

TEXAS

BUSINESS REVIEW

Bureau of Business Research • IC² Institute • The University of Texas at Austin

DECEMBER 2008

Soft Landing: Indian IT Companies in Monterrey, Mexico

by

Kathia Castro Laszlo

*Professor, EGADE
Tecnologico de Monterrey*

Alexander Laszlo

*Professor, EGADE
Tecnologico de Monterrey*

and

Lorraine De Fougères

Consultant, Weave (France)

Monterrey, the capital of the northeastern Mexican state of Nuevo León, has historically been considered an industrial city. In the last few years, a major shift has begun to propel the region beyond the confines of physical industrialization and transform it into a knowledge city. In addition to the investments to support new Mexican startups, Information Technology (IT) companies from India are locating subsidiaries in Monterrey.

In 2006, Sasken, a software development company specializing in telecommunications, was the first Indian company to reach Mexico through its customer Texas Instruments. After that, Aricent, Infosys and Wipro opened new operation centers in the city and are all planning to expand their infrastructure thanks to steady business growth (see Table 1). Those firms have been followed by others such as MindTree, which launched operations in Monterrey in November of 2008. This article presents the reasons why Monterrey has been attracting Indian IT companies and what it might mean for other regions who aspire to become technology centers.

Knowledge-based Development Strategy

Industrialization in Monterrey was launched in the mid-19th century by the steel company

Fundidora de Fierro y Acero Monterrey, which accelerated the emergence of some of Mexico's strongest companies, such as Vitro, ALFA, GRUMA, Cemex and FEMSA. Today, a new economic revolution is underway: in 2004 the State of Nuevo León decided to help give a new strategic business direction to the region by promoting Monterrey as an international knowledge city. One of its core objectives is to position the State of Nuevo León, and in particular its capital city, Monterrey, as the main Latin American IT supplier for the United States of America and Canada. It is a vision that will transform Monterrey from an industrial center to a knowledge and cultural hub. Monterrey's reputation across Mexico is of an entrepreneurial and international city, so the transformation toward a knowledge hub is congruent with the values and aspirations of its people.¹

The landing of Indian IT companies is a strong indicator of the value Monterrey represents for technology investment. Indeed, these enterprises have various interests in setting up new centers in Nuevo León's capital. Their short-term objective is to provide quality services at lower prices to their clients in the USA and Canada.² However, their long-term strategy includes supplying demand for software in emerging Mexican and Latin

Table 1
Indian Companies Established in Monterrey

Indian Company	Web Site	Markets Served
Sasken (2006)	www.sasken.com	North America & Latin America
Wipro (2007)	www.wipro.com	North America & Latin America
Infosys (2007)	www.infosys.com	North America & Latin America
Aricent (2007)	www.aricent.com	North America & Latin America
MindTree (2008)	www.mindtree.com	North America & Latin America

Murthy Rajashekar, Group Head of Wipro Monterrey, emphasized the fact that Monterrey's "good infrastructure, quality of life, and the presence of competent talent" were all taken into consideration when deciding on a city in which to locate their operations.

American markets. Indian companies believe that Monterrey has strategic geographic advantages to access both of these markets.

Northward, Monterrey shares the same time zones with the central United States and is within 5-6 hours flying distance from most anywhere in the US, which is a significant change for companies from India. Monterrey "is a strategic nearshore location that provides more options to our many North American customers to serve their unique sourcing requirements," says Scott Staples, president and co-CEO of MindTree IT Services.³

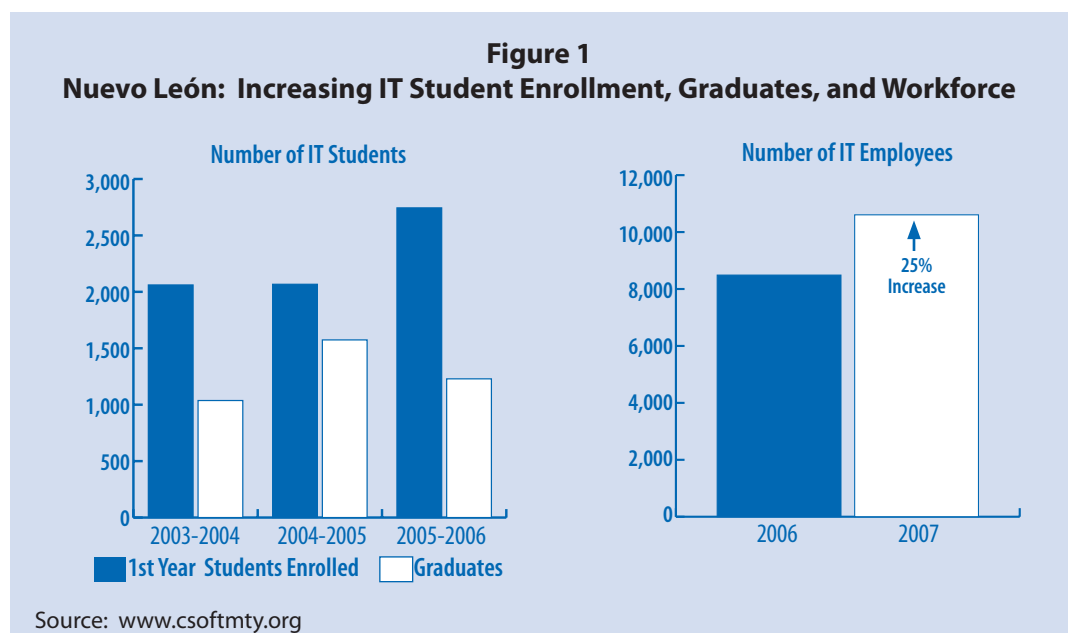
However, the proximity of Monterrey to the U.S. border is not the only reason why Indian companies favor Monterrey. Murthy Rajashekar, Group Head of Wipro Monterrey, emphasized the fact that Monterrey's "good infrastructure, quality of life, and the presence of competent talent" were all taken into consideration when deciding on a city in which to locate their operations.⁴ Monterrey is considered by Indian companies as one of the safest cities in Mexico, with good universities and a population with strong technical and language skills. Furthermore, the opening of operations in Mexico enables Indian companies to establish economic links and cultural relations with emerging Latin American markets. In fact, some of these companies, like Infosys, already have important clients or prospects operating in Latin America.

Indian IT companies in Monterrey have high expectations for rapid returns on their investments and are relying heavily on Monterrey's reputation as a hotbed of

engineering talent. Major universities, including private Tecnológico de Monterrey (ITESM) and the University of Monterrey (UDEM) and the public Autonomous University of Nuevo León (UANL), among other higher education institutions in the city, graduate certified engineers into the local economy. "Monterrey is known for its highly qualified, educated work force and is a recognized center for software development," said the Governor of the State of Nuevo León, Dr. José Natividad González Parás.⁵ Nevertheless, even if Indian companies recognize the quality of the Mexican engineering talent they hire, the quantity of those engineers remains a concern. For instance, Wipro is employing Mexican staff for its financial and administrative departments, but their top executives and most of their technical engineers are from India.

Partially in response to this need for human capital in the software industry, in 2004 Monterrey developed the Council for the Development of the Software Industry in Nuevo León.⁶ Its mission is to increase the competitiveness of this sector by turning it into one of the main components of economic growth in the region. The Council is composed of representatives of the Federal and State governments, the major local academic institutions, and more than 100 companies and software associations in Nuevo León.

One strategic objective of this council is to develop a deeper pool of software engineering talent in the region. As shown in Figure 1, early results are promising: there was a 19 percent increase in college-level students pursuing IT careers between 2005 and 2006,



Pawan Kumar, the IT guru ... said he was impressed to see representatives from government, academia and industry visiting India together.

and a 25 percent increase in the number of employees in the Nuevo León IT industry between 2006 and 2007.

In 2002 the Mexican Ministry of the Economy launched its innovative Program for the Development of the Software Industry (PROSOFT). To take advantage of PROSOFT, the state government of Nuevo León, the Monterrey International City of Knowledge Program (MICK), and the Software Council of Nuevo León forged an innovative partnership. Increased investments in the software industry in the region amounted to 52 million pesos in 2004; 101 million pesos in 2005; and 173 million pesos in 2006 (around \$17 million USD) (see Table 2).⁷

One of the key strategies of Monterrey's International City of Knowledge initiative was the creation of the Research and Technology Innovation Park (PIIT), which opened in 2008.⁸ The park is the first of its kind in Latin America. Comprised of research centers, universities and companies from diverse industries, PIIT's mission is to promote technological research and technology transfer in the academic and business sectors and help develop the intellectual capital of Nuevo León. PIIT's main objectives are to:

- link research and innovation in the academic sector
- facilitate technology transfer in Nuevo León
- attract technology-based international businesses
- create high-value jobs for Nuevo León
- incubate businesses that focus on new technologies
- promote economic development through the commercialization of new technologies.

Infosys will move into a PIIT facility in the next few months, when it will move 5,000 employees into a brand new building,

González Parás, governor of the State of Nuevo León, expressed his satisfaction at having attracted Infosys to the PIIT. According to him, the executives of Infosys understand the advantages offered by a software cluster, academic programs for developing intellectual capital in knowledge areas, and the financial benefits of programs such as PROSOFT and the Software Council.⁹

Business, Academia, and Government Partnership

The need for human capital among Indian firms and the aspiration of Monterrey to become the Mexican "Silicon Valley" naturally led to cooperation among the State of Nuevo León, local universities, and Indian corporations.¹⁰ "Mexico has excellent infrastructure and its advanced technical education system, supported by Nuevo León's government, provides a favorable climate for an industry-academia partnership," said Rajiv Mody, chairman and CEO of Sasken.¹¹

A committee of representatives from corporations, educational institutions, and government representatives of northern Mexico visited Bangalore, India, in January 2008. During the visit, the delegation met with executives from about sixteen industry-leading companies representing the information, technology, and biotechnology sectors. Pawan Kumar, the IT guru who established the first IT company in India, received the delegation from Monterrey in Bangalore and said he was impressed to see representatives from government, academia and industry visiting India together.¹²

This partnership is essential for the success of the knowledge-based development strategy. There needs to be recognition of the importance of quality education that responds to the needs of the IT industry with the support from government as facilitator rather than controller.

Table 2
The Impact of PROSOFT

Year	PROSOFT Investment* (millions of pesos)	Companies Benefited	Jobs Improved	Jobs Created
2004	52	42	279	119
2005	101	134	960	335
2006	173	255	1,267	786

* Combined resources from federal government, state government, and industry

Source: Dirección de Fomento a las Empresas de la Nueva Economía de la Secretaría de Desarrollo Económico

...the partnerships being forged around Indian landing companies in the IT sector may establish the solid ground on which Monterrey can develop its own world-class IT industry...

The challenge that Mexico faces, according to Kumar, is to offer high quality IT services at low cost. Right now India is the only provider in the world that can do this. Another model is providing high quality at high cost, as in the U.S. And of course, there are many emerging economies where lower cost comes with lower quality. With some notable exceptions, this is the stage in which Mexico currently finds itself. But the partnerships being forged around Indian landing companies in the IT sector may establish the solid ground on which Monterrey can develop its own world-class IT industry and forge a new economic identity as a knowledge city.

Dr. Rafael Rangel Sostmann, Rector of the Tecnológico de Monterrey (ITESM), the largest private university in Mexico, emphasized the importance of learning from India's experience in entering the global IT playing field. Kumar, the pioneer of IT in India, mentioned that in his country there was resistance from local industry when the government removed entry protection barriers, and bigger companies did not help smaller ones. This has become a concern for Mexican business people, as well. Blanca Treviño, president of the Mexican company Softek, commented that "to compete with big companies is very difficult. I have no doubt that Mexico will be a great [IT] player, but we need to recognize that there will be an impact [on local firms] and we need to be prepared ... if the big Indian companies didn't support the smaller firms in their own country, how can we expect that they will be our allies?"¹³

But attracting Indian companies to Monterrey remains an important part of the larger vision of Monterrey as an international knowledge city. It has clear economic implications: there is evidence that investment in R&D increases regional per capita GDP.¹⁵ Fundamentally, a knowledge city involves a new mindset and a new culture oriented to innovation. A knowledge city requires diversity and collaboration and the evolution of existing business models to break away from an exclusive focus on competition to create thriving business ecosystems.¹⁵

During the trip to Bangalore, Rangel Sostmann emphasized the Tecnológico de Monterrey's "Soft Landing" program offered to Indian companies. "[International] companies many times decide not to come [to Mexico] because they don't know how to arrive."¹⁶ For example, the Soft Landing program of the Tecnológico de Monterrey

provides office space for Wipro in its "Pavellón Tec" (an off-campus building belonging to the university), helps Wipro and other companies locate software engineers and managers, and helps firms navigate Nuevo León's state government procedures. The Soft Landing program also includes assistance with housing for Indian executives and managers new to Monterrey and provides information needed to minimize culture shock. In the final analysis, the program helps integrate university and enterprise interests by evaluating the adequacy of academic programs for business engineering needs and facilitating the rapid incorporation of engineering graduates into the industry upon graduation.

The close cooperation between Indian companies and institutions of higher education in Monterrey extends to joint curriculum development. In 2008, UANL and ITESM launched a program to identify and re-train individuals who prepared for computer science careers in the past but were unable to find employment, and engineers from other subfields who wish to enter into the field of information technology. Aricent has created a development and testing center at UANL to leverage skilled resources in Mexico – and to increase the adoption of their cutting edge communications software solutions in the Americas. "Our extensive pool of talent will ensure the best possible return on Aricent's investment in UANL through the development of course curricula and certification exams that drive home that knowledge. By offering course curricula through Aricent, UANL is making it more convenient for students to establish themselves as experts in communication software development and testing technologies," said Jose Antonio Gonzalez Treviño, President of UANL.¹⁷

This type of program had already been tested in other countries by Indian corporations. Infosys, for instance, developed "Campus Connect" as "a forum where some of the best practices at Infosys can be shared with colleges. Campus Connect also looks at aligning the needs of colleges, its faculty and students, with those of the IT industry."¹⁸ Its collaboration with Asian universities prepares students for Infosys' specific industry needs and improves Infosys' internal training. Moreover, such collaborative agreements promote Infosys as a potential future employer for the student engineering community.

The Infosys Campus Connect program will soon be rolled out in Monterrey with the

Tecnológico de Monterrey, and after that with other universities in the city. "We believe the Tecnológico de Monterrey will be one of the main sources for recruiting talent into our company," said Sam Prasanth, Head of IT Delivery at Infosys, México.¹⁹

Conclusion

Indian IT companies are perceiving tangible benefits from establishing operations in Monterrey, Mexico. The connections Indian landing companies have made with Mexican universities, the "Soft Landing" program, the efforts made by the State of Nuevo León to improve the attractiveness of the city for software firms, and the natural geographical advantage of being in close proximity to North and South American markets will undoubtedly attract more Indian companies to Monterrey in the years to come.

As Governor González Parás put it, "the combination of human and intellectual capital, a nurturing business community and entrepreneurial spirit found in Monterrey positions the state [of Nuevo Leon] for amazing IT service growth." The fact that Monterrey, Mexico, has been designated the site of the International City of Knowledge Program (MICK) provides an auspicious context for foreign investment in such burgeoning areas as the IT industry. "The world continues to flatten, unlocking Mexico's potential as a major business center and solidifying its role as a strategic location for technology innovators," said Mexican Secretary of the Economy, Dr. Eduardo Sojo.²⁰

The phenomenon of Indian IT companies establishing operations in Monterrey is a promising indicator of the trend toward the internationalization of the IT sector in Mexico. In today's changing world, knowledge, and the processes to generate and manage it, have become key factors in creating competitive business advantage. The challenges facing such globalizing programs as MICK call for an expanded research agenda in the field of knowledge management.²¹ In this context, Monterrey is positioning itself both as a creator and attractor of talent, and the proliferation of IT businesses will bring new economic, social and cultural benefits, much as in the case of Silicon Valley in California. Nevertheless, the path forward presents challenges and opportunities to both Indian and Mexican companies if this economic sector in Mexico is to achieve world-class status.

References

1. Parada, Jaime. "The Monterrey International City of Knowledge: The Vision." *Texas Business Review*. February 2008.
2. Sada, Guillermo. "La industria del software va por todo en Nuevo León," *Innovación*, July 10, 2006, No. 6.
3. "MindTree Plans Nearshore Presence and Announces Mexico Development Center", July 9, 2008. www.mindtree.com/newsandevents/july09_2008.html, accessed August 2008.
4. Rajashekar, Murthy. Personal interview. August 2008.
5. "Aricent establishes development and testing center in Mexico." www.aricent.com/en/press-release-070913-3.html, accessed August 2008.
6. For more information on the Council for the Development of the Software Industry in Nuevo León see www.csoftmty.org.
7. Op. Cit., Sada, 2006.
8. Pinal Alvarez, Magali. "Impulsa NL su lado tecnológico: Arranca primer centro en el PIIT y anuncia llegada de Infosys," *BizNews*, May 14, 2007 No. 373. www.biznews.com.mx/articulos.php?id_sec=23&id_art=1822&id Ejemplar=123, accessed December 2008.
9. For more information on Monterrey's International City of Knowledge initiative see www.mtycic.com.mx.
10. "Busca Monterrey ser el siguiente 'Silicon Valley,'" *El Porvenir*, January 23, 2008. www.elporvenir.com.mx/notas.asp?nota_id=188593, accessed August 2008.
11. "Sasken plans development center in Mexico," *CIOL News*, December 22, 2005. www.ciol.com/content/news/2005/105122211.asp, accessed August 2008.
12. Rojas, Ana Gabriela. "Describren en India oportunidades y amenazas." *Noticias Institucionales del Tecnológico de Monterrey*, January 19, 2008. <http://tinyurl.com/ch8fgg>, accessed December 2008.
13. Ibid.
14. Op.Cit., Parada, 2008.
15. Laszlo, Kathia and Laszlo, Alexander. "Fostering a Sustainable Learning Society through Knowledge Based Development." *Systems Research & Behavioral Science*. Vol. 24, pp. 493-503, 2007.
16. Rojas, Ana Gabriela. "Tiende puentes a India el Tecnológico de Monterrey," *Noticias Institucionales del Tecnológico de Monterrey*, January 18, 2008. <http://tinyurl.com/dfjw4> accessed December 2008.
17. "Aricent establishes development and testing center in Mexico." Sep 13, 2007. www.aricent.com/en/press-release-070913-3.html, accessed August 2008.
18. Infosys (2008). "Campus Connect Fast Facts 2007-2008." <http://campusconnect.infosys.com>, accessed December 2008.
19. García, Diana Aterriza Infosys en el Tecnológico de Monterrey. *Noticias Institucionales del Tecnológico de Monterrey*, January 25, 2008. <http://tinyurl.com/bnafn2> accessed December 2008.
20. "Infosys Technologies Expands into Latin America to Meet Client Needs." August 21, 2007. www.infosys.com/newsroom/press-releases/2007/latin-america.asp, accessed August 2008.
21. Laszlo, Kathia and Laszlo, Alexander. "Evolving knowledge for development: The role of knowledge management in a changing world." *Journal of Knowledge Management, Special Issue on Knowledge-Based Development*. Vol. 6, No. 4, October 2002. ◆

"The world continues to flatten, unlocking Mexico's potential as a major business center and solidifying its role as a strategic location for technology innovators," said Mexican Secretary of the Economy, Dr. Eduardo Sojo.

Texas Business Review is published six times a year (February, April, June, August, October, and December) by the Bureau of Business Research, IC² Institute, The University of Texas at Austin. Subscriptions are available free upon request. Views expressed in this newsletter are those of the authors and do not necessarily reflect the position of the Bureau of Business Research.

Research and service activities of the Bureau of Business Research focus on strategies to make Texas industries more nationally and globally competitive. The Bureau is policy oriented and dedicated to public service. Offices are located at 2815 San Gabriel, Austin, Texas 78705.

IC² Institute Director:

John Sibley Butler
john.butler@mcombs.utexas.edu

TBR Editor:

Bruce Kellison
bkellison@ic2.utexas.edu

TBR Managing Editor:

Margaret Cotrofeld
margaret@ic2.utexas.edu

Sales Office:

(512) 475-7813
(512) 475-8901 fax

www.ic2.utexas.edu/bbr

The University of Texas at Austin
BUREAU OF BUSINESS RESEARCH
IC² Institute
1 University Station A0300
Austin, Texas 78712

NONPROFIT ORG.
U.S. Postage
PAID
Austin, Texas
Permit No. 391

The Year in Review
TBR in 2008

December

"Monterrey, Mexico: India's Soft Landing Site for IT Operations"
Kathia Castro Laszlo, Alexander Laszlo, Lorraine De Fougères

October

"Eco-economics in Texas: Competitive Adaptation for the Next Industry Revolution"
John Motloch, J. David Armistead, John Lebkowsky

August

"Nuestra Casa (Our House): A New Model for Self-help & Improvement Along the Texas/Mexico Border"
Cecilia Giusti

June

"Generating Momentum Toward a Sustainable Economy: The Case of Austin Incentives"
Michael D. Oden

April

"The Hidden Costs of Payday Lending"
Don Baylor

February

"The Growth of Knowledge-Based Small Firms in Monterrey Mexico"
Elsie Echeverri-Carroll

Announcement

*IC² Institute Fellows Meeting
& Workshop*

**"Global Perspectives on
Technology Transfer and
Commercialization"**

May 7-8, 2009

The IC² Institute presents a workshop of IC² Global Fellows that concentrates on global perspectives of technology transfer and commercialization. This workshop and meeting is in the tradition of the IC² Institute's emphasis on wealth and job creation.

For additional information please contact coral@ic2.utexas.edu.