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Mexico

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Executive Summary

The most populous Spanish speaking country in the world, Mexico acts as a bridge for trade between Latin America and Western nations. Although historically and economically overlooked as a developing country overladen with crime and corruption, its potential to contribute to global innovation has yet to be unveiled. Even the ancient civilizations exhibit the hallmarks of entrepreneurship through creating new products, business models, and exploring new markets. Its unique culture and geographic positioning allows for bustling ports, abundant natural resources, and the potential to capture both the US and Latin American markets.

The following report details Mexico's innovation-driven entrepreneurial ecosystem in terms of key programs, policies, and challenges surrounding its entrepreneurship ecosystem in addition to recommendations on how various stakeholders may help improve the ecosystem. The five stakeholder groups are as provided by the Innovation Diplomats framework:

Corporate: Companies of all sizes – small, medium, and large based in or operating in Mexico.

Government: Mexican regional, state, and national government and their associated policies.

University: The educational institutions in Mexico, including universities, researchers, students, and administration.

Entrepreneur: Innovative business owners and in Mexican startups, accelerators, and incubators.

Risk Capital: Venture capitalists, banks, angels, private equity, and family offices in Mexico.

Introduction

With a GDP of more than 1.15 trillion USD, Mexico is the 15th largest economy in the world, and 11th in terms of purchasing power[1]. In addition to free trade agreements with 46 countries as an export-oriented economy, it has one of the largest markets in the world with a population of 130,759,074 (1.71% of the world's population) and strong links to consumer economies in North and South America[2]. The country offers a strategic location and proximity to the main consumption centers of the world, allowing companies to respond quickly to changes in demand. It has a healthy GDP growth rate of 2.0% and a relatively stable inflation rate of 2.5% annually. These characteristics make Mexico one of the most competitive countries for investments at an international level due to its unprecedented macroeconomic stability, size, and strength of the internal market.

The majority of Mexico's GDP comes from the services sector, 59.8%, followed by the industry sector with 36.6%. Unemployment holds at a steady low rate of 3.44% and interest rates are declining in favor of increasing per capita income. Mexico's main industries include food and beverages, tobacco, aerospace, chemicals, iron and steel, petroleum, mining, textiles, and tourism. Its

[1] **Top Challenges of Doing Business in Mexico. TMF group.**
[2] **Jones, Victoria. Entrepreneurship in Mexico.**

main exports are automobiles, electronics, oil, silver, fruits, vegetables, coffee, and cotton, mainly to the US and Canada[3].

However, despite its increasingly growing economy, enormous social gaps remain between the rich and poor, and developmental gaps between urban and rural areas. Mexico's labor force of 52.8 million people ranks as some of the most hardworking in terms of hours worked, yet their productivity per capita remains abysmally low.

Although technology has not been historically prominent as a driving factor of the economy, Mexico is moving away from industry and manufacturing and now boasts one of the more dynamic startup scenes in Latin America, particularly Mexico City. Government and universities have worked tirelessly over recent years to ensure that technology and innovation will be the foundation of the new economy. To catalyze this process, the Mexican Association of Venture Capital and Private Equity (MEXCAP) held its first conference in 2009, and the creation of the National Institute of Entrepreneurship (INADEM) signaled the emergence of a self-sustaining startup ecosystem[4].

At the heart, this movement towards innovation is driven by a community of interconnected citizens. In the bustling Roma and Condesa districts, coworking spaces create a sense of unity in what otherwise can be an overwhelming metropolis. The nationwide entrepreneur week draws talent from across the country to discuss everything from up and coming technology to progressive workstyles.

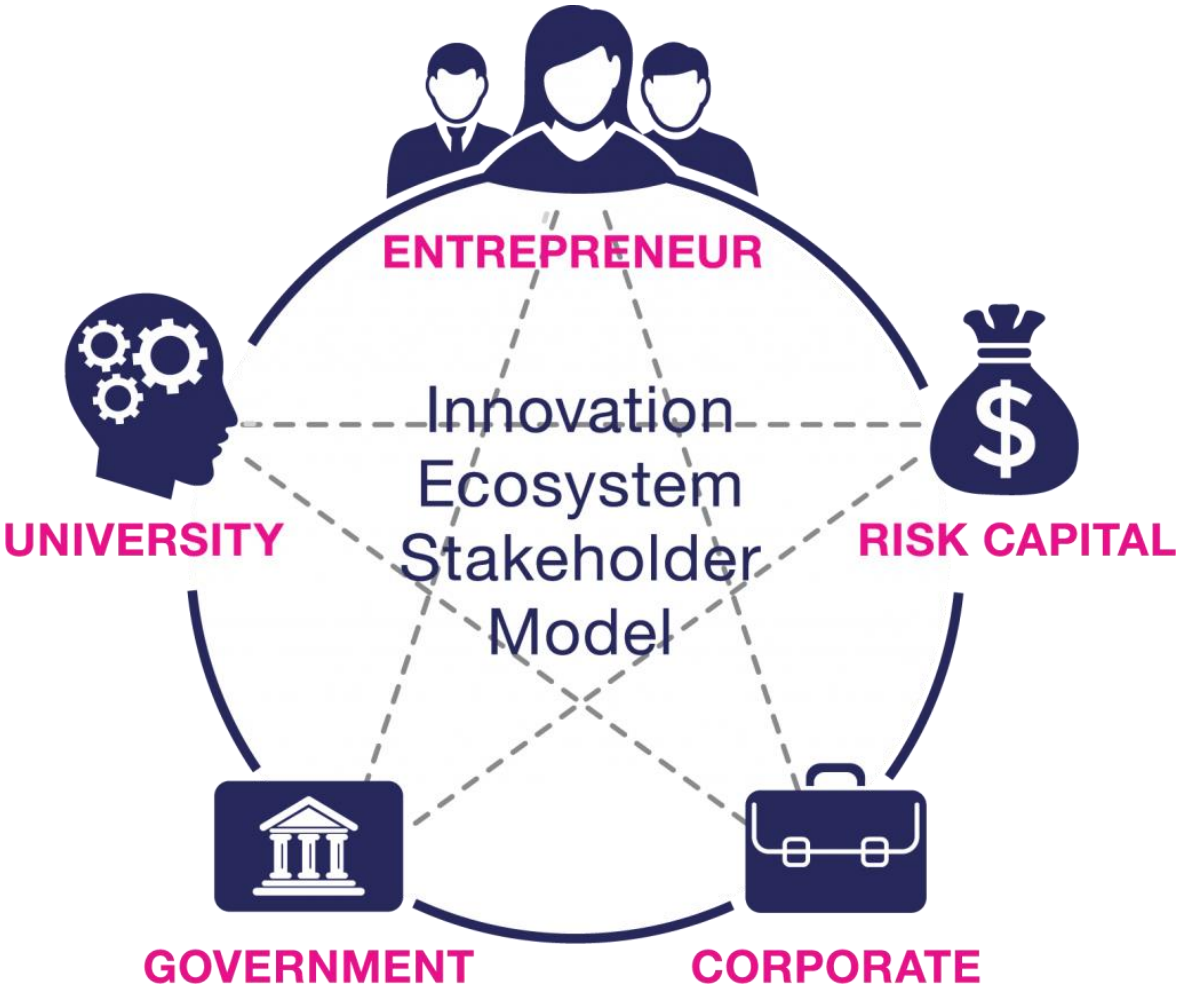
The following research and interviews were conducted in Mexico City, apart from two faculty members in Monterrey. Mexico City is one of the largest and most vibrant cities in the world. As the nation's capital, it boasts the largest population and is home to the national government, headquarters of large corporations, and aspiring change makers. Many investors, incubators, accelerators, and VC funds have offices in Mexico City to be at the forefront of discovering promising startups. To incubate that talent, a majority of Mexico's major entrepreneurship organizations are also based in the capital, including 500 Startups, Endeavor, ImpactHub, and Startup Mexico.

[3] CIA World Fact Book
[4] Techcrunch

Methodology

The information compiled in this report is sourced from formal and informal interviews with key stakeholders, literature review, online research, and the MIT REAP model.

The framework of this report follows the 5 stakeholders of the innovation ecosystem and the iCap and eCap models as defined by MIT REAP. These 5 different types of stakeholders all work in connection to each other to optimize the innovation ecosystem. The illustration below shows how the model demonstrates how each stakeholder is connected to the rest.



A total of fourteen stakeholders in entrepreneurship, risk capital, university, government, and corporate sectors throughout Mexico were interviewed in a ten-week period. Each interview was conducted in English and lasted approximately an hour. The following questions were used as a basis for further discussion.

Entrepreneurs	1. Why did you decide to start the kind of business you did? 2. Why did you decide to physically locate your business where you did? 3. How long did it take to start your business? Why? 4. What is the cultural stigma around entrepreneurship in your region? Why? 5. Did you pursue risk capital when you started, or did you bootstrap? Why? 6. Did you have formal entrepreneurship training?
Risk Capital	1. How many types of venture/risk capital firms are in this region? 2. Does your firm focus on a particular industry to fund? 3. How do you decide which startups to fund?
University	1. Does your university have a center to encourage entrepreneurship in students? Has it ever been considered? Who funds it? 2. Does your university have a center dedicated to commercializing technology? 3. Do you offer courses on entrepreneurship? 4. In what ways, if any, does your university participate with other stakeholders in the region?
Government	1. What do you feel is the government's role to promote entrepreneurship on technological innovation in your region, if any? 2. What are the different roles for federal government, state government, and municipal government? 3. What policies and/or programs has your branch of the government (or another branch) put into place to encourage entrepreneurship or technological innovation? (visa policy, grants, etc) 4. What is the biggest piece of 'red tape' in the government that keeps people from starting businesses? 5. In what ways, if any, does your government agency participate with other stakeholders in the region?
Corporate	1. Does your company partner with other stakeholders in your region in any way to promote entrepreneurship? 2. Does your company offer grants or prizes of any kind to innovators in your region? 3. Does your company feel it can benefit from new entrepreneurial spirit in your region? Why or why not? 4. What services does your company offer that lay the foundation for innovation in your region? Infrastructure? Communications? 5. Does your company promote 'intrapreneurship'? (having employees act like entrepreneurs within your company)

Innovation Ecosystem

Innovation Capacity and Entrepreneurship Capacity

Innovation Capacity (iCap) is the ability to develop new to the world innovations, taking them from inception to the market. Indicators of a strong iCap include the network of universities, central research and development spending, and the number of patents filed, and research papers published.

Entrepreneurship Capacity (eCap) is the ability to start and scale new-to-the-world enterprises, taking them from inception to maturity. Indicators of a strong eCap may include quality of entrepreneurs, mentors, founding teams, and investors at all stages. This can be measured by the Total Early-Stage Entrepreneurship Activity (TEA) rate, the number of new businesses each year, and leading examples of innovation driven enterprises.

iCap and eCap are not exclusive, in fact, they must be interdependent in order to combine innovative ideas and entrepreneurial opportunities. Below is a summary of the iCap and eCap criteria, as defined by MIT REAP[5].

I-Capacity		E-Capacity
-Pool of innovators -Education in tech and commercialization	PEOPLE	-Pool of entrepreneurs -Quality of entrepreneurial education
-Funding for research -Government programs	FUNDING	-Accessibility of entrepreneurial capital (government, private, equity, debt, grants)
-Physical infrastructure -Example: high-speed internet	INFRASTRUCTURE	-Physical infrastructure (space, transportation) -Availability of key services (internet, training)
-Celebration of invention and innovation - Rewards to innovation - Tenure process	CULTURE & COMMUNITY	-Culture of entrepreneurialism and failure -Societal support, ties and recognition
-Nature of established companies in region	DEMAND	-Government, corporate and consumer demand for new products and services

[5] MIT REAP Workshop

Stakeholder 1: Entrepreneurs

Mexico has a mere unemployment rate of 3.44%, however its GDP is not diversified. The service sector accounts of over 59% of Mexico's GDP alone and more than 65% of all employment[6]. A traditional and cultural focus on job security and the historic lack of an entrepreneurial culture has meant that most jobs are concentrated in the corporate sector. Traditionally, the roadmap to success for anyone in Mexico was to go to a private university and get a job in a big company, climb your way up, and end up having a high status, secure job. However, with an expanding youth population, the growth of entrepreneurship could lead to diversified job creation and economy growth.

The opportunity for Mexican entrepreneurs is clear. The government is increasing funding in support of entrepreneurship, with more than 150 incubator and accelerator programs established in cities throughout the country, including 50 that focus on high-impact entrepreneurs. Seed funding from local institutions have never been easier to obtain and it takes a mere nine days, on average, to set up a business.

One of the most established and active incubators is Startup Mexico. Startup Mexico supports high impact startups by providing them with physical workspace, mentors, workshops, funding, and an ecosystem of critical professional services. By helping these startups, the company has a vision to position Mexico as a bridge of innovation and economic engine between Latin America and the most developed markets. This will allow entrepreneurial projects in the region to take advantage of more financial opportunities in mature ecosystems.

Of the 50 focusing on high impact entrepreneurship, Endeavor Mexico is one of the leading stakeholders. With nine regional offices, Endeavor's goal is to help promising startups scale their business and impact level. Although a tough selection process, once selected, teams are provided with specialized services and a network of global business leaders who serve as mentors, connectors, investors, and role models. Endeavor's efforts, in turn, generate quality jobs, contribute to the economic and cultural development, and serves as an investment in the next generations of High Impact Entrepreneurs.

Social entrepreneurship also seems to be a key focus in the ecosystem. An example is Impact Hub, a social enterprise with the largest global network of entrepreneurs and innovators in the world, consisting of more than 15,000 members in 80 cities. Impact Hub plays a large role in the Mexico City ecosystem, offering companies workspace from $2,900 MXN a month in addition to a community of 12,000 members worldwide and access to events, courses, programs, and coaching.

[6] **CIA World Fact Book**

While it is relatively easy to establish a company in Mexico, there are many barriers to entry and hassles in taxes and paperwork that discourage promising entrepreneurs. Other challenges that entrepreneurs face include a cultural stigma around failure, lack of preparation or knowledge of existing resources, and lack of smart capital. Especially, the fear of failure is such highly frowned upon in the Mexican culture that only 17% of the 80% that fail look to start another company. Forty percent of Mexican businesses cease operations during their first year, and eighty percent fail to reach their fifth anniversary. Only ten percent make it to past their tenth year of operation[7]. Nearly 75% of Mexico's GDP is accounted for by private establishments, most of which are family owned. This makes it very hard for new companies to gain traction in industries that overlap with that of existing corporations, which most probably also contributes to the high rates of failure. There has yet to be stories of global success stemming from Mexican startups, and this lack of motivating examples may be an indicator of the cultural stigma towards entrepreneurship.

Aimed at tackling the stigma of entrepreneurship being an industry exclusive to the educated upper class, iLab is a social enterprise based in Veracruz that operates an intensive 16-week boot camp focused on business and technology throughout which, entrepreneurs develop a sustainable business model and launch a functional technology-based prototype. Participants are generally recent graduates from a variety of disciplines who are put in teams based on interests and complementary skills and tasked to generate a hardware-based business idea, develop it, prototype a MVP, and perform its market validation. Eight out of every ten iLabbers are the first ones in their family to graduate high school.

Some of Mexico's most successful startups include Aventones, Clip, and Cornershop. Acquired by BlablaCar in Europe, Aventones is considered Latin America's most successful rideshare app, serving the world's most congested city, Mexico City. Clip is a phone attachment that allows Mexico's countless street and market vendors to accept a variety of credit cards. It was grown exponentially from Mexico to the US, raising $8M USD in 2015 from American Express. Finally, Cornershop is a grocery delivery service similar to US-based Instacart that raised over $21M USD from US VC firms in 2017. The success of these startups speaks volumes to Mexico's potential for innovation. The next step in cultivating more is to improve the risk capital ecosystem in an attempt to keep Mexican companies from having majority US investors.

Key Gap Areas:

- Cultural stigma around the fear of failure
- Low rates of higher education

[7] **AT Kearney, Mexican Innovation, Entrepreneurship, and Venture Capital Financing**

Stakeholder 2: Risk Capital

Many startups in Mexico rely on funding from family and friends; however, due to the country's low per capita income level, this is a limited option. Mexico has a small population of angel investors. In the past five years, venture capital firms have skyrocketed seed investment in startups. In 2008, there were only two large funds in the ecosystem, today, there are more than 25 active funds with over $1 billion USD in capital commitments, representing a huge opportunity for high-impact businesses.

A lot of this development can be contributed to the government's active role in creating better policies and programs for funding. Nacional Financiera (NAFIN) is the national development bank. It encourages commercial banks and credit institutions to lend more and cheaper, this facilitating access to financing for entrepreneurs and small businesses. It also offers on-site training and tools for business development. Another initiative launched by the Ministry of Economy is the Entrepreneur Financing Pilot Program, which allocates around 50 million pesos to support startups that have graduated from incubators at the National Polytechnic Institute (IPN) and the Technological Institute of Superior Studies of Monterrey (ITESM). These resources have benefited around 200 small and medium sized companies[8].

Today, several venture capital firms exist in the region, however, congruent with the culture, many VC firms remain quite risk-adverse, resulting in a struggle for many Mexican startups without previous results to back their proposals. Pablo Fernandez, a Partner at Domo Capital, explains that, unlike in the US when a VC firm has ten companies in its portfolio and expects only one to become a big success, firms in Mexico expect the majority of startups in their portfolio to return at least what was invested. In that sense, 'the risk profile in Mexico is much lower than that in the US.' Alvaró Rodriguez, Cofounder and Managing Director at IGNIA Partners, one of the largest VC firms and the only publicly traded one in Mexico, shares the four characteristics his firm analyzes before investing in a company: (1) the size of the opportunity, (2) the company's traction (how fast they have been growing in the past, (3) unit economics (how much each transaction makes), (4) the quality of the founding team.

Due to all the government intervention and policies, Rodriguez explains, seed funding is not hard to come by in Mexico. Local VC funds, such as Avalancha Ventures, Jaguar Ventures, and Investo, provide up to $50k USD to Mexican startups for seed rounds, and up to $2M USD in later rounds. However, it's very hard for companies to get past the Series A round as there is a definite lack of VC firms investing in Series B to Series D rounds. Although, past Series D, Mexico's private equity industry is very sophisticated. Because of this, the few startups that make it past Series A have no

[8] **Programa Piloto de Financiamiento a Emprendedores**

option but to seek further capital abroad. However, according to Rodriguez, there doesn't seem to be much confidence in the Mexican entrepreneurship industry from outside VCs. This dilemma then holds back overall growth because there aren't enough success stories to draw enough VC interest for there to be more success stories.

It seems that that many VCs are investing in the fintech sector today. Rodriguez explains that fintech services in Mexico are 'horrible.' Because they are such a basic need for emerging economies that are increasingly dependent on technology, Rodriguez sees the sector as a big opportunity for investment for three reasons: (1) the cost of technology is decreasing, (2) people are more and more willing to have interactions/transaction through their devices (note the emergence and dominance of smartphones), (3) regulation in the sector is evolving in favor of technology.

Although from an investor's point of view, the fintech, edtech, health, and ecommerce are the sectors that promise the most return out of every investment, entrepreneurs in other industries are discouraged by the difficulty of securing funding. While chatting with the CEO of Synapbox, a B2B startup that gathers consumer intelligence using AI, Cristina de la Pena shared that this lack of funding for other verticals is because 'investors don't have experience'.

Key Gap Areas:

- Lack of Series A to Series D funding
- Risk adverse mindset
- Almost all funding is limited to the 'hottest' sectors

Stakeholder 3: University

Many of Mexico's leading public and private universities are technological institutions. These universities are very closely linked to innovation, holding a large percentage of the nation's patents on intellectual property.

Mexico has low rates of attendance for secondary and tertiary school; consequently, increasing and improving access to quality education will directly target the lack of preparation identified by many interviewees. While regulatory and tax challenges form the largest barriers to entrepreneurship, the lack of funding for research and development has also been an obstacle to building technological pipelines. Current initiatives to boost entrepreneurial growth include integrating innovation and tech workshops to all university areas of study, in addition to mandatory business classes.

There is a big gap between public and private higher education in Mexico, which may also contribute to an outflux of top talent. Many upper-class Mexicans pursue university abroad. Many of

those do not return to contribute to the local economy, but rather stay in Western countries in favor of more preferable lifestyles, salaries, and work environments. The most talented graduates are also drawn to work overseas at world renowned corporations in places like Silicon Valley or New York City. There are also very limited opportunities in Mexico, especially outside of urban areas, in which the cost of living is significantly higher.

Ever since the government has stepped in to play a larger role in developing entrepreneurship in recent years, universities have received more specialized funding and accreditation in the field. Business clubs, pitch competitions, makerspaces, and even entire departments dedicated to innovation have sprung up in universities across the nation. Of these universities, Tecnológico de Monterrey stands to be a leading institution for technology and innovation. Founded over 70 years ago, Tec de Monterrey (Tec) is one of the largest private schools in Mexico and has six different academic schools as well as campuses throughout Mexico. Julio Noriega, Director of the School of Engineering at the Monterrey campus, described that Tec offers 'units focused on innovation' for all students. These units, or specialized courses of study, and resources such as makerspaces and workshops in the School of Engineering reaches over 8,000 students and 300 professors on the Monterrey campus alone. Additionally, all students are required to take a mandatory course in entrepreneurship.

Students' research can be commercialized with the help of Technology Transfer Offices on the Monterrey, Puebla, and Guadalajara campuses. The office staffs a variety of experts offering services from advising, to IP issues, to licensing companies. Even more astonishing, Noriega cites that 23% of all Tec de Monterrey graduates founded their own companies after graduation. Another source claims that three-quarters of its graduates ultimately go on to own their own businesses[9].

Azael Capetillo, Director of the Innovaction Centre for Innovation and Entrepreneurship on the Monterrey campus, shed more light regarding the degree of involvement in these programs. Innovaction is an initiative to 'develop technology based entrepreneurial and social impact projects.' There are over 25 active, registered projects at any one time, and the program as a whole supports more than 200 students each semester. In addition to makerspaces with trained technicians, Innovaction also holds workshops to help students develop ideas and solutions to problems as part of class projects. Finally, Innovaction is a government recognized entrepreneurship center, thus, those who are involved can get up to 50% of their projects funded through the government.

Key Gap Areas:

- Lack of initiatives in public schools
- Low attendance rates in higher education

[9] AT Kearney

- Outflux of intellectuals of universities and institutions outside of Mexico
- Underdeveloped entrepreneurship training

Stakeholder 4: Government

Under the government of President Enrique Pena Nieto, Mexico's entrepreneurial and risk capital ecosystem has gained momentum. In the past 10 years, as incubators, accelerators, venture capital firms, programs, grants, prizes, and policies sprung up throughout the country, Mexico's traditional corporate ecosystem has been disrupted by promising entrepreneurs and innovators. Although opinions on the governmental programs' impact varies widely in interviews, it is clear that the government has gone to great lengths towards an innovation driven economy.

In 2013, the Mexican government designated over $600 million USD into creating *El Instituto Nacional del Emprendedor* (INADEM), an administrative body aimed at developing a stronger entrepreneurial ecosystem. INADEM's mission is to implement, execute, and coordinate national policy to promote innovation and provide support for entrepreneurs, and micro, small, and medium-sized enterprises to increase their contribution to Mexico's economic development and productivity. INADEM runs many programs and services to help budding entrepreneurs, including an Entrepreneurship support network. One of INADEM's largest programs, the High Impact Entrepreneurship Program (HIEP)'s objective is to promote innovation to boost productivity and employment growth. HIEP provides grants of up to $170,000 USD to innovative startups that have potential for high growth and high impact.

INADEM also plays an important role in running the *Semana Nacional del Emprendedor* (National Entrepreneurship Week), the nation's largest annual entrepreneurial forum. Designed to address key facets of the entrepreneurial ecosystem, it aims to provide entrepreneurs and small businesses with the tools needed to start a company or to consolidate existing companies. The week's programming is focused on three axes: innovation, financing, and emerging technologies. The goal is to expose attendees to methods of incorporating new technologies into their business, give entrepreneurs networking opportunities with key stakeholders in the ecosystem, and offer advice to develop their business models. Emerging technologies introduced include Internet of Things (IoT), Robotics, Machine Learning, Blockchain, and Data Science. Additionally, the event offers panels of success stories for Mexican entrepreneurs to share their journeys and inspire younger generations to undertake the challenges and opportunities around entrepreneurship.

Engaging in entrepreneurship is very capital intensive at seed stages and takes a long time to become financially sustainable. Raul Castellanos was very discouraged throughout the fundraising process for his startup, Teragu, an eCommerce company. He explained that the small amount of

investment he received from family and friends were at very low valuations and not enough to sustain Teragu until it was profitable. VCs in Mexico tend to be very risk adverse to capital intensive projects that have yet to generate revenue, no matter the returns the promise. However, once the initial revenue barrier is broken, it is much easier to get financing.

Additionally, Castellanos notes that 'doing things in Mexico by the book is very expensive and tiresome.' He remembers having to turn in three to four sets of finance reports to the government every month, in addition to a large annual report. Many startups that are not profitable in the first years of operation accumulate so many sales taxes without having the money to offset them, leading to a higher tax margin than gross profit margins. This complicated and time-consuming tax system may have contributed to the growing number of unregistered enterprises in Mexico.

Despite these challenges, the programs and policies implemented by the government are working together to foster a healthy, fast growing entrepreneurial ecosystem in Mexico. Most are designed to promote innovation and increase growth and productivity of small and medium sized businesses. They also serve to generate enthusiasm for entrepreneurship and innovation among the developing generation by offering education and marketing local successful startup stories. Awards and grants also serve to promote a healthy atmosphere of competition within the ecosystem.

Key Gap Areas:

- Poor execution and corruption in the government makes processes and funding disbursement very slow.
- Government officials are concerned with more pressing aid and safety issues that makes it difficult to focus on entrepreneurship.
- The newly elected government may shift INADEM's focus from high impact entrepreneurship to self-employment and self-sustainability.

Stakeholder 5: Corporate

Compared to other Latin American countries, Mexico has been a relatively attractive spot for businesses because of its proximity to the US and many attractive, developing markets in Central and South America. Many companies are international.

The corporate work environment in Mexico is very different from the western work environment. It's a slower paced environment with few partnerships and outside interaction. Additionally, most large corporations in Mexico have been family owned and privatized for generations. Thus, it is a very conservative system and there is little support for entrepreneurs. This same system is the reason why most startups that reach Series B and above seek funding from

international VC firms. Mario Romero, Managing Director at Impact Hub Mexico explains that it is incredibly difficult and rare for startups to have successful exits in the Mexican market. Big family owned corporations don't acquire startups, don't purchase their products or services, and don't form alliances with them as they don't see anything 'threatening their status quo.' It's also not viable for small companies to IPO because those who do generally have more than 800 million USD in sales annually. Furthermore, more than 50% of the Mexican stock market is owned by billionaire Carlos Slim, which makes it ever more difficult for new companies to enter.

A few national and international corporations make an active effort to invest in the innovation ecosystem. For example, a good portion of the School of Engineering's budget at Tecnologico de Monterrey is funded by a national beer brewery[10]. Additionally, many companies run accelerator programs for promising startups, including Cinepolis Accelerator, Grupo Bimbo, Coca Cola, Sura, and Telefonica. The main impact of these programs, according to Cristina de la Pena, CEO and Cofounder of Synapbox, is to 'help [startups] gain traction and get into the doors of clients.' Synapbox itself was a participant in Telefonica's incubator, Wayra, in 2015.

Key Gap Areas:

- Family owned enterprises dominate the corporate environment in Mexico and often have traditional mindsets
- Lack of corporate partnerships
- Lack of IPOs and national acquisitions prevent successful exits by startups

[10] **Interview with Julio Noriega**

Recommendations

The most pressing challenges facing Mexico's innovation ecosystem is the societal stigma of failure, aversion to risk, and lack of quality and accessibility to higher education.

The most effective way to dissolve a fear of failure in a society is through success stories. The most popular view of success today is working for a big corporation and making enough money to sustain a family with some disposable income for recreation. Simply reading about almost impossible successes of the Western world in the news, from that of a college dropout launching the world's highest valued company to Elon Musk starting with $2,000 and launching a rocket to Mars, doesn't cement a concrete validation for risk taking. Instead, more initiatives need to be taken to bring entrepreneurs directly into the classrooms of the younger generation to share not only their success, but also how their failure contributed to their learning and furthered motivation. More effectively, these entrepreneurs should be Mexican in order to inspire cultural pride in potential entrepreneurs. These initiatives will not only motivate younger Mexicans to engage in entrepreneurship but will also encourage the return of talent from other countries by instilling a sense of pride in the nation and its potential.

Another consideration is that, although it is often taught in schools that failure comes before success, the socioeconomic composition of Mexico makes it almost impossible for the lower class to even consider failure as an option because there is no financial support to fall back on in an unforgiving economy. To target this problem, the government should use part of INADEM's funds to ensure that bankrupt entrepreneurs do not end up in piles of debt. Instead, they should either create an inspirational program for failed startups and provide resources for these entrepreneurs to cement what they learned from their failure and start yet another company.

To address the issue of risk adverse capital, the government should divert a portion of INADEM's funds for seed funding and instead invest in creating Series B to Series D VC firms. This will ensure that a majority of Mexican talent and innovation stays in the country and directly benefit the economy rather than going to the US or Europe for better funding opportunities.

Finally, education reform is needed to solve the lack of preparation for promising entrepreneurs. The majority of Mexican students do not have the money to attend esteemed private institutions, and the problem is that there is a lack of research and development funding at public institutions that suppresses innovation. Public universities should create and advertise a program similar to the intensive business and technology boot camp that iLab runs, in which participants come up with an idea, conduct market research, build a prototype, and validate their products. To make it easier to launch such a program, universities should partner with makerspaces such as Fablab to give students training on how to use sophisticated technical equipment to prototype their ideas.

Future research and engagement

In retrospect, I would have liked to interview more people in each of the stakeholder groups, especially within corporations and the government. I also really enjoyed talking informally to many employees who didn't necessarily have formal training or high positions and learning about different perspectives on entrepreneurship.

While this work has afforded some useful insights into the Mexican innovation ecosystem, it is worth noting that most interviewees and entrepreneurship programs are based in/focused on Mexico City. A few interviewees even made parallels between Mexico City and Silicon Valley. Particularly, underdeveloped regions in Mexico, such as Veracruz, Chihuahua, Oaxaca, and Morelia, may benefit significantly more from REAP resources. I was particularly intrigued by iLab, the program in Veracruz that trains low-income graduates to bring an idea from ideation to market within four months, and I think that it would be insightful to closely analyze the model and how it addresses the gaps that lie within Mexico's innovation ecosystem.

Conclusion

Mexico has a youthful population and perhaps one of the largest pools of untapped talent in Latin America and even the world. With its stable macroeconomic economy, optimal geographical location, and increasingly involved government, there are few challenges that stand in the way of Mexico becoming a leader in innovation and entrepreneurship. The most prominent of these challenges include a strong cultural stigma against failure and risk aversion around funding. Additionally, a lack of Series B to Series D VC funding is driving talent out of the country.

To actively target these issues, social enterprises, accelerators, and the government should play a more active role in promoting the failure of successful local entrepreneurs, pushing entrepreneurs who have failed back into the ecosystem, reallocating seed funding to higher rounds of investment, and ultimately targeting the root of the problem by engaging younger generations in innovation.

Appendix

Acknowledgements

Big thank you to the Innovation Diplomats program for the opportunity to have exposure to the innovation ecosystem outside the US; it wouldn't have been possible without the framework, guidance, and support. Thank you to MISTI Mexico for funding my internship for the summer that allowed me to interview many people in the region. Special thanks to my internship host, Cinépolis KLIC. Thank you to all my interviewees for sharing their time, opinions, and insightful experiences. This report would not have been possible without all of you.

Interviewees

1. Raul Castellanos, former CEO of Teragu, an eCommerce startup
2. Rodrigo Langarica, Director of Fablab Querétaro
3. Sebastian Gomez, Cofounder of Reservamos.mx
4. Larissa Santos, former employee at Proctor and Gamble and Grupo Carso
5. German Zubia, Cofounder at connovo.org
6. Pablo Fernandez, Partner at Domo Capital
7. Julio Noriega, Director of the School of Engineering and Information Technology, Technologico de Monterrey, Monterrey Campus
8. Azael Capetillo, Director of the Innovaction center for innovation and entrepreneurship, Technologico de Monterrey, Monterrey Campus
9. Vincent Speranza, Managing Director at Endeavor Mexico
10. Alvaro Rodriguez, Cofounder and Managing Director at IGNIA Partners
11. Cristina de la Pena, CEO and Cofounder at Synapbox
12. Antonio Osio, Managing Partner at Capital Invent
13. Mario Romero, Managing Director at Impact Hub Mexico

Informal interviewees

1. Marco A. Garcia de la Cruz, Director of Cinépolis KLIC
2. Valeria Avila, University student studying marketing
3. Hongyi Tang, Digital Marketing Manager at Bacabes.com and Student at IPADE Business School
4. Karine Yuki, Strategy Consultant at IBM Mexico