



STAY CLOSE. GO FURTHER.

Growing South

The Diffusion of U.S. Tech Innovation and Mexico's Emergence as a Startup Hub



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Summary

This report focuses on the growing ties between technology professionals in the United States and Mexico. The overall objective is to trace how Mexico is re-positioning, from a market where engineering and STEM talent once focused on industrial manufacturing and business services, toward becoming a country with a higher degree of tech entrepreneurship. The report also details how entrepreneurs are preparing to expand on their operations in Mexico to develop a regional footprint in Latin America.

The report is based on interviews with dozens of leading technology professionals and entrepreneurs in Mexico, conducted from February to April 2016. Insights are also provided by data collected by Nearshore Americas Research through wage analysis of IT professionals in Mexico since July 2015, and two surveys conducted among nearshore outsourcing professionals since November 2015.

Specifically, this report focuses on the following themes:

- **Strategic geography:** North America's center of tech innovation has spread out, moving southward in recent decades. The process of tech innovation is de-centralizing. Mexico stands to build on its historic IT strength of human talent through collaborations with U.S. researchers and businesses.
- **Domestic risk aversion:** Mexico's business culture is traditionally risk-averse, one of many challenges startup entrepreneurs have had to overcome. Today that is changing, as startup entrepreneurs eye domestic and international market opportunities.
- **Reforms and innovation:** The Mexican government's efforts to increase competition in key sectors of the economy, including telecommunications and banking, are inspiring tech entrepreneurs, many of whom see an array of opportunities.
- **Talent centers:** Mexico's global services industry is spreading beyond traditional strengths. Established markets like Mexico City continue to demonstrate strength and capacity to grow. Meanwhile, longstanding business services locales like Guadalajara are venturing into new niches.
- **Expansion of Mexican business to Latin America:** Mexican firms are increasingly interested in expanding abroad not just into the United States, but across Latin America.

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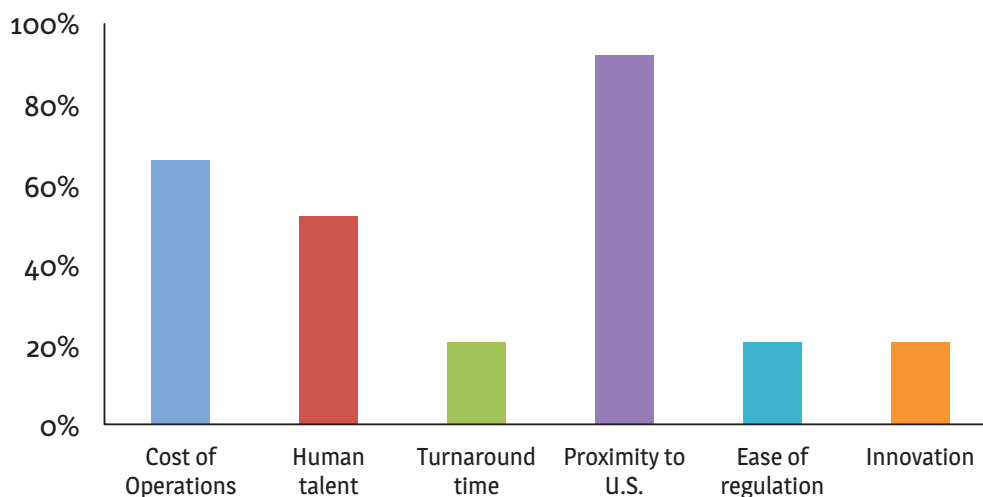
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Mexico's Strategic Geography

Over the past fifteen years, Mexico has established a prominent position for delivery of business services thanks to a series of 'nearshore' advantages: time-zone alignment, proximity, and business culture affinity. These advantages have been complemented by Mexico's ability to offer business service providers arbitrage opportunities vis-à-vis the U.S. market. Human talent and nearshore advantages combine to give Mexico an appealing strategic geography.

What Are Mexico's Most Attractive Qualities as an Outsourcing Destination?

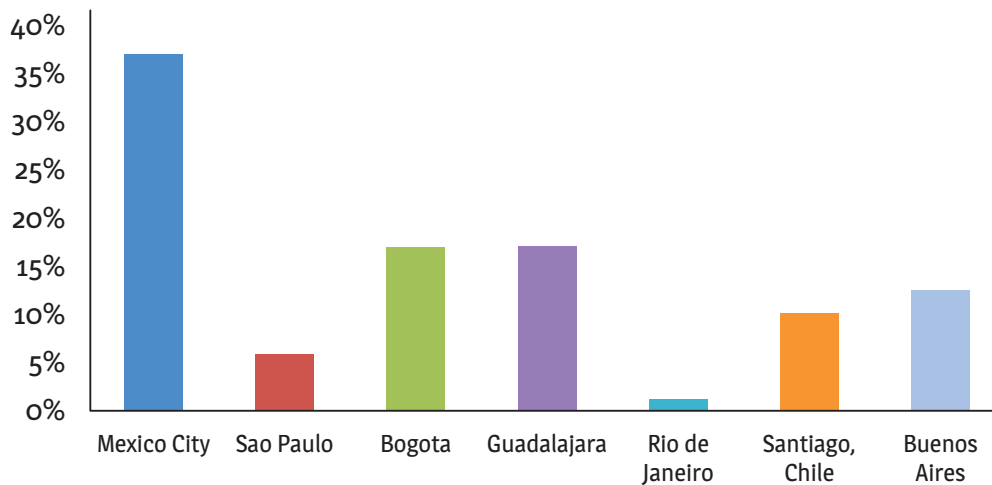


Source: Mexico Next Generation Survey (Nov. 2015). n=123

In terms of the provision of business services, these advantages are likely to persist. Mexico's large pool of human talent, each year refreshed by more than 100,000 engineering graduates from the country's universities, is spread throughout the country.¹ Delivery of business services from a number of different locations helps Mexico to internally re-balance between delivery locations. The multiple locations serve as a release valve that allows the country to internally re-balance between delivery locations, and thus avoid saturation. Today, over 80% of outsourcing professionals remain upbeat about Mexico despite signs of slowdown across the economy of Latin America and in the global services industry.²



Which Market Offers the Highest Value Business Services?



Source: Nearshore Americas Research, *State of the Nearshore—2016* (April 2016). n=144

Mexico's strategic geography is improving due to technological change. The shifting role of technology in the nearshore market is already apparent by the way in which cross-functional teams utilize Agile methodologies to jointly develop software in real-time. This allows projects to develop faster than those that involve teams that work sequentially. This is just one example of the synergy made possible by the technological advancement underway in the business marketplace.

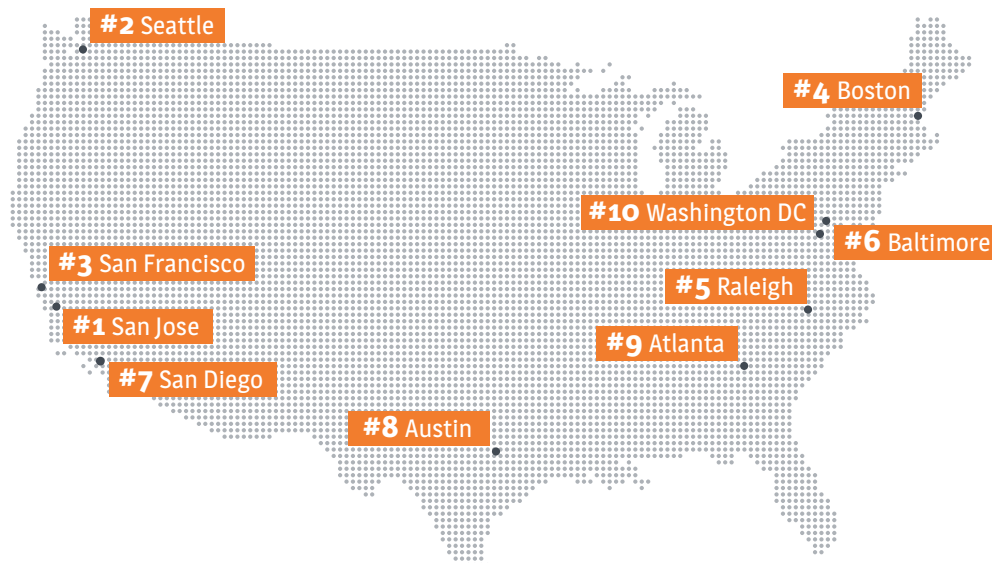


How Silicon Valley Is Growing South

North America's center of technological innovation is moving south. The trek started over a generation ago, when hi-tech firms began moving away from the Boston area. One hub, oriented around pharmaceuticals, statistical and open source software, took root around the Research Triangle Park of North Carolina. On the West Coast, Microsoft's headquarters and research campus transformed Seattle into a tech hub. And from the late 1990s on, a set of tech firms grew up around California's Silicon Valley. Since then, as one area became saturated due to rising costs, other tech hubs have cropped up: Salt Lake City, Utah; Austin, Texas; Denver, Colorado.

At least three characteristics are evident in each emergent tech hub. First, it must make business sense by offering arbitrage opportunities. Second, there must be a pre-existent talent base. The crucial element here is the presence of universities that serve as feeders of tech talent. Third, the emergent tech hub tends to have its own identifiable traits or flavor. For example, the lifeblood of the Washington, DC, tech hub is federal government contracts, while the *Los Angeles Times* notes that part of LA's appeal to tech firms is its capacity to serve as a "gateway to the region's entertainment and media offerings."³

Software Power Index of Leading Tech Hubs



Source: Based on data from San Diego Regional Economic Development Council, *Software Development: Driving San Diego's Tech Ecosystem* (March 2016). p. 31.



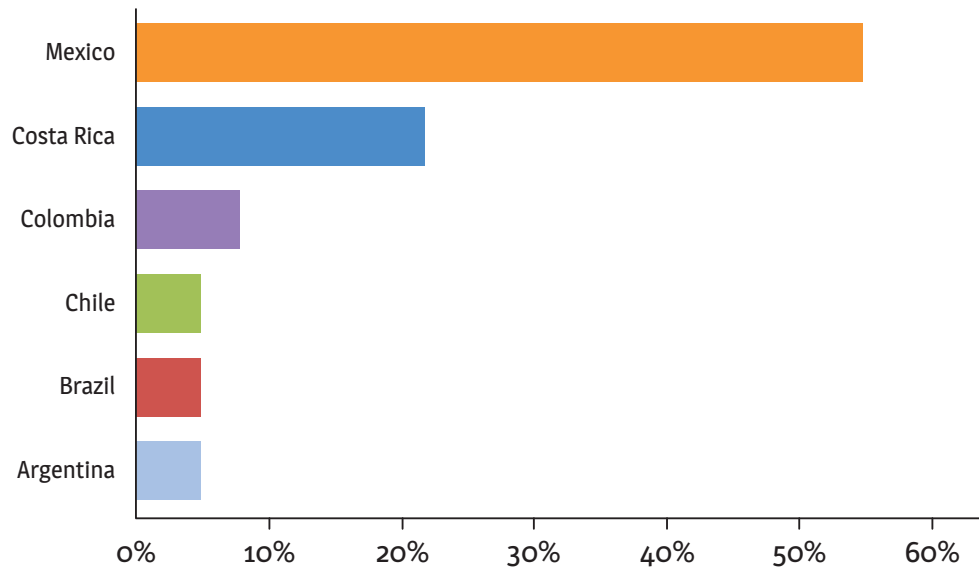
As innovations from Silicon Valley have spread rapidly across the world, a number of other nations, from Brazil to Vietnam, have looked to copy the tech hub model. To date, the results of these initiatives are at best mixed. The tech center in the Chilean capital of Santiago, dubbed “Chilecon Valley,” has run into trouble, not least because of the reality that the country does not have a large enough consumer class. Such proximity to a large class of consumers is crucial for innovators to test new products, devise fixes, and make improvements. Meanwhile, the Russian attempt to consciously emulate Silicon Valley with a number of tech centers around Skolkovo has become a boondoggle. Given recent sanctions and Moscow’s indifference to foreign investors journalists have taken to calling the tech centers “little Potemkin villages.”⁴ Ultimately, transforming a business park into a world-class innovation hub requires more than government-backed initiatives to draw in major firms.

Perhaps more significantly, even Silicon Valley no longer appears to be the tech hub of popular imagination. Around 2013, the most recent stage of U.S. tech de-centralization began as major companies began shrinking their footprint in Silicon Valley while expanding operations further into southern California. For a brief time Santa Monica was positioned to emerge as “Silicon Valley South,” but the city’s small size and its limited capacity to accommodate further growth quickly induced many firms to head further south to Los Angeles. The Los Angeles scene has arguably witnessed the most activity of late. First Facebook moving part of its operations there; Microsoft, Google and Yahoo have all followed suit.

Already this trend has begun to integrate Mexico intensively into the process of software programming and tech innovation. Among nearshore markets, Mexico is perceived to be the most fully tied into the U.S. technology cycle. This level of integration of business technology is pushing ever larger parts of the software development process into Mexico. ArkusNexus and Sonata Services are both software firms that operate out of Tijuana and they are enjoying rapid growth thanks to projects with clients based largely around Southern California. iTexico has grown into a global software company based on the company’s ability to summon talent from a delivery center in Guadalajara to work alongside programmers at its headquarters in Austin, Texas.



Which Market Do You Perceive as Being the Most Fully Tied Into the U.S. Technology Cycle and American Way of Doing Business?



Source: Nearshore Americas Research, *State of the Nearshore—2016* (April 2016). n=108

Elsewhere along the border, hundreds, possibly thousands, of Mexican programmers are also working on projects for U.S.-based firms. According to one C-Suite executive at a global software development firm, Mexican developers in the northern border states of Baja, Chihuahua and Coahuila, are enjoying boom times by working as freelancers for firms just across the border in California and Texas. It's a source of mild frustration to the executive, who is always eager to hire sharp programmers, but he nonetheless finds it amusing that the programmers are so well attuned to the U.S. tech job market that they are able to take advantage of the proximity to the border in this way. In this case, the freelance programmers in northern Mexico may work from home some days, but they travel across the border to work with their U.S.-based colleagues on an ad hoc basis.

These are high-paying jobs. And, as tech innovation becomes increasingly diffuse, the integration with the United States removes the imperative that Mexico would otherwise have to boast of its own Silicon Valley. To the contrary, Mexico's close integration into the U.S. tech sector puts the country in the unique position of not needing to have its own Silicon Valley in order to have a strong and vibrant tech industry.



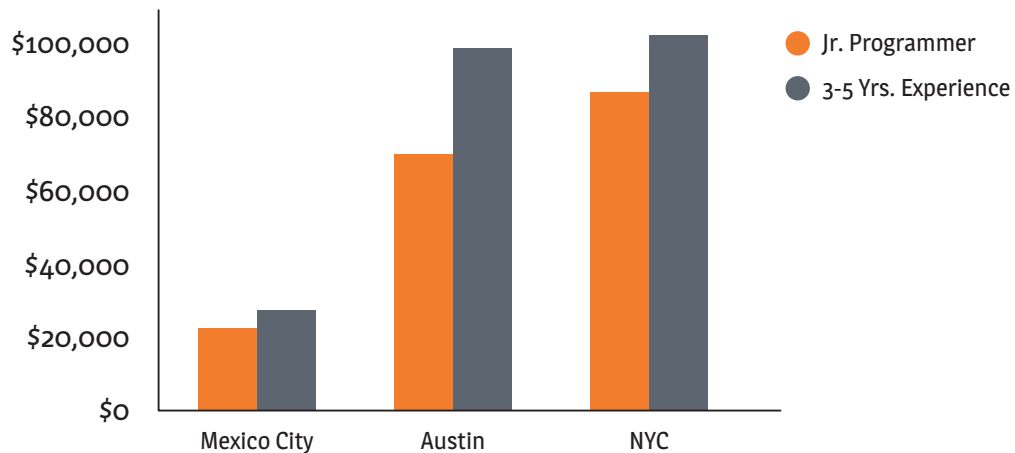
A Microcosm for Tech Entrepreneurs

While global services firms have realized Mexico's nearshore advantages for years, more recently American tech entrepreneurs are seeing the country as a place to realize their vision. After graduating from college in 2009, Isaac Phillips began travelling to Mexico frequently on assignment for the satellite company that he worked for. He was impressed the number of savvy engineers he met there. In mid-2015, Phillips decided to move to Mexico City and use the capital as a testing ground for the mobile app he was developing with his brother, Joel.

*Mexico is unique because it is the one country that does **not** need to replicate Silicon Valley in order to boast a thriving tech industry.*

Perhaps the most immediate feature that draws the attention of tech entrepreneurs to Mexico is the cost savings. It's hard for startups to pay the six-figure salaries commanded by software programmers in New York City. Even after a startup has gone beyond the exploratory phase and succeeded in securing a first round of capital from a venture capital firm (VC), the enterprise is still well shy of being able to pay the sort of wages that programmers in the U.S. typically command. Mexico can serve as a less expensive host for startups. Isaac reckons he can pay 4-5 savvy programmers in Mexico City for as much as it would cost him to employ one programmer in NYC.

Average Salary, Software Programmer (USD)



Source: Nearshore Americas Research, Payscale.com. Note: Full-time programmer (average of front-end and back-end salaries); figures are direct wages and do not include bonuses and other costs to employer.



Yet, the Mexican capital's appeal goes beyond the opportunity to realize labor arbitrage opportunities by paying lower wages than in the U.S. It is a "great place to grow and test products," explains Isaac, because Mexico City is in many ways a microcosm of the developing world.

Across the developed world access to high-speed Internet is the norm, while a small fraction of the world continues to live under conditions where modern, high-speed Internet simply is not accessible. Between the rich world and the poor there is a vast "second world." This is where the majority of the world's population lives. People in this part of the world are middle income (~\$10,000 GDP/pc), they theoretically have access to the Internet, which means the infrastructure is present and modern IT services are operational. But they often have trouble accessing the Internet because of the cost.

The Phillips brother's app is Pig.gi. Affectionately referred to as "piggie" by its users, Pig.gi essentially subsidizes the cost of Internet access through ads that are provided by sponsors. Every time the user opens the phone, they see a piece of content, be it a trending news topics, a coupon, or an ad to download an app. By viewing this content the user accumulates Pig.gi points, which they in turn redeem to buy mobile Internet service. And in Mexico City, where the average person with a mobile phone opens it 150 times a day to make calls, send emails, or post on social media, the ad views generate lots of Pig.gi points. On average, the points amount to \$50 pesos a month in credit, bringing down the cost of voice, messaging and Internet access significantly.

Pig.gi is growing fast. Last year the app eclipsed 100,000 users, and recently the Phillips' secured another round of VC funding. While there is still plenty of room for Pig.gi to grow across Mexico, the brothers also plan to use their Mexican base to expand Pig.gi through much of Latin America. Approximately 80% of mobile users in the region use pre-paid services to talk and access the Internet.



Mexico City is a microcosm; mobile apps and technology solutions that prove popular with consumers there can be deployed from Lima to Lagos.



Technology solutions like Pig.gi are crafted for Mexican consumers, but they can be deployed in Colombia and Peru, as well as Egypt and Nigeria, because the ICT infrastructure in those places is similar to Mexico's. Consumers in developing markets, moreover, rely on their mobile phones as the primary means of accessing the Internet. According to the Pew Research Center, the rapid spread in smartphone ownership owes in part to the rising Internet access across the developing world.⁵ This entails a bevy of opportunities for developers of mobile apps. So while the Mexican market is itself just entering the age of digital consumption, as a market for startups it offers a commercial profile that firms can study, and if they can deploy a product that appeals to Mexican consumers, they can build on their success by reaching out to consumers across Latin America, Africa and the Middle East.



Risk Aversion and Other Domestic Challenges

Technology entrepreneurs face deep-seeded challenges in Mexico. First and foremost, a culture of risk aversion pervades business in the country. Investors have traditionally favored established domestic industries, like real estate, to more innovative, albeit risky, technology ventures. Unlike in Silicon Valley, where success is deemed a result of repeated errors and failure in business is common in Mexico failure in business is often seen as a personal failure and is widely scorned.

This continues to hamper entrepreneurship. "There is booming interest on the part of young people to be part of a happening tech scene," says Tom Johnston, a naturalized Mexican citizen and business consultant in Mexico City, "but at the same time there is a realization that that vision is being slowed down by our traditional business culture." In fact, while Mexico is considered a reasonably good place to do business overall, as measured by the World Bank's Ease of Doing Business Index, the country remains a daunting locale for startups. Furthermore, according to the same sub-category, Mexico ranks at #65 for 'Ease of Starting a Business'.

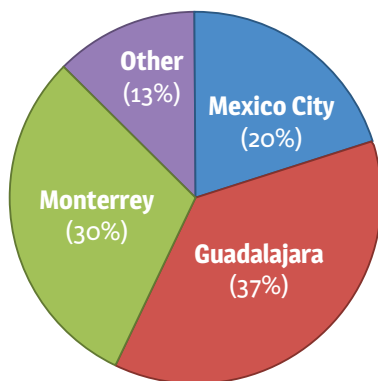
World Bank's Ease of Doing Business Index: 2016

	Overall	Starting A Business
Mexico	#35	#65
Chile	#48	#62
Colombia	#54	#84
Brazil	#116	#174
Argentina	#121	#157

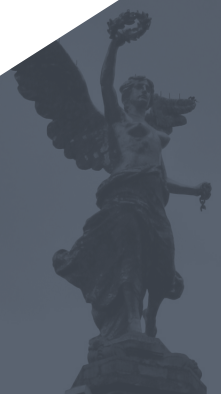
Source: World Bank, *Doing Business 2016 (13th Ed.)*

According to Wil Leonards, a German ex-business development consultant who now lives in Mexico City, where he blogs on philosophy, finance and economics at www.noahdenkt.com, the problem is "there is no meaningful infrastructure that supports you as an entrepreneur early on." Hence, he goes on, "there is a lot more self-started energy required here in Mexico to fight the initial inertia of starting a business than is the case in Germany, let alone a place like Silicon Valley."

What is Mexico's best city for software development?



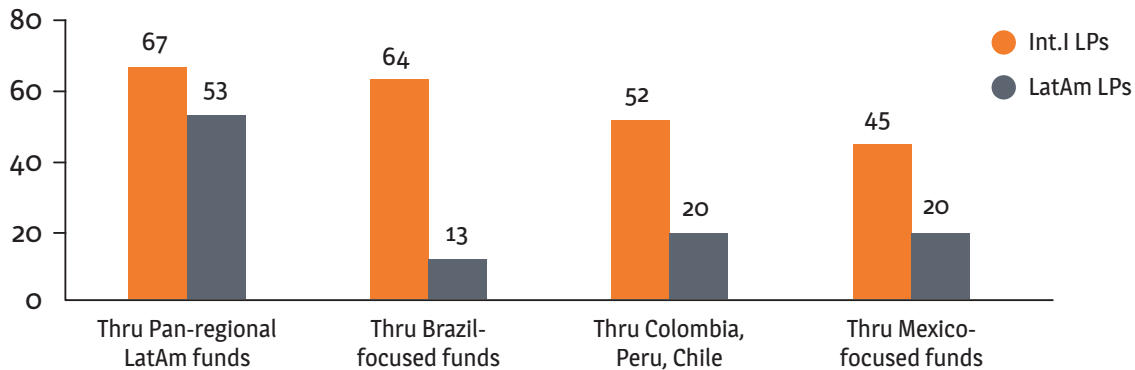
Source: Nearshore Americas Research, *Mexico Next Generation Survey (Nov. 2015)*. n=123



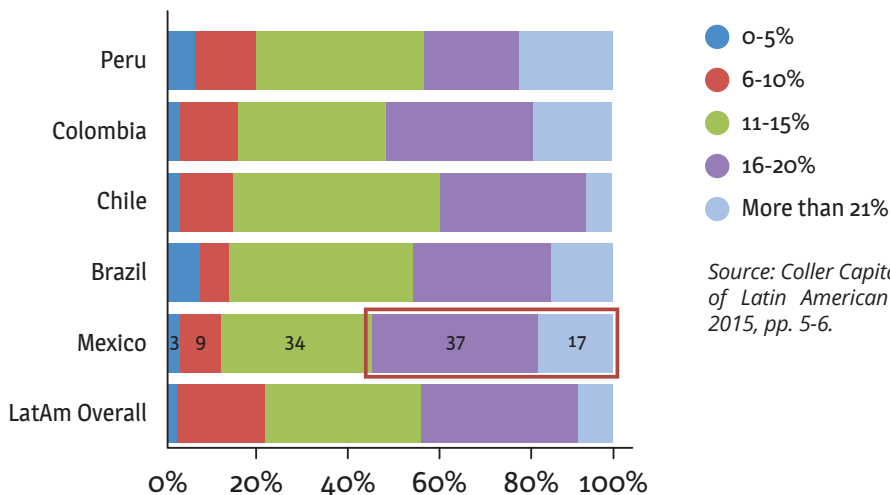
Arguably, the problem of risk aversion is most pervasive around Guadalajara. Despite the city's prominent position in the provision of IT outsourcing and business services and a recent government initiative to brand Guadalajara a "Digital Creative City," its business culture remains deeply wedded to tradition. Groups of families who have built up their position over generations continue to control key industries. In this environment, new entrants are occluded from large sectors of the economy, and startups can't raise cash locally. It's a coziness that deters innovation. "There are a lot of industries in Mexico that haven't innovated in a long time, maybe ever," says David Garcia Aceves, a 25-year-old tech entrepreneur from Guadalajara. "They really need a lot of improvement."

It is also extremely difficult for businesses to attract capital in Mexico. Within Latin America there is optimism that the country's private equity outlets, which largely buy out established firms, will mature over the medium term. But the traditional view of Mexico as a private equity laggard continues to predominate among private equity firms based outside the region, even though returns on private equity are likely to be high over the coming years. As the Latin America Venture Capital Association puts it, "Mexican PE [private equity] activity overall still looks fairly anemic for the size of the economy."⁶

LPs Expecting to Access Private Equity Via Particular Routes in 3 Years' Time



LPs Annual Net Return for LatAm Private Equity Over the Next 3-5 Years



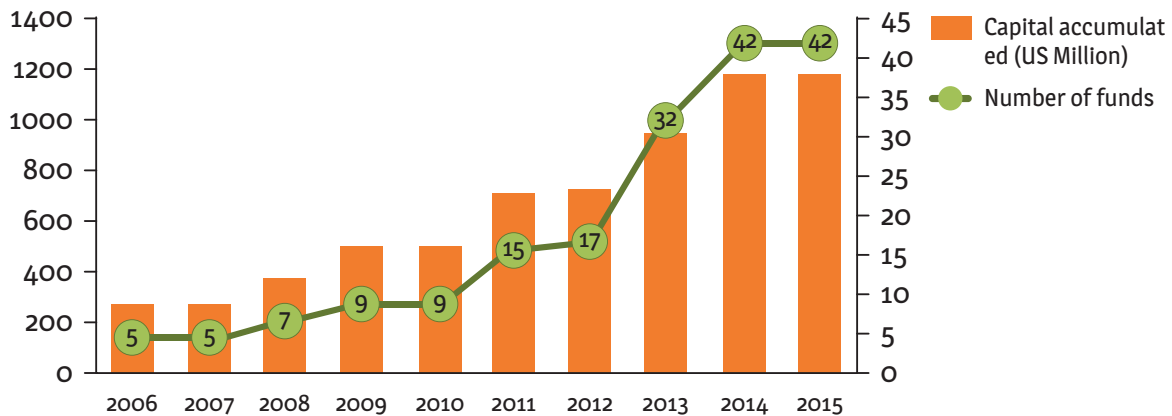
Source: Collier Capital/LAVCA, Survey of Latin American Private Equity 2015, pp. 5-6.



Navigating the VC Pipeline

With scant financing for small businesses through larger and more established channels, entrepreneurs in Mexico are forced to rely to a greater degree than elsewhere on venture capital, a means of finance that has only emerged recently in Mexico. In 2010 there were only nine VC firms in the country; today there are at least 42.

Development of VC Market in Mexico



Source: AMEXCAP

Reliance on venture capital bestows its own set of stresses. Tech startups must find a way to grow on a budget, and if they are relying on VC backing they must meet specific revenue metrics in order to attract subsequent rounds of investment. If they fail to address technical lurches quickly, their cash flow dries up. David Garcia, whose company PagoSafe recently secured additional funding, points out that the discipline restrictions placed on startups only adds to the competitiveness that can negotiate the VC pipeline: “Mexican startups have the need to become profitable a lot sooner and we are constantly trying to find ways to do it, and then, of course, scale up.” But this imperative to monetize technology quickly could bring benefits, and Garcia believes it makes many Mexican startups “uniquely competitive”.



Federico Antoni has a unique vantage on Mexico's VC market. After receiving his MBA from Stanford University, Antoni returned to his native Mexico to co-found one of the country's first start-up incubators. In 2012 Antoni started ALLVP with fellow Mexican entrepreneur and Stanford MBA Fernando Lelo de Larrea y de Haro. Today ALLVP is one of the largest venture capital firms in Mexico.

"Projects are more ambitious and products are more polished and technically sound. Today, Mexico is undoubtedly the entrepreneurial hub of Latin America."

**—Federico Antoni,
Co-Founder, ALLVP**



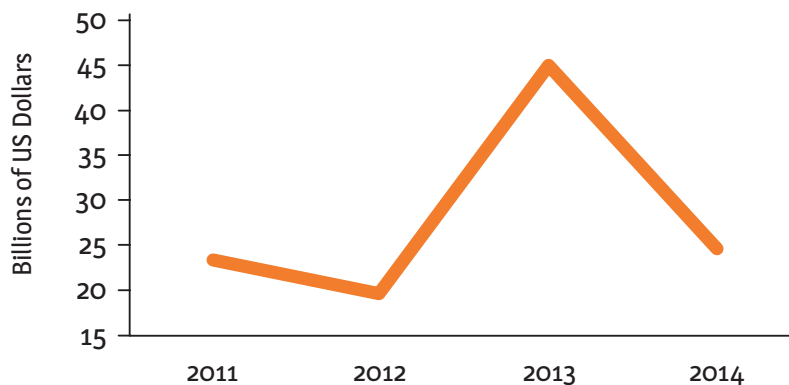
Four years ago, Antoni recalls that when ALLVP was screening projects most of the pitches he received were based on existing companies and technologies, so-called "copycats". But that's changed in recent years. Entrepreneurs come to ALLVP with refined business plans and many company founders show evident signs of having studied business while in the U.S. or Europe. Antoni states that company founders are both more experienced when it comes to business strategy, and they pursue more innovative ideas. "More and more, we see foreign and technical founders, from Latin America, Europe and the U.S. Their projects are more ambitious and products are more polished and technically sound. Today, Mexico is undoubtedly the entrepreneurial hub for Latin America."



Reforms Show Glimmers of a New Economy

In 2012, the Mexican government unveiled a spate of reforms aimed at injecting greater competition into key sectors of the economy, from energy and banking to telecommunications. (Educational reform is also a pillar of the reform drive.) The full benefit of these reforms has yet to register. Household consumption declined by 2.2% from 2012-2015.⁷ Some of this has owes to timing. Shortly after the reforms were introduced the global economy slowed, then oil prices cratered. As a result of the challenging global conditions, some signs of market support for Mexico's reforms are missing. Foreign investment has gyrated, and the peso's value dropped by over 15% in the course of 2015.

Mexico's Incoming FDI



Source: World Bank

On an anecdotal basis, green shoots have emerged. AT&T has spent billions of dollars to establish a large presence in the Mexican telecom market through the acquisition of wireless firms Nextel Mexico and Iusacell, and by buying wireless spectrum. The Dallas-based company's goal is to offer coverage to 100 million in Mexico by 2018. Still, critics point out that more is needed. Garcia ticks off a series of industries, including banking, which beg further reform. "They need to change their mindset and strongly focus on their customer's needs," he says. "They could really use technology to accomplish this objective, but most companies in those industries in Mexico simply are not used to innovation."





“Precisely because of how slow Mexico has been to create or accept innovation in its industrial markets, there is a lot of latent opportunity for domestically developed apps for industrial or commercial uses.”

—Tom Johnston, Co-founder, BDP Americas

This promises a tremendous opportunity for entrepreneurs. Tom Johnston, co-founder of BDP Americas in Mexico City, spells it out: “Daily life here involves people putting a couple bucks at a time of credit on their mobile phones, or paying their electricity bills.” Mexico’s startup tech entrepreneurs can step in to the breach left by industry incumbents and provide solutions tailored around the sort of high volume, low-value transactions that are common in Mexico. Opportunities abound. “Precisely because of how slow Mexico has been to create or accept innovation in its industrial markets,” says Johnston, “there is a lot of latent opportunity for domestically developed apps for industrial or commercial uses.”

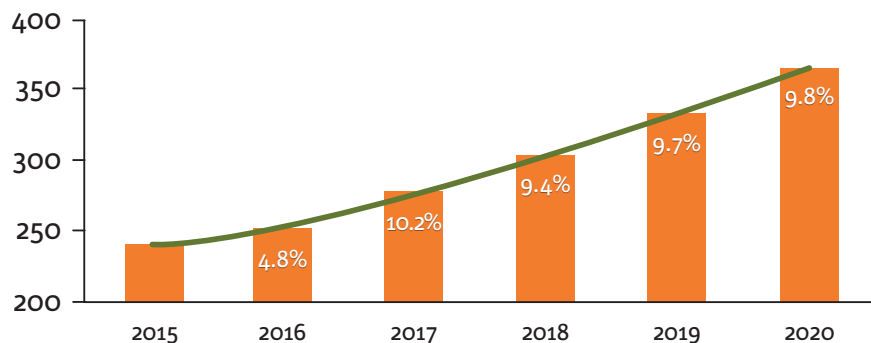
Banking is just one example. If entrepreneurs can offer solutions that facilitate the millions of daily financial transactions that have not involved banks historically, those entrepreneurs stand to succeed. In the process, they will not only improve the lives of their customers, many of whom have avoided banks, by bridging the divide between the banks and the unbanked, but the tech entrepreneurs will set in place a process of credit creation, effectively anchoring millions more Mexicans to the middle-class.⁸



This is just what Garcia aims to achieve. His product, PagoSafe, currently in development in stealth mode, enables users to protect their credit cards from fraud using their smartphones. While Mexico is not nearly as bad as some Latin American countries when it comes to e-commerce fraud—Venezuela is the worst country in the world for e-commerce fraud, Brazil is the fourth worst—credit card fraud remains a major problem in the country.⁹ According to Garcia, banks using PagoSafe enjoy dramatic drops in online credit card fraud and higher credit card usage.

The ramifications could bleed into other sectors, such as retail. In a profile of “the new Mexican consumer,” the global auditing and consulting firm PwC warns retailers about the need to respond to younger, more tech-reliant Mexican consumers: “Convenience is greatly valued today and retail organizations need to identify and address this now, while also keeping a close track on future transitions. Being out of sync may lead to a significant risk of missing out on market opportunities and losing the customer mindshare.”¹⁰

Household Consumption Expenditure (US Billions) and % Growth



Source: PwC, “Convenience Matters: Serving the New Mexican Consumer,” April 2016, p. 8.



Mexico Grows South

Given that the full impact of tech innovation has yet to be felt in Mexico, startups are likely to focus their initial energies reaching consumers in Mexico. Moreover, there are plenty of opportunities for apps specific to cars and other advanced manufactures that Mexico exports, another reason that startups are likely to focus on the Mexican market.

"Sure, Mexico is a cheap place to hire engineers. But there's a huge opportunity to target Mexico as a consumer economy, and from there on to the rest of Latin America."

—Andy Kieffer, Founder, AgaveLabs



However, some technologists are already casting an eye south, seeking to draw on Mexico's strategic geography in order to export their products to Latin America. The following factors are at work:

- Mexico is a microcosm. As the Pig.gi app demonstrates, technology deployed for the Mexican market is often readily suitable for the rest of Latin America. David Garcia also notes that Central America and South America are similar markets to Mexico when it comes to banking, and he says, this will allow PagoSafe to expand quickly.
- Latin America is uniting into a cohesive bloc. Until recently, Latin America was an economic sphere riven by competing trade blocs, vast inequality between countries and within them, and only pockets of middle class consumers scattered about. Now though, the region is becoming a middle-income region with a higher degree of technological proficiency. Meanwhile, trade treaties like APEC and TPP promise fewer restrictions for exporters.
- Major forces in the Mexican VC community see expansion of Mexican tech solutions as a natural extension. The main question concerning technology will go from one around innovation to one around implementation. Andy Kieffer thinks Mexico is fast approaching that inflection point, and thereafter technology fixes can be more rapidly deployed to other markets than was the case in the past. Federico Antoni says: "VC in Mexico will support founders that solve developing economy problems, its impact in the economy, its cities and its population will be broader and more profound."



Talent Centers

Currently Mexico City possesses the strongest ecosystem for tech startups, though as with many things the capital's sheer size can make the network appear dispersed.

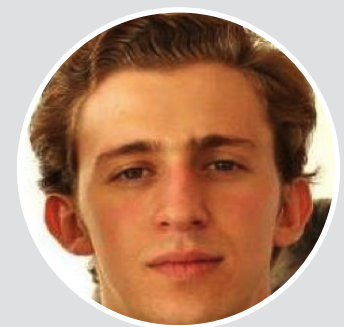
Guadalajara may be the second most mature, bolstered by the large numbers of engineering graduates produced by universities in the state of Jalisco as well as the presence of established VCs like AgaveLabs, founded and run by Andy Kieffer, a former Silicon Valley technologist. Monterrey's nascent tech ecosystem is focused around fintech.

Across northern Mexico, the dispersion of tech talent in border cities and the present ability of the workforce there to take advantage of freelance opportunities with U.S. firms is likely to prevent the emergence of a strong, large tech ecosystem for the foreseeable future. Antoni at ALLVP holds out hope that other locales will also coalesce in time, if just because consumers across the country are in need of better banking and IT services: "Less obvious cities like Tijuana, Aguascalientes or Queretaro could really benefit from industry-driven innovation."

If northern Mexico is to carve out its own niche within the tech startup space, Tijuana is the most likely candidate to emerge. It has a fast growing software development community, powered chiefly by a large supply of skilled programmers. Moreover, ideas spread seamlessly across the Baja border. Developers speak English and Spanish effortlessly, even to the point that bilingualism is taken for granted. Lonnie McRorey, director of research and development at MIND Hub/ArkusNexus, says that in Tijuana "the culture breeds innovation".

"There are many opportunities in huge markets. We know of innovative tools to offer solutions that tackle business challenges, and we have a lot of talent to provide those solutions."

— David Garcia Aceves, CEO, PagoSafe



Conclusion

The center of U.S. tech innovation is spreading out, drifting southward as it diffuses, and Mexico is heavily involved in this process. Thanks to Mexico's strategic geography and large pool of human STEM talent, the country enjoys unrivaled access to the tech development and innovation cycle underway in the United States.

Increasingly, many of the same features that distinguished Mexico as an IT and business services location are helping to create a tech startup industry in the country. Tech entrepreneurs today are taking advantage of the fact that software engineers are more affordable to hire in Mexico than in the United States to build apps in Mexico. As they do, there is a growing realization that, quite beyond the cost savings, technology solutions devised for the Mexican market are suitable for export to the rest of Latin America.

Technological diffusion and rising entrepreneurship are gradual processes. Domestically, the appetite for risk remains low in Mexico's business community. Many engineers and business professionals will continue to opt for secure careers in established businesses rather than opt for the uncertain path of trying to bring an innovative idea to life. This remains a barrier to innovation and the creation of tech startups in Mexico.

However, recent signs that long-entrenched sectors such as banking and telecommunications are opening up to tech solutions is driving excitement among tech entrepreneurs. They see the established industries, widely known for poor customer service, as presenting an immense opportunity. As Andy Kieffer puts it, "People here would rather go to the dentist than the bank." Tech startups stand to make millions by devising apps and other tech solutions that improve customer service and facilitate high volume, small value transactions.

As with tech hubs in the United States, the emergence of tech hubs in Mexico builds on pre-existing work force strengths in different areas. Mexico City and Guadalajara offer the most developed startup ecosystems in the country, while Monterrey's tech startups tend to focus their energy around fintech.

Even as Mexico promises opportunities galore, many tech entrepreneurs in the country are eyeing foreign markets, especially expansion in Latin America. In part this is an extension of the strategic geography that Mexico already enjoys, though Mexico has not been able to exploit it kinetically because of lack of coherence within Latin America as an economic bloc. That's changing thanks to the region's economic development. But also, Mexico is particularly as a place to devise technology solutions. The country's Internet connectivity and income level put it on par with dozens of other countries. Mexico is a microcosm of the middle-income world.

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⁵ Jacob Poushter, “Smartphone Ownership and Internet Usage Continues to Climb in Emerging Economies,” 22 Feb 2016: <http://www.pewglobal.org/2016/02/22/smartphone-ownership-and-internet-usage-continues-to-climb-in-emerging-economies/>

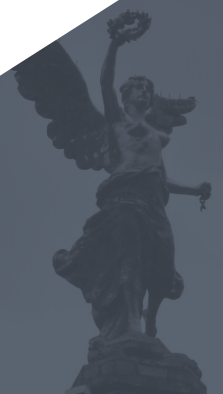
⁶ “Beyond the Headlines: What’s the Deal in Mexico and Brazil?” LAVCA, 31 March 2016: <http://lavca.org/2016/03/31/beyond-headlines-whats-deal-mexico-brazil/>

⁷ PwC, “Convenience Matters: Serving the New Mexican Consumer,” April 2016, p. 8.

⁸ This point is made at length by the Peruvian economist Hernando de Soto in *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. Basic Books: New York, 2000.

⁹ “Countries With the Most and Least Online Fraud,” MarketWatch, 3 June 2015: <http://www.marketwatch.com/story/countries-with-the-most-and-least-internet-fraud-2015-06-03>

¹⁰ PwC, “Convenience Matters: Serving the New Mexican Consumer,” April 2016, p. 22.



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