

Early-Stage Technology Ventures in India: Opportunities and Issues

by

Aparna Chennapragada

Bachelor of Technology in Computer Science, Indian Institute of Technology, Madras (1997)
Master of Science in Computer Science, University of Texas, Austin, USA (1999)

Submitted to the System Design and Management Program
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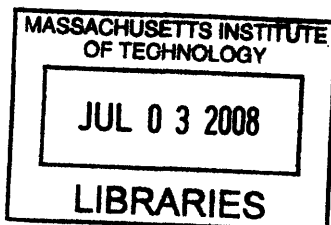
[Signature]
Aparna Chennapragada
System Design and Management Program
May 2008

Certified by _____

[Signature]
Michael Cusumano
Thesis Supervisor
Sloan School of Management

Accepted by _____

[Signature]
Patrick Hale
Director
System Design and Management Program



ARCHIVES

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ABSTRACT

High-technology Entrepreneurship has been a key driver of innovation and economic growth in the US. Aided by factors such as the success in IT and IT-enabled services industries and a booming economy, India has seen a sharp increase in activity in technology entrepreneurship. This thesis explored the opportunities and issues in building and growing technology startups in India. *Money, market, manpower, and mentors* were identified as the broad areas in which startups face challenges. The specific issues within these areas were analyzed from entrepreneurs' and investors' perspectives and potential solutions were recommended. While many of the issues faced by startups in India turned out to be similar to those faced by startups in the US, a few issues were found to be unique to India. The sources for data included in-depth interviews with participants in the Indian entrepreneurial ecosystem as well as existing research on entrepreneurship in US and India.

Thesis Advisor: Michael Cusumano

Title: Sloan Management Review Distinguished Professor of Management

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Table of Contents

ABSTRACT	2
ACKNOWLEDGEMENTS	3
1. INTRODUCTION	6
2. APPROACH	8
Motivation.....	8
Methodology.....	9
Limitations	13
3. ANALYSIS	14
Framework for Analysis	14
Explanation of Terms.....	16
Application of Framework.....	17
4. ENTREPRENEURIAL LENS	18
5. INVESTOR LENS	34
6. CONCLUSION AND FUTURE WORK	55
APPENDIX A: INTERVIEW GUIDES	62
Introduction Provided To Interviewees	62
Interview Guide For Entrepreneurs	64
Interview Guide For Investors	68
APPENDIX B: INTERVIEW EXCERPTS	73
APPENDIX C: RESOURCES FOR RESEARCH	118
APPENDIX D: REFERENCES	119

List of Figures

Figure 1: 4M Framework	15
Figure 2: 4M Framework: Key Issues Through Entrepreneurial Lens	19
Figure 3: 4M Framework: Key Issues Through Investors Lens	35
Figure 4: Relative Returns from Export versus Domestic Markets	47
Figure 5: 4M Framework: Potential Resources	58

List of Tables

Table 1: Entrepreneurs/Startup Representation	12
Table 2: Investor/Expert Representation	12
Table 3: US Venture Deals by Stage of Investment (2007).....	39
Table 4: Value of Indian Deals (\$M) by Stage of Investment.....	39
Table 5: Number of Early-stage Indian VC Deals by Stage of Investment.....	40
Table 6: Challenges Unique to Indian Startups	57

1. INTRODUCTION

Entrepreneurship has been a key driver of innovation and economic prosperity in the United States. Countries across the world have begun to adopt this approach toward economic growth. Over the last several years, India has taken active measures to liberalize its economy, invigorating its private sector. In the last decade, India has achieved tremendous success in IT and IT enabled services industries¹. For this growth to be sustainable, Indian firms need to expand beyond cost arbitrage and service delivery into innovation and value creation. While innovation can and does occur within large corporations, the biggest contributor to innovation-driven growth is a thriving entrepreneurial environment.

The success of high-technology entrepreneurship in the US, particularly Silicon Valley and the Route-128 area in Boston has been studied to understand the ingredients of such an ecosystem and to identify recipes to replicate this success elsewhere in the country. The key elements of an entrepreneurial system are entrepreneurs, venture capital firms, corporate and academic research institutions, professional service firms such as legal and accounting firms.

When examining the potential for high-technology entrepreneurship in India, it can be seen that many elements are in place – large technology talent pool, relatively stable political, legal, and financial infrastructure, and an increasing influx of private equity

capital. Other elements have more room for improvement – university-based innovation, intellectual property development etc.

This thesis is a step toward assessing the environment for high-technology entrepreneurship in India. Questions such as -- How well do cross-border startups work? What role do seed-stage investors, angels, and incubators play? What is the impact of diaspora entrepreneurs and serial entrepreneurs? What business models have worked and what have not? – can be better answered by examining the interaction between an individual startup and the external environment, which is the focus of this thesis.

The rest of the document is organized as follows. Chapter 2 describes the motivation and scope of the thesis and describes the research methodology and its limitations. Chapter 3 presents the framework used for analyzing the data. Chapter 4 and 5 examine the framework from the perspective of the entrepreneur and the investor respectively, and identify the key issues. Chapter 6 presents the conclusion and provides recommendations for entrepreneurs and investors. The appendix contains the interview guide used for data collection and includes excerpts from a representative set of the interviews conducted.

2. APPROACH

“Where most entrepreneurs fail is on the things they don’t know they don’t know”

■ *Vinod Khosla*

Motivation

The goal of the thesis is to understand the challenges and opportunities for an early-stage technology venture based in India. While there is existing research on topics such as environment for risk capital in India, policies to promote innovation, and studies of entrepreneurs and small business owners across industries, this thesis is intended to build on this broad understanding of Indian entrepreneurship by presenting the views of the participants in that ecosystem such as entrepreneurs, investors, experts, academia and professionals in the industry, using in-depth interviews.

The scope of the thesis is limited to observing an individual startup and its interaction with the external environment and analyzing its implications for private sector players such as an entrepreneur, investor, or a professional in the industry. In analyzing the challenges faced by a startup, the thesis focuses on the *external* issues – i.e. the interaction between entrepreneurs and the external environment, specifically around the activities of selling, hiring, seeking advice, and raising capital. Internal issues such as product development processes and organizational challenges were not the focus of this study, for two reasons: 1) the internal issues have been observed to be similar to the

issues faced by startups in the US or other environments. 2) While internal issues can largely be examined and worked out by an individual player in the system, addressing the external issues requires understanding the perspectives of different players in the environment, which this thesis can help identify and present.

The thesis does not cover peripheral issues such as the role of a strong university research system or the role of public capital markets and the legal infrastructure -- issues that involve concerted government action over a long horizon to bring about real change. These are key factors in supporting or dissuading entrepreneurship in any country. However, defining the scope to private sector challenges and specifically, interaction between entrepreneurs and the other players such as investors and academia helped me delve into insights and actionable recommendations for *individual* entrepreneurs, investors, professionals, and startups.

Methodology

The approach consisted of two phases.

- **Phase I (Review of Research)**

This phase consisted of surveying existing literature on high-technology entrepreneurship in the US and in India, particularly the trends in venture capital, and the activity around innovation.

The primary resources used during this phase were academic reports and books on the topics. Other resources for this phase include articles and blogs on innovation and Indian entrepreneurship and venture capital activity, relevant academic courses, conferences and informal discussions with faculty. (Details can be found in Appendix C).

The work during the first phase helped the author develop a broad understanding of the ingredients of an entrepreneurial ecosystem and explore trends in entrepreneurship and venture capital in India.

- **Phase II – Interviews**

During this phase, the author examined the key issues for an individual startup interacting with the external environment. Building on the knowledge from the first phase, the author conducted in-depth interviews with individuals in the Indian entrepreneurial system.

- *Interview Guide Design*

Based on the first phase, the author identified the key areas to explore and prepared a detailed interview guide for each of entrepreneurs, investors, and experts.

For an entrepreneur, the topics identified were related to the entrepreneur's and company's background, the central issues faced by the startup when interacting with the external environment (raising capital, selling, hiring talent, seeking advice).

For an investor, the topics identified were related to the investor's and firm's background, investment focus, the central issues faced by the investing firm when assisting the startups (through deal sourcing, due diligence, deal structuring, and portfolio-support and exit phases). (*Complete interview guides are included in Appendix A*)

After updating the guide based on feedback from the advisor, the author conducted a pilot of the interview guide with a couple of interviewees. Based on the results, the guide was refined and the key questions were finalized with some flexibility to dig deeper into specific areas where the interviewee could contribute his/her experiences most.

○ ***Interviewee Selection***

Request for interviews were sent out via popular India and entrepreneurship focused blog (www.sramanamitra.com) as well as offline channels and professional networks. The selection of the interviewees was such that there was representation from entrepreneurs (experienced and first-time, consumer and enterprise, domestic market and global market), investors (seed funds, traditional venture capital firm, corporate venture firm) and local experts (university faculty, incubators, leaders of entrepreneurial networking organizations) etc.

Over a period of three months, the author conducted one-on-one interviews with over twenty individuals -- entrepreneurs, investors, experts from academia and other relevant organizations. Most of the interviews were conducted via phone

and typically lasted one-to-two hours. A few of them were conducted via detailed email responses to the questionnaire and phone follow-ups on specific questions. After around twenty interviews, the author felt that there was convergence in the themes and only marginal gains were seen from conducting more interviews.

Table 1: Entrepreneurs/Startup Representation

Industry	High-Technology Including Mobile, Consumer IT, Enterprise IT, Semiconductor, Networking)
Geography	Substantial Base in India
Age	Atleast 1 year old
Status	Private
Founder	First time vs. Experienced
Company Characteristics	Includes representation from: <ul style="list-style-type: none"> • Consumer and Enterprise • Domestic and Global market • VC-Funded and Bootstrapped • Product and Services

Table 2: Investor/Expert Representation

Investors	Includes representation from: <ul style="list-style-type: none"> • Domestic Indian Venture Capital Firm (i.e. India-focused fund) • Global Venture Capital Firm • Corporate Venture Capital Firm • Seed Funds • Angel Network • Incubator programs
Experts	<ul style="list-style-type: none"> • Academic Faculty in India and US • Incubator Program • Networking organization leaders

Limitations

The decision to use in-depth interviews for data collection is appropriate for the goal of gathering multiple and rich perspectives on a complex subject. However, the data does not yield any statistically significant results that other data collection methods, e.g. large sample of short quantitative surveys, could. Since the goal of this phase of the thesis was to draw out the key trends, examine core issues, and identify potential recommendations, the interview method was conducive to collecting opinions and experiences of the interviewees.

The interviewee selection is also influenced by the channels to which the author had access to request for participation. There is also an unavoidable self-selection bias since most of the respondents were already plugged into online resources for entrepreneurship and were accessible via those channels. A more comprehensive effort involving multiple organizations and channels may have yielded a larger and hence more balanced representation of entrepreneurs and investors.

3. ANALYSIS

Framework for Analysis

The thesis examined the challenges faced by a nascent startup in the Indian context, with a specific focus on the interaction between a nascent startup and the external environment. The core activities through which an individual startup interacts with the external entities are –

- *Selling* (to customers)
- *Fund-raising* (from investors)
- *Hiring* (employees)
- *Seeking advice* (from mentors and peers)

Accordingly, the findings from the interviews with entrepreneurs, investors, and experts were categorized into four major dimensions along which startups face challenges – **Money, Market, Manpower, and Mentors. (Four Ms)**

The challenges and issues along these four dimensions were then examined from **two lenses** -- that of an **entrepreneur** and an **investor**, since they are the two primary agents that can control the direction of the startup, benefit from its success and hence have a significant stake in removing these bottlenecks.

This chapter introduces the **4M framework** used to present the key issues and the subsequent chapters further examine the implications and potential solutions, from the perspective of an **entrepreneur** and that of an **investor**.

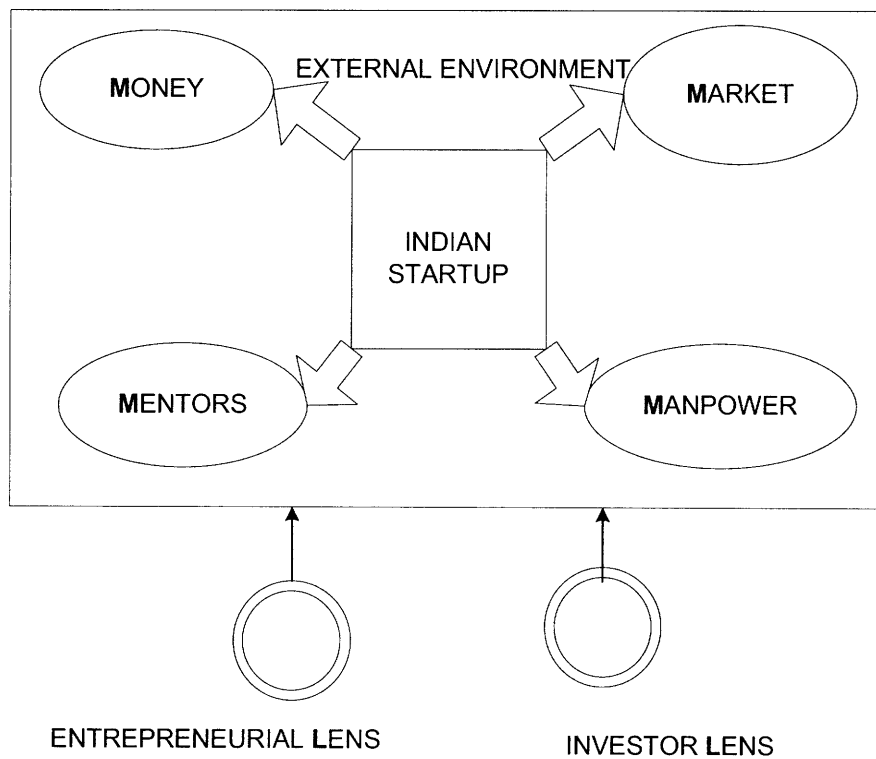


Figure 1: 4M Framework

Explanation of Terms

As mentioned, the thesis focused on analyzing the key forces at play when forming and growing a startup.

MONEY: This dimension encompasses all the issues and challenges related to financing the formation and growth of a startup. It does not include other peripheral financial aspects such as the state and health of public capital markets or the financial services industry as customers etc.

MARKET: This dimension captures a collection of issues related to addressing and capturing the market i.e. understanding customer needs, marketing products, selecting and adapting to the right business models etc. Note that the term 'market' refers to the product-market and not the financial market i.e., the term is used in the management/business sense and not in the finance/economics sense.

MANPOWER: This dimension represents the challenges related to human capital. The issues range from difficulties in finding the founding team, to retaining talent in a competitive labor market, to the transferability of employee skills from successful large companies to future startups.

MENTORS: This dimension represents challenges related to accessing professional connections, guidance, and advice from experienced mentors and peers in the environment. The importance of mentorship and role models has been studied in the

case of other entrepreneurial hotbeds such as Silicon Valley and the Route 128 area in Boston and is acknowledged to be an integral part of nurturing a startup ecosystem.

Application of Framework

When attempting to understand a broad area such as the Indian entrepreneurial ecosystem, several complex issues interact to produce the challenges observed. Hence, this framework offers an abstraction of the broad themes around which the issues seem to coalesce. As such, the framework is not meant to be comprehensive but a useful tool to understand the *major* difficulties faced by the startup and identify potential solutions and strategies that can correspondingly make a significant impact.

The next two chapters will use the framework to present detailed findings and implications for the entrepreneur and the investor.

4. ENTREPRENEURIAL LENS

“Entrepreneurs do more than anyone thinks possible, with less than anyone thinks possible.” – John Doerr, Venture Capitalist

The previous chapter introduced the 4M framework that categorizes the key challenges in building and growing an Indian startup. This chapter examines the framework through the **Entrepreneurial Lens** – identifying the key bottlenecks, their implications and possible solutions, from the perspective of an entrepreneur

Recall that the framework identifies four key factors at play for a startup interacting with the external environment – **Money, Market, Manpower and Mentors**.

The rest of the chapter elaborates on the issues along these dimensions. The findings were synthesized from interviews with entrepreneurs and early employees in Indian startups and from surveying existing resources on Indian entrepreneurs.

The following figure highlights the key issues along the four forces, as viewed through the entrepreneurs' lens.

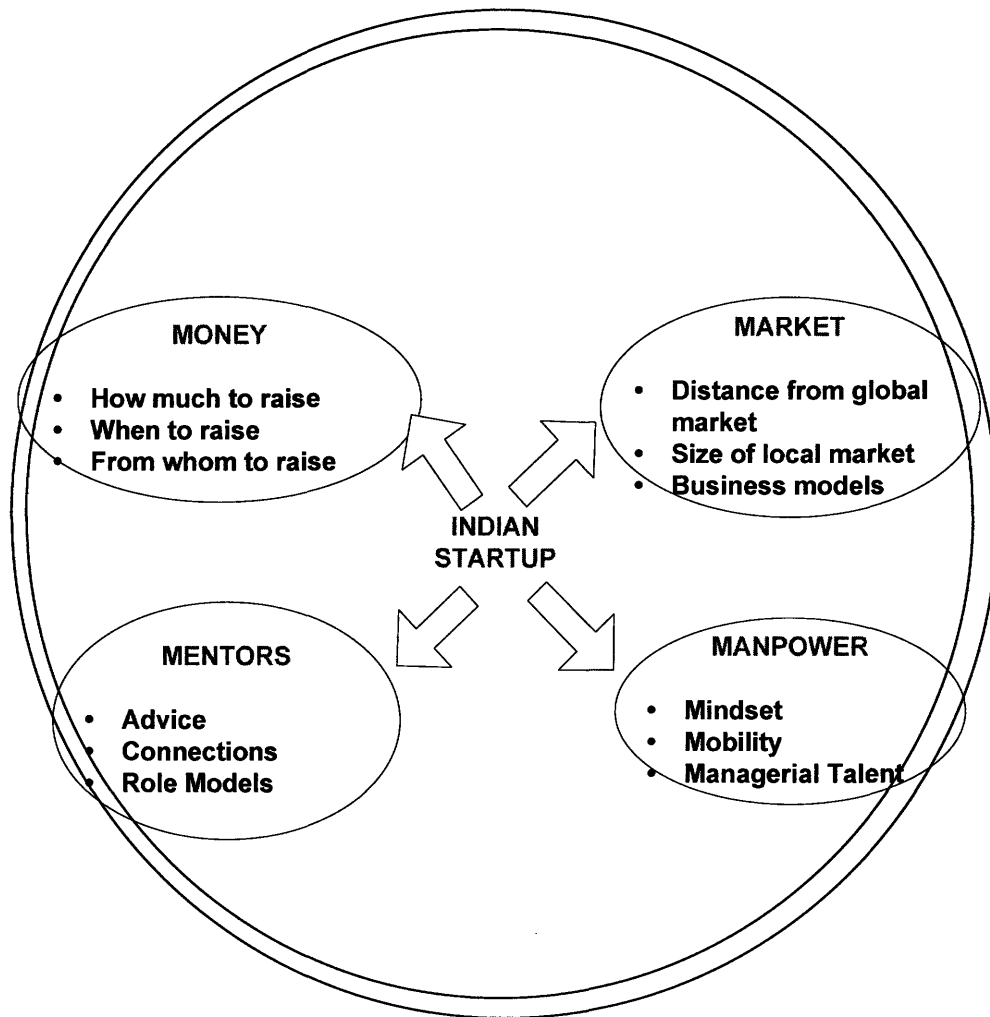


Figure 2: 4M Framework: Key Issues Through Entrepreneurial Lens

Money

For an entrepreneur, especially a first-time founder, raising capital from investors is complex and time-consuming with many uncertainties. Several of the entrepreneurs

interviewed felt that fund-raising posed many questions around – how much, when and from whom to raise money.

- ***How much money to raise?***

As interviewees pointed out, venture money is a crucial step for an entrepreneur and should not be done lightly. Raising too much capital at a very early stage often masks the underlying issues (wrong market, poor or indefensible product ideas, or an ineffective management team). In addition, raising a large amount of capital at an early stage (and hence at a low valuation), forces the entrepreneur to significantly dilute his or her ownership in the company. It is ideal to tie the amount of capital to that required to reach a specific product and customer milestone in the startups' roadmap.

- ***When to raise money?***

As Sushanto Mitra, the Chief Executive Officer of Society for Innovation and Entrepreneurship (SINE) an incubator program, observed, even though there is an abundance of private equity available in the market over all, there is a dearth of capital at a specific stage of a startup.

At the earliest stage, startup founders have resources such as personal loans and savings, friends and family or bank loans for the small amount of capital required to kick off the venture. A relatively later stage startup looking to expand the operations and invest further in product development can approach the large pool of venture

capital firms in the market. However, startups in between these two stages have few venues to raise money today.

Capital needs in this range have traditionally been served by angel groups and seed and early-stage funds in a mature venture capital market such as the US but have yet to thrive in number and accessibility in the Indian environment. The recent past has however seen the growth of organizations such as the Indian Angel Network, Mumbai Angels, and seed-stage venture funds such as Erasmic fund, Venture East and Seed Fund.

Padmaja Ruparel, the executive director of Indian Angel Network (IAN) explained that startups at the seed stage require a combination of capital as well as mentorship. While professional organizations such as The Indus Entrepreneurs (TiE) or the National Entrepreneurs Network (NEN) offer platforms for networking and mentorship, they are not involved in providing capital. On the other hand, a majority of the Indian VC firms can provide ample capital but tend toward later-stage deals and relatively lesser mentorship across their portfolio.

- ***From whom to raise money?***

While interviewees were divided (and presumably biased by their personal fund-raising experience) about the specific investors to approach, there were a few common themes that emerged during the discussions. A key suggestion echoed by several entrepreneurs was to choose an investing source that offers “more than just money”.

As Kumar from Vignani, a high-end engineering services startup, noted, this is particularly important for Indian startups attempting to target a global market and thus benefiting from connections to key customers and vendors. A well-connected investor (such as a corporate venture capital firm or a global VC firm with a strong track record and connections via operating partners or previous portfolio companies)

Entrepreneurs also emphasized that a fund-raising event is as much strategic as it is financial. Investment from a reputed source can be used as a signal of the credibility of the firm with its customers, vendors, partners, and even potential employees.

Market

Another key force the entrepreneur has to reckon with is the nature and attractiveness of the market his or her startup addresses. When discussing the role of the market in the success of a startup, interviewees pointed to several challenges (and a few opportunities) encompassing activities such as accessing and acquiring customers, finding the right business models and avoiding the wrong ones, relative strengths and weaknesses of market segments within the technology industry.

The key issues that emerged through the conversations were – distance from the global market, the small size of the domestic market, and the importance of adapting business models to the Indian context (e.g. infusing online business models with offline components)

- ***Distance from Global Market***

Successful startups need to 1) target large and growing markets and 2) listen carefully to the customers. Indian technology startups targeting the global or the US market have a large and attractive market to target but are too far away from the customer. This is observed to be a worse problem for consumer-facing technology startups than for business-to-business technology startups since the latter often deal with relatively more standard requirements and practices.

As Anand Deshpande, founder of an outsourced product development firm observed –

Especially for companies targeting the global market, it is vital for the team to understand the nuances of product marketing – pricing, promotion, channel strategy, product line extensions etc. Many rookie entrepreneurs make the mistake of starting with cool technology and failing to evolve to the essential question of what the market for the product is and how it can be sold. This is a problem even for US startups with ample access to the market but it gets much worse when the product team is in India and attempting to target a remote market.

Indian startups have attempted to work around this “Distance from Market” issue using a few different approaches.

- *Kitchen – Restaurant*

As Professor Sadagopan (Faculty, IIT, Bangalore) terms this approach, the ‘kitchen-restaurant’ model is one that has the product development carried out in India while the core business operations of the startup are close to the market (e.g. in the US). While this model can result in better access to customers through the business development outfit and cost savings through the outsourced product development operations, it creates two problems –

i) In the early stage of a startup, this model may impose very high coordination costs and affect the products’ time-to-market ii) Even if this model allows an Indian startup to successfully access the target market, much of the learning may remain in the remote location and not transferred to the Indian context.

- *Start Local, Expand Global*

Some other startups (Tejas networks, an Indian telecommunication equipment startup, for example) have adopted an approach of starting out addressing the local market and building on that success to expand to other emerging markets and eventually the global market. This approach has the advantage of using the access to the local market to improve the product and achieve scale. Building on the success in the domestic market, the startup can expand the product line and set up operations closer to the global market.

This advantage is however restricted to those startups that can tap into markets with relevant local customers whose product requirements are compatible with the

global market. This can also lead to an unexpected benefit of optimizing product development for a more-constrained, more-demanding, and cost-conscious local market and leveraging that as an advantage when competing with global players in the overseas market.

- *Stay Local, Target Global*

Other startups have chosen to remain local but address the global market from within the Indian operations. While this approach runs the risk of running blind without the ability to access the market and understand customer needs in context, it can work effectively in a couple of scenarios -- i) the startup targets a well-understood and well-established (and hence possibly low-margin) market ii) the startup is a whitespace opportunity and is focused on building specific product/features. The company could then be a target for acquisition by a large global firm that has the ability to market and distribute the product. (An approach that has worked very well in commercializing Israeli R&D)

- *Size of the Domestic Market*

While startups targeting the domestic Indian market have the advantage of being close to the customer, the market itself in many cases is small. Barring market segments such as telecommunication equipment and niche consumer Internet properties, there are strong underlying barriers such as the relatively slow uptick in broadband access, PC sales and Internet adoption.² The mobile industry, while

promising because of the huge install base is still limited by the carrier-controlled business models leaving little room for innovation by independent startups.

An entrepreneur targeting the domestic market thus has to evaluate the timing of the startup in the context of the macro-level factors such as technology adoption and plan the evolution of the company accordingly (e.g. the entrepreneur focuses on a niche consumer Internet transactional website but actively supplements an advertising revenue model with other short-term revenue streams)

- ***Bricks-and-Clicks Business Models***

There have been many instances of Indian startups taking a business that was proven successful in a developed economy and transplanting it within the Indian context. (For example, Baazee.com was an online auction market place modeled after and eventually acquired by eBay). The process has usually required an adaptation of the business model and operation to the Indian context, particularly in adding an offline/physical equivalent of a technology-enabled or automated product or service. Paraphrasing Pravin Gandhi, a partner in Seed Fund, bricks-and-clicks business models have evolved to be more successful than pure online plays. For example, many of the consumer Internet websites that started out as purely online ventures have supplemented their businesses with offline features or substitutes and achieved greater user adoption and success. This is partly because of the relatively low comfort level with purely online transactions, partly because of the labor advantage and the consumer behavior and expectations of physical facilities.

Manpower

Nearly all the entrepreneurs interviewed have underscored that hiring talent is often **the** biggest challenge in growing a startup in the Indian context. Some of the key contributing factors that emerged during the discussions were – mindset of risk-aversion, high degree of labor mobility and a dearth of managerial talent.

- ***Mindset***

Successful entrepreneurial environments such as Silicon Valley are typically characterized by an absence of stigma attached to honest failure. It has been observed that entrepreneurs are measured by what they are currently doing, not by what they did in the past, whether their previous venture was a success or a failure. The stigma associated with failure is depersonalized.³

Entrepreneurs interviewed observed that technology professionals are still averse to risk-taking in India. A few maintained that the mindset was not necessarily due to any deep societal conditioning but shaped by factors like the lack of safety net against failure, when compared to a developed economy such as the US (with its social security system and cultural acceptance of risk-taking and failure). To an extent, this is changing, as there are more success stories and recent examples of entrepreneurs successfully launching startups.

- **Mobility**

Given the booming economy and the attractive compensation packages offered by the large multi-national companies and local IT services giants, professionals in technology industry have enjoyed high degree of choice and mobility. However, some of the startups have found that they can counter the attraction of larger pay packages in giant companies, by working to provide a more attractive work environment – work that is more challenging, ownership, and camaraderie.

Deap Ubhi, Founder of Burrp, a consumer Internet company noted that – *Hiring has been a major challenge in this country, especially on the engineering side. Unfortunately, this country is not the burgeoning bank of engineering talent that one might expect. The main “perk” that resources are starving for in India is a positive work culture and environment where they do not always feel like subordinates. We all work as peers here, and although people inherently understand and respect the hierarchy, we are all friends and intellectual equals in the company. Work accountability is highly performance based, so if people want to work from home one day a week, we do not care. We don’t track vacation days, etc. – because all that matters is that you’re performing at a very high level, that you are execution oriented and hands-on, no matter what your position, and that you’re generally gelling and getting along with everyone else. When any of those things erode, it is usually time for you to leave*

- ***Managerial Talent***

Entrepreneurs also have found that it is difficult to find and attract managerial talent, particularly those that can bring skills in high-tech product development and product marketing. Some of this difficulty is mitigated by the increase in the number of US diaspora returnees with relevant experience. Silicon Valley owes part of its success to the availability of experienced professionals moving from across companies and transferring key domain expertise and managerial abilities (needs citation). Given such importance of senior and middle management in growing a startup, the availability of managerial and functional talent will continue to be an important factor in determining the successful growth of the entrepreneurial ecosystem in India.

Mentors

Entrepreneurs, especially first-timers, gain much from having access to experienced executives, academic experts and professionals, either as informal advisors or as members of a formal board. From conversations with the entrepreneurs, three primary modes of mentorship emerged as beneficial to the growth of the startup – advice, connections and role models.

- ***Advice***

Entrepreneurs often have to make key decisions under uncertainty and insufficient information. An active board of advisors or informal mentors can play a crucial role in offering strategic and tactical advice that influences the growth of the startup. Depending on the origins of the startup and its stage of growth, the advisory role

could be informal or formal and can be served by different sources – e.g. a startup seeded in a university incubator program can greatly benefit from the advice and support from the incubator executives and university faculty. A later stage startup can often rely on its investors and the advisory board for ongoing advice. Startups can also seek advisory help from industry executives.

Entrepreneurs can use networks such as TiE (The Indus Entrepreneurs), business plan contests and events such as HeadStart and Proto to seek adhoc advice from potential investors and experts but will need to establish a more structured relationship with a chosen set of advisors for longer-term support.

Consequently, an issue that startups seem to wrestle with is how and when to put together a formal board of directors and advisors. There are clear benefits to having a strong board early on in the process but there are downsides to spending time and effort on putting together the board rather than the product. Some of the entrepreneurs cautioned that if the incentives are not aligned and the board members are not vested in the startup, it could be a costly distraction especially at an early-stage startup.

As Anand Deshpande from Persistent systems noted – *I even used the initial customers as mentors. The company has a formal board of directors, which is invaluable for corporate governance and strategic advice. I recommend putting together a formal board after the startup reaches a certain scale and size (50 people).*

- ***Connections***

Another key benefit startups gain by interacting with mentors is connections – to potential customers, employees, investors, and partners. Entrepreneurs need to proactively seek mentors that can help establish connections. These resources can range from *individuals* such as motivated local entrepreneurs, established industry executives, and US diaspora entrepreneurs to *institutions* such as incubators, angel associations, venture capital firms, professional services firms, and non-profit entrepreneurial organizations.

Successful entrepreneurs and industry executives are good sources who can help the startups establish connections with relevant constituents, especially target customers. However, as Aditya Mishra, an active member of local entrepreneurship organizations commented -- *It is difficult to find such mentors, partly because there are so few successful entrepreneurs/executives to begin with and then you need to find willing and motivated ones, among these few. Quasi investors are few in number and US-based angels not looking at Indian market closely yet.*

Angel networks such as Indian Angel Network or business incubators such as the one administered by IIT Bombay SINE (Society for Innovation and Entrepreneurship) can help their member startups using the umbrella organization's partnerships with large technology companies, connections to investors as well as industry executives.

Startups funded by corporate venture capital firms (or global venture capital firms with track record and connections) can potentially benefit from their investors' access to successful companies and executives.

In Silicon Valley, Professional services firms such as law firms have played a strong role in establishing connections between startups and potential investors and key executive hires in some cases⁴. While such a support system has yet to evolve in India, a well-established legal and professional services community will be an integral part of the ecosystem and can be a great resource for deal-making, counseling, and connecting startups with other players in the system.

Entrepreneurs with rich professional networks in the US (Silicon Valley in particular) find those networks valuable in connecting with key customers and potential partners, particularly if the startups target global markets.

- ***Role Models***

The presence of role models is an intangible but vital resource that startups benefit from. In established entrepreneurial regions such as Silicon Valley and the Boston area, the importance of role models has been studied and recognized as a key ingredient in the success of the startups.

As Professor Ed Roberts from MIT observes in his book, *Entrepreneurs in High Technology: Lessons from MIT and Beyond -- A critical influence on entrepreneurship in Greater Boston is the effect of "positive feedback" arising from the early role models and successes. Entrepreneurship, especially when successful,*

begets more entrepreneurship. Schumpeter observed -- "The greater the number of people who have already successfully founded new businesses, the less difficult it becomes to act as an entrepreneur. It is a matter of experience that successes in this sphere, as in all others, draw an ever-increasing number of people in their wake" (1936, page 198).

In the Indian context, the current lack of role models can largely be explained by the fact that the startup activity has only begun and it is going to take several years for a generation of successful entrepreneurs to emerge and serve as inspiration for the aspiring entrepreneurs.

5. INVESTOR LENS

In this business if you are good, you are right six times out of ten. You are never going to be right nine times out of ten.

■ Peter Lynch, Investor

Chapter 3 introduced the 4M framework to identify the key forces acting on a startup interacting with the external environment. Chapter 4 examined the issues and implications from the entrepreneur's perspective. This chapter examines the issues and implications from the investor's perspective. The observations are drawn from interviews with investors and experts playing an active part in the Indian ecosystem, as well as existing studies on the environment for venture capital in India.

The following figure highlights the key issues along the four forces, as viewed through the investors' lens.

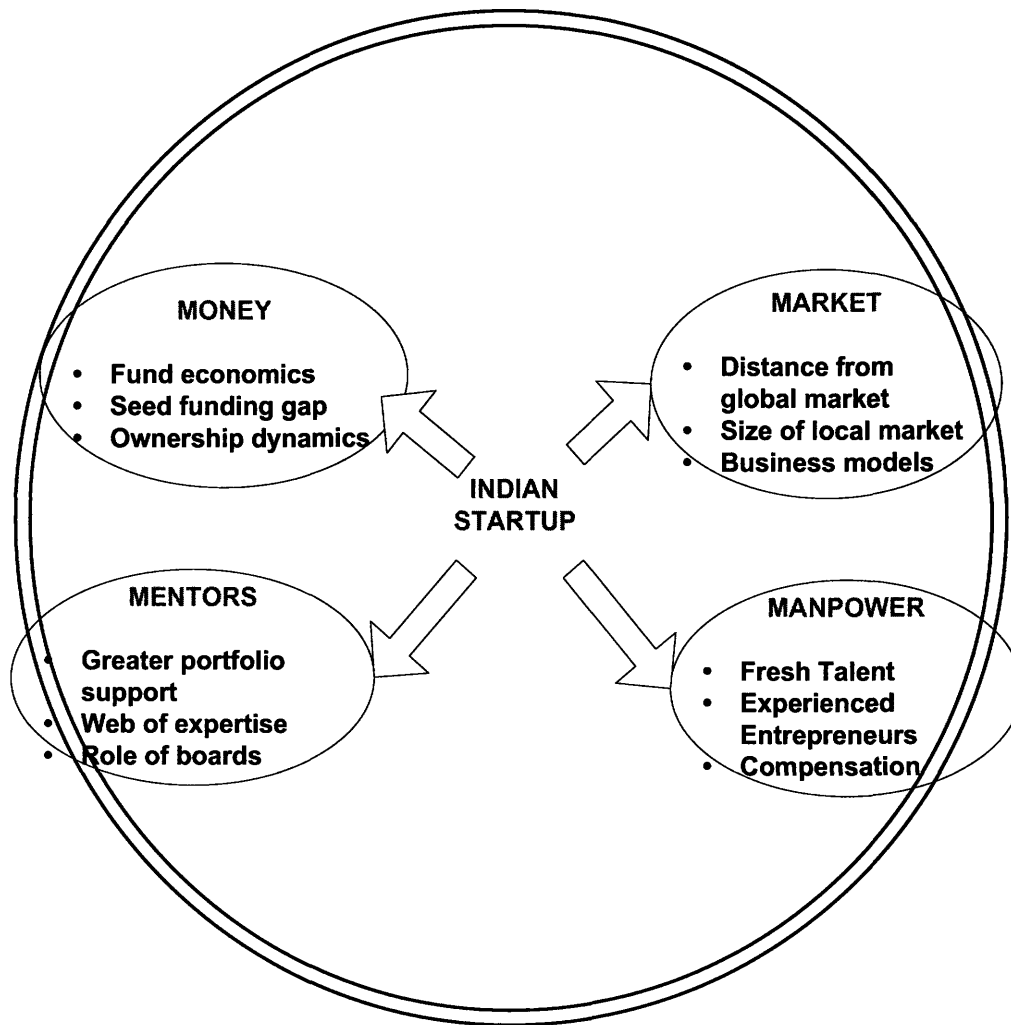


Figure 3: 4M Framework: Key Issues Through Investors Lens

Money

Among the four factors in the framework, *money* is the one directly tied to an investor’s function and role in the entrepreneurial ecosystem. As such, much of the analysis from the investors’ lens in this chapter will focus on this factor. Investors are the key agents

with the interest and ability to address bottlenecks related to raising capital. In the context of financing startups, the term *investors* largely refers to the most common source of capital -- venture capital firms, although startups often take advantage of other sources of capital such as individual investors, personal funds, banks, government-sponsored financing schemes, university-based funds etc.

A brief recap of the operation of a VC firm is helpful in noting the incentives and motivations of the investors: Venture capital firms are typically organized as partnerships. Limited partners such as institutions (pension funds, family offices) invest pools of money into these firms. The general partners within the VC firm are compensated two ways – management fees as a percentage of the fund raised, and a carry i.e. a percentage of the returns earned from investing the fund. Typically, VCs provide the first professional round of financing toward product development. Often, funds invest in subsequent rounds of financing geared more toward expanding operations. They may also occasionally put in seed money to prove an entrepreneur’s idea and vet the viability of the venture. Firms vary on the relative weight they place on seed, early-stage, and late-stage financing (where seed, early-stage and late-stage venture financing phases are defined by a few factors -- the size of the funding round, the development stage of the startup, the valuation etc.⁵

Interviewees have pointed out three key issues related to capital – fund economics that stack against early-stage investing in India, the funding gap in the seed/angel rounds, and entrepreneurs’ views on equity ownership.

- ***Fund Economics***

Interviewees have pointed out that many of the VC firms in India today have in fact not been operating as venture capital firms in the traditional sense. Instead, they have been focused on later-stage private equity investments as well as non-technology-based ones e.g. retail/services etc. Entrepreneurs observed that Indian VCs are seen as passive investors unwilling to take the risks involved in early-stage technology investing.

As Alok Mittal from Canaan Partners noted -- *Venture financing is a relatively recent phenomenon. The model and investment parameters are not yet understood. Hence, it is a matter of time requiring patience and the process can get accelerated only to a certain extent.*

On examining the reasons for this situation, three points are worth noting.

One – Although VC firms are often expected to make heavy investments in the startup phase, in reality, even in established VC industries such as in the US, VC investment has always skewed toward the later-stage (i.e. funding existing companies that have built a product and acquired a few initial customers).⁶

Two – Early-stage technology investing in India is riskier because of additional factors such as less entrepreneurial history, less developed local market, relatively low support for intellectual property and research-backed innovation etc.

Three – Limited partners in most of the venture capital firms targeting India are US-based institutions such as pension funds and university endowment funds. These limited partners may find that the *absolute* dollar returns from early-stage investments (higher risk, lesser capital, longer time to exit) are not as attractive as traditional private equity investments (with lower risk and more capital put to work and faster exits). This edge in performance could be important for a relatively new VC fund trying to establish its reputation and a strong initial track record in the market.

Given these factors, it is not surprising that the majority of investments made by venture capital firms in India today skew toward non-technology sectors and later stages. Left unaddressed, however, this trend can cause some problems. In the long-term, investors may overlook a potentially attractive sector such as high-tech, which could exploit the local technology talent pool. In addition, a tough funding environment in the early-stage dries up the pipeline for later stage activity and stunts the growth of a healthy local technology industry.

- ***Seed Funding Gap***

Another issue that affects the quality and quantity of deal flow for early-stage venture capital is the dearth of funding options at the prior stages of development of a venture. In the US, private investors (individual VCs, angel investors), seed funds, university incubator programs provide the necessary financial and strategic support for the initial stages of a startup and thus create a healthy pipeline of deal flow for subsequent financing by venture capital firms.

Seed-stage funding mechanisms can help grow an entrepreneur’s idea beyond a conceptual stage to a working prototype, and to help the entrepreneur(s) build out the management team and develop a business plan for the venture. Seed-stage financing institutions can also support VC’s by providing access to high quality deal flow and ongoing operational support and advice to the startups.

Interviewees have pointed out that the infrastructure for seed-stage investing is slow to fall in place. It should be pointed out that this is an issue even in an established investing environment such as the US. For example, from the investment distribution across the different stages in the year 2007 shown below, a majority of the deals funded are skewed toward expansion and later-stage financing.

Table 3: US Venture Deals by Stage of Investment (2007)

2007 Deals	Seed Stage	Early Stage	Expansion Stage	Late Stage
% in Deal Volume	11%	26%	32%	31%
% in Dollars	4%	18%	27%	41%

Source: MoneyTree Report by PricewaterhouseCoopers and the US National Venture Capital Association

The situation is similar if not worse in India. Even though there has been an increase in the overall private equity investments flowing into the country, it is mostly geared toward later-stage deals as seen in the figure below.

Table 4: Value of Indian Deals (\$M) by Stage of Investment

Year	2000	2001	2002	2003	2004	2005	2006 (Q1-Q2)
Early and Mid Stage VC	342	78	81	48	150	103	86
Late Stage and PIPEs	819	859	510	422	1500	2097	3394

Source: Evalueserve, Indian Venture Capital Association (IVCA) and Venture Intelligence India

Further, even with the early-stage investments, seed-stage investment by venture capital firms has been very low, as seen in the figure below.

Table 5: Number of Early-stage Indian VC Deals by Stage of Investment

Year	2000	2001	2002	2003	2004	2005
Seed	74	14	7	5	6	5
Series A and B	68	22	9	8	23	14

Source: Evalueserve, Indian Venture Capital Association (IVCA) and Venture Intelligence India

To address this seed-funding gap, a couple of approaches have emerged -- **Angel networks and Seed Funds.**

Angel investing in general in India has been sporadic, unorganized, and particularly so in technology investing. This is changing with more organized effort such as Indian Angel Network (formerly known as Band of Angels), Mumbai Angel network etc.

As Padmaja Ruparel, the executive director of the Indian Angel Network observed, *Angel investing is both old and new. There have been instances of rich individual businessmen who invested their personal money into other small businesses but the current wave of angel investing is more organized and more focused on technology-driven opportunities. There are an increasing number of angels who are looking at private investing as an asset class to and support organized and a wider deal flow (versus investing in the few entrepreneurs who they knew personally), resulting in a new class of high-risk high-gain investment and grouping together to hedge the risks.*

By offering mentorship, access to the network of industry executives and entrepreneurs, angel networks help bridge the gap between the idea stage and a fully formed venture ready to be funded by a venture capital firm.

Another recent trend is the emergence of India-based **seed funds** such as Seed Fund, Erasmic Fund, Mentor Partners, and global firms such as Tandem Entrepreneurs, who provide mentorship as well as financial support for startups.

As Professor Ed Roberts notes in *Entrepreneurs in High-Technology*, *Seed or zero stage funds help put together the startups, working closely with the founders to round out their team, more sharply define their business objectives, and help develop a*

completed business plan. Seed funds often provide more value in advice and “sleeves rolled up” assistance than in the capital itself.

Thus, the partners in such funds require a unique combination of skills, typically prior experience as entrepreneurs and informal financiers and advisors of startups, along with investment acumen. The partners in such funds tend to be motivated by their interest in advising and supporting ventures and long-term monetary payoffs, since any ongoing compensation from asset management is much less than what can be earned managing larger VC funds. The limited partners in seed funds in India have typically been high net-worth individuals, larger VC firms, or global technology companies.

As Aditya Mishra, an active member in the local entrepreneurship network observed -- *One particular class of limited partners interested in investing in seed funds for strategic reasons along with financial returns are large US technology companies such as Motorola, Google, IBM etc. These firms are looking to get into the Indian market and gain early and inexpensive access to the Indian startup ecosystem.*

- ***Ownership Dynamics***

Another key issue that investors have pointed out is the resistance of entrepreneurs to relinquishing control and ownership in their venture. Entrepreneurs, especially first-timers, are very wary of giving up a significant equity stake for the relatively small amount of capital they get from the VCs in return. They dislike the complex set of deal

terms enforcing control rights and triggers for various possible scenarios. This often puts the entrepreneurs in conflict with the investors during the process of structuring the deal.

Investors feel that this is a case of educating the entrepreneur on i) the significant benefits of the resources bought in exchange for the equity (capital, connections, credibility, and counseling) and ii) the tremendous risks undertaken by the investors. In the book *The Money of Invention*, the authors point out the four key risk factors that force investors to demand a high premium for their capital, along with a complex set of terms to protect their rights: *uncertainty about the future, information gap, soft assets, and market conditions*.

Uncertainty about the future implies that the startup can produce a range of possible outcomes, from complete failure to success. Startups face uncertainty about the technology feasibility, market potential, and competitive responses etc., all of which affect the financing decisions as well as the riskiness of the venture. Since entrepreneurs in their optimism may overlook or underestimate the risks and potential pitfalls in executing their plan, investors need to account for this by structuring and staging the deal appropriately.

Information gaps, that is, differences in what entrepreneurs and investors know about the company's internal state, technology and market trends, can lead to conflicting views on the risks involved and lead investors to impose additional constraints (either more corporate control or higher risk premium) to account for this gap.

Soft Assets such as patents, trademarks, or even human capital (key employees) are harder to value and monetize than hard assets. Many of the innovation-driven startups are heavy in the soft assets making the investors wary of overestimating the asset value of the company.

Market conditions, both financial and product-market, can drastically affect the future of the startup in unpredictable ways. In such cases, despite flawless execution by entrepreneurs, investors may very well lose their investment. Investors use tools such as staged financing or syndicating the investment with other VC firms, to account for such outcomes.

While entrepreneurs have good reason to be skeptical about diluting their ownership or raising too much capital too soon, investors need to promote better understanding of the risks and reasoning involved in the deal structuring.

Market

When investors examine the issues around the product-market conditions, they see the same issues that entrepreneurs see, as noted in the previous chapter on the entrepreneur's perspective – *distance from the global market, size of the local market, the need for business models to adapt to the Indian context*. What is different is the vantage point of the investors (across a portfolio of companies, multiple sectors, longer-term trends) versus an entrepreneur's (a single company, particular product space, and shorter-term

opportunities). Hence, the implications and the actions for an investor are different from those for an entrepreneur.

- ***Distance from the Global Market***

As observed in the previous chapter, startups targeting the global market (more commonly, the US) have the opportunity to tap into a large and attractive market but face the drawback of being too far away from the customers.

Investors screening such startup opportunities for investment have two choices. Some investors, recognizing the disadvantages for startups trying to reach a distant market, have chosen to define their investment focus on local opportunities. Other investors have chosen to invest in global startups and are actively exploring ways to help their portfolio companies address this market-access issue.

As an entrepreneur interviewed pointed out, venture firms may be in a good position to overcome this problem since they manage a portfolio of startups, many facing similar issues.

Venture capital firms well-established in the US may be able to use their connections to past and present portfolio companies, large customers, or parent companies (in case of corporate venture arms) to connect their Indian portfolio companies with the right resources. For example, Intel Capital conducts an annual portfolio-wide CEO summit with 400+ attendees across the globe every year. Attendees include 150 industry

executives, Intel executives and the portfolio company management. It also organizes “Technology days”, events to connect portfolio companies with potential customers and technology partners worldwide.

Another approach is for the venture capital firm to explore ways to aggregate the distribution and market access mechanisms across the subset of their portfolio of companies that share the same needs. For example, connecting with large advertising networks on behalf of multiple consumer-facing web startups in the portfolio or temporarily using a common set of sales and distribution force in the US on behalf of multiple enterprise software startups in the portfolio etc. A possible alternative suitable for incubated startups is collaboration with counterpart incubators programs in the target market.

- ***Size of the Local Market***

Startups focusing on the domestic market do have the benefit of staying close to the market and customers. However, in many of the high-technology sectors, e.g. consumer-Internet, enterprise software, the local market is limited in size at this point and depends on other complementary factors falling in place (notably broadband Internet access, PC penetration, growth in local enterprise customers etc.) Investors therefore still largely prefer export-oriented and services markets over domestic and product markets, as reflected in the figure below.

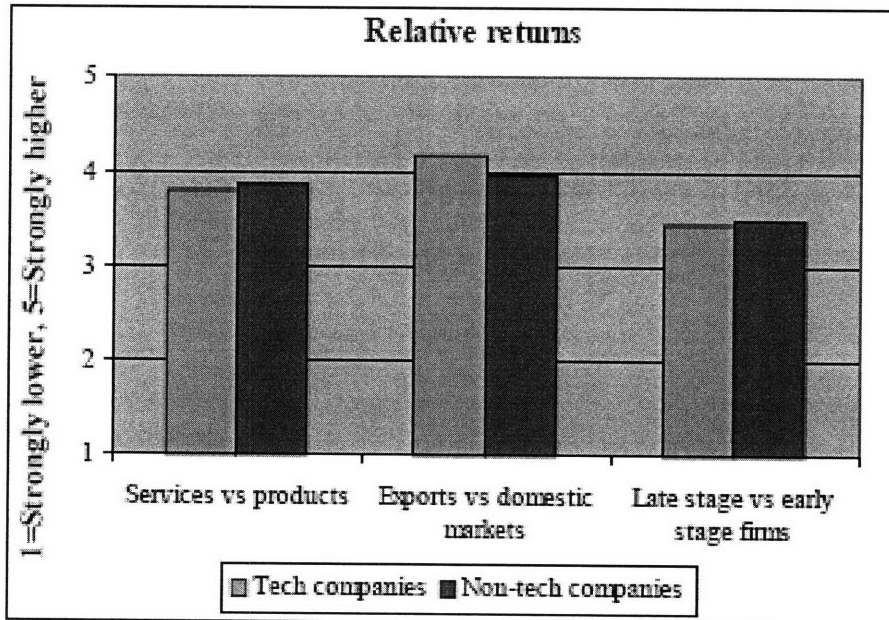


Figure 4: Relative Returns from Export versus Domestic Markets

Source: Investor Survey Data from “Accessing Early-stage Risk Capital in India”, a report by Rafiq Dossani (Stanford) and Asawari Desai (TiE), 2006

Given the market realities, investors are better off defining and following a broad investment thesis that includes global opportunities. However, investors should stay involved in the domestic market, even if many of the opportunities are niche plays. The domestic consumer or enterprise technology market is small right now but the market can be potentially large over time. Investors can thus use their capital and time to gain insights into product development, identify effective business models, and establish a track record of attracting promising opportunities.

- ***Business Models***

Many of the startups, particularly in the consumer Internet space, are based on “concept arbitrage” i.e. transplanting product and business models from the US. Often, the models cannot be directly imported and need adaptation to the Indian context, a big one being that most of the online portal businesses tend to do better with strong offline presence. From the investor’s perspective, this has implications on the amount of capital to invest, the execution risk involved in establishing physical distribution channels etc.

Additionally, while concept arbitrage plays are low-hanging fruit and good for increasing the demand for Internet usage, innovation-driven opportunities that cater to the local needs yield better financial and strategic results for investors.

Manpower

Interviewees have pointed out two broad issues they face, related to manpower – identifying strong entrepreneurs, and helping their portfolio companies hire and retain employee talent.

- ***Finding Founders***

From an investor’s perspective, the biggest challenge related to human capital is finding a strong team of founders to invest. When deciding whether to invest in a deal, investors evaluate the market, technology and the founding team. Investors are incited to

encourage talented professionals to be entrepreneurs since a strong management team significantly improves the odds of the success of the startup.

The desired background, abilities, and experience of the founders depend on the particular startup and its sector of focus. Investors should tap into both fresh talent and experienced entrepreneurs according to the opportunities being pursued.

- *Fresh Talent*

Many innovative startups in the US are born out of university-based talent networks. Even in the absence of such a strong university and research-driven commercial innovation, local universities are a source of young and ambitious students. Investors should cultivate relationships with universities as well as affiliated incubator programs and promote the idea of early-career entrepreneurship. Even if most of the startups coming from the young professionals and college graduates fail, they gain valuable experience and are better prepared to be part of another growing startup.

- *Experienced Entrepreneurs*

Particularly given the challenges in the product-market and the few resources available for entrepreneurs, investors prefer funding entrepreneurs with prior experience in venture-backed startups. Experienced entrepreneurs understand the uncertainties involved, the importance of time-to-market, the relevance of staged financing, stock compensation incentives etc. Experienced entrepreneurs also

typically tend to team up again with their past co-founders and thus begin the new venture with a strong team in place. From the investor's perspective, this is a big advantage since the team has a proven working relationship. (Moreover, multiple founder teams are believed to generally perform far better than single founders do⁷) Investors however note that there are very few such experienced entrepreneurs, other than founders of IT services firms or US returnees with startup experience.

- ***Hiring and Retaining Employees***

Investors interviewed have also echoed the concerns of the entrepreneurs that it is difficult to hire and retain employees in a startup, because of an attitude of risk-aversion and the availability of other more stable job opportunities with attractive compensation and perks. Investors can address hiring issues using their network of connections and employee motivation and retention using effective compensation structures.

- ***Hiring Managerial and Marketing Talent***

Another issue noted by entrepreneurs and investors alike is the dearth of talent, particularly managerial experience in product development, and expertise in sales and marketing.

As Sudheer Kuppam, the managing director of Intel Capital Asia-Pacific observed -- *A key issue for our portfolio companies is the lack of a large group of experienced middle managers in India. Services companies have trained a lot of*

professional managers but their skills are not entirely applicable to an innovative early-stage product company.

Similarly, particularly for startups aiming at global market, there is a dearth of professionals with product management, marketing and sales skills. Investors with a strong network of connections can help their startups find the right talent. The availability overall is slowly improving, with some experienced US diaspora returning and local professionals gaining experience.

- ***Compensation***

Technology professionals are hard to hire and retain in today's competitive labor market. This is a worse problem for startups that are strapped for financial resources and cannot afford to match cash-heavy compensation schemes of multinational companies. Employee stock options are not valued much, since there are no stock success stories yet. Traditional startup compensation (largely equity, below-market salary) is often not adequate in retaining talent. To address this, investors and founders could design compensation schemes to ratchet up the cash compensation but perhaps introduce a vesting schedule for salary increases – essentially trying to ensure alignment of incentives to the long-term success of the company.

Mentors

As early-stage investors, venture capitalists necessarily play an active role in nurturing and shaping the startups they fund. Their role as active investors is even more relevant in India where the environment for entrepreneurship is still taking shape and the entrepreneurs do not have many other resources to rely on for advice, connections, or role models.

Investors interviewed observed a few key issues related to the role of investors in providing mentorship to entrepreneurs – significant time and effort spent in portfolio support per-deal-funded, the need for investors to build expertise and connections, the role of boards and corporate governance.

- ***Greater Need for Portfolio Company Support***

Given that many of the entrepreneurs and founding teams are first-timers, with little precedence, startups in India need greater hand-holding and operational support, particularly in the early months and years. While entrepreneurs often tap into other sources such as informal advisors and peers for advice, investors have the strongest incentives to help the startup make the best strategic and tactical decisions, make the right hiring choices and set up the appropriate processes and systems in place etc.

As Sunil Bhargava, an investor from Tandem Entrepreneurs observed – *Advisors can be valuable. But the key issue is translating their generic advice into context. The*

advisors rarely have skin in the game. They do help in sanity checking ideas, playing the devil's advocate and perhaps technical advisors can help point to any 'gotchas' and assumptions. But they are rarely as helpful as periodic strategic advice from a vested party.

The fact that investors need to spend a greater amount of time on each portfolio-company has implications on the kind of deals and entrepreneurs that get funded as well as the operation of the venture firm itself. On the former note, investors may prefer funding entrepreneurs with previous entrepreneurial learning or global experience. On the latter, investors may need to limit the number of deals to fund, choose the number and the background of the investment professionals to hire, to accommodate the time and skills required for effective portfolio company support. For example, when hiring partners and junior professionals, their past entrepreneurial experience may be more relevant than investing and transactional skills.

- ***Web of Expertise***

Entrepreneurs in India have observed that it is difficult for a young startup to connect to valuable resources such as key customers, industry executives for hiring or advice, academic experts for technology inputs etc. They can greatly benefit from investors who can forge these relationships. To be able to do this, investors need to actively cultivate relationships with a variety of resources – local and global universities (for expertise and ideas), local and global industry executives and previous portfolio company connections (for hiring, strategic inputs and customer contacts), local public institutions (regulatory inputs), US diaspora (for hiring and customers) etc.

Given the number of VC firms establishing themselves in the Indian market, this is also an effective way for investors to differentiate themselves and attract high-quality deal flow using their network of experts for deal sourcing as well as due diligence. The strong connections developed by investors are useful for adhoc advice (screening opportunities, key technology advice for a portfolio company), hiring key executives, or accessing valuable customers.

- ***Role in Boards***

Startups, particularly those that are ready for professional investment, benefit from establishing a balanced board of directors. A strong board can provide guidance on strategic direction, help make executive hires, monitor the performance of the startup. On the other hand, an ill-chosen board can often be a distraction and even lead the startup down the wrong direction.

A board seat allows an investor to receive up-to-date information, assess performance, and exert influence on the startup. As Alok Mittal of Canaan Partners observed – *Board structure is designed to provide strategic advice and corporate governance. Well-formed boards play a big role in coaching the operational team and advising at key turning points in a startup. There is usually no shortage of capable board members since they need not all have been entrepreneurs or investors themselves. Indian entrepreneurs are still not adept at making good use of the board of directors and advisors for key management decisions.*

6. CONCLUSION AND FUTURE WORK

This thesis was an exploration of the issues faced by technology-based startups in India, using data from published research as well as in-person interviews with Indian entrepreneurs, investor, professionals, and experts. The challenges and opportunities faced by Indian startups were categorized along four key dimensions – Money, Market, Manpower, and Mentors, and were examined from the perspectives of an entrepreneur and an investor, key players in the entrepreneurial ecosystem.

The trends in high-technology entrepreneurship in India are exciting. Ideas, capital, and people form the foundation of a thriving entrepreneurial environment. The number of venture-funded startups increased from 36 to 80 deals, a 166% increase⁸. Nearly \$14.3B went into private equity investments in India in 2007 and 300 India-centric funds have been active in the last three years⁹. Even when compared to recent years, there is a significant interest and awareness of high-technology entrepreneurship among professionals.

However, as discussed earlier, there are considerable challenges in forming and growing technology startups in India. Raising capital (especially at seed-stage), choosing the market, attracting skilled and entrepreneurial employees, finding and sustaining mentors, are all areas where startups face challenges. Some of these issues are short-term and are already being addressed. For example, there has been an increased activity in seed and angel funding, peer mentoring organizations and events, even within the few months this thesis spans (validating some of the observations, to an extent). Other issues need

proactive effort from multiple players over a longer horizon. For example, it may take at least five years and a public-private sector initiative for the underlying PC and Internet infrastructure to develop enough to support an attractive domestic market for technology-based products and services.

Universal or Unique to India?

Many of the challenges faced by Indian startups are shared by early-stage ventures even in developed markets such as the US, perhaps varying only in degree with the maturity of the system. Other issues are unique to India due to specific local factors.

For example, the gap in angel/seed funding is worse in India as the environment for entrepreneurial financing is still taking shape. The size of the domestic market and the lack of robust technology infrastructure are again specific to the Indian context and pose additional problems for local startups. Similarly, it will take time for successful entrepreneurs to emerge and serve as mentors/role models for local technology startup founders. These issues will require solutions that are developed for the local context.

On the other hand, many of the issues observed apply to technology-based ventures everywhere – venture capital financing *is* usually skewed toward later stage, startups *do* find it hard to attract talented and risk-taking individuals, entrepreneurs struggle to find good advisors and mentors to support them through the venture. Potential solutions for these issues could thus be borrowed from those that have worked in other markets.

Below are a few major India-specific challenges that were analyzed in the previous two chapters:

Table 6: Challenges Unique to Indian Startups

Factors	Unique to India
MONEY	<ul style="list-style-type: none">• <i>Seed/Angel Funding Gap</i>
MARKET	<ul style="list-style-type: none">• <i>Size of Domestic Market</i>• <i>Distance from Target Market (an issue shared with other developing countries)</i>• <i>Adapting business models to local context</i>
MANPOWER	<ul style="list-style-type: none">• <i>Managerial and Marketing Talent</i>• <i>Talent networks, e.g. University research</i>
MENTORS	<ul style="list-style-type: none">• <i>Lack of Role models</i>

Recommendations

In terms of potential solutions, different players in the system can possibly address different aspects of the challenges. For example, incubators may be effective in providing very early-stage money and mentorship but perhaps not very effective in helping access the global market. Similarly, professional networks can provide startups access to potential hires as well as advice and customer connections. The figure below illustrates a few resources such as corporate venture firms, academia, diaspora connections, angel networks etc. that can help startups address issues along one or more of the four dimensions.

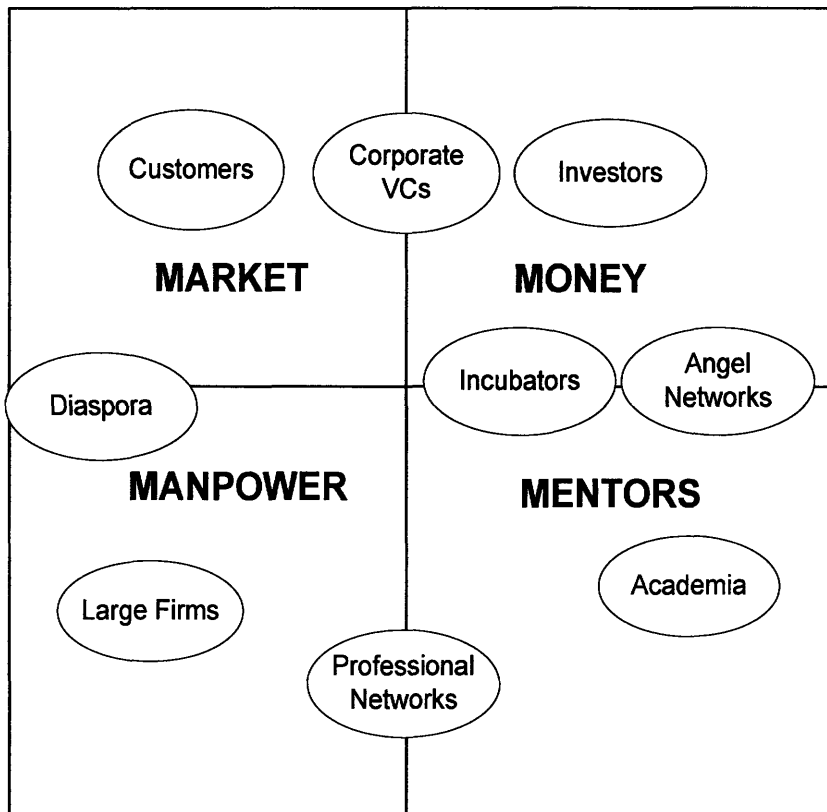


Figure 5: 4M Framework: Potential Resources

Recommendations for Entrepreneurs

Based on the findings in the previous chapters, following are a few recommendations for entrepreneurs to overcome the common challenges, particularly those unique to the India.

- *Money* – To address the dearth in seed funding gap, entrepreneurs should tap into emerging resources such as angel networks, newly formed seed funds etc. In order not to dilute ownership by raising venture capital funding too early, entrepreneurs

should consider bootstrapping initially and aligning fund-raising with product and business milestones.

- *Market* – To address the issue of the distance from the global market, entrepreneurs need to find ways to access the market and connect with customers. They should factor this in when fund-raising and approach investors who can help forge connections with key customers and partners. In addition, entrepreneurs should pay attention to the organizational structures that allow for presence in the global market from the beginning. Entrepreneurs targeting the domestic market need to be aware that many of the opportunities are limited until certain underlying factors need to fall in place. Until then, entrepreneurs should balance the limited domestic revenue potential with targeting the global market.
- *Manpower* – To overcome the dearth of managerial talent in the short-term, entrepreneurs should consider tapping into diaspora returnees and hiring junior professionals and offer internal training. Retaining employees in a competitive labor market will take a combination of compensation structures that offer more liquidity and offering intangible perks of a startup experience.
- *Mentors* – Along with seeking adhoc advice and connections at networking events, entrepreneurs should access more steady resources for mentorship such as angel networks, business incubators, and non-profit organizations such as National Entrepreneurship Network etc. Once the startup reaches a certain scale (in product maturity, revenues and number of employees), entrepreneurs should actively invest in forming a well-balanced board of directors.

Recommendations for Investors

Below are a few recommendations for an investor interested in funding and supporting high-technology startups in India.

- *Money* – In order to bridge seed funding gap, investors should consider either dedicating a small portion of the fund and allocating a few investment professionals to seed stage investments or seeking partnership with existing seed and angel funding sources, thus using the seed investments to increase deal flow. Investors should also educate entrepreneurs on the risks and benefits of the venture financing model.
- *Market* -- Investors focusing on the domestic market need to not only fund startups in low-hanging-fruit plays but also play an active role in investing in longer-term complementary infrastructure opportunities. Investors funding startups that address the US market should leverage connections with their US fund/parent company/previous portfolio companies, to help the startups reach the market. Another idea is for the venture firm to aggregate distribution and marketing efforts across portfolio companies within a broad sector.
- *Manpower* – Investors need to tap into talent networks by establishing and maintaining connections with universities, non-profit entrepreneurial organizations, and professional networking groups. Experienced entrepreneurs are few and investors need to compete for such entrepreneurs using their track record and connections.
- *Mentors* – Given the greater amount of time and effort spent mentoring portfolio companies, Indian investors need to plan the fund size, the number and background of investment professionals, and the number of deals to fund. Investors should also consider promoting other resources that can provide the required mentorship, e.g.

independent 'venture advisor' firms or other mentoring venues such as TiE, Kickstart.in, and National Entrepreneurship Network etc.

Future Work

The thesis was a step toward understanding the challenges faced by Indian startups and identifying potential solutions to these issues. The topic of entrepreneurship is complex and one that lends itself to several branches of exploration.

A future study could build on the themes identified in this thesis and construct a more quantitative and systematic study of the challenges, e.g. exit outcomes of startups by sector/nature of financing/management team, time required to incorporate startup, difference between single-founder and multiple founder teams, etc.. Another possible extension is to conduct in-depth case studies of select high-technology Indian startups and illustrate the challenges and solutions adopted by these firms. Even though these would be subjective accounts of specific firms, they could offer great insights to aspiring entrepreneurs.

In addition, a topic outside of the scope of this thesis yet relevant to the success of any entrepreneurial environment is the role of universities and the impact of academic research on promoting entrepreneurship in India. Finally, the startups considered in this thesis are in the high-technology industry but it would be worth investigating if the issues and potential solutions apply to other knowledge-based industries in India, for example, knowledge-process outsourcing, biotechnology and pharmaceutical industries.

APPENDIX A: INTERVIEW GUIDES

As part of gathering data from participants in the Indian entrepreneurial ecosystem, I conducted close to twenty interviews (one-on-one, in-depth, one to two hours) from entrepreneurs, investors, angels, incubators and academic experts. Below are the questionnaires and interview guides used with the interviewees.

Introduction Provided To Interviewees

While India has traditionally been the center for low-cost software and business processing services, it is increasingly looking to move up the value chain through its high-end service firms and nascent product companies. There has been considerable activity, particularly in wireless and telecommunication areas, and new technology-based startups are taking shape.

Private equity investment in India crossed \$2.2B¹ in the year 2005. While a significant portion of these funds are dedicated to late-stage growth capital, there has been substantial interest in venture capital investments as well. Many of the global early-stage venture firms have established their local presence in India and are actively exploring investment opportunities.

In my thesis, I would like to focus on understanding the challenges in the formation of successful and scalable technology startups in India, from an **investor's** and

¹ Source: TSJ Media

entrepreneur's perspective. The emphasis is on high-technology startups versus other small and medium businesses because of 1) the positive impact high-tech firms have on productivity and economic growth and 2) my professional background and career interest in high-tech industry.

A specific focus of my thesis is on the relationship between the entrepreneurs and external entities such as investors, angels, advisors, university incubators etc. Through this work, I hope to identify the needs of the entrepreneurs in performing external activities (e.g. reaching customers, hiring talent, seeking advice, raising funds) and how these can be better met by investors, angels, mentors, incubators etc. The primary external activities analyzed here are:

■ **Accessing Customers**

- Can cross-border startups solve this issue?
- Are strategic/corporate VCs more effective?
- What sectors and industries have growth opportunities?
- What business models have worked and what have not? Why?

■ **Seeking Advice**

- What role do seed-stage investors, angels, and incubators play?
- What is the impact of diaspora entrepreneurs and serial entrepreneurs?

■ **Hiring Talent**

- Access to management pool, services vs. products expertise

■ **Raising Funds**

- Match-making venues etc.

Interview Guide For Entrepreneurs

As part of the thesis, I would like to get your perspectives as entrepreneurs on the ground. While startups everywhere share some common challenges in formation and growth, I would like to focus here on the external activities of entrepreneurs:

- 1. Fund-raising**
- 2. Hiring**
- 3. Selling**
- 4. Seeking Advice**

I. Your Key Impressions

- Top challenges in **forming** the company
 - Rank in order: Product, Market access, Selling, Forming founding team, Financing
- Top challenges in **running/growing** the company
 - Rank in order: Product expansion , Market access, Selling, Forming founding team, Financing

II. Company Background

- Sector (e.g. mobile VAS, online travel, telecom network equipment etc.)
- Age of the company

- Funding (venture, bootstrap, other)
- Original and current premise
- Roots (Location, Link to any larger company)
- Founding Team
- Current Operations (No. of employees, Order of revenues, Profitability status)
- Reason for India location (founders? Cost? Product team? Market here?)
- Significant Milestones
- Significant Crises faced

III. Entrepreneur Background

- Education
- Professional History
- Entrepreneurial Experience (Serial/First-time/US or India?)
- How you came to be the founder of the present company and how long ago
- Your motivation for entrepreneurship

IV. Internal Operation (high level description)

- *Product*
 - Enterprise/Consumer/Other
 - Infrastructure/Application/Other
 - Service/Product/Hybrid model
 - Any research/Incubator/University involvement?

- Does it leverage existing IT/ITES ecosystem e.g. spun-out of a large company?
- *People*
 - Formation of founding team
 - Hiring (Technical, Sales, Management)
 - Hiring sources (universities, competition, large service/product companies, diaspora?)
 - Which are the major sources? Especially for management roles
 - Growth and talent management, incentives (e.g. fighting against service firms' perks and wages)
- *Process*
 - Product development process (what is unique)
 - Does the firm have Cross-border operations? (if so, is it split along functions or markets)
 -

V. External Interaction (more relevant to thesis)

- *Market*
 - Customers (Domestic/Foreign/Global, Large vs. SME, key challenges in acquiring customers)
 - Competition (Domestic/Foreign/Global, Large vs. startups)

- *Financing*
 - Investing environment when financing occurred
 - Funding sources and stages (bootstrap/VC/banks, number and size of rounds)
 - Proactively sought funding? Financiers approached the company?
 - Avenues for interaction
 - Role of intermediaries in deal negotiation

- *Mentorship*
 - Board of directors (formation, sources, connections)
 - Composition of board (informal advisors, academia, venture capitalists, industry experts, US vs. local)
 - Venture capitalists' involvement (frequency, nature)
 - Informal advisors
 - Any access to US entrepreneurs/Diaspora
 - Avenues for connections

VI. Other Comments

Interview Guide For Investors

Below are the areas I would like to cover in my interviews with investors (venture capitalists, seed investors/angel investors).

I. Key Overall Impression

What are the big 2-3 challenges building scalable tech startups, as an early stage investor?

- Is it just a matter of time?
- Access to global market?
- Lack of product DNA? (But then, what about captives?)
- Lack of mentorship (unlike silicon valley serial entrepreneurship)
- Cultural aversion to failure?
- Which sectors have growth opportunities?
- What about wage rise? (No more labor arbitrage?)

II. Venture Firm Background

- *Roots (US VC/ India/ Corporate VC wing)*
- *Stage, Size, Age, Sector Focus*
- *Founding Team*
- *Current Team*

- *Reason for India location*
- *Significant Exits (what went right)*
- *Significant Failures (what went wrong)*

III. Investor Background

- *Education*
- *Professional History*
- *Investing Experience (US/India/)*
- *Experience prior to investing*
- *Motivation*

III. Operations

- *Fund Raising*
 - US/Indian LPs?
 - Fund Size, Allocation
- *Investment Thesis*
 - Sectors of focus
 - Stage focus
 - Product vs. Service vs. Hybrid
 - Domestic vs. Global Market
 - Large enterprises vs. SMB vs. Consumers
 - Growth areas in High-tech
- *Deal Flow*

- Access to Entrepreneurs
 - (reactive vs. proactive, university incubator cells, business plan contests, Diaspora links, bar camps)
- Role of intermediaries/brokers
- Incubator/EIR model
- Interaction with Individual investors, Angel groups, Seed funds
- % of seen deals by source (business plan contests, introduction, over-transom, university connection, networking events)
- % of **funded** deals by source
- % of deals seen: products vs. services/ enterprises vs. consumer/ local vs. global market

- *Due Diligence*
 - Access to and quality of information (informal trusted networks? Reference checks?)

- *Deal Terms*
 - Equity
 - Legal terms (different from US?)
 - Balance of Cash and Equity (is there more cash compensation vs. US startups)

- *Portfolio Support*

- Money (toward product growth? customer acquisition? International expansion?)
- Function
 - Product: access to product development expertise?
 - Market: Access to distribution channels, US market? (Is it better to be a strategic/corporate VC vs. regular?)
 - Hiring: (business/management talent, advisory board? key sources? US-returned? Large local services firms?)
 - Lend Brand/Credibility/Stability (e.g. top-tier VC funded)
- Nature
 - Percentage of time spent on Strategy and Long-term roadmap?
 - Percentage of time spent on Tactics and operational support?
 - Interaction with founders? Advisers?
- Extent
 - Frequency of involvement (no. of hours/month e.g.)
- Opinion on Cross-border startups
 - Best of both worlds? (Israel, what conditions will it work? Enterprise/consumer)
 - Downsides? (operational nightmare)

(Less central to the scope but to cover, if time permits)

- *Exit*
 - *Average age of portfolio companies*
 - *Exit options and issues (cross-listing IPO, cross-border trade sales)*

- *Human capital*
 - *Hiring practices, backgrounds of partners and junior members*
 - *Focus on skills for deal flow? Portfolio support?*

V. Environment

- *Institutions upstream and downstream (i.e. public markets or late-stage, angels)*
- *Tax structure and incentives*

VI. Other comments

APPENDIX B: INTERVIEW EXCERPTS

This section includes excerpts from a representative subset of the interviews conducted with entrepreneurs, professionals, investors, and experts. These observations informed the framework, the analysis, and recommendations presented in the thesis.

Interviewee -- Kumar Ramachandran, Vignani, high-end engineering services startup

Key Observations:

- Given the long lead times and challenging entry opportunities in the domestic market, start ups should look at the global markets initially. Once established in the global market, it would be easier to penetrate the local market. On the global market front, more opportunities are attractive. Particularly, there are opportunities in areas like high-end engineering services outsourcing (unlike the well-played-out BPO, low-end KPO etc.) and product startups (particularly those that do not rely on local large-scale manufacturing).
- Distance from the customers, i.e. access to market, we find, is a key issue. I suggest that entrepreneurs actively seek investors that add value beyond dollars. Corporate VCs are attractive in that respect, since they can help access key customers and add credibility early on in the life of a startup.
- Most startups need a small amount of capital for the first round. This is usually too small a round for most big VCs. I recommend that startups look into other

sources of capital – e.g. high net worth individuals (one point to note here is that industrialists with a lot of personal wealth are not as good a source as technology-savvy angel investors or even government sponsored funding, since the former cannot add much value beyond the financial investment).

- I find my experience and connections to Silicon Valley roots very helpful in transplanting the startup ethos, bringing in potential employees and professional connections useful for customer acquisition, financing and strategic advice.
- Startups are not yet glamorous in Indian environment. The idea of working for largely equity is still not popular (justifiably so to an extent, since there is not enough of a safety net against failure)
- I have found strong mentors in a few different venues – Silicon Valley connections, industry contacts, venture capitalists, academia

Interviewee -- Anand Deshpande, Persistent systems, outsourced product-development company

[Note: This firm is not a recent startup and has been there for more than 15 years, is 4000-employee strong and has more than \$100M in annual revenues. However, it was included since it offers a unique and valuable perspective of contrasting the entrepreneurial ecosystem in India now versus a decade ago.]

The firm is focused on outsourced product development and has more than 175 customers including five out of the top ten software companies in the world. The firm was bootstrapped initially and operated without external financing for a decade. It took external funding from Intel capital in 2000 and raised additional funds from Norwest and Gabriel ventures in 2005]

Key Observations:

- While there are problems with the entrepreneurial ecosystem in India today, the situation today is much better than the one a decade or so ago, when even a simple task like setting up a business phone line took multiple years. Many of the administrative and overhead tasks are more efficient today and can be outsourced to dedicated partners who specialize in handling such overhead.
- Some of these issues are a function of time. For example, we need more successful exits and early success stories to jumpstart the cycle (more risk-taking from entrepreneurs and investors → better quality startups → better exits etc.)

- Disaggregating distribution – especially when dealing with global markets, startups should find ways to disaggregate distribution and channels from their core product management. Perhaps VCs can be of help since they can manage this across their portfolio.
- Domestic Market – is still not large, PC and software sales are increasing only slowly.
- Entrepreneurs should have realistic expectations. It takes five to seven years to build a sustainable strong technology company. Entrepreneurs today often neglect that and seek instant success or ‘flips’. As is the case for entrepreneurs everywhere, one of the hardest challenges is the mindset required to handle the situations – where the buck stops with the entrepreneur, there is little structure and very few resources.
- Hiring, particularly management and sales talent is a key issue. The increasing pool of US returnees is a recent source of hiring professionals with global experience. Firing can be difficult too, given the cultural expectations (versus US). Employees prefer cash compensation to equity and have very high degree of mobility.
- Especially for companies targeting the global market, it is vital for the team to understand the nuances of product marketing – pricing, promotion, channel strategy, product line extensions etc. Many rookie entrepreneurs make the mistake of starting with cool technology and failing to evolve to the essential question of what the market for the product is and how it can be sold. This is a

problem even for US startups with ample access to the market. It gets worse when the product team is in India and attempting to target a remote market.

- Product management and product marketing disciplines are areas that need more attention. One solution is to have operations close to the market but this may be costly to do in the early stages of a company. In case of the founder's company, the US offices were established much later in 2002, mainly because of the cost issues.
- For an entrepreneur, seeking venture money is a crucial step and should not be done lightly. There is a clear downside, that of losing equity and control. The entrepreneur should choose to raise money only if this negative is outweighed by the value added by the investor financially and reputation-wise. For example, Persistent systems raised only a small amount from Intel capital but gained credibility and endorsement that helped with future business expansion.
- I returned to India after completing my PhD in the US and working in a research laboratory for a short while. I then started the company with a couple of friends and tapped into academic and professional networks in the US for both strategic advice as well as potential business development partnerships. My father was on the board of directors and I sought connections with (the few) entrepreneurs in town and faculty members from IIT Bombay. I even used the initial customers as mentors. The company has a formal board of directors, which is invaluable for corporate governance and strategic advice. I recommend putting together a formal board after the startup reaches a certain scale and size

(50 people). If your startup has venture-backing, you have the advantage of access to the VCs for frequent advice, strategic and tactical.

- Raising money after establishing a track record and revenues ensured that the move was not disruptive to the company's mode of operation. The fund-raising was more a strategic event than a financial one, in that it helped scale the business and bring in key advisors from the venture firms. Raising money too early would have forced the company to adopt a different path than its original services → products path.
- In the early years, an entrepreneur should not overfund the company. This heavily dilutes the entrepreneur and often masks other key issues (wrong market, wrong product, or wrong team) for longer.
- A lot of the initial successes in software/Internet startups will need to combine online and offline channels. A clicks-and-bricks model is most appropriate for a market like India where Internet access is not ubiquitous, labor is cheap and physical facilities and services are considered more convenient. This model of "Internet enabled solutions", combining physical facilities and online tools, has seen success in airline and railway ticket sales, matrimony and dating, auto websites etc.
- Services-based models have matured and there is little startup opportunity left, barring niche outsourcing and Knowledge-Process-Outsourcing (KPO) plays.

Interviewee -- Early employee, IT product startup, active member of Mobile

Monday, Bar Camp Bangalore

Key Observations:

- While there is some support for a startup in its initial formative stage of a startup (access to resources such as BCB, TiE, business school faculty) and for a later stage e.g. 3 years old company (access to NASSCOM, professional investors, formal board of advisors), there is very little support for startups in the intermediate stage (6 months – 3 years). It is this gap that needs to be bridged, in terms of both money as well as mentorship.
- I found the other founders through professional networking organizations. Professionals tend to choose branded established companies over startups and have no startup success stories to motivate risk-taking. A related issue is the relative absence of high-tech marketing talent and lack of venues to connect technical talent with marketing professionals. Forums like Open Coffee or TiE do aid networking but are not as interactive. Most of the role models inspiring organizations such as Bar camp, Open Coffee etc. are foreign (e.g. YCombinator) since the ecosystem is just slowly falling in place in India.
- Entrepreneurship as a career option needs to be promoted right at the undergraduate and graduate level. Retaining talent has become difficult due to the escalating salary hikes in the IT industry. As a result, startups are forced to match them versus offer the typical equity-heavy compensation. Sources of hiring are universities, services firms, professional networks such as Bar Camp,

Mobile Monday and even unusual venues such as advertising on mailing lists of apartment communities that house IT professionals etc. Startups have also tried to match the big company perks such as company social events, free food etc.

- Forums such as TiE are good for networking and professional connections but not as much for peer mentorship for entrepreneurs. A lot of companies struggle and fail in the early stages due to inadequate resources and guidance. Having good mentors and access to common pool of resources (such as those offered by incubators or angel networks) could prevent some of them from failing.
- Forums such as Bar Camp, Mobile Monday, Head start are very effective in the very early stage of a startup (to find co-founders, hire early employees, brainstorm ideas, discuss technology advances etc.)
- University connections to students and faculty are useful for vetting strategy and promoting awareness of the startup but not as useful for hiring.
- Investors are very useful in the later stage (1-3 year old startups) once the team identifies the right market segment, builds initial versions of the product, and achieves some traction.
- The one-year old startup I am part of currently does not have a formal board and went through an internal debate about the merits and demerits of forming a board this early. On the positive side, the team could definitely use the strategic advice and key customer connections that a right board can bring. On the flip side, it is a huge cost of time and may distract the startup from its current initial milestones. The startup has decided for now to loosely form a 'virtual board' of informal advisors.

- The startup also maintains frequent communication with the investors about the product roadmap and progress in business development.
- Funding is indeed a problem but it often masks other big issues with the startup. E.g. poor IP/protection, difficulty in hiring or finding right customers, inadequate administrative resources, incorrect market assessment etc.
- As entrepreneurs, we find that VCs in India are reluctant to take risk (perhaps understandably since they too have not seen many early-stage success stories). Many of them are dabbling in late-stage private equity and manage large funds.
- There is also an inevitable distrust and misalignment of incentives between VC's and entrepreneurs (who are reluctant to give up ownership and control)
- Finding the initial set of customers is often what makes or breaks the early-stage company.

Interviewee -- Aditya Mishra, Active member of Bar Camp Bangalore and Founder of Kickstart.in

Key Observations:

- There is a lot of positive energy and entrepreneurial activity. Upcoming organizations such as Bar Camp, Head Start and events such as Proto are helping entrepreneurs and potential entrepreneurs come together.
- In the past, there were even more significant bottlenecks – for example, the relative dearth of Venture Capital, the conservative risk-averse attitudes etc. These conditions have been changing.
- Among younger professionals, there is a slow change from ‘placement’ mindset to ‘opportunity’ mindset. Even though there is still a herd mentality (influenced by lifestyle, salaries of MNC positions), the spirit of entrepreneurship previously low is changing very rapidly.
- Many of the startups being pitched today have glaring drawbacks – poor or indefensible ideas, insignificant market, incorrect approach or business models, or inexperienced team etc.
- The main problem with seed or early-stage funding is that the opportunities at that stage seem to be higher risk but not proportionally high return ones.
- Startups should choose VC firms that are not in a fly-by mode and have established operations for the long haul. You should be selective about the investment philosophy of the venture firm. Many of the VC firms who do

technology-investing in the US set up operations in India only to invest in entirely different ways e.g. late stage private equity, retail, infrastructure etc.

- Although Angel investors and angel groups have been around for a while, they have not been as effective mainly because the role is not well-understood by many of the angels, high net worth individuals with little experience in US-style angel investing or technology expertise. Professional investment in private equity is a big change in mindset and requires more than putting money in a startup and sitting back.
- The underlying economics of seed investing are shaky, particularly given the alternatives. PE returns and stock market returns are high and the absolute returns from seed investment are very low, especially as perceived by US-based Limited Partners who typically have other better options. One class of limited partners that may be interested in strategic reasons along with financial returns are large US technology companies (such as Motorola, Google, IBM etc.) looking to get into the Indian market and gain early and inexpensive access to the Indian startup ecosystem.
- Most people think companies are built in garages. Real world is not romantic and startups need to be closer to the customer. Talking to customers should become part of the mindset but there is relatively little precedence.
- Domestic technology market is largely consumer-facing and is still small. The US market is largely enterprise-facing and requires customer-facing/sales experience.

- Products versus Services argument is not really about the lack of product DNA in Indian companies. I think it is more of a lack of understanding that product companies have different characteristics than service companies, for example: stronger cash flows, scalability, customer acquisition patterns etc. Therefore, product companies require different behavior and expectations from employees and customers.
- A major ingredient missing in the Indian entrepreneurial ecosystem is a strong network of university-based research. Strong product companies require IP creation, strong research and development, professionals with experience and skills in solving scalable problems. Many successful technology companies (Intel, HP, Google) have benefited from the roots in and spill over from academic research. This is a big drawback in the Indian environment.
- Indian startups need to refine the art of product management – interacting with users, building product, talking to customers. This has been honed over decades in the US and is a matter of time and product discipline.
- I see this as a three-pronged problem that needs VCs, entrepreneurs, and universities to focus on solutions.
- In terms of interaction between the players in the system,
 - Entrepreneur – Entrepreneur: Upcoming organizations like TiE, Headstart offer venues for peer mentorship, conversations, and connections.
 - Entrepreneur -- Technologist: Bar Camp, Mobile Monday, ACM Chapters etc.

- Entrepreneur -- VC: Business plan contests such as the TiE-Canaan challenge, Startup demo events such as Proto.in, TiE forums etc.
- It is difficult to find mentors, partly because there are few successful entrepreneurs/executives to begin with and then find willing and motivated ones, among these few. Quasi investors are few in number and US-based angels not looking at Indian market closely yet.

Interviewee -- Founder of a mobile software startup, active member of entrepreneurial networking organizations

Key Observations:

- In my experience being part of the startup ecosystem for the last two years, I do not think that there are truly any seed-stage or angel investors. I am skeptical about the role of incubators, from personal experience with the incubation unit at my alma mater, as part of my earlier attempt at entrepreneurship.
- Except for a few outliers, most of the investments in India happen only after revenues are shown by the company. A Series A or angel investment in India is more like a Series B in the Silicon Valley/US world.
- Interaction with serial entrepreneurs or diaspora returnees with experience is quite useful. While there may often not be any tangible pointers passed on, it has a lot of intangible benefit through inspiring and motivating entrepreneurs, especially young and first-time ones.
- Local Indian Enterprise market is opening up, as large companies have started seeing benefits of what ICT can do to their operations and are willing to make investments in IT systems but need the appropriate kind of marketing, pricing suitable to them. So I see the local Indian enterprise market as a potential growth market.
- PC-based/Internet services market is not growing at the level it was expected. Mobile local market is a great market with two attractive segments – Providing access to another 200 million customers (rural); Enhancing mobile access in

urban areas by providing new services leveraging the existing infrastructure setup. this might accelerate if value chains are extremely vertically integrated and have more involvement from downstream players.

- In terms of the business models that have worked, there are various approaches – shrink-wrapped software, subscription and advertising, which have had varying degrees of success. I am not too familiar with business models in the enterprise space but many are quite optimistic about Software as a Service model for India.
- Some of the most difficult problems we had to encounter were around getting the paper work done in setting up a company, which include various filings with Registrar of Companies (ROC). It is extremely difficult to find dependable accountants, legal service providers especially since we are first time entrepreneurs with a technical background.
- Hiring is of course a key challenge, with the lack of good talent and salary expectations being roof high. We have used referrals, word of mouth, and connections through Mobile Monday, to access talent.
- Finding mentors is often a challenge. We have had to be careful to filter away wrong advisors. We have managed to find a good US-based advisor, a seasoned serial entrepreneur, ex-VC and a large company corporate development executive.
- We do not hire folks that are heavily ingrained with the services company culture, since we find it hard to make them unlearn their way of doing things and then later enable them to fit within a product company culture. We tend to

select those who strongly desire to be in product companies, which makes the sample set extremely small. Another approach is to hire young/fresh graduates (with about 1 or 2 years experience and train them)

Interviewee -- Pravin Gandhi, Venture Capitalist, Partner of Seed fund

[Seed fund is a new kind of VC fund to address the seed and early-stage funding gap. Some of the LPs in the fund are Google, Motorola and other large firms interested in participating in the venture activity in India]

Key Observations:

- The seed fund is mostly focused on startups addressing domestic markets (and other emerging markets). We typically do not insist on first right of refusal or any formal restrictions on the investee startups and tend to invest less than \$500K in each of the 5-15 companies we plan to invest in. We prefer funding startups in the local areas, so that we can stay actively involved.
- At the seed stage, the venture firms need to get their hands dirty and really understand the entrepreneurs, the local market, and the context. Why are there not as many seed funds? – risk-reward profile is skewed toward large funds, professionals in venture industry get much better individual returns from managing and investing larger funds.
- The role of angels is vital to the growth of an entrepreneurial ecosystem. In the US, typically these are successful entrepreneurs or executives in the technology industry with deep domain expertise and/or professional connections. Many of the individual high-net-worth individuals in India are not plugged into technology industry and often lack domain knowledge and experience to be an effective coach/seed-stage investor.

- Other options are beginning to take hold, for example -- angel networks such as the Indian Angel Network, Seed funds (which are to an extent, institutionalized angel investments), Entrepreneurship Networks etc. Incubators can serve the need in supporting very early-stage startups or commercializing university research.
- Our fund focuses on consumer Internet, wireless, IT infrastructure, and other technology-enabled plays.
- Transplanting concepts directly from the US market does not work as well and often require adaptation to the local context. For example, pure advertising-based models do not work in the Indian market today since the eyeball numbers are not yet significant.
- We get our deal flow from a variety of sources -- TiE forums, business plan contests, incubators, word of mouth, events such as Proto.in and a few walk-ins. We see hundreds of business plans in a year but a majority of them are filtered out because of quality. I do believe that quality deal flow will come with time.
- Since the companies are all at a seed stage, there is not much due diligence done in terms of looking at the financials or operations. We focus mostly on the investment thesis, initial strategy and the team's experience and background.
- Since early-stage deals are high-risk, we typically shoot for 20-30% ownership but amenable to different options based on the entrepreneur's track record and the risks assessed. We are typically less focused on the valuation but more focused on building value, at the earliest stage.

- A big issue is hiring/‘human capital’. With the booming economy and attractive IT salaries, it is hard to attract talented professionals to startups. However this is changing with success stories of startups trickling in and product development groups leaving MNC product companies in India (Microsoft, Yahoo, Google etc.) even though the latter tend to be US-centric. We help the portfolio companies in hiring – through recruiting agencies, educational institutions such as IIMs, IITs and professionals in the industry. We typically hold a board seat in our portfolio company.

Interviewee -- Sudheer Kuppam, Managing Director of Intel Capital India, Japan, Australasia, and SE Asia

Key Observations:

- Intel Capital focuses on investments in semiconductor/tech space. 60% of investments are international. We have made 5 investments in India the last year and currently handle 25+ companies in portfolio.
- We see more and more companies up and coming in the product space though deal flow continues to be in SW/IT/ITES services.
- Most pieces are in place – regulatory, statutory etc.
- Strategic investors may be better in current environment since they can provide credibility to the startup, bridge the gap to the market, put the startup on the map and facilitate access to key customers.
- Valuations hit the roof. Stock market yielding great returns. Trending toward late stage/PE and even PIPEs.
- Early stage: a few of these in place. In India, there are still not many VC firms with deep tech expertise. Local VC firms lean more toward pure financial partnership versus traditional US VC model of financial and strategic support.
- Intel's strategy in India is sector, stage and instrument agnostic in tech vertical. Open to looking at anything and everything that promotes technology adoption and bringing tech awareness to the masses. Given that it is a corporate/strategic investor, the deal flow is also limited to those that promote technology adoption and not part of a competing ecosystem.

- Primary sources for deal flow – proactive scouting (conferences, panels, tradeshows) as well as reactive deal flow from entrepreneurs, other VCs and intermediaries such as bankers or lawyers.
- Quality of deals is not comparable to those in Silicon Valley. There is some progress in this aspect and we are seeing more and more ex-pats taking part and bringing their overseas experience. The hardest part is getting from the idea stage to the next level. (Series A to series B).
- A key issue for our portfolio companies is the lack of a large group of experienced middle managers in India. Services companies have trained a lot of professional managers but their skills are not entirely applicable to an innovative early-stage product company.
- Due Diligence: Professional references, technical diligence by Intel colleagues, fit with investment theses, TAM assessment, Competitive landscape, biz model viability etc.
- Portfolio Monitoring: The VC firm conducts an annual portfolio-wide summit with 400+ attendees across the globe every year. Attendees include 150 industry executives, Intel executives and the portfolio company management.
- Intel Capital organizes “Technology days”, events to connect portfolio companies with potential customers and technology partners worldwide.
- Board seats – since board representation involves unlimited and criminal liability, we typically do not seek a board seat, which makes corporate governance a bit more difficult. However, do take observer positions on boards & rights to nominate an independent director.

Interviewee -- Alok Mittal, Venture Capitalist, Canaan Partners

Key Observations:

- Some things are a matter of time – e.g. it takes time for ‘VC financing’ models to take root, domestic market to be more sizeable with higher Internet adoption
- Dearth of seed capital: we do not need \$1B funds but 20 different \$50M firms. Currently growth-investing is in favor.
- Many of the opportunities in India are based on arbitrage. i.e. concept risk is low but execution risk is high.
- Our investment Strategy: Tech, early-stage (Internet, consumer, wireless), Domestic market.
- Support 3 models
 - US startup with offshore product development in India
 - Indian startup addressing local and/or emerging markets
 - Indian startup addressing high-end services (KPO, engineering services etc.)
- VC model: Venture financing is a relatively recent phenomenon. The model and investment parameters are not yet understood. Hence it is a matter of time requiring patience and the process can be accelerated only to a certain extent.
- There can be a big tailwind in growth if a couple of factors align -- Overall growth in Indian economy and markets continues; Technology (Internet, Mobile etc.) adoption by Indian customers. On the other hand, there can be a big damper on the growth story with global markets going south.

- Access to customers is a key issue. Building software products in India for US market is very hard to get right. Most of the products need to have a local context.
- Wage increases are a self-balancing phenomena to an extent and less worrisome. The lack of ESOP success stories so far meant that people are largely risk-averse. The absence of a significant pool of successful entrepreneurs implies the lack of mentors and advisors for potential startups.
- Management pool for startups: the supply pool is from the local firms and diaspora returning to India. Unlike the valley where startup is often a first option, most Indian professionals prefer the stability and prestige of MNCs and well-known companies. A key factor is the compensation. The equity-heavy compensation schemes in startups are not as appealing and seen as risky (often justifiably so, given the increasingly attractive rewards of MNC positions). This is bound to change as there are more startup (ESOP) success stories. So this is less a case of a cultural aversion to risk than a reflection of the current skewed risk-reward situation.
- Hiring talent is always difficult (and is so even in the US). The problem is aggravated in India by a couple of factors 1) relatively small pool of professionals with Tech-product-based experience 2) Ever-increasing wages and perks from IT MNCs.
- Angel investors: There is a big “funding gap”. While there are a few large VC funds, there are few small funds that can address the seed stage of the pipeline of startups. Today, this is largely driven by economics (late stage yielding large

returns yet at lower risk) and by the fact that the VC industry in India is relatively nascent and the risk-reward models are not yet visible. Incubators are often touted to be one of the solutions but have the danger of adverse selection. A market mechanism is much more reasonable and will eventually develop.

- There is a high volume of deal flow and most of it (60-70%) is reactive. The typical sources of deal flow are business plan contests/events, informal networks and angel networks. Incubators have not been a great source of startups unless they are tied to specific defensible research coming out of the university.
- A big number of the business ideas are focused around IT applications in consumer Internet, wireless or services. Fewer of them are focused around software infrastructure products.
- Equity/ownership – Indian entrepreneurs are more sensitive to dilution and often refuse external financing for fear of loss of ownership and control. This area needs more education and discussion.
- Similar to the process in US, we perform due diligence using contacts with key customers, professional references, personal networks, opinions of domain experts etc.
- Portfolio Monitoring: Board structure is designed to provide strategic advice and corporate governance. Well-formed boards play a big role in coaching the operational team and advising at key turning points in a startup. There is usually no shortage of capable board members since they need not all have been entrepreneurs or investors themselves. Indian entrepreneurs are still not adept at

making good use of the board of directors and advisors for key management decisions. Portfolio support is relatively more high-touch compared to US-based startups. Key areas of focus when coaching an early-stage startup are – hiring issues, strategic advice, putting some control systems and processes in place.

Interviewee -- Sunil Bhargava, Partner in Tandem Entrepreneurs

[Tandem Entrepreneurs is a new vehicle through which founders can get both human and financial capital. It has a co-entrepreneurship model and combines sweat connections along with capital; Its partners all have extensive prior operating and entrepreneurial experience]

Key Observations:

- The cost of building a certain class of startups is reducing due to internet platform that they can build on and social and search engine marketing that reduce early channel cost.
- Some Indian business models that are effective: transplant of US models that start out local but can be extended globally.
- Entrepreneurs need to be in an ecosystem where they leverage the experience of people who have done it before and are doing it now. This is a key missing ingredient in my opinion.
- There is not enough clarity on why (will people use this) or the go-to-market strategy or on the wow (that makes people take notice). This is worsened by poor access to the global market,
- Nature of startups: There are different types of entrepreneurs. One kind is the large team, large burn, a gigantic market and requires large VCs. But this approach is only appropriate for a few small opportunities and requires big home run exits. Another type of entrepreneurs – walks before they run, well defined reasonable size market and possible larger market, ideas are leveraged

and quick to execute, exits likely to be < 50M\$ but could be larger. This kind can very much thrive in an Indian setting, given mentorship and adequate financing/direction.

- "Most startups fail" – is a myth. 1 out of 10 startups is wildly successful but 6 of them can be moderate successes and result in acquisitions by larger companies. (cited data about M&A exits vs. IPO), as features within large product lines (e.g. Picasa by Google) 'mindshare' play. Reason these companies were not funded before was the cost of building was huge. With SaaS and Salesforce, FB, Amazon S3 and EC2, the cost of building the product is substantially lower. This is leading to a "founder, not employee" culture.
- Indian market: Indian opportunities: "offline + online" combinations, "concept arbitrage"/Transplant plays (e.g. Indian version of eBay). Models we have experience and insight in the US and want to help a team replicate the model in India.
- Global market: get it cranking in India and then expand to US and global markets. Makes for good acquisition plays.
- Cross-border startups: Not mere outsourcing. A lot of startups doing product development and business development in both USA and India.
- Angel groups – This has not been very effective, mainly because they bring just money. They are very rarely interested or able to add sweat to the equation. In India there is also a lack of early role models and ex-tech-entrepreneurs. Groups like Indian Angels etc. are certainly going to make things better but some experienced people need to roll up their sleeves. Previously, the contribution

from these angel investors was only money. We definitely need more activity here in terms of investors who can be mentors. Indian entrepreneurs also need local role model equivalents of folks like Paul Graham and Joel Spolsky who have inspired and mentored software entrepreneurs in the US. We need to create an infrastructure similar to that in Silicon Valley: network of people who help each other, on ideas and execution.

- We also need more effective deployment of human capital – current VC model is very hit-driven and is moving more high-end. (Ref:innovator's solution), the low-end/too small market is not being served. Here's where seed-stage investors like Tandem, Ycombinator etc. can effectively address the issues. The Limited Partners in the funds are not passive investors like pension funds but tech titans, executives who can again add value and provide access to top-level decision-makers in business partnerships or acquisition discussions etc.
- Advisors can be valuable e.g. board of advisors. But the key issue is translating their generic advice into context. The advisors rarely have skin in the game. They do help in sanity checking ideas, playing the devil's advocate and perhaps technical advisors can help point to any 'gotchas' and assumptions. But they are rarely as helpful for strategic advice.
- Deal Flow – 90% of US applications have a team and an alpha product in place when they approach us. Indian applications about 50-60% of business plans we see have teams and some products. 30-40% of the deals are from a single person with powerpoint. A small % are proactive – us with an idea looking for a team, for example whitespace investments. Need to see better quality in

business plans, especially in marketing the concepts well (compared to Silicon Valley startups) Communication levels in US are more sophisticated.

- Due Diligence is often done via informal networks. We look for clear evidence that the team can execute. Sometimes though, we deal with incomplete teams and help connect with the rest of the team.

Interviewee -- Prof. Sadagopan, Faculty, IIIT, Bangalore

Professor Sadagopan is the Founder Director of the International Institute of Information Technology, Bangalore, a new generation Institute, promoted jointly by the Government of Karnataka and IT industry in 1999.

Key Observations:

- Many of the issues faced by startups will be resolved over time. It takes a decade or so to build the entire ecosystem.
- There is a big structural defect: no single inter-disciplinary university system like in the US.
- Other systemic issues that affect the ecosystem – e.g. the Indian tax treatment of employee stock options, legal assistance for setting up a new business etc.
- Funding -- Not a very long history of VC. Most of the VC laws have evolved over the past decade or so. Ref: Rafiq Dossani. Initial IT funds mostly were run by folks with banker-mentality. There are very few angels. VC's: domestic are more banker/lender types not ex-entrepreneurs. Int'l VCs are better. Corporate VCs can be useful to connect to key customers.
- Scaling beyond initial product launch necessarily requires venture funding and often companies fail to raise money and fail to survive. Another option not as attractive and very expensive is private/debt money.
- Domestic market is nascent, and limited to certain areas: ringtones, vas. Big driver will be Internet adoption.

- US market: need to know consumer behavior; very difficult to do remote PD. Better chance to do enterprise (Letter of Intent etc. are standardized). Kitchen-restaurant model, although prevalent, is not really a true startup.
- Lack of social security – No fall back safety net from failure of a venture
- Access to Market -- Indian startups are at a disadvantage when targeting a global market. E.g. games, consumer apps – it is crucial for product folks to be clued into consumer behavior and this is hard to do from a distance. In response, many startups have adopted a “kitchen-restaurant” model, where the sales and business development are set up in the US and the product development operations are set up in India. While this makes for a cost-effective operation (if the coordination costs are not too heavy), it does not truly qualify as an Indian startup and does not contribute as much to the local ecosystem.
- Another approach that has worked is companies that start out focusing on domestic market and expand to a global market. (e.g. Tejas, a telecommunication equipment startup that used its success in the local Indian market to expand to the International market).
- The pure export-driven startups (a la Israel: local R&D and aim to be acquired by US companies) are few in number, primarily because of relatively fewer initiatives to commercialize academic research & development.
- Domestic market until now was not thriving. But now consumption economy is thriving in India. E.g. mobile phone usage, VAS markets.

- There are good examples of how IT (even if not innovative, in the pure technological sense) has improved efficiency of low-tech markets in India. E.g. Online and mobile services for railway ticket sales, etc.
- Many startups seem to manage to come up with a single successful product but fail to translate it to the next product and take a long-term approach on the product evolution. Startups like iFlex managed to develop a line of products and successfully were acquired by Oracle.
- IP Laws: weak, not a strong history of copyright protection
- There is a lack of early role models. There will be more role models when the current crop of entrepreneurs rise in careers and can help the next generation of entrepreneurs in 5-10 years.
- Good VCs can bring global access and mentorship. E.g. Intel capital puts together an annual meeting of the portfolio companies and CXO's, making connections.
- No MIT \$50K equivalent e.g. that sparks entrepreneurial energy and mentors contestants to through initial nurture of the idea.
- Everyone is in sequence: VC, Legal, marketing are all present but not within context.
- Risk-aversion: justifiably so. No role models. This is changing a bit, cooler to work in startups. No social security. ESOP stories beginning to circulate.
- Mentality – “Cultural aversion to failure”-- There is some truth to the notion that there is a culture of risk-aversion (society looking down on failures, especially in the middle-class educated strata) but some of the factors are

systemic and tied to the stage of development of the economy. Recent successes in the IT sector have 1) reduced the risks involved given the backup options 2) increased the risk tolerance of the new breed of potential entrepreneurs. Graduates' wanting to be entrepreneurs is a cyclical trend, tied to economic conditions and macro factors as well. The ingredients are there on paper e.g. capital, IP help, R&D, overhead assistance etc. but what is missing are successful examples of ideas → products people and serial entrepreneurs, who may be found among the current crop of executives and entrepreneurs. . Risk-averse culture: no wealth protection/social security etc. so partly justifiable.

- US returnees have been active in founding startups. Diaspora has played an active part in starting or joining early-stage startups.
- Startup employees with experience in services firms do bring valuable process discipline to the startups but may not be appropriate for product-based innovation and risk-taking.

Interviewee – Sushanto Mitra, Chief Executive Officer, Society for Innovation and Entrepreneurship (SINE), Mumbai

Key Observations:

- Funding ‘gap’ between personal/incubator-funded to a formal 1st VC round.
- Distance from the market: is often an issue for startups addressing the global market. One solution we are exploring is tie-ups with university incubator programs in the US, UK etc. so that the benefits can be spread across the portfolio of incubated companies. Merely having a skeleton operation in the US often does not help much and involves too high a cost at such an early stage firm.
- There are not enough examples yet of successes and role models
- Forming startup:
 - Demand/Supply gap for tech professionals. High-tech entrepreneurship in India is relatively new versus mom and pop shops or family-run local businesses. Venture funds are somewhat reluctant to invest in tech companies since the models are largely unproven and there are many opportunities in late stage companies. This may change as venture capital matures in India. The risk/failure-aversion is reducing as it is becoming more of an option for recent graduates to join startups.
- Building/Growing startup:

- Domestic market versus Global market: The latter is hard to build products for, without the sales and marketing context and runs the danger of over-engineering the products.
- Incubation Model:
 - Teams have to be comprised of IITB students, alumni and faculty.
 - Physical incubation space within the area – office, facilities, IT, administrative help. In return, the incubation cell takes 4-8% equity stake.
 - Historically, the areas of focus have been IT products but also expanding to others from mechanical engineering, rural, bio-sensors etc.
 - The tenure of the incubated company is 3 years after which the company graduates.
 - In addition, the incubator invests as either loan or equity of \$2500.
- The key benefits of being under an incubator umbrella are
 - Initial investment – primary help
 - Administrative and facilities help
 - Prepare the firms for future Angel/VC funding rounds and key customer deals.
 - Business orientation and networking
 - Connect the entrepreneurs with the university on one hand and VC and customer connections on the other.
- SINE is run as an independent non-profit.

- We assist in hiring for the startups since we can tap into the IITB Alumni and student pools. From the company perspective, funding and hiring are two key challenges.

\$2500 → [[\$100K]] → \$2-3M

Gap in the \$100K range and there is not much supply of funds in that stage. Typically VCs tend to come in at a later stage after the company reaches a few milestones. To fill that gap, there are a few organizations coming into existence, e.g. angel network organizations such as the Indian Angel network or the Mumbai Angel network. The incubators also have relationships with large players in the technology industry (Microsoft, Intel etc.) which could be leveraged by the startups.

- Mentoring/Advising: Many startups do not have formal board of advisors at a very early stage. Entrepreneurs can definitely use mentors but it is often hard to value the intangible benefit from having mentors/advisors and is de-prioritized. Incubated companies have the advantage of a 3 year gestation period during which the company gets adequate help and support to hit the initial milestones of product and business development. Hence they tend to have better survival rate. We have also helped incubated companies find key mentors/advisors from successful IITB alumni, for example.
- 4-8% equity stake is typical and it depends on whether the IP comes from IITB research. The key challenge is valuing the company and convincing entrepreneurs that relinquishing a percentage of ownership is a risk that can pay

off great rewards later, a key requirement for equity/venture financing model to work.

- In addition, incubators also provide education and training to the young startups via tech talks, events, workshops on key aspects of running the business.

Interviewee -- Padmaja Ruparel, Executive Director, Indian Angel Network

Indian Angel Network – first and the largest group. Grew from 5 members in 2006 to more than 60 members by the end of 2007 and have begun doing investments across multiple sectors. The focus has largely been on Indian startups. In comparison, band of angels in Silicon valley has ~150 members.

- The organization's institutional members are some of the top-tier VC funds and premier tech companies, who are motivated by the benefit of getting in early on quality deals)
- From the angels' perspective, having institutional members ensures a higher likelihood for the startups to raise future rounds of funding.
- Role of IAN in helping startups:
 - Selling – establishing key customer connections, structuring deals
 - Hiring – Attrition and retention are key issues. The angel group helps address both issues by mentoring entire team and finding right people etc.
 - Building a brand – by investing and supporting the startup, we add to the investee brand.
- We track the progress of the company through board membership, frequent informal discussions with the founding team.

IAN – has been steadily building credibility and has often been endorsed even by entrepreneurs who were declined. They see themselves as on the same side of the table as the entrepreneur vs. VC.

Structure of IAN: All deal flow is vetted by the executive director of the organization. Typically, there is a monthly event where entrepreneurs present for ten minutes to a small group of investors and get instant and direct feedback and a yes/no. The shortlisted ones are passed to the next round of detailed interaction with a small subgroup of investors with most interest.

The individual members of the organization are typically successful serial entrepreneurs and CEOs/executives of companies. Membership is by invitation and involves a detailed internal review and approval process, since the organization is designed to attract people who are entrepreneurial and believe in the angel investing philosophy versus interested in being part of a “club”.

The goal of an organized angel organization such as IAN is to combine mentoring *and* investment versus exclusively one or the other. Organizations such as TiE do an excellent job at providing inspiration and networking but do not incorporate investment. Organizations such as IVCA or individual venture firms invest at a later stage and provide little mentoring, since a few partners’ time is spread across a large portfolio of companies.

IAN addresses this clear gap and tries to incorporate the mentoring and networking as found in forums such as TiE, and additionally leverages the network of investors in the organization. It also adopts a structured investment process and helps prepare the entrepreneurs for future VC rounds.

Angel investing: is both old and new. There have been instances of rich individual businessmen who invested their personal money into other small businesses but the current wave of angel investing is more organized and more focused on technology-driven opportunities. There are an increasing number of angels who are looking at private investing as an asset class to and support organized and a wider deal flow (versus investing in the few entrepreneurs who they knew personally), resulting in a new class of high-risk high-gain investment and grouping together to hedge the risks.

Relative to high capital-intensive industries such as manufacturing, IT and knowledge-based sectors are more amenable to angel-sized investments and smaller funding rounds. Most of the current focus for IAN and other angel groups is thus the umbrella of tech-based sectors.

Deal flow: As a branded investment group, it attracts a lot of deal flow, typically in IT, digital media, education, etc. The group is also connected with incubators and organizations such as TiE, NASSCOM and IVCA. Business plan contests and events are not as much sources of quality deal flow but help promote awareness. Most of the deal flow (~30-40 deals/month) is reactive and via referrals, repeat entrepreneurs, diaspora returnees etc. Geography wise, the group largely invests in India-based startups.

Interviewee -- Deap Ubhi, Founder of Burrp, consumer Internet startup

Company Background:

Consumer Internet & Mobile. More specifically, we're a social lifestyle listings company. What that means is that our focus is on building social applications on top of lifestyle related listings, such as local listings (restaurants, bars, etc.); TV listings; etc. HQ in Mumbai, independently run company with no links to any larger players

Can't comment on the revenues and profitability outside of the fact that we are a cash-burning company, but also revenue-generating, mainly through advertising.

Very nascent market, some room for concept arbitrage if the product is localized intelligently, softening the concept risk to a certain extent. Cost of doing business is another reason, although those are starting to diminish as the economy continues to prove its resiliency and strength. 7 city local presence in India. Angel funded in March of 2006. Series A led by a leading digital and traditional media company in India closed in November of 2007. Listed as one of the top 30 web 2.0 companies in the world by Business 2.0 magazine.

Founders Background:

Deap Ubhi, Co-Founder & CEO: Deap began his career helping develop Marsh & McLennan's strategic mergers and acquisitions group. After spending two years there,

Deap moved to a smaller leveraged buyout firm, Alpine Investors, in San Francisco, where he was part of the deal sourcing and deal execution team. Currently, Deap manages corporate strategy and administrative aspects of burrp!

Anand Jain, Co-Founder & CTO: Anand has 14 years of comprehensive technology experience in software. Anand has been working with carriers, device manufacturers and enterprises in the mobile/wireless domain for the past six years. Anand has worked for organizations such as Brience, AT&T Wireless, and most recently, Motorola China. Currently, Anand manages all aspects of technology and product strategy at burrp!

Currently, full-time team of 8, not including part-time community managers for the local cities that we are live in. Anand and I have been involved from day one, since we conceptualized the idea together. The conceptualization of the idea began informally in December, 2004. Formalization of the concept came via the angel funding in March, 2006. Prime motivation is to do something on my own, where my decisions directly affect the barometer of success for this company. Anand and I have been family friends for the past decade, so us coming together to do this was not some large, drawn-out process. It was quite natural to gain that kind of trust and comfort with him.

Key Observations:

- Hiring has been a major challenge in this country, especially on the engineering side. Unfortunately, this country is not the burgeoning bank of engineering talent that one

might expect. We've actually been approaching more and more self-taught engineers, since they display a true passion for the knowledge. The large IT institutions have not proven to be a good source of talent for us. We do not actively poach resources from other companies as well, but we've been the target of that kind of recruiting.

- The main "perk" that resources are starving for in India is a positive work culture and environment where they do not always feel like subordinates. We all work as peers here, and although people inherently understand and respect the hierarchy, we are all friends and intellectual equals in the company. Work accountability is highly performance based, so if people want to work from home one day a week, we don't care. We don't track vacation days, etc. – because all that matters is that you're performing at a very high level, that you are execution oriented and hands-on, no matter what your position, and that you're generally gelling and getting along with everyone else. When any of those things erode, it's usually time for you to leave.
- Our "customers" can fall into two categories – the users of our product; and advertisers. Our user base is mainly all a native Indian user-base, since the product is highly localized and relevant to them. Our advertisers comprise of both domestic and international brands, including online travel players, large retail brands, mobile handset brands, etc.
- Key challenges in acquiring users are obviously much larger, since the internet using population is a nascent market. We need more people to get on the internet itself, and some of those barriers are much more bureaucratic in nature. Some of the responsibility also falls on entrepreneurs in the space to build compelling applications

for the Indian internet user, something I think has been less of a focus, since concept arbitrage has mainly taken the spotlight with respect to product development in India.

- Key challenges in acquiring customers, especially with a predominantly ad-based model, directly follows acquiring users. Theoretically, with more page views and more users, comes more interest from advertisers to touch those users.
- Besides the slew of native startups, a lot of the big players are trying to "get India right." I believe the large players, i.e. Google, Yahoo, understand that they also need to develop and evolve products for the Indian internet user, even though the internet using base is quite small. Larger players have the staying power to stomach the long haul in India, and furthermore, they have the capital and the influence to change the direction of the wind, so to say. I believe that some of these larger players will end up being positive catalysts towards getting more people aware of the power of the internet.
- Our first round was an angel round from friends and family, so we were not too aware of the investing environment in India. After moving to India in June of 2006, the so-called early stage VC funds in India had just begun to get formalized. What is happening now is that there is this surplus of venture capital in the country that seemingly was raised as early stage capital. What I'm seeing is that more and more of that capital is being deployed downstream, to later-stage, lower-risk businesses. I believe the early-stage investor base in India has still not found the comfort level they seek with the general market for nascent products in India yet.
- Angel round was a family and friends round, \$100,000. Series A, as mentioned before, was a large digital and traditional media player for an undisclosed amount.

- The community of people looking to deploy money and people looking to raise capital is a small one here – it's quite easy to get to know all the players in the game and then maintain relationships with the ones you like.
- Company is still at a small size right now, so the board consists of one burrp! representative, one investor representative, and one independent.
- I've had quite a few informal advisors that have led me along the way as informal advisors. Most ex-entrepreneurs that have moved on to being VCs in India now have been a great source of advice for me. I am originally from the Bay Area, so luckily, I've had very open access to some heavy hitters from the Bay Area, including from companies such as Yelp!, Slide, Google, Yahoo!, Kiva, Myspace, etc.

APPENDIX C: RESOURCES FOR RESEARCH

Books and Papers:

- **Understanding Silicon Valley, the Anatomy of an Entrepreneurial Region**, edited by Martin Kenney.
- **Entrepreneurs in High-Technology. Lessons from MIT and Beyond**, Edward Roberts
- **The Money of Invention, How Venture Capital Creates New Wealth**, Paul Gompers and Josh Lerner
- **Accessing Venture Capital in India**, Report of a Conference Held June 1, 1999, Prepared by Rafiq Dossani, Asia/Pacific Research Center, Stanford University
- **Accessing Early-Stage Risk Capital in India**, Rafiq Dossani, Stanford University and Asawari Desai, TiE Inc
- **Is the Venture Capital Market in India Getting Overheated?** Report by Evalueserve Inc.

Online Resources::

- **VC Circle**, news website on Indian venture capital, private equity, mergers and acquisitions (www.vccircle.com)
- **Venture Intelligence India**, blog tracking Indian VC/PE investments (www.ventureintelligence.in)
- **Venture Woods**, startup and VC community blog (www.venturewoods.org)
- **Sramana Mitra's blog** on technology, business, India (www.sramanamitra.com)
- **Startup Dunia**, blog covering Indian startups, entrepreneurship, web 2.0 (www.startupdunia.com)
- **Webyantra**, technology blog that profiles Indian web products & services (www.webyantra.com)

Others:

Academic Courses: China and India (MIT), Venture Capital and Private Equity (HBS)
Events: MIT Sloan VCPE conference, South Asian Business Club events on the topic.

APPENDIX D: REFERENCES

¹ IT/ITES 2008 Projected Revenues at US\$64 Billion – NASSCOM report February 2008

² TRAI Quarterly Report 2008 on Internet and Mobile Usage in India

³ Understanding Silicon Valley, Page 177

⁴ Understanding Silicon Valley, Page 79

⁵ <http://www.illinoisvc.org/pages/definitions/61.php>

⁶ Entrepreneurs in High-Technology, Professor Edward Roberts, Page 129

⁷ Entrepreneurs in High-Technology, Professor Edward Roberts, Page 28

⁸ Indian Venture Capital Report 2007, Dow Jones Venture Source

⁹ Indian Venture Capital Association Presentation February 2008