



DISRUPTIVE GOVERNMENT PROGRAM FOR INNOVATION AND ENTREPRENEURSHIP HUB: STARTUP CHILE.

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Abstract

Start-Up Chile is a disruptive government program of the Chilean Government to attract world-class early stage entrepreneurs to bootstrap their startups in Chile. The selection process begins to choose 1000 startups whose entrepreneurs will receive \$40.000 in seed funding without giving up any equity stake. The only obligation is to live in Chile for at least 6 months. The aim is to replicate the similarity in terms of economics and innovation of Silicon Valley. We believe that the Chilean Start-up project can work in most developing countries. If we sustain innovation supporting projects with a similar program set-up, development economists can succeed to convert most developing regions into high-tech regions.

Key Words: funding, venture capital, trial and error, risk sharing, startup companies, marketing, Chile.

INTRODUCTION

1. Importance of trial-error in marketing and venture capitalism in investment

This paper aims to show why traditional development approach has not been working in promoting entrepreneurship and we will explore the Chilean initiative program for high-tech startups strategies for developing countries. We believe that the Chilean Start-up project can work in most developing countries. Also, if we sustain innovation supporting projects with a similar program set-up, development economists can succeed to convert most developing regions into high-tech regions including South Asia and Sub-Saharan African countries. Latin American history contains well-known politic

“They arrive. They work. They connect. They leave, and Chile stays connected.”

Start-up Chile

revolutions (i.e. Che and Fidel Castro) and people used to think that in order to change the world they have to make a revolution. However, revolutions cost much lives and tears and they are failed. So instead of changing the world through revolution, the Start-up Chile model promotes changing the world through innovation.

“Why they are rich and we are poor?” is a well-known question in development economic (Lucas, 1990). Many economists tried to answer this question with different approaches such as saving, human capital, institutionalization (i.e., lack of property rights), and externalities in knowledge economies (Lewis, 1954; 2000; Lucas, 1988; Romer, 1986; Daronoglu et al., 2001; De Soto, 1989). One of the last empirical findings is entrepreneurship since all these inputs need to be transformed into a



service/product to increase the welfare of the society (Audretsch, 2009). However, in a comparison between high-tech and low-tech entrepreneurs in West Germany, it is recognized that the knowledge spillover is much higher in high-tech growth (Audretsch and Fritsch, 2003). The essential question of the paper is how to promote high-tech entrepreneurship in developing regions?

This paper presents a theoretical aspect of comparison between old and new paradigms of entrepreneurship in development economics in section 2. The practical application of Start-up Chile is shown in section 3. The result will be analyzed in section 4 and discussion will be in section 5.

2. Theoretical Aspect

2.1. Traditional View

In the traditional view, public spend money to build human and physical capitals to support the companies getting the required factors of production (Schema 1). Additionally, government subsidizes the cost of production by tax holidays, low interest rate, and low rents of production areas. Therefore, companies are able to operate and pay back the tax to

public. Government programs are successful in human (through schooling) and physical capitals (through subsidized credit) but the consequences are varied. Traditionally, government tries to educate people and support the investments for companies. However the main question is “Where the company can find the consumer market (especially export market) for these governmental investments in human and physical capitals? **For instance, the schooling ratio in the world has grown tremendously.** School enrollments have increased nearly ten-fold, seven-fold, five-fold, and four-fold between 1965 and 1988 in Africa, Latin America, East Asia and South Asia, respectively, in secondary education (Ziderman and Albrecht, 1995). Table 1 shows the steady increase of secondary education enrollment in the world. In 1960, only 15% was registering for classes in secondary education but in 1995 more than half of the students continued with their secondary education. Even though the schooling per year increases over time but the growth rate fluctuates. For instance, the real income per capita growth in Latin America and in Africa was negative in most of the countries in 1970s even though schooling has increased (Easterly, 2002).

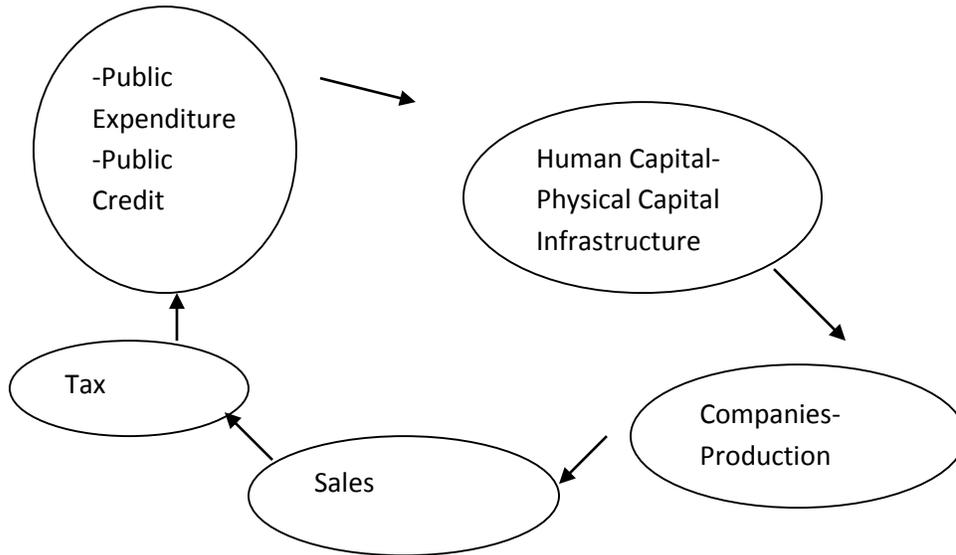
Table 1 Schooling of Secondary Education

Year	Schooling of secondary education (%)
1960	14
1965	16
1970	26
1975	29.5
1980	34.6
1985	41.6
1990	47.3
1995	57

Source: World Bank (1995)



Schema 1: Development Path in Traditional View

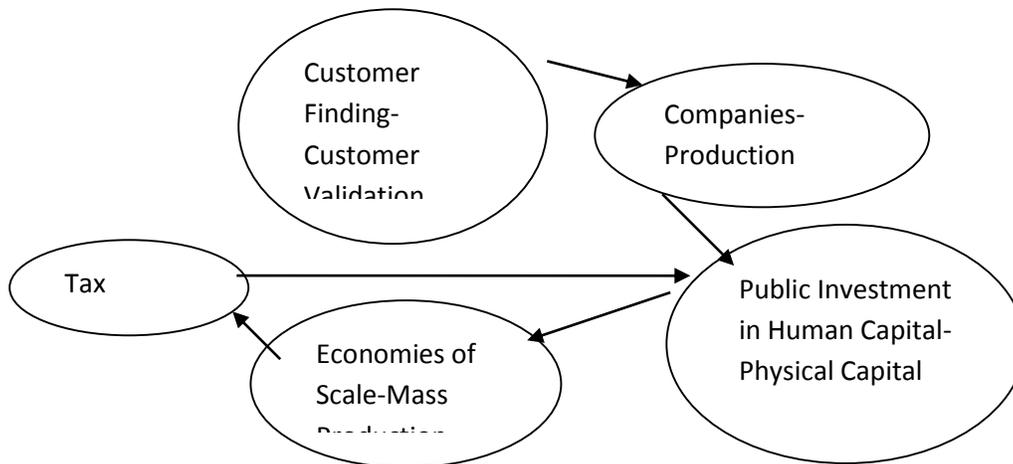


2.2.Customer Discovery

Customer discovery is to find customers who approve product/service of the company (Schema 2). Companies start to produce an existing resource are used for the initial production. After this stage, government enters the market and heavily supports

companies in terms of education, infrastructure, and credit to make them reach the economies of scale and mass production. An entrepreneur runs some experiments. He produces some prototypes. The condition of the government support depends on the discovery of (potential) customers.

Schema 2: Customer Validation Approach





Customer centricity is something that's almost become trite and it's really hard to realize. **Basically, the puzzle of development economics is the creation of customers who buys products that poor people produce.** The education system without focusing on the validation of the customer feeds developed regions. Brain drain occurs since developed regions have many different sectors that people get employed. **Are we willing to rescue the people or the region?** If the aim is to save individuals, it is a wise idea to invest in schooling but if the goal is to save regions, the focus should shift to marketing regional products.

The idea behind **the marketing in development economics is to integrate poor regions into the global market to solve the poverty in the bottom of pyramid** (Prahalad, 2009). Poor regions should produce a service/product that rich people are willing to purchase. However, what are these products/services and how will we introduce to market? It is vital question and the role of high-tech industries is crucial. This paper tries to answer this question.

The trial-error mechanism and developing new technologies are the essence of high-tech entrepreneurial capitalism. The main formula for the traditional approach in development economics is to invest in physical and human capitals (Lewis, 1954 and Lucas, 1988). However, the human and physical formations are required but not sufficient conditions (Easterly, 2002). Building capital is relatively easy, or at least it can be reachable within a plan. On the other hand, what we cannot assure is the result of our investment. What cannot be planned is the customization of products. The difficulty is to find customers for the products or services (Prahalad, 2009 and Kotler, 2001). As a result, either all the resources remain idle or migration towards developed countries or regions occurs. A mistake of our development strategies is undermining the venture capital (and angel investment) side to allow a trial-error mechanism in marketing.

In developing countries, there are some initiatives to start the venture capitalism. However, the system works just for enlargement intention of the market share of pretty well-established companies. **However, too many good ideas are faded before serving to market because there are no opportunities for trial-errors practices in**

developing countries. This is why entrepreneurial capitalism does not work in developing countries, and we end up with large income inequality gap. Poor people cannot find the opportunities to test their ideas and rich people preserve their wealth. If the failure is not tolerable, nobody will ever try anything. **The reason why U.S. based entrepreneurial activities have thrived is because one can fail and be able to get funded again. Plus, an entrepreneur can learn from that experience, and it is not viewed as personally a failure (Komisar, 2001).** Even the bankruptcy laws in the U.S. are designed to support failing and being able to start again (World Bank, 2008).

The trial-errors mechanism is blocked in developing countries; hence innovative steps are not realized. For instance, in Mexico (or even in Europe), the top rich people inherited their wealth. However, in the U.S. the top rich people change very often, and they are mostly self-made rich (Enriquez, 2005).

Venture capital and angel investment are vital of initiating new ideas. In Chile, the government grants financial capital for any entrepreneurs regardless the citizenship, for instance Start-up Chile is a program of the Chilean Government designated to attract world-class entrepreneurs in early stage to bootstrap their startups in Chile. Start-up Chile is a government sponsored program, not only function as a fund provision but also it convey the impactful message through public relation campaign for Chile's start-up community. Successful innovative firms in developing countries such as Israel, Ireland and Taiwan are supported by the state. For example, Israel initially creates ~~as~~ a government VC fund (Yozma fund) of \$100 million.

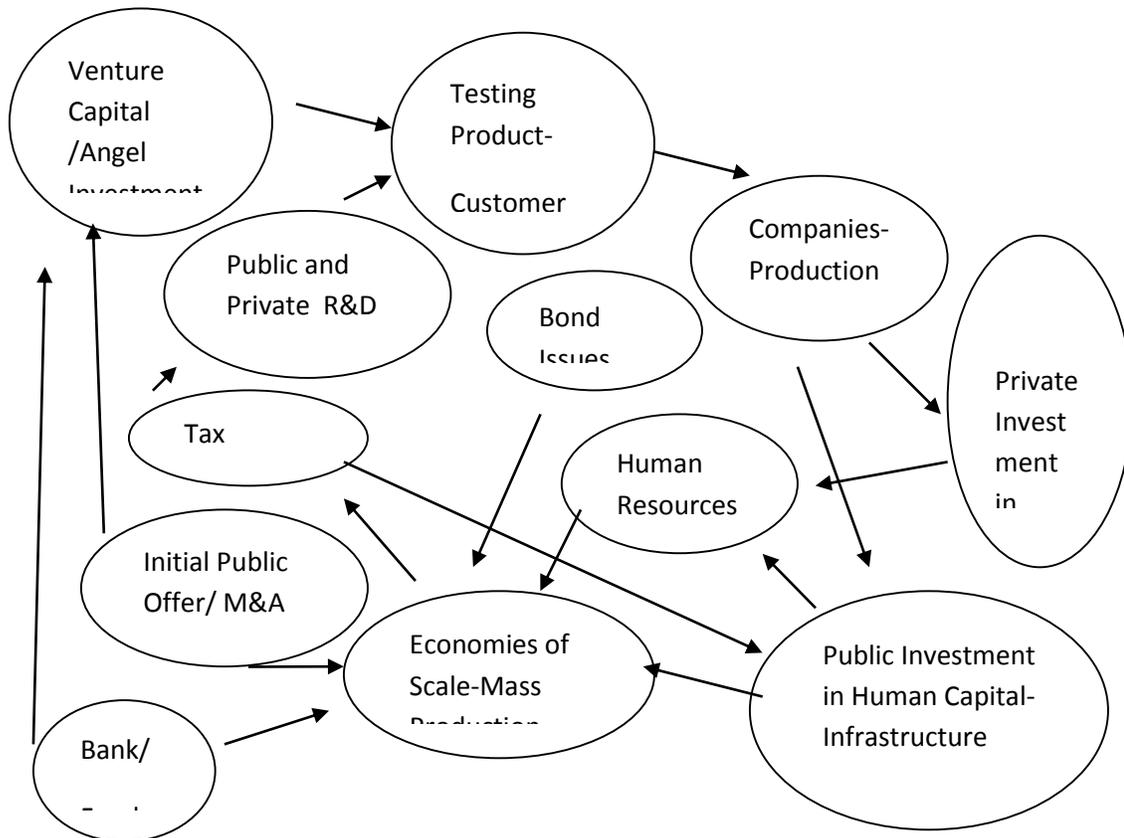
Implementing a product/service into the market requests a trial-error approach. If the risk is only on the shoulder of the entrepreneurs, they will avoid the risk. So, our view is that the main investment strategies for developed and developing countries are to create an ecosystem in which innovative start-up companies can develop and thrive. **The main success (superiority) of the U.S. is the existence of venture capital industry in its ecosystem that allows trial-errors in the market.**

In developed economies, there are several institutions to support the customer validations, initial production, and reaching economies of scale

(Sahlman and Gompers, 2002 and Sahlman et. al., 2006). With the support of the public and private R&D accompanied with venture capital (and angel

investor) funds, entrepreneurs have a product or service to test into the market (Schema 3).

Schema 3: Customer Validation in Developed Economies



After getting positive feedbacks from the market, companies start to produce its products/services, and venture capital firms follow the exit strategies through the stock market and Merger & Acquisition takes place. The revenues from the sale of companies feed the venture capital firms. Governments support new sectors through human capital and infrastructures. Due to high return on education, Parents save money to send their kids to private school. When the company starts to mature, banks and bond markets back the company for the big investment.

There are many benefits of the venture capital industry. Venture capital firms accelerate the growth of business which (might) takes generations to enlarge. **Venture capitalist and angel investors have**

a great deal of network (social capital) to support firms to reach certain people, distribution channels and financial institutions. The inexperienced young entrepreneurs need guidance, they are lacking of many domains in business: institutionalization, financial reporting, marketing and so on. Venture capitalists and angel investors can contribute to the making decisions process and formulize strategies (Komisar, 2001). They can coach the entrepreneurs. They recommend the upper level managers to be hired. (Bossidy et al., 2002).

3. What Does Chile Aim to Accomplish?

The goal of Start-Up Chile is to make Chile more innovative and to build an entrepreneurial



community. The vision is to convert Chile into the innovation and entrepreneurship hub of Latin America by attracting the world's best and brightest entrepreneurs to bootstrap their startups in Chile.

The Chilean government realizes that the risk-averse Chilean economy needs to innovate in order to reach the next stage of development. It's very clear that just a "good economic environment" and an "easy to do business" aren't enough for being developed, Chile follows "good economics practices" but more than a half of its exports is copper, salmon, wine, and wood pulp.

Global innovation hubs like Silicon Valley, Route 128, Tel Aviv or Bangalore demonstrate that attracting creative and innovative people is the key of economic success. Start-Up Chile is looking for world-class, early stage entrepreneurs who want to start their business in Chile (Keppel, 2012). Chile needs innovators who create new things, who seek to break conventional ties. The innovation is possible by having people who want to try new things and failure is acceptable. In every instance there should be space and liberty to take risks. These people will bring a huge benefit for Chile to foster an entrepreneurial mindset. The government wants to bring in foreign entrepreneurs to interact with the local business community. The engineering talent in Latin America is high but undervalued (Keppel, 2012).

Additionally, not only diversifying economy to high-tech sector but also changing the negative "drugs and corruption" image of Chile and Latin America is necessary (Manning, 2011).

3.1 Set-Up Program: Condition, Selection Criteria, Board Advisory and Team

This section is dedicated for the guidance to establish a similar program in other developing countries. There are four major components of the program: condition of application, selection criteria, board advisory and team.

In table 2, we analyze the conditions of applications. We divide two sections of the deal: what is expected from entrepreneurs? And what is offering to entrepreneurs? In the expectation part, the nature of projects, the industries, the presentation, the recommendation letter, the language requirement, the age of companies, the settle down requirement in Chile, the engagement to young entrepreneurs and the citizenship status. In return, Chilean government offers funding without equity sharing, fast working visa, access social and capital networks, office space, low skillful labor cost, flight tickets and intense entrepreneurial meetings/events/activities. Besides the 40k US\$ of investment, with no equity, an entrepreneur will be co-working with more than 100 amazing startups from all over the globe (Wadhwa, 2012)

Table 2: What is the deal?

What is expected from entrepreneur?	What is offering to entrepreneurs?
<ul style="list-style-type: none"> • Project is globally minded and easily scalable. • Video pitch to state business plan: a brief summary explaining about the project: problem, solution, and differentiated product or service in a business model. • Recommendation letters need to confirm about entrepreneurial talent, experience and technical skills. • A good command of English is necessary since the program communications is in English. • Projects either an idea or already launched but these must be under two years old. 	<ul style="list-style-type: none"> • Provided with support and the funding to test your product. • Providing \$40,000 of seed capital without taking any equity stake. • One-year working visa. • Access to the most potent social and capital networks in the country. The program will arrange for the entrepreneurs to have meetings/events/activities with Chilean business incubators, angel investors and venture capitalists. • Office space



- Founder must live in Chile during the six months the program and work only in project.
- Start-up Chile participants are required to engage with Chilean students and entrepreneurs. In many cases they end up mentoring or hiring Chileans.
- People from everywhere in the world are encouraged to apply.
- Company can be based in Chile or in any other country
- Skillful labor costs far less than developed countries (Engineering talent can cost as little as \$1,500 per month. In San Francisco, it can cost a minimum of \$6,000 per month to hire an engineer)
- Reimbursement the flight fee.

Source: (Williams, 2012; Keppel, 2012; Economist 2012; Start-Up Chile.org, 2011)

Second component of the program is the selection criteria. Teams and projects will be mainly judged on three criteria values:

1. Human Capital (weight: 33%): quality of the talent and commitment of the founding team members. Human capital aspect is very important because the execution talent is the scarcest commodity on earth. This scarcity is even more acute in developing countries (Das, 2002). Execution is more precious than money. Success and fail ultimately based on the quality of the leadership and the quality of the talent that attract to work with the entrepreneur (Welch, 2005).

2. Project (weight: 34%– composite): Product/Service (weight: 17%) and Market (weight: 17%): Differentiation, and innovation factors of the product/service are essentials. Business should have an international focus. Projects can be from any industry but preference is high-tech industries (i.e., Biotechnology, Clean

Technology, Consumer-Internet, E-Commerce, Education, Enterprise Software, Games, Location Based Services, Mobile and Social Media).

3. Environment (weight: 33%): Value of the founding team's networks for the Chilean entrepreneurship ecosystem. The main question is what an entrepreneur will do while in Chile to help improve the entrepreneurial ecosystem (the mission of the program).

The third and the fourth components of the Start-Up Chile program are Board advisory and team.

The Start-Up Chile is fully supported by the Chilean Government with special consideration of the Ministry of Economy, the Ministry of Foreign Affairs, and the Ministry of Internal Affairs. An Advisory Board comprised of some of the most patent and recognized minds in entrepreneurship and innovation.

Table 3: Background of Board Members



Board Members	Managerial Experience in Technology Firms	Managerial Experience in Start-Up	Entrepreneurial Experience	Silicon Valley Experience	Education/Teaching in Stanford University
Chuck Holloway	Yes	Yes	Yes	Yes	Yes
Kathy Eisenhardt	No	Yes	No	Yes	Yes
Teena Seelig	Yes	Yes	Yes	Yes	Yes
Marcela Perez de Alonso	Yes	No	No	No	No
Vivek Wadhwa	Yes	Yes	No	Yes	Yes
Michael Leatherbee	Yes	Yes	Yes	Yes	Yes
Nicolás Shea	Yes	Yes	Yes	Yes	Yes
Agustín Huneus	No	Yes	Yes	No	No
Amit Aharoni	Yes	Yes	Yes	Yes	Yes

Source: (Start-Up Chile.org, 2011)

The table 3 shows the background of Board members. Overwhelmingly, they have managerial experiences in technology firms, start-up firms; they also graduate or teach in Stanford University and work in Silicon Valley. Recruiting high quality Board member is crucial for the credibility of the program, prevention corruption and favoritism in developing countries.

There are 10 team members for the assistance to entrepreneurs. The team members are dynamic, talented young people who believe in goals of Start-Up Chile. The team consists of Executive Director, vice-Executive Director, Business Developer, public relation experts, Software Engineers, Global Connections and Financial Controllers.

The set-up of the program is inspired by the Silicon Valley. As it is recognized in table 3, members are selected from pool of individuals who have Silicon Valley experience. It is not meaningful to compare

Silicon Valley with Startup Chile or even with Chile as a country since Silicon Valley has long history, culture of entrepreneurship, venture capital industry and big research institutions. What is inspiring in Silicon Valley? What models can be replicated? Silicon Valley Model refers to a productive combination of high-level science and entrepreneurial spirit. In Chile, there are talented engineer but the correlation between entrepreneurship and scientific success is weak. However, over the long-run by following the model of Silicon Valley regarding the resources, networking, vision, and structure, the convergence will occur.

Start-Up Chile is built from scratch, a small scale Silicon Valley. As in Silicon Valley, the program is trying to attract to foreign talented people by offering fast business visa process, venture capital and tolerance culture for failure. In Silicon Valley, between 1995 and 2005, half of the new businesses



created by immigrant entrepreneurs. Chile is following number of policies to convert Chile to be the innovation hub of South America by

interconnecting Chile with the innovation centers of the world. (Devaney and Stein, 2011; Economist, 2012)

“The fragrance always remains on the hand that gives the rose.”

Gandhi

4. The Initial Result of Startup Chile:

The success of the program can be evaluated by three aspects; connectedness, attraction and hub. Connectedness refers to whether or not the foreign entrepreneurs stay connected in Chile? It has launched government-funded seed-capital programs to back local start-ups and made it easier to set up a new company (Wadhwa, 2012). So, does the spillover work in Chile?

Secondly, attraction refers to the interest of high qualified entrepreneur into the program. How is the competition evolving through time to get admitted into program?

The third aspect is: does Chile become the hub of entrepreneurial ecosystem of Latin America?

4.1. Connectedness

The motto of Start-Up Chile is: “Foreign entrepreneurs arrive. They work. They connect. They leave, and Chile stays connected.” Does Chile stay connected? Connectedness can be evaluated by domestic job creation, local entrepreneurship, ability to raise-up funds/deals from investors around the world from Chile.

From 2010 to 2012, the program has hosted 687 entrepreneurs from 35 countries, created 695 jobs and sparked 36 deals with Chilean investors. Around 60 percent of Start-up Chile entrepreneurs now have operations in Chile. This can be considered success for an infancy stage of the program (Keppel, 2012). Chilean startups are emerging: we will review some examples:

Quantconnect is a company seeking to democratize tools that banks and hedge funds use to develop trading algorithms. Quantconnect is incorporated in Start-Up Chile, it moves to New York but keeps the engineering team in Santiago (Williams, 2012).

Another success story of operating in Chile from Start-Up Chile is Safer Taxi. Swiss and Argentine cofounders developed an application allowing users to get a cab and pay for it with their phones, and making it safer for both passengers and cab drivers. Operating in 3 countries including Chile, Safer Taxi has 80 thousand people and more than 2000 taxis using the application (Geromel, 2012)

Gustavo Bessone, from Argentina, is helping users to monetize their websites using pictures. The first generation Start-Up Chile (November 2011) has raised a million dollars from Chilean investors: Aurus Capital and Copesa. They are relocating to NY now and are about to close a few partnerships with major US media outlets (Geromel, 2012).

Carlos Solorio who runs Arden Reed, an online menswear retailer and has already decided to develop his company's tech base in Latin America. Start-up Chile has helped him connect with the designer community in Argentina.

Jeff Thelen, an American entrepreneur based in Bogotá, is using Start-up Chile to connect with other entrepreneurs and build his contact network in Latin America. Thelen starts the website Edmond.com.co with his brother to provide personal finance information and eventually financial products to Colombian and Chilean consumers (Keppel, 2012).

Regarding raising fund, Start-Up Chile already shows some successes such as CruiseWise, an online cruise-booking service, that go on to raise capital from other sources (Economist, 2012). Davis and his partners, Amit Aharoni and Nicolas Meunier, are members of Start-Up Chile's freshman class, arriving in 2010. When the six-month program ends, they return to San Francisco. They raise \$1.6 million in funding and launch CruiseWise.com (Devaney and Stein, 2012). Now, Amit Aharoni, ex-software specialist for Israeli army, graduate from Bar-Ilan University and Stanford University, now becomes a member of the Board.



Successful companies continue to raise fund from angel investors and venture capitalists. Pick1-a San Francisco company, puts \$1 million in funding for Chilean startups.

TechCrunch Disrupt week is a distinguished meeting for the world entrepreneurs and investors. In 2011-TechCrunch Disrupt week in San Francisco, the Start-Up Chile, just one year after the program becomes eligible to present its startups (Lardinois, 2012b)

The program has spillover effect. Foreigner entrepreneurs are coaching local entrepreneurs and are speaking at events. Between 2010 and 2012, Start-Up Chile participants hold 400 meetings and organize 1,000 workshops and conferences (Williams, 2012).

4.2. Attraction

There are three main trends in the program: more diverse, more projects and increasing quality from 2010 to 2012.

Number projects are increased drastically. Every year there are three periods of application terms and it carries the goal of bringing 300 startups. The first term of 2011 brought 87 startups to Chile from over 30 countries, after having received 330 applications– and, during the second term of 2011, 650 project submitted (double increase) and in the first term of 2012 the committee received 1421 applications (one more double) from 60 countries. ([Geromel](#), 2012)

The quality of the projects and teams has improved: for instance, BiometryCloud is a solution provider for companies who need to match, verify or validate data (picture, audio, video, vectors, etc.). One of the key features is the instantaneous face recognition and identity verification services for smart phones. Within 2 years, the technology will be able to recognize a person in a database with 10.000.000

enrolled faces in less than 2 seconds with 99% confidence. In 3 years, the biometry will be able to recognize a person in an unlimited database keeping the confidence and speed.

Many applicants were graduates of the world's most prestigious educational institutions including Harvard, MIT, Columbia University, and Oxford University (Geromel, 2012).

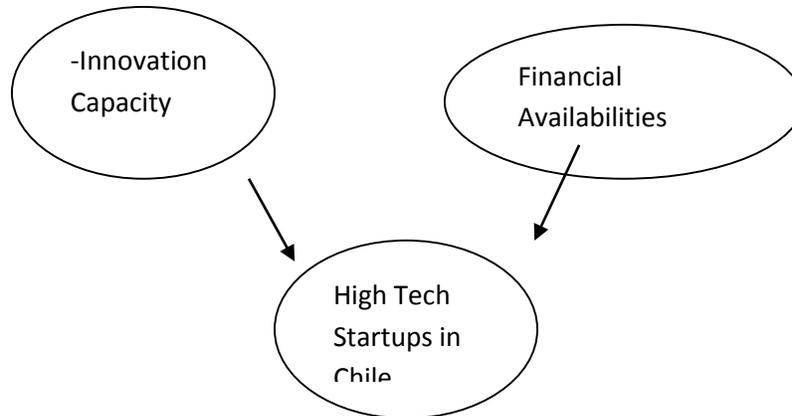
Diversity of applicant has increased. In 2011, the most represented countries among applying founders are Chile (38%), United States (14%), Argentina (8%), India (4%), Spain (4%), and Brazil (4%). In 2012 most of the entrepreneurs come from the U.S. (24 percent), followed by host country Chile (19 percent) Argentina (9 percent) and India (7 percent). The program also begins hosting startups from countries like Morocco, Ukraine, Pakistan, the Netherlands, Trinidad & Tobago, Latvia and Uganda (Economist, 2012). Funding without equity allows chance to draw higher qualified projects and teams.

4.3. The Macro Level Change in the Chilean Ecosystem from 2009 to 2012

Does Chile become the entrepreneurial hub of Latin America? Other major Latin American countries, Brazil, Mexico and Argentina compete for the same goal (Manning, 2011).

We have to consider how the ecosystem in Chile is able to promote investments in technology? Chile is a small, developing country, and the success of its firms depends on ecosystem which should be supportive of the creation of high-tech start-up companies. The numbers of Chilean Startups depend on two main resources: innovation (especially strong research institutions) and finance (especially the availability of venture capital) (Graph 4 and Table 5 and 6).

Graph 4: The Ecosystem



In terms of availability of venture capital, Chile was ranked 37th in the world in 2009 and in 2013, after its launch of seed fund programs, it is ranked 31st among 133 countries (World Economic Forum, 2013). Overall financial ranking maintains its leadership (in table 5).

In terms of the quality of scientific research institutions, Chile was 62th in 2009 and is following Brazil. However, in 2013, it becomes the leader innovative country in the region by being ranked 42nd country in the world (in table 6). One of the targets of Chilean government is to convey the research effort into innovation. When we check the University-

industry collaboration, there is a big improvement from 2009 (ranked 51st) to 2013 (ranked 39th).

However, company spending for R&D and capacity to innovation remain stagnant overall in the region. The government procurement of advanced technology plays an essential role in the leadership of Chile. Despite the advertisement of Startup Chile, Chile is not an easy place to do business in all aspects. Regarding doing-business index of World Bank, the bankruptcy rule is very strict. Its ranking improves in the beginning of 2000s but deteriorates year by year (World Bank, 2013). Moreover, all the competitors have much larger domestic markets than Chile has.

Table 5: Financial Ranking of Major Latin American Countries (133 countries) from 2009 to 2013

Financial Series 2013-2009	Chile 13	Chile 09	Brazil 13	Brazil 09	Mexico 13	Mexico 09	Argentina 13	Argentina 09
Soundness of banks	11	18	8	24	33	55	107	129
Financing through local equity	16	10	14	56	60	77	123	103
Availability of financial services	17		26		60		129	
Affordability of financial services	21		38		61		136	
Ease of access to loans	21	28	40	77	62	95	139	119
Efficiency	21	23	46	61	65	63	133	111
Venture capital availability	31	37	51	79	66	99	135	108



Trustworthiness and confidence	50	38	51	64	67	71	121	115
Legal rights index	65	72	62	119	82	93	99	93
Regulation of securities exchanges	89	14	118	28	84	43	104	74
Financial market development overall	28	29	51	64	65	66	131	117

(Source: World Economic Forum, 2013)

Table 6: Innovation Ranking of Major Latin American Countries from 2009 to 2013

Innovation Series	Chile 13	Chile 09	Brazil 13	Brazil 09	Mexico 13	Mexico 09	Argentina 13	Argentina 09
Availability of sci and eng	29	35	113	57	71	105	80	81
Gov't procurement of adv. tech	37	53	53	84	67	104	131	123
University-industry in R&D	39	51	44	50	42	84	57	75
Quality research institutions	42	62	46	43	49	79	47	90
Patents, applications/million	46		48					
Company spending on R&D	61	64	33	31	59	71	91	81
Capacity for innovation	83	57	34	27	75	67	95	79
Innovation in general	44	56	49	43	56	90	91	98

(Source: World Economic Forum 2013)

5. Conclusion and Policy Suggestions

The trial-error mechanism is the essence of entrepreneurial capitalism. A mistake of our development strategies is neglecting the venture capital side to allow a trial-error mechanism.

Start-Up Chile is a disruptive government program of the Chilean Government to attract world-class early stage entrepreneurs to bootstrap their startups in Chile. The selection process begins to choose 1000 startups whose entrepreneurs will receive \$40,000 in seed funding without giving up any equity stake. The only obligation is to live in Chile for at least 6 months. The aim is to replicate the similarity in terms of economics and innovation of Silicon Valley.

We consider Start-Up Chile as a startup. US\$40 million (1000 projects with 40K grants for each) is a drop in the ocean. The goal is fostering entrepreneurs to think big. The major impact has been to help young Chilean imagine themselves in new roles as value creators and societal influencers. Adaptation, taking smart risks and learning by experience are the essential abilities of the new economy. The ultimate goal of the accelerator program is to convert Chile into the definitive innovation and entrepreneurial hub of Latin America. Start-Up Chile is rapidly gaining momentum as the leading incubator in Latin America, encouraging foreign investors to head Chile and proving to Latin American countries the importance of investing in human entrepreneurial capital.

Steps should be followed to do a similar program are:



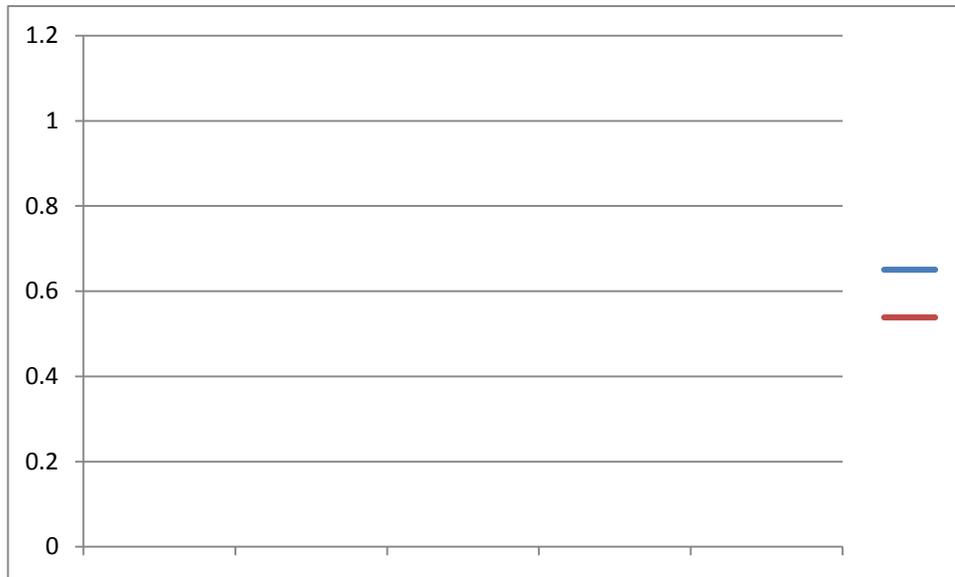
1. Specify the goal: Establishing innovative culture in country.
2. Organize the Board and Team: Board of program should be internationally recognized people and Funds should be under their control. This prevents many doubts about the selection process. Team should be open -minded and engaged the values of the program.
3. Choose the target group: In the stage of factor driven or transition from factor driven to innovative stage in a country, program may invite entrepreneur worldwide, if it is still endowment driven country, program may gather local or neighborhood countries (Porter, 1998).
4. Choose the location: should near to Tech-industry, Universities, Air transportation.
5. Determine the funding conditions: Funding amount should be enough to attract entrepreneurs. Founders must stay during the period of funding. Create an environment for tolerance failure. Make very clean about the terms and application process.
6. Spillover: organize the conference, lectures and meetings by inviting university students, local entrepreneurs, and invited guest from top-notch guests.

We claim that this program works most of developing countries. However there will be some obstacles. First argument can be that American entrepreneurs are willing to spend for a while in Chile

but they do not prefer staying in Sub-Saharan Africa. This is certainly true but the main reason is that sub-Saharan Africa is still in endowment driven or transition stage from endowment driven to factor driven (World Economic Forum, 2013). Ecosystem is weak and additionally there are bad images about the African countries (Asiedu, 2002). Therefore these countries initially should keep the program locally. Second argument will be how these underdeveloped countries promote high-tech industries. The high-tech industries are scattered in certain areas. They spread from these distinctive areas. In these underdeveloped countries, there are some regions where some high-tech industries locate such as mobile phone enterprises and headquarter of banks. Therefore, these are the source of qualified high-tech people. Overtime, the program will spread out throughout the countries.

In 1959, regarding per capita income, Virginia is the 20th poorest state in the U.S. (graph 5). However, in 1999 it is the 13th richest state and in 2011 it is 7th richest state. Virginia has one of the most prominent high-tech research and development centers in the United States. It was created in 1959 by state and local governments, nearby universities, and local business interests (Link, 1995). Also, Virginia has the highest concentration of technology workers and the fourth-highest number of technology workers in the U.S.A. (Poersch, 2008; Censer, 2011; Garber, 2009). The case of Virginia proves that the great success story occurs in 50 years but it started with one initiation and it continues over time. In 1979, Virginia's average income per capita, after 20 years of establishing the Research Triangle, catches the U.S. average income. Again, it takes 20 years to be in top tiers of the list of income per capita among 50 states.

Graph 5: Income per Capita U.S. versus Virginia with 1999 US\$



(Source: U.S. Census Bureau)

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