Lab4.

Pymes

**Shared DNA,
different destinations.**

Start-ups

MÉXICO
MEDIA
LAB

Executive Editor

Rossana Fuentes Berain Villenave

Authors

Guillermo Ortega Rancé
Noha Kikhia

Collaborators

Mayra Álvarez   Graphic Design
Addy Góngora Basterra   Editor

Introduction

"A rose by any other name would smell as sweet," says Juliet in the romantic balcony scene where she asks Romeo to forsake his name out of love for her and the prospect of having her forever.

What name will we have to forsake in Mexico to refer to an entity dedicated to business, an entity that does its work with a limited number of employees, that already has sales, aspires to grow and may or may not be rooted in technology?

We know that not only Shakespeare but also the Argentine poet Jorge Luis Borges said that naming makes a thing real. It opens and closes possibilities because the way in which we describe the world affects how it manifests. So rather than switching from one concept to another or just abandoning one all together, we wanted to see what was implied in two terms: startups and small and medium sized businesses in Mexico and the United States.

Conversations about innovation frequently use both terms and therefore the concepts are quite relevant. Shall we use the English word that immediately references Silicon Valley, the home of technological startups for the global economy? Or given the current political times shall we forsake the Shakespeare language and go for castellano, PYMEs, that puts more of an emphasis on the internal market?

Are SMEs and startups different entities belonging to two different Mexicos? One that is globalized or another that is inward looking? Or can the words move between those two universes regardless of their specificity?

The following exploration is meant to provoke precisely that - a dialogue around the two concepts in the purest sense of what the Mexico Institute at the Wilson Center always promotes:

- The generation of a body of knowledge, this time around startups and small businesses in Mexico
- Documenting what can be of value within the same concepts in the USA to use as comparative politics
- Promote ideas for bilateral cooperation on the topic

Guillermo Ortega Rance and Noha Kikhia reached an overarching conclusion that Mexican public policy on innovation in 2018 - 2024 needs to balance creating the space needed for a nascent startup ecosystem while also attending to a lack of productivity in small business.

Doing this from two branches of power, executive and legislative, in Mexico and two spaces within the US government, the Department of State and Small Business Administration, is taking agency over the spirit of Chapter 25 from the new trilateral trade agreement USMCA. One of the premises of the new agreement was to expand the benefits of international trade to a larger number of companies, and not only the usual suspects for SMEs, but also those owned by minority groups and women in Mexico, the United States, and Canada.

In Mexico, understanding startups and small businesses better will allow the ecosystem to grow and fill with not simply more incumbents, but others who want to be a part of a movement. However, regardless of the name adopted, we all want something similar from the capitalism of the hemisphere: to generate first-rate jobs.

– Rossana Fuentes Berain Villenave
CEO and Co-Founder México Media Lab

Contents

Executive Summary

Startups and small businesses in Mexico and the United States are integral to the growth of each economy. The purpose of this document is to explore formal and informal definitions of both types of organizations, study their contexts and needs on each side of the border, and how each government can design effective ecosystems and public policy.

The primary difference between small businesses and startups is that to be classified as small there are formal guidelines whereas the definition of a startup is much more fluid. In both Mexico and the United States small business criteria is based on number of employees, annual sales and the industry - the only difference lies in the exact formulas. A startup on the other hand does not have objective characteristics and the informal definition relies on its level of growth and relationship to innovation and technology. Through interviews and formal research we have identified three primary characteristics that distinguish a startup from a small business:

1. **Objective to grow:** startups are born with the ambition to grow to reach many users and customers
2. **Speed of growth:** startups are able to scale exponentially, growing their income with relatively small teams
3. **Novelty in the business model:** startups are generally oriented toward resolving an unmet need in the market

These three characteristics are crucial to understand. It demonstrates that support services and public policy that targets these two groups are interconnected but require slightly different approaches to reach ideal outcomes. Startups are experimental and contribute innovation, new skills and added value to their industries and the economy. Small businesses are integral to economic growth and job creation. While both types of organizations appear similar based on size, the needs of small businesses are a combination of the needs of startups and large corporations.

Much like startups, small businesses often compete with large companies that have access to more resources which creates common needs across the two groups: access to financing, talent and new clients. However, unlike startups small business-

es share a need with large corporations in incorporating innovation and technology in their operations to be competitive in their industries. Startups do not share this need because they typically are using technology in their novel business model to disrupt the market, a threat to both small businesses and large corporations.

In the United States, public policy has long focused on giving support to small businesses while the private sector took the lead on cultivating startup ecosystems. In Mexico the public sector has been crucial for both groups. The difference in government engagement has created an opportunity for both countries to co-design a bilateral agenda that takes into account the strengths and challenges of startups and small businesses in each country. We recommend the bilateral agenda focus on the following issue areas:

- **Talent:** create a regional vision for the workforce and train people with tools that connect supply and demand of talent on both sides of the border
- **International Trade:** take advantage of the USMCA to move away from focusing solely on volume of trade between the countries to actually integrating regional value chains to make North America a more competitive region globally
- **Innovation:** increase the level of global connectedness of the innovation and entrepreneurship ecosystems in each country to positively impact the growth and competitiveness of small businesses and startups

1

Definitions of Small Businesses and Startups

How many times have we used a word and realized too late that it means something different to us than those with which we are communicating?

In the areas of business, economics, and technology there are various words that refer to abstract concepts that are especially susceptible to differing interpretations. In Mexico it is common to hear conversations where people see startups as small businesses as well as others claiming they are quite different. Some strongly defend themselves as "serious" business professionals, not entrepreneurs; others presume their companies are startups, not small businesses.

These gaps in understanding are deepened when we translate from one language to another. Each word used has its own cultural evolution. For example, when we refer to the concept of engaging in economic activity to earn a profit, in Spanish the word "empresa" (enterprise) is used and puts more emphasis on the institution whereas in English the word "business" is used and focuses more on the activity.

This seems to have a cultural impact that is relevant to the conversation at the heart of this paper. Anyone who engages in economic activity to survive in the United States is linguistically considered a business owner, but in Mexico an empresario is someone who already has an established institution. Thus, those who do not meet that requirement in Mexico are referred to differently with words like *changarro* or *trabajador autónomo*.

Small and medium-sized companies are considered the backbone of many economies, which is a reality in both Mexico and the United States.

The law and formal language allows us to give uniform and pragmatic definitions to the concept of business/empresa that also allows comparability between the two languages and contexts. However, informal definitions created through differing cultural lenses also influences how we interpret business concepts. In the rest of this paper we 1) elaborate on the formal definitions of small businesses and startups in Mexico and the United States, 2) identify differences based on conversations with different actors of the entrepreneurial ecosystems of both countries, and 3) propose focus areas for a bilateral agenda.

What is formally a small business?

Small and medium sized enterprises (SMEs) are considered the backbone of many economies, especially in Mexico and the United States. These organizations are key for increasing productivity, job creation and inclusive economic growth. That being said, SMEs are defined slightly differently on each side of the border.

In Mexico, the formal definition of SMEs comes from the Law for the Development of the Competitiveness of Micro, Small and Medium Enterprises. In effect since 2002, Article 3 defines micro, small and medium sized enterprises as legally constituted companies that have 0 to 100 employees if they are commercial or 0 to 250 employees if they are industrial. It is estimated that there are about 5 million companies in Mexico of which 99.8% are small or medium-sized.

In 2009 an agreement was published in the Official Journal of the Federation that introduced a new formula to reclassify SMEs into categories based on the number of employees and annual sales in millions of pesos[1]. This was proposed with the goal to increase the reach of programs for SMEs to serve not only companies with small teams, but also those with less income.

Stratification of small businesses in Mexico
Law for the Development of the Competitiveness of Micro, Small and Medium Enterprises

		Micro	Small		Medium		
	Sector	All	Comercial	Industrial and Services	Commercial	Services	Industrial
	Number of Employees	Up to 10	10 to 30	31 to 100	31 to 100	31 to 100	51 to 100
	Annual sales (millions of MXN pesos)	Up to $4	$4.01 to $100	$4.01 to $100	$100.01 to $250	$100.01 to $250	$100.01 to $250
	Maximum Combined*	4.6	93	95	235	235	250

* Maximum Combined = (Employees) x 10% + (Annual sales) x 90%

In Mexico there is no legal structure that allows someone to open a business as a sole proprietor; commercial companies must have at least two partners. In practice, many micro-entrepreneurs start their businesses individually and operate as the "physical or moral person with commercial activities" defined under Mexican tax laws, specifically in the Income Tax Law.

The classification of small and medium sized enterprises in Mexico is most similar to the SME definition used in the European Union. However, the entity in charge of the formal classification of small businesses and support services in the United States is the Small Business Administration (SBA) and they have differ-ent classifications. The SBA was created in 1953 with a focus on delivering loans, loan guarantees, contracts, counseling, and other forms of assistance. To qualify for the support and services of the SBA, companies must qualify according to the Small Business Size Standards which vary by industry and are either based on number of employees or annual receipts.

The last update to the Small Business Size Standards was in October 2017 and the industries match those in the North American Industry Classification System (NAICS)[2]. About half of all specific industries use number of employees to classify small businesses and the other half uses annual receipts. The sectors, groupings of specific industries, that use each are as follows:

1. http://dof.gob.mx/nota_detalle_popup.php?codigo=5096849

2. https://www.sba.gov/sites/default/files/files/Size_Standards_Table_2017.pdf

SBA clasification criteria
Small Business Administration Estados Unidos

DOLLARS

Accommodation and Food Service
Administrative and Support, Waste
Management and Remediation Services
Agriculture, Forestry, Fishing and Hunting
Arts, Entertainment and Recreation
Construction
Educational Services
Finance and Insurance
Health Care and Social Assistance
Management of Companies and Enterprises
Other Services
Professional, Scientific and Technical Services
Real Estate and Rental and Leasing
Retail Trade

EMPLOYEES

Manufacturing
Mining, Quarrying, and Oil and Gas
Extraction
Utilities
Wholesale Trade

MIX

Information
Transportation and Warehousing

According to the 2018 Small Business Profile, there were 30.8 million small businesses in the United States that made up 99.9% of all companies and employed 58.9 million people - 47.5% of the private workforce in the country[3]. While the classification of small business does not always depend on number of employees, the data shows firms with fewer than 100 employees have the largest share of small business employment and firms with fewer than 20 employees experienced the largest gains in 2015 - adding 1.1 million net jobs.

The large diversity among small businesses in the United States poses a challenge in creating a support ecosystem and crafting comprehensive public policy to advocate for the needs of these organizations. The SME definition is not formally used in the United States to distinguish organizations that may have different needs based on their size. There is a single definition of small in the USA compared to micro, small and medium-sized in the Mexico and the EU. The User Guide to the SME Definition published by the EU claims that not only size, but also resources are important to consider when classifying SMEs. If an entity does not have many employees but is owned by a larger entity or has access to resources through partnerships and linkages, they may not qualify as an SME[4]. This system of classifying organizations is one approach to administering services more efficiently, which the SBA solves for by the creation of small business development centers (SBDCs). There are over 900 SBDC service sites around the country that modify their services to meet the evolving needs of the small businesses in their area[5]. While the classification of small business in the United States has a single category, personalization is achievable through services offered on a local scale.

Small business in Mexico

An SME in Mexico is any legally constituted company that has a certain number of employees and annual sales, with special tax provisions for micro-entrepreneurs who perform business activities but do not have a formally incorporated institution.

Small business in USA

A small business in the United States is an independent company that fulfills the SBA size standards based on number of employees or annual receipts.

There are clear distinctions between PyMEs in Mexico and small businesses in the United States when considering the formal definitions. PyMEs are classified in three categories (micro, small, and medium) whereas small businesses are simply in a single category. The cutoffs of number of employees and revenue are distinct. Small business classifications in the United States are industry dependent, and there are 427 industries in the United States which the employee cutoff to qualify as small is higher than the 250 employee cutoff to qualify as medium-sized in Mexico.

A comparison of these organizations across the United States and Mexico demonstrates the diversity of the companies is quite large, however many of the needs are similar which suggests thoughtful ecosystem building and public policy can effectively support these companies.

What is formally a startup?

The fact that an English word is used in Mexico gives a clue that startups are an imported concept. From where? Clearly from the entrepreneurial culture of Silicon Valley that gave rise to startups that have become icons of the 21st Century.

In the United States there is a robust startup ecosystem that surrounds an entrepreneur such as accelerators, incubators, private capital, academic programs, research institutes and more. The term "startup" was born during the dot com boom in the early 2000s when companies experienced highly scalable business models and eventually turned a profit by using the Internet. There is no single, agreed-upon definition of a startup, but there are many key players in the US startup ecosystem who have attempted to define the characteristics of a startup that distinguishes it from other types of organizations.

The federal government in the United States is not a central player in the startup ecosystem and therefore the definition of a startup is more likely to come from other sources in the ecosystem. One organization central to entrepreneurship in the US is Y Combinator, an accelerator started in 2005 that helped to launch startups like Dropbox, Airbnb, and Reddit. One of the founders of Y Combinator, Paul Graham, defines a startup as "a company designed to grow fast[6]. Startups must make something many people want and create a way to reach and serve all those people. Another definition of what distinguishes a startup has come from Eric Ries, author of the commonly used methodology Lean Startup.

3. https://www.sba.gov/sites/default/files/advocacy/2018-Small-Business-Profiles-US.pdf

4. http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en

The startup concept was generated in Silicon Valley with highly scalable Internet-based companies.

He says, "A startup is a human institution designed to deliver a new product or service under conditions of extreme uncertainty." He emphasizes this definition has nothing to do with size, age, or industry - but rather is tied to the pursuit of institution building in the face of uncertainty[7].

One final definition posed by Steve Blank, a Silicon Valley entrepreneur and now professor of entrepreneurship, is: "A startup is an organizations formed to search for a repeatable and scalable business model.[8]" Much like Eric Ries, he emphasizes the experimental nature of startups and the novelty of their approach. Startups can exist in four types of markets:

1. Existing market: there are users, competitors and a channel. customer discovery is easy
2. Resegmented market: (low cost or niche): existing market with an incumbent so a startup strategy needs to be low cost or exploit a niche
3. New market: new users, competitors and channels which makes customer discovery more challenging
4. Clone market: Startup outside the US cloning an existing US business model
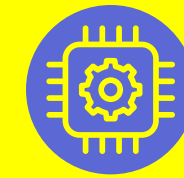
The existence of the fourth type of market - clone market - is a testament to how this startup culture has taken off all over the world, including México where the concept of an entrepreneur already existed.

It was usually associated with the small business owner who, by vocation, started a business to solve a market need and dedicated his whole life to growing the business as much as he could. Many of the large Mexican companies today have an entrepreneurial story behind them.

The Global Entrepreneurship Monitor (GEM) has measured global entrepreneurial activity for almost two decades with a methodology that identifies the percentage of the adult population that is working in brand new companies and companies that have been in operation for less than 3.5 years. In Mexico that percentage, called Total early-stage Entrepreneurial Activity (TEA), doubled from 10.5 percent in 2010 to 21 percent in 2015, then later fell to 14 percent in 2017[9].

In the last decade, the traditional concept of the entrepreneur has become more associated with the newer concept of the startup, popularized by the technology companies in California. In certain circles, both words are used equally to talk about this new model of high-impact, fast-growing companies.

There is not standard definition of a startup in the law; since a startup is an early-stage company it often shares characteristics with small businesses and is subject to similar laws. Eduardo Morelos of Startupbootcamp Mexico describes these differences by defining a startup as "a large company in its early stage," adding that "different than an SME, a startup is a business that can scale more quickly and easily, using digital technologies.[10]" Through conversations with entrepreneurs who define their companies as small and others who call their companies startups we have identified some differences in the concepts.

5. https://www.sba.gov/offices/headquarters/osbdc/resources/11409

6. http://www.paulgraham.com/growth.html

7. https://www.inc.com/eric-ries/eric-ries-how-to-define-a-start-up.html

A note about technology

The use of technology is a commonly cited characteristic in the conversation about the differences between a startup and a small business, but there seems to be a debate about whether or not it is a true differentiator. Some say that the use of technology distinguishes startups because it is what allows them to reach the level of exponential growth. Others argue that there are innovative startups that grow exponentially with a novel business model without technology at the core of what they do.

According to researchers at the Startup Genome Project, industries that are experiencing the most growth are Advanced Manufacturing and Robotics, AgTech, blockchain, and Artificial Intelligence, Big Data and analytics. While all these areas are experiencing tremendous growth with the use of technology, it is not the whole picture. Brookings Institution studied the companies listed in the Inc 5000 which are companies experiencing the most growth over a certain sales threshold. They found that 29 percent of rapidly growing companies were in high tech while more than 70 percent were in other industries. This study makes an important observation, "though high-tech firms are much more likely to be high-growth, not all high-growth firms are high-tech. In fact, the substantial majority are not." There is more consensus around the idea that startups must experience exponential growth rather than having a base in technology.

Startups are distinguished by a novel business model aimed at growing very, very fast.

What are the differences between a small business and startup?

The formal definitions explored thus far suggest that all startups are SMEs - in Mexico - or small businesses - in the United States - at an early stage in their lifecycle. But what differences are there between a startup and a small business in its early stages?

From conversations with actors in support ecosystems of startups and small businesses in both countries, we have identified three elements that distinguish a startup from other companies in their early stages:

- **Objective to grow:** startups are born with the ambition to grow to the scale of large companies like the legends that gave rise to the term (Google, Amazon, Apple, Facebook, Microsoft) or grow enough to lead to a successful exit
- **Speed of growth**: startups are able to scale exponentially, growing their income with relatively small teams
- **Novelty in the business model:** startups are generally oriented toward resolving an unmet need in the market.

While it is clear startups and small businesses have distinct characteristics, they do share similar challenges that must be confronted with different strategies:

8. https://steveblank.com/2010/01/25/whats-a-startup-first-principles/

9. https://www.gemconsortium.org/country-profile/87

10. https://www.entrepreneur.com/article/304376

Shared challenges between small businesses and startups

Characteristics	Small Businesses	Startups
Capital	Typically seek credit and loans to finance inventory, working capital and their teams.	Seek angel investors and seed capital to finance the work necessary to get from an idea to reality. Venture capital is the tool frequently used to sustain their accelerated level of growth.
Talent	Develop soft skills in their employees that allow their small teams to be resilient and search for technical skills to operate new tools that continuously evolve.	Recruit the best talent with experience in their product or service. Typically search for people who thrive in fast environments of uncertainty.
Access to market	Are well positioned in situations where they generate demand among clients. Give confidence to clients through certifications and good practices.	One of the biggest challenges for startups; they usually have innovative products and services that require them to educate their customer and convince them to try it out. This requires translation into a familiar language and gaining their trust.
Technology Adoption	Adopt new tools to improve efficiency and generate data and insights to be more competitive in a global and connected world.	Generate technological tools with large companies or other startups to accelerate their growth and create new ecosystems.

2

Mexico, the public policy pendulum for small business

The National Institute of the Entrepreneur (INADEM for its name in Spanish) included an interesting history of how the Mexican government has adapted structurally and politically to economic challenges in its libro blanco, a government-issued report for transparency and to educate the public[11]. With this document and an Organization for Economic Co-operation and Development (OECD) analysis of startups and SMEs in Mexico[12] as foundations, we sought to describe the SME/startup ecosystem in the country, what needs have been resolved over time, and what challenges are ahead.

Ecosystem and Public Policy

The government administration of Miguel de la Madrid was the first time the country formally paid attention to the SME industry and took a stance that increasing the competitiveness of small businesses was critical to breaking the economic crisis of the seventies. This marked the birth of a program designed to tackle the specific needs of SMEs that still sound familiar to us today: technology adoption, capacity building, financing, and access to internal and external markets.

The Carlos Salinas and Ernesto Zedillo administrations maintained and expanded the effort to create differentiated policy and services for SMEs in Mexico. As the country's economy opened to the rest of the world, the Mexican government focused on modernizing companies to compete in foreign markets and began to foster the integration of key supply chains, such as the automotive industry.

Vicente Fox's government for the first time created a formal entity within the Ministry of Economy focused on the development of SMEs (SPYME) and a legal framework to classify them in the Law for the Development of the Competitiveness of Micro, Small and Medium Enterprises of 2002.

Between 2001 and 2012 there were three changes in public policy in Mexico that gave rise to the current ecosystem:

• Focus on creating new companies.
Formal public policy began to talk about the importance of startup entrepreneurs. They discussed other important components of ecosystems like training programs and created infrastructure like the National System of Incubators and the Mexico Emprende centers.

In the Felipe Calderon administration they found that some small businesses performed better than others (growth above 15%, lean and resilient organizational structures, and better asset turnover) and named them "gazelle companies," an early predecessor to the modern startup concept.

• Diversification of Financing
The SME Fund (Fondo PYME) was created as a source of financial support for all SMEs and entrepreneurs. Financial policy first evolved from subsidies and loans to loans and credit guarantees, then later toward the development of capital markets.

The National System of Guarantees, implemented during this period, is considered by the OECD as a best practice in public policy. This program had a goal to improve access to financing for SMEs and was efficient in improving their credit ratings while keeping costs low and increasing competition in the banking sector.

Finally, the capital markets opened up as a potential funding source due to the creation of angel investor clubs and the Fund of funds that launched venture capital funds that invested in early stage, high growth companies (startups).

• Prioritizing innovation and technological development.
Starting in about 2007, innovation was understood not only as a tool of large companies, but also a method to increasing competitiveness of all businesses. Financial instruments were created to encourage the development of innovative ideas in SMEs such as the Technological Innovation Fund and programs like INNOVAPYME and PROINNOVA, financed by both SPYME and the National Council for Science and Technology (CONACYT).

Other key organizations in the current innovation ecosystem were created during that time as well such as technology parks, industry associations, and accelerators. Among the many accelerators with presence in Mexico now, TechBA is one coordinated by FUMEC (Mexico-United States Foundation for Science) that connects Mexican companies with ecosystems in the United States.

The Peña Nieto government built on the advances of the previous two administrations and sought to give even more weight to public policy aimed at SMEs and entrepreneurs. The SPYME division within the Ministry of Economy transformed into the National Institute of the Entrepreneur (INADEM) with more power and resources. The total budget during Peña Nieto's six-year term was 43 billion pesos and they administered much of those resources through the new National Entrepreneur Fund.

Perhaps the greatest achievement of INADEM was how it maintained and grew what worked well in the past while giving the Mexican entrepreneurial ecosystem a single hub. It also helped in increasing the size and diversity of the ecosystem with more angel investors, venture capital funds, incubators, accelerators, fab-labs, and coworking spaces.

Starting in 2007, it began to be understood that innovation was not an exclusive activity of large companies and financial instruments were created to encourage the development of innovative ideas in SMEs.

11. https://www.brookings.edu/research/high-growth-firms-and-cities-in-the-us-an-analysis-of-the-inc-5000/

12. https://www.inadem.gob.mx/wp-content/uploads/2018/12/Libro-Blanco-POLI%CC%81TICA-DE-MIPYMES.pdf

One case that demonstrates the success of public policy support for entrepreneurship during the past six years is the sub-sector of FinTech companies. Mexico now has more than 300 startups focused on financial technologies and a regulatory framework through the Law to Regulate Institutions of Financial Technology created in 2018. The FinTech ecosystem also has a positive impact on the country's SMEs because many of the startups offer financial inclusion solutions: access to credit, collective investment, digital payment tools, and new ways to move money through virtual assets.

Small Business and Startup Needs

In January 2017 the OECD made two important observations about SMEs and startups in Mexico[13]:

- **First.** There has been a lot of emphasis in recent public policy to regulate high growth companies - what we define as startups in this paper - that make up 10 to 15 percent of the total number of companies; the rest of the small businesses that make up more than 50 percent of Mexico's employment have been neglected.

A case that shows the success of the policy of support for entrepreneurship is the sub-ecosystem of FinTech companies, which already has more than 300 startups in Mexico.

- **Second.** Mexico has experienced a continuous decline in productivity caused by low levels of value added per person employed by SMEs.

These two points suggest that Mexico needs to balance its public policy to both incentivize the creation of high growth startups and boost the productivity of more traditional SMEs. After consulting various sources of public policy analysis, including the OECD, there seems to be consensus about five major priorities to increase the productivity of SMEs in Mexico, as appreciated in the table of the right.

Challenges

The government of Andres Lopez Obrador, inaugurated in December 2018, has taken steps that appear to be going against the noted trends of the last 30 years, and especially the last three administrations.

First, INADEM has been dissolved and the funding for the National Entrepreneur Fund has been reduced to the minimum necessary to finish the programs and recruitment currently in progress. Meanwhile, the Ministry of Economy has announced plans to create a National Program of Microentrepreneur Financing that will grant more than 3 billion pesos in microcredit to the smallest companies in marginalized areas. These initial steps have swung the pendulum to the other side: minimum support to companies with high growth potential and more for the traditional small business.

Next, it appears that CONACYT, the entity in charge of promoting science and technology, will likely experience budget cuts particularly in programs focused on stimulating business innovations. However, the Ministry of Economy announced increases to the Program for the Development of the Software Industry (Prosoft) and the Program for Industrial Productivity and Competitiveness (PPCI). Once these budget changes occur it will be more clear

Challenges of public policy in Mexico

Reduce informatility

Although there has been progress, the share of people working in informal sectors remains high, representing 57 percent of jobs in 2016.

Financial inclusion

SMEs still have limited options to access loans, so efforts such as the loan guarantee program should be increased.

Competency development

About 31 percent of workers in the country are not qualified enough for their jobs. Both the National Productivity Committee[14], created in 2013, and the OECD[15] have addressed the need to improve lifelong skills training and more effective use of those skills at work.

Innovation and technology adoption

The country's gross domestic spending on research and development has barely risen, from 0.3 percent to 0.5 of GDP in the last twenty years[16]. China has duplicated its R&D spending from 0.9 to 2.1 percent during the same period. The OECD average is 2.3 percent of GDP. The proportion of innovations is particularly low in SMEs.

Participation in the global economy

In 2016, SMEs accounted for only 5.4% of exports. Chapter 25 of the new USMCA agreement provides a base to develop tools to promote the integration of SMEs in trade among the three countries.

if the increases for business innovation programming from the Ministry of Economy offset the cuts in CONACYT and the impacts these changes will have on the country's gross domestic spending on research and development.

Finally, it has been announced that ProMexico, an organization created in 2007 to boost exports in the country, will close. In contrast, the Ministry of Economy named commercial diversification as one of its new objectives and has promised to support SMEs with exports.

While there have been various structural and budgetary changes, it appears that

the Ministry of Economy has committed to working with SMEs, with a particular focus on the most marginalized companies and populations. Meanwhile, the federal government has announced one of their most ambitious programs called Youth Building the Future (JCF for its name in Spanish). The program has a 44 billion peso budget and focuses on the development of technical and soft skills for people between 18 and 29 years old. This program has the potential to develop skills needed in the workplace, a key need among both SMEs and startups.

14. https://www.oecd.org/policy-briefs/mexico-incrementar-la-productividad-en-las-pequenas-empresas-tradicionales.pdf

15. https://www.gob.mx/cms/uploads/attachment/file/388189/7._Recomendaciones_SFH.PDF

16. https://www.oecd.org/mexico/Diagnostico-de-la-OCDE-sobre-la-Estrategia-de-Competencias-Destrezas-y-Habilidades-de-Mexico-Resumen-Ejecutivo.pdf

13. https://read.oecd-ilibrary.org/industry-and-services/temas-y-politicas-clave-sobre-pymes-y-emprendimiento-en-mexico_9789264204591-es

3

The United States, maintaining innovation leadership

nlike Mexico, the startup and small business ecosystems are fairly distinct from one another. One reason for the distinction is that the United States dedicated resources to small businesses early on with the formal creation of the SBA in 1953. However, even before that the philosophy and mission of the organization lived in a number of agencies built as a response to the pressures of the Great Depression.

Ecosystem

The federal government sought to support small businesses during World War 2 as they were not able to compete with larger companies to win war contracts. At that time and moving forward, the federal government committed to support small businesses. The SBA has grown since in terms of its total assistance and diversity of programs including financial and federal contract procurement assistance, management assistance, specialized advice on international trade, and specialized outreach to women, minorities, armed forces veterans and victims of natural disasters.

Given the early creation of the SBA, the small business environment was created and expanded through this centralized agency. As mentioned before in this paper, the SBA administers its services on a local level through the creation of SBDCs. There are over 900 SBDC service sites around the country that modify their services to meet the evolving needs of the small businesses in their area[17]. The 2018 budget of the SBA was a little over $1 billion with $269.5 million allocated to salaries and expenses, $152 to the business loan administration, $125 to small business development centers, and $31 million to the microloan program[18]. The agency's funding over time has been fairly constant, not falling below $800 million since 2000.

In addition to serving small businesses, the SBA has also opened its services to startups that technically qualify as small businesses according to their size and/or annual receipts. A study in 2011 found that startups and nascent businesses found SBA Management and Technical Assistance Training Programs as useful or more useful than traditional small businesses as you can see in the table below.

While these services are available to startups, we still see the ecosystems as distinct - mostly due to the fact that the startup ecosystem was born and grew out of the dot com bubble largely separate from the federal government and SBA. Silicon Valley has long been a hub for technological innovation and paved the way for the development of various startup ecosystems around the country.
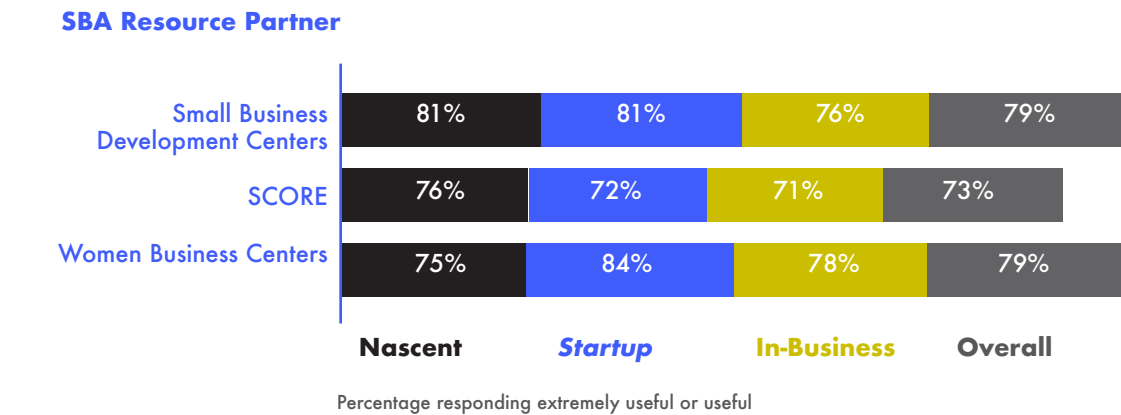
According to the Startup Genome research initiative, global entrepreneurship is trending toward high-tech and that is also the case in the United States. They claim that to find success as a startup in the current global ecosystem, a company must either 1) tackle specific Third Wave verticals - like Uber for mobility or Airbnb for hospitality or 2) build businesses through technological breakthroughs such as Blockchain, AI or Life Sciences[19]. This is exactly where the United States is growing as well, with the sub-sectors most represented in 10 startup ecosystems in the country being:

1. **AI, Big Data, and Analytics**
2. **Advanced Manufacturing and Robotics**
3. **Health and Life Sciences**
4. **Fintech**
5. **Cleantech**

Usefulness of SBA management and technical assitnace training programs
Percentage by client business development stage, 2011

SBA Resource Partner

	Nascent	Startup	In-Business	Overall
Small Business Development Centers	81%	81%	76%	79%
SCORE	76%	72%	71%	73%
Women Business Centers	75%	84%	78%	79%

Percentage responding extremely useful or useful

Startup founders in the US are also slightly distinct from other parts of the world. The Startup Genome studies what percent of founders have a builder mindset, success defined as scaling a venture profitably over a 10 to 15 year period, or a entrepreneur mindset, success defined as an exit within 5 years for $6 million to $1.2 billion. The average builder mindset across the United States was 40% (compared to a 32.5% global average) and the average entrepreneur mindset was 23.9% (compared to a 20.5% global average). The startup ecosystem in the United States is much more robust than other parts of the world due to the high concentration of capital, talent, mentors, investors and scaling experience.

Small Business and Startup Needs

The National Federation of Independent Business has published nine editions of the Small Business Problems and Priorities report with the most recent edition in 2016. Of their problem clusters they found that the most severe four, in order, were

taxes, regulation, employees, and costs. The table below highlights the most severe and least severe issues ranked by 2,831 small business owners in the United States[20]:

Exporting products and services has consistently been ranked one of the least severe problems for small business owners, something of note especially considering the bilateral agenda between the US and Mexico. Only 3 percent of respondents found exporting to be a critical issue and 59 percent found it to be "not a problem." It appears that some small business owners are disinterested in exporting and the ones who are find sufficient resources to get it done.

Since many of the most severe problems facing small business owners were very dependent on the national agenda, it is important to look at which problems are of increasing importance that may be addressed through a bilateral approach. The five problems with the most increasing importance were finding and keeping skilled employees, locating qualified employees, minimum wage/living wage, and employee turnover.

17. https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm
18. https://www.sba.gov/offices/headquarters/osbdc/resources/11409
19. https://fas.org/sgp/crs/misc/R43846.pdf
20. https://startupgenome.com/all-report-thank-you/?file=2018

Problems of small businesses in USA
Small Business Problems and Priorities 2016.

More severe problems

1. Cost of health insurance
2. Unreasonable government regulations
3. Federal taxes on business income
4. Uncertainty over Economic Conditions
5. Tax Complexity
6. Uncertainty over Government Actions
7. Frequent Changes in Federal Tax Laws and Rules
8. Property Taxes
9. State Taxes on Business Income
10. Locating Qualified Workers

Least severe problems

66. Access to High-Speed Internet
67. Bad debts (not delinquencies) and/or bankruptcies
68. Costs and Frequency of lawsuits/ threatened lawsuits
69. Obtaining long-term business loans (5 years or more)
70. Obtaining short-term business loans (less than 12 months or revolving)
71. Credit Rating / Record Errors
72. Winning contracts from Federal/State/ Local governments
73. Undocumented workers
74. Out-of-State Sales Tax
75. Exporting my products / services

Challenges

Although small businesses and startups experience many similar issues, the most acute challenges facing each in the United States are distinct. As cited above, small businesses are mostly concerned with legal frameworks and administrative work that keeps them from the core of their business. A study by Deloitte found there are substantial benefits to adopting digital technology. The top 20% most digitally advanced small businesses[21]:

- **Earned 2 times as much revenue per employee**
- **Experienced revenue growth over the previous year that was nearly 4 times as high**
- **Were almost 3 times as likely to be creating jobs over the previous year**
- **Had an average employment growth rate that was more than 6 times as high**
- **Were 3 times as likely to have exported over the previous year**

While small businesses themselves did not cite technology adoption as a challenge, it is a clear path to increased growth and competitiveness.

Some of the largest challenges for startups in the United States is growth in the face of very competitive markets. The legal framework of the United States and the cultural attitude toward failure allows for startup founders to be more experimental and innovative than other countries.

A challenge that both small businesses and startups experience, is the attraction of talent to their organizations.

However, this is also one reason the market is so competitive - barriers to entry are low, there is fairly good access to capital, and the market is full of seasoned entrepreneurs. Growth is also a large challenge for these companies because they must be able to assess when they have found product market fit and how to sustain high levels of growth in fairly saturated markets.

One challenge that both small businesses and startups experience is with attracting talent to their organizations.

The profiles of a small business employee and a startup one are distinct, but both are especially in need for technology skills and realize the importance of finding top performers to transform their businesses. Whether or not the company is disrupting the market, there are characteristics of the modern economy that the current workforce is not completely prepared to address. Exponential technologies can both be used to create a new company or expand the reach and operations of an existing company.

4

Bilateral Agenda

The small business and startup ecosystems across the United States and Mexico serve both countries in boosting economic growth, job creation and innovation. While each country has its own challenges that must be addressed domestically, there are a few issues that may be better tackled through a bilateral agenda.

Talent
The Fourth Industrial Revolution is transforming modern economies and has created a skills gap that must be addressed to support the growth of both small businesses and startups. In Mexico, the top emerging occupations are software developer, medical assistant, social media specialist, human resources specialist, and recruiter. The top emerging occupations in the United States are software developer, recruiter, business strategist, marketing specialist and real estate broker. The creation of a comprehensive bilateral workforce development agenda is a great opportunity for the US and Mexico.

Another trend to note is the emergence of distributed talent through remote and freelance networks. The future of work has shown many organizations and workers that labor agreements are changing and flexible arrangements are more common than ever before. Two countries with such large populations in such close proximity must work together to create a regional advantage in skills development and technological tools to add value to the market.

International Trade
The signing of the US-Mexico Canada Agreement (USMCA) is a great opportunity to design a new bilateral relationship across a number of subjects. As international trade has evolved, it is clear that treaties cannot solely focus on commercial transactions, especially between countries with large differences in income per capita. The flows of goods and services is very important because it closely affects investments and jobs, so moving forward the bilateral agenda must address the impacts of international trade in a holistic way.

The most immediate next steps for the US and Mexico is to operationalize the policy established in chapters 25 (SMEs) and 26 (Competitiveness) through the integration of committees who can establish regional objectives to increase competitiveness of SMEs and small businesses in both countries. This includes connecting institutions such as the SBA and Ministry of Economy who are driving the SME agenda on each side of the border. Rather than focusing on the volume of trade, we must shift the conversation to integrating regional value chains more efficiently to make North America a more competitive region with the rest of the world.

Innovation
The Startup Genome project has studied entrepreneurial ecosystems around the world and concluded that the ecosystems that focused on global markets grew twice as fast as those focused on national markets[22]. This suggests that the global connectedness of entrepreneurial and innovation ecosystem is a worthy goal in the conversation of regional competitiveness. There is a great opportunity to scale up initiatives such as TechBA from FUMEC to create connections between companies, investors, research centers and other actors in both countries.

What we are doing at Lab4.

Lab4 is a nonprofit initiative launched out of Mexico Media Lab, an innovation agency focused on the implications of Industry 4.0 in Mexico and Latin America.

Our three objectives are:

1. Increase technology adoption of SMEs

2. Facilitate access to markets for SMEs and startups

3. Provide new skills training to the workforce

A constant challenge in public policy for SMEs and small businesses is to design projects that recognize and adapt to the diversity of situations that may arise. Understanding this challenge and the need for personalized support, we designed an index that measures the level of technological maturity of an SME that also identifies what type of technology adoption will have the most impact on their business. Once an SME is diagnosed, they can participate in Lab4 bootcamps that 1) help them identify how technology can help them solve real business needs and 2) put them in direct contact with technology providers that can reach them how to use tools aligned with those needs. We have already worked with partners like: AT&T, Facebook, Google, IBM, Kio Networks, Microsoft and SAP.

In the area of access to the market, we provide services to connect startups and small businesses to corporate clients. For small businesses, access to corporate clients is about relationship building and scaling operations to a level that meets a large client's needs. For startups, the sales process requires more customer discovery and iteration to test product market fit. We identify where startups and small businesses are and support them in closing contracts with clients.

Finally, talent is also a large need for both small businesses and startups, a need Lab4 addresses from a number of perspectives. First, from a research perspective Lab4 focuses on four important industries with respect to Industry 4.0 in Mexico - aerospace, automotive, chemicals, and energy - and maps out the skills most relevant for workers. Then, in collaboration with partners and through proprietary curriculum, Lab4 offers skills development to young workers to enter into those industries with the skills already in demand. Through our work with small businesses we have also identified a number of skills needed to aide technology adoption and train workers and young people to fill the gaps and support small business growth in their communities.

22. https://startupgenome.com/global-connectedness-the-key-to-fast-growing-startups-and-ecosystems/

"We can not solve problems using
the same kind of thinking we had
when we created them."
—Albert Einstein.

Contact us!

noha@mexicomedialab21.com
guillermo@mexicomedialab21.com

Flora 11, Roma Norte
Mexico City

Lab4 MMHM MÉXICO MEDIA LAB

Sources

Acuerdo por el que se establece la estratificación de las micro, pequeñas y medianas empresas. (30 de junio 2009). Diario Oficial de la Federación. Recuperado de http://dof.gob.mx/nota_detalle_popup.php?codigo=5096849

Blank, Steve. (25 de enero de 2010). *What's A Startup?* First Principles. Steve Blank. Recuperado de https://steveblank.com/2010/01/25/whats-a-startup-first-principles/

Connecting Small Businesses in the US. (2017). Deloitte. Recuperado de https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-connected-small-businesses-Dec2017.pdf

Dilger, Robert Jay. (16 de febrero 2018). Small Business Administration (SBA) *Funding: Overview and Recent Trends. Congressional Research Service.* Recuperado de https://fas.org/sgp/crs/misc/R43846.pdf

Dorantes, Ricardo. (22 de agosto de 2018). *Qué es una startup.* Entrepreneur. Recuperado de https://www.entrepreneur.com/article/304376

Entrepreneurial Behaviour and Attitudes (2017). Global Entrepreneurship Monitor. Recuperado de https://www.gemconsortium.org/country-profile/87

Eric Ries' *Definition of a Start-up.* (Sin fecha). Inc. Recuperado de https://www.inc.com/eric-ries/eric-ries-how-to-define-a-start-up.html

Global Startup Ecosystem Report 2018. (2018). *Startup Genome.* Recuperado de https://startupgenome.com/all-reports/?file=2018

Graham, Paul. (Septiembre de 2012). *Startup = Growth.* Paul Graham. Recuperado de http://www.paulgraham.com/growth.html

Hathway, Ian. (5 de febrero 2018). *High-growth firms and cities in the US: An analysis of the Inc. 5000.* Brookings Institution. Retrieved from https://www.brookings.edu/research/high-growth-firms-and-cities-in-the-us-an-analysis-of-the-inc-5000

Instituto Nacional del Emprendedor. (2013). *Libro Blanco. Política de MiPymes/INADEM 2013-2018.* México: Secretaría de Economía.

OCDE (12017) *Diagnóstico de la OCDE sobre la Estrategia de Competencias, Destrezas y Habilidades de México.* OCDE. Recuperado de https://www.oecd.org/mexico/Diagnostico-de-la-OCDE-sobre-la-Estrategia-de-Competencias-Destrezas-y-Habilidades-de-Mexico-Resumen-Ejecutivo.pdf

OECD. (2019). *Gross domestic spending on R&D* (indicator). OECD. doi: 10.1787/d8b068b4-en

OECD. (2017). *Mexico Policy Brief.* OECD. Recuperado de https://www.oecd.org/policy-briefs/mexico-incrementar-la-productividad-en-las-pequenas-empresas-tradicionales.pdf

OECD. (2013) *Temas y políticas claves sobre PYMES y emprendimiento en México.* OECD Publishing.

Recomendaciones para confirmar el sistema de formación de habilidades a lo largo de la vida para México. (Sin fecha). Comité Nacional de Productividad. Recuperado de https://www.gob.mx/cms/uploads/attachment/file/388189/7._Recomendaciones_SFH.PDF

Resources. (Sin fecha). U.S. Small Business Administration. Recuperado de https://www.sba.gov/offices/headquarters/osbdc/resources/11409

Startup Genome. (22 de octubre 2018). *Global Connectedness: The Key to Fast-Growing Startups and Ecosystems.*Startup Genome. Recuperado de https://startupgenome.com/global-connectedness-the-key-to-fast-growing-startups-and-ecosystems/

Wade, Holly. (Agosto de 2016). *Small Business Problems and Priorities*. National Federation of Independent Business. Recuperado de https://www.nfib.com/assets/NFIB-Problems-and-Priorities-2016.pdf

What is an SME? (2018). European Commission. Recuperado de http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en