

Leveraging Entrepreneurship Ecosystems in Post-conflict Colombia

By

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ABSTRACT

This thesis explores the specificity of the Colombian entrepreneurship ecosystem. Building on and extending an entrepreneurial research methodology developed by the World Economic Forum, this thesis attempts to identify how the Colombian entrepreneurship ecosystem compares to others around the globe and to understand which factors are most relevant to its success.

Combining insights from the literature, a quantitative analysis and multiple interviews, this study finds that the four factors with biggest potential for high positive impact on the performance outcomes of entrepreneurs in Colombia are: Funding & Finance, Accessible Markets, Regulatory Framework & Infrastructure and Cultural Support. Furthermore, the study shows that the high relevance of the latter two factors constitute a “Colombian specificity”. This thesis contributes to the research by suggesting the most relevant factors to the long-term success of the Colombian entrepreneurship ecosystem.

Keywords: entrepreneurship, ecosystem, success factors, Colombia

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SECTION 1 INTRODUCTION

As entrepreneurs are increasingly in the spotlight, their role in economic and social progress has become more visible than ever. Entrepreneurship is now overwhelmingly seen as a fundamental driver of growth and development (World Bank, 2014). This has triggered growing interest from policy makers around the world in how to foster local, national, regional and global entrepreneurship ecosystems. This interest is equally the case in emerging economies, where 97% of all jobs come from small and medium-sized enterprises (World Economic Forum, 2013).

As Colombia appears poised to end more than five decades of armed conflict, a number of exciting economic opportunities as well as major socio-economic challenges arise. This unique timing creates the possibility that, if leveraged properly, entrepreneurship could become a driving force for job creation and growth in Columbia, and enable the social and economic transition of the country. In recent years, Colombia has already started to undergo an entrepreneurial revolution, with Medellin as a national hub for innovation. Public support has grown, private initiatives have emerged, and universities have started to include entrepreneurship in their curriculum. But, is that enough to allow Colombia to achieve its entrepreneurial transition?

Key questions remain:

- What are the key success factors of an entrepreneurship ecosystem?
- Based on these factors, how does the Colombian entrepreneurship ecosystem compare to others in the rest of the world?

- Which of these factors are most relevant in Colombia? What is needed to take the Colombian ecosystem to the next level?

Whereas most prior studies of entrepreneurship ecosystems focus either on the more famous examples of such ecosystems (e.g. Silicon Valley) or on regional ones (e.g. Latin America as a whole), this thesis explores the specificity of the Colombian ecosystem. Building on and extending a methodology designed by the World Economic Forum, this thesis attempts to identify how the Colombian ecosystem differs from others in the rest of the world and to understand which factors are most relevant to its success.

The thesis is organized in six sections. In section 2, I provide the rationale and background for the methods used for the thesis. In section 3, I review the literature to understand what makes an entrepreneurship ecosystem successful. In section 4, I draw on the criteria identified in section 3 to benchmark the current Colombian ecosystem against 12 other ecosystems in the rest of the world. In section 5, I identify which parts of the ecosystem are most relevant for Colombia to achieve a successful entrepreneurial transition. Finally, in section 6, I discuss the strategic implications of my findings and consider the study's limitations.

SECTION 2 METHODOLOGY

This thesis draws its insights from both existing research (through a literature review) and new data (a quantitative analysis based on a survey and qualitative inputs from interviews).

Literature review

I performed a review of the research literature on “entrepreneurship ecosystems” so as to understand the concept and to identify key success factors. This enabled me to build upon experts’ views on what entrepreneurship ecosystems are, what they have in common, and what drives their success. Further, the review provided me with information on the most studied ecosystems, and these served as an excellent benchmark for the data I collected about the Colombian ecosystem. I discuss the insights obtained from the literature review in the following section.

Quantitative analysis

The goal of this second step was to collect data specific to the Colombian entrepreneurship ecosystem, and was focused on addressing the following questions:

- How do entrepreneurs in Colombia perceive their current entrepreneurship ecosystem? Which of the key success factors are present in Colombia and how does that compare to other countries in the world?
- Which factors are most important to Colombian entrepreneurs? Is there a gap between the needs of entrepreneurs and the current state of the ecosystem in Colombia? Do entrepreneurs in Colombia have different needs than entrepreneurs in the rest of the world?

As for the data-gathering process, I conducted a survey in Spanish and collected responses from 230+ entrepreneurs in Colombia. To ensure that the data came exclusively from entrepreneurs and to filter out non-entrepreneur respondents, I included a preliminary question asking the respondents whether they considered themselves to be entrepreneurs. Additionally, for the purpose of this study, I only considered responses collected between 1/21/2016 and 1/28/2016, corresponding to the time when I was in the field in Colombia and actively administering the survey. These two restrictions reduced the sample size from 284 to 232 respondents.

Survey questions analyzed in this study were part of a larger survey about entrepreneurship in Colombia that I conducted in association with the organization Postobón S.A.. This organization was particularly interested in supporting social and scalable entrepreneurship in Colombia in order to help solve some of the country's biggest social challenges. While I designed the survey, it was administered by Postobón S.A.'s Corporate Social Responsibility (CSR) department. A copy of the survey questions is available in Appendix A (in both the original Spanish language and an English translation). To ensure broad reach and good response rate, the survey was branded with Postobón S.A.'s logo and distributed by its CSR department, as well as by a dozen other organizations with extensive networks of entrepreneurs in Colombia.

Additionally, to check for robustness of the results and potentially gain further insights, I included "years of experience in an early-stage company" as a preliminary question (proxy for a control variable) so as to see how results differed depending on

experience. The rationale behind this is the following: entrepreneurs' view of the ecosystem may differ depending on how experienced they are. For instance, serial entrepreneurs, who tend to be more experienced, may have a more thorough knowledge of the country's regulatory framework than newcomers. Thus, when looking at the survey results, I compare the overall results to the results obtained by selecting on experienced entrepreneurs.

Interviews

I conducted 18 interviews with a wide range of stakeholders within the Colombian entrepreneurship ecosystem (see Appendix B). These interviews were performed either through videoconference or directly on site in Colombia, where I spent three weeks in January 2016. While I keep the anonymity of the interviewees, I use some of their valuable insights to inform some of my quantitative results and provide insights from the field when relevant.

SECTION 3 UNDERSTANDING ENTREPRENEURSHIP ECOSYSTEMS: INSIGHTS FROM THE LITERATURE

As the interest in entrepreneurship is relatively recent, literature on entrepreneurship ecosystems remains somewhat limited. Below I draw on the latest research to shed light on the topic.

3.1. Definition of entrepreneurship ecosystem

According to Feters, Greene and Rice (2010, p. 179): “an entrepreneurship ecosystem provides a resource-rich environment that enhances the development of nascent entrepreneurial talent and the rate of start-up, survival and success of new ventures.” This gives us a first definition, although incomplete for two reasons:

- This definition only accounts for the positive aspects, failing to consider that poor ecosystems can inhibit this same talent and success, as highlighted by Rice, Feters and Greene (2014) in a later paper.
- This definition omits the interactions that condition the likelihood of either one of these two outcomes occurring.

In order to dig deeper into what kinds of interactions influence ecosystem health, I examined the work of pioneering organizations and initiatives that improve the understanding and outcomes of entrepreneurship ecosystems in the world. The MIT Regional Acceleration Program is one such organization. This program defines an innovation ecosystem as “the connections among 5 key stakeholders: entrepreneurs, universities, risk capital, government and large corporations” (Murray and Budden, 2016). This is illustrated in Figure 3-1 below.

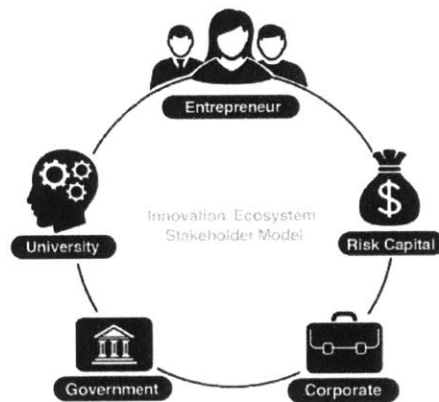


Figure 3-1: MIT REAP Innovation Ecosystem Stakeholder Model

Source: MIT REAP (2016)

This model offers a good starting point, going beyond the traditional public-private debate by highlighting 5 key players. However, this definition too has limitations for the purpose of this thesis. First, my thesis looks at entrepreneurship ecosystems rather than innovation ecosystems. While these two have a lot in common, not all types of entrepreneurship are innovation-focused (e.g. mom & pop stores). Second, some key stakeholders such as the human workforce (labor) and the general population (cultural mindset and support) are missing.

As a result, for the purpose of this thesis, I will define an entrepreneurship ecosystem as: *the environmental conditions and relational interactions that enhance and/or inhibit the performance outcomes of entrepreneurs.*

3.2. 8 key success factors or “pillars”

According to Rice, Fettes and Greene (2014, p. 483): “what is increasingly recognised is that establishing a high-impact, sustainable entrepreneurship ecosystem requires that all stakeholders need to collaborate and contribute.”

Their paper thus emphasizes the importance of cooperation between all stakeholders, and the use of the word “contribution” underlines that all factors are likely to be important in the ecosystem, although their relative importance may vary between countries (a phenomenon I will consider later). The more these factors are present and active, the more likely it is that entrepreneurial companies will take off, accelerate and become scalable, high growth businesses. In the research below, “key factors” will be referred to as *pillars* and their “presence” and “activity” will be referred to as *availability*. Going back to the definition of entrepreneurship ecosystem above, these factors or pillars constitute the environmental conditions that I refer to, and their availability determines their ability to interact with one another.

So, what are the pillars that make up an ecosystem? The World Economic Forum, an organization that has worked on improving the understanding of entrepreneurship ecosystems in the world, identified such pillars in a report published in 2013, in collaboration with Stanford University, Ernst & Young and Endeavor. Their work, based on prior research and interactions with entrepreneurs, investors, government officials and politicians, resulted in the following 8-pillar characterization of an entrepreneurship ecosystem (Figure 3-2 below).

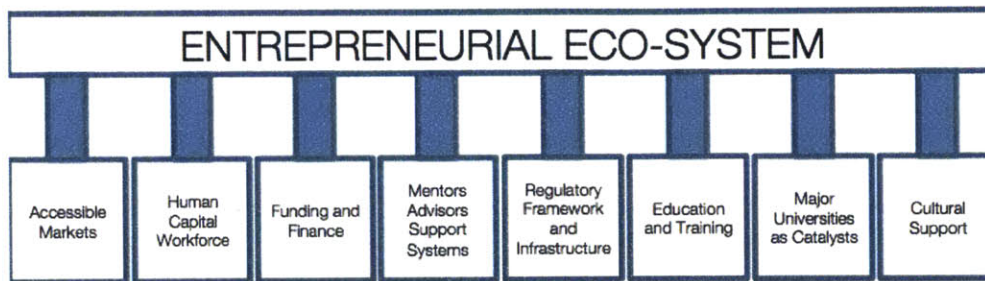


Figure 3-2: WEF's 8 pillars of entrepreneurship ecosystems

Source: WEF (2013)

Furthermore, in that same report, the World Economic Forum and its collaborators surveyed over 1000 entrepreneurs from around the globe to answer two questions:

- How do entrepreneurs perceive their ecosystem in terms of the ready availability of the 8 pillars?
- Which pillars do entrepreneurs view as most important to the growth and success of their companies?

This research provided a significant breakthrough for two reasons. First, little prior research on the topic was based specifically on evidence gathered directly from entrepreneurs. Second, entrepreneurs were requested to respond to both questions, generating insights about entrepreneurs' needs for success. This is important as most prior research had focused on the first question. Precisely, on that note, the report's key takeaway is that 3 out of the 8 pillars seem to be perceived as most important by entrepreneurs around the globe, regardless of their location: Accessible Markets, Human Capital Workforce and Funding & Finance.

While valuable, this research has limitations with respect to my study. Among the main ones are its sample distribution: entrepreneurs from North America made up more than 50% of the total respondents. As each entrepreneur was asked questions regarding their own ecosystem, this distribution might not have been an issue per se. However, for the purposes of my goal of understanding the Colombian ecosystem, the data collected in Latin America is insufficient. Indeed, data from South America and Mexico accounts for only 5% of the total data points in the study (53 out of 1042), with most of these coming from Mexico. Thus, although the methodology of the study appears robust, the results would not necessarily be representative of the Colombian entrepreneurship ecosystem.

In this thesis, I extend this World Economic Forum study by asking the same two key questions to 232 Colombian entrepreneurs. I then compare my results to the findings from this study, and use that analysis to highlight the specificities of the Colombian entrepreneurship ecosystem as compared to those of other ecosystems in the world. I discuss this analysis in sections 3 and 4.

SECTION 4 CURRENT ASSESSMENT OF THE COLOMBIAN ENTREPRENEURSHIP ECOSYSTEM

4.1. General assessment

Before examining the extent to which each pillar is available in Colombia, the most straightforward way to get a grasp on the current state of the Colombian ecosystem is to ask local entrepreneurs how they would assess the current entrepreneurship ecosystem in their country. This question was asked in the survey I conducted and the results (Figure 4-1 below) provide a clear overview of the ecosystem as perceived by the entrepreneurs: over 58% of the 232 respondents view it as “very limited” or “limited”, whereas only close to 18% view it as “good” or “very good”. Furthermore, these results are robust to the entrepreneurs’ years of experience. That is, looking only at entrepreneurs with more than 4 years of experience in an early-stage company, or at entrepreneurs with more than 10 years of experience (arguably those who know the ecosystem the best), the results are not significantly different.

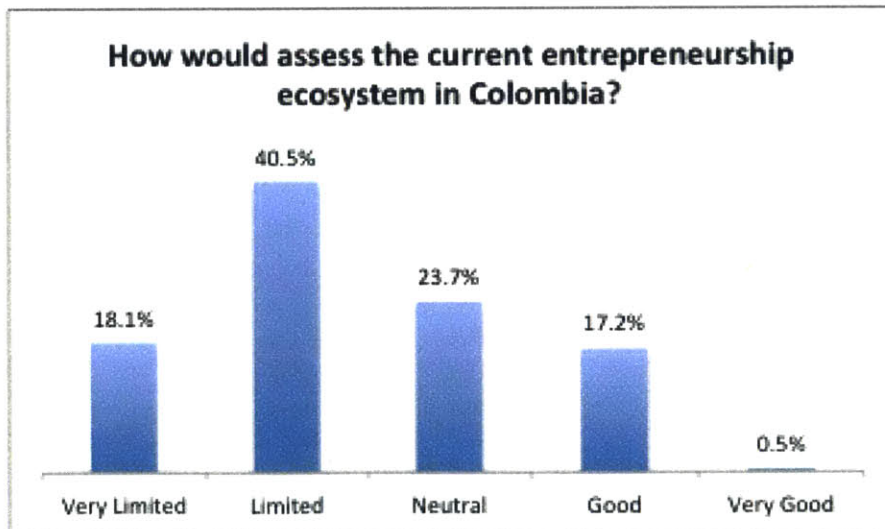


Figure 4-1: Current assessment of Colombian entrepreneurship ecosystem by survey respondents

Source: Thesis survey

Thus, the results show clear room for improvement in the ecosystem, but at this point two important questions remain:

- In which areas can and should the ecosystem be improved?
- How does Colombia compare to other countries?

4.2. Availability of the 8 pillars

Building on the World Economic Forum 2013 Report's methodology, I asked the entrepreneurs in Colombia to identify which of the eight pillars of an entrepreneurial ecosystem were readily available to them as they built their venture. This is important as the WEF (2013, p. 9) found that: "the higher the percentage of respondents indicating ready availability, the stronger that ecosystem pillar is considered to be in that region".

Based on my survey, I collected the results for Colombia, then benchmarked them against the data provided by the WEF for 12 other ecosystems, and summarized the results in a table (Figure 4-2).

Pillar/Country	Data from WEF Report												Data from survey
	US - Bay Area	US - Other Cities	US	UK	Switzerland	Ireland	Spain	Singapore	Pakistan	India	Australia	Mexico	Colombia
Accessible Markets	92%	83%	86%	82%	89%	79%	67%	70%	78%	72%	71%	52%	27%
Human Capital Workforce	93%	87%	90%	79%	67%	74%	90%	50%	92%	72%	79%	65%	52%
Funding and Finance	91%	76%	82%	68%	61%	53%	43%	65%	22%	44%	67%	52%	20%
Mentors/Advisors/Support Systems	91%	72%	79%	68%	56%	53%	29%	40%	58%	28%	54%	48%	53%
Regulatory Framework/Infrastructure	67%	57%	61%	57%	61%	63%	48%	80%	31%	28%	54%	52%	24%
Education and Training	80%	62%	70%	61%	61%	37%	62%	40%	39%	22%	33%	30%	49%
Major Universities as Catalysts	88%	67%	75%	68%	67%	37%	38%	65%	22%	11%	38%	35%	64%
Cultural Support	90%	64%	75%	50%	39%	42%	24%	40%	25%	17%	29%	22%	27%
Average Score	87%	71%	77%	67%	63%	55%	50%	56%	46%	37%	53%	45%	40%

Figure 4-2: Breakdown per country of the availability of the 8 ecosystem pillars

Source: Thesis survey and WEF (2013)

Overall, the big picture of the current ecosystem in Colombia seems aligned with the “limited” general assessment previously made. Colombia is ranked second to last in terms of average availability of the pillars, behind all of the 12 other ecosystems studied with the exception of India.

Nevertheless, we should be careful when doing a precise comparison across ecosystems in the world (see section 6 for additional details on possible limitations). These results are primarily based on the perceptions of entrepreneurs within a given ecosystem. These perceptions may vary significantly between cultures, as well as between countries, making it difficult to do a quantitative comparison that is likely to be influenced positively or negatively by cultural mindsets.

As a result, I believe it makes more sense to pay closer attention to orders of magnitude (rather than exact numbers) as well as to investigate further the availability of each pillar in the ecosystem (rather than solely looking at average scores).

Compared to most ecosystems, Colombia seems to be mainly lagging behind with respect to four pillars: Accessible Markets, Funding & Finance, Regulatory Framework & Infrastructure, and Cultural Support. The scores on these four pillars are all below 28% and possible reasons for that will be discussed below. As before, these results are robust when controlling for entrepreneurs' level of experience.

For the next step of the analysis I examined each of the 8 pillars in more detail.

4.2.1. Accessible Markets

Accessible Markets comprises ease of access to both domestic and foreign markets, including large companies, small & medium companies and governments as potential customers.

Interestingly, this pillar features the biggest gap between score for Colombia and average score for the other entrepreneurship ecosystems studied, meaning that the Colombian ecosystem is strongly lagging behind regarding the accessibility of both domestic and foreign markets.

Why would this be the case? One possible explanation is that the domestic private and public sectors may not be playing the role of first customers. This was one of the concerns expressed and one of the areas of improvement identified by the

entrepreneurs I interviewed in Colombia. Another possible explanation is that the national, regional (Latin America) and international markets are hard to reach due to the country's geographical constraints and high logistics costs. One senior member of a large Colombian private corporation observed that even domestically, many markets remain logistically out of reach for new businesses, which as a result struggle to scale.

4.2.2. Human Capital Workforce

Human Capital/Workforce includes management talent, technical talent, entrepreneurial experience, outsourcing availability and access to immigrant workforce.

Although absolute numbers for this pillar in Colombia may seem low (only Singaporean entrepreneurs perceive this pillar as less available), this study finds that the perceived availability of Human Capital/Workforce is high in Colombia relative to most other pillars, making this pillar a “relative strength” of the Colombian ecosystem. In other words, local entrepreneurs are much more confident in their ability to find the right people (talent) to join their teams than for instance in their ability to find first customers for their products or services.

4.2.3. Funding and Finance

Funding and Finance includes all types of financing, from bootstrapping, friends and family, grants and donations, angel investors, private equity, venture capital and access to debt.

A key finding of this study is that, along with Pakistan, Colombia is the only other ecosystem studied where Funding & Finance is perceived as the least available pillar.

One common explanation is that the Colombian Venture Capital (VC) industry is still in its infancy. This reasoning came up repeatedly in the interviews I conducted in Colombia. However, as counter evidence, the country does include a number of other actors such as governmental agencies (e.g., Innpulsa), private corporations (e.g., Postobón S.A.) and foundations (e.g., Fundación Bolívar Davivienda) that have recently been funding entrepreneurial ventures.

So, why do Colombian entrepreneurs perceive such a lack of availability in financing? Some might argue that entrepreneurs are always looking for additional funding anyway, and thus perceive any financing opportunity they have as not good enough. In section 6, I also discuss the possible negative effect of the survey being branded by Postobón S.A.). According to the entrepreneurs I interviewed in the field, the reality is more complex. They highlight that many of the current funding initiatives in Colombia, including entrepreneurship contests and incubation programs, feature grants or in-kind donations rather than extensive funding through equity or debt. This results in the availability of short-term funding opportunities, but fails to provide entrepreneurs with the long-term financing they need to reach sustainable growth and success.

4.2.4. Mentors/Advisors and Support Systems

This pillar includes mentors/advisors, incubators/accelerators and network of entrepreneurial peers.

With 53% perceived availability, the Support Systems pillar ranks second in Colombia, with a score very similar to the average of the other 12 ecosystems studied (56%).

I see two main reasons for this relatively high perceived availability. First, initiatives aimed at supporting entrepreneurs have skyrocketed in Colombia over the last 15 years, whether in the public, private or non-profit sectors. Endeavor is one of the many examples of non-profit organizations that have been advising Colombian entrepreneurs, connecting them with peers and mentors, as well as accelerating their ventures for over 10 years. Second, the fact that this survey was partly distributed through partner organizations (including Endeavor) that support entrepreneurs may have contributed to the high availability score of this pillar (more on this in section 6).

4.2.5. Regulatory Framework and Infrastructure

Regulatory Framework and Infrastructure includes ease of starting a business, tax incentives, business friendly legislation and policies, access to basic infrastructure, telecommunications and transport.

This study shows that other than Colombia, only two countries have the Regulation & Infrastructure pillar ranked amongst their two least available ones. However, for both the US and the UK, this can be explained by the high perceived availability of the other pillars, whereas this does not hold for Colombia.

One plausible explanation for this finding is that Colombia's entrepreneurship regulatory framework is quite recent and rapidly evolving. Indeed, since 1990 (date of the first law for Science and Technology) and even more since the early 2000's, the government has been changing, updating and simplifying the regulatory framework frequently. The effects of such changes are usually not noticeable overnight. When interviewed, one stakeholder whose work is to support entrepreneurs on a daily basis pointed out that recent national policies have reduced the time to register a new company from 3 months to 1 week.

To better understand Colombia's regulatory framework and infrastructure, I looked at the World Economic Forum's 2014 report on Global Competitiveness. This report ranks countries around the globe on several factors aimed at determining the competitiveness level of a given economy. According to the report, the three most problematic factors for doing business in Colombia are the high level of corruption (Colombia is ranked 123rd out of 144 countries on this factor), the inadequate supply of infrastructure (84th), and inefficiency due to government bureaucracy. Those all hint at a less positive picture, one that is closer to the perception of local entrepreneurs, regarding Colombia's regulatory framework and infrastructure.

4.2.6. Education and Training

Education and Training comprises the available workforce with pre-university education, the available workforce with university education and entrepreneur-specific training.

With 49% perceived availability, Colombia does better than its developing counterparts (Pakistan, India, and Mexico) and does even better than a few more developed economies (Ireland, Singapore).

This finding corroborates the ones from the Human Capital/Workforce, Support Systems and Universities pillars, and stems from similar possible explanations.

4.2.7. Major Universities as Catalysts

This pillar captures 3 key roles of major universities in the ecosystem: promoting a culture of respect for entrepreneurship, contributing to idea-formation for new companies and providing graduates for new companies.

This study finds that entrepreneurs currently perceive this pillar as the Colombian ecosystem's biggest strength. With 64% perceived availability, this pillar ranks first in Colombia, with a score that is as good as those for some of the world's most advanced economies.

Insights from university members interviewed in Medellin shed some light on this phenomenon. EAFIT University representatives emphasized the growing role that Colombian universities were playing as a mediator between the public and the private sector, specifically between the government and companies. For example, building on the trust earned from these two key stakeholders, the university can source a problem to solve for its entrepreneurship students from the government and source funds to solve this problem from companies. This contributes to the idea-formation for new companies, and so does the increasing number of research groups that thrive in

Colombian universities. Additionally, EAFIT university created a mandatory course in entrepreneurship for its undergraduate students, thus promoting a culture of respect for entrepreneurship and potentially generating this interest among its future graduates. This element is also key to enhancing the last pillar of entrepreneurship ecosystems, cultural support.

4.2.8. Cultural Support

Cultural Support includes tolerance to risk and failure, preference for self-employment, success stories and role models, research culture, positive image of entrepreneurship and celebration of innovation.

This study finds that although entrepreneurs in Colombia perceive little cultural support (27%), Colombia actually does better than its developing counterparts (Pakistan, India, and Mexico) on this pillar. Furthermore, this performance is likely underestimated by the general trend of lower numbers for the Colombian ecosystem. Thus, despite doubtless room for improvement, the picture on cultural support may be brighter than it seems.

There are several possible explanations to account for this ambivalent finding. As an interviewee who has been supporting entrepreneurs for several years puts it, an unusually high percentage of the population aspires to become entrepreneurs (up to 50% of workers in Colombia according to that source). This accounts for entrepreneurship in a broad sense and takes into consideration the very high number of “mom’s and pop’s” stores in the country. Yet, this input sheds an interesting light on the image of self-employment and entrepreneurship in Colombia, which is much

more positive than in many developing or emerging countries. Furthermore, the progressive development of an innovation hub in Medellin, with initiatives such as the public-led Ruta N, has been and will remain cornerstone in shifting cultural mindsets towards more celebration of innovation.

Nonetheless, as highlighted by the survey, Colombia's cultural support towards entrepreneurship has a lot of room for improvement. Like many others, a high-potential social entrepreneur interviewed in Colombia noted that tolerance to risk and cultural perception of failure are currently the biggest hurdles entrepreneurs are facing in their struggle for cultural support.

SECTION 5 MOST RELEVANT SUCCESS FACTORS FOR THE COLOMBIAN ENTREPRENEURSHIP ECOSYSTEM

5.1. Rationale

Having understood how entrepreneurs in Colombia view their current entrepreneurship ecosystem and how it differs from current ecosystems in the rest of the world, it is critical to understand which of the key success factors outlined in section 3 and analyzed in section 4 (in terms of availability) are perceived as most important by these same entrepreneurs. The rationale for this is twofold.

First, availability and importance may differ significantly, thus highlighting an ecosystem discrepancy, which could be either a void or an unnecessary abundance. The analysis of the pillars' availability showed that Colombia was clearly lagging behind on 4 pillars, and at this point we do not really know how big of an issue this is. Indeed, depending on the perceived importance of these “missing pillars”, their lack of availability could be either a huge obstacle or a relatively low impediment to the growth of the Colombian entrepreneurship ecosystem. If a highly important pillar is not available, then the long-term success of the entrepreneurship ecosystem is jeopardized and critical actions can and should be taken to offset that. Conversely, if a hardly available pillar is perceived as less important, long-term consequences of its relative absence will likely be less detrimental to the success of the overall ecosystem. The first aim of this section is to identify these discrepancies or “gaps”, in order to understand possible mismatches between entrepreneurs' needs and currently available

support, enabling us to determine which factors will be most relevant to the ecosystem's future success.

Second, because of the characteristics and circumstances inherent to each country, entrepreneurs may have different needs and value each of the 8 pillars differently depending on where they are located. The second aim of this section is to refine the previous analysis by shifting from a general 8-pillar approach to an approach specific to each ecosystem.

For that purpose, entrepreneurs were asked which of the 8 pillars they viewed as most important to the growth and success of their venture. This was first done in the 12 ecosystems studied in the World Economic Forum's 2013 report. As before, I extended the report's methodology to the Colombian ecosystem by including this question in my survey of entrepreneurs in Colombia.

5.2. Relative importance of the 8 pillars

Once the responses were collected for each ecosystem, I ranked the pillars from 1 to 8 based on the frequency with which they were selected as "important". I assigned "1" to the pillar most frequently selected as "important" and "8" for the one least frequently selected. The results are summarized in the table provided below with the ranking of the pillars for each entrepreneurship ecosystem (Figure 5-1).

Pillar/Country	Data from WEF Report													Data from survey
	US - Bay Area	US - Other Cities	US	UK	Switzerland	Ireland	Spain	Singapore	Pakistan	India	Australia	Mexico	Colombia	
Accessible Markets	3	3	3	3	1	1	2	1	1	3	1	3	2	
Human Capital Workforce	2	1	1	2	2	2	1	1	2	2	3	2	6	
Funding and Finance	1	2	2	1	3	3	6	3	3	1	2	1	1	
Mentors/Advisors/Support Systems	4	4	4	5	4	4	3	5	4	6	3	5	5	
Regulatory Framework/Infrastructure	7	7	8	4	5	4	4	4	6	4	5	4	3	
Education and Training	7	6	7	6	6	8	4	8	5	4	6	7	6	
Major Universities as Catalysts	6	8	6	6	6	7	7	7	7	8	7	8	8	
Cultural Support	5	5	5	6	6	6	7	6	7	7	7	6	4	

Figure 5-1: Breakdown per country of the importance of the 8 ecosystem pillars

Source: Thesis survey and WEF (2013)

In Colombia, the “top 4” pillars are, in descending order of perceived importance by entrepreneurs: Funding and Finance, Accessible Markets, Regulatory Framework and Infrastructure, and Cultural Support. Then the “bottom 4” pillars are: Mentors/Advisors and Support Systems, Education and Training, Human Capital Workforce, and Major Universities as Catalysts.

I then cross-analyzed these results with the availability findings to understand which pillars feature the biggest opportunities for high impact actions that will support the long-term success of the Colombian entrepreneurship ecosystem. After considering these, I will examine how and why the perceived importance of entrepreneurship ecosystem pillars may differ between countries.

5.3. Importance vs. availability gaps: identifying the Colombian entrepreneurship ecosystem's most relevant factors

It appears that the four most important ecosystem pillars to entrepreneurs in Colombia are also the ones that are currently the least available.

Thus, these pillars are not only the ones with the biggest room for improvement (the main weaknesses of the ecosystem as of today), they are also the ones with the biggest potential to positively impact the performance outcomes of entrepreneurs. Combining these two dimensions yields what I refer to as *relevance*, which captures the incremental positive impact that actions targeted at strengthening a given pillar would have on the performance outcomes of entrepreneurs (or in other words, on the potential success of the ecosystem overall). For each ecosystem pillar, this incremental positive impact can be viewed as a function of both importance and availability of the pillar.

This study highlights that the most relevant factors to the long-term success of the Colombian Entrepreneurship Ecosystem are:

- Funding and Finance
- Accessible Markets
- Regulatory Framework and Infrastructure
- Cultural Support

Before considering the Colombian specificities in terms of perceived importance of ecosystem pillars, I would like to emphasize two points. First, there appears to be a negative correlation between perceived availability and perceived importance of the

ecosystem pillars. Although this does not question the relevance of the factors above, it is important to understand what this means, and I will discuss this point in section 6. Second, insights from the literature clearly indicated that all the factors identified are relevant, but their specific relevance will depend on the country studied and the development stage of the ecosystem. In this part of the thesis I highlight the factors with the biggest upside potential, but one should keep in mind that for an ecosystem to reach its full potential, all factors should be present and interacting with one another.

5.4. Specificities of the Colombian entrepreneurship ecosystem

Like almost every other country (except for Spain), Colombia places Accessible Markets and Funding & Finance amongst the “top 3” of most important pillars. However, when comparing the Colombian ecosystem to others around the globe, three significant differences stand out:

- Lower relevance of Human Capital Workforce
- Higher relevance of Regulatory Framework & Infrastructure
- Higher relevance of Cultural Support

I will now take a closer look at these 3 pillars and examine why their relevance may be so different in Colombia with respect to the rest of the world.

5.3.1. Lower relevance of Human Capital Workforce

Insights from the field corroborate the results from the quantitative analysis. From my interviews with stakeholders in the Colombian ecosystem, Human Capital/Workforce

hardly came up as a main issue that needed specific attention. The country seems to benefit from good university-industry connections for technical talent on one side and from an affordable labor market on the other side. These enable entrepreneurs to build qualified and affordable teams much more easily than in other developing or emerging countries, an ease that likely makes entrepreneurs perceive this pillar as less important. Backing up the university-industry connections, the World Economic Forum (WEF, 2014) ranks Colombia at the 49th place (out of 144) in terms of university-industry collaboration in R&D, clearly ahead of Colombia's overall competitiveness ranking (66th). Going back to the field experience, another factor that may play a role in the relatively low perceived importance of this pillar for entrepreneurs is the boom of "small entrepreneurship" in Colombia. Many new ventures flourish as small businesses, and for them this pillar is less relevant than high growth ventures with bigger needs in terms of Human Capital/Workforce.

Having said that, it is important not to misinterpret these results. This "lower relevance" is a relative lower relevance, meaning Human Capital/Workforce is perceived as less relevant compared to other pillars that are perceived as less available and more important for a venture's success. Still, in absolute terms, much more often than not, entrepreneurs selected Human Capital/Workforce as an important pillar for their venture's success.

5.3.2. Higher relevance of Regulatory Framework & Infrastructure

To understand the perceived relevance of this pillar, one needs to step into the shoes of someone willing to do business in Colombia, or more precisely, in the shoes of someone willing to start a new business in Colombia. As highlighted in 4.2.5, the

WEF (2014) found that corruption, inadequate supply of infrastructure, and inefficient government bureaucracy were the most problematic factors for doing business in Colombia. In contrast to these conditions, entrepreneurs need an environment with low bureaucracy and proper infrastructure to quickly build and scale their business. Further, entrepreneurs need a feeling of freedom and relatively few rules to innovate. Low corruption and low bureaucracy are key factors for both innovation (challenging the status quo, changing traditional markets, and shaping new ones) and execution (speed of getting from ideation to accelerated growth stage). In a world increasingly driven by new technologies, the role of infrastructure, especially access to telecommunications and broadband, also plays a key role in a successful execution.

As a result, given the mismatch between the country's current capabilities and the needs of local entrepreneurs, it makes sense that the Regulatory Framework & Infrastructure pillar is perceived as highly relevant.

5.3.3. Higher relevance of Cultural Support

The qualitative data helped me better understand the relevance of this pillar. Having interviewed a wide range of stakeholders, I noticed that a common theme emerged regardless of the stakeholder's role: in Colombia, entrepreneurs seem to be swimming against the tide insofar as they are trying to innovate in a risk-averse environment, where the culture is not supportive of failure. This currently makes their job much harder and their opportunities fewer (e.g., fewer funding opportunities, less support from the private sector). By definition, entrepreneurs take risks. This is the nature of their business and includes high odds of failure. For entrepreneurship to really take off in Colombia, tolerance towards risk and failure must change. The only way this

can happen is if all stakeholders (public, private, non-profit and universities) tackle the problem together at its root: people's beliefs, their cultural mindset. Moreover, another factor hindering cultural support seems to be the lack of well-known entrepreneurial figures, who could serve as recent role models for people to identify with.

Both of these current cultural obstacles (attitude towards risk & failure and lack of role models) are vicious circles. The less supportive the culture, the less successful the entrepreneur, and the less successful the entrepreneur, the less supportive the culture. With appropriate cultural support, this vicious circle can be turned into a virtuous circle. This is why entrepreneurs perceive this pillar as so relevant. The Colombian entrepreneurship ecosystem is at an exciting stage of its development, a stage where this change can and needs to happen. Recent initiatives have set a path towards such a cultural mindset change. It is now the responsibility of all stakeholders in the ecosystem to make it happen.

SECTION 6 DISCUSSION AND CONCLUSION

6.1. Strategic implications and recommendations

As highlighted by the literature, entrepreneurship ecosystems feature 8 key success factors (also referred to as “pillars”) and all of them play an important role in the long-term success of the ecosystem. The interactions between these 8 pillars are also a vital component of the ecosystem’s success. For the purpose of this thesis, I extended this approach to understand the specificities of the Colombian entrepreneurship ecosystem. By identifying the ecosystem’s current weaknesses and cross-analyzing that information with local entrepreneurs’ main needs to achieve sustainable success, I was able to determine the most relevant factors to the long-term success of the Colombian entrepreneurship ecosystem.

This study presents two main findings. First, four pillars stand out as most relevant to entrepreneurs in the current stage of the ecosystem: Funding & Finance, Accessible Markets, Regulatory Framework & Infrastructure and Cultural Support. These pillars show the biggest potential for high positive impact on the performance outcomes of entrepreneurs. Second, there is a “Colombian specificity”: two of these pillars, Regulatory Framework & Infrastructure and Cultural Support, show significantly higher relevance in Colombia than in the rest of the world.

These findings lead to a set of recommendations for improving the Colombian entrepreneurship ecosystem. While taking all pillars of the ecosystems into consideration and making sure they interact with one another, key players in the

ecosystem (policy-makers, private corporations, NGOs and universities) should pay special attention to the 4 pillars with biggest potential for high positive impact. Below are some recommendations to reach that kind of impact.

1. Funding & Finance: increase role of private sector in the financing of early-stage companies; continue and geographically extend public-led initiatives such as Innpulsa; increasingly shift financing through grants to equity and debt financing.
2. Accessible Markets: increase role of private and public sectors as first customers; promote partnerships in logistics between start-ups and large private companies.
3. Regulatory Framework & Infrastructure: keep reducing administrative hurdles for new businesses; develop transports and telecommunications infrastructure around the country.
4. Cultural Support: promote tolerance for risk and failure; give more visibility to potential entrepreneurial role models; develop additional entrepreneurship curriculums in universities and strengthen connections to public and private sector; increasingly celebrate innovation around the country (currently limited to a few big cities, primarily Medellin).

6.2. Possible limitations

My study has a few possible limitations. While I do not believe those seriously jeopardize the findings of this thesis, it is important for me to outline them so that readers can be aware of them.

First, there seems to be a negative correlation between the importance and the availability of the ecosystem pillars, meaning the lower the perceived availability of a given pillar, the higher its perceived importance to entrepreneurs. One could argue that people value what they lack and that they are biased after answering the first question. Although it could be tempting to think that this largely affected the results, I believe that the effect (if any) was marginal, for two reasons. The first is that the questions were asked in the opposite order (see Appendix A) and thus the aforementioned logic does not hold in that case. The second reason is that the mere fact that entrepreneurs find a pillar either hardly available or very important (one of the two) makes it of interest for the purpose of this study, and thus contributes to its relevance.

Second, there may be limitation due to language differences. As the results for different countries were obtained through different languages, I cannot exclude the possibility that translating the survey from one language to another could have triggered slight differences in phrasing, which in turn could have yielded different results. However, I believe this potential bias is not a factor when looking at the differences between pillars within a country such as Colombia.

Third, the results of the study come from local entrepreneurs' perceptions, which may vary significantly between cultures, and thus between countries. This makes it difficult to run a comparison based on quantitative numbers (could be driven up or down by cultural mindsets) and explains why I frequently used rankings and orders of magnitude to analyze the results.

On a more specific note, for one of the pillars (namely Mentors/Advisors and Support Systems), the availability score may have suffered from a selected sample bias. This is because many of the organizations that helped distribute the survey to their network of entrepreneurs do provide support entrepreneurs. This may have inflated the percentage of entrepreneurs who perceived the “Mentors/Advisors and Support Systems” pillar as available. That said, it is important to note that this bias may have affected the World Economic Forum’s results (survey distributed with the help of Endeavor) just as much as it affected mine for Colombia. Therefore, when looking at this pillar across the different ecosystems, the effect should be minimal.

Finally, the survey branding (the use of Postobón S.A.’s name and logo on the survey) might have influenced some of the respondents. While this is unlikely, I cannot exclude the possibility that, when seeing the name of one the largest companies in the country, some respondents strategically decided to select some answer choices (e.g., Funding & Finance or Accessible Markets) more often than they would have had the company’s name not been there. As mentioned in the methodology description (section 2), the added value provided by the company’s name in terms of national reach and respondents’ likelihood of answering the survey has hopefully counterbalanced that potentially detrimental effect.

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APPENDIX

Appendix A - Survey questions used for the quantitative analysis

		Original question (in Spanish)	Translation (in English)
1	Question	¿Se considera usted un emprendedor?	Do you consider yourself as an entrepreneur?
	Answers	<ul style="list-style-type: none"> • Si, soy emprendedor en serie • Si, soy emprendedor por primera vez • No 	<ul style="list-style-type: none"> • Yes, serial entrepreneur • Yes, first time entrepreneur • No
2	Question	¿Cuántos años de experiencia tiene trabajando en empresas de etapa temprana?	How many years of experience do you have in early-stage companies?
	Answers	<ul style="list-style-type: none"> • 1 año o menos • Entre 1 y 3 años • Entre 4 y 10 años • Más de 10 años 	<ul style="list-style-type: none"> • 1 year or less • Between 1-3 years • Between 4-10 years • More than 10 years
3	Question	¿Cómo considera el ecosistema actual de emprendimiento en Colombia?	How would you assess the current Colombian entrepreneurship ecosystem?
	Answers	<ul style="list-style-type: none"> • Muy limitado • Limitado • Neutral • Bueno • Muy bueno 	<ul style="list-style-type: none"> • Very limited • Limited • Neutral • Good • Very good
4	Question	¿Cuáles de los siguientes 8 pilares considera importante para el éxito y crecimiento de su emprendimiento en Colombia, y cuáles considera están presentes en Colombia?	Which of the following 8 pillars do you consider as important for the success and growth of your venture in Colombia? Which of these do you consider as readily available in Colombia?
	Answers	<ul style="list-style-type: none"> • Acceso a mercados • Capital humano y fuerza laboral • Financiamiento • Mentores y asesoramiento • Infraestructura y marco regulatorio • Educación y capacitación • Universidades • Cultura de apoyo al emprendedor en la comunidad 	<ul style="list-style-type: none"> • Accessible Markets • Human Capital/Workforce • Funding and Finance • Mentors/Advisors and Support Systems • Regulatory Framework and Infrastructure • Education and Training • Major Universities as Catalysts • Cultural Support

Appendix B – Interviewees breakdown

Type of stakeholder within the Colombian entrepreneurship ecosystem	Number of interviewees
Entrepreneur	2
Impact investing fund	1
Non-profit organization	7
Private corporation	4
Public agency	2
University	2
Total	18