सत्यमेव जयते

Government of India

ENTREPRENEURSHIP

education innovation employment culture wealth business environment finance

A Study by National Knowledge Commission

Entrepreneurship in India

National Knowledge Commission

2008

This report has been prepared by Amlanjyoti Goswami, Namita Dalmia and Megha Pradhan with support and guidance from Dr. Ashok Kolaskar and Mr. Sunil Bahri.

Table of Contents

List of Figures

List of Tables

List of Boxes

Acknowledgements

The Commission is grateful to all those who were generous with their time and provided valuable inputs during the study. At the heart of the report are the entrepreneurs, who responded with tremendous enthusiasm in sharing their experiences with the National Knowledge Commission (NKC). The one-on-one interviews with entrepreneurs in Pune, Kolkata, Chennai, Ahmedabad, Hyderabad and Bangalore, along with a few telephonic and questionnaire based interviews in Delhi and Mumbai, provided the foundation for the report. NKC would also like to thank Mr. Shantanu Prakash (Educomp Solutions Ltd), Mr. Sunil Gujral (Quatrro BPO Solutions Pvt. Ltd) and Ms. Guljit, for useful preliminary discussions. In addition, NKC acknowledges the logistical assistance and organizational support provided by the following: Ms. Manasi Phadke at the Mahratta Chamber of Commerce, Industry and Agriculture (MCCIA) in Pune; Mr. Khokon Mukhopadhyaya and Mr. Somnath Goswami at the Bengal Chamber of Commerce and Industry (BCCI) in Kolkata; Ms. K Savita (CII- Chennai); Mr. Malay Kantharia, Gujarat Chamber of Commerce and Industry (GCCI) in Ahmedabad; Mr. K.V.R.L.N. Sarma at the Federation of Andhra Pradesh Chambers of Commerce and Industry (FAPCCI) in Hyderabad and Ms. Usha Nagaraj at Federation of Karnataka Chambers of Commerce and Industry (FKCCI) in Bangalore. NKC would also like to thank the other important stakeholders – the financial community, including angel investors and venture capitalists, educational institutions, incubation centres, business associations and other relevant institutions as well as various entrepreneurial networks – for sharing their experiences and advice on Entrepreneurship in India. At the end of this report are profiles of some entrepreneurial icons. NKC wishes to thank them for sparing their valuable time in providing these narratives.

Dr. Ashok Ganguly
Member, National Knowledge Commission

Executive Summary

Why Entrepreneurship: Given the increasing significance and visible impact of Entrepreneurship in wealth-creation and employment-generation, NKC considers it critical to India's growth and development. It has undertaken this study to explore factors that have advanced Entrepreneurship in India as also various other factors that could further encourage and facilitate even greater growth.

Definition: For the purposes of this study and keeping in mind its key role in creating value, NKC defines Entrepreneurship as follows:

> 'Entrepreneurship is the professional application of knowledge, skills and competencies and/or of monetizing a new idea, by an individual or a set of people by launching an enterprise *de novo* or diversifying from an existing one (distinct from seeking self employment as in a profession or trade), thus to pursue growth while generating wealth, employment and social good'.

Methodology: The methodology adopted in preparing this report is based on one-on-one interviews with one hundred and fifty five entrepreneurs from diverse backgrounds, in selected cities across India, as well as collecting information from consultations with other relevant stakeholders in the entrepreneurial ecosystem (such as educational institutions, incubation centres, the financial community, chambers of commerce, entrepreneurial associations etc.) across the country.

Key Findings

- A successful Entrepreneurship ecosystem is the function of a number of factors working in tandem. Key 'Entrepreneurial Triggers' are: Individual Motivations, Socio-cultural Factors, Access to Early-Stage Finance Education and Business Environment.
- Prominent 'Motivation Triggers' are 'Independence', 'Market Opportunity', 'Family Background', 'New Idea', 'Challenge', and 'Dream Desire'. Motivation Triggers vary according to parameters such as region, gender, age, family background, and work experience. 'Challenge' is the principal 'Motivation Driver'. 99.4% of the entrepreneurs interviewed did not want to be in a routine job. 74% of the entrepreneurs interviewed received family support, underscoring its crucial significance.
- 63% of the entrepreneurs interviewed were self-financed, while other sources included banks, venture capital (VC), angel investors and state finance corporations. Among those financed by banks, a majority who approached banks (61%) did receive bank finance. Yet there is a widely held perception among entrepreneurs that it is very difficult to get bank loans at the start-up stage while becoming comparatively easier at the

growth stage. Perceptions regarding bank finance have not improved in case of entrepreneurs who started ventures after 2000 and are mainly in knowledge intensive sectors.

- 95% of entrepreneurs believe education is a critical success factor. Education is a key trigger to evoke entrepreneurial inclinations. 98% of the entrepreneurs are graduates. However, only 16% chose a specific sector as a result of their educational background.
- Nearly one in two entrepreneurs considered skill shortages in recruitment to be a problem of average importance, while nearly one in three considered it 'somewhat difficult' or 'very difficult' to find candidates with the right skills. More than a third of the entrepreneurs faced problems in accessing as well as retaining employees generally.
- 50% of the entrepreneurs experienced difficulties while seeking statutory clearances and licences. Two-thirds faced hassles while filing taxes and 60% claimed to have encountered corruption. Another hurdle was in accessing reliable information on registration procedures, finance and other schemes. 56% claimed that the paucity of quality infrastructure – especially transport, power, and telecommunications – was a critical barrier.

Key Recommendations

- There is a need to demystify perceptions of risk and failure by facilitating dissemination of best practices as well as documentation of unsuccessful ideas in the entrepreneurial space. Recognition and rewards right from the local up to the national level will energize and encourage new entrepreneurs. Involving entrepreneurial networks and associations will also help in giving visibility and encouragement to Entrepreneurship.
- An imaginative combination of assessing debt and equity would require positive efforts on the part of banks, financial institutions, VCs, angel investors and private equity (PE) funds. In India, financiers need to be more proactive in assessing the business opportunities generated by Indian entrepreneurs. Innovations in risk management will also reduce information asymmetry and make funding more accessible.
- Angel investors, VCs and PE funds are beginning to become more active, particularly in knowledge-intensive sectors, and need incentives for greater involvement. To create incentives for seed capital funding, some steps include the following: establishing a secondary market for smaller companies, creating new instruments for start-up funding and providing financial literacy to start-ups.
- Synergies between Education (including modern vocational education training/skill development), Innovation (converting ideas into wealth and employment) and Entrepreneurship should be encouraged. NKC

has already recommended the need to enact a uniform legislation for publicly funded research that would grant IP rights for successful results of research to universities/research centers and also entitle the inventor to a share of the royalties from commercialization, as a source of innovation and entrepreneurial advancement. India's innovation intensity could also improve significantly if more PhD and other research scholars are encouraged by providing a supportive environment for Entrepreneurship. There is also a need to significantly increase Business Incubation for Entrepreneurship (BIE) by comprehensively exploring policy options to improve access to financing. While valuable work is being done by Indian incubators, there is huge scope for them to become entrepreneurial themselves by providing services such as market data, helping in preparing business models, recruiting skilled employees, etc.

- Growing the pool of skilled people is a key priority. This entirely depends upon access to quality education. The key challenges in higher education relate to ensuring access, inclusiveness and excellence. In Vocational Education and Training (VET) there is need to completely overhaul and modernize current institutions and practices. Reforms in VET require innovative delivery models, providing incentives for states, ensuring performance-based training and assessment, re-branding, certification, encouraging learning-by-doing, incentivizing English speaking skills, ensuring flexibility of VET alongside the higher education stream, for easier crossover and choice, as critical success factors.

- Economic liberalization has been a key catalyst to encourage Entrepreneurship. There are a number of initiatives at the central and state levels which aim to improve the ease of doing business. In fact, the '*Doing Business Report 2008*' (published by the World Bank-IFC) states that India can jump 55 places from its current rank of 120th if some of the local best practices are adopted nationwide. Priority should be given to the *MCA-21 project* (initiated by the Ministry of Company Affairs) to fully automate processes of enforcement and compliance. Other suggestions to enhance Entrepreneurship include the following: meaningful implementation of the *Single Window System*; introducing a *Single Composite Application Form* as already done in a few states; introducing a '*Single Unique Company Number*' (for company, tax and social security registrations); reducing the frequency of tax payments for entrepreneurs from monthly to quarterly; creating specialized commercial courts; introducing Limited Liability Partnerships (LLPs); and creating 'one-stop shops' to provide all relevant information needed to start an entrepreneurial activity. There are a number of websites relating to Entrepreneurship in India. In this regard, NKC proposes to explore the possibility of having an all encompassing website on Entrepreneurship as a one-stop information portal for current and aspiring entrepreneurs. In addition, Entrepreneurship in India will also grow significantly with the spread of e-governance and quality infrastructure development.

Chapter I

Introduction: Why Entrepreneurship

1.1 Defining Entrepreneurship

1.1.1 Entrepreneurship means different things to different people.[1] Conceptually and in practice, the term hints of no stereotypical model. Yet its very etymology – derived from the French '*entreprendre* which literally means, 'to undertake'[2] – indicates the minimum characteristics of an entrepreneur.

1.1.2 From the perspective of economic functions, three crucial characteristics of entrepreneurial activity are: risk taking, innovation and venturing into new business activities for profit.[3]

1.1.3 For the purposes of this study and keeping in mind its key role in creating value, NKC defines Entrepreneurship as follows:

'Entrepreneurship is the professional application of knowledge, skills and competencies and/or of monetizing a new idea, by an individual or a set of people by launching an enterprise *de novo* or diversifying from an existing one (distinct from seeking self employment as in a profession or trade), thus to pursue growth while generating wealth, employment and social good'.

'Entrepreneurship is the professional application of knowledge, skills and competencies and/or of monetizing a new idea, by an individual or a set of people by launching an enterprise de novo or diversifying from an existing one (distinct from seeking self employment as in a profession or trade), thus to pursue growth while generating wealth, employment and social good'.

[1] Entrepreneurship has been understood to mean, among other things: 'the ability to create and build something from practically nothing' (J.A. Timmons, "The Entrepreneurial Mind", 1989); 'the creation of new economic opportunities' (Wennekers and Thurik, "Linking Entrepreneurship and Economic Growth", 1999); 'creating and managing vision and demonstrating leadership' (Wickham, "Strategic Entrepreneurship: A decision making approach to new venture creation and management", 1998, page 34); 'the ability to see and evaluate business opportunities' (Meredith, "The Practice of Entrepreneurship", 1982, page 3; see also the GEM studies that distinguish between 'need based' and 'opportunity based' entrepreneurship); 'a practice with a knowledge base' (Peter Drucker, 'Innovation and Entrepreneurship', page viii); 'an ability to assemble or reassemble from what is available into a new kind of activity' (Peter Marris, 'The Social Barriers of African Entrepreneurship', Journal of Developing Societies, October, 1968, as quoted in Thomas A. Timberg, ' The Marwaris: From Traders to Industrialists', 1978, page 19); 'the shifting of economic resources out of an area of lower productivity into one of higher productivity and yield' (The Economist, October 13, 2007, page 18 of the special section on Innovation, quoting Jean Baptiste Say) as well as 'an activity characterized by the goals of profitability, growth and innovative practices' (see Joseph Schumpeter's works generally, quoted in Kirby, supra note 1 as above, page 10).

[2] David Kirby, 'Entrepreneurship' 2003, McGraw Hill, page 13; see also 'Entrepreneurial Management: In Pursuit of Opportunity', The Intellectual Venture Capitalist: John H. McArthur and the work of the Harvard Business School, 1980-1995 (Ed. Thomas K. McCraw and Jeffrey L. Cruikshank. Harvard Business School Press, 1999); insight provided by Mohit Malik, Innova Consulting, New Delhi; coinage of the term is also attributed to the economist Jean Baptiste Say

[3] See McCraw et al in supra note 2 as above; see also Per Davidson, 'Researching Entrepreneurship', Springer 2004, page 1-3, who succinctly states that 'researching Entrepreneurship is fun, fascinating and frustrating…one of the fascinations is the richness of the phenomenon, which leads to one of its greatest frustrations, namely the lack of a common understanding of what precisely Entrepreneurship is'. See also Abhishek Goel, Neharika Vohra, Liyan Zhang, Bhupinder Arora' 'Attitudes of Youth towards Entrepreneurs and Entrepreneurship: A Cross Cultural Comparison of India and China', Indian Institute of Management (IIM) Ahmedabad paper; Goel et al summarise some of the existing approaches as follows: 'leader manager' (Mill, 1848; Brockhaus and Horwitz, 1986; McClelland, 1961); 'innovator' (Schumpeter, 1934); 'risk taker' (Brockhaus and Horwitz, 1986); 'with internal locus of control' (Rotter, 1966; as in B & H, 1986); and 'different from managers' (Penrose); quoting Cunnigham and Lischeron (1991), who understood the term from the following perspectives: 'psychological', 'opportunity', leadership and intrapreneurship (within organizations)

1.2 Role of Entrepreneurship in the Economy: Creating Value

1.2.1 The entrepreneur who implements 'new combinations of means of production' plays a crucial role in disturbing the status quo through innovation — or 'creative destruction' — and thereby becomes an agent of change.[4] As such, the 'dynamic equilibrium' achieved by a constantly innovating entrepreneur could generate the conditions for:

a. increasing opportunities for employment (comprising various competitive skill sets);
b. additional wealth creation;
c. introduction and dissemination of new methods and technology; and
d. overall economic growth.[5]

It is in the creation of more wealth, and in the constant innovation from prevailing to the next best practices, that the significance and importance of Entrepreneurship lies.

It is in the creation of more wealth, and in the constant innovation from prevailing to the next best practices, that the significance and importance of Entrepreneurship lies.

1.2.2 As such, the development of Entrepreneurship in a particular milieu depends not on a single overriding factor but rather on 'a constellation of factors' at the individual, societal and national levels.[6] Entrepreneurship depends on individual motivations, individual experiences, socio-cultural (including family) traditions, educational opportunities, availability of relevant skills and attitudes, supporting financial institutions and access to credit, existence of commercial trading centres, supporting infrastructure including trade routes with efficient transport and communication facilities, macro-economic environment and overall political stability[7]. It has also been argued that Innovation and Entrepreneurship flourish best in decentralized systems by empowered people, who are willing to explore new ideas as well as willing to deal with exogenous influences.[8]

---

[4] David Kirby, supra note 2 as above on page 15 quoting Joseph Schumpeter.

[5] See, for example Peter Drucker, 'Innovation and Entrepreneurship, supra note 1 as above, pages 1-7, who attributes the surge of employment figures between 1965 and 1985 and the creation of 40 million jobs in USA to Entrepreneurship. In his words, 'Where did all the new jobs come from? The answer is everywhere and nowhere; in other words, from no one single source'. See also, the results of the SEAF study, 2004, 'The Development Impact of Small and Medium Enterprises: Lessons Learnt from SEAF Investments', Report, Small Enterprise Development Funds, which stated that for every dollar invested on average, ten additional dollars were generated in the local economy, accompanied by the creation of new jobs, introduction of new business methods and integration into supply chains. See also Rafiq Dossani and Asawari Desai, 'Accessing Early Stage Risk Capital in India', Stanford-TiE Study, 2006, page 16; see also, Report of the Symposium on the Small Business Innovation Research Program, National Research Council, USA, 2007. See also, 'What it takes to be an Entrepreneur', speech by CK Prahalad to GLIM Chennai, Hindu Business Line dated February 25, 2008, as quoted in http://www.ibef.org; according to the provisional data of the Fifth Economic Census (2005) there are 42.12 million 'enterprises' in India engaged in different economic activities (*other than crop production and plantation*.) An enterprise is defined in the Fifth Economic Census as 'an undertaking engaged in production and/or distribution of goods and/or services not for the sole purpose of own consumption'. Five states - Andhra Pradesh, Maharashtra, Tamil Nadu, Uttar Pradesh and West Bengal together account for about 50% of the total enterprises in the country. The total number of persons working in all the enterprises is about 98.97 million. The overall average annual growth rate in enterprises per year during the period 1998 to 2005 was 4.80% and the average annual growth rate in total employment during over the same period was 2.49%.

[6] Dwijendra Tripathy (ed.) 'Business Communities of India: A Historical Perspective', 1984, page 18.

[7] See Tripathy supra note 6 as above, page 18- 19; Timberg supra note 1 as above, page 15 quoting DR Gadgil, 'Origins of the Modern Indian Business Class', 1958, page 1-16; see also, R Gopalakrishnan, 'Prosperity Beyond Our Cities by Spreading Enterprise', AD Shroff Memorial Lecture, October 17, 2007, page 8.

[8] R Gopalakrishnan, supra note 7 as above, page 3, 6.

1.3 Entrepreneurship in India

1.3.1 Entrepreneurship has been 'embedded in the Indian genius and is a part of its tradition'.[9] To quote the renowned economist, T.N. Srinivasan, 'India has been an entrepreneurial society…we had the entrepreneurial skill but suppressed it for too long a time… and now it is thriving.'[10] The entrepreneurial spirit is an ongoing characteristic of India's history, particularly visible in a number of communities engaged primarily in trading.[11] Traditionally, the Entrepreneurship of such communities is facilitated principally by the successful use of informal 'entrepreneurial ecosystems' and interdependent business networks.[12] Further, there is also a rich tradition within the Indian diaspora, spanning the past several hundred years, whose spirit of enterprise is legion.[13]

1.3.2 Entrepreneurship in India occurs in 'far more encompassing and far reaching ways than in developed countries', and could therefore be far more complex, 'for there is so much more that needs to be done'.[14] Commentators today celebrate the ubiquitous Indian attitude of '*Jugaad*' (a Hindi word roughly translated as 'creative improvisation…a tool to somehow find a solution based on a refusal to accept defeat, and calling on initiative, quick thinking, cunning and resolve…to quickly fulfill market demands at the lowest possible prices'[15]) as an entrepreneurial trait that has been as much a part of everyday Indian living as its rich tradition of philosophy and speculation.

Entrepreneurship in India occurs in 'far more encompassing and far reaching ways than in developed countries', and could therefore be far more complex, 'for there is so much more that needs to be done'.

1.3.3 The salience of Entrepreneurship in India has intensified in recent times, particularly with the rise in knowledge-intensive services. New entrepreneurs who do not belong to traditional business communities have begun to emerge in large numbers. Entrepreneurship has grown rapidly, visibly so, creating wealth and generating employment, especially in the past twenty years. Crucial efforts initiated after economic liberalization — including systematic attempts to reduce the 'licence raj', greater efforts to make finance more easily accessible to entrepreneurs and other institutional support to 'techno-preneurs' — have helped improve the climate for Entrepreneurship.[16]

---

[9] R Gopalakrishnan, supra note 7 as above, page 8.

[10] TN Srinivasan, in an interview to The Hindu, Business Line, April 23, 2007.

[11] See Tripathy, supra note 6 as above, for an overview of business communities in India at different epochs; see also, Timberg, supra note 1 as above on the Marwari business community; see also Claude Markovits, 'The Global World of Indian Merchants, 1750-1947: Traders of Sind from Bukhara to Panama'; see also Mario Rutten, 'Farms and Factories: Social Profiles of Large Farmers and Rural Industrialists in Western India'.

[12] This topic is explained in detail in the following chapter. Examples include community credit networks, forms of reciprocal social support, apprenticeships, business networks, the availability of markets as well as the influence of factors such as migration, in part influenced by geography. A web of social interdependence along with 'contact with other professionals, sharing a particular body of values…a sense of belonging and by the very nature of the alliances, sharing a community of interests' (Melvin Weber) are a part of such informal ecosystems that have already existed in the country.

[13] R Gopalakrishnan, supra note 7 as above, page 7; see also, Markovits, supra note 11 as above.

[14] Tarun Khanna, 'Billions of Entrepreneurs: How China and India are Reshaping their Future and Yours', 2007, page 20; see also CK Prahalad speech to GLIN Chennai, supra note 5 as above at www.ibef.org.

[15] See Pawan K Verma, 'Being Indian'; see also Vinay Rai, 'Think India', 2007, pages 29-31, 2007; also, Kamal Nath, 'India's Century: The Age of Entrepreneurship in the World's Biggest Democracy', 2007, page 3-5 where he extols Jugaad as 'innovation…a survival tool for Indians, where every obstacle became an opportunity'; also for a general overview of India's historical tradition of dialogue on matters beyond the speculative, see Amartya Sen, 'The Argumentative Indian', 2005.

[16] See Abhishek Goel et al, supra note 3 as above.

The software industry, in particular, its initial growth arising largely out of the 'interstices inadvertently left untouched by the State', has today taken giant strides, with the top companies working 'within the market and with a fuller understanding of the rules of international commerce'[17].

Thus, the opportunities created by today's global knowledge economy coupled with the 'unshackling of indigenous enterprise', have contributed to making India a 'fertile ground' for Entrepreneurship.[18]

1.3.4 Statistics on the growth of India's technology driven entrepreneurship are telling. In a recent survey by the Deloitte group, India ranks 2nd globally as home to the fastest growing technology firms. 82 Indian companies entered the Deloitte Technology Fast 500 list of Asia-Pacific Companies in 2007 and the companies that have made it to the Technology Fast 50 of India have an average three-year revenue growth of 489%.[19] In this respect, particularly in high skill innovation driven Entrepreneurship, the opportunities offered by complex and interconnected global networks are also relevant. The ability to 'adapt to changing market conditions and anticipate future technologies and economic trends'[20] and leverage across a large number of markets provides 'opportunities for exploiting economies of scale.'[21] As such, comparative knowledge leverage at lower costs would play a key role in the race to achieve economic competitiveness.

The opportunities created by today's global knowledge economy coupled with the 'unshackling of indigenous enterprise', have contributed to making India a 'fertile ground' for Entrepreneurship.

1.3.5 Recent surveys, such as those undertaken by Goldman Sachs and Pricewaterhouse Coopers, have estimated that India has the potential to be among the world's leading economies by 2050.[22] Further, India's economy can potentially gain significantly from the country's characteristic features — a democratic open society, a strong technology base (with capacity for leapfrogging), unparalleled diversity, vibrant capital markets (including growing private equity and venture capital markets), an increasingly youthful population (50% of India is 25 years and younger), a sizeable market of a large number of customers with vast unmet needs as well as an environment of full and free competition in the private sector.[23]

---

[17] Tarun Khanna, supra note 14 as above, page 24, 130; see also, The Economist, October 13, 2007, page 21 of the special section on Innovation, which also quotes Curtis Carlson, Head of California's Stanford Research Institute, stating, 'China and India are a tsunami about to overwhelm us'.

[18] See Tarun Khanna, supra note 14 as above, page 121, 126 ; see also references to recent acquisitions by Indian companies in the global market, especially Tata acquisition of Corus and Mittal Steel acquisition of Arcelor recently; also Rajat Gupta, 'Creating Indian Entrepreneurs', McKinsey and Company, 2001; see also Kamal Nath, supra note 15 as above, where he states that 'the sinews of the new Indian industry are respect for knowledge, knowledge systems and knowledge protection' at page 128; see also Abhishek Goel et al, supra note 3 as above, to quote, 'entrepreneurial activity has been identified as one resource that needs to be tapped by developing countries to enable them to compete in a globalizing market economy'.

[19] The Economic Times, November 25, 2007.

[20] See Bowonder, Kelkat, NG Satish, JK Racheria, 'Innovation in India: Recent Trends', TTMC Research Paper, March 31, 2006; also I. Haque, 'Trade, Development and International Competitiveness', World Bank, 1995.

[21] See Bowonder et al, supra note 20 as above, page 2. See also 'Innovation in India', report of the National Knowledge Commission, 2007, which surveys large firms as well as SMEs across India and confirms the rise in innovation activity.

[22] See Outlook Business, May 5, 2007; Goldman Sachs' BRIC report states that by 2050, India could have a GDP of $37.66 trillion, just marginally less than USA's estimated $38.51 trillion. The Pricewaterhouse Coopers report, 'The World in 2050' states that India could be the fastest growing economy by 2050.

[23] Vijay Govindarajan, Outlook Business , May 5, 2007.

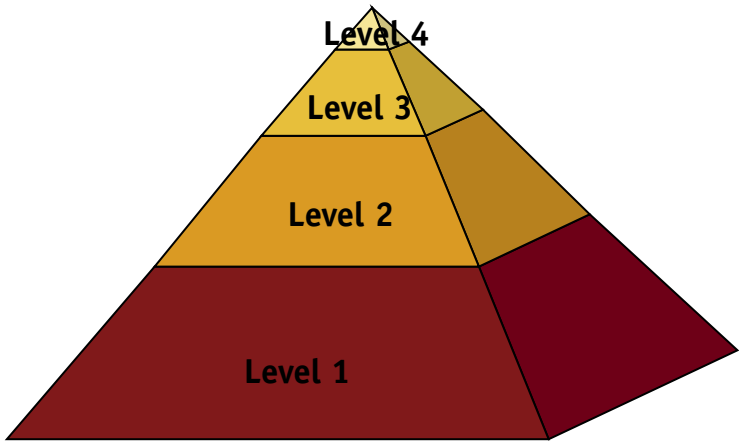
1.3.6 In this situation, India enjoys enormous potential for the creation of wealth through knowledge. Entrepreneurship and Innovation are the key drivers for generating wealth from knowledge, supported principally by the availability of skilled human resources, access to finance and the ability of the State to create an enabling environment.

1.3.7 The Entrepreneurship 'Pyramid' in India (in terms of sectors and numbers of people engaged) is made up of the following[24]:

- *Level 1:* Agriculture and other activities: Crop production, Plantation, Forestry, Livestock, Fishing, Mining and Quarrying.
- *Level 2:* Trading services: Wholesale and retail trade; Hotels and restaurants
- *Level 3:* Old economy or traditional sectors: Manufacturing, Electricity, Gas and Water supply
- *Level 4:* Emerging sectors (including knowledge intensive sectors): IT, Finance, Insurance and Business services, Construction, Community, Social & Personal Services, Supply Chain, Transport-Storage-Communications etc.

Entrepreneurship and Innovation are the key drivers for generating wealth from knowledge, supported principally by the availability of skilled human resources, access to finance and the ability of the State to create an enabling environment.

Figure 1.1: Entrepreneurship Pyramid

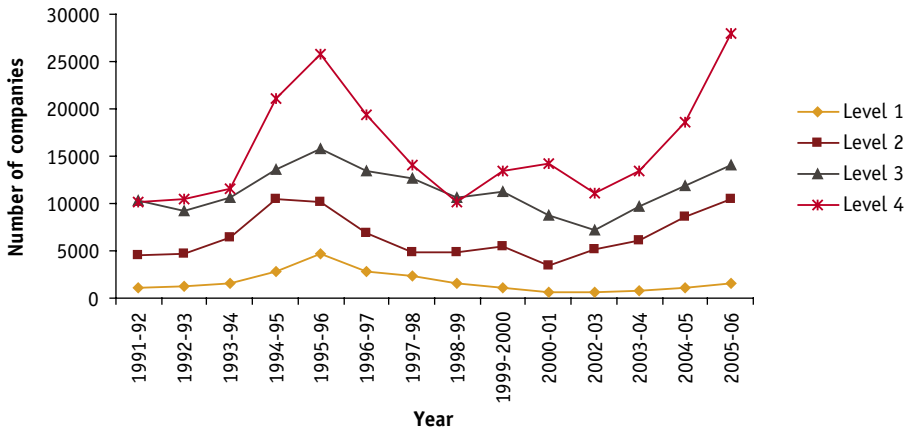


1.3.8 Levels 2 and 3 (Trading and Manufacturing) of the above pyramid comprise the traditional areas of Entrepreneurship. Level 4, on the other hand, is an emerging/modern sector of Entrepreneurship with high growth rates. In future we may expect a broadening of Levels 3 and 4 with the activities from Levels 1 and 2 migrating to the other

[24] This 'pyramid' is illustrative and provides an understanding of the type of sectors in which Entrepreneurship takes place in India. Some statistics from the the 4th CSO Economic Census (1998) were useful in this regard. While the said census does not cover enterprises engaged in crop production and plantation, we include them in our understanding of Level 1 of the Pyramid. As per the census, 41% of all existing enterprises in India (excluding those engaged in crop production and plantation) are engaged in activities falling under Level 2 and 18% are engaged in activities falling under Level 3. Further, Level 4 in this pyramid represents emerging/modern sectors of Entrepreneurship with high growth rates.

levels.[25] Such trends are already being seen upon analyzing time series data regarding registration of new companies according to sectors (See Figure 1.2). The number of new companies registered (a proportion of which relate to Entrepreneurship) has in general been increasing over the past years. The figure below clearly shows that the number of new companies in Level 4 has been growing at a much faster rate compared to those in the other levels. At the same time, it must be noted that most entrepreneurial ventures in Levels 1 and 2 do not register themselves as companies and instead function largely as self employed entities.

Figure 1.2: Registration of new companies according to nature of economic activity



*Data for 2001-02 was not available
Source: Based on data received from Ministry of Company Affairs

This study explores factors that have advanced Entrepreneurship in India as also various others that could further encourage and facilitate even greater growth.

1.3.9 **Design of NKC Study:** Given the increasing significance and visible impact of Entrepreneurship in wealth-creation and employment-generation, NKC considered the subject to be of immense importance in India's growth and development. This study explores factors that have advanced Entrepreneurship in India as also various others that could further encourage and facilitate even greater growth. The methodology adopted for this exploration includes structured one-on-one interviews with entrepreneurs and other stakeholders in the entrepreneurial ecosystem (such as educational institutions, incubation centres, the banking and financial sector, including angel investors and venture capitalists, as well as chambers of commerce, entrepreneurial associations, etc.) across the country. For the list of 155 entrepreneurs interviewed along with a brief background, see Annex I. For details on Methodology, see Annex III. Most of the entrepreneurs interviewed are from Ahmedabad, Pune, Bangalore, Chennai, Hyderabad and Kolkata.[26]

[25] In the NKC sample, among the entrepreneurs interviewed who started ventures before 1990, 77% of them belonged to the manufacturing sector, 11% were in the 'knowledge intensive services' sector, and 13% were in the 'other services' sector. On the other hand, of the entrepreneurs interviewed who started their business after 1990, 57% were involved in 'knowledge intensive services', 23% in 'manufacturing', and 20% in 'other services'. This could indicate a shift from Entrepreneurship in traditional sectors into emerging and high-tech areas. See also Tarun Khanna, supra note 14 as above at page 207. Further, according to the annual budget for 2008-09, estimated growth rates in services and manufacturing are 10.7% and 9.4% respectively.

[26] A few entrepreneurs from National Capital Region (NCR) and Mumbai were also interviewed.

Overall, responses from more than 200 stakeholders were collected. This study also refers to relevant literature on the topic, both at the academic and policy levels.

1.3.10 A classification of the entrepreneurs interviewed in terms of some key parameters such as sectors, turnover, employment, age, family background, gender and time period are as follows:

- **Sector:** The bulk of the entrepreneurs interviewed belong to the 'manufacturing' and 'knowledge intensive services' sectors. (See levels 3 and 4 of the pyramid above); in addition, an ancillary segment of 'other services' is also covered.[27]

- **Turnover:** While entrepreneurs revealed a wide range in annual turnover (from less than Rs. 1 crore to more than Rs. 500 crore), the majority in the sample report a turnover of less than Rs. 100 crore (< Rs. 1 crore: 22%; Rs. 1-10 crore: 35%; Rs. 10-100 crore: 30%). The median turnover was Rs. 5 crore.

- **Employment:** About 81% of the entrepreneurs interviewed have less than 250 employees each (<10 employees: 17%; 10-50 employees: 33%; 50-250 employees: 31%; >250 employees: 19%). The median number of employees is 44.

- **Age:** While entrepreneurs across a range of age groups (from 21 to 70) were interviewed, the median age of the sample of entrepreneurs is 43. In fact, one–fourth of the entrepreneurs are under 35, which enabled us to get valuable insights from younger entrepreneurs. The median age at which individuals in the sample became entrepreneurs was 27.

- **Family Background:** The sample comprises three types of entrepreneurs: first generation entrepreneurs, second generation entrepreneurs in the same business and second generation entrepreneurs in a different business. In fact, 63% of the entrepreneurs interviewed were first generation entrepreneurs, 22% were second generation entrepreneurs who started their own businesses and 15% were second generation entrepreneurs running their family businesses. Since the growth in scale and scope of Entrepreneurship is intimately connected to the increasing numbers of first generation entrepreneurs, most of the entrepreneurs interviewed belong to this segment.

- **Gender:** About 16% of the entrepreneurs interviewed were women.

While entrepreneurs across a range of age groups (from 21 to 70) were interviewed, the median age of the sample of entrepreneurs is 43. In fact, one-fourth of the entrepreneurs are under 35, which enabled us to get valuable insights from younger entrepreneurs. The median age at which individuals in the sample became entrepreneurs was 27.

[27] 'Manufacturing' includes auto components, steel, textiles, leather, ceramics, etc; 'Knowledge intensive services' include IT/ITeS, animation, business services, finance, healthcare, etc; 'Other services' includes services such as travel and tours, event management, catering, retail, etc. This focus does not take away from the importance of the other sectors, where very interesting developments are taking place and are subjects of very rich and detailed analytical study.

- **Time Period:** To explore factors across various time periods, the sample is spread as follows. 41% of the sample entrepreneurs started their ventures before 1991; 25% started during the 1990s and 34% after 2000.

Based on the interviews, this study concludes that a successful Entrepreneurship ecosystem is the function of a number of factors working in tandem. These are classified as 'Entrepreneurial Triggers'.

1.3.11 Based on the interviews, this study concludes that a successful Entrepreneurship ecosystem is the function of a number of factors working in tandem. These are classified as 'Entrepreneurial Triggers'.[28] Each of these triggers is discussed in the subsequent chapters. These are as follows:

- Individual Motivations for Entrepreneurship
- Socio-cultural Factors
- Access to Early Stage Finance
- Education and Incubation
- Business Environment for Entrepreneurship.

These are dynamic issues and are continuously evolving and need to be periodically monitored.

Chapter Summary

While there are various definitions of Entrepreneurship, there are some common themes. Entrepreneurship involves risk taking, being innovative as well as using knowledge and skills to set up new ventures or diversify from existing ones. Entrepreneurship adds significant value to the economy by creating wealth and generating employment. India has a rich tradition of Entrepreneurship, practised in diverse ways. Entrepreneurship is embedded in the Indian mindset. After economic liberalization, there has been increased salience of Entrepreneurship in India, particularly in the high growth and knowledge intensive sectors. The NKC Study examines Entrepreneurship across a range of parameters to identify and understand the principal enabling and hindering factors. Entrepreneurship flourishes as a combined result of a number of key triggers such as individual motivations, socio-cultural attitudes, access to early stage finance, education and incubation as well as the overall business environment. These are specifically referred to in this study.

[28] Conversely, when we asked entrepreneurs about the most significant obstacles in scaling up (from small to medium, or medium to large), the three main responses pertained to finance, human resources/skills and infrastructure. Newer entrepreneurs also have to deal with issues relating to obtaining clients, acquiring office space, getting a good team and marketing their product or service. As such, some of the key challenges facing the 'small and medium' sector in India today include the following: inadequate access to finance (including lack of financial information, access to private equity, venture capital and very limited access to secondary market instruments), fragmented markets, lack of easy access to national and international markets, lack of awareness of global best practices and innovations, delays in settlement of dues by larger buyers, inadequacy of quality infrastructure and of opportunities for marketing of products and services etc. See in particular, the 'Policy Package for Stepping Up Credit to SMEs', announced by the Finance Minister, as quoted in Annexure IV of the RBI Master Circular on Lending to SME Sector, dated July 2, 2007.

Chapter II

What Motivates Entrepreneurship

2.1 What are some of the Motivations?

2.1.1 There are varied approaches to understanding why some individuals decide to venture into Entrepreneurship and, thereby, 'break through traditional ways of doing things'.[29] Notwithstanding numerous studies on 'entrepreneurial traits', there are no 'well-defined psychological attitudes or profiles that describe all entrepreneurs or characteristics to which entrepreneurs generally conform'.[30] As Amar Bhide put it, 'There is no ideal profile. Entrepreneurs can be gregarious or taciturn, analytical or intuitive, cautious or daring'.[31] Some theoretical explanations of what motivates entrepreneurs include the following:

- The 'Achievement Orientation' or the desire to achieve purely for the sake of achievement alone'.[32]
- The interrelation between religion, norms, values, behaviour and the economy in a particular epoch.[33]
- The ability to comprehend opportunity, i.e. 'to reinterpret the meaning of things, fit them together in new ways' and 'see what others may have missed, such as an unsatisfied demand'.[34]
- The capacity to sustain a high degree of interest in the advancement and technological development of the industrial process and in the improvement in the scale of industrial operations.[35]
- The ability to make the best of what one has, in order to get what one needs, i.e. the capacity to innovate in figuring out the best ways to reach the market with minimum expenditure of time, effort and money.[36]

According to Amar Bhide, 'there is no ideal profile. Entrepreneurs can be gregarious or taciturn, analytical or intuitive, cautious or daring'.

[29] Mario Rutten, 'Farms and Factories: Social Profiles of Large Farmers and Rural Industrialists in Western India', page 23; see also paras 1.1 and 1.2; read with relevant footnotes in Chapter 1.

[30] See, for example, 'Entrepreneurial Management: In Pursuit of Opportunity', The Intellectual Venture Capitalist: John H. McArthur and the work of the Harvard Business School, 1980-1995 (Ed. Thomas K. McCraw and Jeffrey L. Cruikshank. Harvard Business School Press, 1999) who discusses various studies; to quote, 'Although this individually and psychologically oriented research has pointed to some interesting correlations, unfortunate consequences too easily result from such a focus. It implicitly suggests that, if one could only discern the psychological profile of an entrepreneur and then hold an individual up against that profile, one could predict whether that individual has the potential to become an entrepreneur, or is one already. Yet none of the proposed "profiles" applies to all entrepreneurs, and many entrepreneurs refuse to conform to any of these profiles.'

[31] Amar Bhide, 'How Entrepreneurs Craft', Harvard Business Review, March-April, 1994.

[32] Attributed to David McClelland, see Mario Rutten, supra note 16 as above, at page 23; See also , R Gopalakrishnan, 'Prosperity Beyond Our Cities by Spreading Enterprise', AD Shroff Memorial Lecture, October 17, 2007; see generally, David Kirby, supra note 1 as above.

[33] Attributed to the sociologist Max Weber, see Mario Rutten, supra note 16 as above at page 23.

[34] Peter Marris, 'The Social Barriers of African Entrepreneurship', Journal of Developing Societies (October, 1968), as quoted in Thomas A. Timberg, 'The Marwaris: From Traders to Industrialists', 1978, page 19; see also, the GEM studies on Entrepreneurship that distinguish between 'need based' and 'opportunity based' Entrepreneurship.

[35] Mario Rutten, supra note 16 as above at page 24.

[36] See the work of Saras D Sarasvathy generally on the 'affordable loss principle', at the University of Virginia, Darden School Foundation.

2.1.2 The NKC Study confirms that there is no single motivating factor that triggers the decision to become an entrepreneur. As seen from the figure below, the significant 'Motivation Triggers' are: '**Independence**' (stemming from the freedom to do 'one's own thing'), '**Market Opportunity**', '**Family Background'** in Entrepreneurship, a **'New Idea'** (with business potential), the prospect of **'Challenge'** offered by Entrepreneurship as well as a long cherished **'Dream Desire'** to become an entrepreneur.

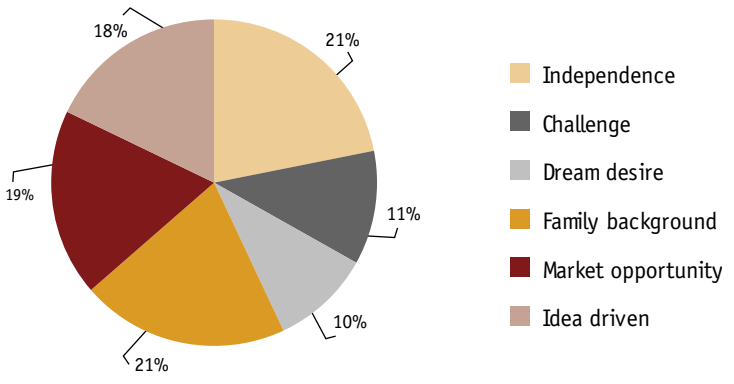
The entrepreneurs are driven more by their own inner drive rather than by external conditions. At the same time, 'market opportunity' as an additional motivating factor has also shown a steady rise over the last two decades.

2.1.3 'Internal' factors (such as Independence, Challenge and Dream Desire, i.e. the idea that 'by nature, man cannot *but* be an entrepreneur') cumulatively account for the bulk of the total motivating triggers (42%). This lends credence to the argument that the entrepreneurs are driven more by their own inner drive rather than by external conditions. At the same time, as elaborated in the paragraphs that follow, 'market opportunity' as an additional motivating factor has also shown a steady rise over the last two decades. This fact gives rise to the argument that macro environment plays a crucial role in influencing the initial decision of an individual to become an entrepreneur.

2.1.4 To illustrate the many reasons for becoming an Entrepreneur, here are some direct quotes from entrepreneurs interviewed for the NKC study:

- 'Entrepreneurship offers the opportunity to create something of one's own'.
- 'Entrepreneurs get the opportunity to make the road as well as walk on it'.
- 'Entrepreneurship allows people to think outside the box and make thoughts work'.
- 'Entrepreneurs are not confined to a particular area of business; they need to know everything about how business runs'.
- 'Entrepreneurship allows possibilities for constant self-actualization'.

Figure 2.1: Motivation to become an entrepreneur



- 'Entrepreneurship is about the ability to survive long enough till one succeeds'.
- 'Entrepreneurship is about the sheer joy of taking an idea and making it work'.
- 'Entrepreneurs are like lotuses – born out of dirt – and all they need is a flourishing environment'.
- 'Entrepreneurs like to do it their way – they are virtually unemployable'.
- 'Entrepreneurship brings pride, passion and self-respect, from doing things on one's own'.
- 'Entrepreneurship gives the freedom to try something new and break stereotypes'.
- 'Entrepreneurship provides a constant learning experience and a continuous process of growth'.
- 'Entrepreneurship brings a sense of belongingness derived from doing one's own thing and providing employment to many'.
- 'Entrepreneurship provides the opportunity to create wealth and make the best of the economic environment'.

2.2 Variations in Motivation Triggers

The NKC Study also reveals interesting variations across region, gender, age, family background, time period and levels of work experience.

2.2.1 Variations According to **Region**: The most significant motivating trigger for Entrepreneurship was found to be wide ranging across regions – from 'family background' being the prime trigger in Ahmedabad and Kolkata to 'market opportunity' serving as the most important motivator in

The most significant motivating trigger for Entrepreneurship was found to be wide ranging across regions – from 'family background' being the prime trigger in Ahmedabad and Kolkata to 'market opportunity' serving as the most important motivator in Bangalore.

Figure 2.2: Highest motivation – Variations according to region

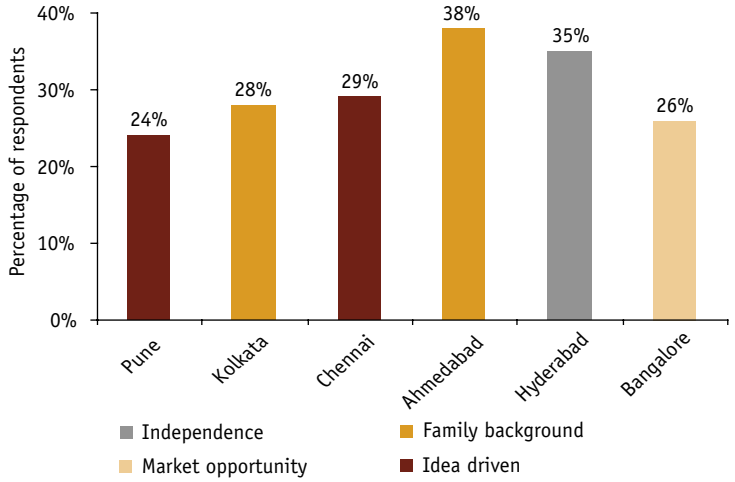
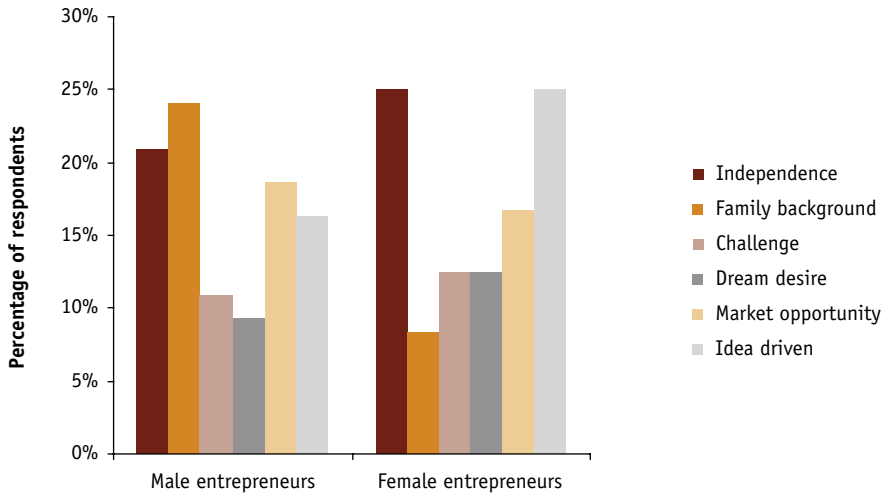


Figure 2.3: Motivation – Variations according to gender



Bangalore. Gujarat has been a traditional trading and business hub that may explain greater influence of family background as a prime trigger. In West Bengal, the seeds of Entrepreneurship were sown by migrants belonging to traditional business communities from Rajasthan. On the other hand, Bangalore, an IT hub and a centre of educational excellence, has emerged as an attractive centre for knowledge Entrepreneurship, driven by increasing market opportunity. Chennai and Pune have also been educational centres of repute, which may explain the pre-eminence of idea-driven Entrepreneurship in these cities. Interestingly, entrepreneurs from Hyderabad valued 'independence' as a trigger more than other factors.

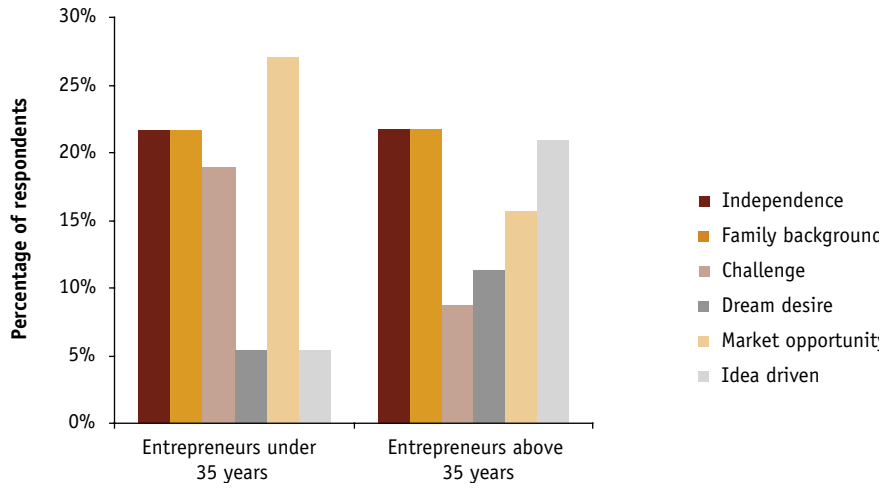
The study found that 'independence' is the most powerful motivator for the first-generation entrepreneur.

2.2.2 Variations According to **Gender**: For female entrepreneurs, the independence derived from Entrepreneurship, as well as the identification of a marketable idea are the most important motivators (25% each). Male entrepreneurs on the other hand, were found to be most significantly influenced by 'family background' (24%) with 'independence' (21%) coming a close second as a motivating trigger.

2.2.3 Variations According to **Age**: 'Idea-driven' motivators are more significant for entrepreneurs above the age of 35 and exert a minimal influence on those below 35. Further, 'market opportunity' is a far significant motivating factor for the below-35 age-group compared to those above that age.

2.2.4 Variations According to **Family Background**: The study found that 'independence' is the most powerful motivator for the first-generation entrepreneur (33%), while it has almost no significance in motivating second generation entrepreneurs (only 4% among those second generation entrepreneurs in the same business and only 3% for the second generation entrepreneurs in a different business).

Figure 2.4: Motivation – Variations according to age



Predictably, 'family background' is the prime motivating factor among the second generation, whether in the same family business (74%) or in a different one (34%), though the extent to which it serves as a motivation trigger varies significantly. Further, 'family background' is a more significant motivator for the second generation compared with the first generation. This may be because the second generation entrepreneur is more likely to be influenced by a family environment that extols Entrepreneurship,

2.2.5 Variations According to **Time Periods**: The NKC study found that 'market opportunity' has become an increasingly significant motivating trigger since the economic liberalization gathered momentum. 28% of those in the sample who started enterprises during 1991-99 and 22% of those starting after 2000 cited 'market opportunity' as the main motivating factor, compared to 11% of those starting enterprises

The NKC study found that 'market opportunity' has become an increasingly significant motivating trigger since the economic liberalization gathered momentum.

Figure 2.5: Motivation – Variations according to family background

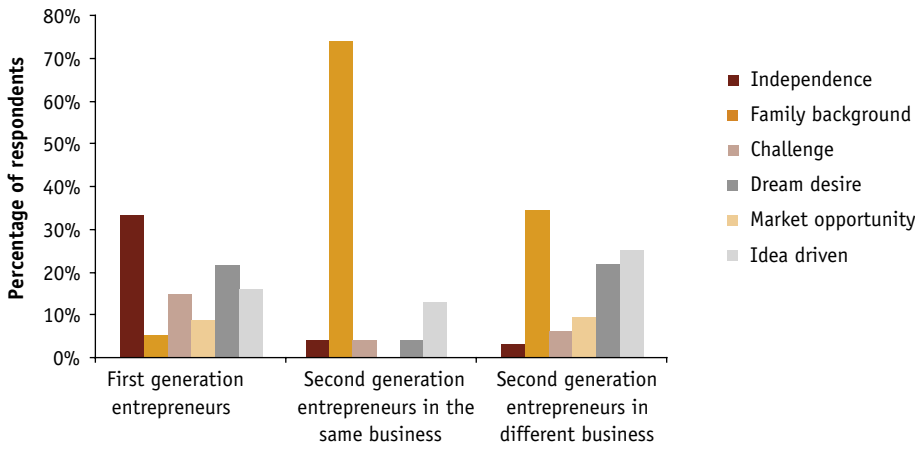
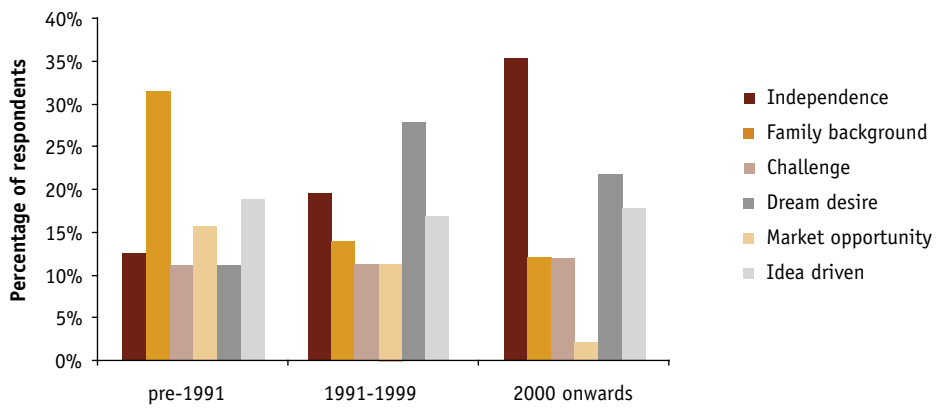


Figure 2.6: Motivation – Variations according to time periods



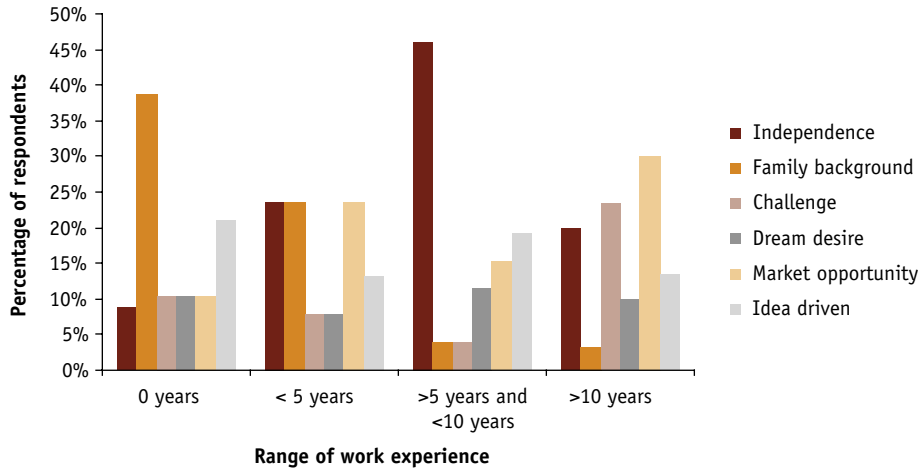
before 1991. Simultaneously, 'independence' has increasingly become a significant motivating factor since the turn of the century — primarily motivating 12% of those starting new enterprises before 1991; 19% of those doing so during 1991-99 and 35% of those starting out after 2000. The study also noticed that 'family background' has served less as a motivating factor after the launch of economic reforms — from primarily motivating 31% before 1991 to influencing 14% during 1991-99 and 12% after 2000. (See Figure 2.6.)

2.2.6 Variations According to **Levels of Work Experience**: The study found that levels of work experience significantly influenced motivational triggers.

'Independence' was the least important trigger for those entrepreneurs who started out without work experience and the most important factor for those with 5-10 years of work experience before starting out as entrepreneurs.

- It found that 'family background' became less significant with increasing levels of work experience. While this was the most significant trigger for those entrepreneurs who started out without work experience, it was the least important motivational factor for those with more than 10 years' experience, for whom other factors such as 'market opportunity' and 'challenge' were more significant.
- 'Independence' was the least important trigger for those entrepreneurs who started out without work experience and the most important factor for those with 5-10 years of work experience before starting out as entrepreneurs; it was also a significant trigger for those with at least some work experience.
- The study found that 'market opportunity' did not act as a significant trigger for those who started out without any work experience but became, by far, the most important trigger for those with more than 10 years' work experience. The study also found that there was a strong correlation between previous work experience and '*business idea origin*', thereby impacting the nature of enterprise. Among those who had work experience, 53% started enterprises in fields

Figure 2.7: Motivation – Variations according to level of work experience



related to those in which they had previously worked (as distinct from merely replicating the business idea of their former employers). Thus, the study found instances of a person employed in an IT company starting one's own IT venture, a person with experience in the media launching his/her own event management company, and so on. While working as employees, these entrepreneurs identified market gaps and designed innovative products or services, which enabled them to become entrepreneurs.[37]

- 'Idea driven' triggers are very important, but they were found to be of greater significance for those who start out without any work experience (21%) than for those with substantial work experience (13%).

'Idea-driven' triggers are very important, but they were found to be of greater significance for those who start out without any work experience (21%) than for those with substantial work experience (13%).

2.3 Positive Factors: What Excites Entrepreneurs?

2.3.1 When entrepreneurs were asked: *'Where do you see yourself five years from now?',* it was discovered that most entrepreneurs envision the future of their business in terms of the nature and quality of work (and other intangibles) rather than only in terms of turnover and growth rates. While some entrepreneurs spoke about getting more clients or venturing into the international market, others spoke about being leaders in their respective markets. Some said they see the future in terms of diversifying into newer areas, while others elaborated on dreams of building their current ventures into world-class enterprises. The vision of growth was found to vary according to both the age of the entrepreneur as well as the age of the enterprise. This clearly

[37] For instance, we interviewed an entrepreneur who was initially a doctor and teaching at medical colleges, who then got an offer to build and manage hospitals. Now as an entrepreneur he is building his own hospitals and pharmacy stores. Clearly, apart from being influenced by his education, his prior work experience also influenced his first business venture.

shows that entrepreneurs are intensely involved with the work they engage in and view future possibilities through their work, rather than in financial terms alone.

2.3.2 To understand the degree of ambition among entrepreneurs regarding their own growth, the study calculated the Compound Annual Growth Rate (CAGR) based on each enterprise's current turnover and the turnover that the entrepreneurs themselves expected to generate in five years time. The median 'expected' CAGR of the sample was found to be 38%, ranging widely from 5% to almost 200%. Further examination showed that 76% of the companies with above-median CAGR (identified as high-growth companies, based on five-year turnover estimates provided by the entrepreneurs themselves) belong to the knowledge-intensive services sector, 14% to the manufacturing sector, and only 10% to the 'Other Services' sector. Among those enterprises forecasting above 100% CAGR, 88% are from the knowledge-intensive services sector. Therefore, entrepreneurs in the knowledge-intensive services clearly see higher growth potential compared to entrepreneurs engaged in other sectors. The high ambition levels displayed by entrepreneurs interviewed seem to contradict findings of some other studies on the subject.[38]

The study found that 51% of the entrepreneurs interviewed had already diversified or were planning to diversify in the near future. Among the entrepreneurs who had diversified, some had more than one business in the same or related field.

2.3.3 The study found that 51% of the entrepreneurs interviewed had already diversified or were planning to diversify in the near future. Among the entrepreneurs who had diversified, some had more than one business in the same or related field. For example, one entrepreneur began by building and managing hospitals and then promoted a pharmacy chain. Another who was engaged in manufacturing sanitary wares, also started a pottery unit. In many instances, entrepreneurs had also diversified into areas unrelated to their original business. For instance, one entrepreneur who started with managing franchise NIIT centres, went on to set up institutes for hotel management and nursing, and is now foraying into unrelated fields of biotechnology and renewable energy. Another started off with manufacturing auto components, and then diversified into agro industry and the BPO services. The study found varied reasons for diversifying – some entrepreneurs diversified to utilize a natural advantage arising from the nature of their current business, while others tried to avail of opportunities in new sectors.

2.3.4 In this respect, it is relevant to look at some of the critical 'drivers' of Entrepreneurship, which reveal the positive factors that motivate entrepreneurs during their journey. Some observations are as follows:

[38] See here, for example, the GEM India report 2002 that states that very few firms anticipated growth or offered new products or used new technologies. See also, Amar Bhide, 'What Role for Entrepreneurship in India' (2004, in http://www.bhide.net/publications.html). Bhide concluded that in Bangalore, 'less than a quarter of entrepreneurs are expected to grow significantly in the next five years.' He instead found that 'entrepreneurs preferred to diversify into new businesses rather than expand'. See also, GEM 2007 Executive Report which concludes that 'India's high-growth expectation early-stage Entrepreneurship (HEA) 2000-06 rate is one-fifth that of China.

- **Challenge**: Challenge is the principal 'Motivation Driver', though not the main trigger, for Entrepreneurship. While only 11% of those interviewed cited 'challenge' as the main motivating factor for starting a business, as many as 38% said they consider the challenge in Entrepreneurship to be the main driver for the excitement and satisfaction of doing business.

- **Independence**: Independence is important, both as a trigger and as a driver. It is a crucial trigger (as 22% of those interviewed said) as well as a significant driver (32%).

- **Money**: Money is a secondary factor during the business development (12%) and is considered less significant as an excitement factor than either challenge or independence.

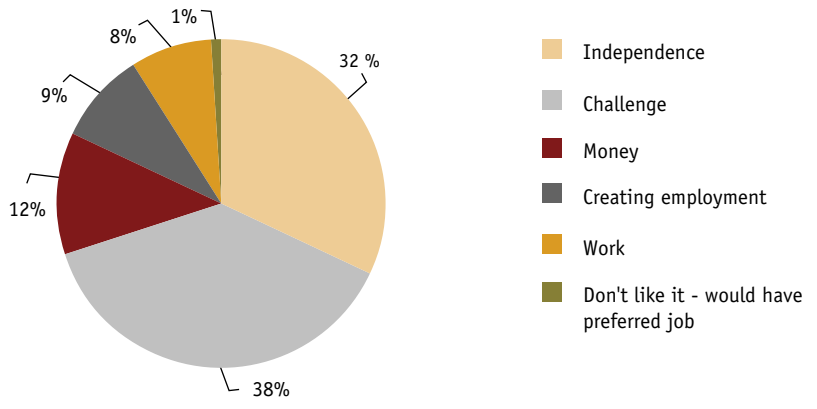
2.3.5 **Overall Satisfaction**: An overwhelming 99.4% of the entrepreneurs said they do not want to be in a routine job, signifying that they are satisfied with their vocation and do not regret their initial decision to become entrepreneurs.

2.3.6 Variations in Motivation Drivers Across **Gender and Age**: The fact that Entrepreneurship 'creates employment opportunities' exerts a more significant impact as an excitement factor for female entrepreneurs than males. The study found that entrepreneurs above the age of 35 also feel the same compared to those below 35 years.

2.3.7 **Change in Mindset:** The study also found that there has been a gradual change in mindset towards ownership among entrepreneurs. While older businesses were traditionally run as family concerns, newer entrepreneurs are found to be inclined to decouple ownership from management. The latter are more comfortable with the idea of a professional manager, from outside the family, taking control of their business. Younger entrepreneurs, particularly in the knowledge-intensive sectors, are also open to the idea of selling off a business

An overwhelming 99.4% of the entrepreneurs said they do not want to be in a routine job, signifying that they are satisfied with their vocation and do not regret their initial decision to become entrepreneurs.

Figure 2.8: Positive factors



and starting new ventures ('Serial Entrepreneurs'). Unlike older counterparts, new generation entrepreneurs are not averse to selling off (or handing over the day-to-day management of) their business, once it becomes mature. As a result, there are instances of entrepreneurs in their 30s who are already on their third or fourth venture, after having established *successful* businesses earlier.

Figure 2.9: Positive factors – Variations according to gender

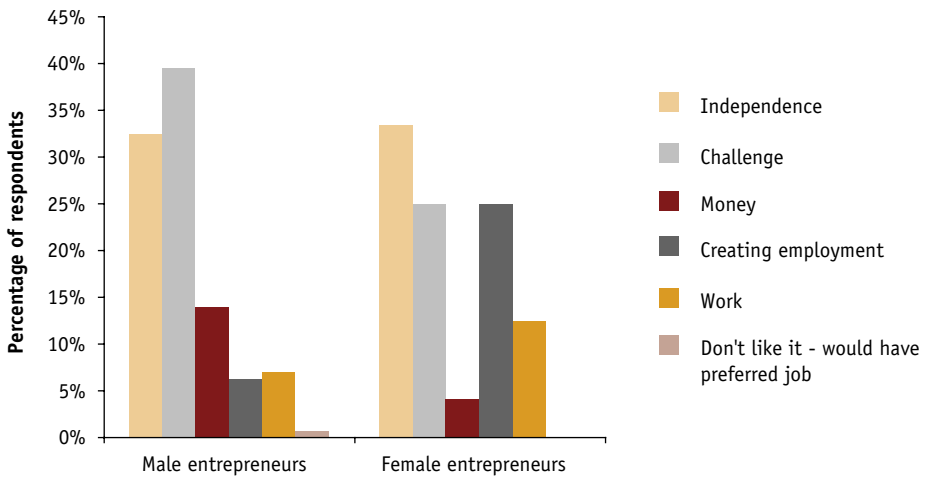
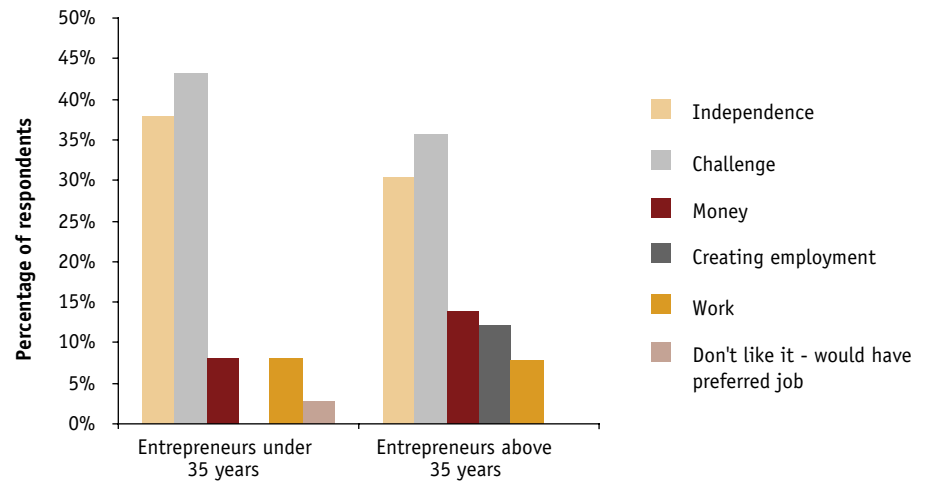


Figure 2.10: Positive factors – Variations according to age



Chapter Summary

There is no common set of traits, psychological attitudes or profiles that apply to all entrepreneurs alike or to which all entrepreneurs generally conform. Significant motivating factors are: 'Independence' (stemming from the freedom to do 'one's own thing'), 'Market Opportunity', 'Family Background', a 'New Idea' (with business potential), the prospect of 'Challenge', as well as a long cherished 'Dream Desire' to become an entrepreneur. Internal triggers are the primary motivators, while external factors such as market opportunity are also growing in importance. There are variations in Motivation Triggers on parameters such as region, gender, age, family background, time period and levels of work experience. 'Challenge' is the principal Motivation Driver or positive factor, even if not the most important trigger. Entrepreneurs view the future in terms of the nature and quality of work as well as turnover increase. By their very nature, entrepreneurs tend to be ambitious. Monetary gain is not as significant as either Challenge or Independence. There are also variations in the excitement factors based on gender and age. Almost all entrepreneurs do not want to be in a routine job and are generally satisfied with their experience in Entrepreneurship. An emerging trend is to welcome professional management of their enterprises and seek new opportunities, which is described as 'Serial Entrepreneurship'. This is particularly evident amongst entrepreneurs in the knowledge-intensive sectors.

Chapter III

Socio-cultural Factors

3.1 General Importance

3.1.1 Socio-cultural factors such as social norms, family values, networks and social value of Entrepreneurship, play a key role in nurturing the entrepreneurial ecosystem.[39] A historical and sociological understanding of certain communities in India, which have been traditionally engaged in business, confirms the role of social factors that encourage Entrepreneurship.[40] Important success factors include the pragmatic use of social and family networks as well as 'webs of interdependence' that continuously facilitate the development of entrepreneurial ecosystems at the community level. In Melvin M. Weber's words, 'specialized professionals maintain webs of intimate contact with other professionals, wherever they may be. They share a particular body of values; their roles are defined by the organized structure of their groups; they undoubtedly have a sense of belonging to the groups; and by the nature of the alliances, all share a community of interests.'[41]

Socio-cultural factors such as social norms, family values, networks and social value of entrepreneurship, play a key role in nurturing the entrepreneurial ecosystem. A historical and sociological understanding of certain communities in India, which have been traditionally engaged in business, confirms the role of social factors that encourage Entrepreneurship.

3.1.2 To illustrate, the 'constellation of socio-cultural forces'[42] that has been responsible for the development of business enterprise in certain communities comprises the following:

- Credit facilities: The existence of community banks and credit networks (including profit-sharing schemes) has traditionally ensured availability of liquidity. While describing the **Sarafi System** used by Marwaris in Benaras, Alan R. Cohen remarked as follows: 'Firms in the system borrowed from each other whenever short of cash, loans were payable on demand, "even at midnight" and

[39] See for example, Jackson and Rodkey (1994), quoted in Abhishek Goel et al, that 'socialization had an impact on an individual's attitude towards entrepreneurship…this socialization took place at home, at the place of education and other spheres of interaction'. Status and social value attached to entrepreneurship also influence motivations, supra note 2 as above.

[40] For an overview on various business communities in India in various time periods, see for example, Dwijendra Tripathy (ed.) 'Business Communities of India: A Historical Perspective', 1984, supra note 13 as above; see also, Thomas A. Timberg, 'The Marwaris: From Traders to Industrialists', 1978, supra note 8 as above on the Marwari business community; Claude Markovits, 'The Global World of Indian Merchants, 1750-1947: Traders of Sind from Bukhara to Panama', Mario Rutten, 'Farms and Factories: Social Profiles of Large Farmers and Rural Industrialists in Western India'; the role of various communities such as the Parsis, Jain merchants, Mahajans, Gujaratis, business communities in Punjab, Jews, Chettiyars etc. is a fascinating subject of study; see also Harish Damodaran (forthcoming), 'India's New Capitalists' on the sociology and history of some of India's business communities since independence. The use of the term community is in its generic sociological sense, to refer to a social group, typically endogamous, to which are connected certain 'stereotypes, traditions, occupational directions, attitudes and social positions…a community may be separated internally by caste, ritual, regional or economic differences', see for example Timberg at page 5; see also Chapter 1 of this report.

[41] Melvin M. Weber, 'Towards a Definition of Interest Community', in P. Worsely (ed.) ' Modern Sociology: Introductory Readings' (1972), quoted in Timberg at page 11.

[42] See Tripathy, supra note 13 as above, at page 18.

interest was tallied and settled once a year, with total borrowing offset by total lending.'[43]

- Infrastructural support: Traditional networks assure infrastructural support such as access to storage facilities for goods along trade routes, remittance facilities and arrangements for accommodation.[44] Thomas Timberg, for example, cites how G.D. Birla's grandfather, Shiv Narain, stayed in a cooperative '***basa***' (collective mess) in then Bombay (now Mumbai) when he first arrived from his village of Pilani in the 1860s.[45]
- Socialization: The community encourages socialization into Entrepreneurship, the inculcation of commercial morality (respecting the contract, making ethical profits etc), notions of thrift as well as training opportunities, such as apprenticeships to learn techniques of business. Mechanisms for 'cushioning of conflict' and division of labour and authority also develop through the joint family system and social networks.
- Market development: In certain geographical locations, the presence of entrepreneurial communities led to the development of futures markets. Further, migration of the community (e.g. the Marwaris) to commercial centres such as ports and trading hubs encouraged Entrepreneurship in these places.[46]

The community encourages socialization into Entrepreneurship, the inculcation of commercial morality, notions of thrift, as well as training opportunities such as apprenticeships.

3.1.3 The role of intra-caste networks in furthering Entrepreneurship, especially among marginalized groups, deserves to be studied in greater detail. Generally, among the four *varnas* in Hinduism, Vaishyas have been traditionally involved in trade. However, the influence of notions of pollution and purity, if any, on entrepreneurial behaviour, among so-called 'high' and 'low' caste population, remains to be explored. It remains to be analyzed whether other castes are less inhibited in undertaking manual entrepreneurial activities, compared to upper castes. Another topic worth exploring is the role of Entrepreneurship as a means of expressing aspirations among marginalized groups, who otherwise have limited access to opportunities in the formal sectors.[47]

[43] Alan Cohen, ' Tradition, Values and Inter-role Conflict in Indian Family Business', quoted in Timberg at page 6.
[44] See Timberg, supra note 8 as above, at page 5.
[45] Timberg, supra note 8 as above, at page 17.
[46] Some examples of such centres being Calcutta (now Kolkata), Bombay (now Mumbai), Ahmedabad and Kanpur; see Timberg chapter 1.
[47] Generalizations on caste and Entrepreneurship are difficult to arrive at, just as there are ethnographic studies on certain communities. See Tripathy at page 17-19, where NR Sheth in his article, 'Theoretical Framework for the Study of Indian Business Communities' cites the work of Saberwal on Entrepreneurship among Ramgarhias in Punjab and Owens' work among the low caste peasant community of Mahishyas in Howrah for understanding of how marginalized communities may use Entrepreneurship to rise in the social hierarchy. However, Sheth also cites Barnett's work on the Kontaikatti Velalars, where strict caste rules prohibiting association with lower castes, deterred upper castes from entering Entrepreneurship. At the same time, among upper castes, we observe the existence of the Iyenger family in Chennai whose TVS Group, founded by TV Sundaram Iyenger in 1911, are among India's leaders in the auto sector; further, it is also argued that the precise lack of opportunities in the formal sector may act as a spur for marginalized groups to rise as entrepreneurs, as long as the intra and inter caste business networks allow sufficient openness and mobility. See also, Harish Damodaran (forthcoming), 'India's New Capitalists'.

3.2 Degree of Family Support as a Factor

3.2.1 The NKC study explores the degree of family support (a socio-cultural factor, particularly in India) that the entrepreneurs received at the time of starting their venture. Overall, as many as 74% of the entrepreneurs were supported by their families (as seen from the figure below, 51% were 'very supportive' and 23% were 'supportive'), which further underscores the importance of social institutions for entrepreneurs in India.

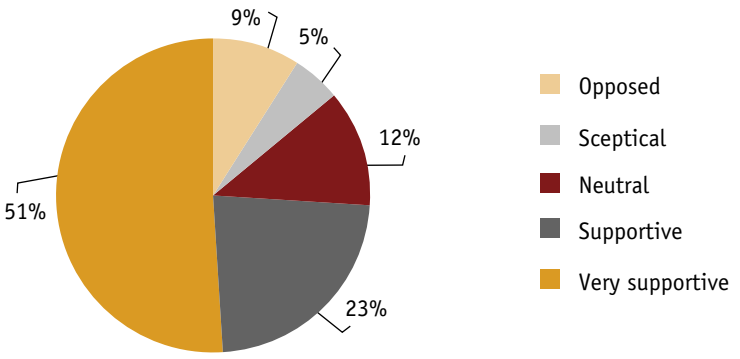
3.2.2 At the same time, the study also reveals interesting variations in family support across regions, family backgrounds, gender, age and levels of work experience.[48] Some of these are described below:

a. Variations according to region: Ahmedabad (home to traditional entrepreneurial communities) shows a higher degree of family support for Entrepreneurship (88%) compared to the national average (74%). This shows that traditional commercial areas have a greater confidence in supporting Entrepreneurship. Such favourable social perceptions regarding Entrepreneurship, in turn, influence the degree of family support that entrepreneurs receive.

b. Variations according to family background: Second generation entrepreneurs in the same business enjoy a much higher degree of family support (96%) than second generation entrepreneurs in a different business (88%) or first generation entrepreneurs (67%). Families of second generation entrepreneurs, already familiar with the practice of Entrepreneurship have less fear of risk and failure

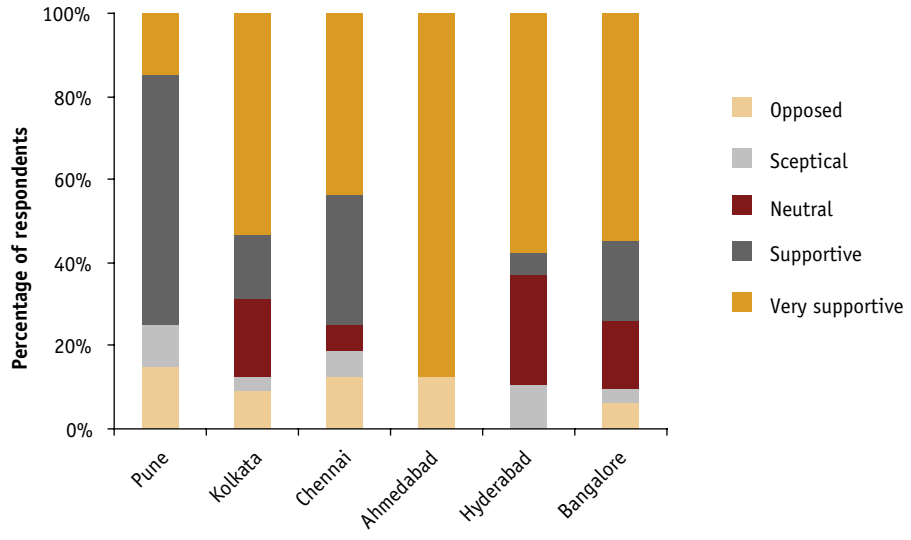
The NKC study explores the degree of family support (a socio-cultural factor, particularly in India) that the entrepreneurs received at the time of starting their venture.

Figure 3.1: Family support to entrepreneurs



[48] See, for example, Abhishek Goel et al, supra note 2 as above on attitudes towards Entrepreneurship among youth from various regions in India.

Figure 3.2: Family support – Variations according to region



Entrepreneurs with more than ten years' work experience receive marginally greater family support at the time of starting up (78%), compared to those with less than ten years' experience (71%).

and therefore provide greater support. Further, second generation entrepreneurs in a different business have to deal with families that are less familiar with the new area of business. This often results in reduced levels of support for such entrepreneurs, when compared to those entering into or expanding the same business.

c. **Variations according to work experience:** Entrepreneurs with more than 10 years' work experience receive marginally greater family support at the time of starting up (78%), compared to those with less than 10 years' experience (71%).

Once a person is employed, the perceived opportunity costs (in terms of leaving a remunerative position in order to start a new venture) could be higher, which could explain why entrepreneurs with less than 10 years' work experience receive relatively less support. Moreover,

Figure 3.3: Family support – Variations according to family background

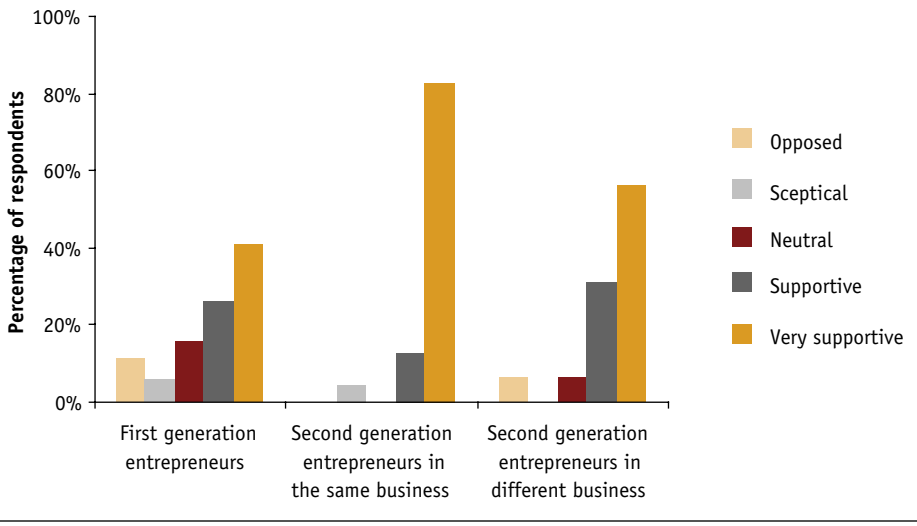
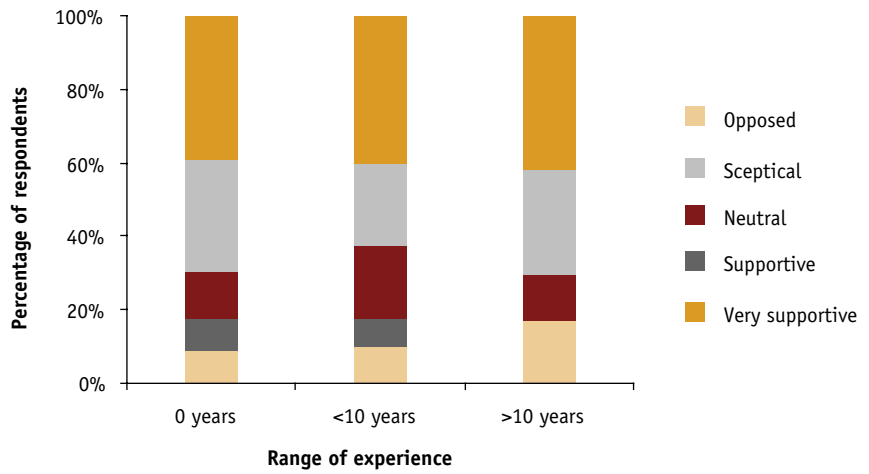


Figure 3.4: Family support to first generation entrepreneurs – Variations according to work experience



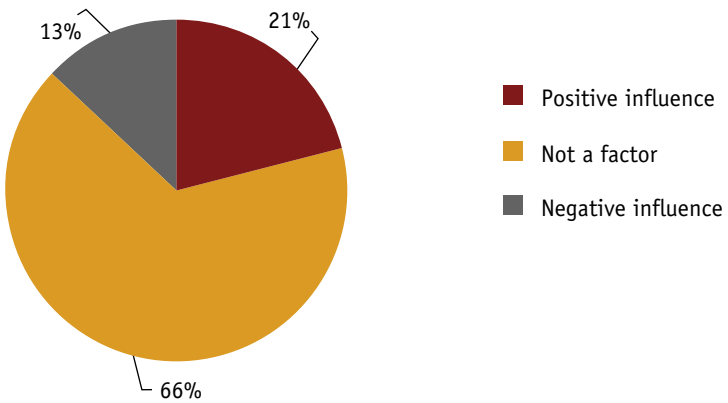
those with more than 10 years' prior experience would have acquired the professional expertise, financial security and social capital required to become successful entrepreneurs, as a result of which their perceived risks could be lower. This could explain the relatively higher levels of family support among such entrepreneurs.

3.3 Gender as a Factor in Entrepreneurship

3.3.1 **Gender as a Factor in Entrepreneurship:** Of the 24 female entrepreneurs interviewed, two-thirds said that their gender did not make any difference to their entrepreneurial ventures. More than one-fifth considered their gender to be an advantage rather than a disadvantage as an entrepreneur. Only 13% of the female entrepreneurs interviewed said that their gender had hindered them on their way to becoming successful entrepreneurs.

Two-thirds of the female entrepreneurs interviewed said their gender did not make any difference to their entrepreneurial ventures.

Figure 3.5: Gender as a factor in entrepreneurship



3.3.2 **Some More Illustrative Points on Gender:** A female entrepreneur from Kolkata mentioned that gender becomes an issue only because people have preconceived notions, and hence, as a woman entrepreneur, she had to continuously 'over-prove' herself. Another entrepreneur said that while women are able to deal with the details of business, they face problems because their family life suffers. At the same time, exactly the opposite sentiment was expressed by a female entrepreneur from Hyderabad who said that running her own business gave her the flexibility (in terms of timings) so that she could manage her family life and run her business as and when it best suited her. A female entrepreneur from Bangalore said that women make better entrepreneurs than men because of their inherent ability to multitask, a crucial skill for an entrepreneur who has to handle many jobs simultaneously.

3.3.3 **Key Challenges:** At the same time, a number of female entrepreneurs also said that they would benefit from programmes that could provide assistance in obtaining finance, marketing support, counselling and other core support (such as functional day care centres, crèches etc). As examples, organizations such as the Association of Lady Entrepreneurs of Andhra Pradesh (ALEAP), the Association of Women Entrepreneurs of Karnataka (AWAKE)[49] and the Federation of Indian Women Entrepreneurs (FIWE) etc focus exclusively on the development of Entrepreneurship among women. ALEAP assists women in identifying projects, in marketing their products as well as in conducting training programmes. It also assists in providing finance to its members through an innovative Mutual Credit Guarantee Scheme (MCGS) and currently also has two industrial estates exclusively for women.

Institutional and informal associations as well as networks of entrepreneurs can play a significant role in encouraging Entrepreneurship.

3.4 Encouraging and Celebrating Entrepreneurship

3.4.1 Institutional and informal associations as well as networks of entrepreneurs can play a significant role in encouraging Entrepreneurship. Some of the major industry associations in India include CII, FICCI and ASSOCHAM. Our consultations with local chambers of commerce such as Mahratta Chambers of Commerce, Industries and Agriculture (MCCIA) in Pune, Bengal Chambers of Commerce and Industry (BCCI) in Kolkata, Gujarat Chambers of Commerce and Industry (GCCI) in Ahmedabad, Federation of Andhra Pradesh Chamber of Commerce and Industry (FAPCCI) in Hyderabad and Federation of Karnataka Chambers of Commerce and Industry (FKCCI)[50] in Bangalore revealed that

[49] The NKC Entrepreneurship team had the opportunity of interacting with the founders of ALEAP and AWAKE.

[50] These institutions have historically played an active role in development of Indian commerce and industry. Apart from representing industry at various governmental and industrial fora, such institutions also conduct seminars and conferences and publish reports on key issues in Indian industry.

chambers of commerce can and do play institutional roles in nurturing young entrepreneurs, through their established networks as well as by providing platforms for discussing entrepreneurial best practices and experiences. For these organizations, the challenge would be to go beyond the traditional role of catering to mid-size and large companies and take active steps to reach out more to young entrepreneurs. Some illustrations of associations involved with entrepreneurial initiatives and encouraging Entrepreneurship are described below.

3.4.2 An interesting initiative is that of the Bharatiya Yuva Shakti Trust (BYST, also known as 'Business and Youth Starting Together'), that provides key support in finance and training. BYST primarily caters to underprivileged groups (with per-capita family income less than Rs. 5000) between 18 and 35 years. BYST leverages financial assistance through the Credit Guarantee Scheme of the Government of India and also provides active mentoring assistance through an active network of established entrepreneurs.[51]

To better understand and manage risk as well as create a supportive social environment for entrepreneurs, it is essential to remove the stigma associated with failure.

3.4.3 Other groups such as the National Entrepreneurship Network (NEN)[52] and The Indus Entrepreneurs (TiE[53]) are also very active in providing mentoring and networking in the entrepreneurial ecosystem, especially in the knowledge-driven and high growth sectors in key metropolitan cities. NEN, for example, also supports 'Entrepreneurship cell' workshops in educational institutions and organizes a national 'Entrepreneurship Week' every year, which brings together a large number of educational institutions and supporting networks. TiE also organizes networking events among entrepreneurs and investors. A recent initiative is the 'Pan-IIT Entrepreneurship Movement' involving alumni of all the seven IITs, to evolve a brand that would provide strong fraternity links among IIT alumni and entrepreneurs.

3.4.4 The task of ensuring greater social affinity for Entrepreneurship requires dissemination of best practices as well as documenting unsuccessful ideas, as part of raising awareness about entrepreneurial experiences at all levels. A key socio-cultural factor also pertains to social attitudes towards risk and failure. To better understand and manage risk as well as create a supportive social environment for entrepreneurs, it is essential to remove the stigma associated with failure. This is possible by acknowledging the value of experience gained, 'being smart enough

[51] From consultations with BYST, it is understood that BYST has tied up with Indian Bank and leverages the credit guarantee scheme to make available loans of up to Rs. 5 lakh. BYST selects entrepreneurs and has a mentor network of about 3000 (80% of whom are entrepreneurs from SME sectors). BYST also has a mentor development programme, where mentors are supposed to undergo online training and get a certificate. On an average, mentors are said to spend 15-20 hours a month on upcoming entrepreneurs.

[52] Founded in 2002, NEN is a not-for-profit initiative of the Wadhwani Foundation, working to 'inspire, educate and support the next generation of high-growth entrepreneurs in India… NEN works with academic institutions to help build and ramp-up entrepreneurship programmes and create a constant flow of high-impact, world-class activities designed to facilitate success in the real world'. See www.nenonline.org.

[53] Successful entrepreneurs and professionals founded The Indus Entrepreneurs, also known as Talent, Ideas and Enterprises in Silicon Valley in 1992, with roots in the Indus region. There are over 12,000 members and more than 1600 'charter members', including successful entrepreneurs, venture capitalists, private equity players, Angels, law firms and technology and management professionals. See www.tie.org.

to recognize mistakes and change strategies' and being quick in 'adopting the successful approaches that work'.[54] In this respect, it is imperative to launch Entrepreneurship outreach events (not just in schools and colleges, but also through the media) where entrepreneurial experiences (including unsuccessful experiences) can be shared widely. Social networks at the informal level also play their part in helping entrepreneurs to share experiences and best practices. Recognition and reward systems, at the local, state as well as national and global levels, will also help in encouraging entrepreneurial behaviour and celebrating the spirit of Entrepreneurship.

Chapter Summary

Socio-cultural factors such as norms, values, social networks, social perceptions and the degree of cultural acceptance of, and support for Entrepreneurship are important for entrepreneurs. Communities traditionally associated with business and trade have leveraged networks and natural webs of interdependence, in building informal ecosystems that provide credit support, infrastructure, socialization and risk management. The role of caste requires separate analysis. The NKC study reveals that most of the entrepreneurs received family support, thereby underscoring its importance in India. Variations in the degree of family support are seen across region, based on family background, work experience and gender. Encouraging Entrepreneurship involves widening the social base of capital, which in turn also means enlarging networks and including access to new entrepreneurs from communities not traditionally associated with business. Two-thirds of female entrepreneurs interviewed said that gender did not make any difference to their entrepreneurial ventures. Formal and informal associations play a key role in nurturing Entrepreneurship. The task of ensuring greater social acceptability for Entrepreneurship also requires dissemination of best practices, documenting unsuccessful ideas as well as other entrepreneurial experiences at all levels. Reward and recognition at various levels, from local to global, also help in promoting Entrepreneurship.

[54] Amar Bhide, 'How Entrepreneurs Craft', Harvard Business Review, March-April 1994. The stigma associated with failure is relative to cultures. For example, it is said that VCs in Silicon Valley would also consider the entrepreneurs previous ventures, even if unsuccessful, in order to value the entrepreneur's experience and incorporate such into investment decisions. It is also pertinent here to relate an interesting apocryphal anecdote, attributed to Thomas Alva Edison. When asked once on the number of experiments that failed to generate any substantial results, he had apparently replied that, far from failing in any, he had instead discovered the many ways that would not work for that particular experiment.

Chapter IV

Access to Early Stage Finance

4.1 General Importance

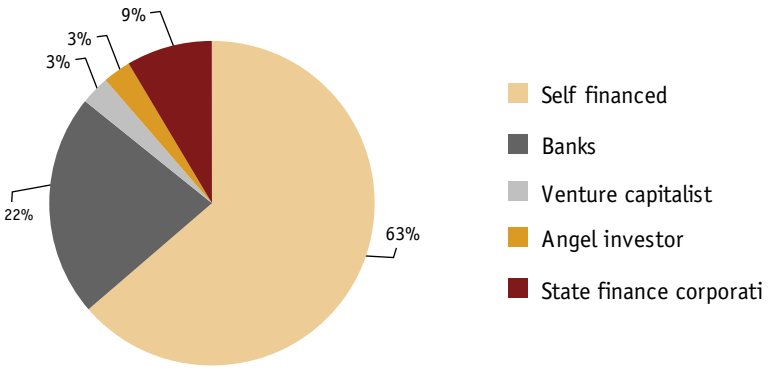
4.1.1 Ready access to early-stage finance, especially seed capital, is a critical factor in a favourable entrepreneurial ecosystem. It is a key factor in deciding whether to become an entrepreneur as well as in deciding the nature of the enterprise to promote. This is especially important for younger and first-generation entrepreneurs. There are two basic types of early stage finance: debt (largely from banks and financial institutions) and equity (from sources such as angels, venture capital funds and private equity funds). While traditional bank financing largely relies on the criteria of adequate collateral and established track record to judge credit-worthiness before disbursement of funds, the equity-based sources are less risk averse and restrictive in financing start-ups. However, as of now, traditional debt based models cover a wider range of entrepreneurial sectors, compared to venture capitalists (VCs) and private equity (PE) funds. Since VCs and PE funds, by and large, are more visible in the knowledge-intensive sectors, it is expected that a combination of novel debt and equity models will spur early-stage finance for first-generation entrepreneurs in the foreseeable future.

It is expected that a combination of novel debt and equity models will spur early-stage finance for first-generation entrepreneurs in the forseeable future.

4.2 Statistics on Early Stage Finance from the NKC Study

4.2.1 **Self-financed:** The NKC Study found that a majority of the entrepreneurs interviewed (63%) had actually been self-financed at the start-up

Figure 4.1: Sources of start-up phase funding



stage. In the NKC sample, bank loans accounted for start-up finance for 22% of the entrepreneurs while 9% received loans from state finance corporations. VCs and angels account for the early-stage capital needs of 6% of the entrepreneurs interviewed. Of the entrepreneurs who approached banks, 61% did actually receive bank finance.

4.2.2 On a closer examination of the sources of self-financing, the study found that nearly half of the self-financed entrepreneurs borrowed start-up money from family or friends. Nearly a third of these entrepreneurs invested their own savings into the start-up, while money from an existing family business helped only about one-fifth of the self-financed entrepreneurs. This could be a reflection of greater confidence among new entrepreneurs in their own abilities as well as the crucial significance of the socio-cultural support systems of family and friends discussed in the previous chapter.

The study found that nearly half of the self-financed entrepreneurs borrowed start-up money from family or friends.

4.2.3 Further, the study found that among the self-financed entrepreneurs, there was little variation according to gender. Compared to their male counterparts, women received marginally more borrowings from family

Figure 4.2: Sources of self financing

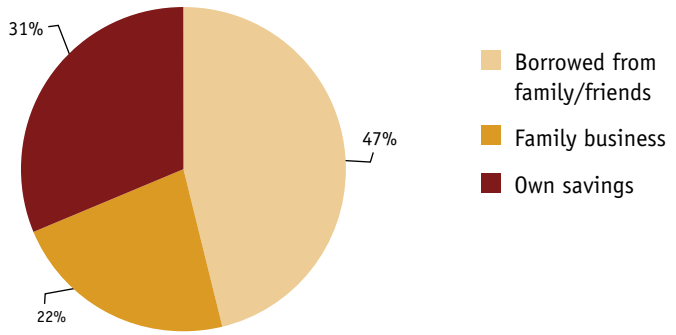
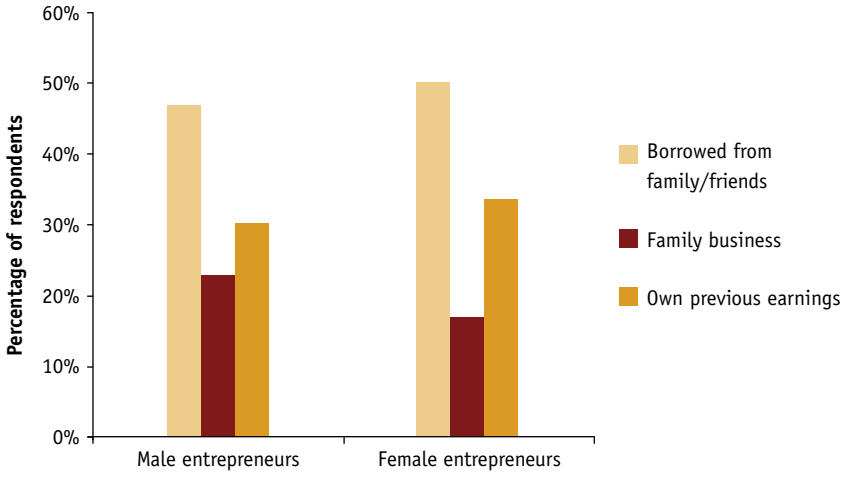


Figure 4.3: Sources of self financing – Variations according to gender



and friends, and slightly less investments from other family businesses. Overall, the general trends among self-financed entrepreneurs do not show significant variation according to gender.

4.2.4 **Bank Finance:** It was earlier noted that of the entrepreneurs who actually approached banks, 61% did receive some funds from banks. Since most of the entrepreneurs were self-financed (for various reasons), NKC asked the entrepreneurs — in order to understand what they think of bank financing — to rate their perceptions on access to bank loans at the start-up stage and then at the growth stage (on a scale of 'difficult', 'average' and 'easy'). From the responses, it is observed that access to early stage finance from banks is perceived to be **very difficult at the start-up stage** but becomes comparatively easy at the growth stage. Of the entrepreneurs interviewed, 42% said that it was difficult to obtain finance at the start-up stage, 20% said that it was easy and 38% scored the ease or difficulty of access as 'average'. However, at the growth stage, it was almost reverse. While the average stayed the same at 38%, 49% found it easy and only 13% found it difficult to access finance at the growth stage.

It is observed that access to early stage finance from banks is perceived to be very difficult at the start-up stage but becomes comparatively easy at the growth stage.

Thus, entrepreneurs believe that the stage of a business influences perceptions of risk on the part of the banks and that a successful track record makes it easier to access bank credit. They said that it is most difficult to access credit from banks for their ventures precisely when they need it the most.

4.2.5 Interestingly, on perceptions regarding credit from banks, the study noticed little variation between first generation and second generation entrepreneurs. There was almost no difference in accessibility to bank credit for second generation entrepreneurs starting a different business from first generation entrepreneurs as for practical purposes, both were starting afresh. This suggests that even a successful history of family business does not *per se* make any significant difference in obtaining

Figure 4.4: Access to finance from banks at different phases

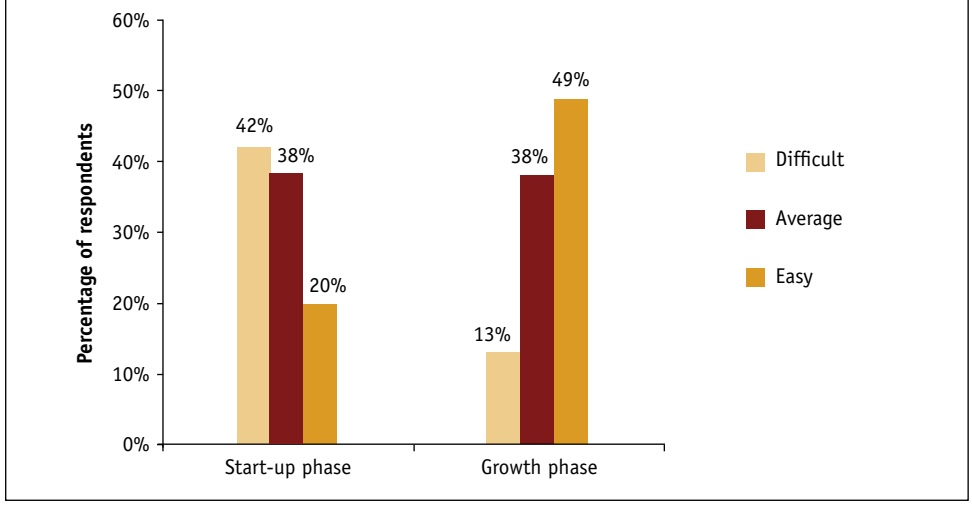
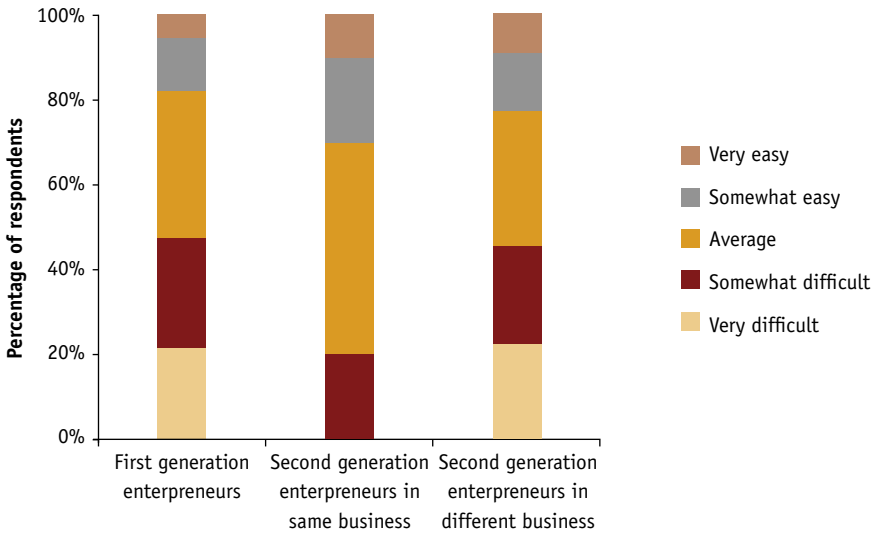


Figure 4.5: Access to finance from banks – Variations according to family background



bank loans other than when there is sufficient collateral and a clear business plan that banks would examine and approve according to their own guidelines.

Of the entrepreneurs who started business after year 2000, a much larger percentage found it 'somewhat difficult' or 'very difficult' to access bank funding.

4.2.6 **Changes Over a Period of Time:** An analysis of entrepreneurial responses indicates that the availability of bank finance is less favourable for enterprises started after year 2000 compared to those that were established in the 1990s or earlier. Of the entrepreneurs who started business after year 2000, a much larger percentage found it 'somewhat difficult' or 'very difficult' to access bank funding. Many of the enterprises which commenced business after 2000 are in the knowledge-intensive sectors, where information asymmetry and perceived higher levels of risks may have inhibited bank credit availability. It is in these sectors that angel investors and VCs are slowly beginning to fill a crucial market gap. Yet, even among VCs and

Figure 4.6: Access to finance from banks – Variations according to time periods

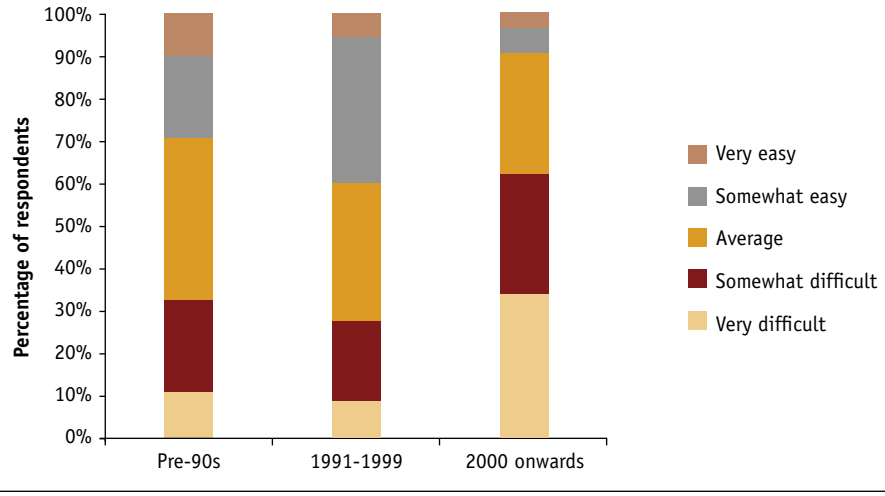
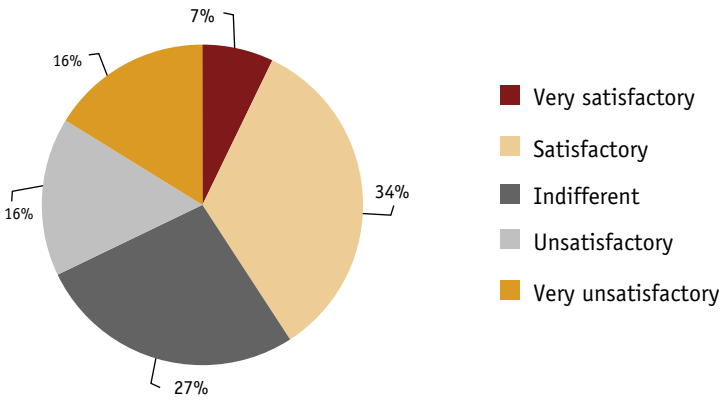


Figure 4.7: Perceptions on venture capital



angels, there is scope for improvement. While 41% of entrepreneurs said they find VCs 'satisfactory' or 'very satisfactory', 32% still find them 'unsatisfactory' and as many as 27% expressed themselves as largely 'indifferent' to VCs in the financial space. Overall the role of banks, VCs and angel investors continues to be highly underexploited for the advancement of entrepreneurial activities in India. Access to finance is one of the biggest limiting factors in achieving significantly higher levels of entrepreneurial growth in India.

Overall the role of banks, VCs and angel investors continues to be highly underexploited for the advancement of entrepreneurial activities in India.

4.3 Entrepreneurship and the Banking Sector

4.3.1 It may, therefore, be useful to highlight some key financial packages developed for the SME sector in recent years.[55] Some of the key interventions include recommendations from the numerous committees set up by the Reserve Bank of India (RBI)[56], the Union Finance Minister's 'Policy Package for Stepping up Credit to SMEs as well as the enactment of the Micro, Small and Medium Enterprises Development Act (MSME Act) in 2006. The key aim is to facilitate access to finance and incentivize efficient use of funds by entrepreneurs, to bring about greater growth in numbers and overall competitiveness. Some of the significant financial policies are as follows:

a. **Risk Management:** A transparent rating system for SMEs, where the cost of credit is linked to the credit rating of the enterprise, thereby incentivizing SMEs to get credit rated; availability of a Credit Appraisal and Rating Tool (CART) and a comprehensive Risk Assessment Model (RAM), which public sector banks could best use.[57]

[55] It is pertinent here to refer to the Small Industries Development Bank of India (SIDBI) set up by an Act of the Parliament in 1990, to promote financing and development of small scale industries and to function as the nodal agency for execution of SME programmes of the Government of India; see also the RBI Master Circular on lending to SME sector dated July 2, 2007; http://www.reservebank.com/scripts/BS_ViewMasterCirculars.

[56] See particularly, the noteworthy work in this regard by the Nayak Committee, Kapur Committee and Ganguly Committee, each set up by the RBI.

[57] See the Policy Package for Stepping up Credit to SMEs, announced by the Union Finance Minister, quoted in the RBI Master Circular dated July 2, 2007.

In this regard, Credit Information Bureau (India) Limited (CIBIL), Dun & Bradstreet Information Services India Private Limited (D&B), SIDBI, and a few other banks have together set up SMERA (SME Rating Agency) – the first rating agency in India focusing primarily on the SME segment. Since its inception in September 2005, SMERA has rated over 1400 SMEs. Initial signs appear to be encouraging. According to SMERA reports, 'the rated companies have reported varied experience in terms of interest rate reduction, larger loan size, faster turnaround in processing of loan applications, bigger export orders, and better internal assessment. Specifically, thanks to SMERA rating, a particular unit benefited not just with 450 basis points reduction in interest on its loan, but also managed to obtain a bigger loan from its bank. Banks have also reported reduction in interest rate by 25 to 100 basis points for 'SMERA rated companies.'[58] SMERA rating as a driving force for encouraging Entrepreneurship needs far greater publicity and marketing across the country.

SMERA rating as a driving force for encouraging Entrepreneurship needs far greater publicity and marketing across the country.

b. **Credit Guarantee:** To encourage collateral free loans, the Credit Guarantee Cover offers to 'Member Lending Institutions'[59] (MLIs), up to 75% of amount of default under the Credit Guarantee Fund Trust Scheme for Small Industries (CGTSI).[60] The figure below shows an increase in the approved guarantee amounts as well as in the number of MLIs over the last few years.

Table 4.1: Credit guarantee scheme in India

Period	Active MLIs	Number of Proposals Approved	Credit Amount Approved	Cumulative Guarantees Approved (Rs in lakh)
FY 2000-01	9	951	606	606
FY 2001-02	16	2296	2952	3558
FY 2002-03	22	4955	5867	9425
FY 2003-04	29	6603	11760	21185
FY 2004-05	32	9516	32677	53862
FY 2005-06	36	16284	46191	100053
FY 2006-07	40	27457	70453	170506
FY 2007-08*	44	13283	44714	215220

*Up to 30 September 2007.
Source: Ministry of Micro, Small and Medium Enterprises (MSME); http://www.laghu-udyog.com/schemes/sccrguarn.htm

c. **Other Policies:** Some other policies pertain to the following: (i) increasing credit flow;[61] (ii) widening credit spread[62]; (iii) use

[58] See in particular, an interview with Mr. Rajesh Dubey, CEO, SMERA; http://smera.in/media/Emerging%20SME%20Nov%20Issue.pdf.
[59] Member Lending Institutions (MLIs) include banks and financial institutions.
[60] The said scheme covers term loans and grant of working capital facilities up to Rs. 25 lakh to new and existing SSIs without collateral security and third party guarantee.. See the Finance Minister's policy package, Annexure IV, RBI Master Circular dated July 2, 2007; also reduction of one time guarantee fee from 1.5% to 1% and annual service fee from 0.75% to 0.5% for SIDBI loans up to Rs. 5 lakh has been announced in the annual budget for 2008-09. For details on the credit guarantee scheme, see also http://www.laghu-udyog.com/schemes/sccrguarn.htm.
[61] See generally, Annexure IV of the RBI Master Circular dated July 2, 2007. Public sector banks have been advised to achieve at least a minimum of 20% on year growth in credit to SMEs, with the objective of doubling the flow of credit to SMEs from Rs. 67, 600 crore in 2004-05 to 135,200 crore in 2009-10.
[62] See Section IV, read with Annexure IV, RBI Master Circular dated July 2, 2007. Advice to increase credit cover to include an addition of at least five new tiny, small and medium enterprises at each semi urban/urban branch of a commercial bank per year ; public sector banks have been advised by RBI to open at least one specialized SSI/SME branch in each district.

of cluster approaches[63] (including corporate clusters); (iv) debt restructuring[64]; (v) fixing time limits for disposal of applications[65]; and (vi) fixing stringent penalties for delayed payments.

While such schemes underline the increasing recognition of Entrepreneurship, there is need for independent monitoring and evaluation of their impact. It is relevant to highlight here the government plan to put in place a 'Central Plan Schemes Monitoring System' (CPSMS), as mentioned in the Budget for 2008-09. Within the CPSMS, monitoring for the SME segment should receive visibility and priority.

4.3.2 **Micro Small and Medium Enterprises Development Act (MSME Act):** Further, the enactment of a specialized legislation targeted at meeting specific needs of the micro, small and medium enterprises, is another noteworthy step. Section 10 of the MSME Act states expressly that 'the policies and practices in respect of credit to the micro, small and medium enterprises shall be progressive' ...and that the RBI would issue guidelines from time to time, 'to ensure timely and smooth flow of credit to such enterprises, minimize the incidence of sickness and enhance the competitiveness of such enterprises'. Section 12 of the Act also calls for the constitution of one or more funds for the sector, to which the government would provide grants. Since the MSME Act was enacted only in 2006, it may be too early to assess its impact on Entrepreneurship.

Within the Central Plan Schemes Monitoring System (CPSMS), monitoring for the SME segment should receive visibility and priority.

4.3.3 **Need for More Information Flows:** While recognizing the improvements in policies that seek to facilitate easy access to early-stage finance, there is need for more effective implementation on the part of banks as well as for removal of information asymmetries at various levels. Commentators have criticized 'skewed incentives' that exist for Indian bankers, as a result of which 'banks display inertia' and are 'characteristically risk averse'.[66] Banks too are beginning to recognize Entrepreneurship. For example, State Bank of India (SBI) has introduced special consultancy cells to address functional inadequacies and develop multi-dimensional skills for Entrepreneurship.[67] From the perspective of banks, the crucial need is to encourage entrepreneurs to achieve greater scale of operations and develop multi-dimensional expertise.[68]

---

[63] Use of cluster based financing for SMEs (in places with relative homogeneity and critical mass) that offer possibilities of reduction of transaction costs and mitigation of risk , through holistic views of credit risk, opportunities to deal with recognized groups, availability of information for risk assessment and adequate monitoring arrangements. Corporate linked cluster models which encourage new entrepreneurs to link as suppliers or manufacturers with successful large industries, who could also provide guarantee covers etc. See RBI Master Circular dated July 2, 2007; also report of the 'working group on the flow of credit to the SSI sector (Ganguly Committee) as quoted in the said master circular.

[64] See Section IV of the RBI Master Circular, dated July 2, 2007 along with the Policy Package for SMEs for more liberal policies relating to restructuring of debt, debt restructuring mechanism by RBI and fixing of guidelines on rehabilitation of sick SSIs (based on the Kohli working group recommendations).

[65] See Section IV of the RBI Master Circular for an overview of guidelines for disposal of applications for SSIs and stringent provisions (including penal provisions) for delayed payments to entrepreneurs; see also MSME Act 2006.

[66] Tarun Khanna, 'Billions of Entrepreneurs', page 92, quoting Abhijit Banerjee, Shawn Cole and Esther Duflo, 'Banking Reforms in India', working paper, Massachusetts Institute of Technology, June 2004.

[67] Mr. R Kuppanna of SBI, Chennai provided valuable insights in this regard.

[68] See also Manish Sabharwal, 'Babies or Dwarfs?' Business India, October 21, 2007; see also John Hamm, 'Why Entrepreneurs don't Scale', Harvard Business Review, 2002 where the author states that the very qualities that help entrepreneurs in launching businesses (i.e. task orientation, single mindedness, working in isolation) can inhibit scaling up.

Increased awareness of financial schemes backed by efficient credit information and rating systems is expected to ensure greater ease of access to traditional sources of finance.

A key development relating to flow of credit information has been the establishment of CIBIL (see 4.3.1.a). Credit reporting helps remove information asymmetries – reducing problems of adverse selection and moral hazard. According to CIBIL, 'aggregate bank credit to the private sector is higher in countries where information sharing is more developed. Analyses of firm level data show that access to bank credit is easier in countries where credit bureaus exist'. According to recent estimates, CIBIL currently has 146 members including 77 banks, 16 housing finance companies (HFCs), 10 financial institutions (FIs), two credit card companies, six state financial corporations (SFCs) and 35 major non banking financial companies (NBFCs). CIBIL's 'Commercial Bureau' has a database of over 15.6 lakh accounts contributed by 65 members while its 'Consumer Bureau' has a database of over 100 million accounts contributed by 83 members.[69] It is expected that greater information availability will create the necessary transparency that will, in turn, make funding decisions easier.

It is expected that greater information availability will create the necessary transparency that will, in turn, make funding decisions easier.

In addition, India's corporate laws have elaborate rules of disclosure, particularly for public listed companies. Further, private institutions such as the Centre for Monitoring Indian Economy (CMIE) also provide clearing-house facilities for publicly traded as well as some private companies in India.[70]

While there are a few websites containing information on entrepreneurial needs, NKC proposes to explore the possibility of an all encompassing website on Entrepreneurship as a one-stop information portal for current and aspiring entrepreneurs.

4.3.4 **Other Innovations:** While this study has not examined rural and informal sector Entrepreneurship, there are interesting financial innovations such as micro-finance, micro-equity, mutual guarantee associations and various other guarantee models that are also evolving in those spaces in India today. It is important to encourage win-win solutions that involve multiple stakeholders and provide various incentives. Two illustrations of innovative initiatives, namely Mutual Credit Guarantee and the Network Enterprises Fund are highlighted in the following boxes:

[69] http://www.cibil.com/newsletter.htm
[70] Tarun Khanna, 'Billions of Entrepreneurs', page 61; see also www.cmie.com

Box 4.1: Mutual Credit Guarantee

A Mutual Guarantee Association (MGA) is an association comprising entrepreneurs who together create an organization which establishes a dialogue with banks. The association thus plays the role of an intermediary between entrepreneurs and banks, facilitating access to bank and other credit. Each member is required to make a certain contribution to the common fund, which is then used as a guarantee to help members access credit from traditional banks. MGAs thus constitute an effective tool for smaller entrepreneurs to overcome the challenge of gaining access to credit from traditional sources of finance such as banks. Traditional financial institutions also benefit from MGAs, which can help them reduce administrative costs and level of risk. In the MGA scheme, part of the analysis of the loan application is undertaken by the association itself, which has an intimate knowledge of the SME sector. The MGA and the bank share risk.

The first MGAs appeared in Europe in the 1940s and, since then, they have expanded considerably, both in number and in size. At the end of 2000, in the 15 EU countries, over 1.4 million SMEs were members of MGAs, benefiting from 14,173,907 guarantees. Italy, with a strong presence of SMEs, currently has 800 *Confidi* (mutual guarantee schemes). One of the impressive achievements of the mutual guarantee schemes in Italy has been to keep the average default rate of the guarantee loans far lower than the average in corresponding banking operations; it is reported that the average national insolvency is about 9%-10%, while the insolvency on *Confidi* counter-guaranteed loans is around 1.5%-2%.

In India, the Indian Institute of Rural Development (IIRD), with support from UNIDO, launched the Mutual Credit Guarantee Fund Scheme (MCGFS) in 2000. The project was designed to help hand block printing textile clusters (at Sanganer and Bagru near Jaipur) overcome the difficulty in accessing credit arising from their inability to offer traditional forms of collateral. Among industry associations, the ALEAP Credit Guarantee Association (ACGA) has entered into a tripartite agreement with Andhra Bank and CGTSI for implementation of MCGS in the state of Andhra Pradesh wherein member SSI (small-scale) units can avail of collateral-free bank finance.

Source: "Making Social Capital Work: Mutual Guarantee Associations for Artisans", September 2002, Social Finance Programme, Employment Sector, ILO; http://www.nmcc-vikas.gov.in/ComptitivenessManagement/SMEFinanceCredit/Pages/MutualCreaditGuaranteeFinanceSchemes.aspx

Box 4.2: Network Enterprises Fund

Network Enterprises Fund (NEF) was created by IFMR (Institute for Financial Management and Research) Trust in January 2008 as an equity fund that invests in commercially viable, sustainable enterprises in sectors impacting low-income households. It aims to go beyond solely providing micro-finance to the entrepreneur by ensuring participation in economic activities on a sustainable basis. The equity fund created under NEF seeks to create a network of enterprises (NEs) to provide the economically disadvantaged a platform to engage with the markets, as producers and consumers of goods and services. NEs are expected to act as intermediaries between the formal markets and low-income groups, to demonstrate and implement market-based solutions. They will help in aggregation of primary producers, facilitating 'backward and forward linkages', providing technical and managerial support and delivering basic services. They are also expected to work in partnership with grassroots organizations. Each NE will complement the work of the other, and yet specialize in what it can do best. The key value proposition that networking offers is that it preserves the competitive advantage of disaggregated low cost of production and yet manages to take advantage of standardization and scaled economies through networks created. NEF will be exploring the potential for supporting industries such as dairy, rural BPO, food, crafts, village tourism and rural infrastructure such as drinking water, education, skill development, low cost housing, waste recycling, healthcare, and rural energy. This is a very recent initiative and it will be interesting to watch its impact on rural Entrepreneurship in the years to come.

Source: Information received from Network Enterprises Fund

The lending decisions of banks are governed by the ability of businesses to service the loan and the availability of collateral. On the other hand, equity investors make capital investments (with a different emphasis and understanding of collateral) in return for significantly larger returns within a defined exit horizon.

4.4 New Sources of Finance – Angel Investors, VCs and PE Funds

4.4.1 Unlike traditional banking finance, which is largely debt based, the relatively newer sources of finance — such as angel investors, VCs and PE funds — invest equity with the expectation of much higher returns. The lending decisions of banks are governed by the ability of businesses to service the loan and the availability of collateral. On the other hand, equity investors make capital investments (with a different emphasis and understanding of collateral) in return for significantly larger returns within a defined exit horizon. Further, the level of mentoring and guidance for running the business is more intense in the case of early-stage investors, unlike traditional banking financiers. While banks expect repayment on fixed interest rates within particular time horizons, there is variation among different types of early-stage investors on crucial investment decisions, return expectations and strategies for exit. The emergence of angel investors,, VCs and PE funds (including cross-border investment) and their active involvement in the equity market in India (especially in the knowledge-based industries) over the last few years is one of the most significant financial

developments that could impact the growth of Entrepreneurship in India. For recent figures on such investment, see Figures 4.8, 4.9, 4.10, 4.11 and Tables 4.3 and 4.4.

4.4.2 **Angel Investors:** Angel investors are typically high-net-worth individuals (HNIs) who have often been successful entrepreneurs themselves. They re-deploy their wealth in next-generation businesses. They invest in new-idea enterprises (that do not yet have external validation), help bring these ideas to market, take significant risks and invest a lot of time and energy in mentoring, management guidance and networking. Angel investors are also governed by considerations other than finance alone, such as belief in Entrepreneurship itself. Their time horizons are limited and aimed at ensuring the availability of larger institutional funding, mainly from VCs. In recent years, institutional seed funds that perform the roles of sophisticated angel investors have also emerged in India. Where access to early-stage capital is a serious issue, angel investors have the potential to become one of the most important catalysts for increasing the number of new entrepreneurial ventures in India.

Angel investors are typically high-net-worth individuals (HNIs) who have often been successful entrepreneurs themselves. They re-deploy their wealth in next-generation businesses.

Box 4.3: Angel Investment - Illustrations

One recent innovative deal that deserves mention is the seed fund investment of about Rs. 4 crore (US$ 1 million) in TRI-Thinklabs in December 2007. TRI-Thinklabs is the brainchild of two IIT Mumbai graduates, Gagan Goyal and Abhishek Biswal, who were incubated in SINE, IIT Mumbai. The company is working on 'Career Oriented Embedded Systems Training' using robotics as a practical learning tool. It has already trained over 10,000 students in an 'In-Campus Workshop Model' over the last 12 months, in a hands-on environment to enable maximum exposure to actual shop-floor conditions. Over the next few years, it aims to train over 10,000 students per year, working with engineering and science colleges in about seven cities in India. The broad goal of the company is to help provide trained skilled resources in the critical area of manufacturing, especially in hardware, automation and power sectors. The seed fund worked closely with the entrepreneurs before investing, on issues such as developing the idea, positioning it in the market, evolving strategy, obtaining feedback from industry, financial modelling, etc. In return, it has taken a stake of less than 30% in equity.[71]

4.4.3 **Venture Capital:** Venture capital funding provides funds for early-stage companies once they have passed the seed stage and report some returns. VC investments are traditionally made for scaling up operations (i.e., developing, launching and expanding new products or services). VCs take lesser degrees of risk and invest more money than angel investors. However, a VC is about more than financial support alone.[72] VCs provide entrepreneurial support and partnership-

[71] Anand Lunia of Seedfund provided valuable inputs in this regard.

[72] See Vishnu Varshney, 'Venture Financing in India', GVFL, for a historical overview of VC investment in India. In particular, see page 37 for key advice on VC funding.

based value-addition, often in the form of providing financial advice, human resources, IP issues, establishing networks with customers and overall guidance in company strategy. In return, VCs also retain a degree of control over decisions governing the company's functioning (e.g., through board seats and legal covenants[73]), and usually look at fixed time horizons for predetermined exit, usually via a private equity fund. As illustrations, two recent VC investments by Helion Ventures Limited provide insights on the type of new, high value added, wealth generating ideas that are evolving in India today.[74]

Box 4.4: Venture Capital Deals - Illustrations

Jigrahak Mobile Solutions, which received an investment of US$2.2 million in 2006, offers technology solutions in the mobile-commerce space. It has developed a mobile platform that allows end-customers to choose from a variety of products and services from a range of service providers like MakeMyTrip, cinema halls, flower merchants, banks, etc. Customers can also make payments using mobile phones in a quick and secure manner. It was founded by Sourabh Jain who invested his own savings for a year before receiving VC funding. A combination of factors ensured funding for Jigrahak: it is in the mobile space with a growing number of subscribers in India; it has a ready number of interested service providers and it does not charge end-customers for completing transactions. Helion also played an active mentoring role and has two of its directors on Jigrahak's board.

Another example of VC investment in the knowledge-intensive sector is the US$6.5 million funding received by Anantara Solutions Private Limited in 2007 from a combination of investors led by Helion. Anantara is in the 'Second Generation Outsourcing' space that shifts the focus from cost arbitrage alone to generating high value through offshore business consulting and IT services frequently delivered through a set of partner companies that Anantara recruits and manages. It was founded by G.B. Prabhat (who had substantial prior experience with Satyam) and his management team of eight partners. Within months, Anantara has enlisted new clients from India as well as the UK, Germany, France and Hong Kong. It was also short listed for the NASSCOM '100 IT Innovators' register in 2007.

Private Equity (PE) funds are among the largest sources of funding for enterprises that are relatively secure with an established track record, requiring significantly large funds for expansion and growth.

4.4.4 **Private Equity:** Private Equity (PE) funds are among the largest sources of funding for enterprises that are relatively secure with an established track record, requiring significantly large funds for expansion and growth. PEs make capital investments in companies not yet quoted on a stock exchange in exchange for equity and management participation. As such, they take reasonably well-defined risks and their exit strategy is usually up to the stage when the company goes public or gets acquired at high value.

[73] Examples of VC control provisions typically include board seats, control over Reserved Matters (such as sales, acquisitions, budgets, executive appointment/removal and strategic business change) as well as legal rights over the company (such as right of first refusal over sale of shares, tag along rights, drag along rights, liquidation preference, non-compete clauses, rights of further participation and anti-dilution protection)

[74] Ashish Gupta of Helion Ventures provided valuable inputs in this regard.

4.4.5 Some significant features of angel investors, VCs and PE funds are illustrated in the table 4.2.[75]

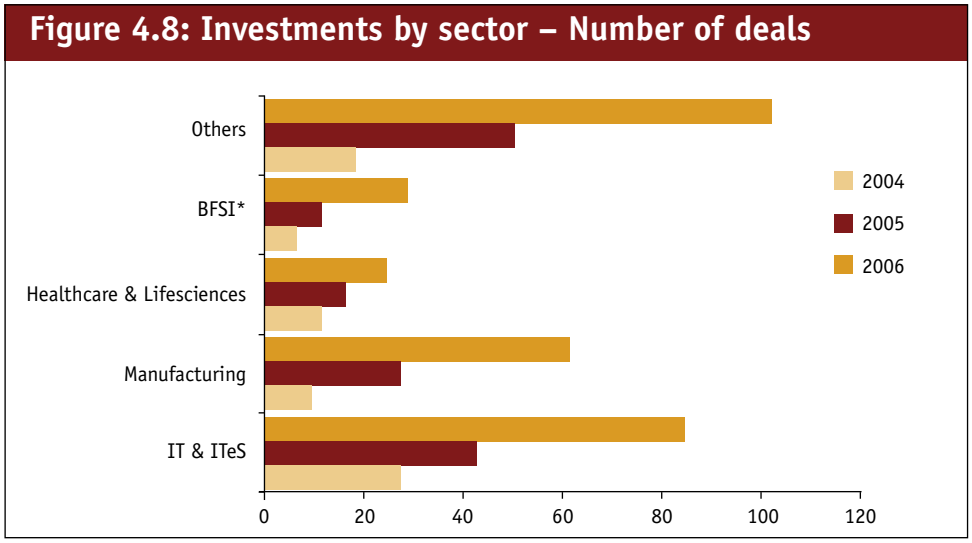
Table 4.2: New sources of finance

Type of investor	Stage of enterprise	Risk & return	Amount invested	Equity	Mentoring involvement	Monetary source	Challenges	Exit horizon
Angel	Seed; "SeriesA"	Very high risk; also Return on Investment (ROI) > 25%	Less; equity (preferred, convertible) usually $100,00 -200,000; typically 5-10 lacs and up to Rs. 4 crore	1-5%; also varies	Very high; personal	Largely individual; also fund	Prove business model, idea to market, validate product	Short; flexible
VC	Early; after start-up	Medium risk; ROI> 25%	High; equity up to $5million	20%	High; less personal	Typically other financial institutions; also individuals	Scale, team, accountability, sustainability	5-7 yrs; till next round of financing/ acquisition
PE funds	Late-pre IPO	Less risk, high ROI	Large; equity; $15m estimates	>20%	Low	Other financial institutions, market	Mergers, divestment, leadership restructuring	Short-till IPO/ acquisition

4.4.6 Recent studies show a gradual increase in the volume of VC and PE investments in high-growth sectors over the last few years.[76] Principally, investments have targeted the IT/ITeS, healthcare and life sciences, media and entertainment, telecom, banking, financial and insurance services as well as engineering and construction sectors. Mumbai, Delhi/NCR and Bangalore are key investment destinations,[77] while some other key regions for such investments are Chennai, Hyderabad Ahmedabad, Pune and Kolkata. The bulk of investments are driven to

Recent studies show a gradual increase in the volume of VC and PE investments in high-growth sectors over the last few years.

Figure 4.8: Investments by sector – Number of deals



Source: TSJ Venture Intelligence

* Banking Financial Services and Insurance

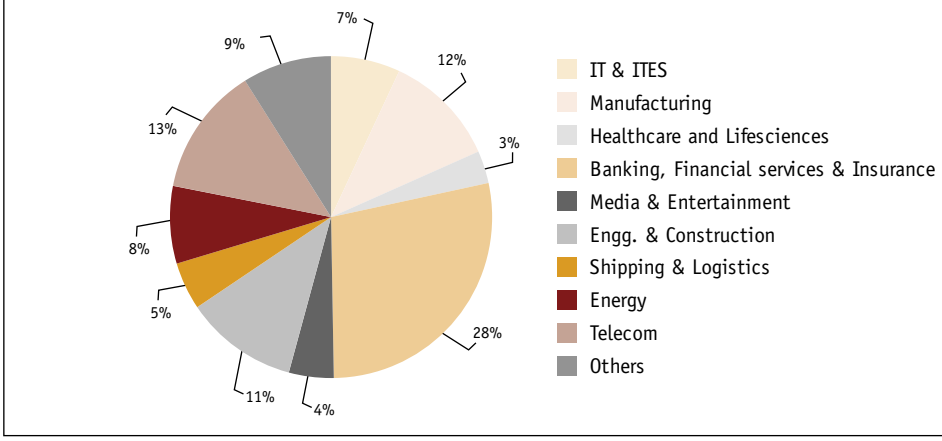
2006: Others: Textile, Garments, Media & Entertainment, Retail, Engineering/Construction, Food & Beverage, Real Estate

[75] Also refer to Seedfund's work in this regard, see www.seedfund.in; see also www.nenonline.org; further, Ashish Gupta (Helion) and Anand Lunia (SeedFund) provided valuable inputs in this regard.

[76] See for example, the figures of the Indian Venture Capital Association; also a study conducted by Venture Intelligence and US-India Venture Capital Association, as reported in the Times of India dated January 31, 2008.

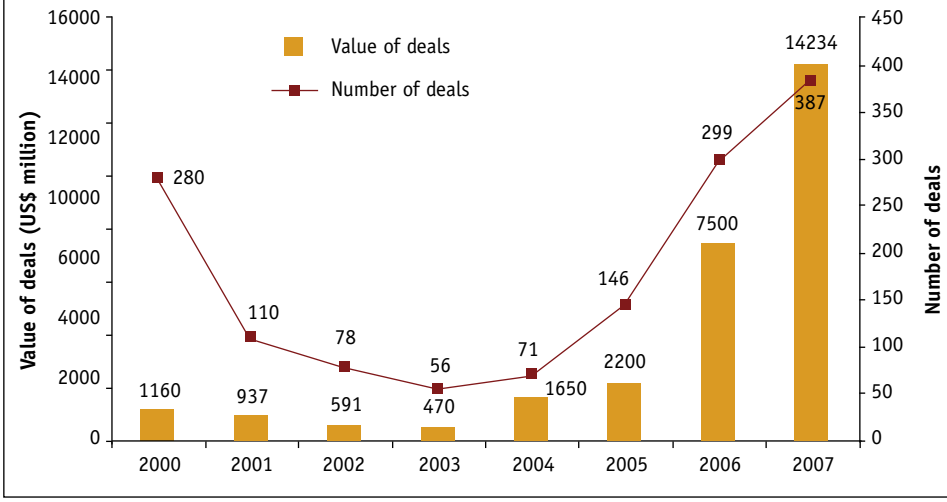
[77] According to the said survey (supra note 76 as above), companies in south India received 37% of all VC investments and those in western India received 36% of investments in 2007.

Figure 4.9: PE/VC investments by industry in 2007 (Total US$ 14.2 Bn)



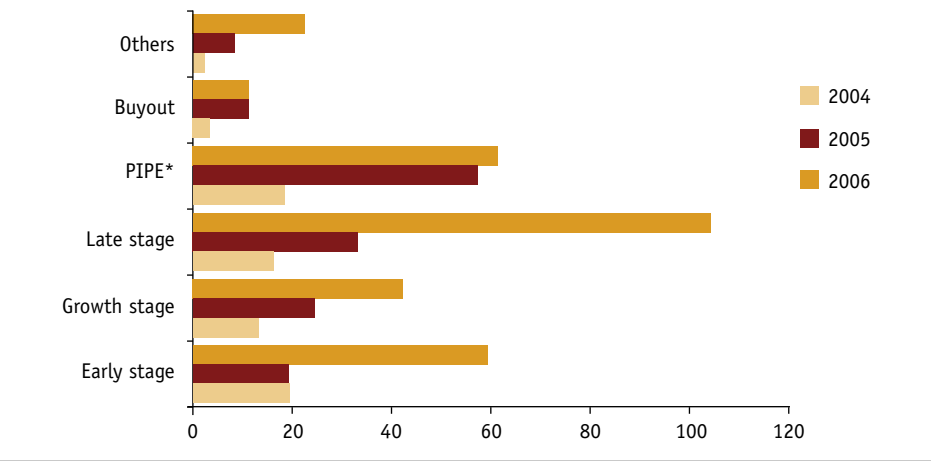
Source: TSJ Venture Intelligence

Figure 4.10: Growth of venture capital and private equity in India, 2000 – 2007



Source: TSJ Venture Intelligence

Figure 4.11: Investments by stage – Number of deals



Source: TSJ Venture intelligence
PIPE* — Private investment in public equity

the late stage. However, according to a recent survey, there has also been a rise in seed and early-stage investments in 2007.[78] Some recent figures from the Indian Venture Capital Association[79] are as follows:

Table 4.3: PE investments by stage (2007)

Stage of company development	No. of deals	Amount (US$ million)
Venture capital	98	542
Growth PE	32	1321
Late	136	5070
Pre IPO	14	434
Private investment in public equity	80	4210
Buyout	7	173
Buyout – Large	3	474
Other (Includes infrastructure investment)	17	2010
Total	**387**	**14234**

Source: TSJ Venture Intelligence

Table 4.4: Top cities attracting PE investments (2007)

City	No. of deals	Value (US$ million)
Mumbai	103	5995
Delhi/ NCR	63	2688
Bangalore	49	685
Hyderabad	41	1380
Chennai	32	824
Ahmedabad	14	492
Kolkata	12	339

Source: TSJ Venture Intelligence

4.5 Some Critical Issues in Financing

4.5.1 **Ensuring Ready Availability of Seed Capital:** Ensuring a ready supply of seed capital and a wider source of capital across geographies is a critical financial issue for entrepreneurs in India. It is essential to move beyond a few informal angel investors and promote more incentive schemes to encourage seed capital funding in India. While there has been growing foreign investment in India in recent years, a 2006 study states that over 90% of such funds are invested in late stage initiatives by mature firms.[80] VCs and PE funds generally invest in reasonably established enterprises. Since investments in SMEs typically generate returns and add value in various ways, it is important to examine the issue of incentivizing start-up capital with greater rigour.[81] With the rise of entrepreneurial activity

It is essential to move beyond a few informal angel investors and promote more incentive schemes to encourage seed capital funding in India.

[78] According to the said survey (supra note 76 as above), over 50% of the VC investments during 2007 were below $5 million, out of which 23% was below $ 2 million.

[79] See http://www.indiavca.org/IVCA%20Presentation_February%202008.pdf.

[80] See also Rafiq Dossani and Asawari Desai, 'Accessing Early Stage Risk Capital in India', Stanford-Ti E Study, 2006, page 16; for policy options, see also report of the Committee on Technology Innovation and Venture Capital submitted to the Planning Commission in July 2006.

[81] See also, the results of the SEAF study, 2004, 'The Development Impact of Small and Medium Enterprises: lessons learnt from SEAF Investments; report on Small Enterprise Development Funds, which stated that for every dollar invested on average, ten additional dollars were generated in the local economy, accompanied by the creation of new jobs, introduction of new business methods and integration into supply chains, quoted in Dossani and Desai, supra note 80 as above.

in India, it is also expected that a number of innovative finance models will emerge in the coming years.[82]

4.5.2 **Lack of Relevant Secondary Markets**: The absence of equity markets for listing and trading of small-cap companies means that the options for raising capital are limited. The lack of such an exchange also means that the options before a seed investor, in terms of finding a market and for exit, remain obscure. Further, the relative lack of capital flow from big corporate players to start-up entrepreneurs at the seed stage (and the absence of incentives for doing so) makes it difficult to sustain a critical mass of seed funding in the entrepreneurial sector.

4.5.3 **Relative Lack of Market Understanding among Start-ups**: Start-up funders who actively mentor through a company's initial days, often have to face serious challenges in communicating the product or service as a marketable proposition. Start-ups also need guidance regarding scaling-up, including decisions involving professionalizing, teamwork, corporate structuring etc. Angels and VCs consider these issues as well as scaling up questions to be extremely significant. In this respect, it is useful to point out that one-third of the entrepreneurs interviewed took to Entrepreneurship on their own. However, the trend of starting with a core team has become more marked in the recent years. New entrepreneurs feel that it does help to work in teams, ideally with varying skill sets.

It is useful to point out that one-third of the entrepreneurs interviewed took to Entrepreneurship on their own. However, the trend of starting with a core team has become more marked in the recent years.

Regarding market research before starting up, less than half of the entrepreneurs interviewed had either prepared a business plan or undertaken market research before starting their business venture. While the financial community looks for clear business plans and scaling up particulars, entrepreneurs often decide to test the waters based on a variety of other factors, without necessarily going into traditional details. The efficacy of such risk-taking behaviour does merit further analysis.[83]

4.6 Key Suggestions to Incentivize Seed Stage and Early Stage Funding in India

4.6.1 Some of the key suggestions to provide more incentives for greater seed capital funding as well as involvement of angel investors and VCs are as follows:

a. **Explore innovative models:** To help knowledge-based start-ups, Venture Debt is a novel idea that is worth exploring. Venture Debt combines traditional debt options with venture capital. To help knowledge-based start-ups move from idea to market in the least

[82] For an overview of policy options, see also report of the Committee on Technology Innovation and Venture Capital submitted to the Planning Commission in July 2006.

[83] See the work of Saras D Sarasvathy generally on the 'affordable loss principle', at the University of Virginia, Darden School Foundation.

possible time, angels and seed investors prefer their investments to be utilized in activities that lead to substantial value addition (such as R&D, building of teams, developing products and marketing networks, knowledge investments, etc.) rather than on brick and mortar costs (such as leasing of infrastructure, hardware, fixed and working capital, etc.) Venture Debt is an option that could be used here for traditional brick and mortar costs. Such debt could be serviced by banks such as SIDBI and/or by private players who could bear the risks to which traditional banking mechanisms may otherwise be averse. While Venture Debt is prevalent in USA, it has not yet become current in India. It will be interesting to examine the feasibility, especially for knowledge-based start-ups.[84]

Alternatively, other models could involve a blend of traditional debt and equity. The lender could have the option of converting debt into equity over a period of time. This gives an incentive to the lender to fund start-ups as well as participate in their growth.[85] Further, greater availability of soft loans (i.e. loans at below-market rates of interest and on easier terms) at the start-up stage from banks will also supplement the efforts of angel investors.

The lender could have the option of converting debt into equity over a period of time. This gives an incentive to the lender to fund start-ups as well as participate in their growth.

Some initiatives are already underway in India. For example, the National Association of Software and Service Companies (NASSCOM) and ICICI Knowledge Park are planning to set up a US $25-million VC fund to help start-ups with Intellectual Property (IP). The fund, to be registered with the SEBI, will look after the brick-and-mortar costs of start-ups.[86]

b. **Set up a public fund for start-up entrepreneurs using innovative PPP mechanisms:** A variant of ideas mentioned in 4.6.1 (a) is to establish a public fund that typically provides start-up capital.[87] In this respect, suitable PPPs could be promoted. In the USA, for example, the Small Business Investment Company (SBIC) scheme allows private seed and VC fund investors to borrow funds at favourable terms[88] from the government. These loans are then invested as equity in start-ups, where the seed investor also provides crucial mentoring skills and contacts with business networks. Such a scheme allows the government to share some of the high risks involved in start-ups and, at the same time, encourages more seed investors and VCs to enter start-up and

[84] See for example, SIDBI's recent efforts to provide equity financing in selected areas; see http://economictimes.indiatimes.com/News/Economy/Finance/SIDBI_to_focus_on_direct_equity_support_to_SMEs_of_north_/rssarticleshow/2628546.cms; also on SIDBI's proposed initiative on creating a Rs. 2000 crore worth risk capital fund to support new entrepreneurs and encourage angel investors, see, http://www.financialexpress.com/news/SIDBI-begins-work-on-Rs-2-000cr-risk-capital-fund/281567/; see also annual budget speech 2008-09 of the Union Finance Minister, P Chidambaram on achieving greater financial inclusion through facilitative efforts. It is relevant here to point out that SIDBI has already earmarked a sum of Rs. 11 crore for equity financing to select SMEs (with a typical stake of about 30%) in north India. See The Economic Times dated December 18, 2007. Further, it has set up funds in the IT sector, grassroots innovation and knowledge based industries.

[85] See also for example, mezzanine financing as another relevant financial instrument. See www. icicventure.com/mezzanine_practice.html

[86] The Economic Times, dated January 13, 2008; see also http://www.vccircle.com/2008/01/12/nasscom-icici-knowledge-parks-25-million-early-stage-fund-kicks-off/.

[87] See for example, the recommendation of the Ganguly Committee Working Group set up by RBI, on SME Development Fund. See also section 12, 13 of the MSME Act, 2006; in this respect, see also the proposed venture capital fund to be set up by NASSCOM and ICICI Knowledge Park.

[88] Typically, these loans are availed by VCs and seed funds at low interest rates, with clauses that allow deferment of interest and capital repayment till the enterprise earns profits. See, http://www.sba.gov/aboutsba/sbaprograms/inv/index.html.

early-stage financing. Further, under the SBIC scheme, there are special benefits for investing in less developed sectors of the economy as well as for disadvantaged sections of the population. In India, areas such as rural Entrepreneurship and efforts to develop a more inclusive entrepreneurial environment could receive a fillip from such a scheme. Further, special incentives such as tax benefits on capital gains arising out of such seed stage investment could also be considered as ways of increasing big corporate appetite to invest in start-ups.

The NKC, for example, has already recommended an SME Fund in its recommendations on Intellectual Property Rights (IPR), which may enable crucial technology acquisition abroad.[89] In his Annual Budget 2008-09 speech, the Union Finance Minister also proposed to create a Rs. 2000 crore risk capital fund for the SME sector within SIDBI.[90] The Economic Survey 2008 also discusses a proposal to set up a Small Enterprises Development Fund under SIDBI.[91] The involvement of various stakeholders in this fund could signify a major and positive departure from past practices.

A stock exchange that is specifically designed for smaller companies will provide significant advantages.

c. **Create a secondary market for smaller companies:** A stock exchange that is specifically designed for smaller companies will provide significant advantages. From the company's point of view, it will ensure visibility, help in accessing additional capital, create a market with a public value for its shares and also help to broaden the shareholder base. From the seed stage investor's point of view, the prime advantage lies in the creation of a market that is small enough for the company to attract the attention of other shareholders (including bigger companies and VCs), and thereby also provide appropriate exit options. Such an exchange will also help generate significant 'network' with the wider business community. The exchange would need to incorporate distinctive regulations tailored to the needs of the smaller companies and investors, with appropriate monitoring and quality checks, ensuring public trading of shares of small companies within a well-supervised, yet simplified, regulatory environment.[92]

There are examples of similar exchanges set up in other parts of the world, most notably the Alternative Investment Market (AIM) in London, which has raised about £49 billion since its inception in 1995.[93] Some examples of stock exchanges for smaller companies around the world (as of December 2006) are[94]:

[89] See NKC's recommendations on IPR at http://knowledgecommission.gov.in/recommendations/intellectual.asp.
[90] In addition, there is also a proposal to create a fund of Rs. 2000 crore in SIDBI for enhancing refinance capability of the MSME sector.
[91] Incidentally, SIDBI has already embarked on equity financing in targeted areas of the country. It has earmarked Rs. 11 crore for equity financing to select SMEs in north India. http://sify.com/finance/fullstory.php?id=14576864.
[92] In this context, see recent statements by senior SEBI officials on establishing a new stock exchange for small companies. The Hindu, Feb 1, 2008. See also for example, the recent study on the AIM entitled, 'From Local to Global–The Rise of AIM as a Stock Market for Growing Companies', London School of Economics and Political Science (LSE), September 2007; see http://www.londonstockexchange.com/NR/rdonlyres/4B0DF62A-BE1E-44F5-8616-EA2891873F1D/0/AIMshortreport.pdf. The AIM in the London Stock Exchange was established in 1995 and has a membership of over 2100 companies from over 22 countries, in over 30 business sectors, together raising over 2.2 billion pounds and providing a vibrant environment of new entrepreneurial energies and innovation.
[93] See for example, the LSE study, supra note 92 as above, stating that AIM has raised more 15.7 billion pounds in 2006.
[94] World Federation of Exchanges, quoted in the LSE study, supra note 92 as above at page 18.

Table 4.5 Stock exchanges for smaller companies

Location	Exchange	Domestic	Foreign	Total
London	AIM	1328	306	1634
Germany	Entry Standard	70	6	76
Euronext-Paris	Alternext	73	2	75
Spain	Nuevo Mercado	10	1	11
Italy	Mercato Expandi	26	0	26
Ireland	Irish Enterprise	19	4	23
OMX	Investor & NM List	34	0	34
Toronto	TSX Ventures	2,244	0	2,244
Hong Kong	Growth Enterprise	198	0	198
Korea	KOSDAQ	962	0	962
Singapore	SESDAQ	129	40	169
Tokyo	Mothers	185	2	187

d. **Make incubators responsive to market needs:** Making incubators into entrepreneurial services, with active involvement from industry, to promote products and services that meet market needs, requires significant scaling up in the quantity and quality of incubation services. This topic is discussed in greater detail in the following chapter. While not yet seen in India, the methodology followed by Y Combinator, a US venture firm specializing in early stage start-ups (seed funding), could provide interesting insights. Y Combinator's core competence lies in working with the start-ups in transitioning from idea to company. Some of their value additions include the following: assisting in initial issues such as incorporation, Intellectual Property and creating the team; securing network connections, especially with lawyers and other professionals; and assisting start-ups in dealing with investors and acquirers, once the company becomes relatively mature.[95]

Making incubators into entrepreneurial services, with active involvement from industry, requires significant scaling up in the quantity and quality of incubation services.

e. **Encourage enabling business environment:** Ensuring simplified regulatory processes, improving delivery time, eliminating corruption, meeting information needs and improving corporate governance norms for entrepreneurial start-ups, are some of the overall enablers to create a better business and regulatory environment.

[95] www.ycombinator.com; It invests mostly in software and web services. It makes small investments (rarely more than $20,000) in return for small stakes in the companies it funds (usually 2-10%).

Chapter Summary

A combination of debt and equity models will spur early stage finance for Entrepreneurship in the foreseeable future. Most of the entrepreneurs interviewed were self-financed; at the same time, a majority of those who approached banks did receive loans. Yet, there is a widely held perception that it is very difficult to get bank loans at the start-up stage while becoming comparatively easy at the growth stage. While there are new initiatives and schemes, perceptions on bank finance have not improved for entrepreneurs who have started ventures after 2000, most of which are in the knowledge-intensive sectors. It is in these sectors, where the information asymmetries and perceived risk levels are considered higher, that Angels, VCs and PE funds are beginning to fill a crucial market gap and need incentives for more involvement.

Improving risk management by developing transparent rating systems and devising information tools are expected to address information asymmetries. Recent financial schemes reflect greater recognition being given to Entrepreneurship. In addition, interesting financial innovations are occurring in the rural and informal entrepreneurial spaces. Seed capital funding needs incentives for greater involvement. Some ideas worth exploring include establishing a secondary market for newer companies; creating new mechanisms for start-up funding, enhancing understanding of the financial aspects of Entrepreneurship among start-ups and improving the business environment for Entrepreneurship. A secondary market for smaller companies will, in particular, provide exit options to the seed-stage investor as well as value-addition to the entrepreneur by ensuring visibility, access to additional capital, broadening the shareholder base and generating networks with the wider business community.

Chapter V

Education, Innovation and Entrepreneurship

5.1 Interlinking Education, Innovation and Entrepreneurship

5.1.1 Generating a critical mass of entrepreneurs oriented to high levels of growth depends on the quality of education provided and the presence of an environment that encourages innovation. Three interconnected areas provide possibilities for mutually beneficial synergies through the flow of ideas and wealth, which could generate high level of dynamism. These are: Education (especially, quality vocational training and skill development), Innovation[96] (generating commercial value through new and improved ideas) and Entrepreneurship. Together, these are the cornerstones of inclusive and sustainable growth. See Figure 5.1

- Education is indispensable for skill development and fundamental to Entrepreneurship and innovation. The ability to innovate and generate commercially valuable new products and processes can only take place in environments that encourage experimentation and value addition.

The ability to innovate and generate commercially valuable new products and processes can only take place in environments that encourage experimentation and value addition.

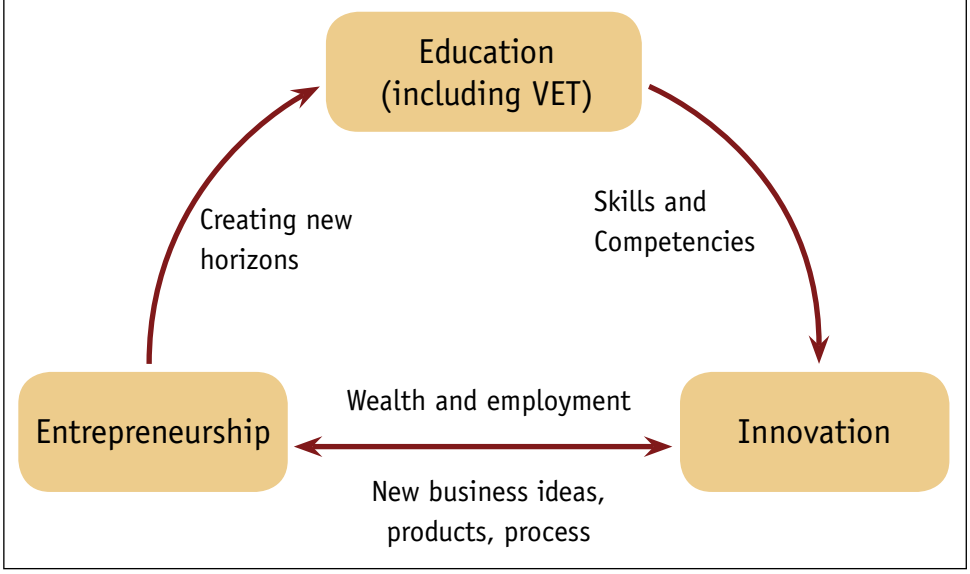
- Innovation catalyzes Entrepreneurship by providing ideas that can be converted into wealth (through goods and services). Innovation helps reveal market opportunities for Entrepreneurship to develop and flourish. Innovations are not limited to those involving high-end technology alone. Any new idea that generates commercial value is by itself the spur for a new entrepreneur to plan a venture. To quote the economist, T. N. Srinivasan, 'Innovation and Entrepreneurship is a two-way relationship. In one sense, in innovation, someone finds something but that somebody may not be equipped to translate that something into a commercial proposition. That is where Entrepreneurship comes in.'[97]

- An entrepreneurial culture drives creation of wealth from knowledge and generates impetus for further innovation. Entrepreneurship, in turn, helps generate new jobs in the economy, and creates a culture of independence, risk-taking and confidence, more so amongst the

[96] For the purposes of its Innovation study, NKC has defined Innovation as 'a process by which varying degrees of measurable value enhancement is planned and achieved, in any commercial activity. This process may be breakthrough or incremental, and it may occur systematically in a company or sporadically; it may be achieved by; a) introducing new/improved goods/services; and/or b) implementing new/improved operational processes; and/or c) implementing new/improved organizational/managerial processes, in order to improve market share, competitiveness and quality, while reducing costs. ' See NKC Innovation Report, 2007 at http://knowledgecommission.gov.in/downloads/documents/NKC_Innovation.pdf.

[97] TN Srinivasan, 'Create a Framework that helps Entrepreneurs', interview to The Hindu, Business Line, April 23, 2007.

Figure 5.1: Building synergies



emerging educated groups. A dynamic entrepreneurial environment is supported by a vibrant academic culture with innovation linking the two as a generator of new ideas and opportunities.

5.2 Significance of Education

One major determinant for growth of Entrepreneurship is the availability of adequate number of skilled human resources, people who can take advantage of the opportunities provided by a growing economy at the local, national and global levels.

5.2.1 The importance of education for social progress and economic development is undisputed.[98] In this respect, the nature and role of education in catalyzing Entrepreneurship, especially in the highly skilled and knowledge-driven sectors is a topic requiring special attention. One major determinant for growth of Entrepreneurship is the availability of adequate number of skilled human resources, people who can take advantage of the opportunities provided by a growing economy at the local, national and global levels. To quote T. N. Srinivasan again: 'If the future demand for labour is going to be in activities which require much more skills, much more education, much more specific training and so on, are we providing them?... We are not anticipating future growth in labour demand of specific categories and providing the facilities to train them.'[99]

5.2.2 At a general level, the multi-dimensional nature of the required entrepreneurial skills originates in education and involves a combination of critical (objective, analytical and logical) as well as creative and empathetic (lateral, imaginative and emotional)[100] thinking. Imparting such skills is a process, which starts right from the school stage. However, critical aspects of higher education include professional education, Vocational Education and Training (VET) and skill development.

[98] NKC, letter to the Prime Minister on Higher Education; see http://knowledgecommission.gov.in/downloads/recommendations/HigherEducationLetterPM.pdf.
[99] TN Srinivasan, 'Create a Framework that helps Entrepreneurs', interview to The Hindu, Business Line, April 23, 2007.
[100] David Kirby, 'Entrepreneurship' 2003, McGraw Hill, page 145; see also, Saras Sarasvathy, 'Entrepreneurial Thinking versus Managerial Thinking' quoted in www.businessgyan.com.

5.3 Key Issues

5.3.1 **Higher and Professional Education:** In its earlier recommendations to the Prime Minister, NKC has expressly stated that the crucial challenge is to find ways of ensuring expansion, excellence and inclusiveness in higher education.[101] This mammoth task calls for systemic reforms such as bringing about regulatory changes, diversifying sources of funding and ensuring qualitative improvements in infrastructure and curricula. In addition, NKC has also emphasized the need to make large-scale improvements in related areas including:

a. Intensifying the quality and scale of industry interaction with academia.

b. Providing commercial and legal incentive structures that promote such collaboration (such as granting IP rights to universities and research centres for inventions developed from publicly funded research and encouraging commercialization, where the inventor also has a stake in the royalties)[102].

c. Interconnecting the knowledge institutions in the country (through digital broadband network with gigabit capabilities)[103].

d. Finding sustainable and workable models for continuous innovation driven Entrepreneurship.

VET needs to be given high priority in India. Skill development is crucial to reap the demographic dividend in India, where the size of the working age population, as per the annual budget 2008-09, is estimated to increase.

Implementation of recommendations in these areas is essential to further facilitate the growth of knowledge-driven Entrepreneurship on a very large scale throughout the country. In this respect, it is pertinent to point out that there is already an increase in budgetary allocations for education. The annual budget for the year 2008-09 has proposed increasing the total allocation for the education sector by 20% from Rs. 28,674 crore in 2007-08 to Rs. 34,400 crore.

5.3.2 **Vocational Education & Training - Skill Development:** It is pertinent here to note that only 5% of India's existing workforce has received skill training as against 96% in Korea, 75% in Germany, 80% in Japan and 68% in United Kingdom[104]. VET needs to be given high priority in India. Skill development is crucial to reap the demographic dividend in India, where the size of the working age population, as per the annual budget 2008-09, is estimated to increase from 77.5 crore in 2008 to 95 crore in 2026. NKC has earlier recommended the need for grassroots reforms in this area, such as innovative delivery models, re-branding, improving certification and monitoring as well as increasing flexibility of VET with

[101] For details of the NKC's recommendations on higher education, VET and professional education, refer to www.knowledgecommission.gov.in.
[102] For details of the NKC's recommendations on legal framework on public funded research and IPR, see www.knowledgecommission.gov.in.
[103] See http://knowledgecommission.gov.in/downloads/recommendations/KnowledgeNetworkLetterPM.pdf.
[104] XI Five Year Plan document, chapter 5, page 3.

the school and higher education streams.[105] Currently, there is stigma associated with VET as a result of various systemic flaws, such as the following:

a. Returns from VET are low and the quality of training does not meet the needs of industry[106]

b. There is little incentive to pursue VET courses since most of these do not lead to a job

c. Facilities in most VET institutes are old and outdated

d. Different aspects of VET are in the hands of different ministries and therefore VET has become a 'policy orphan'

e. There is lack of any assessment of skills and requirements at the entry stage itself

Democratization of innovation is releasing 'untapped energies of people everywhere that could solve the world's weightiest problems'.

f. There is need to provide incentives for training in spoken and written English

g. Performance outcomes in VET institutions are not measured with industry participation and there is no incentive for better performance

h. Current certification systems are inadequate and in need of overhaul. The emphasis should be on designing institutional systems that are 'accreditation-light' and 'certification-heavy', focusing more on empowering the student for a variety of industry needs.

5.3.3 **Innovation:** Globalization has spurred the phenomenon of 'Mass Innovation', triggering rapid and disruptive change in companies. This democratization of innovation is releasing 'untapped energies of people everywhere that could solve the world's weightiest problems'.[107] Younger and smaller companies are leveraging on innovative breakthroughs, carrying out the classic Schumpeterian 'creative destruction' to create wealth and find newer solutions. As such, 'large returns to national economic capability can result from relatively small national investments in transitioning new technologies to the market' and with 'appropriate policy support, promising innovations can become commercial propositions that

[105] See www.knowledgecommission.gov.in for NKC's recommendations on VET. In India, skill acquisition takes place through two basic structural streams – a small formal one and a large informal one. The formal structure includes (a) higher technical education imparted through professional colleges; (b) vocational education in schools at the post-secondary stage; (c) technical training in specialized institutions; and; (d) apprenticeship training. The unorganized sector which constitutes about 93% of the work force is not supported by any structural system of acquiring or upgrading skills. By and large, skill formation takes place through informal channels like family occupations, on-the-job training under master craftsmen with no linkages to the formal education training and certification. Training needs in this sector are highly diverse and multi-skill oriented.

[106] Unlike other areas of education, VET outcomes are easier to measure because they are 'binary' - largely in terms of employability and the capacity to sustain productive employment.

[107] Vijay Vaitheeswaran, 'Something New under the Sun' and 'The Age of Mass Innovation, in The Economist, dated October 13, 2007, where he also quotes Vinod Khosla saying, 'A crisis is a terrible thing to waste'.

drive growth'.[108] In the global race today, "the only way ahead for companies is to innovate".[109]

Innovation has emerged as one of the drivers of India's economic growth, and is a factor in increasing competitiveness, profitability and market share as well as reduced costs. NKC conducted a survey in 2006-07 on innovation occurring in large firms and SMEs across the country. According to its report, 'Innovation in India', the 'Innovation Intensity' (i.e. the percentage of revenue derived from products or services which are less than three years old) has increased for large firms as well as SMEs in India. The strategic prioritization of innovation has also intensified since economic liberalization. Moreover, an interesting finding is that SMEs register a greater increase in 'Innovation Intensity' than large firms. This could also indicate that smaller, decentralized, creative and experimentation-oriented organizations could be the torch-bearers of large-scale 'disruptive innovation' in the country.

However, in order to fully realize India's potential for innovation – from grassroots to the large firms – certain key actions such as reforms in higher education, investment in research and building formal and informal academia-industry linkages have become imperative. According to the NKC survey, the most significant external barrier to innovation for large firms and SMEs continues to be 'skills-shortages, arising out of lack of emphasis on creativity, problem solving, design and experimentation etc in the education curricula.' As such the report noted that 'it is critical to focus on policy reform in the higher and vocational educational curricula in order for India to achieve its innovation potential'.

In order to fully realize India's potential for innovation – from grassroots to the large firms – certain key actions such as reforms in higher education, investment in research and building formal and informal academia-industry linkages have become imperative.

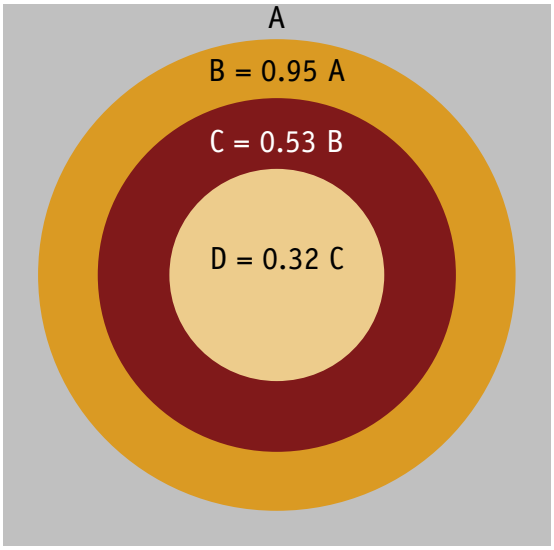
5.4 Key Statistics from NKC Study

5.4.1 **Importance of Education for Entrepreneurship**: As seen from Figure 5.2, there is universal acknowledgement regarding the importance of education. As many as 95% of entrepreneurs think education is a critical success factor for every individual, generally; this is not surprising since 98% of the entrepreneurs interviewed have at least an undergraduate degree. Of the 95% who value education generally, 53% (i.e. 50% of the overall sample) consider education a key trigger to evoke entrepreneurial inclinations. (i.e. they feel their education has helped them to be successful entrepreneurs). Further, 32% of this 53% (i.e. 16% overall) got into their respective business sectors as a result of their particular educational background.

[108] Attributed to Charles Wessner, National Research Council, USA, in 'Small Business Innovation Research Program', USA, Report of Symposium, 2007, page 33

[109] Prof. Vijay Govindarajan, Outlook Business, May 5, 2007

Figure 5.2: Importance of education



5.4.2 **Qualifications of Entrepreneurs:** Some observations regarding the qualifications of the entrepreneurs are as follows:

- Only 2% of the entrepreneurs interviewed have a PhD degree. This may lead one to conclude that many more doctorate degree holders (PhDs) could be potential entrepreneurs provided an enabling environment is created. Indian academia is yet to appreciate the kind of flexibility that prevails in campuses abroad, especially in the Silicon Valley where many PhD students and academics are also very successful entrepreneurs. In this respect, Indian institutions could encourage Entrepreneurship through promotional policies such as the following: enabling PhDs/ researchers to set up commercial entities while engaged in universities or professional employment; allowing institutional mobility and flexibility; encouraging universities/research organizations to establish commercial enterprises based on their new inventions and enabling industry and other research organizations to invest in new inventions, enterprises and innovations as equity, etc.[110]

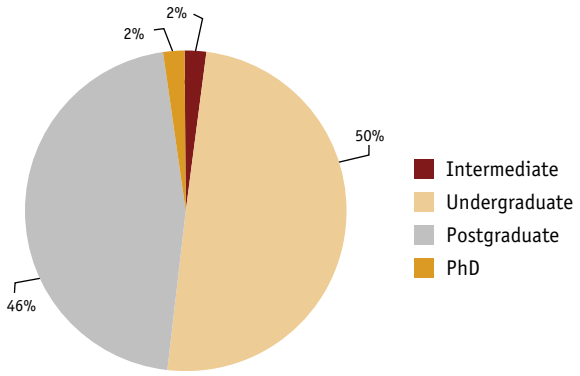
Indian academia is yet to appreciate the kind of flexibility that prevails in campuses abroad, especially in the Silicon Valley where many PhD students and academics are also very successful entrepreneurs.

- While nearly 80% of the entrepreneurs interviewed have a science/ engineering background, only 16% of the overall sample said that they consider their education relevant for their particular entrepreneurial venture. This leads one to wonder how much more entrepreneurs might gain if their curricula paid more attention to post education business opportunities.

- 70% of the entrepreneurs interviewed do not have an MBA qualification. This may suggest that an MBA degree is not a sine qua non to become an entrepreneur, though perceptions may be changing. There is potential even in those who may not have a background in business and science education to become entrepreneurs.

[110] See also, for example, the draft proposal from CSIR entitled, 'Encouraging Development and Commercialization of Inventions and Innovation: A New Impetus', dated April 10, 2007.

Figure 5.3: Qualification of entrepreneurs



- One in every five entrepreneurs interviewed have a liberal arts degree, which would suggest that Entrepreneurship is as much about technical skills as about acquiring a holistic understanding of the social and business environment and opportunities.

5.4.3 **Qualifications – The Changing Scenario:** The NKC Study found that for entrepreneurial ventures, established since the beginning of this decade, the ratio of MBAs and postgraduate entrepreneurs has steadily increased, while the number of undergraduate entrepreneurs has decreased. This indicates a growing importance of higher and professional education among the new generation of entrepreneurs.

Entrepreneurship is as much about technical skills as it is about acquiring a holistic understanding of the social and business environment.

Further, since the year 2000, a larger proportion of entrepreneurs with MBA degrees were also found to have prior work experience, compared to the pre-2000 figures. This may be a trend among knowledge entrepreneurs for gaining formal experience through employment prior to starting their own enterprises. While a large number of the entrepreneurs interviewed (39%) became entrepreneurs right after completing their education and without any prior work experience, for

Figure 5.4: Qualification of entrepreneurs – Variations according to time period

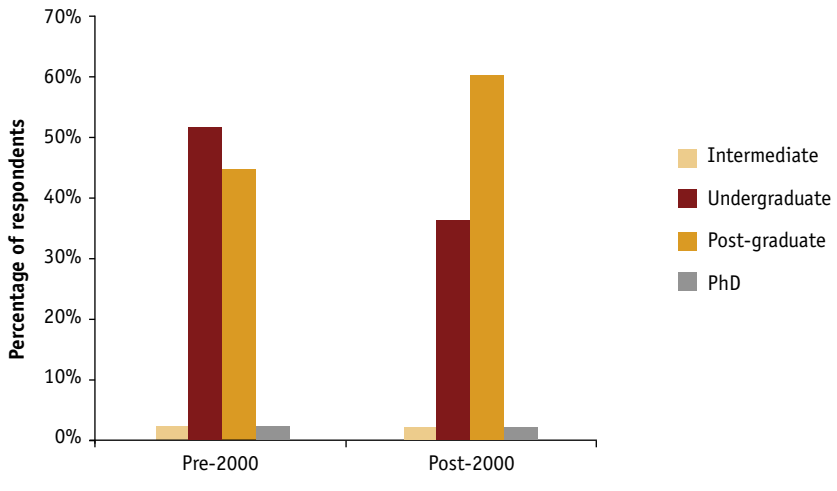


Figure 5.5: MBA and entrepreneurship – Variations according to time period

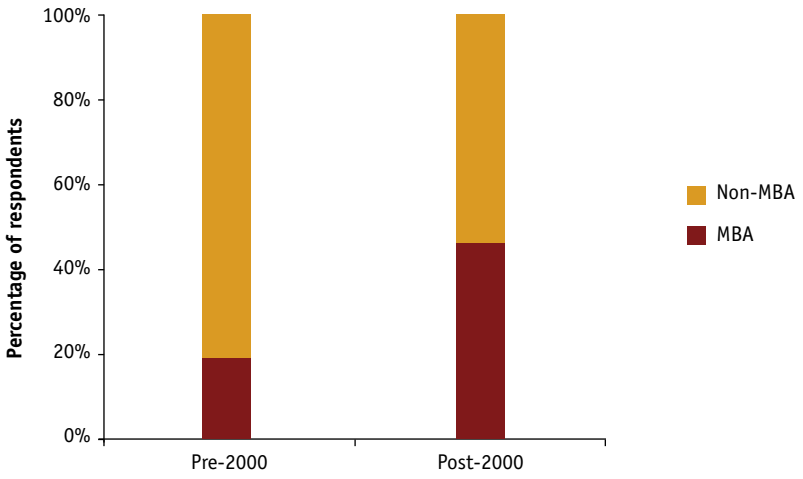
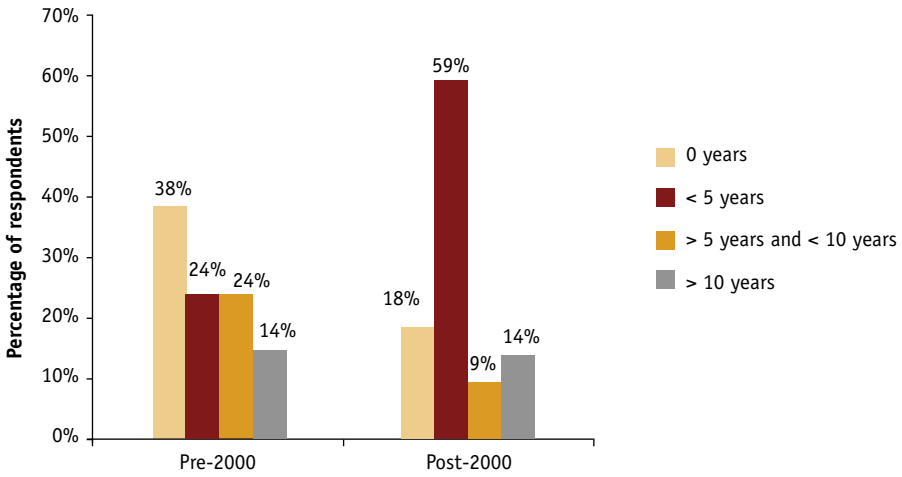


Figure 5.6: Profile of MBA graduates in different time periods – Variations according to work experience



The lack of skilled resources is going to be one of the most significant rate-limiters for entrepreneurial growth in India.

the remaining 61%, the median number of years they had worked as an employee in another organization was seven years.

5.4.4 **Availability of Skilled Employees**: When entrepreneurs were asked to rate on the availability of skilled employees (along a scale ranging from 'very easy', 'somewhat easy', 'average', 'somewhat difficult' and 'very difficult') only 25% of the entrepreneurs rated it 'very easy' or 'somewhat easy' to find skilled employees. Nearly one in two entrepreneurs (45%) said they consider skills-shortage to be a problem of 'average' importance, while nearly one in three entrepreneurs considered it 'somewhat difficult' or 'very difficult' to find employees with the right skills. The lack of skilled resources is going to be one of the most significant rate-limiters for entrepreneurial growth in India.

This observation is similar to a recent survey, which states that 33% of Indian CEOs are worried about the poor availability of skilled employees.[111] According to another recent survey, manpower and infrastructure are seen as among the most important barriers for Entrepreneurship in India.[112] A recent McKinsey study reveals the critical nature of challenge regarding shortage of talent faced by executives worldwide.[113] According to this survey conducted in 2006, finding talented people is likely to be "the single most important managerial preoccupation" for companies. Another McKinsey survey conducted in 2007 revealed that nearly half of the respondents expect 'intensifying competition for talent' and 'the increasingly global nature of that competition' would have a major impact on their companies over the next five years.

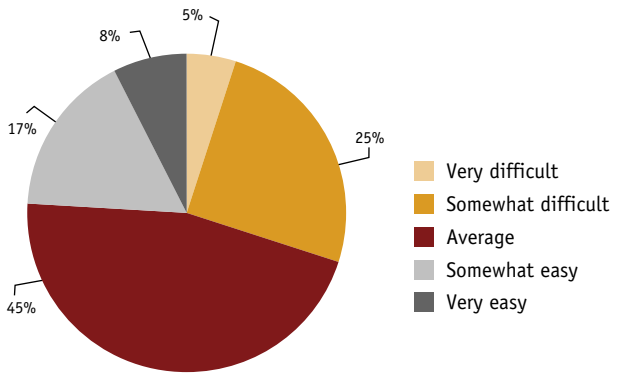
Entrepreneurs face problems in both recruiting and retaining skilled employees.

According to the 2007 McKinsey study, three external factors are at work - *demographic change* (people born after 1980, empowered by information, have a 'different outlook' and see their career as a series of two-to-three year jobs and readily switch); *globalization* (requiring talented people, with an international mind-set, who are also willing to work abroad) and the *rise of the knowledge worker* (who would generate up to 'three times more profit' than other employees). In addition, the company's *internal factors (HR policies)* are responsible for the talent crunch.

In a similar vein, another recent report states that 'investments in human capital and businesses are low when compared to rising economic needs' which, in turn could adversely impact growth rates.[114]

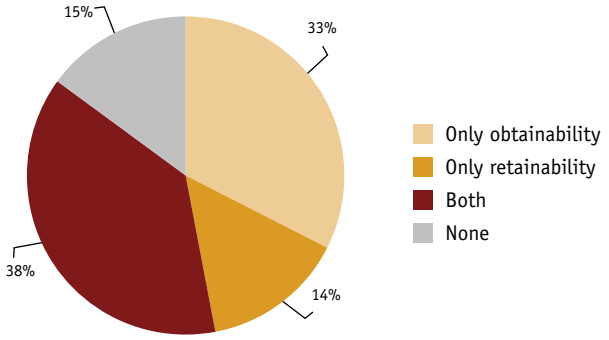
5.4.4.1 **The Nature of Skills-related Issues**: Entrepreneurs face problems in both recruiting and retaining skilled employees. More than a third of the entrepreneurs interviewed face this problem. While

Figure 5.7: Availability of skills



[111] Times of India dated January 28, 2008, page 19, quoting a recent PWC Global CEO survey.
[112] See KPMG TiE Study, 'Entrepreneurial India', 2008.
[113] The McKinsey Quarterly, 'Making Talent a Strategic Priority', January 2008.
[114] Global Economic Outlook 2008/Deloitte Research, quoted in Hindustan Times Business dated February 18, 2008.

Figure 5.8: Issues of skills



retention remains an issue, entrepreneurs do not consider the problem of retaining employees as acute as the problem in recruiting them.

5.4.4.2 **Variations According to Skill Types:** In general, entrepreneurs face problems in recruiting high-skilled as well as low-skilled employees. This implies that there is a need for an increase in supply of both categories of employees. Therefore, vocational education is as critical as higher education. Within this, recruiting and retaining high-skilled employees is more difficult compared to low-skilled employees. This may suggest that low-skilled employees do not gain the necessary higher market value and mobility with work experience, compared to their highly skilled counterparts. In other words, lack of skills reduces options for individuals. For entrepreneurs, retaining low-skilled employees may not be as significant a problem perhaps because wages for low-skilled workers are more or less the same across sectors and companies. Conversely, this also means that modernization and

There is a need for increase in supply of high-skilled as well as low-skilled employees.

Figure 5.9: Issues with skills – Variations according to type of skills

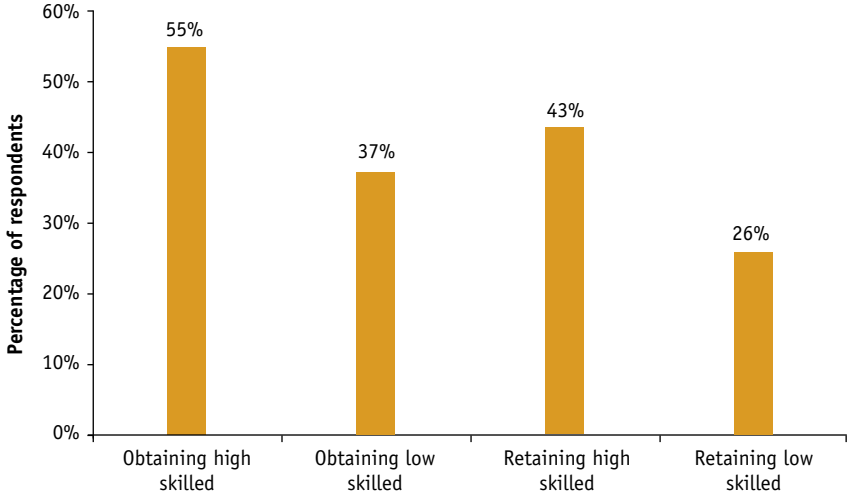
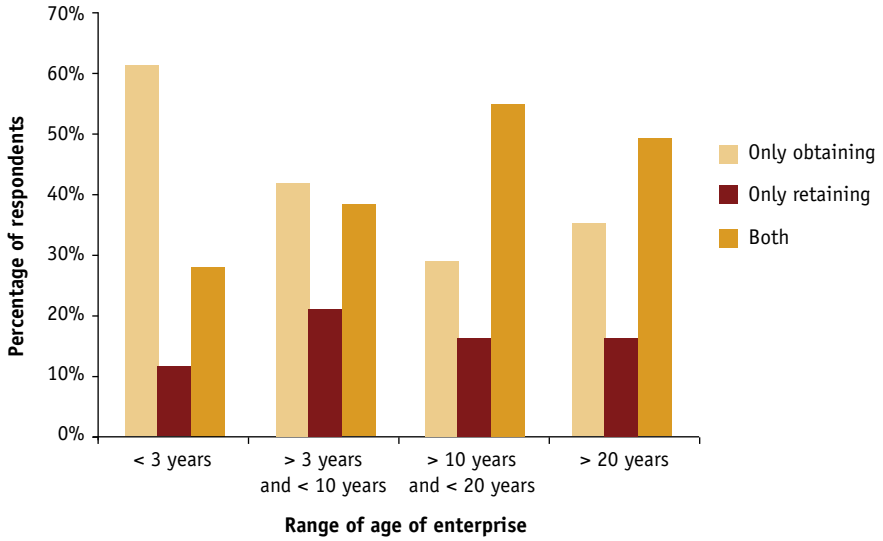


Figure 5.10: Issues of skills – Variations according to age of enterprise



improved quality of vocational training could increase value and lead to increased mobility of this group. Periodic upgrading of skills may also increase growth opportunities for employees.

5.4.4.3 **Variations according to age of enterprise:** Enterprises that are under three years old find it more difficult to hire skilled employees, as compared to those that have been operational for a longer time. The relative lack of brand value of new firms makes it difficult for them to attract talent. Refer to Figure 5.10.

5.4.4.4 A more detailed analysis is necessary to understand the relationship between attrition and incentives (such as appropriate HR policies, stake in enterprise, long-term incentives, learning opportunities, autonomy of decision-making and professionalization of functions). Some of the entrepreneurs interviewed already have such mechanisms in place.

There is an increase in the resource allocation for education from 7.68% in the Tenth Five Year Plan to 19.29% in the Eleventh Five Year Plan.

5.5 Eleventh Five Year Plan Initiatives in School Education, Higher Education and Development of VET

5.5.1 It is relevant here to highlight some of the key initiatives recently undertaken by the Government of India in order to expand quantity, improve quality and achieve inclusiveness, via significant increase in allocation for education in the Eleventh Five Year Plan. There is an increase in the resource allocation for education from 7.68% in the Tenth Five Year Plan to 19.29% in the Eleventh Five Year Plan.[115] It

115 Eleventh Five Year Plan (2007-12), 54th NDC Meeting, December 2007, Volume 1, Chapter 3, page 13, Table 3.13.

has stipulated five targets areas for monitoring:[116] (i) drop out rates of children which are targeted to be reduced at the elementary level from 52.2% in 2003-04 to 20% by 2011-12; (ii) minimum standards of educational attainment in elementary schools; (iii) increased literacy rate, which is targeted to be increased (for persons of age 7 years or more) to 85% by 2011-12; (iv) gender gap in literacy, which is targeted to be reduced to 10 percentage points by 2011-12; and (v) increasing the percentage of each cohort entering higher education from the present 10% to 15% by 2011-12.[117] The Plan also emphasizes upgrading quality in primary education,[118] expansion of secondary education,[119] upgrading higher education (including technical education) and the use of ICT throughout the education system.

5.5.2 In addition, the current Plan has targeted setting up 30 new Central universities, eight new Indian Institutes of Technology (IITs), seven new Indian Institutes of Management (IIMs), 10 new National Institutes of Technology (NITs), three Indian Institutes of Science Education and Research (IISERs), 20 Indian Institutes of Information Technology (IIITs) and two new Schools of Planning and Architecture (SPA) and a number of new degree colleges.[120] For upgrading science education and research infrastructure in the universities, it is envisaged that the existing Science and Engineering Research Council (SERC) mechanism of the Department of Science and Technology should be restructured to constitute a National Science and Engineering Research Board (NSERB). The NSERB would aim at expanding and strengthening the S&T base in the universities, building research capabilities in the academic sector and ensuring funding for undertaking internationally competitive research programmes.[121]

In the annual budget for 2008-09, the Government of India has proposed the establishment of a non-profit corporation, to fulfill the NSDM goals.

5.5.3 The Eleventh Plan also aims to launch a National Skill Development Mission (NSDM) and has proposed to allocate Rs. 31,200 crore for this. In the annual budget for 2008-09, the Government of India has proposed the establishment of a non-profit corporation, to fulfill the NSDM goals, with about Rs. 15,000 crore as capital from various sources, public and private, and an initial government equity of Rs. 1000 crore. During the Plan period, the mission is expected to spearhead efforts to

[116] Eleventh Five Year Plan (2007-12), 54th NDC Meeting, Volume 1, Chapter 1, page 26. Twenty seven targets at the national level fall in six major categories. The six categories are: (a) Income and Poverty, (b) Education, (c) Health; (d) Women and Children, (e) Infrastructure, and (f) Environment.
[117] Eleventh Five Year Plan (2007-12), 54th NDC Meeting, Volume 1, Chapter 1, page 26.
[118] Eleventh Five Year Plan, 54th NDC Meeting, Volume 2, Chapter 1, page 9; other plans include providing universal enrolment of 6-14 age group children including the 'hard to reach' segment; substantial improvement in quality and standards with the ultimate objective to achieve standards of Kendriya Vidyalayas under the CBSE pattern; all gender, social and regional gaps in enrolments to be eliminated by 2011-12; one year pre-school education for children entering primary school; drop out at primary level to be eliminated and the drop out rate at the elementary level to be reduced from over 50% to 20% by 2011-12; all States/UTs to adopt NCERT Quality Monitoring Tools.
[119] Eleventh Five Year Plan, Volume 2, Chapter 1, page 16. The Eleventh Plan aims to: (i) raise the minimum level of education to class X level and accordingly universalize access to secondary education; (ii) ensure good quality secondary education with focus on Science, Mathematics and English; and (iii) major reduction in gender, social and regional gaps in enrolments, drop outs and schools retention. The norm will be to provide a secondary school within 5 km and a higher secondary school within 7-8 km of every habitation. The GER in secondary education is targeted to increase from 52% in 2004-05 to 75% by 2011-12 and the combined secondary and senior secondary GER from 40% to 65% in the same period.
[120] Eleventh Five Year Plan, Volume 2, Chapter 1, page 28.
[121] Eleventh Five Year Plan, Volume 2, Chapter 1, page 29.

increase the number of trained personnel from 2.5 million to 10 million. It is expected to coordinate the relevant VET work of 17 different ministries and departments of the Government of India, involve the private sector and facilitate a collaborative process. The Public Private Partnership (PPP) mode is expected to restructure and reposition existing infrastructure, with coordination from concerned ministries. Further, in 20 identified high growth sectors, private initiatives with government support are also planned. Respective industry associations in each sector are expected to outline their vision for the 'Sectoral Skill Development Initiative' (SSDI). The NSDM would engage with each of these sectors to work out appropriate deliverables and strategies in the respective 'Sectoral Skill Development Plans'. It would then prescribe a national framework for domain-specific standards and common principles to create an enabling environment for private investment in skill training.

5.5.4 In this respect, the NSDM's objectives include the following:

a. 'Skills Mapping'

b. Expanding and modernizing the existing 'Public Sector Skill Development' infrastructure and its utilization by a factor of five

c. Enlarging the coverage of skills from 150 to 1000 trades

d. Setting up 50,000 skill development web based learning centres through the PPP mode

e. Facilitating the repositioning of employment exchanges as outreach points of the NSDM

f. Establishing a National Qualifications Frame-work (with 'equivalence' and horizontal mobility between various VET, technical and academic streams at more than one career point)

g. Establishing a 'credible accreditation system', a 'guidance framework' (for all accrediting agencies), a 'national skill inventory' and a 'national database for skill deficiency mapping' on a national web portal as well as a 'trainee placement and tracking system'.

The Public Private Partnership (PPP) mode is expected to restructure and reposition existing infrastructure, with coordination from concerned ministries.

5.5.5 Further, the NSDM has an action plan for the Ministry of Rural Development under which 600 new RUDISETIs (Rural Development and Self Employment Training Institutes) would be set up. These RUDISETIs are expected to focus on developing Entrepreneurship by collaborating with the Entrepreneurship Development Institute (EDI), which is an autonomous non-profit organization set up to promote Entrepreneurship through education, research and training.[122]

[122] See www.ediindia.org.

5.6 Other Suggestions to Enhance Entrepreneurship

5.6.1 **Content and Learning Methods:** The NKC consultations with entrepreneurs reveal that it is important to develop pedagogic methods, examination systems and curricula that encourage critical and lateral thinking. The ability to promote Entrepreneurship requires an enquiring mind that is able to make connections between theory and practice. Entrepreneurs feel that there is a need to recreate real-life situations in the classroom with the help of examples and illustrations so that students are able to get a 'concrete feel' of various aspects of the outside world. At the same time, many entrepreneurs also feel that the starting point for reforming teaching methods and encouraging variety in career options, must be at the school stage itself, where the pressure to learn by rote and to join typically stereotypical career paths are huge. Right from the school stage, pedagogy should encourage original thinking and not rote learning. One specific suggestion from several entrepreneurs is to introduce manuals in school curricula on 'How Things Work', on various practical aspects of everyday living.

Right from the school stage, pedagogy should encourage original thinking and not rote learning.

5.6.2 **Teaching and Entrepreneurship:** While Entrepreneurship has been introduced as a course in a number of business school curricula, there needs to be a greater thrust in making Entrepreneurship a priority subject. Other aspects of Entrepreneurship such as business ethics, early enterprise management, aspects of scaling up, Indian corporate law and relevant international laws, should also be a part of such curricula.[123] A noteworthy development is the recent proposal to set up a School of Entrepreneurship offering undergraduate and post-graduate degrees in IIT Kharagpur.[124] Such initiatives need to be encouraged for widespread adaptation in other educational institutions, including institutions located outside metropolitan areas. The involvement of the burgeoning NRI community and alumni networks in funding such schools must be encouraged.

5.6.3 **Encourage Student-led Entrepreneurial Activities on Campus:** Entrepreneurship cannot be learnt only by 'chalk and talk'.[125] Shared activities outside the confines of the textbook are imperative to develop leadership and team building skills that are necessary for Entrepreneurship.[126] It is necessary to encourage activities

[123] The Indian School of Business (ISB) in Hyderabad, a pioneer in actively encouraging Entrepreneurship, has introduced Entrepreneurship as a compulsory subject.

[124] http://www.indiaedunews.net/IIT/IIT-Kgp_to_set_up_%27entrepreneurship_school%27_2986/; here alumni involvement for funding, especially NRI involvement will be a key factor.

[125] Laura Parkin, Executive Director, NEN provided valuable insights in this regard. See also, http://economictimes.indiatimes.com/Interview/Laura_Parkin_Executive_Director_NEN/articleshow/2681558.cms.

[126] David Kirby, 'Entrepreneurship' 2003, page 1. Research on Entrepreneurship undertaken by the UK Small Business Trust (1988) indicates that only 13 % of the surveyed sample believed that entrepreneurial skills could not be acquired by a process of learning.

within educational institutions, where entrepreneurial abilities find opportunities and fertile ground to grow. In several educational institutions, student led and faculty supported activities have been able to create awareness and prepare necessary mindsets about Entrepreneurship. Examples include the Entrepreneurship and Innovation Cell at IIM Bangalore and the Entrepreneurship Cell at IIT Bombay, which engage in activities such as business plan contests, assisting start-ups and incubation centres. Initiatives such as 'business plan contests' (with angel/VC/private sector assistance, which could directly become entrepreneurial ventures with rewards in terms of seed funding), instructional programmes that deal with the basic practicalities of Entrepreneurship and platforms to interact with other entrepreneurs and the financial community (especially VCs and angels) need to be intensified and encouraged.

5.6.4 **Performance-oriented VET Skill Development:** While the NSDM is a significant and landmark initiative, special care needs to be taken to ensure that NSDM outlays are utilized to actually transform VET. This issue is significant since it relates to the concept of equality of opportunity itself. At the basic structural level, the VET policy needs performance-based models that link incentives to outcomes. Further, decentralized approaches in governance and accountability, being rooted in local realties, may be more useful in implementation of VET plans. This could be done through the State Councils for Vocational Training (SCVT) in each state.

In several educational institutions, student led and faculty supported activities have been able to create awareness and prepare necessary mindsets about Entrepreneurship.

Fresh thought is needed in understanding the entry-stage requirements of each trainee, according to which tailored supportive courses can be developed. English language skills as well as a transparent industry-backed certification system for each trainee should be made compulsory. Learning by doing or earning needs to be encouraged with renewed vigour, which may require a fresh look into relevant issues enshrined in relevant laws.

Further, the process of connecting financing to performance based outcomes in VET needs to be given thrust through nationwide publication and dissemination of learning outcomes in the form of a Vocational Skill Primer that measures each VET institution. Publication of performance-based outcomes is therefore the first step in developing a transparent and independent rating agency and system in VET. Bringing about systemic changes in the way the VET policy is executed is the only way to enable the country to take advantage of its democratic dividend and realize its human resource potential. This is a task where the State must perform its role, and where the industry must also play an increasingly valuable role.

5.6.5 **Enterprise Centres in Major Educational and Research Institutions:** Special enterprise centres focused on translating innovation-driven

ideas into viable businesses would greatly enhance Entrepreneurship. Currently, incubation centres provide assistance to selected start-ups. Enterprise centres in major educational and research institutions can provide institutional support for Entrepreneurship, on a larger scale, and on a more systematic basis. The institutions could also provide extensive industry linkages on different aspects of business, law and finance. Elaborate models of profit-sharing and advisory assistance can also be provided. NKC has already recommended the establishment of IPR Cells in major scientific and educational institutions with competent staff, trained in law and technical aspects of various disciplines in order to capture the value and exclusivity of new ideas and innovations.[127] Further, as already mentioned, NKC has recommended the enactment of legislation that creates a legal framework for public funded research and provides universities and research institutions ownership and patent rights. This will create an enabling environment for the institutions to commercialize such inventions through licensing arrangements where the inventors would also receive a share of royalties.[128]

NKC has recommended the enactment of legislation that creates a legal framework for public funded research and provides universities and research institutions ownership and patent rights.

5.7 Business Incubation for Entrepreneurship (BIE)

5.7.1 The process of Business Incubation for Entrepreneurship (BIE) is a critical organizational support mechanism for fledgling entrepreneurs at the initial stage. The quality and scale of BIE could become one of the most important tools to enhance the entrepreneurial ecosystem in the country. A typical high quality Business Incubator provides the following services to a budding entrepreneur: physical infrastructure, administrative support, management guidance/mentoring, help in formulation of a business plan, technical support, Intellectual Property (IP) advice where applicable, facilitating access to finance and encouraging networking with the greater and relevant business community.[129] At the start-up stage, the entrepreneur is beset with significant challenges of marketability and resources (financial and otherwise), which successful incubation can help address. In this respect, the transformation of a business idea into a revenue-generating product requires the need to be familiar with not just technology but also key market indicators such as risk, business space, scaling-up challenges, cash flows, corporate governance, human resources as well as ethics. Some illustrations of Business Incubation for Entrepreneurship in India are listed in Table 5.1.

5.7.2 Globally, the concept of Business Incubation has evolved to meet changing demands.[130] The 'first generation' incubators (in the 1980s) focused on infrastructural needs such as affordable space and shared

[127] See NKC's recommendations on IPR at http://www.knowledgecommission.gov.in/downloads/recommendations/IPRPM.pdf.
[128] See NKC's recommendations on legal framework for public funded research at http://www.knowledgecommission.gov.in/downloads/recommendations/LegislationPM.pdf.
[129] http://en.wikipedia.org/wiki/Business_incubator,;http://www.nbia.org/resource_center/what_is/index.php.
[130] See http://www.unescap.org/tid/publication/indpub2323_part2ivD.pdf .

facilities. The 'second generation' incubators (from the 1990s onwards) have tried to respond to needs of counseling, networking, skill enhancement, professional support and seed capital. To meet newer demands of globalization, widening scope and scale of business and rapidly changing technology, it is expected that Business Incubation will further develop. Shifts from the purely non-profit models to PPPs and for-profit models could also be seen in future. In this respect, some of the private ventures already in operation are The Life Science Incubator at ICICI Knowledge Park located in Hyderabad, the International Biotech Park in Hinjewadi and Nirma Labs in Ahmedabad.

5.7.3 In India, in order to develop techno-preneurship, the Ministry of Science and Technology (MoST) initiated the Science and Technology Entrepreneurship Park (STEP) programme under the National Science and Technology Entrepreneurship Development Board (NSTEDB) in 1984 in collaboration with financial institutions such as IDBI, IFCI and ICICI. STEP has tried to foster linkages between academia, industry and R&D institutions to inculcate a culture of Entrepreneurship.[131] Other ministries today supplement MoST's pioneering efforts and the private sector is also entering the incubation space.[132] Another initiative envisaged is the Technology Incubation Development of Entrepreneurs (TIDE) under the Department of Information Technology (DIT).[133] A fund worth Rs. 25 crore is proposed to be set up, from which selected start-ups will receive a funding of Rs 25 lakh to Rs 50 lakh per start-up for a two-year period. This initiative will also be promoted through premier institutions such as the Indian Institute of Science (IISC), the Indian Institutes of Technology (IITs) and the Indian Institutes of Management (IIMs). Further, the ISBA (The Indian STEP and Business Incubator Association) was set up in 2004 to serve as a professional apex body to promote business incubation in India.[134]

To meet newer demands of globalization, widening scope and scale of business and rapidly changing technology, it is expected that Business Incubation will further develop.

5.7.4 During consultations with incubators,[135] and various organizations providing mentoring and networking assistance to entrepreneurs[136] as well as members of the financial community, the NKC Study found that incubator support in India is largely in the form of physical infrastructure, technical support (access to libraries, labs and academic resources), management advice and helping in access to finance (largely from government agencies such as the Technology Development Board and the Technopreneur Promotion Programme under DSIR and TIFAC).[137] Typically, 'incubatees' are selected on the basis of a periodic

[131] http://www.unescap.org/tid/publication/indpub2323_part2ivD.pdf].
[132] http://economictimes.indiatimes.com/Economy/Incubation_biz_set_to_hit_growth/articleshow/2749998.cms.
[133] See Mint, dated March 17, 2008; http://www.livemint.com/2008/03/17231518/At-this-research-institute-qu.html.
[134] http://www.isba.in/index.php?option=com_content&task=view&id=22&Itemid=46.
[135] During the course of our study, we had the opportunity to interact with the following incubators: TeNeT (IIT Chennai); Center for Innovation, Incubation and Entrepreneurship (IIM Ahmedabad); NSRCEL (IIM Bangalore); Society for Innovation and Entrepreneurship (SINE, IIT Mumbai); FITT (IIT Delhi); Nirma Labs (Ahmedabad) and TREC-STEP (REC Trichy).
[136] Examples include KASSIA, ALEAP, AWAKE, T I E, NEN and the various chambers of commerce.
[137] Relevant government programs here are NMITLI, Te PP, TDB, Home Grown Technology Program etc.

competitive selection process lasting between four and six months, during which the participants also work on their respective business plans and at the end of which, a memorandum of understanding (MoU) is signed between the institution and the selected 'incubatee'. Incubation facilities are located in major institutions of excellence and have contributed much to the development of techno-entrepreneurship in India. Given below is a list of the incubation centres that were consulted, along with relevant structural aspects such as type of sectors catered to, eligibility, entry point etc.[138]

Table 5.1: Illustrations of incubation for entrepreneurship

	Year of establish-ment	Type of incubation	Eligible applicants (primarily)	Entry point for incubates	# of incubates (so far)
CIIE, IIM-A	2001	Hi-Tech	All	Prototype stage	24
NSRCEL, IIM-B	2001	Mixed	All	Idea stage	6
TeNeT, IIT-M[139]		Hi- Tech	All	Pre-idea	20
SINE, IIT-B	2004	Hi-Tech	Faculty/ Students/ Alumni	Post-idea	26
TBI, IIT-D	2000	Hi-Tech	Faculty/ Students/ Alumni	Post-idea	19
TREC-STEP	1986	Hi-Tech	All	Pre-idea	182
Nirma Labs	2004	Hi-Tech	All	Pre/Post Idea-stage	

Students in various institutions have also set up 'Entrepreneurship Cells' which provide a platform for expert mentoring, conduct business plan/idea competitions as well as interact with respective incubation cells.

5.7.5 It is also relevant here to highlight the role of some organizations and associations involved in mentoring in India. For example, apart from assisting with finance, BYST has an active mentoring programme for start-ups launched by the economically less privileged, with trained entrepreneurs as mentors. NEN is engaged with over 280 institutes, with a student base of over 300,000 and over 500 faculty members from the institutes themselves.[140] It has also assisted in conducting certificate courses for 'Entrepreneurship Educators', along with developing content, thinking and pedagogy. Students in various institutions have also set up 'Entrepreneurship Cells' which provide a platform for expert mentoring, conduct business plan/idea competitions as well as interact with respective incubation cells. Similarly, TIE is another organization actively involved with mentoring young entrepreneurs. Through networking events and initiatives such as 'TIE-ISB Connect',[141] it has facilitated the interactions among entrepreneurs as well as members of the financial community (including angels and VCs), with successful entrepreneurs and other professionals as mentors. Another recent mentoring initiative here

[138] These figures are based on consultations conducted with the respective incubators in 2007.
[139] While not a formal incubator, TENET is an established research group, which broadly aims at 'providing world class technology at an affordable price'. See, www.tenet.res.in
[140] See www.nenonline.org. NEN also conducts E cell workshops, a national 'entrepreneurship week' every year and connects institutions on best practices.
[141] http://www.tie-isbconnect.com/index.html

is the 'Pan-IIT Entrepreneurship Movement' launched in January 2008 that seeks to provide a platform for interactions among IIT alumni.[142] While these are valuable initiatives, there is need for far greater scale and scope, for mentoring to take off on a wider and more sustainable institutional basis throughout the country. In this respect, chambers of commerce with their large institutional and networking leverage, also have the potential to play a much more active mentoring role. However, this is yet to take off.

5.7.6 Consultations with members of the financial community (including angels and VCs) reveal that incubation in India requires greater thrust on the business and financial aspects of Entrepreneurship. This is very significant for the growth of Entrepreneurship in India that 'virtually hinges on its ability to bridge the time gap for an idea to be taken from the laboratory to commercial utilization'.[143] While the incubation facilities in educational institutions are indeed playing an important role in translating ideas to commercial ventures, there is a need for explosive growth, both in the structural framework of incubation itself as well as intensifying rigour in the type of services that can be provided by such facilities. Compared to countries such as USA, China and Korea, India's business incubation environment still lags behind and is in need of qualitative and quantitative transformation.

Compared to countries such as USA, China and Korea, India's business incubation environment still lags behind and is in need of qualitative and quantitative transformation.

5.7.7 According to a recent report by the Expert Committee on 'Technology Innovation and Venture Capital',[144] submitted to the Planning Commission in 2006, incubation efforts in universities and research institutions have not always succeeded for a number of reasons. First, the consulting staff of the institution does not always have relevant complementary skills in business development and marketing. Second, the incubator managers do not always have effective networks with angel investors and risk capital providers, a point that becomes even more pertinent because incubators are not themselves venture funds. The first issue can be addressed through better networking with the local business services community and venture funds. The second problem requires direct investments from high-net-worth individuals to such enterprises emerging from the incubators. IP issues also require special attention. While leading institutions such as the IITs have developed IPR policies, there is need for far greater awareness on the role of IPR in converting ideas into commercial propositions.

5.7.8 Here are some key suggestions to improve the process of Business Incubation for Entrepreneurship (BIE) in India. The three relevant areas pertain to Quantity, Quality and Financing:

[142] www.iit.org/paniit.php.
[143] http://economictimes.indiatimes.com/Economy/Incubation_biz_set_to_hit_growth/articleshow/2749998.cms.
[144] Report of the Committee on Technology Innovation and Venture Capital submitted to the Planning Commission in July 2006, page 15.

- **Quantity**: There is a need to massively increase the number of incubators in the country. USA has about 1400 incubators while China and Korea have about 800 and 400 respectively.[145] According to 'The Indian STEPS (Science and Technology Entrepreneurs' Parks) and Business Incubation Association (ISBA), the apex professional body supporting business incubation', India has only about 100 incubators.[146] Scaling up the numbers also means widening the reach beyond centres of excellence in metropolitan cities (i.e. beyond IITs and the top-grade engineering and business schools), going beyond alumni entrepreneurs and exploring areas beyond high tech. Further, there is a need to widen the incubation horizon beyond the idea-stage to accommodate issues relating to scaling up. There are initiatives already being proposed. For example, there are plans in Gujarat to set up a number of incubation centres with possible venture capital infusion in certain selected regions.[147] Expansion of incubation centres on a globally competitive scale will necessitate much greater involvement of private players as well as PPPs to supplement the current governmental initiatives.

- **Quality**: There is a need to develop greater marketability of ideas to industry (especially on aspects relating to marketability, ability to understand cash flows, issues in scaling up, monetizing potential of an idea, financial advice on risk mitigation-management-measurement, analysis of unsuccessful ventures, business ethics, outcome measurement, sustainability etc). This will require incubation centres to be entrepreneurial themselves, in terms of ready and organic adaptability to the market, development of business processes and infusion of greater business dynamism. Workshops on best practices will also help spread the knowledge base and to build sustainable incubation models throughout the country. It is also essential here to develop formal and informal systems of active, regular mentoring with successful entrepreneurs as well as platforms for networking and peer recognition and honour of successful emerging entrepreneurs at regular intervals.[148]

Workshops on best practices will also help spread the knowledge base and to build sustainable incubation models throughout the country.

- **Finance**: Access to finance and its timely disbursal is one of the biggest barriers to Entrepreneurship. Given the need for scale and globally competitive quality, it is imperative to look beyond the limited grants that are available from the MoST. While MoST grants have served a useful purpose and will continue to do so, what is required is a large-scale infusion of capital in this service sector,

[145] See, supra note 40 as above; also check, http://www.nbia.org/resource_center/bus_inc_facts/index.php which states that there are five thousand incubators worldwide, with North America accounting for about 1400 and China about 500.

[146] The Economic Times dated February 3, 2008; see also http://economictimes.indiatimes.com/articleshow/msid-2749998,prtpage-1.cms

[147] See Business Standard dated February 25, 2008; see http://www.businessstandard.com/common/news_article.php?autono=314844&leftnm=3&subLeft=0&chkFlg

[148] There is a separate ministry on MSMEs (www.msme.gov.in) which is entrusted with the task of looking into the specific needs of the micro, small and medium enterprise sector and has, inter alia, also instituted special entrepreneur awards in various categories.

along with viable business models that could be replicated. This requires intensifying and encouraging the role of angel investors and VCs in the incubation and mentoring programmes. The active involvement of industry (including successful entrepreneurs, banks, VCs, angels, chambers of commerce, associations etc) as part of the social networks for mentoring, will supplement the efforts of academics within the educational institutions. Viable PPPs and business models need to be worked out to enhance the range of finance options in incubation. Above all, there is immediate need to create awareness in the banking sector on the huge competitive advantage and business opportunities of Entrepreneurship in India.

5.7.9 To bring about a qualitative and quantitative transformation in Business Incubation for Entrepreneurship, there is need to develop a comprehensive **Incubation Policy** at the national level which would *inter alia*, explore the following:

To bring about a qualitative and quantitative transformation in Business Incubation for Entrepreneurship, there is need to develop a comprehensive Incubation Policy.

- Crucial incentive structures such as Special Enterprise Zones (given the level of infrastructural problems that start-ups face), tax sops, banking policies, micro-funds, innovative financial schemes, outcome measurement and delivery mechanisms.
- Practical business models for incubators that align incentive structures towards measurable performance outcomes and provide stake in the outcomes and fund allocations.
- The structure of delivery mechanisms (including PPP and for profit models), the diversification of financial options and ways of building sustainable synergies with industry.

Chapter Summary

Entrepreneurship requires ample number of productive human resources with multiple skills for a sustained period of time that can transform opportunities, provided by the economy, at the local, national and global levels. Three interconnected areas provide possibilities for mutually beneficial synergies through the flow of ideas and wealth, which could generate high level of dynamism. These are: Education (including quality vocational training-skill development), Innovation (generating commercial value through new and improved ideas) and Entrepreneurship. Entrepreneurs generally agree on the utility of education. However, there is potential to improve the relevance of subjects of study. High-tech innovations translating into wealth generating ideas could also improve if more PhDs and research scholars are provided a flexible supportive environment for Entrepreneurship in their institutions. There are major problems of availability of skilled employees. More than a third of the entrepreneurs face problems in both recruiting and retaining employees. As such, VET and skill development is going to be critical for Entrepreneurship and employment generation in India.

While recognizing recent government initiatives to significantly raise allocation for education, some suggestions on improving the educational space for Entrepreneurship include the following: improve content and learning methods; introduce Entrepreneurship as a compulsory subject in business schools (also consider prospects for NRI and alumni networks' involvement in funding new Entrepreneurship schools); encourage student-led entrepreneurial activities on campus with active stakeholder participation; and introduce performance based VET (linking performance to outcomes, incentivizing states, introducing English speaking skills, learning by doing etc). Further, there is a need to significantly increase Business Incubation for Entrepreneurship (BIE) by comprehensively exploring policy issues pertaining to increasing quantity, improving quality and enhancing financing. While valuable work has been done by incubators, there is huge scope for them to become entrepreneurial themselves in terms of ready and organic adaptability to the market, development of business processes and infusion of greater dynamism.

Chapter VI

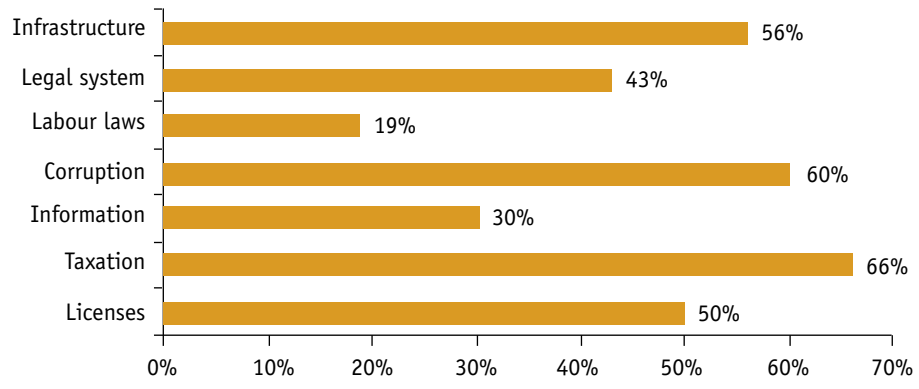
Business Environment and Entrepreneurship

6.1 General Significance

6.1.1 A prerequisite for nurturing Entrepreneurship is the creation of a favourable business environment. This goal is at the heart of India's economic liberalization initiatives. Twhe key parameters of a conducive business environment include smooth flow of information; ease of starting a business and obtaining various clearances and permits; ease of filing taxes; an efficient legal system; enabling legislations and regulations; absence of corruption; and world-class infrastructure facilities. The entrepreneurs interviewed highlighted some of the critical bottlenecks in this regard, as shown in Figure 6.1 below.

A prerequisite for nurturing Entrepreneurship is the creation of a favourable business environment. This goal is at the heart of India's economic liberalization initiatives.

Figure 6.1: Problems faced by entrepreneurs



6.1.2 Various comparative studies on business regulations in India, as well as in other countries are also quite revealing.[149] While these studies recognize India's comparative advantage in human resources, skills, demographic profile and growing domestic demand, India fares poorly vis-à-vis its business environment. For instance, in the *'Doing*

[149] See for instance, Doing Business by World Bank 2007, 2008; Global Competitiveness Report 2007 by World Economic Forum and GEM Global Report 2007 and GEM India Report 2002.

Business 2008' report (See Box 6.1), which is published by World Bank and the International Finance Corporation, India ranks 120th out of 178 countries – even behind countries such as The Maldives (60th), Pakistan (76th), Sri Lanka (101st), Bangladesh (107th), and Nepal (111th). The OECD draft report on regulatory framework in market for goods and services places India behind various countries, including Chile and Brazil.[150] The Global Competitiveness Report 2007-08 of the World Economic Forum places India in the 48th position among 131 countries.[151] Clearly, there appears to be need for qualitative improvement in the business facilitation environment.

Box 6.1: Doing Business in India Indicators

- Starting a business: 13 procedures; 33 days
- Dealing with licenses: 20 procedures; 224 days
- Registering property: 6 procedures; 62 days
- Paying taxes: 60 payments per year; 271 hours per year
- Enforcing contracts: 46 procedures; 1420 days
- Closing a business: 10 years; recovery rate 11.6%

Source: Doing Business 2008, World Bank - IFC

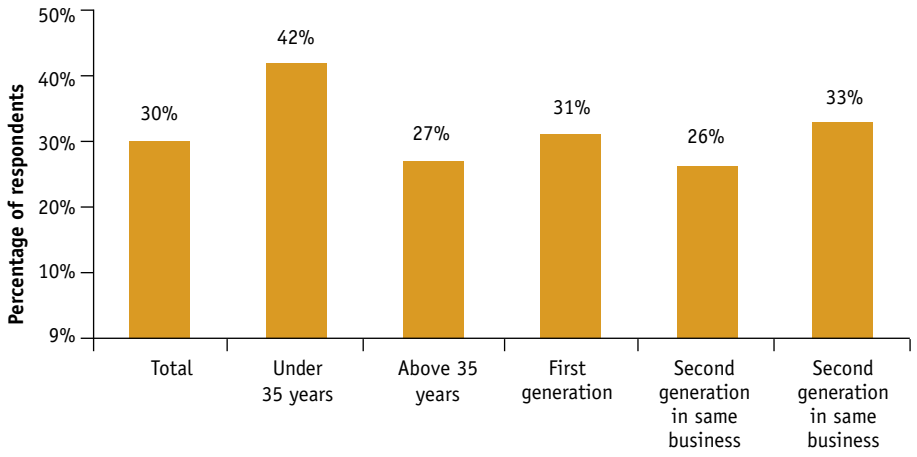
6.2 Access to Relevant Information

The lack of readily available information compels new entrepreneurs to employ intermediaries to advise them on essential aspects of starting a business, thereby incurring additional costs.

6.2.1 An entrepreneur starting a business requires access to reliable information on various aspects of business such as regulatory issues, statutory compliances, registration processes, available sources of finance, infrastructure and so on. However in India, this information is largely diffused and dispersed. The lack of readily available information compels new entrepreneurs to employ intermediaries to advise them on essential aspects of starting a business, thereby incurring additional costs. Over one-third of the entrepreneurs interviewed said they had faced problems because of lack of information at the start-up stage. While most entrepreneurs highlighted this problem, it was found to be the most severe for entrepreneurs under the age of 35, with 42% of such entrepreneurs highlighting information deficit as a major hurdle (see Figure 6.2).

[150] 'Improving Business Climate' (PPT Presentation) http://darpg.nic.in/arpgwebsite/Conference/ChiefSecyConf-PPTs/dipp200407.ppt.
[151] http://www.gcr.weforum.org/.

Figure 6.2: Information deficit as a hurdle



6.2.2 **Suggestions to Ease Information Access:** Develop comprehensive sources of information through the following:

a. Entrepreneur information handbooks (by public and/or private sources) on aspects such as starting and operating a trading business, a manufacturing business, a technology business, a service business, and other sectors. Such handbooks should also contain all relevant statutory requirements and procedures, fee structures, government subsidies (if any), tax procedures and funding sources. In addition, there could be ways of incorporating case studies of successful start-ups in different categories. Where the government undertakes this task, the official version should be readily available, in hard and soft copy and also advertised by the government regularly in national newspapers rather than on obscure notice boards.[152]

b. **One Stop Shops:** There is need for 'One Stop Shops' that could provide comprehensive information on Entrepreneurship, such as the 'One Stop Capital Shops' in USA, UK's 'Direct Access Government Online Resource' and Singapore's online government resource, 'EnterpriseOne.'[153] Relevant ministries in India (Ministry of Company Affairs, MSME, Commerce and Industry etc) could explore the feasibility of such One Stop Shops. In a spirit of free and fair competition to provide optimal information services, the proposed 'One Stop Shops' would also have the potential of becoming a business enterprise on their own.

In a spirit of free and fair competition to provide optimal information services, the proposed 'One Stop Shops' would also have the potential of becoming a business enterprise on their own.

[152] Mr. Subramani Ramachandrappa of Richcore Lifesciences provided valuable insights in this regard.

[153] See http://www.direct.gov.uk/en/index.htm for UK's Direct Access online resource; for Singapore's online resource, EnterpriseOne, see http://www.business.gov.sg/. See also 'China and the Knowledge Economy, 2002', page 61, World Bank Institute.

c. **Web Sources in India:** In India, a few attempts have been made to create online information resources for entrepreneurs. Some examples include a web portal developed jointly by the National Science and Technology Entrepreneurship Development Board (NSTEDB), Department of Science and Technology and FICCI,[154] the website of the Ministry of Micro, Small and Medium Enterprises, Government of India[155] and the business segment of the National Portal of India.[156] Another interesting private initiative is the online resource called 'SME Toolkit' started jointly by ICICI Bank, IBM and IFC.[157]

In this regard, NKC proposes to explore the possibility of having an all encompassing website on Entrepreneurship as a one-stop information portal for current and aspiring entrepreneurs.

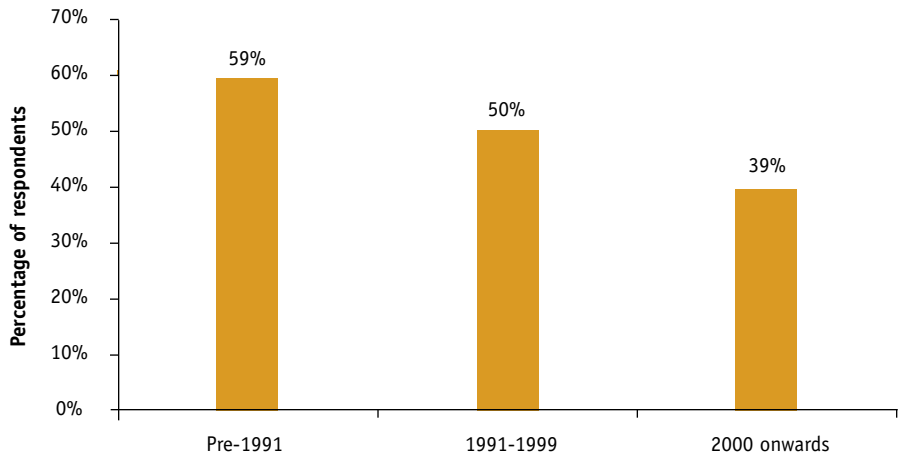
6.3 Ease of Starting and Operating Business

The official costs of starting a business are high and the process quite complex, involving no less than 13 procedures.

6.3.1 Difficulty and delays in meeting various government requirements such as registration of company, obtaining licences and registering property still confront entrepreneurs. The World Bank report, *'Doing Business in South Asia 2007'* says that, it takes 35 days (in Mumbai) to 52 days (in New Delhi) to *start a business* in India. The official costs of starting a business are high and the process quite complex, involving no less than 13 procedures.[158] A large number of separate registrations – Tax Account Number (TAN), Permanent Account Number (PAN), Value Added Tax (VAT), Employees Provident Fund Organization (EPFO), Employees State Insurance Corporation (ESIC), among others – are required for any business to start operations. Registering property itself requires six procedures and an average of 62 days.[159] Different rates of stamp duty and transfer charges exist across states. Apart from these initial procedural hurdles, an entrepreneur also has to obtain other *permits and clearances,* both at the central and state levels. These include land use approvals, building permits, power connections, water and sewerage connections, and so on. Even in states where the Single Window System has been put in place, most entrepreneurs do not find them satisfactory; 'there is a single window but many ventilators', as an entrepreneur from Hyderabad aptly put it.[160] About 50% of the entrepreneurs interviewed claimed to have problems while

[154] www.techno-preneur.net.in.
[155] www.laghu-udyog.com.
[156] www.india.gov.in/business.php
[157] http://www.smetoolkit.org/smetoolkit/en.
[158] Doing Business 2008, World Bank-IFC http://www.doingbusiness.org/documents/FullReport/2008/DB08_Full_Report.pdf.
[159] Doing Business 2008, World Bank-IFC.
[160] For example, entrepreneurs state that single window clearance in Andhra Pradesh is supposed to ensure clearances from Inspectorate of Factories, Inspectorate of Boilers, Electrical Inspectorate, Panchayat/ Municipality/ HUDA, Fire Services, Chief Controller of Explosives, Pollution Control Board, etc. In practice, however, entrepreneurs state that they still need to obtain separate clearances from the Pollution Control Board and the Chief Controller of Explosives. The latter is a central government institution.

Figure 6.3: Obtaining licenses as a hurdle - Variations according to time period



applying for and obtaining various clearances and licences. However, the perception regarding licences has gradually improved over the years. (See Figure 6.3)

6.3.2 **Corruption:** Almost 60% of the entrepreneurs interviewed said they faced corruption at some time during their entrepreneurial journey while dealing with governmental procedures and officials. That is a very disturbing statistic.

MCA-21, the e-governance project of the Ministry of Company Affairs aims to fully automate processes of compliance and enforcement.

6.3.3 **Initiatives Already Underway-MCA-21:** One of the key reforms undertaken to ease the process of starting a business in India includes MCA-21, the e-governance project of the Ministry of Company Affairs aims to fully automate processes of compliance and enforcement. The objective of this initiative is to make services such as registration of companies transparent. The key benefits of this project are expected to include online incorporation of companies; simplifying the processes of filing of forms and returns; registration as well as verification of charges from any location; inspection of public documents of companies; and establishing a centralized database repository of companies.[161]

6.3.4 **Single Unique Company Number:** Another idea that needs to be explored is the proposal of a Single Unique Company Number that a new business can use for company, tax and social security registrations. This has also been suggested by the World Bank Report, *'Doing Business in South Asia 2007.'* Once such a number is adopted, the relevant registration information could be forwarded directly by the registry of companies to the tax administration offices, the EPFO and the ESIC.[162]

[161] http://www.mca.gov.in/MinistryWebsite/dca/help/ProcessHandbook.pdf.
[162] Doing Business in South Asia, 2007, World Bank-IFC http://www.doingbusiness.org/Documents/SouthAsia07/Full_report.pdf.

6.3.5 **Single Window System:** In order to facilitate the process of obtaining clearances, many states have introduced the 'single window clearance' procedure. However, the power to accord approvals is still vested with various departments and agencies under their separate statutes and notifications. The existing legal framework does not allow one consolidated department or agency to accord all requisite clearances. Nevertheless, some state governments have taken initiatives to overcome this problem. For instance, in Rajasthan, the rules of business have been amended for specially empowered bodies to accord approvals for subjects under different departments; significantly, the amendments disallow any department to review the decisions of these empowered bodies. Other similar legislations include the 'Andhra Pradesh Infrastructure Development Enabling Act, 2001', the 'Chhattisgarh Audyogik Nivesh Protsahan Adhiiyam, 2002' and the 'Orissa Industries Facilitation Act, 2004'.[163]

Other simplifying actions include the introduction of a Single Composite Application Form (SCAF) which allows an entrepreneur to submit a single application form for obtaining various clearances and approvals.

6.3.6 **Single Composite Application Form:** Other simplifying actions include the introduction of a Single Composite Application Form (SCAF) which allows an entrepreneur to submit a single application form for obtaining different clearances and approvals from various departments and government authorities. States that have introduced this initiative include Andhra Pradesh, Gujarat, Karnataka, Kerala, Orissa, Punjab, Rajasthan, Tamil Nadu and Uttar Pradesh.

6.3.7 **Illustrative International Best Practices:** Mexico, Thailand and Latvia have succeeded in limiting inspections to 10%, 15% and 20% of shipments respectively, by following a risk assessment policy that calculates the probability of inspections based on profiles of businesses.[164] With the introduction of electronic filing of documents for trading (import, export and trans-shipment permit applications), the time for cargo clearances in Singapore fell from four days to 30 minutes; the number of shipments processed rose three-fold and cost to businesses of handling trade documents fell by a third.[165] Mauritius has launched a virtual one-stop shop linking the commercial registry and tax, and local authorities through a central electronic database.[166]

6.3.8 **Illustrative National Best Practices:** The World Bank-IFC Report, *'Doing Business in South Asia 2007'*, mentions some Indian cities known for their respective best practices (see Box 6.2). Examples include Jaipur (for starting business), Bhubaneswar (for obtaining construction clearances), Bangalore (for obtaining building permits) and Hyderabad (for obtaining land use approvals and registering property). Maharashtra

[163] For details on respective state measures, see 'Single Window System in States/ UTs', 2002, published by the Department of Industrial Policy and Promotion (DIPP).
[164] Improving Business Climate' (PPT Presentation) http://darpg.nic.in/arpgwebsite/Conference/ChiefSecyConf-PPTs/dipp200407.ppt; further, such a policy not only led to reduction of delays, but also increased the detection of smuggled goods.
[165] 'Improving Business Climate' (PPT Presentation) http://darpg.nic.in/arpgwebsite/Conference/ChiefSecyConf-PPTs/dipp200407.ppt.
[166] Doing Business 2008, World Bank-IFC.

and Karnataka have taken steps to ease the process of registering property. While Maharashtra has taken steps to lower stamp duties, Karnataka has reduced the time taken in the mutation and execution of sale deeds. Further, regarding mode of payment of stamp duty, Karnataka has discontinued the use of stamp paper and enabled payment through bank draft. Chennai has a 24-hour online container tracking system while Bangalore has an e-payment gateway for custom duties. The Mumbai Port Trust has also started an Online Port Community System.[167] In fact, the *'Doing Business in South Asia 2007'* report states that India can jump 55 places from its current rank if some of the local best practices are adopted nationwide.

Box 6.2: Best Practices in India

Starting a business: Jaipur

Dealing with licenses: Bhubaneswar

Registering property: Hyderabad

Paying taxes: Bhubaneswar, Chandigarh

Trading across borders: Chennai

Enforcing contracts: Bhubaneswar

Closing a business: Bangalore

Source: Doing Business Report, 2007

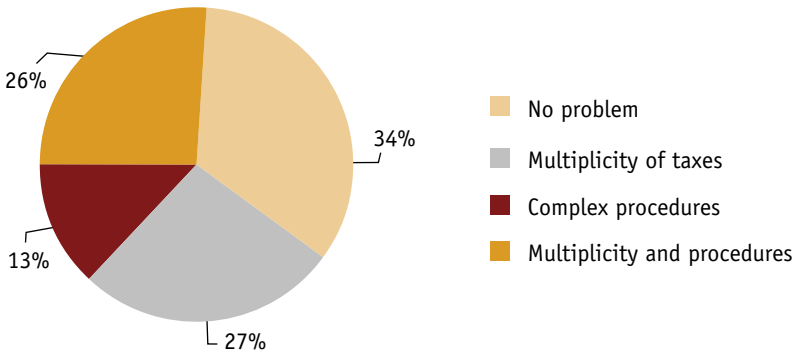
6.4 Taxation

6.4.1 Entrepreneurs also faced problems relating to cumbersome tax procedures as well as multiplicity of taxes. According to the World Bank-IFC Report, *'Doing Business 2008'*, India's tax regime requires 60 separate payments every year.[168] Collection of taxes through different government agencies also increases the problems of complying with tax regulation. There also exists a multiplicity of taxes. In addition to service tax, CENVAT and custom duties that are imposed by the central government, state and local levels of governments levy respective state VAT/sales tax, entertainment tax and entry tax.[169] As seen in Figure 6.4 below, 27% of entrepreneurs interviewed said they had faced problems because of multiplicity of taxes alone; 13% faced a problem with complexity of procedures alone and 26% faced problems with both. In other words, 66% of the entrepreneurs interviewed, i.e. two out of every three entrepreneurs, faced difficulties with regard to some aspect of taxation - the multiplicity of taxes or the complexity of filing procedures, or both.

The 'Doing Business in South Asia 2007' report states that India can jump 55 places from its current rank if some of the local best practices are adopted nationwide.

[167] Doing Business 2008, World Bank-IFC.
[168] See 'Soon, 24x7 paperless port transactions', The Indian Express, dated October 22, 2007.
[169] Doing Business 2008, World Bank-IFC.

Figure 6.4: Problems relating to taxation



6.4.2 **Process Re-engineering in E-governance:** Entrepreneurs were also of the opinion that while online filing of taxes had been introduced, tax compliance was still not easy since forms and procedures are still complicated. For instance, an entrepreneur from Kolkata said that almost one-third of his time was spent in doing paperwork and complying with multiple tax requirements. This confirms NKC's earlier recommendations that e-governance initiatives should be more about re-engineering government processes rather than only about front-end computerization.[170]

E-governance initiatives should be more about re-engineering government processes rather than only about front-end computerization.

6.4.3 **Key Initiatives in Taxation:** The introduction of Value Added Tax (VAT) in April 2005 was a significant measure. With the VAT system in operation, it has also been recently reported that Indian states have, in principle, agreed to move towards a common classification of all merchandise sold within the country - the 'Harmonized System of Nomenclature' (HSN).[171] Currently, the same product can be taxed at different rates across states leading to problems of cost uncertainty for entrepreneurs. A common classification of all merchandise sold throughout the country, coupled with fixation of tax rates for all classifications, is a move towards greater uniformity and thereby, less cost uncertainty for entrepreneurs.[172] A single HSN code for all the products under VAT across the country could also help states in making operational the Tax Information Network (TINXYS), an online network intended to bring transparency to inter-state transactions.[173]

[170] See, http://knowledgecommission.gov.in/recommendations/egovernance.asp .
[171] See 'States agree to uniform classification of goods', Mint, dated December 6, 2007; India being a signatory of ITA (International Trade Agreement) has to comply with the tariff guidelines of the World Customs Organization (WCO). The WCO has a standard classification called the Harmonised System of Nomenclature (HSN) that classifies various products and also decides on the tax structure for each category. The HSN code classifies products and services in 5,019 different categories, which are revised on a regular basis to incorporate technological changes.
[172] HSN is also expected to assist in India's smooth transition to the goods and service tax system (GST).
[173] http://www.rediff.com/money/2006/aug/07vat.htm.

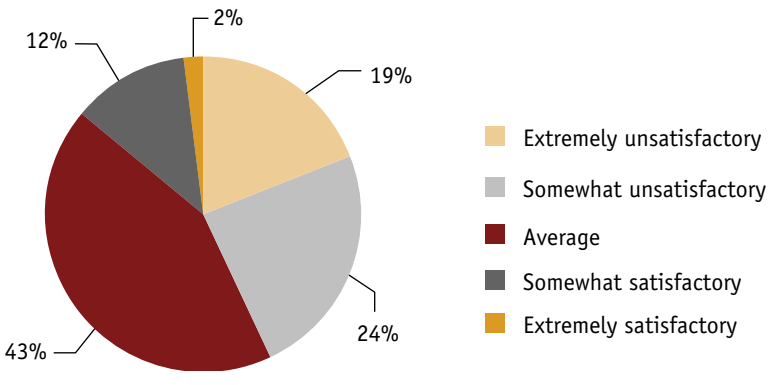
There are also state-level initiatives to help entrepreneurs. Maharashtra has, for instance, computerized registration procedures for sales tax/ VAT, which drastically reduces the time taken in filing tax returns. Another reform measure whose feasibility needs to be explored is reducing the frequency of payments by entrepreneurs from monthly to a quarterly basis.[174] The issue of consolidation of tax forms also needs to be examined in detail. For example, an entrepreneur in Sweden can file multiple taxes – corporate income tax, value added tax, labour contributions as well as property tax – in a single form.[175]

6.5 Legal System

6.5.1 Of the entrepreneurs interviewed, 43% said they find the current legal procedures and requirements to be either 'extremely unsatisfactory' or 'somewhat unsatisfactory' (see Figure 6.5). Their complaints largely relate to procedures of law such as the slow pace of enforcing contracts as well as the current bankruptcy and labour law procedures. 19% of the entrepreneurs interviewed said they feel constrained by labour laws (see Figure 6.1). According to the World Bank-IFC's *'Doing Business 2008'* report, it takes on an average, 10 years to complete bankruptcy proceedings in India. Further, claimants can expect to recover an average of less than 11.6 cents on the dollar. While official liquidators are appointed to carry out liquidations, the procedures are often long drawn. Another legal issue is that of unlimited liability for promoters in partnership concerns and proprietorship businesses due to the absence of Limited Liability Partnerships (LLPs) as a legal entity in India.

According to the World Bank-IFC's 'Doing Business 2008' report, it takes on an average, 10 years to complete bankruptcy proceedings in India.

Figure 6.5: Helpfulness of legal system



[174] See Doing Business in South Asia 2007 http://www.doingbusiness.org/Documents/SouthAsia07/Full_report.pdf.
[175] Doing Business 2008, World Bank-IFC.

6.5.2 **Suggested Improvements:** Some of the legal reforms that would facilitate a better environment for Entrepreneurship are as follows:

a. Specialized Commercial Courts: Since the debt recovery tribunals in India have jurisdiction to entertain only debt related issues, a possible reform for speedy enforcement of contracts would be the establishment of separate specialized commercial courts, which would deal with all types of commercial disputes.[176]

b. Undertake Reforms in Bankruptcy Laws: Discussions are also underway to change India's bankruptcy laws. The draft Companies Bill 2007 is expected to simplify rules and procedures. Establishment of institutions such as the National Company Law Tribunal (NCLT) and National Company Law Appellate Tribunal (NCALT) are also expected to bring about improvements in dealing with cases relating to insolvency, rehabilitation and liquidation and winding up proceedings. RBI's Advisory Group on Bankruptcy Laws has also recommended the enactment of a new bankruptcy code to deal more quickly with liquidations.[177]

c. One Person Company/LLPs: The draft Companies Bill 2007 is also expected to propose a new entity called a one-person company (OPC) that would provide individual entrepreneurs the flexibility and low cost of forming a proprietorship/partnership concern while restricting their personal liabilities to that of a private limited company.[178] Similarly, the government is also expected to enact a law on Limited Liability Partnerships soon.[179]

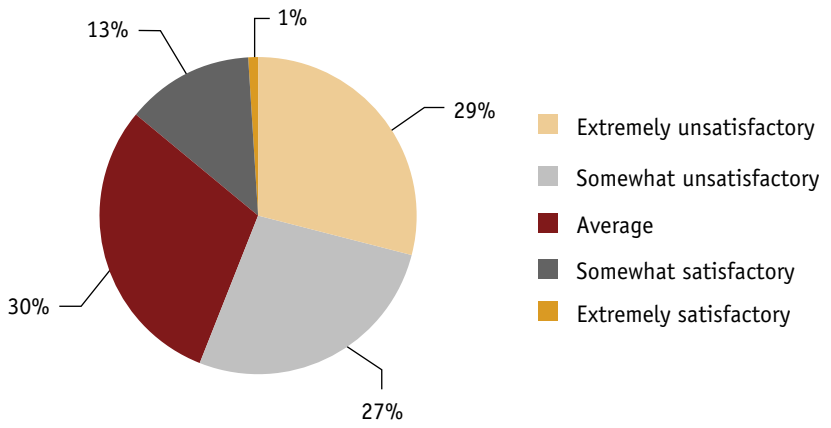
The high transport and supply-chain costs that poor infrastructure entails are significant, particularly for a small entrepreneur.

6.6 Infrastructure

6.6.1 The reliability and availability of world-class infrastructure services is critical for the growth of Entrepreneurship. India's physical infrastructure – roads/highways, railways, ports, airports, power, telecom – is seen as a bottleneck to the smooth operation of all economic activity. The high transport and supply-chain costs that poor infrastructure entails are significant, particularly for a small entrepreneur. Enterprises surveyed in the *Global Competitiveness Report 2007-08*, rated inadequate infrastructure as 'the most problematic factor' for doing business in India.[180] In this report, while India scores well on 'soft' parameters such

[176] Improving Business Climate' (PPT Presentation) http://darpg.nic.in/arpgwebsite/Conference/ChiefSecyConf-PPTs/dipp200407.ppt; such courts have been established in Tanzania and Peru.
[177] See Report of the Standing Committee on International Financial Standards and Codes, RBI, 2002.
[178] See 'One-person companies', The Economic Times, dated December 3, 2007.
[179] See the reports of 'Naresh Chandra Committee on Regulation of Private Companies and Partnership Concerns' and the 'Expert Committee on Company Law (Dr.J.J. Irani Committee)'.
[180] http://www.gcr.weforum.org.

Figure 6.6: Availabilty of infrastructure



as higher education, the rule of law and political legislation, it loses out on the adequacy of infrastructure facilities. According to another recent survey, 40% of Indian CEOs are worried about the quality of infrastructure in the country.[181]

Leasing of work space is more prevalent among first generation and second generation entrepreneurs pursuing a business different from that of their family.

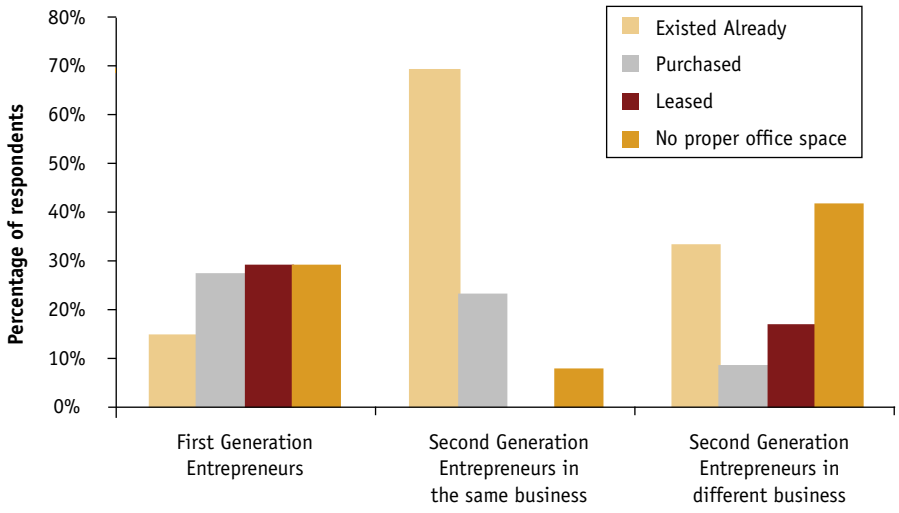
6.6.2 Of the entrepreneurs interviewed, 56% found the current infrastructure in India to be unfavourable, rating it as 'extremely unsatisfactory' or 'somewhat unsatisfactory' (see Figure 6.6). However perceptions have improved – while 67% of the pre-1990 entrepreneurs rated infrastructure as unfavourable, among the post-2000 entrepreneurs, only 36% felt the same. This could be due to improvements in the country's infrastructure and/or there being a higher proportion of service-based enterprises among the post-2000 enterprises which have lower dependence on infrastructure.

6.6.3 **Availability of Work Space**: Another crucial infrastructure issue for a new entrepreneur is the availability of adequate work space. There are interesting differences based on family backgrounds as seen in Figure 6.7 below. Among first generation entrepreneurs, only 15% reported already having work space at the start-up stage. A majority of second generation entrepreneurs in the same business (69%) already had work space to start operations. However, this figure dips significantly for second generation entrepreneurs, who pursue a different business (33%).

Another pattern observed is that leasing of work space is more prevalent among first generation and second generation entrepreneurs pursuing a business different from that of their family. Of the first generation entrepreneurs, 29% leased work space compared to 17% among second generation entrepreneurs in a different business.

[181] The Times of India dated January 19, 2008, quoting a recent PWC Global CEO Survey.

Figure 6.7: Office space with entrepreneurs – Variation according to family background



A sudden spurt of growth in these cities has led to an increase in the demand for land, resulting in shortage of industrial estates as well as rapid escalation in land prices.

6.6.4 **Some Illustrative Examples of Infrastructural Issues:** Interestingly, an entrepreneur from Bangalore operated from a makeshift office inside a PCO booth in his early days in the service industry. Another entrepreneur, also from Bangalore, stated that power failures, poor bandwidth and insufficient public transport led her to incur high unplanned costs. In order to ensure the smooth operation of her business, she had to purchase generators, fix additional internet lines and even provide housing for her employees near her office premises. Another problem that manufacturing entrepreneurs in Hyderabad and Bangalore, in particular, face is the shortage of industrial land. A sudden spurt of growth in these cities has led to an increase in the demand for land, resulting in shortage of industrial estates as well as rapid escalation in land prices. Without basic infrastructure, entrepreneurs cannot envisage shifting to alternative places outside the main city, as feasible. Entrepreneurs also mentioned difficulties in transportation of physical goods. An entrepreneur from Hyderabad said that while it takes 60 days for a consignment from Hyderabad to reach USA, it would take only 21 days from China. Complaints relating to power varied across regions. While the interviewees in Kolkata complained about inferior quality of power supply, entrepreneurs in Ahmedabad had issues with the high cost of power.[182]

6.6.5 **Some Recent Initiatives:** Since inadequate infrastructure is seen as a critical bottleneck to economic growth, the government has given high priority to quality infrastructure development, incorporating various delivery mechanisms such as PPPs (see Box 6.3). The total

[182] In Gujarat, the rate of electricity is Rs. 516 P/KWh for domestic users and Rs 501 P/KWh for industrial users. (according to the Economic Survey 2006-07).

investment in infrastructure in 2006-07 is estimated to be around 5% of GDP. The total investment in infrastructure in the Eleventh Five Year Plan is projected at Rs. 20, 60, 193 crore or 7.65% of GDP.[183] Among the key infrastructure development projects are the National Highways Development Project (NHDP), Pradhan Mantri Gram Sadak Yojana (PMGSY), National Maritime Development Programme, Bharat Nirman for rural infrastructure, Jawaharlal Nehru National Urban Renewal Mission (JNNURM), and Integrated Development of Small and Medium Towns (IDSMT). At the same time, the private sector's share for investment in infrastructure is expected to increase from 20% to 30% during the current Plan period. (see Table 6.1)

Table 6.1: Infrastructure: Deficit and Eleventh Plan targets

Sector	Target	XI Plan targets
Roads/ Highways	65,569 km of NH comprise only 2% of network & carry 40% of traffic; 12% 4-laned; 50% 2-laned; and 38% single-laned	6-lane 6,500 km in GQ; 4-lane 6,736 km NS-EW; 4-lane 12,109 km; 2-lane 20,000 km; 1,000 km Expressway
Ports	Inadequate berths and rail/road connectivity	New capacity: 485 mn. MT in major ports; 345 mn. MT in minor ports
Airports	Inadequate runways, aircraft handling capacity, parking space and terminal buildings	Modernize 4 metro and 35 non-metro airports; 3 greenfield in NE; 7 other greenfield airports
Railways	Old technology; saturated routes: slow speeds (freight: 22 kmph; passengers: 50 kmph); low payload to fare ratio (2.5)	10,300 km new rail; 10,000 km gauge conversion; modernize 21 stations; dedicated freight corridors
Power	11% peaking deficit; 7% energy shortage; 40% transmission and distribution losses; absence of competition	Add 78,000 MW; access to all rural households
Irrigation	1123 BCM utilizable water resources; yet near crisis in per capita availability and storage; only 43% of net sown area irrigated	Develop 16 mha major and minor works; 10.25 mha CAD; 2.18 mha flood control
Telecom/IT	Only 18% of market accessed; obsolete hardware; acute human resources' shortages	Reach 600 mn subscribers – 200 mn in rural areas; 20 mn broadband; 40 mn internet

Source: Chapter 12, Development of Infrastructure, Eleventh Five Year Plan, 54th NDC Meeting

[183] Chapter 12, Development of Infrastructure, Eleventh Five Year Plan, 54th NDC Meeting.

Box 6.3: PPP in India

Public Private Partnership (PPP) in infrastructure refers to a project based on a contract or concession agreement, between a government or statutory entity on the one side and a private sector company on the other, for delivering an infrastructure service upon payment of user charges. The Government of India has established a Cabinet Committee on Infrastructure (CoI) and a high-level Committee of Secretaries (CoS), in addition to sector-wise task forces to streamline rapid decision-making and operationalize PPPs in highways, airports, sea ports, power generation, railways, etc. It has initiated the Viability Gap Funding (VGF) scheme and established the India Infrastructure Finance Company Limited (IIFCL) to provide long-term debt finance to PPP projects, and has intensified its efforts on strengthening public sector capacity and enabling environment for attracting private sector participation in infrastructure. Overall, the government sees PPPs as an important tool for producing an accelerated and larger pipeline of infrastructure investments and catching up with the infrastructure deficit in the country.

While 86 PPP projects have been contracted, there are an estimated 500 PPP projects that exist in India, together valued at about Rs 340 billion, in 12 states and three central agencies. The roads and port sectors constitute a major portion of the number and size of PPPs. Till October 2006, 12 proposals have been given in-principle approval under the VGF. (See: 'Facilitating Public Private Partnership for Accelerated Infrastructure Development in India,' Regional Workshop of Chief Secretaries on PPP, December 2006)

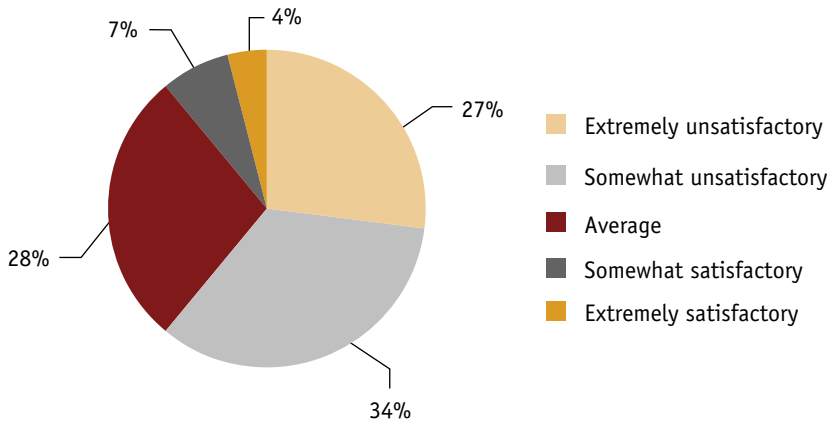
PPPs contribute private capital and managerial efficiencies to enhance public services. Some of the PPPs may provide entrepreneurial opportunities where none existed before. For example, the task of modernizing airports in various cities in India has received a fillip due to the involvement of private players such as the GMR Group who had themselves started as entrepreneurs.

6.7 Does the State facilitate Entrepreneurship?

6.7.1 **General Government Facilitation:** The NKC Study found a significant majority of entrepreneurs saying that the government is generally 'not helpful'. In the interviews, 61% of the entrepreneurs rated 'helpfulness of government' as 'extremely unsatisfactory' or 'somewhat unsatisfactory' (see Figure 6.8). Some entrepreneurs said that while the government has some very significant policies to help entrepreneurs, the implementation of these policies is extremely poor. Some were of the view that government schemes and initiatives are not publicized adequately. Others said that corruption and red-tapism result in the schemes not reaching the targeted people. Currently, there are a number

of policies and schemes in place to promote and assist entrepreneurs in India, at central and state levels.[184] The Ministry of Micro, Small and Medium Enterprises also provides a package of incentives and subsidies for the promotion of micro and small enterprises (See Box 6.4). The challenge is to make the policies into catalysts for driving Entrepreneurship in India.

Figure 6.8: Helpfulness of government



Box 6.4: Package for Promotion of Small and Medium Entrepreneurs, 2007

1. Legislation: The Micro, Small and Medium Enterprises Development Bill, 2006 has been enacted for the promotion and development of micro, small and medium enterprises. The Government is also expected to enact relevant law on Limited Liability Partnerships.

2. Credit Support: RBI has issued guidelines to the public sector banks to ensure 20% year-on-year growth in credit to the SME sector. The State Industrial Development Bank of India (SIDBI) is expected to upscale its credit operations for micro enterprises and cover 50 lakh additional beneficiaries over five years beginning 2006-07. The Union Government to provide grants to SIDBI to augment its Portfolio Risk Fund and enable it to create a Risk Capital Fund. To strengthen the Credit Guarantee Fund, the corpus of the fund is expected to be raised from Rs. 1189 crore as of 01 April 2006 to Rs. 2500 crore over a period of 5 years.

3. Fiscal Support: The Government is expected to examine the feasibility of increase in the General Excise Exemption (GEE) limit and the existing eligibility limit for GEE; also consider extending the time limit for payment of excise duty by micro and small enterprises and extending the GEE

(Contd...)

[184] Some examples include the Food Processing Policy, Auto Policy, Information Technology Act, and National Jute Policy.

(Contd...)

benefits to small enterprises on their graduation to medium enterprises for a limited period.

4. Support for Cluster Based Development: Accelerate the holistic development of clusters, including provision of Common Facility Centres, developed sites for new enterprises, upgradation of existing industrial infrastructure and provision of Exhibition Grounds/Halls and also for creation and management of infrastructure-related assets in the public private partnership mode. The ceiling on project cost is expected to be raised to Rs. 10 crore.

5. Technologies and Quality Upgradation Support: Four Training-cum-Product Development Centres (TPDCs) for agro & food processing industries to be set up. A Technology Mission to be set up to assist MSMEs in technology upgradation, energy conservation and pollution mitigation.

6. Support for Entrepreneurial and Managerial Development: 50,000 entrepreneurs to be trained in information technology, catering, agro and food processing, pharmaceuticals, biotechnology, etc., during the Eleventh Plan; a new scheme to be formulated to provide financial assistance to select management/business schools and technical institutes, to conduct tailor-made courses for new as well as existing micro and small entrepreneurs; a new scheme to be also be formulated to provide financial assistance to five select universities/colleges to run 1200 entrepreneurial clubs.

Source: http://www.laghu-udyog.com/publications/circulars/GazNot/promotion_package_english.pdf.

Chapter Summary

A critical prerequisite for nurturing Entrepreneurship is the creation of a favourable business environment. The key parameters of a conducive business environment include the smooth flow of information, ease of starting a business and obtaining various clearances and permits, ease of filing taxes, an efficient legal system, enabling legislations and regulations, absence of corruption and world class infrastructure facilities. Half of the entrepreneurs interviewed have encountered problems relating to obtaining clearances and licenses. Two-thirds have faced hassles while filing taxes. About 60% of the entrepreneurs interviewed have encountered corruption at some point during their entrepreneurial journey. Entrepreneurs have also emphasized the lack of information, as well as poor implementation of government schemes, as significant impediments. About 56% of entrepreneurs stressed that the lack of availability of quality infrastructure – transport, power, and telecommunications – is a critical problem restricting Entrepreneurship.

While India has the potential to derive comparative advantage in human resources, skills, demographic profile and growing domestic demand, recent studies such as the World Bank report 'Doing Business 2008', rate India poorly on indicators of the business environment. According to the Doing Business report, India ranks 120th out of 178 countries on conducive business environment. There are a number of initiatives at the central and state levels, which aim at improving the ease of doing business. In fact the World Bank-IFC report says that India can jump 55 places from its current rank if some of its own local best practices are adopted nation wide. For example, the Ministry of Company Affairs has initiated the *MCA-21* project designed to fully automate all processes related to the proactive enforcement and compliance of the legal requirements under the Companies Act, 1956. Other suggestions to improve the business environment for Entrepreneurship include the following: meaningful implementation of the *Single Window System*; *Single Composite Application Form*; PPPs in infrastructure, specialized commercial courts; relevant amendments in company laws to introduce LLPs; setting up 'one stop shops' for information needs; and improving tax processes and process re-engineering in e-governance. NKC also proposes to explore the possibility of having an all encompassing website on Entrepreneurship as a one stop information portal for current and aspiring entrepreneurs.

Chapter VII

Conclusion: Encouraging Entrepreneurship

7.1 Comprehensive Campaign

7.1.1 A comprehensive campaign to raise the tempo of Entrepreneurship in India will necessarily need the concerted efforts of a number of agencies. Based on the narrative in the previous chapters and interviews with stakeholders, there are a few key action points that will encourage and enhance Entrepreneurship in the country. As seen in previous chapters, enhancing Entrepreneurship involves the community, family, academia, financial players, government, industry, and potential entrepreneurs themselves. Promoting Entrepreneurship means encouraging people to be self-reliant in taking economic decisions and creating wealth and employment. NKC believes that Entrepreneurship has enormous scope in India's growth story.

7.1.2 **Advice to Entrepreneurs:** During the interviews, entrepreneurs were asked what advice they would like to offer to upcoming entrepreneurs. Below is a list of illustrative responses:

- Increase networks with other entrepreneurs to encourage sharing of ideas and experiences, and to mentor upcoming entrepreneurs.
- Document failures as much as successes and learn from each experience.
- Invest in people and build teams that follow inclusive approaches (address the needs of talent at all levels), develop incentives and bolster human resources – 'translate business strategy into talent strategy'.
- Understand the product and markets well.
- Conduct extensive background research, especially on marketing and financial aspects.
- Focus on quality – 'Cost is forgotten, quality never'.
- Match the skills, mindsets and beliefs with the business venture – focus on core strength and excel.
- Do not cling on to the venture, – especially in up-scaling – hire individuals who are better than you; if you are responsible, give autonomy and divest authority.
- Be open to ideas. Take informed risks.

- Hard work, persistence, perseverance, confidence – these are the 'must qualities' for every entrepreneur.
- Be honest – never compromise on ethics or offer bribes.
- Build strong foundations and then grow; take incremental steps.
- A history of paying taxes and having a decent balance sheet helps when you approach lending institutions.
- Possess 'ferocious ambition' and believe that the 'sky is the limit'.
- Develop clear business plans and targets for growth.
- Undertake information disclosures and participate in the development of the rating processes of banks, to enable better risk management for finance.

7.1.3 What the Government Can Do

Encourage a conducive business environment; ensure simplified start-up processes; improve the delivery time; reduce corruption; collate informational needs of start-ups; improve corporate governance norms; create an environment that will reduce risk; and encourage more seed funds and corporate players to provide start-up funding. In particular:

- Create up-to-date information source for start-up entrepreneurs in the form of source books, web portals and 'one stop shops' and widen dissemination of all relevant information.
- Introduce a Single Unique Company Number to be used by new businesses for company, social security and tax registrations.
- Improve the current Single Window System of getting clearances and introduce a Single Composite Application Form.
- Ease the process of filing taxes by reducing the frequency of tax payments and multiplicity of procedures.
- Create specialized commercial courts for speedy enforcement of contracts.
- Reform bankruptcy laws to ease the process of closing down businesses.
- Speed up development of world-class infrastructure.
- Ensure proper publicity and implementation of various promotional schemes and policies.
- Set up a Public Fund for new entrepreneurs using innovative PPP mechanisms.
- Explore venture debt instruments with the help of innovative PPP mechanisms, through SIDBI and similar institutions.
- Establish a secondary market for trade in stocks of smaller companies.

- Develop a comprehensive Incubation Policy at the national level, which would increase quantity, enhance quality and increase access to financing.
- Explore crucial incentive structures in Incubation such as land schemes (given the level of infrastructure problems that start-ups face), tax sops, banking policies, micro funds, innovative financial schemes, outcome measurement and delivery mechanisms.
- Explore possibilities of PPP as well as private incubation centres as a way to increase the number of incubation centres in the country and thereby providing wider access to incubation opportunity for new entrepreneurs.
- NKC has already recommended that the Government should set up a Global Technology Acquisition Fund in Intellectual Property (IP), which can enable crucial technology acquisition across the world, especially for SMEs. Funds could be placed with a financial institution or a special purpose vehicle (SPV) could be created to manage the fund, with members of industry and government invited on the board. Relevant financial instruments, including support in the form of loans and equity could be evolved for such technology intensive acquisition.
- NKC has also suggested the need to enact legislation that creates a legal framework for public funded research. Such legislation would give universities and research institutions ownership and patent rights and create an enabling environment for them to commercialize such inventions through licensing arrangements where the inventors would also receive a share of royalties.
- Frame appropriate polices to encourage innovation among smaller institutions and companies and encourage transition among R&D/ educational institutions.
- Give high priority to VET policy and bring about a transformation in the sector through innovative delivery models, re-branding, improving certification and monitoring as well as increasing flexibility of VET with the higher education stream.
- Explore performance-based models in VET policy that links incentives to outcomes. Incentivize SCVTs and states; assess the entry stage requirements of each trainee; align financial incentives to teaching of requisite English language skills as well as to a transparent industry-backed certification system for each trainee. Encourage learning by doing earning; connect financing to performance based outcomes through nationwide publication and dissemination of learning outcomes in the form of a Vocational Skill Primer, that measures each VET institution; publication of performance based outcomes becomes therefore the first step in developing a transparent, independent rating system in VET.

- Develop recognition and reward systems for Entrepreneurship, at the local, state as well as national levels (such as those instituted by MSME at the national level).
- Implement far reaching changes in higher education policy to enhance quality, quantity and inclusiveness.
- Modernize and make transparent and accessible IPR infrastructure.
- Explore the possibility of innovative social security for entrepreneurs to encourage ability to take risks.

7.1.4 How can Chambers of Commerce/Industrial Associations/Other Networks Help?

- Chambers need to take active steps to give prominence to regular entrepreneurial meetings, discussions and networking.
- Chambers need to go beyond mid-size and large companies to reach out to young entrepreneurs.
- Scale up current initiatives on Entrepreneurship; coordinate across associations and networks, and beyond metropolitan cities and top educational institutions.
- Create networks of Entrepreneurship initiatives that are being undertaken across the country.
- Strengthen mentoring programmes for upcoming entrepreneurs and actively leverage networks with successful entrepreneurs.
- Provide platforms for discussing entrepreneurial best practices and experiences by holding nation wide workshops.
- Create forums for partnerships with and mentoring by financial institutions.

7.1.5 Role of Educational Institutions/R&D Centres

- Develop content, learning methods, pedagogy, examination systems and curricula that encourage critical and lateral thinking; incorporate case studies of real life situations in the curriculum so that students are able to get a 'concrete feel' of the outside world; introduce manuals in school curricula on 'How Things Work' on various practical aspects of everyday living; explore ideas for flexibility of vocational education with mainstream education for greater linkages between theory and practice.
- Make Entrepreneurship a core subject in business schools, including topics relating to business ethics, early enterprise management, relevant aspects of scaling-up, Indian corporate law and relevant international laws in curricula, explore possibilities of establishing entrepreneurship schools at the undergraduate and post graduate levels such as the one envisaged at IIT Kharagpur, with possible alumni and NRI involvement.

- Encourage student-led entrepreneurial activities in campus with active stakeholder participation; encourage initiatives such as business plan contests (with angel/VC/private sector assistance by holding 'Enterprise Melas.' Encourage activities that deal with the basic practicalities of Entrepreneurship and platforms to interact with various entrepreneurs, the financial community (especially VCs and angels) and relevant networks.
- Set up Enterprise Centres in major educational and research centres, with industry linkages, partnerships and supporting incubation activities.
- Create greater linkages with industry; provide flexible options and supporting environment for those with PhD degrees to translate high tech innovations into wealth generating ideas and entrepreneurial ventures; enable researchers to set up commercial entities while in professional employment with research organizations; facilitate mobility and flexibility; encourage universities/ research organizations to establish commercial enterprises based on their new inventions.
- Enable research organizations to invest through knowledge, positioning inventions and innovations as equity in the new enterprises.

7.1.6 Business Incubation Centres

- Make incubation a core business proposition to trigger Entrepreneurship.
- Develop feasible business models at the incubation stage which align incentive structures towards measurable performance outcomes and provide stake in the outcomes (through knowledge equity, etc.).
- Emphasize the financial and commercialization aspects of incubation (i.e. on the feasibility of taking an idea to market, understanding risk mitigation-measurement-strategy, cash flows, analysis of business failures, ethics etc and not only technical feasibility) where the financial community can play a significant role.
- Actively involve industry (other successful entrepreneurs, angels, VCs, banks, chambers of commerce, associations etc) as part of the social networks for mentoring, thereby supplementing the efforts of academics within the educational institutions.
- Develop formal and informal systems of active, regular mentoring by successful entrepreneurs, platforms for networking and peer recognition, and honour successful emerging entrepreneurs at regular intervals.
- Widen incubation and mentoring beyond technology related ventures, alumni and centres of excellence in metropolitan centres.
- Widen the incubation horizon beyond the start-up stage to also include scaling up.
- Hold national and state level incubation seminars and workshops.

7.1.7 Role of the Financial Community

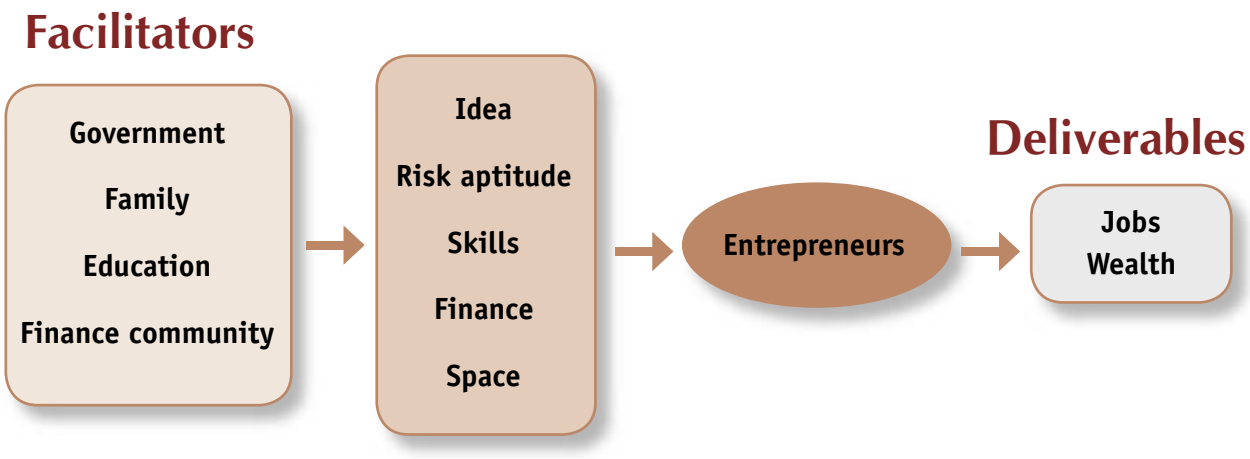
- Banks must consider Entrepreneurship as a major business opportunity.
- Explore innovative options such as venture debt, soft loans etc for start-ups.
- Encourage current efforts on development of systematic risk management systems (SMERA-credit ratings, CIBIL-information disclosures, CART-credit appraisal tools, RAM-risk assessment models etc) as ways to increase risk appetite.
- Incentivize entrepreneurs to undertake ratings and information disclosures by linking cost of credit to ratings (where more holistic ideas of risk can be evolved).
- Encourage the setting up of special industrial and management consultancy departments in banks to address functional inadequacies and market gaps, as well as develop multi-dimensional skills and increased information flows to encourage entrepreneurial funding.
- Actively assist entrepreneurs to develop multiple skills necessary for scaling up.
- Implement significant policy initiatives, including relevant RBI recommendations which facilitate ease of credit flow to small entrepreneurs.
- Banks need to reduce information asymmetries at various levels and disseminate information on various relevant issues (ratings, policies, schemes, consultancies etc).
- Banks could explore ways to monetize aspects of the knowledge industry (including Intellectual Property in the form of licenses etc as assets) with a view to better finance for such sectors.
- Realize the enormous potential for greater involvement of angels and VCs at the seed stage, especially in the newer, high growth sectors of the economy.
- Increase awareness on the activities of angel/VC financing through greater involvement with educational and research institutions, incubation centres etc.
- Scale up and publicise best practices in financial innovations for Entrepreneurship.

7.1.8 At the National Level

- Encourage and celebrate Entrepreneurship – Reward and acknowledge its role in wealth creation and employment generation.
- Widen the social base of capital, including access to new entrepreneurs from communities not traditionally associated with business, especially from marginalized groups.

- Launch Entrepreneurship Outreach events (not just in schools and colleges, but also through the media).
- Improve general perceptions regarding Entrepreneurship to influence family and community support for first generation entrepreneurs.

Figure 7.1: The Entrepreneurial Ecosystem



Annexure I

List of Stakeholders and Details of Entrepreneurs Surveyed

This section contains a list of entrepreneurs (city-wise) and other stakeholders in the ecosystem whom we interviewed for the purpose of this study.

Entrepreneurs

Pune

1. Mr. Vishwas Joshi and Subhada Joshi, Girikand Travels Pvt Ltd
2. Mr. M.D. Adoni, Certified Management Consultant
3. Mr. Milind Pandit, Akshay Urja Pvt Ltd
4. Ms. Gayatri & Mr. Gopal Tambe, FRP Toilets
5. Mr. N.S. Rao, Intelux Electronics
6. Ms. Rajashree Jhangle, Simply Delicious
7. Mr. Ravi Bhagwat, Symtronics Automation Private Limited
8. Dr. Sunita Chaudhari, Consulting Ayurvedacharya
9. Mr. Vincent D'Souza, V R Coatings Pvt Ltd
10. Mr. Linesh Thakur, Aishwarya Enterprises
11. Mr. Subhash Devi, Membrane Filters
12. Ms. Mrunal Gokhale, Feelings Flowers
13. Mr. Ravindra Bam, Ajay Windecor
14. Mr. Vivek Sawant, Maharashtra Knowledge Corporation Ltd
15. Mr. Pravin Dhole, Technofour
16. Mr. Sunil Bhandari, Food Grade Products
17. Mr. Raj Pathak, Akshay Urja Pvt. Limited
18. Mr. H.M. Bakshi, Innova Group
19. Mr. Firoz Poonawalla, Fila Rozil Exporters Pvt Ltd
20. Dr. Ashish Dhawad, Medsynaptic Pvt Ltd
21. Dr. Prashant Lahane, Medsynaptic Pvt Ltd
22. Mr. Anil Deshpande, Atul Electroformers Private Limited

Kolkata

1. Mr. Partha Das, Partha Das and Associates
2. Dr. Aloke Roy, Medica Synergie

3. Mr. Amit Dastidar and Mr. Subhajit Bhattacharya, The Event Managers
4. Mr. Sourav Chakraborty, Aunwesha Knowledge Technologies Pvt Ltd
5. Mr. Siddharth Pansari, Pansari Group of Enterprises
6. Mr. Anjan Ghosh, Kol Web
7. Mr. Jhelum Chowdhry, Crystal Research and Consulting Pvt Ltd
8. Ms. Sunira Chamaria, Sunira Foods
9. Mr. Arun Lohia, Alliance Mills (Lessees) Ltd
10. Mr. Rajiv Poddar, Smartpower Computer Center
11. Mr. Namit Shah, Harley Group
12. Mr. Sidharth Kaul, NICCO Engineering
13. Mr. Aditya Chamaria, Indian Ropeways & Engg Co. Ltd
14. Dr. Mousmi Ghosh, Future Business School
15. Mr. Vijay Kumar Shroff, Vijay Kumar & Co (Jute) Pvt Ltd
16. Mr. Cecil Anthony, Synergy Group
17. Mr. S. Bhattacharya, Midland Packers
18. Mr. Shoummo Acharya, VI eTrans Pvt Ltd
19. Mr. S. Daspal, Info Horizon
20. Mr. Manish Chandani & Mr. Talat Ahmed, Ajanta Leather Fashions Pvt Ltd
21. Mr. Pradip Poddar, Shanta Colibri (India) Pvt Ltd
22. Mr. Nitin Himatsingka, Car Showroom
23. Mr. Indraneil Bose, Futuretech Solutions
24. Mr. Kumar Shivam, ALB Consultancy
25. Ms. Roopa Mehta, SASHA
26. Mr. P.K. Saha, P.K. Saha & Associates
27. Dr. Partha Ray, R M Clinical Laboratoies Pvt Ltd
28. Mr. Ashish Mitra, Exterior-Interiors Ltd
29. Mr. Prateek Surekha, Brainwave Live
30. Mr. Ankur Gattani, Lifelines
31. Mr. Sundeep Tibrewal, ResolveQuery.com

Chennai

1. Mr. Ramachandran N & Mr. T Srinivasan, MEL Systems & Services Ltd
2. Mr. Ramachandran A, Ganga Chemicals
3. Mr. Sanjeevi V, eLogistics Pvt Ltd
4. Mr. G.R. Ravi, Medik India Phytoceuticals
5. Mr. L. Ashok, Futurenet Technologies

6. Mr. Govindachari P.S, Rajsriya Group of Industries
7. Mr. K Shivaram Alva, Allva Plast
8. Mr. V.P.N. Rahman, Nadeem Leatherware Exports
9. Mr. Vara Prasad Raju P, Sigma Solid Strips Pvt. Ltd.
10. Mr. Amit Vaishnav, Megafoods Products Madras (P)
11. Mr. D.S. Balachandra Babu, Fram Implements Pvt Ltd
12. Mr. Naveen Velagapalli, Vitalife Clinic
13. Mr. Suhas Gopinath, Globals ITeS Pvt Ltd
14. Mr. B.A. Srinivasa, Vivek Ltd
15. Ms. Rajeshwari, Akshya
16. Mr. A Benedict, Mercy Hygiene Healthcare Products
17. Mr. Anoop Mehandale, Latent View Analytics

Ahmedabad

1. Mr. Rupesh Shah, Sonya Ceramics
2. Dr. Nita Goswami, Rucha Pharmaceuticals
3. Mr. Indrajit Simlai, SSBI Exports
4. Mr. Jasvinder Singh, ACTUNIV
5. Mr. Sajjan Kejriwal, Acme International Ltd
6. Mr. Samir N Patel, Amos Enterprise Ltd
7. Mr. Malay Kantharia, Team Spirits India Pvt Ltd
8. Mr. E. Sarath Babu, Foodking
9. Ms. Kala Amin, Kanisha
10. Mr. Samir Shah, JBS Group of Companies
11. Ms. Seema Mehta, Sparkle Granites
12. Ms. Jayshree Mehta, Infinium Toyota
13. Mr. Amit Khaitan, Gujaratgifts.com
14. Mr. Abhay Panjiyar, CEON Solutions Pvt Ltd
15. Mr. Aniket Nagri, Nagri Group
16. Mr. Bhakti Vohra, Vastrapur Times
17. Mr. Deepak Vakil, Yeti Leather Products
18. Mr. Rajiv Gandhi, Hester Pharmaceuticals Ltd
19. Mr. S.V. Modi, S.V. Modi Export Import
20. Mr. Sushil Handa, Claris Lifesciences Ltd.
21. Mr. Sheshgiri Bekal, Incubatee at Nirma Labs

Hyderabad

1. Mr. V. Venkata Raju, VEM Technology Pvt Ltd
2. Mr. N.K. Malani, Sri Venkateswara Coir Products Pvt Ltd
3. Mr. Nitin Vyakaranam, Arthayantra
4. Ms. Devika Vardarajan, Polaris Management Services Pvt Ltd
5. Mr. Narne Prabhakar, Hyderabad Tulaman Ltd
6. Mr. Jayadev Meela, Sudhakar Polymers Ltd
7. Mr. V. Anil Reddy, Nayastrap Ltd
8. Mr. Devendra Surana, Bhagyanagar India Ltd
9. Mr. Ravindra Modi, Surya Masale
10. Mr. D. Nagarjuna Sarma, Imprint Travels
11. Mr. Sriram Yalamati, Matrix Equipment Pvt Ltd
12. Mr. Sreeram M.M, S & U MEK Engineers Pvt Ltd
13. Mr. Ramesh Datla, Elico Ltd
14. Ms. Aartee Patil, Icon Accessories Pvt Ltd
15. Mr. A.N. Gupta, Premier Explosives Ltd
16. Ms. Durga Rani, Hyma Industries
17. Ms. Vijay Lakshmi, Anu Group
18. Mr. Rajeev Puri, Sukhjit Starch and Chemicals Ltd
19. Mr. Ram Prasad, Sri Sarada Industries

Bangalore

1. Mr. J. Crasta, CM Envirosystems Pvt Ltd
2. Mr. Subramani Ramachandra, Richcore Lifesciences Pvt Ltd
3. Mr. J.R. Bangera, Premiers Starch Products Pvt Ltd
4. Ms. Madhura Chatrapathy, Food Associates; AWAKE; ASCENT
5. Mr. Srikumar Narayan, Winfoware Technologies Pvt Ltd
6. Mr. D.R. Srikantaiah, Associated Trading Corporation
7. Ms. Raj Bhasin, Bhasinsoft India Ltd
8. Mr. M.S. Sidhu, Apara Enterprise solutions Pvt Ltd
9. Ms Uma Reddy, Hitech Magnetics
10. Mr. Shivakumar, Indigo Edge
11. Mr. Ravi Venkatesan, OnTrac
12. Dr. Krishnaswamy, Animal Biotech (Bangalore) Pvt Ltd
13. Mr. Tallam Venkatesh, Press Tools & Elements Pvt Ltd
14. Mr. Mansoor Ahmed, Tiger Tail Studios, BrewHaHa
15. Mr. Balakrishna M.R., Mediateck

16. Mr. Satyanarayana, Informatics India
17. Dr. Sunita Maheshwari, Teleradiology Solutions
18. Mr. Srinath Shetty, Gift Wrapped
19. Mr. S. Babu, Ashwin Precision Products Pvt Ltd
20. Mr. M.C.R. Shetty, Porlu Packers
21. Mr. Philip Lewis, Electro Mech Corporation
22. Mr. K. Ganesh, Tutor Vista
23. Mr. M.K. Panduranga Setty, Mysore Snack Foods Ltd
24. Dr. Rajeshwari, Manu Pet Clinic
25. Mr. K.N. Jayalingappa, Transphone Corporation I.T.I Ancilliary Industries Association
26. Mr. R.S.H. Raju, Bluechip Solutions
27. Mr. V.C. Karthic, Buzzworks Business Services Pvt Ltd
28. Ms. Suma Krishnaswamy, Global Greens
29. Ms. Padma Seshadri, Atithya Hotels
30. Mr. Muralidhar, Innova Security Investments Ltd
31. Mr. R.C. Purohit, Bhoruka Steel and Services Ltd
32. Mr. K. Shiva Shanmugam, Sivasakhti Engineering Company
33. Ms. Usha Nagaraj, Srimati Mahila Co-operative Bank; FKCCI
34. Mr. Babu Sathian, Process Pumps Pvt Ltd
35. Mr. Veerendra Shivhare, mGinger
36. Mr. Balaji Pasumarthy, Business Gyan
37. Mr. Divye Tela, Cheesecare Corporate Services

Others

1. Mr. Priyankar Baid, P B Tech Impact Solutions, New Delhi
2. Mr. Atul Nigam, i2k Solutions, Mumbai
3. Mr. Nalin Agrawal, INREA Research, Mumbai
4. Mr. Abhishek Biswal, TRI India, Mumbai
5. Mr. Sanjay Labroo, Asahi India Glass Ltd., New Delhi
6. Mr. Pratap S. Mungi, Mungi Brothers, Mumbai
7. Mr. Ramesh Suri, Subros Ltd., New Delhi
8. Mr. Arvind Kapur, Rico Auto Industries Ltd., Gurgaon

Other Stakeholders in the Ecosystem

1. Ms. Lalita Gupte, ICICI Venture
2. Ms. Bala Deshpande, ICICI Venture
3. Mr. Kanwaljit Singh, Helion Venture Partners

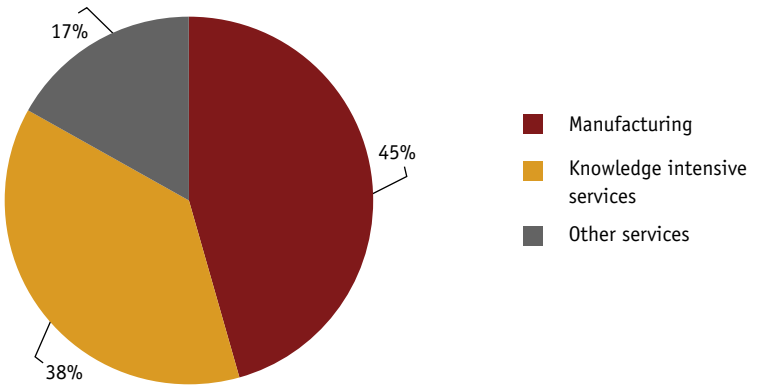
4. Mr. Ashish Gupta, Helion Venture Partners
5. Mr. Anand Lunia, The Seed Fund
6. Mr. Pravin Gandhi, The Seed Fund
7. Mr. Vishnu Varshney, Gujarat Venture Finance Ltd (GVFL)
8. Mr. R. Kuppanna, SBI Chennai
9. Mr. Puneet Gupta, NEF
10. Ms. Laxmi Venkatraman, BYST
11. Ms. Laura Parkin, NEN
12. Mr. Manak Singh, TIE
13. Mr. Paul Murphy, Microsoft India
14. Dr. Subhashish Gangopadhya, IDF
15. Mr. Mohit Malik, Anoova Consulting
16. Mr. Krishnan Iyer, Sequoia Capital India
17. Mr. Harish Damodran, The Hindu Business Line
18. Mr. Manish Sabharwal, TeamLease Services Ltd
19. Prof. Suresh Bhagavatula, NSRCEL, IIM Bangalore
20. Mr. R.M.P. Jawahar, TREC-STEP
21. Ms. Poyni Bhatt, SINE, IIT Bombay
22. Dr. Madhu Mehta, NIRMA Labs
23. Dr. A. Wali, FITT, IIT Delhi
24. Mr. Nitin Kundra, Entrepreneurship and Innovation Cell, IIM Bangalore
25. Prof. Ashok Jhunjhunwala, TeNeT, IIT Madras
26. Centre for Innovation, Incubation & Entrepreneurship (CIIE), IIM Ahmedabad
27. Prof. Subramonia Sarma, Indian School of Business (ISB)
28. Mr. Brahmananda Rao & Mr. Rajeswara Prasad, Andhra Pradesh State Finance Corporation (APSFC)
29. Ms. Ramadevi Kanneganti, ALEAP
30. Mr. S. Subba Rao, Andhra Pradesh Industrial Development Corporation (APIDC)
31. Mr. Khokon Mukhopadhyaya, Bengal Chambers of Commerce
32. Mr. Kaushik Shah, Gujarat Chambers of Commerce and Industry
33. Mr. Sampat Raman, Federation of Karnataka Chamber of Commerce & Industry (FKCCI)
34. Representatives of Tamil Nadu Adi Dravidar Housing Development Corporation (TAHDCO)
35. Mr. Mritunjoy Bandyopadhya, Agastya Associates

36. Dr R.C. Rane Intas Pharmaceuticals
37. Mr. V.V. Sanyasi Rao, Anakapalle Merchants Association
38. Mr. Uday Bhaskar, Zen Technologies
39. Mr. Y. Rambabu, Ushodaya Enterprise
40. Dr. Pulastya Vora, CSM Services
41. Mr. K.M. Pai, Bell Ceramics Ltd
42. Dr. Shrikant Joshi, International Advanced Research Centre for Powder Metallurgy
43. Prof. M.G.K. Murty, Centre for Environmental Adaptation
44. Mr. M. Raja Reddy, Srinivasa Industries
45. Mr. Arun Kumar D, AGI Glaspac

Classification of Entrepreneurs Interviewed

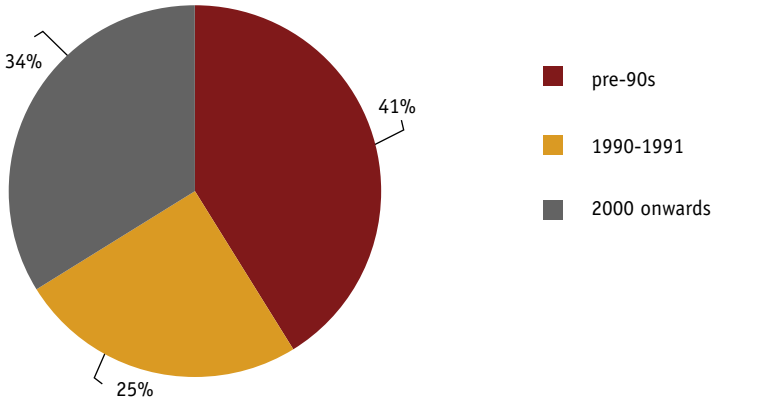
(i) Based on the sector of their operations

Figure A.1: Categorization by sector



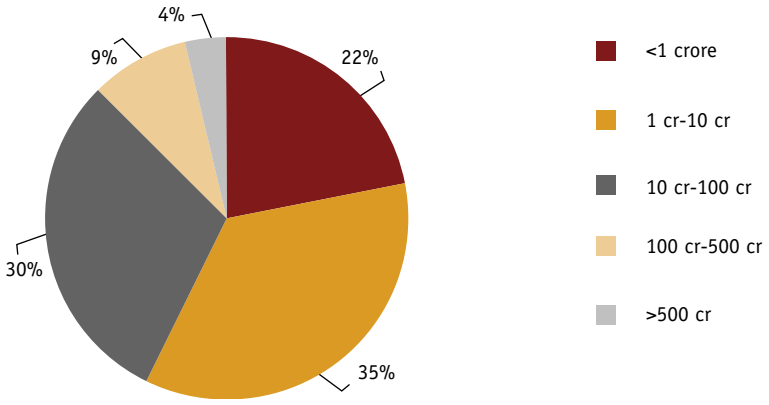
(ii) Based on the time period of venturing into entrepreneurship

Figure A.2: Categorization by time period



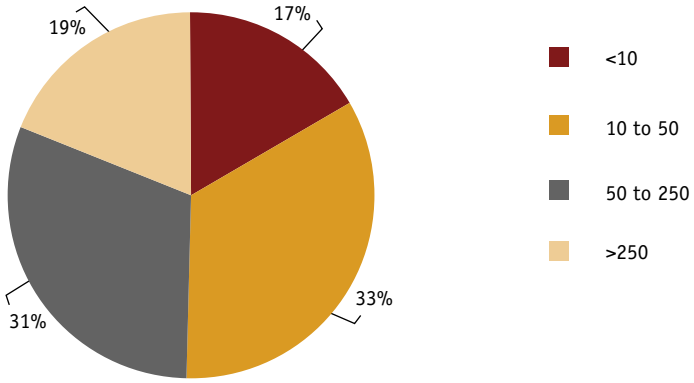
(iii) Based on the company's turnover

Figure A.3: Categorization by turnover



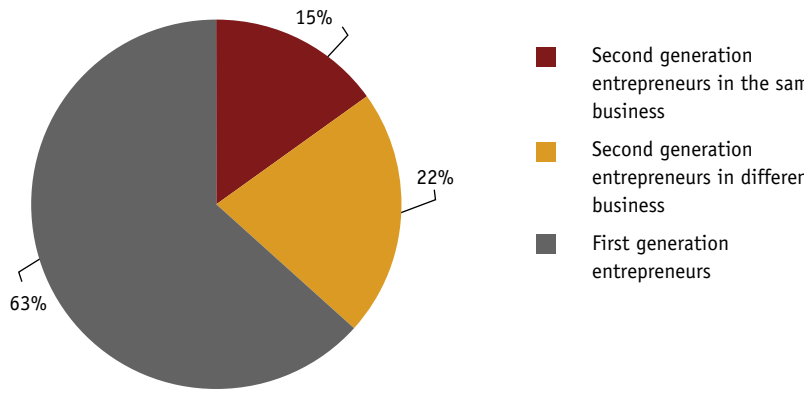
(iv) Based on the number of people they employ

Figure A.4: Categorization by number of employees



(v) Based on the family background

Figure A.5: Categorization by family background



Annexure II

Entrepreneurship Profiles

We requested some of India's entrepreneurial icons to provide personal narratives of their experiences and share their insights on Entrepreneurship. In alphabetical order, these entrepreneurs are as follows:[185]

- Mr. Ajay Piramal, Chairman, Piramal Enterprises Limited
- Mr. Ajit Nagral, Founder & Chairman, NuGenesis Technologies Corporation: Founder and President, Megaware, Inc.; Co-founder and Chairman, Sciformix Corporation
- Mr. Ashank Desai, Founder & Former Chairman, Mastek Ltd
- Mr. Cecil Antony, Chairman, Synergy Group
- Mr. Glenn Saldanha, Managing Director, Glenmark Pharmaceuticals Limited
- Mr. Jignesh Shah, Chairman and CEO, Financial Technologies (India) Limited
- Dr. Kiran Mazumdar-Shaw, Chairman & Managing Director, Biocon Limited
- Mr. K. Ganesh, Founder and CEO, TutorVista
- Mr. M.S. Sidhu, Founder and CEO, Apara Enterprise Solutions (Pvt) Limited
- Mr. Sam Balsara, CMD, Madison Communications (Pvt.) Limited
- Mr. Sanjeev Bhikchandani, Founder and CEO, InfoEdge India Limited
- Mr. Subhash Bagaria, Chairman and MD, Kemwell India Limited
- Mr. Subramani Ramachandrappa, CMD, Richcore Lifesciences Pvt Limited
- Dr. Sunita Maheshwari and Dr. Arjun Kalyanpur, Teleradiology Solutions
- Mr. Sriram Raghavan, Co-founder and President, Comat Technologies (P) Limited
- Mr. Vijay Nair, Co-founder and Director, Only Much Louder

[185] The insights and facts narrated in the following pages of Annexure II solely reflect the personal views of the entrepreneurs. NKC does not bear any responsibility or liability for the authenticity of the facts highlighted therein.

My Entrepreneurial Journey

Ajay Piramal
Chairman, Piramal Enterprises Limited

Historical background: Morarjee Mills

Morarjee Mills was established in 1871 and is one of the oldest registered mills in India. The Mill built up a reputation for quality and withstood the two world wars and the Great Bombay Plague. In 1935, the management of the mills passed into the hands of my grandfather Shri Piramal Chaturbhuj, heralding a new era of growth and prosperity. In 1942, the Viceroy of India awarded the Mills a gold medal for its khakhi drill. The mill threw itself into the Swadeshi movement, and won special acclaim from Mahatma Gandhi. I was brought up around the culture of textile mills, with the values of building world-class manufacturing, continuous modernization and care for workers. Due to the untimely death of my father and brother, I became Chairman of the Mill in 1984. At that time the textile business constituted 95% of the Piramal Group turnover. I served as Chairman of the Mill for 20 years, made it one of the best export-oriented units in the country, supplying high quality material to USA, Europe and Japan. At the same time, I recognized that textiles could not be the future of the Company.

We had to move away from the commodity type, labour-intensive products line that the mill was making, to sell products that were knowledge-based. Pharmaceuticals fit that bill and in 1988 we acquired Nicholas Laboratories India Limited (later renamed as Nicholas Piramal India Limited), a small pharmaceutical company. The turnover was around Rs. 11 crore. Using both organic growth and acquisitions, we are now the fourth largest pharmaceuticals company in India. We have invested heavily in discovery research and development, and hope to launch a drug developed in India in the global market. By 2004, textiles were just one percent of the group sales, showing how entrepreneurship had led to the growth of completely new businesses.

Views on Entrepreneurship Opportunities in India: Boosts and Barriers

I believe that Indians have a highly entrepreneurial culture. Indians who have migrated to the other countries — e.g., USA or UK — have done remarkably

well and are amongst the wealthiest groups in those countries. They are also intellectuals and Indian professors teach at many Ivy League Universities in the USA. This is India's century, and Indian companies are making their mark in the world, and acquiring companies in the West. The pharmaceutical and biotechnology arena has great potential. Domestic sales were approximately US$ 8 billion in 2006 and growing at 17.6%. Globally, India ranks 4th in terms of volume of sales in pharmaceuticals, but 14th in terms of the value of sales. Drug prices are the lowest in the world. India has the highest number of plants outside the USA that are approved by the US FDA. India also has the highest number of applications for drug master files to the USFDA. Exports are growing at 20% up to $ 5 billion.

Yet here, we in India have the most regulated industries in the world. Drug price control has ensured low prices, but failed to provide adequate access to medicines for millions of Indians. More than 50 years after independence, only 30% of Indians are covered by modern medicine. There has been nearly five percent price decline in each year in real terms over last five years. The LifeEx is dropping and the pharma industry is trailing the Sensex.

Over 70% of Indian women and over 50% of children aged 10 have iron deficiency anaemia, the cure for which is available through tablets or capsules costing around 12 paise each. Therefore, because of the mindset of price control, we have failed to ensure delivery to rural India. This old-fashioned mindset of control has led us to have medicines, which are generic. The policy has failed (barring a few top Indian companies), to stimulate discovery research in those diseases that affect us the most, e.g. tropical diseases like malaria, anaemia, chikungunya, bird flu, etc. We have also failed to reduce high transaction costs in duties and taxes, which add up to 60% of the cost of a drug. In the past few years, the NPPA has been overactive in reducing prices; this affected over 500 formulations in 2006. The positive trend of phase-wise decontrol is now being reserved and the National Pharmaceutical Policy proposes to bring all the 354 drugs in the National List of Essential Medicines, in addition to the current 74 drugs under price control. The cost-based price control does not account for any research investments. It costs over a billion dollars to discover a new drug. It takes more than 10 years to develop a drug and only one in hundred newly discovered drugs hits the market. It is, therefore, a high-risk research with a long gestation period. The government needs a long-term policy to stimulate research. Today, no Indian company, using surplus from its domestic market can bring a drug to market globally on its own muscle. Perforce, it has to license out its discoveries or seek funding thereby giving up some future benefits as well.

Regulatory infrastructure is also poor. Basic quality norms such as Schedule M have not yet been nationally enforced, leading to poor quality medicines. The tender systems in public health institutions are riddled by corruption and inefficiency and hence the Indian consumer is not getting what he deserves – good quality medicines at affordable prices. Also, intense competition between

more than 25,000 pharma companies has kept prices at uncompetitive, low levels. Spurious drugs have become a national health problem with regulated packaging allowances. If Indian research were allowed to develop by liberalizing the sector, it would deliver new drugs at less than half the cost of the West, thereby providing affordable drugs not just for India, but also for the world.

Though India's pharmaceutical market is just one percent of the global pharma market, it accounts for 8.5% of the world pharma production, and over 22% of the world's generic production. It is a net foreign exchange earner. India is emerging as a global powerhouse in pharmaceuticals with a robust domestic industry. Intense competition has resulted in medicine prices falling to the lowest in the world (lower than in even neighbouring countries like Pakistan, Indonesia, etc.)

However, China is fast catching up. The government of China is spending in excess of two percent of GDP in science. It is investing huge amounts in its leading universities. Public spending on biotechnology is increasing in leaps and bounds. China has overtaken India in the number of clinical trials, and Western pharma leaders view China and (not India) as the future leader in pharma and biotechnology, according to a recent survey reported in *The Financial Times*, London.

According to a McKinsey report released on August 22, 2007, India's pharma turnover is expected to treble to US$ 20 billion by 2015. According to recent estimates, Indian NCE research-based companies may exceed US$ 100 billion in market capitalization, if this sector was liberalized, to spur investments in research. A small beginning has been made here with Indian companies making significant investments in research (twice that of the auto industry and ten times more than that of the IT industry). The impact of this on the growing Indian knowledge sector would be dramatic. It would mean a shift in regulatory mindset from controls to monitoring of prices, stimulating research aggressively, stimulating the growth of anti-counterfeit packaging, improving regulatory infrastructure and reducing transaction costs. This is a chance that India cannot afford to miss as it otherwise runs the risk of being overtaken by China, Korea, Taiwan and other countries. India has the potential of becoming the "medicine maker" to the world by unlocking its vast knowledge potential and becoming the knowledge power.

My Entrepreneurial Journey

Ajit Nagral

Founder & Chairman, NuGenesis Technologies Corporation
Founder and President, Megaware, Inc.
Co-founder and Chairman, Sciformix Corporation

My journey as an entrepreneur began 16 years ago. I had by then finished my education in engineering at the Victoria Jubilee Technical Institute, Mumbai, India and moved to Boston, Massachusetts (USA) for higher studies in Computer Engineering. During my early days as a student in the USA and then as an engineer for a multi-billion dollar technology company there, I always felt a lack of purpose. Perhaps it was because I was so far away from my own country, or maybe because I found myself following a standard career path. Deep inside, that drove me to be different.

It is important to understand that I do not come from a business family. My father is a General Surgeon, my mother a Family Physician and my brother a Liver Transplant Specialist. I grew up in a middle-class household. Business was not in our blood. We were raised with core values of honesty, integrity, patience and faith. These values have time and again helped me throughout my business career. Like many of my friends, who grew up with limited means, and went to the USA like me, and became successful entrepreneurs in Silicon Valley or New York or Boston, we all had one thing in common – a strong intellect provided to us by the Indian school systems and a burning desire to succeed. Growing up in India, the system and my own circumstances made me hungry to succeed.

I have been fortunate enough to build three technology and knowledge focused businesses in my 16 years of entrepreneurship. All three businesses have a common thread — they focus on innovation, skill, and the convergence of technology and science. I started my first company, Megaware, Inc. in 1991, and over time Megaware has become a well-known player in the field of Laboratory Informatics and Laboratory Data Management. My second company, NuGenesis Technologies became a leading provider of Enterprise Scientific Data Management software for hundreds of Pharmaceutical and Biotechnology companies worldwide. In 2004, NuGenesis was acquired by a large public company in the USA and has now become a major brand within this multi-billion dollar corporation. My third venture, a Knowledge Process Outsourcing

(KPO) company called Sciformix, provides high-end knowledge management services for Pharmaceutical and Healthcare companies across the globe.

Entrepreneurship is full of ups and downs. I have had my fair share. I clearly remember the days when making basic ends meet was a challenge. I had bootstrapped my first company and we used to have very little left over month in and month out. Sometimes ignorance is bliss, and had I known the depths of misery that an entrepreneur could possibly face, I may not have been so courageous. I remember the time when my bank balance was so low that I did not even have money for a week's grocery. In stark contrast, I also remember the time I sold my company and the same bank balance suddenly surged. This is what entrepreneurship is all about – unpredictable, often difficult, yet immensely fulfilling.

Entrepreneurship is also about a purpose. In my case it has been about getting to the next level for my family's sake and mine. How one gets there is equally important; my value system has influenced my actions. I have always been transparent with my employees, investors and customers. I have always delivered good news and bad news with the same balance and clarity. I once recall losing a large deal to a competitor because we refused to misrepresent what our product did. It was in early 2001 and we were competing head to head on a multi-million dollar deal. We knew our product was superior to our competitors, but unlike them, chose not to make exaggerated claims bordering on half-truths. We lost the deal. At that time it was devastating. It took exactly two years to the date to receive a call back from the customer. They came back to us as the competitor's product had failed. Although the pain we felt when we lost the deal could never be replaced, we felt clearly vindicated. I have had the loyalty of this customer since, virtually for my entire business career. My roots have allowed me to stay grounded in the best of times and the worst of times.

I can never forget the early years of my business career trying to raise financing for my business and the countless efforts and rejections faced in the process. In our entrepreneurial circle we used to call it the "bruised knee" syndrome — crawling on our knees asking for money from banks, financial institutions and wealthy individuals. Raising money is like feast or famine — either everyone wants to give you money or nobody does. It was hard initially; however, once the money started coming in, predictably it was more than we wanted and had to turn people away. These experiences are part and parcel of an entrepreneurial journey; they can break the strongest of them all, or they can shape your life forever.

Most entrepreneurs would attribute their success to some common traits — skills and abilities, unflinching passion for success, unrelenting effort, an appetite for high risk and lots of luck. In my case, I would add two more to the list — "Music" and "Mentors". I have been a professional musician for over 20 years. As a *tabla* (Indian drums) player, I have accompanied many

well known Indian and western artistes throughout my career. Growing up, little did I know that this dimension would prove to be my best support in business. My abilities in music have helped me build a strong business network, through which I have been able to reach out to customers, investors and key employees. This network is a lot stronger because it has been built on a multi-dimensional foundation of music and entrepreneurship. With this experience, I always advise other entrepreneurs to have another dimension separate from their business. Also, without mentors, I would not have been where I am today. I have had two prominent personalities who helped build my business career, one from the USA and the other from India. They are such well known and well placed industry leaders, to date I don't know why they do what they do for me. Perhaps it is because they appreciate my efforts and my fight for success. I think it is because they have a strong sense of "giving back" and mentoring is one way to do that.

After spending a major part of my entrepreneurial career in the USA, I returned to India in 2005. What has drawn me back to India is quite simple — in today's India I can do many things as an entrepreneur that are no different to what I am able to do in the USA. Perhaps, many of us would have never left in the late 1980s, had this been possible then.

India's march towards open markets and economic growth no doubt has generated tremendous business opportunities. The good news is that opportunities abound in many sectors — IT, Retail, Manufacturing, Real Estate, Banking, Insurance, Financial Services: the list goes on. As a nation, we have always been entrepreneurial. We had to be, since that is the only way of survival for many — from street vendors to the millions of people who depend on their own or someone else's small business for their living. The difference today though is the confidence on the street. People in business believe in themselves, employees are taking charge of their careers, India Inc. is a confident lot. The economic growth process, first triggered in the early 1990s, is finally irreversible!

I built two companies in the USA before returning to India after a 20 year stay there. It has been two years since I began my journey as an entrepreneur in India. My views herein reflect my 14 years of entrepreneurial experience in the USA and the past two years here. I would like to make a distinction here between "business opportunities" and "entrepreneurial opportunities". Business opportunities in India are many, but they remain outside the reach of most entrepreneurs. For the sake of clarity, let me define an entrepreneur in this context. I am not talking about individuals who run mom and pop businesses, nor am I talking about successful businesses that are setting up entrepreneurial ventures. I am talking about the educated youth of India who is a first time entrepreneur, or individuals with successful corporate careers who are taking the plunge into entrepreneurship. For many of them, entrepreneurial success is a distant dream. Unfortunately, it has little to do with their ideas, efforts, or the desire to succeed.

A country like the USA has embraced the fact that small entrepreneurial businesses are the engines of growth. The USA provides a strong 'Ecosystem' for entrepreneurs to thrive. This ecosystem, while not guaranteeing success in business, levels the playing field for entrepreneurs. Access to capital, well defined investment rules, access to basic infrastructure, access to talent, and acceptance of failure are certain key ingredients of this ecosystem. Today, India lacks this ecosystem. The playing field is certainly not level here. A key criterion for entrepreneurial success in India still remains an entrepreneur's ability to "work the system" and not an entrepreneur's ability to "work the business". Until that changes there will be no level playing field and entrepreneurship will remain the purview of a select few, or at least of those who know how to work the system.

As I build a business in India, my pedigree has allowed me to overcome many of the prominent barriers Indian entrepreneurs face. Even so, the efforts to overcome these hurdles have taken away precious time and focus from critical business activities. My biggest surprise in all this has been the nature of these hurdles — basic things you take for granted elsewhere become major hurdles in India. I would like to list some of them based on my recent experiences — affordable space for small business, lack of early-stage capital, lack of quality talent, mismatch of skills versus cost of skills and more. While Government policies over the years have been business-friendly, the needs of entrepreneurs and small enterprises remain somewhat unaddressed. Even well meaning initiatives like the creation of SEZs remain by and large inaccessible for small business for a variety of reasons.

I consider myself extremely fortunate to have achieved a certain level of success in my entrepreneurial journey, a journey punctuated by highs and lows, coupled with a fair share of wins and losses, and backed by relentless effort, sacrifice, grace, but most of all the unwavering support of my wife Vibhu through it all. Entrepreneurship is a way of life for me now; it is in my blood. For someone who knew nothing about business, I have come a long way on this journey. Despite facing a lot of hurdles along the way, there is very little I would like to change about my experience. I am a better human being because of it.

I would like to thank the National Knowledge Commission for providing me this opportunity to share a brief sketch of my entrepreneurial journey with other fellow entrepreneurs. The NKC can play a pivotal role in fostering an 'Ecosystem' for entrepreneurs to thrive. As an entrepreneur, I will be happy to contribute in any way I can towards this effort.

My Entrepreneurial Journey: Going Against the Grain

Ashank Desai

Founder & Former Chairman, Mastek Ltd

The early years

The life of an entrepreneur, while invigorating and at times even thrilling, is almost always filled with obstacles and can be quite exhausting — more so in the early part of the journey. In my case, life took a tough and challenging turn years before I could even embark on my entrepreneurial journey. Within two years of my birth in Goa, my father passed away, leaving my mother to take care of me. The pressure was compounded by the fact that our family was also very active in the Goa freedom struggle during 1951-52; both my mother and my aunt were involved in the struggle. Despite the rough times we were going through and her meagre earnings, my mother was passionate about giving me the best education she could afford. She worked very hard and made sacrifices to ensure that my studies did not suffer. I went to rural schools with rudimentary infrastructure in Goa and Nagar Haveli. When I decided that I wanted to study engineering, my preferred choice was obviously an IIT, but my mother wasn't sure of meeting the financial commitments associated with higher studies in a large city. Fortunately for me, an engineering college opened in Goa that year, and although it did not have the best of infrastructure, I studied really hard and was a rank-holder in my B.E. programme. That was when I realized that if you set a goal and work hard towards it, the results can be rewarding.

By the time I earned my B.E. degree, I had also realized the value of education and was eager to pursue it further. I successfully took the M.Tech entrance test at IIT Bombay and was admitted with a small scholarship. Armed with an M.Tech, my only objective then was to get a job, which I found at the Godrej group. The couple of years I spent there made me want to augment my skill-set with management education, and I went to I-E-V-I Ahmedabad. In a very generous gesture, the Godrej group paid my fees, enabling me to attend the course, which I completed in 1979.

Building Mastek from the ground up

The experience at IIM was truly challenging as they make you work hard, especially in the first year when the coursework is very rigorous. For the first time, I found myself surrounded by scores of very smart people with high energy levels and the passion to excel. The environment there encouraged us to ideate and think laterally and it was at IIM that the entrepreneurship bug bit me.

The worst time then for entrepreneurship in India

Some of my classmates were keen to start a venture and we came together, considering a variety of very interesting things we could do. However, those were extremely difficult times to start a business in India. Businesses were generally not trusted. On top of that, for a bunch of first-generation entrepreneurs from middle-class families with no contacts and limited access to capital, it was almost impossible to think of getting into any sphere of activity with even a remote chance of success. Manufacturing, because of its capital-intensive nature, was obviously not a choice. We toyed with various ideas and finally settled on IT and even within that, on software because it required very little capital. The problem, of course, was that in those days there was no export market for Indian IT software and the domestic software market was tiny. In fact, most of the domestic IT market was for hardware, and the accompanying software was generally given away free.

We decided to focus on leveraging software to address business problems, that is, deliver IT-led business solutions for management teams. We began as 'Management and Software Technology' and later abbreviated it to 'Mastek'.

At the risk of repeating myself, I must say that doing business in those years was tough. One had to wait for years to get just a telephone connection! Running a new start-up was possible only with the active support of my wife. An entrepreneur rarely has enough time for family, at least in the initial phase. The fact that I had three other active partners — Ketan Mehta, Sudhakar Ram, and R. Sundar — also helped tremendously, as each of us brought his own unique strengths to the table.

Focusing on solutions aimed at making an impact on customers

Our first office was in an apartment in Ghatkopar, a Mumbai suburb, which was actually the residence of Ketan Mehta. In the initial days, we had to rely a lot on our contacts within the IIM alumni network. Our first project, in 1982, was for Richardson Hindustan, which is now known as Procter & Gamble. They asked us if we could help them manage the cyclical nature of the manner in which Vicks, and many other products with similar seasonal characteristics, was sold. That is, a lot during some months when they had a difficult time meeting demand, and much less in other months. We found an optimum solution, and because in those days Microsoft Windows had not yet been launched, we

designed our own user interface using a spare computer that the customer had lying on the shop floor! The solution worked, and we began getting business from other customers in India. We focused on multinationals as they were aggressive spenders on IT at that time, and companies like Citibank, Boots, Hindustan Lever and American Express formed a large part of our clientele. We later rented a small office space of about 35 sq ft in Mumbai's business hub of Nariman Point and then, as we grew, purchased a much larger office space at Prabhadevi in 1986. Today, of course, we have large facilities in Mumbai and Pune, and a new 15-acre campus coming up in Chennai.

With no background in running a business, we faced multiple pressures and difficulties. For example, since software is not as well defined as any other product, you can run into losses if you are not careful about fixing specifications and scope of work. At the same time, we also had to prove ourselves and build a level of trust in a new industry, a sceptical market, and a business environment that was almost hostile to new entrepreneurs.

Pioneering product development in India

By the mid 1980s, and more rapidly in the early 1990s as the Indian economy was liberalized, PCs were becoming cheaper, and that helped the Indian IT industry a lot. Obviously, we also benefited. While we continued to deliver IT solutions to customers, we also capitalized on the opportunities created by the growing use of PCs within the country's business community and entered the area of product development. We developed a financial accounting product called Finac, and later developed Strac, a product for broking houses. At its peak, Strac was the market leader at the Bombay Stock Exchange as well as the Ahmedabad Stock Exchange, which then used to be a very active bourse. We also began distributing an RDBMS product called Ingres.

A major achievement in product development then came when we developed an ERP software called MAMIS — the first developed in India by an Indian company at a time when ERP products were at an initial phase of development even globally. Obviously, developing products is risky and is also quite capital-intensive, and so we began studying options to raise additional capital. Luckily for us, the Technology Development & Information Company of India Ltd (TDICI) had just begun operations then, and they structured a deal for us under which they funded us with repayment based on a percentage of revenues. Getting into products was a turning point and propelled us into the next level where our revenue per customer increased dramatically. Our confidence was bolstered when *Dataquest* magazine ranked Mastek among the Top 10 Indian IT companies in 1989.

The process of consolidation and benchmarking

At Mastek, we always got a thrill in developing new products — and this continues till today. Product development, however, is a high-risk, high-reward

activity and requires capital. We were doing fairly well as a business by the early 1990s, but did not have enough capital to drive our plans for further intellectual property (IP) development. Public listing in those days could only be done at par value, not at a premium. The concept of sweat equity was also non-existent. Valuations were based on book value, which would result in significant dilution of an entrepreneur's stake.

Going public at a premium

Later on, when IPOs at premium pricing were allowed in the country and restrictions placed by the Controller of Capital Issues were removed, Mastek became the first IT company to go public at premium pricing in 1992. TDICI, which had earlier supported us with venture investments, saw its invested capital multiply manifold after the listing. I believe that this, to an extent, helped create confidence among VC firms at that time to provide capital to promising start-ups.

Going global against many odds

As a business, while we grew our domestic operations, we also began tapping the global markets where we faced several tough challenges. First, the image of India then was very different from what it is today, and the country's technology capabilities were not recognized. So we not only had to market ourselves but also market India. Second, the country's internal policies were not very conducive and it was difficult to even travel abroad due to controls on foreign exchange. The country and its nascent IT industry also had no access to new technologies, because of which we did not have a talent pool with adequate training and exposure to the latest hardware and software. In the face of such odds, I am proud to say that Indian professionals were able to make the best out of whatever they had, learned and updated themselves quickly, and were able to rise to the occasion.

At Mastek, we went to Singapore in 1986-87, which gave us access to the Asia-Pacific market, and a year after that we entered the US market. In 1991-92, we entered the UK market. We also began to enter into partnerships with large international players, both abroad and in India. Our global operations continued to grow and the focus remained on creating a business impact for customers.

A helping hand from economic reforms and liberalization

By that time, some of us in the industry had together and established NASSCOM (National Association of Software and Service Companies). NASSCOM and I personally made strong efforts to change mindsets in the government and convince it to reduce the duty on software imports, which used to be as high as 110%. I knew that while cheaper imported software products would affect us, as we too were into products, it would also create immense opportunities. Most of our business was still coming from the domestic market and we felt

that cheaper software was the key to also tap the export markets. The economic reforms driven by the then Finance Minister Dr Manmohan Singh finally made that happen, and the result is there now for all of us to see.

The economic reforms in India, coupled with the global opportunities unfolding as a result of the Y2K problem cropping up, led to a sea change within the country's IT industry. I see that as the first phase or wave in the evolution of the Indian IT industry, when Indian IT talent began to attract global attention and respect. Mastek too began to expand its footprint overseas, but we remained focused on what we considered our organizational DNA: solutions. We chose not to ride the Y2K bus, perhaps the only Indian IT player to do so, as that was not aligned with the kind of work we were doing and wanted to do.

Developing the capabilities and processes to manage complex and large programmes

We at Mastek went against the trend and remained focused on developing capabilities to manage and deliver complex programmes that made a visible impact at the customer's end. Very early on, we understood the importance of building an organization and implemented initiatives at creating a culture that fostered innovation and teamwork, developing new leaders, and setting up HR processes like regular appraisals and 360-degree feedback systems. In the year 2000, we became the first IT solutions company in the world to be assessed at P-CMM Level 3 and SW-CMM Level 5. We also established a strategic planning process to align our operations with long-term objectives.

These initiatives gave us capabilities that, in turn, helped us successfully manage and implement large complex assignments in a predictable manner. For example, in 2003 we implemented the London Congestion Charging (LCC) project in partnership with local firm Capita pic for Transport for London (TfL). This was a large-scale, multi-vendor assignment and we took complete ownership for integrating all the technology-led applications of such a complex programme, and delivered on tight parameters. We also partnered with Deloitte Consulting and formed a joint venture in 2002, which enabled the company to get a foothold in India while giving us access to its markets in North America. We are now working on an ambitious programme for the UK's National Health Service (NHS). The NHS is revolutionizing the healthcare delivery system in the UK and we have partnered with BT Global Services to create what could be the world's largest healthcare data warehouse. It is a huge, complex project with significant security issues, and will ultimately have an impact on the ability of NHS to deliver better services to citizens. Evidently, what we are doing is very different from what most other IT companies in the country are doing. While our focus remains on solutions, others are focused more on services. Indeed, today about 70% of Mastek's revenues come from application development and 30% from application management or maintenance. It is the other way round for most other Indian IT firms.

Quest for excellence and benchmarking against the world's best

Given the kind of work we have done, and continue to do, in the UK, we have become a formidable name in that market and are among the Top 5 IT players from India. Our success was to a large extent driven by our quest for global excellence. At Mastek, we always benchmarked ourselves against the world's best; many other Indian IT players have also done the same, which has benefited the Indian IT industry. I see similar things happening now in other sectors like pharmaceuticals and manufacturing, inspired perhaps by the manner in which the IT industry has demonstrated that we Indians are capable of delivering world-class products and services.

Interestingly, our unique business model, which is focused on leveraging intellectual property to create solutions, is one of the reasons why only a small part of our revenues comes from the USA today. Potential customers in the USA are used to seeing Indian IT firms capitalizing on labour-cost arbitrage to provide services using the off-shoring model. It has been an uphill task for us to convince the US market that an Indian company such as ours can also do higher-end solutions work. But we are making progress, and our business in the USA has been growing rapidly over the past couple of years.

I believe that while the first wave of evolution within the Indian IT industry culminated in Y2K, the cost-arbitrage-based off-shoring model brought in the second wave of evolution. Like any arbitrage, however, this labour arbitrage will not last forever. Rising wages and an appreciating rupee are already sounding the alarm bells for this model. The next, third wave of growth for the Indian IT industry will come from higher-end solutions backed by intellectual property. There, Mastek has a significant head-start. We have been ready for this for years!

Making way for the next generation

Having built a truly unique "third wave" IT company, I decided in January 2007 to step aside and let Sudhakar Ram, one of Mastek's founders, take over the leadership role as Chairman. The real measure of success of any entrepreneurial endeavour is whether one has been able to create an institution that can sustain and grow even in her or his absence. I believe Mastek has reached that stage, and has a long way to go as an organization. Sudhakar is younger, has more energy and passion, and has been involved in various aspects of the company since the initial phase. He has outlined an aggressive growth strategy for Mastek. The thrust will remain on delivering IP-led solutions, but with a more focused approach to target two verticals, insurance and government, where we have a very strong track record and have our own IP. In insurance, for example, we have Elixir™ and are now in the process of introducing its more powerful version. With the time now ripe for Indian solutions providers, the future outlook for Mastek has never been better. I continue to be Mastek's chief ambassador to the world.

Having stepped aside from my operational role there, I now also have the time to engage in leadership activities that can make a difference at the macro level. I am actively involved with the Pan IIT organization, which is a worldwide IIT alumni movement focused on a multitude of important initiatives such as nation-building and encouraging entrepreneurship in India. Recently, I took over as President of the Asian-Oceanian Computing Industry Organization (ASOCIO), whose mission is to improve trade across 19 nations in the region, including India, Australia, Japan, and Singapore. Just as our liberalization led to tremendous opportunities for the entire Indian IT sector, I believe increased regional cooperation will unlock new prospects for our industry.

At Mastek, we not only benchmarked ourselves against the best globally on operational parameters, but also on softer issues that make an equally hard impact on organizational value. We have laid enormous emphasis on values and that continues to be high on our agenda. I take special pride in the high standards of corporate governance that we established as a public company. We also made serious and result-oriented efforts in the area of social uplift, with the objective of giving a hand-up, not a hand-out. We have formalized our social initiatives under Mastek Foundation. The Foundation works on the principle of "informed giving, responsible receiving", so we help NGOs improve their own governance in order to attract more funding. At the same time, it also provides people the option to make a choice about the cause they want to be associated with. I have been pleasantly surprised to note that a large number of Mastek employees too frequently volunteer their spare time to make social contributions with Mastek Foundation.

My message for aspiring entrepreneurs

As an entrepreneur, I today have the satisfaction of having created a global institution based on a robust foundation of innovation, people, values, and customer-centricity. Looking back today on my formative years, I believe they contributed as much to my success as anything else. The resolve that I witnessed in my mother perhaps instilled in me a level of tenacity that is critical for entrepreneurial success, and the hardships I faced during those years taught me to make the best of what one has.

The journey so far for me has been full of thrilling moments and disappointing times, as is the case with any entrepreneurial venture. Only unbridled passion is likely to see you through the rigour and pains that are part and parcel of any start-up process. The key enablers of my own success were education, values, and relationships. During my time, it was very difficult to establish a new business and for four professionals to build a company like Mastek in an environment where business was not trusted was truly remarkable. I am proud of the fact that I have been a part of that phase in India's history that saw entrepreneurial enterprise take root.

This is a good time to be an entrepreneur in India. Today, we have successful role models, India is growing rapidly, economic liberalization is going on

in full swing, and India enjoys a favourable positioning as a brand in the global markets. Government policy is increasingly becoming progressive and the business environment is more conducive, which is a very welcome development because India needs many more entrepreneurs across industries if it has to achieve and sustain the kind of growth we as a nation seek. In my personal capacity, I intend to do what I can to make that happen. Since Mastek happened at IIM Ahmedabad, I believe educational institutions can help foster entrepreneurship, which is why I am also involved with the Society for Innovation & Entrepreneurship (SINE) at IIT Bombay — a business incubator where ideas from students and alumni can be commercialized. I am very excited by the potential and drive I see in today's generation of aspiring entrepreneurs, and I am very optimistic about the future of entrepreneurship in India.

A Walk on the Entrepreneurial Path

Cecil Antony

Chairman, Synergy Group of Companies, Chief Mentor, NSHM Knowledge Campus

It was the year 1989. I had just graduated from the Jabalpur Government Engineering College with an Electrical Engineering degree in hand and had four good job offers. SAIL's offer appealed to me the most. SAIL, under the dynamic leadership of Mr. V Krishnamurthy was doing very well, including an excellent brand-building exercise. I joined SAIL and was posted to Durgapur Steel Plant, which was my first visit to the eastern part of the country. Nine months of hectic training followed, but somewhere the satisfaction was not there. Along with my batch-mate Amitabh Gupta, a B.Tech in Electronics & Telecom, we used to sit and ponder — should we do something on our own or join the private sector, do an MBA from one of the IIMs or go to the USA (as all engineers wished to do then)?

Somehow the entrepreneurial bug caught me more than anything else. Yet everything seemed to be risky in business then. Both Amitabh and I did not have a business background. That was the year 1990. We were looking for options. Cable television came to our mind and so did export of innerwear — both were booming in those days. Then suddenly, it was an advertisement from the IT education provider NIIT that clicked. I applied. In the first round there were 60 applicants. I cleared the second round and went into the third. And finally, in the fourth round, I met the visionary R. S. Pawar who gave me the first offer from NIIT to start the centre at Durgapur, 160 km. from Kolkata. All hell broke loose after that!!

Between Amitabh and me, we had only about Rs 5000 but a lot of burning desire to build something. I went to Jabalpur where my parents were stationed, to talk to them. My father was a simple, honest, dedicated employee of MPSEB and my mother came from a very humble background. They had, in our formative years, undergone tremendous financial difficulty to bring up their three children and provide good schooling. Despite all constraints, they had instilled in us tremendous values of integrity, hard work and dedication. When I informed them about my idea to quit my cushy public sector job, the roof fell in. There were three full days of discussion and the odd emotional breakdown

before my father told me – 'Son, you have to build your life, take the decision which you feel is right'. With a loan of Rs. 25,000 from my father, I took the train to Delhi to sign the Letter of Intent with NIIT.

A project of Rs. 9 lakh with only Rs. 30,000 in hand seemed to be an impossible task. I resigned from SAIL in February 1991 and at the age of 24 decided to take the plunge into business in a place called Durgapur in West Bengal, which was in a abysmally poor condition as far as investor friendliness was concerned. Everybody around told us that it was the wrong place to invest and nobody would cough up Rs. 10,000 for a computer course. Through friends and well wishers, we were able to raise about Rs 3 lakh and with some very good suppliers we kicked off the first venture of Synergy on 30th May 1991. The business did very well. We enrolled 80 students in the first two weeks and suppliers were paid from the collection of Rs 8 lakh (I had never seen that kind of money in my life before!) But the worst part then was the banks. After months of follow up with them, an SSI registration was insisted upon, and the end answer was – 'you have no money or collaterals, so we can't give you a loan.'

That was the beginning. The next four years were really a great learning exercise — learning the ropes of business, understanding the ups and downs, understanding balance sheets, profit & loss accounting, not allowing success to go to your head (we got into that syndrome but were lucky to come out of it) and understanding that human resource is the pillar of the service industry. In 1992, my brother Francis finished his education and wanted to set up a business in Jabalpur. Amitabh and I convinced him to join Synergy, which he did. By 1993, we had diversified into a number of businesses out of our immaturity and in 1994 we closed everything except our education business – learning the hard way to FOCUS on core strength areas and to develop it. In 1995, Amitabh quit his job and we started the second NIIT centre at Asansol. We reached our first crore in 1996, and by end 1996 we decided to enter the formal education sector, which we found to be very promising. It was then that we set up NSHM Knowledge Campus at Durgapur – purely as a hotel management college. Working with NIIT was a big learning experience and it taught us to focus on customers, leadership position, financial discipline, MIS, use of IT and Technology in business and a lot more. In 1998, we were able to convince another batch-mate of ours, Prashant Kumar, a product of IIT-Kharagpur, to join Synergy and thus Synergy became a group promoted by the four of us. In 1998, I shifted to the city of Kolkata, considered to be the business hub of the east. While in Durgapur I became a young successful businessman getting accolades from all quarters for my risk taking abilities, in Kolkata, it was like re-starting the entire wheel and being a fish in the sea.

By the year 2000 we became NIIT's largest franchise in numbers, with 18 operational centres and were among the top ten in the country, as far as business was concerned. NSHM Knowledge Campus has grown in leaps and bounds and has two operational campuses — a 25-acre one at Durgapur and a 2.3-acre

campus at Kolkata; it is coming up with a 15-acre campus in Bhubaneswar, a three-acre campus in Tripura, a 25000-sq. ft campus in the heart of Gurgaon, a 35000-sq. ft campus in the heart of Bangalore, a 25-acre campus at Lavasa, Pune, and a 10-acre campus at Neemrana, NCR. Over the years we have built more than 30 knowledge partnerships including the one with Sheffield Hallam University of UK, Oracle, Autodesk, Adobe, IMI of Switzerland, and the deBono Institute of Lateral Learning & Innovation, among others.

Post 2003, we started exploring new business areas and finally, after extensive interactions and research, we zeroed in on Biotechnology, Renewable Energy and Infrastructure. Our business vision, 'Business Beyond Boundaries', guided us to look at businesses that were futuristic in nature. In 2005 we started Synergy Biotechnologies Ltd (SBTL) with a 32-acre setup and became the first fully operational state-of-the-art plant bio-tech facility in the East, with an eight-million plant tissue culture facility. Synergy Renewable Energy (P) Ltd. (SREPL) was started in 2006 with business operations in Solar & Bio-Energy. A 5 MW Solar Module manufacturing facility was set up; a tie-up with Indian Institute of Science for bio-mass technology was signed and so was a tie-up with Capstone Turbine Corp. of USA for bio-gas micro-turbines. This marked the transition of Synergy from being only a services based company to a manufacturing company as well. We built India's first micro-turbines-based bio-gas project at Purulia. SREPL and SBTL took us beyond the boundaries of our country into Europe, China, USA and the Far East countries. Our infrastructure initiative was in the form of setting up the country's first integrated 'Knowledge & Health City', christened IQ City. On hundred acres of land, this project is coming up with a medical college, nursing, dental, para-medical and allied health science-college, management-college along with all allied infrastructure of residential townships, indoor sports complex, outdoor sports complex, shopping mall, multiplex, etc.

Banks became very friendly after 2000, and have extended more than Rs 50 crore in long-term loans to us. In West Bengal, the state's outlook towards private investment changed over a period of time and we got a lot of advantage in being among the first of the new-generation entrepreneurs in this state. We crossed our first Rs 100 crore in turnover and envision being a Rs 2000-crore group by 2017. In time we have built strong external partnerships with various leading groups to build faster growth. Transparency, integrity, unflinching passion, a lot of hard work and dedication were the pillars of success. Managing human resources has been one of my personal core areas apart from providing vision and strategic directions to my group. The 500-odd Synergy-ites and NSHM-ites and their families have been the biggest force for wherever Synergy is today. A lot of delegation and freedom for people who have a passion to build have ensured our success. Notwithstanding the support from my dear parents, I am indebted to my sister Reena and her family and especially my wife Mary and kids Rishabh and Nikita who have sacrificed a lot, to help me build Synergy.

When I look back today and travel the 17 years of our existence, it has been people, infrastructure and environment that have been the pillars of our business, along with the strong belief that to be good is not enough, we have to be great. I still remember moving on my motorcycle 17 years ago to hang banners in the city of Durgapur. Maybe that connectivity with the grassroots has helped me to understand people and their requirements. The opening up of the Indian economy, the huge youth force developing in our country as well as liberalization has opened up a lot of opportunities to everybody in our country. Financial institutions, the investment climate, and the growing economy's requirements have generated enough opportunities for businesses to build up. There is no stopping India from becoming one of the major forces in the world by 2020. Yet more needs to be done. We have to cut down a lot on licences and bring the Single Window Policy to realization. We need to train more skilled manpower (not only engineers, graduates and post-graduates). Our systems require much more transparency. We require opening of a lot of sectors for private and overseas investment including education. We need to have more youth with a lot of desire to achieve, in the bureaucracy and the political arena – yes we have to do a lot and all of us can do it collectively. India is a huge country but if everybody works in their respective districts and focuses on the development of that district, we will have balanced and well distributed growth.

Entrepreneurship is all about passion and a vision. You don't require only money to build great businesses. You require looking beyond, seeing the future and just grabbing the opportunity and then having a lot of perseverance. There is no business in the world that is non-profitable but everybody has not been able to build profitable businesses. There are risks and so also rewards. Patience is important; any business that makes money overnight will not have strong fundamentals. With tomorrow's entrepreneurs of India I want to share some key thoughts: dream first; take the risk as early as possible; have a lot of willpower, determination and perseverance; success doesn't come overnight; put in a lot of dedicated, focussed efforts; don't chase money but chase dreams; have the courage to face failures – it always comes before success; finally, invest in people. It is necessary to ignite the entrepreneurial spirit of Indians. We do have a lot of it in us!

A Journey Driven by Entrepreneurship

Glenn Saldanha

Managing Director, Glenmark Pharmaceuticals Limited

Glenmark was founded in 1997 and was a family-run business till the year 1998. Till then, 99% of Glenmark's business was from India with total sales of approximately Rs 80 crore. The revenues were primarily from finished formulation with a leadership in the dermatology segment.

In the year 1998, Mr. Glenn Saldanha come back from the US with a vision to broad base Glenmark into a leading vertically integrated R&D based pharmaceutical company. His vision was to build global scales in the generic and API business and deploy the profits into building intellectual property (new molecules). The idea was to take these new molecules and subsequently license it to big pharmaceutical companies at an early stage of development, keeping certain success-based rights on these molecules. At that point, India was at the infancy of conducting high quality innovation as the industry was primarily driven by reverse engineering of western products.

In order to fulfil this vision, Glenmark made its initial public offer on the BSE and NSE of India, resulting in a market capitalization of US$40 million and built an R&D facility with the IPO proceeds. The facilities were designed to conduct drug discovery research. As Glenmark was not well known in the global pharmaceutical arena, it used stock options as a currency to attract people of Indian origin back from the USA to work in the drug discovery area. Glenmark also built its R&D facility and corporate structure to mimic a US biotech environment where the decision-making was fast and work culture stimulated creativity.

Seven years later, Glenmark today prides itself as being the No.1 Indian company in the R&D sphere, with 11 molecules in the research pipeline of which three are in Phase II clinical development. Currently Glenmark has three molecules in phase II clinical development and has struck out-licensing deals with big pharma companies like Merck KGaA, Forest, Eli Lilly and Teijin Pharma for total milestones exceeding US$800 million and success-based royalties if these molecules make it to the market. Glenmark has already received over US$100 million (with less than US$25 million being invested in drug discovery and R&D over the last seven years) milestones and would continue to receive

milestones as the molecules progress. In addition Glenmark has three pre-clinical candidates entering clinical trials this year.

During the seven-year period, Glenmark faced several challenges to reach this stage of evolution. Clearly, heavy investments in R&D were viewed negatively by most of the financial communities as they questioned Glenmark's small size, limited resources, limited talent and understanding to do novel work. At every stage, until the first out-licensing deal, financial investors were cynical about anything coming out of the research efforts. However, Glenmark's will to succeed was unshaken and it continued down the path of innovation driven by the strong belief system of the management team.

Today Glenmark is a fully integrated global research-led pharmaceutical company. The market cap has crossed US$2.5 billion and has significant presence in the branded generic, generics and API business with operations in over 80 countries, including the USA and across Europe.

Entrepreneurship in India

Entrepreneurship is a critical aspect of the knowledge economy and India has a large pool of entrepreneurs, who have the ability to make a difference and need to be nurtured to achieve their potential, and provide a further boost to the Indian economy. India needs entrepreneurs for two reasons – first, to create employment and wealth and, second, to get the most out of existing opportunities.

However, an unstructured business environment and a high level of bureaucracy often discourage potential entrepreneurs to take risks and build innovative enterprises. Government regulations and policies, which are not in line with global standards, not only affect existing entrepreneurs, but also create diffidence in the minds of talented individuals who have the inherent capacity to take risks and make a success of it.

Indian entrepreneurs are also often shackled by lack of skilled manpower to support their business enterprise and often have to do with average talent or limited resources, as the cost of skilled manpower is very high. To help the growth of entrepreneurship in India, investments have to be made in training people to develop the requisite skills and an entrepreneurial mindset. It is important for India to create the right environment for building entrepreneurship, by providing the right training, knowledge support, skill sets, networking opportunities and forums, simplified regulations, etc. This requires the right kind of foresight and planning to create entrepreneurs from India who can go on to become world leaders and harbingers of positive socio-economic change.

An Entrepreneurial Journey

Jignesh Shah

Chairman and CEO of Financial Technologies Group

Financial Technologies Group (NSE: FINANTECH, BSE: FINTECH) is a leader in providing technology and domain IP (intellectual property) to trade on next-generation financial markets (exchanges) that can transform lives of common people by propagating key benefits such as price transparency, trade efficiency, risk hedging and structured public finance, making these available to the masses.

An engineering graduate from the University of Mumbai, who started his career with the Bombay Stock Exchange (BSE), working on implementation of its online trading system (named BOLT), Mr. Jignesh Shah initially trained and gained experience in technology and trading operations at the world's leading exchanges in USA, UK, Singapore, Hong Kong and Japan. Soon he spotted the opportunity to make financial markets more affordable and accessible to the common man through technology – effectively shifting power from, 'Wall Street to the man on the street'. He founded Financial Technologies in 1995 with three of his BSE colleagues, Mr. Dewang Neralla, Mr. Ghanshyam Rohira and Mr. V. Hariharan, after they gave up their lucrative US job offers and decided to leverage the technology and domain expertise, obtained in the USA – for India. The US$10,000 company he financed by mortgaging his home has grown to a US$3-billion globally respected enterprise in less than 12 years — proving that the next generation driving the growth of India Inc are the children of knowledge, not necessarily children of businessmen.

A serial entrepreneur, Mr. Shah is considered an architect of modern financial markets for his role in creating a successful Public Private Partnership (PPP) model that can help unlock significant value from the middle and bottom of the socio-economic pyramid by democratizing benefits of global trade and economy, thereby driving inclusive and equitable growth. MCX (Multi Commodity Exchange) with SBI, BOI, HDFC, NSE, NABARD and others, DGCX with Government of Dubai, GBOT with Government of Mauritius, SNX with NDDB (Government of India enterprise) and IEX (Indian Energy Exchange) with PTC are some of the examples of globally recognized and respected PPP ventures promoted by Mr. Shah and Financial Technologies.

Mr Shah's vision is to empower the common man through what he terms as 'Mission Transparency – Using Technology' which seeks to challenge the

role of conventional non-value-added middle men, intermediaries and vested interest groups who have squeezed producers and consumers by depriving them benefits of modern, open and efficient markets. In this sense, he targets monopolistic behaviour that disproportionately benefits by operating in price opaqueness and unfair trade practices. He seeks to bridge the rural-urban economic divide by integrating them into global markets through electronic market infrastructure.

Under the leadership of Mr. Shah, Financial Technologies has been recognized by the World Economic Forum (WEF), Geneva, among the top "Founding Global Growth Company Members" at Dalian, China. It has been rated as the 8th most valued Software Company as per NASSCOM's list of top 1000 Indian IT companies. Deloitte has ranked Financial Technologies as the 2nd fastest growing company in India and one of the top 50 fastest growing companies in Asia. Financial Technologies has also been ranked No. 1 for delivering the highest shareholder return over the past three years by Business World in their BW 500 annual ranking. In a sense, he has helped redefine 'Brand India' in IT and services - from one that offers a cost arbitrage value proposition to one that is considered a global centre for mass disruptive innovation in IP based services for financial and technology markets.

Mr. Jignesh Shah, who considers himself a 'capitalist with a socialist heart', also personally spearheads the FT Foundation which aims to set a corporate example of making a difference to the community and environment in a positive and meaningful way through Corporate Social Responsibility (CSR). He is involved in CSR initiatives such as the setting up of 'Gramin Suvidha Kendra' (GSK) in association with the Department of Posts, Government of India, to cater to the market information, warehousing, advisory, and agricultural input needs of the Indian farmers. He is also involved with 'Pragati', a training programme in association with Rotary International Club to empower underprivileged communities with education and job-oriented training in technology and financial markets. Along with his wife, Ms. Rupal Shah, he also actively promotes and encourages corporate giving among the growing legions of wealthy company executives who are fortunate to be in a position to do so due to their stock grants in Financial Technologies and group companies like MCX.

The crucial task is to leverage technology and financial markets to level the playing field for creating jobs, not just for the privileged few who have higher education and know English but also for the vast majority of the semi-educated populations who have the trading and entrepreneurial skills but do not have the platform to scale and succeed. No pyramid of achievement and progress can shine at the top for long, if its base is weak and crumbling. We have to build a more energetic and capable social and economic base for sustained and sustainable economic growth. 'Equality in economic opportunities, through technology enabled financial markets' continues to be the goal and destination. The journey is its true reward.

Entrepreneurship: What it Means to Me

Dr. Kiran Mazumdar-Shaw

Chairman & Managing Director, Biocon Limited

Entrepreneurship is a pivotal force in the growth trajectory of any economy. An enabling environment that fosters an entrepreneurial ethos is therefore an underlying tenet for growth. India has seen unprecedented growth in just a decade thanks to an entrepreneurial surge post economic and regulatory liberalization. Continued economic reforms will enable India to unleash an even greater entrepreneurial boom in the years ahead.

When I reflect on my own entrepreneurial journey, qualities that I believe that stood me in good stead were the following: a spirit of challenge, a sense of conviction, resourcefulness, an ethos of persistence, the ability to manage failure, a problem solving approach, an ability to spot and leverage opportunity, building core competence and excellence, an uncompromising work ethic as well as building a strong organizational DNA through differentiation.

As a young student, I was keen to pursue a career as a medical doctor but when I did not get into medical college, I studied Biology and later Brewing technology. My entry into the entrepreneurial world was accidental. My inability to pursue a career as a Brew Master, on account of my gender, saw me start up a biotechnology company instead! You could say I started Biocon on the rebound! I took on a challenge to prove to the world that a woman could make a good business manager and that, contrary to common perception, women did have the ability to take and manage risk!

I established Biocon India as India's first Biotechnology start-up in November 1978 as a JV with a small Irish Biotechnology company, Biocon Biochemicals Limited. My mandate was modest: I was to develop a manufacturing process for *Papain*, an enzyme derived from the *Papaya* fruit that was used extensively in the brewing industry to clarify beer. Apart from this, I was required to create a market for other enzymes for the brewing industry to be imported from the Irish partner. My approach was frugal. I converted the garage in my rented home into my office and rented a 3000 square feet industrial shed to manufacture *Papain*. Later, I expanded this to develop other microbial enzymes.

Resourcefulness and addressing challenges

Making the most of what you have, lateral thinking and learning to face challenges are all aspects of this quality of resourcefulness. For instance, when I set up Biocon, I faced credibility challenges: my age (I was only 25 years old), my gender and my unfamiliar business model. Young entrepreneurs were a rare breed. Biotechnology was an unheard of business segment and what's more, no professional wanted to work for me because women were considered 'high risk' employers in the business world. I think entrepreneurship has travelled a great distance since my early start up days. Women entrepreneurs today, have a lot of support from the government as well as financial institutions and have gained a great deal of credibility as business managers. Once I overcame the initial challenges, I had to face technological challenges of trying to build a Biotech business in a country where the infrastructure was too primitive to support a high tech industry like Biotechnology that was so dependent on uninterrupted power, high quality water, sterile labs, imported research equipment, advanced scientific skills etc. Today, our challenges address those posed by new medical wisdom: addressing unmet medical needs, researching new drugs, novel drug delivery systems and advanced therapies. Overcoming each of these challenging phases has been a rich learning experience that has helped us to develop world-class expertise in Biotechnology.

Building a Business Strategy

When I began Biocon, I saw Biotechnology as a business opportunity long before it was on anyone's radar. This called for a strategy and a mindset that was inherently pioneering. I had to chart out my own path. I had no benchmarks or any peers that I could relate to. I do believe that as an entrepreneur I have always pursued a strategy that strives to find market differentiation. This has been the essence of my leadership style. Biotechnology as a business was a strong differentiator. Whilst my competition in the brewing industry sold chemical process aids, I introduced biological process aids by way of enzymes. This allowed me to build a "green business model" which stressed on environmental sustainability through the elimination of chemical pollution. This was an idea way ahead of its time. Enzymes were a vast field and once again I had to develop a differentiated strategy. I opted for specialty low volume, high value enzymes for the food and beverages industry as I felt this was more doable for a small entrepreneur. Despite this, I also always had a leadership mindset. My mission was to build global leadership in specialty enzymes for food, feed and beverages.

Evolving Vision

Vision and strategy are evolving processes and need to adapt to the changing environment. Changing tack, being responsive allows one to take risks more confidently. It is this evolutionary approach that allows one to leverage opportunities and capabilities effectively. We started with enzymes in 1978.

In 1994, we decided to set up Syngene, a research services company to cater to the early stage drug discovery needs of global pharma and biotech majors. Syngene was modelled along the lines of the emerging software services business where Bangalore was the recognized knowledge hub. The knowledge economy was now a part of the radical change that we were witnessing in India and it was both an opportunity and a necessity for us to change tack in our strategy. Syngene became the country's first Research services company. In 1998, we decided to leverage our fermentation based enzyme capabilities as a high growth strategy to enter the bio-pharmaceutical space by starting two important R&D programmes for fermentation based cholesterol reducing statins and r-human Insulin. Our entry into pharmaceuticals also exposed a large regulatory gap in clinical development. In 2000 we promoted a CRO (Clinical Research Organization) named Clinigene in order to build in-house clinical development capabilities and to provide clinical services to third parties.

Spotting Opportunities for Growth

Entrepreneurship is about learning to grow the business through existing and new businesses. This means that it is important to identify new avenues for growth. In 2002, a chance visit to Cuba led to the establishment of a JV with CIMAB (Centre for Molecular Immunology), Cuba, to develop monoclonal antibodies and cancer vaccines. Antibodies were recognized as the next big business opportunity in Biotechnology and this JV would enable Biocon to leapfrog into this space. In 2005, Biocon entered into a partnering arrangement with Nobex Inc., a US company with a proprietary technology to deliver proteins orally. Under this programme, Biocon commenced the development of Oral Insulin and Oral BNP. An opportunity to acquire Nobex arose in 2006, and consequently Biocon took full ownership of these programmes and acquired a rich portfolio of patents and IP. In 2005, Biocon also entered into a partnership co-development arrangement with another US company Vaccinex Inc., to develop a pipeline of fully human antibodies and commenced two programmes: BVX 10 and BVX20. Biocon's strategy was to enter into the innovation space through partnerships with the objective to develop a rich pipeline of proprietary molecules that would deliver high value growth in the future.

Unlocking Value

2004 saw Biocon list on the Indian stock exchange as India's first public biotech company where we unlocked a US$1 billion valuation. We were ranked amongst the top 20 global biotech companies. Later that year, Biocon moved up the value chain by launching INSUGEN®, recombinant human Insulin, into the Indian market through a new marketing division. In 2006, a second division, Oncotherapeutics was set up to launch BIOMAb EGFR™, the first indigenously developed humanized monoclonal antibody for Head & Neck cancer licensed from Cuba. In 2007, Biocon announced the launch of its Nephrology Division and a comprehensive portfolio of renal therapy products. 2007 also goes down as the year in which Biocon established an external JV where Biocon and

the Abu Dhabi-based pharmaceutical company, Neopharma, established NEO BIOCON to manufacture and market a range of biopharmaceuticals for the GCC countries (Gulf Cooperation Council).

Building Core Competence

In 2007, Biocon made a strategic decision to divest its historic enzymes business to Novozymes A/S of Denmark. The decision was difficult and charged with emotion. Enzymes were a profitable business and contributed to 10% of the Company's profits. However, the business had remained stagnant and needed large capital injection for growth. Biocon's pharmaceutical business also needed large financial investment to realize the growth potential. Biocon's management decided that it was important for Biocon to concentrate its efforts and resources to become a fully integrated bio-pharma enterprise rather than support a non-core business like enzymes. The divestment unlocked a huge financial value for Biocon, which will now allow the company to address M&A opportunities in the near future. With this divestment, our new mission is to "Develop novel and affordable Biotherapeutics for global markets". As is apparent, Biocon's successful journey has been marked by a constant change in strategy as and when opportunities have presented themselves.

Core Values

An important signature to leave behind as a successful entrepreneur is *strong fundamentals for a company*. This is not possible if the leader compromises the company's beliefs and values for business gains. A leader has to have a deep sense of values and integrity. A company's values are intrinsically linked to its growth. Corporate values and integrity define the framework within which employees should operate. Core values act as a guiding light, when tough business decisions need to be taken. Beyond relationships and reputation, core values are what create the distinct DNA of any organization.

Excellence needs to be inculcated as a habit. I truly believe that consistent quality outperforms intermittent excellence. Value systems are ingrained by belief and practice. They cannot be taught. The sense of ownership is strong entrepreneurial trait. The challenge for any entrepreneur is to build a team of professionals that feel the same sense of ownership. Giving high levels of responsibility is the biggest motivating factor for most people. To perform well under pressure brings in a feeling of ownership and achievement. At Biocon we believe that it is about "owning a problem and not a task" that delivers excellence. Problem solving is integral to this and it is this that teaches one to manage risk and failure.

Today I am optimistic that my success may influence ordinary middle class Indian men and women to succeed in the business world. If I can continue to inspire confidence amongst young Indian entrepreneurs, I feel gratified.

My Experiences as an Entrepreneur

K. Ganesh
Founder and CEO, TutorVista

New Delhi, 1990: I had been married for five years, had a five-month old baby, was responsible for my mother and two unmarried sisters and had no home to speak of and I decided to make the first of many life-changing decisions in my life. I would start a company. Foolish as it seemed, I knew that in my heart I would never forgive myself if I did not venture beyond my comfort zone.

After four ventures and 18 years later, I now know and believe that to be a successful entrepreneur two fundamental things are needed — a passion for an idea and the stupidity to believe against all common sense that the idea will work! At that time, I had virtually no background in business. My mother, who had been in government service, was fiercely opposed to even the thought of something as drastically off the beaten track as this. And back in those days, business itself had a very different meaning. It consisted hugely of large factories, started by rich industrialists who were in possession of many acres and fat pockets. Service business was, imaginably, unheard of. That was rightfully so. Capital was difficult to access. Bank loans were available only against full collaterals, mortgage of assets and for capital purchase only. It was in that climate that my partners and I set out with Rs 93,000 in our pockets to build our very own company, IT&T, whose business model was based on providing computer maintenance services to corporate organizations. We hoped to survive on the advances of our clients. Obviously, it is more than evident why my family was displeased.

We bootstrapped the company for around eight years, from 1990 to 1998, during which time the company grew to 400 people and over 13 offices. It was riding comfortably on the IT wave. Like surfers, we too rode on the IT boom and, on the way, realized that what was required for a company to truly succeed is not only a service that would sell, but also having it positioned in such a way that it works for you and the consumer. In 2000, we managed to make the company public and by 2003, we had sold the business to Igate, a listed company!

During this phase, carrying the tag of a first time entrepreneur, I learnt more than I have in all my other ventures – on aspects both practical and conceptual. At times, we ran too fast, expanding too rapidly on not enough capital. Sometimes,

we also failed to anticipate the advances that technology was making and that led us to carry obsolete spare stock. But, more than anything, I learnt, from the many disagreements between the co-founders, that not only does having a core team matter but also having the right set of people is sacrosanct. And with my exit, I learnt to plan for an exit or monetization strategy from the very beginning. In 1998, I felt my time had come. I packed up my bags, resigned as CEO, (continued to be director and large shareholder), handed over running of the business to my two co-founders and set off to Bangalore where I joined Bharti BT as their CEO. What pleased me the most about working there was the unique challenge that it presented me. It was the sheer excitement of turning a company that was making heavy losses into a self-sustaining profitable entity. And in two short years I did just that.

At the same time I began to grow restless. A long-term corporate job was not for me. I again started feeling the need to start something, to create my own company from scratch and give rise to a brand new sector if I could. That was the time that the seeds for CustomerAsset were sown. This time the spark came from my wife, Meena, who was senior manager at Microsoft in India heading their Internet business. It was 2000, and the dotcom boom was at its zenith in the USA and around the world. With my wife and another partner, I started a new venture — CustomerAsset, a company that would give email support to Internet companies like Yahoo and Ebay from India.

The first thing that I did was approach SoftBank, a venture capitalist that had funded companies like Yahoo and Buy.com. I received a positive response from them and we were able to secure US$3.3 million in funding; we also got guaranteed business for the first two years from SoftBank's Internet companies. This demonstrated the importance of timing. If we had delayed the idea by three months, it would have been impossible to start a similar venture or business.

After having procured our funding, we were all set and rearing to go. But like every foolproof business plan, nothing went as planned. With 2000 came the IT bust and no clients left to serve. So we found ourselves having to drastically revamp our services and the target market. From email service to Internet companies, we shifted to voice and call-centres and focused on the big guys like Wal-Mart and Marks and Spencer's. For this we needed teams in the USA and UK and all of a sudden the US$ 3.3 million that we had been offered by SoftBank seemed barely enough to run the business for six months, let alone two years.

Nevertheless, with a strong founding team, we found ourselves not only able to dodge all the obstacles but also grew into a company of over 1000 people in two years and stood in the top five companies in the sector. This was when we caught ICICI's eye and they gave us an acquisition offer we could not refuse. In May 2002, ICICI (NYSE listed, India's largest bank) acquired CustomerAsset for over US$ 20 million. It benefited not only the company but also the founders and its employees. Indeed, it was a win-win situation. So in

that deft manoeuvre, CustomerAsset became ICICIOnesource and is now listed as First Source in India!

The most exciting time in a serial entrepreneur's life comes at that juncture when you are yet to start a new venture while being done with the previous one. The slate is clean and it is yours to fill as you see fit. For a while I dabbled in legal work, healthcare, education and analytics. As was expected, most of these were nascent ideas yet to be tapped. Once again, I wanted to start something in a field that had been until now untouched, with no competition and no established leaders. Around this time, I came in contact with three young entrepreneurs, reminiscent of my IT&T days, from the IITs/IIMs, who had started Marketics, a company for statistical analytics from India for US clients. Once again, I was in my comfort zone — outsourcing in a previously untouched field. Three young men approached me for mentoring, to invest in their company and help them to scale. I was now their non-executive Chairman, advisor and the sole investor and spent the next few months lending them a steady hand while in my mind toiling with ideas for my next venture.

As exciting as it was, it was unsettling too. My impatience and restlessness seized me every morning when I woke up and wondered what my next big idea would be. More than me, my children wondered why their father sat at home all day twiddling his thumbs. My five-year old son did not know what to say in his class when the teacher asked everyone to tell about what their father did for a living. He said, 'My daddy does Send – Receive on his computer. That is his job. He receives lots of mails'! His friends probably thought I was a postman.

Back in 2000, when my wife and I started CustomerAsset, the net had been flooded with the "Bangalored" phenomenon. One such cartoon struck a chord. It had a father saying to his child, "NO! You cannot outsource your homework to Bangalore!" This sparked off a new internal thought process in me. I thought, 'Why Not! We have the resources and more to outsource knowledge. I began to wonder if we could do some kind of consumer Internet service from India for students in the US'. This was the genesis of TutorVista (www.TutorVista.com), a new consumer Internet company in education services space that aims to bring twenty-first century technology to education space by combining content, scientific pedagogy and on-line teaching.

Now that the idea had finally arrived, the biggest challenge lay ahead. Creating a realistic business model, which would be scalable and at the same time profitable was the first obstacle. But I took the plunge in November 2005, inexperienced, though, in this field. In the past two years we managed to raise Rs 72 crore in venture capital money, have grown to 800 employees who teach currently 10000 students worldwide. Our teacher pool is diverse and international with 600 teachers from across India, Philippines, Hong Kong and Singapore, most of who teach from home. After going through the call-centre BPO experience, we realized that having a large central office with huge infrastructure would just add to costs. Using teachers from home gave us flexibility and lesser costs. I was convinced that if we could let the faculty

work from home, we could tap the huge pool of highly qualified, passionate Indians – retired professors, housewives who have taken a break from the career to mind their homes and passionate teachers who didn't have the right opportunity where they lived.

Meanwhile, Marketics too was maturing considerably. It had grown to nearly 200 people, most of whom were statisticians doing analysis and data modelling for marketing companies like P&G and Coca Cola. In this scenario, the company got a mind-blowing acquisition offer from the NYSE listed WNS. In merely four years, the founders of Marketics had created with less than Rs 2 crore investment, over Rs 250 crore of value! Now that is my idea of Greenfield entrepreneurial growth.

Throughout my entrepreneurial ventures, I have learnt more about starting companies and business than any B-school could have taught me in a lifetime. First and foremost, a good core team is like the life-breath of any new venture. Then there is the razor sharp focus on the one big idea that you are chasing. To scale a business, articulate your dream and begin to sell it with vigour from the early days to investors, key employees, customers and anybody else who shows some sort of interest in your work.

From day one, get your funding right. Some businesses require less to break-even and others far more capital. Underestimating the time to profitability could prove fatal for a company.

Get your support system in place. It is important to have family, friends, and mentors, right behind you. Less than five percent of new ventures become great successes. You need to have all the high value cards as you can get to win this game. The more aces you have, the better are your chances. After my first venture, my mother and my in-laws started believing in my ideas but till that time, it needed lot of communication and reassurance. As they say in India, behind every successful man there is a devoted wife and a very surprised mother-in-law!

Finally, what I have always felt to be most important is to enjoy the journey. Revel in every success and learn from every failure but always feel what you do. It should be true to your heart, true to your passion. If you don't feel it in your blood, you probably should not be doing it in the first place. Love your work and love your life.

On Entrepreneurs

M.S. Sidhu

Founder and CEO, Apara Enterprise Solutions (P) Limited

An entrepreneur is a person who undertakes and operates a new venture, and assumes accountability for the inherent risks associated with creating something. Being in business or being an entrepreneur is about taking risks and confronting challenges. Entrepreneurs can build new companies. They can also rejuvenate existing companies through buyouts and turnarounds or build and create new companies inside existing companies.

Entrepreneurs build companies that are specifically crafted to exploit particular opportunities. This gives them an advantage over older companies that were designed in response to challenges of the past and which need to adapt to current requirements. A truly dynamic economy is characterized by the development of new products and services, including newer and more efficient methods. The newer methods drive out older, less efficient ones as well as the businesses that use them.

I am driven by the sheer passion for innovation and for selling. I strongly believe selling is all about creativity. All other functions in a company such as human resource management, finance and services come into play only upon selling. This is the most challenging and satisfying area of business, while, of course there are other challenges such as marketing, investment infusion and services to enable sales. I enjoy all of these functions and believe that I am learning all the time.

Born in Ludhiana, Punjab and raised in Chandigarh, I completed my initial schooling at Shivalik Public School and DAV College, Chandigarh. After graduating from Bangalore University in the field of mechanical engineering in 1989, I started my career at Eureka Forbes and moved into sales & marketing roles at HCL Technologies, Hyderabad and Wipro InfoTech, Bangalore. I worked for Wipro for a couple of years.

Based on my success at Wipro, my peers suggested that I should start my own business. Though initially elated, I did not know from where to start, and discussed the idea with a few of my colleagues and friends. My friends were delighted and immediately proposed the name of the firm 'Apara' while I designed the logo. Though the name and logo were in place, I did not have

the required funds to start a company. To start Apara and pursue my passion, I literally had to pawn everything including jewellery, my motorbike and other incidental assets and finally managed to raise a little money. Apara was started in 1992 in a small, humble way, housed in my friend's garage, and then we moved into an apartment.

Apara's line of business in 1992 was delivering UNIX services to semi-conductor firms. I chanced upon the idea to deliver UNIX services to semi-conductor firms as these firms were relatively new to the Indian market and very few companies were delivering such services. After a couple of years of struggle in selling UNIX services, Apara had attained a market leadership position in delivering UNIX services to semiconductor firms by 1995. Even as Apara reached its market leadership position, I was personally not satisfied. My penchant for innovation meant that I was always looking towards positioning something new in the market. A voracious reader, I used to keep myself abreast of new technologies in the IT infrastructure space.

Initially, while the semi-conductor industry was receptive to Apara, because of the quality of services delivered earlier, I still struggled to make an impact in the other industry verticals such as the telecom, BFSI, manufacturing, pharmaceuticals, and automotive industries. I succeeded in gaining a foothold in the storage market in India by 1997. History repeats itself; again I did not know what to do, what was next! One thought was clear: whatever I would do, it would be related to the area of IT infrastructure. I started thinking in terms of what enterprises would do to access data stored and how they could access such data in a secure manner. During the years 1996-1997, most of the MNCs in India had their servers in the USA or Europe as networking and security was a critical area of concern in India. I was clear about one thing: storage, networking and security would form the core IT infrastructure for any enterprise; this, then, was the basis for Apara's foray into the networking and security business in the year 1998. Being a pure IT infrastructure solutions provider, in 2006 we forayed into delivering professional services globally and delivering remote management services in 2007.

Apara has grown into a successful Information Technologies (IT) Systems integrator specializing in integrated network, security and storage solutions. One cannot accomplish much without innovation. In order to take Apara to the next level, we set up Apara Labs to build the next-generation-platform-services for the IT industry. The focus is to scale the current business within India and beyond and to expand such services.

Apara was built block by block, doubling our profitability and revenue year on year and we have moved into our own premises. We continue to double our profits and revenue year after year. That has been the way of life at Apara.

My Journey

Sam Balsara

CMD, Madison Communications (Pvt.) Limited

After completing my MMS from Jamnalal Bajaj in 1972, I was offered a position through one of my professors in marketing at a Company called Sarabhai's (a large Indian FMCG Company). I later moved to another marketing assignment in Cadbury. After eight years in marketing, I realized that success in marketing is closely related to success in advertising and therefore moved over to advertising.

I was the founder member of Contract, JWT's second agency in India and after spending four years in Contract, I moved to Mudra. The best thing about advertising is that it is a young people's business. It keeps you on your toes. It makes you think on your feet. It makes you think differently and innovatively all the time.

After 16 years of working in marketing and advertising, I founded Madison on March 21, 1988. In Madison, until 1993, we dealt with only three or four clients. These clients were of course very large and kept rewarding us with additional businesses, which kept us growing at a healthy pace. Whilst most business strategists would think this to be too risky a strategy, my thinking was that 'spreading myself too thin was more risky a strategy'. In those days my belief also was, 'Small was beautiful', but then in the mid '90s when India changed its mind and the economy liberalized and opened up, I also changed my mind. At that time I drew inspiration from the fact that 'Consistency is a virtue of fools!'

In 1993, our then largest client Godrej, a large Indian industrial house with large presence in FMCG did a joint venture with Procter & Gamble and we got into a relationship with Procter & Gamble's global agency, which was then DMB&B. This alliance lasted for about five years and we parted ways in 1998. Since 1998 we have survived, thrived and prospered following the unbundling or specialization route. Procter & Gamble recognized that as an agency we had significant strength in media-alone business and awarded us their Media AOR. When we parted ways with DMB&B they took away the creative business but retained the media business with us.

Using this as a springboard and the fact that the world had begun to recognize the importance of media-alone specialists, we went on to build up our infrastructure, capabilities and expertise and became the country's leading media agency. In 2005 we were voted by Economic Times, Brand Equity as the "Most Admired Media Agency" and were voted no. 1 on each and every parameter from negotiation skills to planning to research. We were also voted the "Most Admired Planning Agency in 2006". In 2007, we were again voted as the "Most Admired Media Agency".

The two main media which contribute to almost 90% of ad spend are print & TV; radio and Internet though are expected to sharply increase over the next fewer years. Clients appreciate creativity in advertising because they know that in the ultimate analysis only enlightened work that can set a brand apart, build lasting brand value and they look for creativity in all aspects not just in the 30 seconds TV commercial.

Our desire is to be the preferred agency of choice of large enlightened advertisers and we believe that what clients are looking for are best-in-class specialist units. Because clients know that if they have to continue to be globally competitive, they need to have agency partners who are best-in-class, and an agency that is best-in-class in every sphere of communication from Creative, to Media, to BTL, to Direct Marketing, to PR is yet to emerge! Therefore they need to hire more than one agency. Today Madison has 15 specialist units, in different areas of Communication. Each of these units is headed by specialists from the respective fields. Following this strategy has proved to work given that in the last three years our growth rates have been good (11%, 15% and 21%).

We are strongly focused on delivery to the client and our attempt has always been to cut out all expenditure that does not directly contribute to increasing the quality and quantity of delivery to the client. I believe that is the only way to remain competitive today. Sometimes, I do feel that young people set unrealistic targets for achievement and personal growth, which leads to higher level of frustration and burnouts and ultimately leads to their leaving the industry.

Like in any industry the challenges remain, but Madison continues to function by its motto – 'If it is safe, it is risky.'

My Entrepreneurial Journey

Sanjeev Bhikchandani

Founder and CEO of InfoEdge India Limited

Info Edge (India) Ltd. is better known by its flagship web site – naukri.com. Apart from this, the company has four other divisions – Jeevansathi.com (India's third largest matrimonial portal), Quadrangle (its executive search firm), 99acres.com (India's leading real estate portal) and Gulfnaukri.com (a recently launched local job site for the Middle East).

The organization started out as a partnership firm doing salary surveys in 1989. Initially I was a sleeping partner. I joined the firm full time in October 1990 after quitting my job with the marketing department at Glaxo SmithKline (then called HMM).

While I was working at HMM I noticed a couple of things that stayed with me. We were a team of half a dozen or so marketing executives who used to sit in an open hall. I noticed that whenever the office copy of Business India came in, everyone would read it back to front — because they all wanted to look at the appointments section first. These were highly qualified people who were happy in their jobs. They were not looking to switch. I figured that even if you are not looking *for* a job you will look *at* a job. Jobs, I realized, are an extremely high interest information category for almost all people. The second observation that stayed with me was that every few days some or the other head hunter would call and try and entice one of us to consider a change. To me it appeared that there were hundreds of head hunters in the market, each with a handful of clients and with vacancies that were not advertised in the appointment columns. By early 1990, I had concluded that there was probably a large, highly fragmented, database of jobs out there with HR managers and head hunters, which if someone were to aggregate and keep current, would be a very valuable resource.

Keeping this at the back of my mind as useful information, which I did not know what to do with, I quit my job to join my partner. He had been operating out of his bedroom till then. Clearly this would not do, now that there were two of us. We set up office in the servants' quarters above the garage in my father's house. I had recently married Surabhi, a classmate from IIM and we

also lived in the same house in one of the bedrooms. I paid my father a rent of Rs. 800 a month for use of the servants' quarters.

For the first few years we did salary surveys and built and marketed a database of pharmaceutical trademarks. We had a lot of fun but financially we struggled. Business was adequate for the company to stay afloat but I was unable to draw a salary. Fortunately Surabhi was working in Nestle and we were able to run the house on her salary. Nevertheless to meet my personal expenditure I would teach at business schools as visiting faculty on weekends. I taught Written Analysis of Cases, Presentation Skills, Marketing Management, Marketing in Service Industries and other courses at IMT Ghaziabad and other business schools in Delhi. Later, I visited IIM Ahmedabad for guest lectures a few times. I also got invited by a few companies to conduct training programmes for their staff. By 1993, I had built up a modest side income through teaching and training, so that I did not need to burden the company with my salary, which in any case it was unable to pay.

Meanwhile in 1991 the Department of Telecommunications (DoT) advertised that it was planning to start a videotex service in Delhi. The plan was to host a number of databases on a server in one of the telephone exchanges in Delhi. These databases would be accessible by anyone from several public access terminals on payment of a fee. DoT needed private information providers who would own, build and maintain these databases. DoT would pay the information provider a share of the revenue earned from the public. I felt that this could be a good backbone on which to deploy a database of jobs and build a business around it. It was a pay to view model where initially the employer would be allowed to host his job free and we would earn from the revenue share that the DoT would give us. We prepared a detailed proposal, along with feasibilities and the product features. As luck would have it, the DoT project never took off; however, we had a product concept ready with nowhere to deploy it. We dumped this project and continued with our other work.

In 1993, my partner and I decided to go our separate ways and he retained the database part of the business and I kept the Salary Survey part, as well as the name Info Edge. By then we had around ten employees and we were doing a turnover of around Rs. 12 lakh in the year. We had moved out of the servants' quarters a year ago to move to a rented office in Green Park Extension. After this split I moved back with five employees to the office at home – this time we occupied two servants' quarters. 1993 was a good year for my wife and me, as our daughter Tanvi was born in August.

Over the next two years I rolled up my sleeves and we focused on the business, which prospered, and was able to pay me a reasonably handsome salary, with which I was able to fund the building of two additional floors in the house. Surabhi, Tanvi and I moved to the first floor and were glad for the extra space it gave us. We shifted the office from the servants' quarters to the second floor of the house. The additional office space enabled me to look at hiring and diversification. In 1995 Surabhi quit her job at Nestle to be a

full time mother for a few years. I was financially strapped after paying for the house construction and the loss of her income was a matter of concern. To compound matters, the business hit a downturn in early 1996 and soon enough we were barely breaking even. Once again, I could not take a salary from the company.

Fortunately, in mid-1996, a close friend and the editor of the Pioneer Newspaper, Chandan Mitra, offered me a part time assignment with the newspaper as Consulting Editor. I gladly accepted, happy to get a steady income. The workload was little – only a few hours a week. I was able to manage it and still devote enough time to Info Edge. My parallel stint with The Pioneer was to continue for the next four years.

In October 1996 I visited IT Asia in Pragati Maidan and saw the word Internet for the first time at one of the smaller stalls there. I found out more about what it was and realized that this could be a potential medium on which we could deploy the jobs database idea, which we had abandoned five years earlier. Over the next few weeks I read about the Internet and by December 1996 I had decided to launch a job site. In the same month our second child Raghav, was born. While this was good news, it meant that Surabhi would be grounded for a few more years.

I roped in a couple of friends and gave them equity in the company. Anil Lall, a genius, and one of the best software programmers I have met, was to be in charge of technology. V N Saroja, another bright spark, who was a year junior to me at IIM, would look after operations. I gave my brother some equity too and asked him to fund a server in the USA on an ongoing basis. We registered the domain name naukri.com and Saroja, assisted by a couple of data entry operators, compiled a database of jobs from published sources. Anil quickly programmed the site. Naukri.com was launched in March 1997 at a time when there were only a few thousand Internet users in the country. We had never heard of Venture Capital or a dotcom valuation. We just felt it was a good business idea. We began to market our job listing services to HR Managers through direct mail.

Initial revenue was sluggish, most listings were free. However traffic on the site was very good. We were getting a lot of press coverage since there were few sites around at that time to compete for media attention. The site did revenue of just over Rs. 2 lakh in the first year of operations. In the second year, however, revenue quickly climbed to Rs. 18 lakh. We realised we had a winner on our hands and decided to shut our other businesses and deploy the entire staff on naukri. I did not take a salary from the company since I was getting a monthly retainer from The Pioneer. Saroja and Anil Lall would take a low salary – enough to get by on. We were excited about the future of naukri.com.

Meanwhile in 1998, there were developments at The Pioneer. The Thapar Group decided to shut down the paper since it was making large losses. Chandan, being the fighter that he is, decided to take over the paper and save it.

He enlisted me in the cause and with me playing the junior role, we took over the paper in mid-1998. I began to handle the management side of the business and worked on a revival package for the paper. We cut costs and successfully obtained funding for The Pioneer from financial institutions. For me the experience with The Pioneer was invaluable as for the first time I had a large organization and team reporting to me. I got the experience of dealing with financial institutions. For the first time I faced a crisis of a very large magnitude – there were times when we were running eight months behind on salaries. Our efforts paid off and The Pioneer had turned the corner by end 1999. The enlarged role at The Pioneer meant that I was putting in a 16- to 18-hour work day seven days a week in order to do justice to both jobs. By end-1999, the work schedule was beginning to tell on me. I decided to reduce my time commitment to The Pioneer since the crisis had passed.

By 1999, the dotcom fever had hit India as well. I was bewildered to see dotcoms that were just starting out getting valued at tens of crores. Here we were doing revenues of Rs 36 lakh, yet I could not pay myself a salary. I also felt that if a VC were to fund another job site we would be unable to compete with our meagre funds. We approached three VC firms and two agreed to fund us at a valuation in excess of Rs. 45 crore. We chose to go with ICICI since we felt there was greater investor compatibility. In April 2000, ICICI invested Rs. 7.3 crore in Info Edge for 15% of the company. The real growth story of naukri.com began now. Until then it had been a cottage industry. Rather than spend huge sums on advertising, we felt that we had to be in the business for the long haul, so we spent the funds slowly — on offices, people, product development and servers. We had planned to make a loss for a couple of years as we ramped up the organization. Revenue grew continuously quarter on quarter and within two years we were making a profit once again at a much higher revenue base than before. Nevertheless the meltdown years were tense since each month end we would be unsure about the prospects the next month.

Today naukri has over 6.5 million registered users, 920 employees (overall), 40 offices, 20,000 clients and over 60% share of the traffic in domain. In 2005-06, its revenue was over Rs. 84 crore, with a PBT of over Rs. 20 crore. Naukri accounts for over 80% of company turnover and currently offers to our clients the following services:

- **Job listing services** to attract response to vacancy advertisements. This is akin to vacancy advertisements in newspapers. Prices range from Rs. 500/- to Rs. 9 lakh depending on the level of visibility on the site, the number of jobs put up, the nature of job listing and the period of subscription.
- **Response management services** using our proprietary software tool with which clients can quickly shortlist the right applicants and schedule interviews
- **Access to our database** of registered users

A few months ago the leading Silicon Valley based Venture Capital firm Kleiner Perkins Caufield and Byers (investors in Google and Amazon among other companies) and Sherpalo Ventures bought a stake in the company. Info Edge was listed in India in November 2006. Our vision is to consolidate our position at India's leading online classifieds company and make forays into selected international markets.

Future Plans

Our future plans are continuously evolving. Nevertheless if I were to do some crystal ball gazing, our future plans currently include the following:

- International marketing of our current services to recruiters in countries and industries where Indian talent is required – USA, Middle East, Africa, South East Asia and Europe
- Going deeper into India and setting up business development offices in the top 75 cities of India
- Continuously improving our current products and services to ensure we stay ahead of competition
- Making our products more and more locally relevant so as to differentiate ourselves from competition which is in India with a global template
- Launch of new services that make recruiters work simpler
- Growing the Jeevansathi, Gulfnaukri, voice and mobility and 99acres businesses
- Launching of one or possibly two more online businesses in 2007
- Acquiring small internet businesses post IPO and growing them
- Evaluating entry into other international markets with local internet businesses.

People Philosophy

My people philosophy is very simple: attract talent, respect talent, give talent space to grow, reward talent and retain talent.

Just as you take bets on businesses, you take bets on people. Those bets that look like they are coming good, you back with more investments. The company has placed bets on a dozen or so senior managers in the past five years. When someone looked like they were succeeding we would reward the person for performance and also invest more behind that business.

What this meant was that people who were performing ended up heading bigger businesses and had a very high variable pay. This would either motivate the non-performers to work harder or result in their looking for other jobs. When someone left, that business would be given to a proven performer as an additional charge.

Key to this process is our compensation strategy where we pay a fixed salary that is lower than the market by 25% or so. However our performance linked variable pay is such that people can double or even triple their fixed salary. This ensures that performers are paid well beyond the market and so cannot be head hunted. Non-performers either improve and earn high variable pay going forward or leave on their own. They do not have a problem finding jobs since their fixed pay is 25% below market. We are able to attract talent because we offer a huge upside for performance. We have an attrition rate of over 30% in the company however in the last five years we have not lost more than 35 people whom we really wanted to retain. Generally if a person stays for a year he tends to stay for a longish time. For most people in the company variable pay forms over 40% of total compensation.

The other thing I believe in is genuine empowerment. Managers in naukri usually take independent business calls. It has taken me quite a while to persuade others in the organization to support empowerment with action rather than with words. When an organization grows from 16 people to 900 people in seven years with a whole lot of lateral hires, you get a mish-mash of corporate cultures. However, we are now gravitating towards a culture where people are encouraged to speak their minds, take decisions and challenge their superiors just as my immediate reports challenge me. This is what builds leadership at all levels in our company. The toughest bit here was to get supervisors to accept being challenged by their teams and accepting it with an open mind.

Apart from this one of the KRAs for HR is to ensure that people have fun at the work place. The average age in our company is 26. So HR plans a whole calendar of activities for employees — a pictionary contest, a dumb charades contest, a best-dressed employee contest on the Diwali party, tambola etc. I see a key part of my job as creating conditions where people enjoy working, where they feel happy coming to office and where talented people can give their best.

Innovation

The one quality that our company possesses in abundance is imagination. Every time we have succeeded we have innovated (not that every innovation has succeeded). Every time we have imitated we have failed (not that every failure is an imitation). There was a time when almost all ideas that were implemented were mine. As the organization grew I realized that sustainable success would only come when there were many bright people thinking about the business and successfully implementing their good ideas.

To do that, I had to first change myself. It took me a year or so after getting VC investment to learn to delegate and to empower people. I slowly understood that in order to scale up you have to let go. But you must let go to the right people. Therefore, aspects such as hiring, nurturing and retaining the right talent became key to the success of the company.

I instinctively understood that quality of ideas frequently has little to do with level in the hierarchy. In our company the best ideas often come from the bottom of the rung especially from the front line sales people who are regularly in touch with customers. Also good ideas often challenge the existing assumptions of senior management. To cut through the hierarchy we set up e-groups in the company to trade notes. So there is one e-group for the entire company, and one for each department in the company.

For instance, if a client gives feedback for improvement of one of our products the relationship manager immediately posts it on the sales e-group for a discussion. The idea is tossed around and if it gets traction it is passed on to the product development team for evaluation and perhaps implementation. We have formed a cross functional team that conducts an innovation meeting every week and prioritises and plans a rollout of product innovations. This process alone has resulted in over 100 product and process innovations, large and small, in the last one year.

We have consciously encouraged a culture of dissent in the company. Anyone can tell the CEO he is wrong if you differ with him, and get away with it. Frequently my ideas are challenged and rejected. To an outsider our meetings will appear to be anarchic but they work very well for the organization. Anarchy is an important element of innovation.

Thus a culture of innovation has been institutionalized. It extends beyond product development to all other areas of company operation.

Accidental Entrepreneur

Sriram Raghavan

President & Co-founder, Comat Technologies (P) Limited

Entrepreneurship is an ongoing journey that unfolds with each passing day. When I write about my experiences, I realize that there was no blueprint that I followed. Sheer spirit of enterprise, a passion for discovery combined with finding a noble business partner and immense good fortune has brought me where I am today.

I chanced upon the concept of selling during my seventh grade. One summer, I helped a friend run a stationery store in Bangalore. Here my friend explained concepts like 'cross-sell' and 'up-sell'. He taught me simple techniques of identifying good customers, respecting repeat customers and judging 'credit worthy' customers. These were early learning opportunities that became the foundation of my business success.

I met my outstanding business partner Ravi Rangan just as I finished college through a common friend, Dr. Sundar, a researcher with the National Aerospace Laboratories (NAL). Ravi was completing his final year project under his guidance. He gauged that putting us together would be ideal as we had entirely dissimilar skills that complemented each other in a balanced manner.

In 1993, the scripting of Comat began. Just out of college and at 20, I was bullish and fearless! We started with no money, from Ravi's garage essentially providing software development to NAL. Our inherent urge to succeed spurred us on. We landed our first real project in Hong Kong through our contacts at the Chamber of Commerce.

The following year we formed alliances with US customers and I decided to move with one customer to the USA. I travelled with US$1500 and lived out of a suitcase in my brother's apartment in Cleveland. With little money and a few contacts, I looked at developing business for Comat in India while also building a self-sustaining organization locally. In the USA, Comat's activities were on two levels — one was to send work to India (primarily digitization and BPO type work) and the other was to undertake consulting work for clients in the US. For executing projects in the USA, we hired people locally and grew the US business from scratch to a multi-million dollar revenue business within a year. We attracted Fortune 500 companies like American Airlines, Mobil Oil, and

Nokia as customers and built a very profitable small enterprise. Comat gained repute as a top quality, technology-consulting company for large corporations and we had a well-renowned client base. I then decided to sell the Comat US business with intent to move back to India. We attracted a lot of high-end bidders and in 2001 we sold the business for stock and cash and exited very profitably. For some time to ensure continuity I lived in the USA and Comat India continued to grow as planned. While in the USA, I worked with several not-for-profit organizations, primarily as an advisor in the entrepreneurship space for building sustainable businesses.

I returned to India in 2004. Comat India needed additional bandwidth to carve our space as a leader in e-governance. The turning point came as soon as I returned. The deadly tsunami impacted the coastal rural Tamil Nadu. I travelled to Cuddalore with a friend to assist in relief efforts. The entire region was in chaos with limited staff and no proper management of relief efforts. There was no system in place to track the relief material coming in from various corporate and other organizations and individuals and their distribution amongst the tsunami victims. I was resolute in ensuring that a semblance of orderliness was brought in. With necessary permissions from the District Commissioners' office we created a software system to track relief material and its distribution. Later, Comat sent in engineers to install the software system and this very system conducted operations in the region that year. This experience was extremely inspirational in that it laid out the reality — that such a large population in India was living in isolation. It also bared the extent of exploitation in rural India — even in times of dire need. It was clear that these individuals did not know their rights, much less fight for them.

My experience in the US had taught me that there was a method to madness and research backed most business endeavours. At Comat, we decided to do things scientifically to achieve maximum social impact and teamed with the Poverty Action Lab at MIT to evaluate our work. This decision and our travels to rural India allowed us a first-hand feel of what lay ahead.

Comat redefined itself in India and we focused on citizen centric services by providing easy access using technology. The realignment took a year and a half and we sold off non-core areas in software development and BPO. An offshoot of this was the establishment of rural business centres that provide government and business services to rural India. We realized rural India was extremely dependent on the government and found that working closely with the government enabled us to cater to its citizens. Being a contractor with the government did not work in our favour as cash flow issues impacted scale and growth.

A successful entrepreneur needs to be able to change strategies effectively. So Comat implemented the Public-Private-Partnership (PPP) model for Nemmadi (800 rural centres in Karnataka) in 2006. We generated revenue from delivering Government services to citizens. We first worked with the Karnataka government and expanded into the Common Service Centre (CSC) projects. Presently we

have a network of over 1000 centres across two states and are expanding to 10,000 across India. We also provide rural BPO opportunities and Comat now has the potential to offer India's rural citizens multiple services.

The transformation of rural India is occurring on four different levels. First, rural citizens have become more aspirational and self- driven within their communities due to the information revolution. Second, the government has directed initiatives towards this sector with sops. Third, corporates are expanding their network and stress the importance of rural markets. Last, people like us, social entrepreneurs, who aim to convert rural India into a workforce that generates a revenue stream for business. Presently, I believe these forces are in close collaboration and this will culminate in tremendous success. Today, India is synonymous with IT. In time the services economy of rural India will be the singular force that drives the Indian economy. The process of self-discovery has just begun but I am proud that Comat is providing the necessary impetus for this revolution. Rural India will be what will define our country in the years to come.

My story has been exciting and fulfilling thus far. I am driven by the urge to empower people. My deep sense of purpose, persistence and an edge for backing the right opportunities have worked to my advantage. I have an inherent sense of values and believe that humility, integrity and being true to oneself are key qualities to achieving success.

Today, Comat is successful. What is more satisfying is that Comat is synonymous with social entrepreneurship in India and the recognition received for this has been a deeply touching experience The World Technology Award summit nominated me for being a social entrepreneur in 2005 and in 2006 the Indira Institute awarded me 'Super Achiever of the Year'. These awards and recognition showcase the true potential of social entrepreneurship and are a tribute to the unfailing support I have received from my team at Comat. I am blessed with a great business partner in Ravi. His perseverance and patience has led to the successful implementation of our ideas. Ravi and I form a great 'inside-outside' team and I will always remain indebted to his support without which our dreams would not have been realized.

Going ahead, Comat has to continue defining this space and we look forward to unlocking the true value and might of social entrepreneurship in India. Being a strong advocate of association and collaboration, I urge readers inspired by my story to partner with us.

An Entrepreneurship Journey in India

Subhash Bagaria

Chairman and MD, Kemwell India Limited

Subhash Bagaria began his career managing a tea machinery manufacturing and exporting business in Assam, India. In the early 1980s, he moved to Bangalore to almost start afresh and to search for biotech and pharma opportunities worldwide. In order to do so, he decided to travel extensively in Europe, USA and Japan, making cold-calls and encouraged only by his belief in himself. After all, in the early 1980s, hardly any biotech products were in the market and in fact, research had just begun in the field. In fact, the Indian biotech industry was minimal to non-existent. Owing to his young enthusiasm and dedication, Subhash managed to win contracts to be an Indian affiliate of some leading tools and services providers to this research group — world-renowned companies like Pharmacia Biotech, Millipore, Waters and Becton Dickinson.

Millipore India Pvt. Ltd.:

Even though these alliances were made, the Indian import regulations in those days made business very difficult to run and customs duties were almost unaffordable. In spite of such hurdles, Subhash was able to persevere and continue to support the biotech research in. India. Eventually, this led to winning over a joint, venture with Millipore and simultaneously with Waters. Even here it proved difficult to convince Millipore to do a JV with an Indian company when most American hi-tech companies were hesitant owing to local Indian regulations and insufficient patent protection laws. Moreover, Millipore had never entered into a JV in any part of the world. Once Subhash managed to convince the then Chairman of Millipore to invest in Millipore India, he had to physically sit in the Delhi government offices himself to get all the approvals cleared in 6-8 months. Finally, Millipore India was created as a 60-40% venture between Subhash Bagaria and Millipore Corp, USA, respectively.

Miliipore India's operations have been growing at a healthy rate of 25-30% over the last few years as the biotech and pharma market in India has been growing substantially. For even further growth, Subhash has constantly pushed Miliipore Corp. to consider India for outsourcing manufacturing of its high-tech products. Finally, in 2005, Miliipore moved its key technology for production of chromatography systems from their US production sites to India and closed down

the US sites. Now, the worldwide production for standard chromatography systems is done in India. Miliipore also moved separation columns manufacturing from their plant in UK to India and once Miliipore India began manufacturing at world standards, the UK plant was closed down.

Miliipore India received tremendous pressure for moving these products from the US and UK to India. The employees in those plants were very upset that "these Indians" were responsible for their unemployment. So Subhash and his team had to be very diplomatic in convincing these employees to pass on the technology so that manufacturing could be done successfully in India.

Miliipore also provides a range of services to pharma and biotech customers worldwide from their labs in US, France and Japan. Last year, Subhash was able to convince Miliipore Corp. to build a similar lab in India to service Indian customers. Labs of international standards manned by very well trained scientists were constructed at a short notice and services were started for India. Now the Indian lab is expanding its global reach and has begun servicing customers in Europe and Asia-Pacific.

Kemwell Pvt Ltd:

Along with following his passion for biotechnology, Subhash also bought over Kemwell Pvt. Ltd., a Bangalore-based pharmaceutical company, in 1985. At that time, the company's operations included manufacturing and marketing finished pharmaceutical products and an API production plant. The company was also making a substantial loss each year. Subhash realized that the only way to turn the company around was to take some bold decisions and he closed down the pharmaceutical marketing business completely, changing track to become a 100% pure-play contract manufacturing company. Subhash realized early that though the large pharmaceutical companies had captive manufacturing facilities then, their high cost structures would soon drive them to start outsourcing their manufacturing requirements.

However, in those days it was very difficult to convince multi-national companies to outsource products for contract manufacturing in India; their fear being counterfeited by the contract manufacturer. Subhash's high standard of integrity combined with his enthusiasm and drive were the selling points that convinced Glaxo Pharmaceuticals to outsource some products in small quantities to Kemwell in 1985. Twenty years later, this relationship has expanded substantially and today Kemwell is Glaxo's largest contract manufacturer in India.

Over the last two decades, Kemwell has expanded with new Greenfield facilities. With the expansions, Kemwell increased the breadth of its service offerings and now offers formulations of tablets, liquid orals, oral drops, ointments, creams, eardrops, nasal drops and dusting powders. Also, with the expansions it added new customers including Pfizer, Novartis, Johnson & Johnson, and AstraZenaca. While Subhash tried to continuously improve Kemwell's systems and facilities, most Indian manufacturing companies failed to achieve true international standards

and were thus unable to win over any innovator companies to outsource from India. This was in part owing to the strict Drug Price Control rules that kept the conversion rates of pharmaceutical products almost fixed for over 10 years. This made it difficult for Indian pharmaceutical manufacturing companies to even fight inflation in expenses, leave alone making further investments in quality and operations.

After twenty years of operating in the domestic market, Subhash decided it was time for Kemwell to go global. Studying the trends of outsourcing in various industries Subhash realized that the pharmaceutical industry worldwide would also have to start outsourcing to increase profitability. To capitalize on these trends and Kemwell's current operations, Subhash took two steps.

First, Subhash decided to leverage Kemwell's know-how in India to set-up a world-class facility to manufacture various types and forms of tablets for exports to USA and Europe. It was Subhash's vision to construct India's largest contract manufacturing facility for exporting tablets with a capacity of 5 billion tablets. To build a state-of-the-art facility for contract manufacturing for US and European multinationals was quite challenging under Indian regulations because most building materials had to be imported. Also, it was difficult recruiting competent engineering services capable of building a state-of-the-art facility. This was mainly because the envisioned facility was not similar to existing manufacturing units in India as they manufacture generic drugs while Kemwell was focusing on ethical and branded drugs.

Second, to be a global player, Subhash realized that having manufacturing facilities only in India was not enough. He felt the need to establish operations in areas such as Europe, USA and South America. Subhash made his first international acquisition in Uppsala, Sweden, buying a manufacturing facility from Pfizer, the largest pharmaceutical company in the world. The experience of running this plant has been invaluable for Kemwell's employees both technically and commercially, especially in the running of Kemwell's new tablet facility in India. Above all, it has helped to build a strong relationship with Pfizer and has put Kemwell, and thus India, on the global map of contract manufacturing.

On Entrepreneurship

Subramani Ramachandrappa, CMD

Richcore Lifesciences Pvt Ltd, Bangalore.

A ship is safe in harbour, but that's not what ships are built for ... Anonymous.

My learning in the past few years is that the victories have little impact when you start up. It is the failures that make all the difference. Entrepreneurship to me is about understanding your fears and seeing failure as nothing more than a learning experience.

Background

I was born into a traditional joint family. My father started out as a daily wage weaver in a silk weaving unit. Over time he built up a large enterprise of his own, manufacturing silk fabrics in old central Bangalore. Being a man of his word, he had gained a lot of respect, credibility and goodwill in society. He retired from active business in the early 1980s and, like in most traditional business families, handed over the reins to his brother. Unfortunately for our family, my uncle's ineptitude in financial management ran the business to the ground. Having been a stalwart in society, my father suffered severe mental trauma and passed away in 1997. With the death of my father, my uncle vanished and did not take up any responsibility for the family or the financial liabilities. I was then 22 and in the third year of my college, studying textile engineering.

While I was coping with the loss in the family, I was slapped with several litigations and threats from banks and individual creditors. That year, I attended court more often than my engineering classes and the situation required me to quit studies, if I were to disentangle my inheritance of debt. But I decided to continue with my studies as advised by my father moments before he passed away. When I look back today, I realize that his last wish was the greatest gift he left behind. I graduated as a textiles engineer in 1998, ranked fourth in the university.

Jobs were hard to come by, and after several odd jobs I got a lucky break with a job at Biocon as a marketing executive. My experience at Biocon shaped my thinking; the professional environment coupled with Kiran Mazumdar's

entrepreneurial spirit and leadership qualities inspired me to believe in my dreams. Richcore was born in my mind.

Taking the plunge

I quit Biocon in 2000 and **a**fter a short stint in managing financial reporting for a Chennai based business group, I was finally ready to take the plunge. I borrowed Rs 25,000 from my friends to buy a PC in 2001 and Richcore was suddenly a reality. The office was at home, and I had no staff other than my sister to support me in the operations.

Richcore began as a distributor to Biocon; this association gave me the initial support to establish some regular cash flow. Acquiring the first few customers was tough and eventful. My initial days were a test of patience and relentless perseverance, and I came face to face with the rude reality of being an entrepreneur with no money in India. Banks needed collaterals, suppliers needed advance payments and customers needed credit. Financial prudence and bootstrapping came naturally to Richcore and this has kept us going for the last several years. But moderation has not rubbed off on investment into critical areas. We have invested continuously in R&D and the company is in the process of applying for five unique patents with global potential.

Continued learning

After managing Richcore for two years, I realized that my thinking was still limited. A chance visit to ISB at Hyderabad changed all that. The facility and what ISB stood for inspired me. I joined ISB for a one-year MBA programme. It was an interesting one year of learning, with me attending the course through the weekdays and rushing back to Bangalore over the weekends to manage Richcore. Though managing time was tough, I was able to simultaneously implement my learning at the business school into action at Richcore.

The Business

Richcore today is an application research-oriented biotech company. The company produces novel enzyme formulations for new applications, which solve known problems in conventional industries like sugar and alcohol, bio-fuel, animal feed, renewable energy resources, effluent management etc. Our products are aimed at helping these industries make their processes cleaner, greener and more efficient.

We have, in a short time-span, won encouraging accolades. Richcore Lifesciences represented India in the 'Intel-University of California, Berkeley Technology Entrepreneurship Challenge', held in California in 2006 and it was declared the second most innovative start-up company. The event featured start-up companies across industry segments from all over the world. Richcore Lifesciences was also declared the 'champion of champions' by DST (Department of Science and Technology- Government of India) – Intel India Innovation Challenge 2006. I have also been recently nominated as the

Honorary Ambassador for the DST-Intel India Innovation Pioneer Challenge in partnership with Indo-US Science and Technology Forum.

The Team

As the company grew, I realized that I could not do everything myself and that it was time to build an experienced think tank. I approached my mentors to come on board and I was pleased to have Professor Kavil Ramachandran, Associate Dean at ISB, Professor Dhinakar Kompala Biotechnologist, University of Boulder, Denver CO USA, and Gp Capt RN Sharma join me in my journey, based on their belief in me and my dreams. I feel their experience coupled with my energy creates a very positive force to take Richcore to the next level.

More than the think tank, I am proud of the young energetic dedicated team at Richcore who believe in the common vision with the same passion that I do. At Richcore we believe that together we will change the world.

Funding

Running a business and raising money to fund a business are two entirely different activities with their own unique challenges. For an entrepreneur, the biggest challenge is to make your investor believe in your dream. In order to raise funds for my business I met more than 20 VCs before I found the one that was willing to go the distance with me. During this process I faced several uncomfortable questions about my business, which almost made me question if I were on the right track. I realised that more than the business plan, patience and extreme self-conviction are prerequisites for raising funds.

Seeing new opportunities

Through this journey, I have come across several hurdles in critical areas such as statutory compliance, regulatory issues, finance, infrastructure, human resources etc. And many a time I have wished there were a single point for assistance. Knowing that this is a common problem for most start-up companies, I see this as an opportunity and have embarked on another venture to help other entrepreneurs in their early days, and the initiative www.entrepreneursindia.com will be launched shortly. In short, entrepreneurship is a way of life, and if one keeps their eyes open, there are opportunities galore to tap into. I also take a keen interest in sharing my experiences as an innovator-entrepreneur in numerous entrepreneurship development forums.

Entrepreneurship: a way of life

Contrary to what is believed, entrepreneurship is not about being your own boss. In fact you have to be willing to be the first servant in your organisation.

To me entrepreneurship is not a job or profession. It is my life. It is what I love doing.

A Journey in Medical Entrepreneurship: Entrepreneurs of the New India

'Dr. Arjun Kalyanpur,
Teleradiology Solutions

Dr. Sunita Maheshwari,
Teleradiology Solutions

You are over qualified; there are no jobs for you here'. Circa 1999.

My husband, Dr Arjun Kalyanpur, and I returned to India in 1999. He had trained at AIIMS, New Delhi and I at Osmania Medical in Hyderabad. After nine years spent in training and working at an Ivy League University in the United States — Yale University — we decided to return to India to work as doctors and do good where there was the chance to do the greatest good. On returning, I (a Pediatric Cardiologist i.e. a heart doctor for children) got a job at a local cardiac hospital whereas Arjun (a Radiologist i.e. an expert in CT scans and MRIs) could not get a local job in Bangalore. This was 1999.

Fortunately for us, Yale University had kept Arjun on as faculty in the hope that we would change our minds about living in India and would return to the United States. This saw us through the first two years of his 'Indian unemployment'. On one of his trips back, an ex-American colleague told him 'If ever you move back to the US come and join our group and work with us'. As a joke, he said, 'Richard, I'll work with you from India!' This was 2001 and no one had ever done international teleradiology i.e. report scans from India for American hospitals.

As it was, he had no significant opportunities in India and he was working for Yale on a part-time basis, so we decided to look into the feasibility of this 'joke'. We did a trial study with Yale University on this concept of a doctor in India in the day-time reporting CT scans for patients in American emergency rooms at night — i.e., using the night-day time difference to provide seamless coverage to emergency rooms. Interestingly, the concept worked and the research was published and presented at American medical meetings. Arjun began working for Yale University from Bangalore from a home office. Within six months, the programme with Yale fell through — there was too much opposition to such a concept. 'Why are our scans going to India? Is there no doctor in America who can report them' were the nature of questions asked.

However, we had seen the future. This could be done. There was a shortage of radiologists for the night shift in the USA. Why not fill that need by having

daytime fresh doctors in India? We set up a company in India — Teleradiology Solutions — from our home and, with Rs 1000, paid a nephew to design a website. In 2002, we put ourselves on the World Wide Web and got our first hospital contract!

I think we represent the new Entrepreneurs of opportunity of the new India — no business background, no finance knowledge, no idea of how to run a company, no inclination to run one, until the opportunity presents itself.

The first few years were challenging — bandwidth costs were high, our high speed bandwidth lines would get cut by linesmen digging the roads, the electricity would go off for eight hours and we would be unable to provide service to the US hospitals; we were inundated by paperwork involved in running a company in India and so on. Above all, we were a brown company in a very white space!

2002-2004: India was getting known for BPO work. However, such high-end medical work — i.e., doctors in India directing patient care in America — had not been done or heard of. We began to get hounded by the US press, especially at the peak of the anti outsourcing tirade in 2004. We had to deal with stories about poor quality, Indian 'radiology sweatshops' and the like.

However, we decided to dig in our heels and work away to prove them all wrong. We focused on quality and became the first Indian healthcare organization to get the JCAHO seal (Joint Commission on Accreditation of Health Care Organizations) from the USA in 2005. We focused on training within our organization and processes to provide superior quality diagnostic reports to the US. Currently, our quality is 99.7% versus a US national average of 96%. We decided we were going to prove to the Americans that an Indian company can provide high-end high-quality medical services to American patients at a lower cost and on time. It was our aim to put India on the global map of telemedicine and by God's grace, we've done it!

There are some factors that helped us grow, number 1 being the STPI — thanks to the benefits offered to companies such as ours we were able to save money and reinvest that money in building infrastructure (we now have a beautiful 70000 sq ft campus in Whitefield, Bangalore) and in improving our technology. Additionally, we used the manpower in India to optimize delivery to the USA. Every report on a patient is called in by our call centre team; our IT team has built a world-class radiology information system that we are now selling to US clients and so on. We also learnt how to proceed within India's infrastructural chaos — we invested in a Rs 80-lakh generator, overcame redundancies in bandwidth, installed invertors for each computer, set up offices outside Bangalore (e.g Delhi, Mumbai and China) All this would not have been possible without STPI support and the tax holiday until 2009.

Our company grew from a two-person operation in 2002 to a current strength of over 180 employees. Since we had no business preconceptions, we instituted

HR practices that an HR consultant later told us were all wrong! We incentivized employees with negative points for drop in quality, paid them to work on Sundays, created a fun atmosphere (our office in Whitefield now has a slide from the 1st floor to the basketball court), invested in training so that every member of our telrad family felt they were growing. These efforts have worked. Our attrition in employees over a year is less than one%!

Having been bitten by the entrepreneurial bug, we got hooked to the new buzz that is there in India. We expanded into several related areas of healthcare. For example, we do high-end medical research with the Jack Welch GE Centre in Whitefield. Earlier, they collaborated with American Universities on these projects, now with us. Additionally, we do consulting on JCAHO for medical groups, IT consulting in the health care space and training at our very own 'Rad Gurukul'. We built and run a multi-speciality acute care (pre-hospital) centre called RXDX and we now have employees all over the world, including a doctor in China. All this has been recognized within the medical community and Arjun received the 'Entrepreneur of the Year Award' from Modern Medicare in March 2008. Welcome to the brave new world of Indian medical entrepreneurs!

Although we started off by providing teleradiology services to American hospitals, we were approached by the Singapore government and became the first Indian healthcare organization to be accredited by the Ministry of Health of Singapore. Our Indian doctors sitting in Bangalore report on X-rays and CT scans of Singaporean patients. We reduced the turnaround time on a report from three days to one hour in Singapore. We currently cover nine medical centres in Singapore in a programme initiated and blessed by the Health Minister of Singapore. In February 2008, we set up a company in Europe to tap the European need for telerad services — Telerad Europe. And we signed with a group in Puerto Rico and Oman to provide telediagnostics.

Unfortunately, we have not been successful in doing much on a large scale in our own country for our own people. We do run two radiology departments in Bangalore and are training students and technologists in radiology. However, in the grand scheme of things this is on a small scale. We are passionate about giving back to our country. We feel God gave us this company for a purpose-to use the technology and domain knowledge and expertise gained via running this company and to put it to good use for remote parts of India. Without good diagnosis in rural India, the health care plan for a patient cannot be made. Getting a high quality diagnostic report to rural India will change the way healthcare is delivered there. We have set up a Telrad Foundation that aims to take high quality diagnostics to remote parts of India where there are patients and scanners but no radiologists. We have been covering Ramakrishna Mission Hospital in Arunachal Pradesh gratis for over six months now. And hope to expand this coverage to other areas and hospitals that need it.

Apart from Telerad, we are also involved with a trust called People4people that builds playgrounds in poorer sections of Karnataka, primarily in government

schools (thus far we have put up 30 playgrounds in Bangalore in government schools) and funds activities for children. We are also involved in running a health assistant training programme at Karunashraya, a hospice for the terminally ill in Whitefield, Bangalore.

Interestingly, the government largely ignores smaller companies such as ours, although we have seen a change in this regard over the past year. We made a representation to the Karnataka government three years ago that we would cover all their district hospitals via a telerad link. The representative we spoke to simply asked, 'Why?' We said we wanted to give back to our country. He looked most sceptical and nothing ever came of the project. It is our belief that smaller innovative niche companies such as ours have the domain knowledge, expertise and will to do good things if given a chance. Greatest good can be achieved if we work with the Government as the Government machinery has the ability to reach the maximum number of poor and disadvantaged patients. Inshallah and God willing, this will happen soon in the new India.

Being entrepreneurs in the India of today is both challenging and stimulating. We feel proud to be showcasing India as a destination of high-end medical work. It feels wonderful to be creating jobs and supporting families. It is an empowering feeling to be able to use high tech solutions for remote parts of Asia. The creative energy of taking an idea and making it work is unmatched!

Entrepreneurship

Vijay Nair

Co-Founder and Director, Only Much Louder
24 years old

While still in junior college at Sydenham in Mumbai, I took the first steps in my professional career with Procter & Gamble, one of the world's largest consumer companies. I was part of a focus group that was reviewing their teen-focused portal and ended up working for the website. I was charged with building a nation-wide team constituting teenagers like myself and managing the website, and this served as a fantastic springboard to learn the ropes of being an entrepreneur at the age of 16.

After two years of working with P&G, a chance encounter with Sandeep Mittal, the founder of a website called gigpad.com aimed at bringing together musicians across the country, led to my joining gigpad. It seemed far more challenging and helped cultivate my taste in music at the same time. The work at gigpad involved reviewing shows and keeping the site alive, but I soon discovered that my true calling was organizing concerts and working backstage with the bands, rather than a desk job writing about them.

When I was 18, a band called Acquired Funk Syndrome approached me to manage their band and it sounded like an interesting project. Since there were not many independent managers operating in India, it was uncharted territory for me, and indeed for the people I worked with. We tasted success within the first few months, managing to perform more shows than any other bands in the country. I ended up travelling the length and breadth of the country within the first few months, all the time learning and discovering the tricks of my trade.

At this point, I chose to drop out from the formal education that I was pursuing, as I firmly believed that my future lay in the music industry, the skills for which could only be learnt first-hand. I did not feel a college degree would help me be better at my chosen vocation.

I soon started managing more bands including Zero, PDV and Pentagram, among the biggest rock bands in the country, and booked over a 100 shows in the first year. This phase exposed me to difficulties and gaps in the existing music industry in India and I started focussing on other core areas of this industry, such as distribution, production, organizing concerts etc. The big picture was always to have a complete Do-It-Yourself (DIY) setup.

In late 2002, I founded my company Only Much Louder (OML), an entity that would manage bands and produce music albums to begin with. We tied up with Sony, one of the world's biggest media and entertainment corporations. Soon, OML-managed artists were being distributed at all major music stores across India.

There were other significant milestones along the way. Pentagram, OML's marquee band earned the distinction of being the first band to play at Estonia's Sun Dance Music Festival and later at the prestigious Glastonbury Music Festival in England.

Girish Talwar joined me in 2005 as a partner in OML, now a private limited company. We started Counter Culture records, which became the record label arm of OML. In 2007, we founded 'babblefish productions' along with Samira Kanwar as the production arm under OML.

While travelling with bands across the country, we developed healthy relationships with colleges where our bands performed. Over the last two years, OML established a strong network with these campuses, including the leading engineering colleges such as the IITs and elite business schools such as the IIMs, as our artists were invited to perform time and again. In the music business, the only person not making sufficient money is the artist himself. We have attempted to correct this fundamental anomaly in the system with an all-inclusive approach where the musician becomes an integral part of his promotions and is more aware of his rights as an artiste.

Across the world, there are two parallel streams in the music industry. The mainstream industry centres around the big, well known bands and major record labels. Co-existing in its shadows is an independent (indie) music scene where some of the best yet mostly unknown music thrives. These artists connect directly with fans and are more in control of their careers and rarely have to compromise on their artistic integrity and the quality of their work. At OML, we aim to work with these independent artists and help them be more successful while maintaining their independent streak. Once bands and artists are part of the OML family, they are recorded and distributed, their videos are produced and they perform live shows across the country. We serve as a one-of-its-kind, end-to-end Artist Management Company, helping our artists integrate all aspects of their careers.

The next step for OML is to take Indian bands international as many of them have the talent but not enough exposure to launch internationally. At OML, we are looking at new media with a fresh perspective and exploring new options such as online distribution and use of other digital formats. We believe the future lies in finding a balance between online and offline promotions and both will co-exist. We intend to propel OML into one of India's most well known and independent music firms, operating across a gamut of businesses successfully.

I have been extremely lucky that my passion for music is aligned with the work we do at OML. The freedom to paint my own canvas as an entrepreneur is exhilarating and the challenges I face every day make my life far richer than it would have been if I had followed the well-trodden path.

Annexure III

Methodology

This study is based on formal one-on-one interviews with entrepreneurs and other stakeholders of the entrepreneurial ecosystem, along with review of policy literature by NKC researchers. The interviews were conducted across six cities of India – Pune, Kolkata, Chennai, Ahmedabad, Hyderabad and Bangalore, while a few responses are also included from the National Capital Region (NCR) and Mumbai. Without exception, all entrepreneurs were forthcoming with their responses and displayed significant interest and involvement. Interviews with entrepreneurs were based on a flexible framework of questions while keeping core issues as a priority: background, entrepreneurial turning points, views on facilitative triggers and the nature of roadblocks. We also conducted interviews with other stakeholders such as the financial community (bankers, angel investors, venture capitalists, state finance corporations etc), educational institutions, incubation centres, incubatees, chambers of commerce, industry associations, institutional networks and associations of entrepreneurs. Finally, we also requested and received profiles of some entrepreneurial icons whose personal narratives provide rich insight and direction.

Besides qualitative data on some key issues (such as availability of human resources, helpfulness of government, infrastructure etc), we also asked entrepreneurs to rate their perceptions along numerical scales. Based on both quantitative parameters (such as gender, age of entrepreneur, sector, year of starting, educational qualifications, turnover of enterprise, number of employees, etc) and qualitative parameters (such as family support, importance of education, financial assistance, taxation policies, corruption, regulatory issues, problems in scaling up etc), statistical measures were computed. Further based on consultations with other stakeholders, we received additional suggestions to enhance Entrepreneurship in the country. These have been duly acknowledged.

This study explores some of the most significant entrepreneurial issues in India with a view to recommending broad policies that would further enhance the spread of Entrepreneurship. While highlighting broad issues, the study has not made detailed empirical investigations on micro issues based on rigorous econometric techniques.

Annexure IV

List of Resources

This section contains a list of resources, relevant for entrepreneurs and other stakeholders in the entrepreneurial ecosystem.

List of Resources

1. http://msme.gov.in/ and http://www.laghu-udyog.com/ - The Ministry of Micro, Small And Medium Enterprises lists various government schemes for entrepreneurs
2. http://www.techno-preneur.net/ - The Technology Innovation Management and Entrepreneurship Information Service assists techno-preneurs in finding technologies, projects, funding options and information on policy environment, incentive schemes and industrial infrastructure available in the country, covering central and state governments.
3. http://www.sidbi.in/ - The Small Industrial Development Bank of India works towards empowering Micro, Small and Medium Enterprises.
4. http://dst.gov.in/scientific-programme/t-d-tdb.htm - The Technology Development Board aims at accelerating the development and commercialisation of indigenous technology or adapting imported technology to wider domestic application. The board provides financial assistance in the form of equity, soft loans or grants.
5. http://www.dsir.nic.in/tpdup/tepp/tepp.htm - The Technopreneur Promotion Programme is run by Department of Scientific & Industrial Research.
6. http://www.numsum.com/spreadsheet/show/48465 - This lists VCs based in India and/or making investments in Indian companies.
7. http://www.indiavca.org/ - The Indian Venture Capital and Private Equity Association (IVCA) is a member based national organization that represents venture capital and private equity firms.
8. http://www.indianangelnetwork.com/ - The Indian Angel Network (IAN) is India's first and largest Angel network with successful entrepreneurs and high profile CEOs interested in investing in early stage businesses across India, which have the potential to create disproportionate value. IAN has invested in multiple sectors like information technology, intellectual property, hospitality, mobile, education, Internet, etc.
9. http://ycombinator.com/ - Y Combinator is a US venture firm specializing in early stage start-ups (seed funding). It helps start-ups through what

is for many the hardest step, from idea to company, and invests mostly in software and web services. It makes small investments (rarely more than $20,000) in return for small stakes in the companies it funds (usually industry 2-10%).

10. http://www.thenetworkenterprisesfund.in/ - The Network Enterprises Fund is an equity fund that invests in commercially viable, sustainable enterprises in sectors impacting low-income households.
11. shttp://www.gvfl.com/home.htm - Gujarat Venture Finance Limited is a pioneer of venture capital in India. It is an independent, board-managed, autonomous venture finance company based at Ahmedabad.
12. http://www.theseedfund.com/ - The Seed Fund, based in Mumbai, is a partnership and network of experienced investors, entrepreneurs and executives with a mission to find and invest in unique, high potential, early-stage IT companies.
13. http://www.ventureintelligence.in/ - Venture Intelligence is the leading provider of information and networking services to the private equity and venture capital ecosystem.
14. http://www.nenonline.org/ - The National Entrepreneurship Network (NEN) is a network of over 280 top academic institutions across India encompassing a 300,000+ strong student base and over 500 faculty members leading entrepreneurship programmes at various institutes.
15. http://www.tie.org/ - The Indus Entrepreneurs, also known as Talent Ideas and Enterprise is spread across 11 countries, fostering entrepreneurship globally through mentoring, networking, and education.
16. http://www.aleap.org – The Association of Lady Entrepreneurs of Andhra Pradesh (ALEAP) provides a platform to female entrepreneurs who help each other and work in collaboration for welfare maximization.
17. http://www.bystonline.org/ - The Bharat Yuva Shakti Trust works with young people in the age group of 18 - 35, who are either unemployed or underemployed, providing financial and mentoring support to establish their own ventures.
18. www.ediindia.org/ - The Entrepreneurship Development Institute of India (EDI), setup in 1983 fosters entrepreneurship through various programmes and courses.
19. http://barcamp.org/ - BarCamp is an international network of techno-entrepreneurs who meet from time to time to share ideas and sell products.
20. http://www.businessgyan.com/ - This is a Karnataka-based business magazine on Entrepreneurship.
21. http://www.kassia.com/ - Kassia is a premier voluntary state level non-government institution of small-scale industries in Karnataka.
22. http://maccia.org.in/ - The Mahratta Chamber of Commerce, Industry &

Agriculture (MACCIA) is the local chamber of commerce in Pune serving the Maharashtra region.

23. http://www.gujaratchamber.org/ - The Gujarat Chamber of Commerce and Industry is a local chamber of commerce in Ahmedabad.
24. http://www.biztradeshows.com/cii-chennai/ - The Chennai wing of Confederation of Indian Industry.
25. http://www.bengalchamber.com/ - The Bengal Chamber of Commerce and Industry, located in Kolkata, is an important chamber of commerce especially for the eastern region
26. http://www.fapcci.in/ - The Federation of Andhra Pradesh Chambers of Commerce is a local chamber of commerce.
27. http://www.fkcci.org/Site/index.php - The Federation of Karnataka Chambers of Commerce & Industry is a local chamber of commerce largely catering to entrepreneurs in Bangalore.

Annexure V

Glossary

AIM	Alternative Investment Market
ALEAP	Association of Lady Entrepreneurs of Andhra Pradesh
ASSOCHAM	Association of Chambers of Commerce
AWAKE	Association of Women Entrepreneurs of Karnataka
BCCI	Bengal Chamber of Commerce and Industry
BIE	Business Incubation for Entrepreneurship
BPO	Business Process Outsourcing
BYST	Bharatiya Yuva Shakti Trust
CAGR	Compound Annual Growth Rate
CART	Credit Appraisal and Rating Tool
CENVAT	Central Value Added Tax
CIBIL	Credit Information Bureau (India) Limited
CII	Confederation of Indian Industry
CIIE	Centre for Innovation, Incubation and Entrepreneurship
CMIE	Centre for Monitoring Indian Economy
CSO	Central Statistical Organization
DIT	Department of Information Technology
DSB	Dun and Bradstreet
EDI	Entrepreneurship Development Institute
EPFO	Employees Providend Fund Organization
ESIC	Employees State Insurance Organization
FAPCII	Federation of Andhra Pradesh Chambers of Commerce and Industry
FICCI	Federation of Indian Chambers of Commerce and Industry
FITT	Foundation for Innovation and Technology Transfer
FIWE	Federation of Indian Women Entrepreneurs
FKCCI	Federation of Karnataka Chambers of Commerce and Industry
GCCI	Gujarat Chamber of Commerce and Industry
GEM	Global Entrepreneurship Monitor
HSN	Harmonized System of Nomenclature

IDSMT	Integrated Development of Small and Medium Towns
IIIT	Indian Institute of Information Technology
IIM	Indian Institute of Management
IISc	Indian Institute of Science
IISER	Indian Institute of Science Education and Research
IIT	Indian Institute of Technology
IP	Intellectual Property
IPR	Intellectual Property Rights
IPO	Initial Public Offer
ISB	Indian School of Business
ISBA	Indian STEP and Business Incubator Association
IT	Information Technology
ITeS	Information Technology enabled Services
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
KASSIA	Karnataka Small-scale Industries' Association
LLP	Limited Liability Partnership
MCA	Ministry of Company Affairs
MCCIA	Mahratta Chamber of Commerce, Industry and Agriculture
MCGS	Mutual Credit Guarantee Scheme
MGA	Mutual Guarantee Association
MLI	Member Lending Institutions
MOST	Ministry of Science and Technology
MSME	Micro Small and Medium Enterprises
NASSCOM	National Association of Software and Service Companies
NCALT	National Company Law Appellate Tribunal
NCLT	National Company Law Tribunal
NEF	Network Enterprises Fund
NEN	National Entrepreneurship Network
NHDP	National Highways Development Project
NIT	National Institute of Technology
NKC	National Knowledge Commission
NSDM	National Skill Development Mission
NSERB	National Science and Engineering Research Board
NSRCEL	N. S. Raghavan Centre for Entrepreneurial Learning
NSTEDB	National Science and Technology Entrepreneurship Development Board

OPC	One Person Company
PAN	Permanent Account Number
PE	Private Equity
PMGSY	Pradhan Mantri Gram Sadak Yojana
PPP	Public Private Partnership
RAM	Risk Assessment Model
R&D	Research and Development
RBI	Reserve Bank of India
RUDISETIS	Rural Development and Self Employment Training Institutes
SBI	State Bank of India
SBIC	Small Business Investment Company
SCAF	Single Composite Application Form
SCVT	State Councils for Vocational Training
SIDBI	Small Industries Development Bank of India
SEBI	Securities and Exchange Board of India
SERC	Science and Engineering Research Council
SINE	Society for Innovation and Entrepreneurship
SME	Small and Medium Enterprises
SMERA	SME Rating Agency
SPA	School of Planning and Architecture
SPV	Special Purpose Vehicle
STEP	Science and Technology Entrepreneurship Park
TAN	Tax Account Number
TDB	Technology Development Board
TeNeT	The Telecommunications and Computer Networking Group
TePP	Technopreneur Promotion Programme
TIDE	Technology Incubation Development of Entrepreneurs
TiE	The Indus Entrepreneurs
VAT	Value Added Tax
VC	Venture Capital
VET	Vocational Education and Training