control over satellite access but eventually Infosel prevailed and was granted the first state license to own and operate a satellite.

In summary, El Norte has experienced high growth and innovativeness in a market that did not always initially value the products El Norte had to offer. The El Norte case is next interpreted from the resource-based view of the firm.

5. CASE ANALYSIS: THE RESOURCE BASED VIEW

In 1986, over ten years ago, El Norte did not face an attractive industry that would have provided resources to develop its core capabilities. Also, the firm made a large wager that the local markets would be deregulated and that the local firms would require new information services. Yet, via use of its key resources—Junco’s leadership, its history of political independence, corporate culture, IT investments, community networks, and its geographical base—El Norte developed core competencies that position it as an undisputed local leader in the information provider sector. These capabilities are political connectedness, managerial foresight of market trends, strategic flexibility, new IT-based information products and ideas, and the reputation for trustworthiness. Through shaping the environment, El Norte has created a unique configuration of resources that in combination are rare, valuable, and difficult to imitate by large international players. Table 2 summarizes the analysis of El Norte via the resource-based view.

5.1 The Key Resources

In shaping the environment, El Norte developed and utilized key resources which in turn became the source of core competencies.

5.1.1 *Leadership and Political Connectedness of Junco*

The powerful leadership and political connections of Junco has probably been the single most important resource of El Norte’s success. Only an insider in Mexico could have acquired (even after three years of negotiation) a satellite for private ownership from the government or could have come up with an agreement (again even after long negotiations) with the Mexican Bolsa to supply information. Such an accomplishment would not have been possible for someone less well connected, certainly not a foreigner. In addition, the political connectedness of Junco enabled him to see emerging political and economic events as well as the resultant new markets and new needs in his own country, which triggered the innovations allowing El Norte to pioneer a local information industry in Mexico.

Table 2. Analysis of El Norte via Resource-Based View

Key Resources	Core Capabilities
Causally ambiguous	
<ul style="list-style-type: none"> • Leadership • Tradition of political independence 	<ul style="list-style-type: none"> • Political Connections/ Managerial Foresight • Trustworthiness/Integrity
Socially complex	
<ul style="list-style-type: none"> • Firm culture • Strong community networks 	<ul style="list-style-type: none"> • Strategic Integration/Flexibility • Strategic Flexibility
Rare (firm specific)	
<ul style="list-style-type: none"> • Investments and experimentation with new technology • Geography/demography 	<ul style="list-style-type: none"> • New information products and services • Progressive IT infrastructure • Professionalism

5.1.2 History of Political Independence

The firm's tradition of fact-based journalism and political independence has contributed to the core capability of trustworthiness and integrity. As a recently graduated journalism student, Junco took over the company in 1973 at the age of 25 from his grandfather and did not hesitate to go head to head against the Mexican president of the time, Lois Echeverria, calling him a corrupt demagogue. El Norte's newsprint allotment was reduced by more than 80% but the spirited Junco refused to ebb his criticism (Palmeri 1995). At that time, the key resource—paper—was totally controlled by the government.

Since then, El Norte has had numerous fights with the government, with private companies, and with academia about the editorial line. The editorial line has continued to present the facts regardless of who stood to gain or lose from the facts. This political independence has been a tremendous competitive asset to the firm as it has positioned itself as the first provider of trustworthy, reliable, and uncompromised news.

5.1.3 Culture

El Norte has succeeded in American style businesses, but beat Americans by being Mexican. Its culture is modern, yet deeply embedded in Mexican traditions and patriotism. Its employees were on a mission to disseminate information about Mexico to Mexicans in order to enable them to compete against large multinational companies. Harnessing this strong Mexican culture has been a key resource enabling a unique advantage to El Norte. It has presented the firm with shortcuts or advantages while raising barriers of foreignness² for non-Mexican firms wishing to enter the Mexican market. El Norte has selectively adopted and successfully modified ideas from industrialized nations to mold them to the local culture.

5.1.4 Strong Community Networks

Strong community networks promote competencies of foresight and strategic flexibility. Networks exist with customers as well as with the government. Wishing to have a paper for the people, *El Norte News* established "editorial boards" composed of individuals from the community who serve free of charge for nine to ten months at a time. These boards provide important feedback to the editors of the respective newspaper concerning what types of topics need to be addressed, issues that need to be surfaced, and special reports that would be valuable. El Norte has over 200 alumni of their editorial boards who serve as sources of information within their respective industries. This human network, which transcends the organization's boundaries, contributes to a sustainable advantage over larger, multinational firms.

In terms of Infotel, developing a human network with government and the financial sector was viewed as critical as well. The management of Infotel maintains that they have close communication ties with government and bank officers who are typically the first to be aware of important news in the financial sector and this network has given Infotel an advantage over Reuters and other US-based firms trying to tap the Mexican market. In addition, these tight liaisons with individuals in industry and government enabled Infotel to withstand takeover attempts by US firms. Infotel was forcefully accosted by a US firm wishing to purchase Infotel and Infotel wanted to maintain its independence and form a partnership. Subsequently, the US firm offered Infotel customers a 30% discount to switch.

²The liability of foreignness arises from (1) costs associated with spatial distance, (2) company's unfamiliarity with a local environment, (3) lack of legitimacy in the local environment, and (4) restrictions imposed by the multinational's home country for doing business in the other country (Zaheer 1995).

Such tactics, while effective in cultures where loyalty takes second place to economics, are ineffective in a culture that values the human tie.

5.1.5 Geography/Demography

Geographically speaking, El Norte is headquartered in Monterrey. Although far from the sea and any port, although not favored by climate and distant from markets and all sources of raw materials, Monterrey is known as having the most advanced industry in Mexico (DeRossi 1971). The people from Monterrey are characterized as industrious, driven, and independent (DeRossi 1971; Kras 1995). These demographic factors have promoted professionalism as a core competency within El Norte.

5.1.6 IT Investments

The firm believes fundamentally in the power of technology to provide a competitive advantage. The technology officer reports directly to Junco. In the early 1980s, El Norte was among the first Mexican firms to set up a formal IT department. Technical experimentation and innovation are firmly embedded in El Norte's culture. IT is also at the heart of its product strategy. The firm offers different product lines by different technology options: Internet, CD-ROM, online services, etc. IT also provides operational and structural flexibility in the firm's internal operations (e.g., virtual newsroom). Yet, El Norte understands the need to take a long term view of technology investments. For example, the problem with their original on-line service was an example of how they had to learn from their setbacks and redesign some of their ways of doing business.

Perseverance in developing a private IT infrastructure to combat the underdeveloped national infrastructure also proved to have important strategic consequences for Infosel. As the US market grew in importance to Mexican investors, a new demand for information about the US surged. One manager in Infosel states that, prior to 1990, there was no information made available on US markets because there simply was no demand for such information. However, with the burgeoning of NAFTA, demand for US market information grew and several of the well-established US information companies including Knight-Ridder, Telerate, and Reuters began pursuing the Mexican market. The long fought battle to establish Infosel's infrastructure turned into a competitive advantage as the US firms, to operate efficiently in Mexico, required a large shift from their normal infrastructure. Infosel was in an enviable position of having already developed a low-cost option which allowed them to be more expansive.

In summary, the leadership and political connections of El Norte's CEO have enabled the firm to distinguish itself by its foresight of the coming trends. Its tradition of fact-based journalism and political independence has enabled the firm's new online products and services to leverage the core capability of trustworthy information. The firm's human resource policies as well as the Monterrey roots promote professionalism. The firm's culture that centered on the deep pride in the country, strong human networks, and its investments in IT provide strategic flexibility in a turbulent and rapidly evolving market place.

6. DISCUSSION

The fundamental difference between managing in a less developed and a developed country is that in the less developed country, the environment is more challenging and carries more significant managerial implications (Austin 1990). The purpose of this study was to uncover how a local information firm in a less developed country context can mold its environment and create sustainable advantage over foreign competitors. Although past research has assumed that under environmental jolts, a firm's core capabilities become obsolete and might even become "core

rigidities” (Leonard-Barton 1992; Tushman and Anderson 1986), this study found instead that the firm’s capabilities and key resources might be strengthened as long as the executives have foresight to shape their external environment during the time of turbulence.

The past work on the resource-based view has had an overly internal focus (Miller and Shamsie 1996). Among the exceptions are Hart (1995), who examined the role of natural environmental constraints on a firm’s core capability development, and Miller and Shamsie, who examined the value of resources under stable and unstable environments. The present study provides a perspective of a firm located in a less developed country.

Thomas (1996) suggests that many competitive models, including the five-forces model, are Anglo-Saxon to the extent that they ignore the broader environment including the government, capital markets, and the institutions of science. These environmental factors are expected to play significant roles, both as constraints and as drivers, in less developed countries. El Norte found that the government posed certain constraints, even viewing El Norte as a competitor at times. However, the relationships that El Norte built with government officials also proved over the long-term to be advantageous. They were able to get a lead on important information that foreign-based firms would have no access to and were able to eventually negotiate important deals that foreigners would have been precluded from even considering. Similarly, while the Mexican culture itself posed constraints on El Norte’s ability to achieve its desired goals, the culture also provided El Norte with an asset internally (in terms of motivating employees that their work was tied to the success of Mexico) and externally (in terms of forming strong ties with the community). And while the technical infrastructure of Mexico posed an initial constraint on El Norte, this weak infrastructure also provided El Norte with an advantage over foreign firms as El Norte was able to readjust their project to the country’s capabilities and later negotiate concessions from the government. Thus, the environment has profound effect on the operations of a local firm in a less developed country, but there is also a paradox: the constraints and vulnerabilities of their environment can be turned to their chief assets (Nee 1992).

Hence, in the less developed country context, responding to the environmental constraints as well as influencing them in a proactive manner is a key to success. Strategic flexibility plays a central role. Flexibility means that not only will a firm be able to respond to the environmental changes, but it has a capacity and management repertoire to influence or even control those environmental changes as well (i.e., control capacity of the management) (Volberda 1996). Miller and Shamsie distinguished between knowledge and other resources. They argue that resources that can be used to respond to a larger number of contingencies (so called knowledge-based assets) help firm performance during unstable and unpredictable environments, whereas non-knowledge-based assets help performance during stable and predictable environments.

In a less developed country, a firm facing newly open markets is likely to find itself at a disadvantage in terms of knowledge resources to devote to strategic readjustment. A key issue for these firms is how to effect flexibility in the short-term while maintaining a long-term vision. El Norte created such flexibility by establishing strong community networks, establishing a strong internal IT infrastructure, embedding strong national pride into the organizational culture, and working within the political system where possible but developing alternative strategies on an interim basis.

The study has a number limitations that need to be considered in making any conclusions. First, the single case site limits the generalizability of results. The purpose of the study was not to provide generalizability of empirical results to other firms, rather the purpose was to “expand and generalize theories” (Yin 1984). Second, the primary data was based on interviews that provided retrospective accounts of events. Although retrospective data is inferior to longitudinal concurrent data, recent research suggests that retrospective reports, particularly if provided first-hand, can be reliable and valid (Miller et al. 1997). Third, the researchers analyzed the case data via a theoretical lens

developed in the US. The emphasis was not on understanding the events using Mexico's own management thinking, terms, and constructs. This approach is justified as long as one believes that there may be universal management principles (Early and Singh 1995).

7. REFERENCES

Austin, J. E. *Managing in Developing Countries*, The Free Press, New York, 1990.

Barrett, M., and Walsham, G. "Managing IT for Business Innovation: Issues of Culture, Learning, and Leadership in a Jamaican Insurance Company," *Journal of Global Information Management* (3:3), 1995, pp. 25-33.

Barney, J. B. "Firm Resources and Sustained Competitive Advantage," *Journal of Management* (17), 1991, pp. 99-120.

Barney, J. B. *Gaining and Sustaining Competitive Advantage*, Addison-Wesley Publishing Company, Reading, MA, 1997.

Barney, J. B. "Organizational Culture: Can It Be a Source of Sustained Competitive Advantage," *Academy of Management Review* (11), 1986, pp. 656-665.

Collis, D. J., and Montgomery, C. A. "Competing on Resources: Strategy in the 1990s," *Harvard Business Review*, July-August 1995, pp. 118-128.

DeRossi, F. *The Mexican Entrepreneur*, Development Center of the Organization for Economic Co-Operation and Development, Paris, 1971.

Earley, P. C., and Singh, H. "International and Intercultural Management Research: What's Next?" *Academy of Management Journal* (38:2), April 1995, pp. 327-340.

Galunic, D. C., and Eisenhardt, K. M. "The Evolution of Intracorporate Domains: Divisional Charter Losses in High-Technology, Multidivisional Corporations," *Organization Science* (7:3), May-June 1996, pp. 255-282.

Hart, S. L. "A Natural-Resource-Based View of the Firm," *Academy of Management Review* (20:4), 1995, pp. 986-1014.

Kras, E. S. *Management in Two Cultures: Bridging the Gap Between US and Mexican Managers*, Intercultural Press, Yarmouth, ME, 1995.

Leonard-Barton, D. "Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development," *Strategic Management Journal* (13), 1992, pp. 111-125.

Levinthal, D., and Myatt, J. "Co-Evolution of Capabilities and Industry: The Evolution of Mutual Fund Processing," *Strategic Management Journal* (15), 1994, pp. 45-62.

Mata, F. J.; Fuerst, W. L.; and Barney, J. B. "Information Technology and Sustained Competitive Advantage: A Resource-Based Analysis," *MIS Quarterly* (19:4), December 1995, pp. 487-505.

- Miller, C. C.; Cardinal, L. B.; and Glick, W. H. "Retrospective Reports in Organizational Research: A Reexamination of Recent Evidence," *Academy of Management Journal* (40:1), 1997, pp. 189-204.
- Miller, D., and Shamsie, J. "The Resource-Based View of the Firm in Two Environments: The Hollywood Film Studios from 1936-1965," *Academy of Management Journal* (39:3), 1996, pp. 519-543.
- Montealegre, R. *Management's Role in the Implementation of Information Technology in an Agroindustrial Organization of a Less-Developed Country*, unpublished Doctor of Business Administration thesis, Graduate School of Business Administration, Harvard University, 1994.
- Nee, V. "Organizational Dynamics of Market Transition: Hybrid Forms, Property Rights, and Mixed Economy in China," *Administrative Science Quarterly* (37), 1992, pp. 1-27.
- Orlikowski, W. J., and Baroudi, J. J. "Studying Information Technology in Organizations: Research Approaches and Assumptions," *Information Systems Research* (2:1), 1991, pp. 1-28.
- Palmeri, C. "Senor Clean," *Forbes* (155:9), April 24, 1995, pp. 132-134.
- Porter, M. E. "The Competitive Advantage of Nations," *Harvard Business Review*, March-April 1990, pp. 73-93.
- Ross, J. W.; Beath, C. M.; and Goodhue, D. L. "Develop Long-Term Competitiveness through IT Assets," *Sloan Management Review*, Fall 1996, pp. 31-42.
- Thomas III, L. G. "The Two Faces of Competition: Dynamic Resourcefulness and the Hypercompetitive Shift," *Organization Science* (7:3), May-June 1996, pp. 221-242.
- Tushman, M., and Anderson, P. "Technological Discontinuities and Organizational Environments," *Administrative Science Quarterly* (31), 1986, pp. 439-465.
- Volberda, H. W. "Toward the Flexible Form: How to Remain Vital in Hypercompetitive Environments," *Organization Science* (7:4), July-August 1996, pp. 359-374.
- Walsham, G. *Interpreting Information Systems in Organizations*, John Wiley and Sons, London, 1993.
- Yin, R. K. *Case Study Research: Design and Methods*, Sage Publications, Beverly Hills, CA, 1984.
- Zaheer, S. "Overcoming the Liability of Foreignness," *Academy of Management Journal* (38:2), 1995, pp. 341-363.