

Economic Development through Entrepreneurship in India

by

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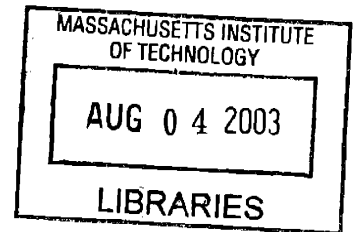
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ABSTRACT

Entrepreneurship, with all its attendant ingredients, is one of the best means of triggering economic and social development in developing countries like India. There are several staple and mandatory ingredients necessary for the nourishment of entrepreneurship such as capital, labor, management, and several others; and several milestones in the evolution of an entrepreneurial opportunity such as funding, recruitment, and so on. As entrepreneurship ideas and opportunities take form and substance, the prevailing process for entrepreneurship in a country results gradually guides an entrepreneur past numerous milestones.

The value of entrepreneurship as an economic development tool lies in the compression and/or acceleration of the overall process of entrepreneurship in a country by providing pinpointed assistance in three areas viz. idea development, capital and skills procurement, and organizational growth. This is best achieved by an organizational entity committed to accelerating the entrepreneurship process.

This thesis follows through on the above idea specifically in the context of India. India is a durable democracy with a long legacy and history of entrepreneurship dating back to the first century B.C. Modern India features political and economic policies that favour global trade and business, a reliable yet evolving regulatory and legal framework, a resilient financial system, an educated and English-speaking labor force that offers tremendous cost advantages and a growing educational infrastructure of education institutions that offer excellent higher education in technology and business. In summary, as developing countries go, India offers an excellent milieu for aspiring entrepreneurs. A summary country analysis detailing this forms the first part of the thesis.

The thesis then identifies candidate business models that could effectively support the one-point agenda of catalyzing entrepreneurship. These four business models differ with respect to the organizational form of the entity concerned, the metrics for success, the measurement of the metrics, possible conflicts of interest, and the estimated overall risk of the venture in the Indian context. The most viable and effective business model is selected. Finally, the thesis builds on the model selected and presents a comprehensive business plan for accelerating entrepreneurship in India.

Thesis Supervisor:

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1. Introduction

entre-pre-neur *n.* a person who organizes and manages a business undertaking, assuming the risk for the sake of profit

-Webster's New World College Dictionary

Entrepreneurship, with all its attendant ingredients, is one of the best means of triggering economic and social development in developing countries like India. Thus, catalyzing the process of entrepreneurship in developing countries will accelerate the process of economic and social development. There are several staple and mandatory ingredients necessary for the nourishment of entrepreneurship such as capital, labor, management; and several milestones such as funding, recruitment, and growth in the evolution of an entrepreneurial opportunity. As entrepreneurship ideas assume form and substance, the prevailing process for entrepreneurship guides the entrepreneur past the following milestones in the new venture life cycle (1) Idea development, (2) Organizational Creation and Capitalization, and (3) Organizational Development. However, the process is a very difficult one and most new ventures fail midstream at one stage or the other. As a result, an array of organizations has emerged to help new ventures at each stage of the process. These organizations differ in their interests and approach. This thesis examines these different organizational forms and their effectiveness in facilitating entrepreneurship in India.

This thesis follows through on the above idea specifically in the context of India.

India is a durable democracy with one of the oldest civilizations in the world, one

with a long legacy and history of entrepreneurship dating back to the first century B.C. Modern India features a complex and volatile political environment, a legacy of protectionist policies, a complex and inconsistent regulatory framework, an inefficient and overburdened legal system (with glaring deficiencies in intellectual property protection), a volatile financial system, a bureaucracy ridden with inefficiencies and corruption, and a heterogeneous society simmering with religious tensions. These factors can test the resolve of any new venture. However, at the same time India is a long-standing democracy with economic policies that favour global trade and business, a growing middle-class, an educated and English-speaking labor force that offers tremendous cost advantages, and a growing educational infrastructure of education institutions that offer excellent higher education in technology and business. Thus despite its numerous problems, India is a growing economy that holds great potential for aspiring entrepreneurs.

The first part of the thesis provides a country analysis of India, with focus on the political and macroeconomic environment, the legal system, the financial system, the labor market, the consumer market and source organizations. Although India has numerous irregularities, risks and hurdles there remains untapped potential and tremendous opportunities for resilient entrepreneurs.

The second part of the thesis identifies and reviews various organizational models aimed at overcoming obstacles to entrepreneurship. These models differ with respect to the organizational form of the entity concerned, the definition of success, the metrics for success, the measurement of the metrics, possible

conflicts of interest, and the estimated overall risk of the venture in the Indian context. These models are analyzed and compared to determine their effectiveness in the Indian context. The most viable and effective business model is recommended for further scrutiny.

Finally, the thesis builds on the model selected and presents a comprehensive business plan for accelerating entrepreneurship in India.

2. INDIA – Country Report

This section provides a macroeconomic analysis of India with a view to assessing the support provided to entrepreneurs and the entrepreneurial process. Existing academic and journalistic literature propose macroeconomic and other national characteristics that are seen to be crucial to the development of entrepreneurship. Although these characteristics are ostensibly important, they have largely been formulated in the context of developing nations. Although these characteristics provide an excellent reference point for understanding any country's entrepreneurial eco-system, the writer advocates caution in rigidly using these characteristics to judge a country's entrepreneurship potential. This is revisited later in this section.

Traditional Institutional Characteristics

There is now considerable literature available on the desired features of an effective entrepreneurial ecosystem. Although there are numerous attributes that have been proposed and discussed in this regard, for purposes of this discussion, the writer will focus on six principal institutional features that are considered to be almost mandatory for the growth of an entrepreneurship culture in a nation:

- (A) *A Stable Political and Macro-economic Environment*
- (B) *A Well-developed Financial System*
- (C) *A Labour Market composed of an ample supply of skilled employees*
- (D) *A Robust Legal System*
- (E) *A Consumer Market that is large and technologically sophisticated enough*

(F) *A Healthy Supply of Source Organizations*⁹

India's Institutional Characteristics

An analysis of India with respect to the above characteristics is detailed below.

The first section provides a largely factual description of India's institutional characteristics. This is followed by the writer's commentary on the implications of these characteristics for the development of entrepreneurship (see Exhibit 1 for a political map of India).

A. Political and Macro-economic Environment

(Source: Economist Country Intelligence Unit)

India is a parliamentary federal democracy with federal and individual state governments. British rule in India ended in 1947 after a sustained campaign for independence, led by the Indian National Congress (Congress). British India was partitioned amid great bloodshed to create Muslim-majority Pakistan and the secular state of India. India established a complex system of socialist economic controls that remained in place until the 1980s. A coalition led by the Bharatiya Janata Party (BJP) won a majority in the general election in October 1999, and installed Atal Behari Vajpayee as prime minister.

Macroeconomic Structure

Two-thirds of India's population works in agriculture and agriculture, forestry and fishing accounts for around 25% of GDP. However, India has some of the lowest human development indicators in the world, particularly in rural areas. At the other end of the scale, India also has a large number of highly qualified professionals, as well as several internationally established industrial groups.

Without a rapid and sustained increase in overall rates of economic growth, reducing poverty will remain a considerable challenge.

Agriculture, Industry and Services

Agricultural production-mainly food grains-accounts for around one-quarter of GDP (at factor cost). A policy of import substitution in the decades after independence encouraged the development of a broad industrial base. However, a lack of competition contributed to inefficiencies. Several sectors have now been opened up to foreign participation under India's reform program. Services have proved India's most dynamic sector in recent years, and accounted for over 48% of GDP in 2000. Moves to privatize state-owned companies are proceeding slowly.

Comparative economic indicators, 2001

	India	China	Pakistan
GDP (US\$ bn)	485.2	1180.1	58.7
GDP per head (US\$)	471	928	418
GDP per head (US\$ at PPP)	2,489	5,575	1,970
Consumer price inflation (av; %)	3.7	0.7	3.2
Current-account balance (US\$ bn)	-3.0	20.1	-0.1
% of GDP	-0.6	1.7	-0.3
Exports of goods fob (US\$ bn)	44.8	264.1	8.7
Imports of goods fob (US\$ bn)	-54.9	-232.6	-9.2
External debt (US\$ bn)	101.5	146.0	30.1
Debt-service ratio, paid (%)	13.3	6.3	17.9

Source: Economist Intelligence Unit, CountryData

Economic Policy

India's economic growth remains severely constrained by a fiscal deficit. Fiscal deficit was about 5.9% in 2001/02. Both the center and the states finance their

deficits by borrowing from banks, insurance companies, pension funds and other institutions, which in turn borrow from the public.

Emerging Growth Sectors

India's information-technology (IT) industry, riding a wave of global labor arbitrage, has been a success story. Much of this success stems from the fact that it is largely export-oriented (about three quarters) and therefore enjoys regulatory support. Furthermore, being completely service oriented it has managed to stay several steps ahead of India's otherwise onerous import-export policies. The sector has grown at an average annual rate of over 50% a year since 1991 to reach US\$9.8bn in 2001, and accounted for approximately 18% of India's total exports. The export market is uncomfortably leveraged with The US market accounting for 60% of exports. The recent economic downturn has proven to be a chastening experience and prompted the search for other markets.

Over last 5 years or so, BPO (Business Process Outsourcing) has shown signs of becoming a growth sector. This entails the outsourcing of back-office activities by companies in developing countries to Indian companies to gain a cost advantage. At the most basic level, all these processes include a combination of inbound and outbound call centers, data storage and analysis, transaction processing, and email management.

Other emerging growth areas include outsourcing of Clinical Trials processing and Bio-informatics.

Capital Flows and the Foreign Debt

Foreign Direct Investment(FDI) has become increasingly relevant since the launch of the reforms in 1991, but has done little to contain borrowing. Between 1991 and 1998 FDI inflows grew from virtually nothing to more than US\$2bn per year, while net external borrowing remained constant at around US\$5bn-6bn per year. India's total external debt grew from US\$83.8bn in 1991 to US\$100.4bn in September 2001.

Foreign Reserves and the Exchange Rate

India's foreign-exchange reserves, including gold and special drawing rights (SDRs), rose to US\$54.2bn at the end of March 2002-an increase of US\$6.1bn over the year, the improvement in the current account being the primary trigger. The Reserve Bank of India (RBI, the central bank) has guided a managed decline in the rupee.

B. Financial System

(Source: Think Quest online library (www.thinkquest.org))

The commercial banking system comprises of Public Sector Banks, Private Sector Banks, Co-operative Sector and Development Banks. Government institutions dominate the sector. The central government owns four long-term financial institutions-the Industrial Development Bank of India (IDBI), the Industrial Finance Corporation of India (IFCI), the Small Industries Development Bank of India (SIDBI) and the Industrial Investment Bank of India (IIBI). The Government is also the largest shareholder in the Industrial Capital and Investment Corporation of India (ICICI). These institutions in turn own three

venture capital funds. IDBI owns Indian Venture Capital Fund (IVCF) and Technology Finance Corporation of India (TFCI), and ICICI owns ICICI Venture Fund. In addition, Unit Trust of India (UTI), Life Insurance Corporation (LIC) and General Insurance Corporation (GIC) also provide finance. These institutions together disbursed Rs725bn between April 2000 and February 2001, a Rs49bn increase year on year.

Organized financial markets have existed in India for more than a century. Today, markets of varying maturity exist in equity, debt, commodities and foreign exchange. The rupee has been convertible on the current account since 1992.

The capital markets are characterized by a large variety of financial instruments including equity and preference shares, fully convertible debentures (FCDs), non-convertible debentures (NCDs) and partly convertible debentures (PCDs). Equity based instruments are the most popular means of raising finance. In 1993-94, nearly three quarters of the capital raised by the corporate sector was in equity.

C. Labor

(Source: Economist Country Intelligence Unit)

India has a versatile, stable, English speaking workforce. According to the Ministry of Labor, the labor force is expected to grow to approximately 400m over the 1997-2002 period. However, only an estimated 14% of the workforce have regular salaried employment, the rest are on contract wages. Labor productivity is amongst the lowest of major Asian countries. Payroll costs are estimated to be 15-40% of total production costs. Most labor laws apply only to workers in the organized sector (not including the small-scale sector, agriculture and most

construction work). In cases where they apply to all sectors, enforcement mechanisms are found to be lacking.

Generally, competent staff can be found without much difficulty. Unskilled labor is also easy to find. The number of persons with managerial and other white-collar skills has increased with the proliferation of management and technical institutes. There are hundreds of technical institutes offering courses in engineering and non-engineering trades. According to the National Association of Software and Service Companies (NASSCOM), 410,000 IT professionals were employed at the start of 2001. Unskilled workers are easily found. Foreign firms are allowed to employ expatriate managers. More recently, foreign firms have begun to recruit Indian managers for overseas placements.

Fundamental indicators: Labor

Labor	2000 estimate	2001 forecast	2002 forecast
Labor force (m)	446.2	454.7	463.3
Labor force (% change)	2.0	1.9	1.9

Source: Economist Intelligence Unit, India Country Forecast, October 2001.

D. Legal System

(Source: Indianlaw Online (www.globallawreview.com))

India has an established judiciary that is largely based on English common law. However, the system comprises of complex and archaic legislation, inefficient and tortuous implementation, and opposition to foreign lawyers and some measure of corruption. Courts face a mounting backlog of cases; the Government being a significant contributor. Although English is the legal and commercial language for the most part, smaller cities and towns use local

dialects. India's numerous labor laws are overlapping, frequently inconsistent and tortuous with numerous pieces of related legislation. There are considerable difficulties in terminating employment and closing an industrial establishment.

The extent of "positive discrimination" is staggering. Underprivileged castes are allotted a certain quote of jobs - 27% of central government jobs, and 27% of jobs in firms in which it has a 51% or greater stake. The cumulative effect on organizational expertise, productivity and morale is reflected in the performance of public sector enterprises and governmental organizations. In 1998 the government rejected an ILO secretariat draft on the fundamental rights of workers. It continues to oppose the linking of international trade with labor standards.

Employment termination regulations are a continuing impediment to labor productivity. Organizations seeking to execute a flexible and aggressive business model are often hampered by existing regulations that require them to obtain government permission to close an operation or lay off workers. The Industrial Disputes Act requires employers wishing to close an establishment to apply for permission at least 90 days before the intended closing date. There are related regulations that entitle workers to full pay and benefits if they are retrenched without government permission. In general, it is very difficult for large companies to dismiss staff. Retrenchments and layoffs require substantive disclosure and justification to the government and explicit approval from the concerned state government.

Intellectual Property protection and enforcement is notoriously lax and a great concern to multi-nationals and domestic firms alike. Software piracy is rampant and is estimated to cost companies millions of dollars.

E. The Consumer Market

(Source: COMPSTRAT Country Sector Analysis Reports)

Demographic Classifications

The population is classified into five groups on the basis of annual household income – Lower Income, three sub-groups of Middle income (lower middle, middle middle, upper middle), Higher Income. This classification, however, should be viewed in the light of differences in purchasing power parities of different currencies. If this is taken into account, then despite having a per capita income of \$340, India ranks fifth in the world on purchase power parity terms.

Consumer Classes

The National Council of Applied Economic Research (NCAER) taxonomy of the consumer class proposes five classes of consumer households. These classes exhibit significant differences in their consumption behavior and ownership patterns across various categories of goods.

Consumer Classes (Annual income Rs)	1996	2001	2007	Change
The Rich (Rs 215,000 and more)	1.2	2	6.2	416.00%
The Consuming Class (Rs 45,000 - 215,000)	32.5	54.6	90.9	179.00%
The Climbers (Rs 22,000 - 45,000)	54.1	71.6	74.1	37.00%
The Aspirants (Rs 16,000 - 45,000)	44	28.1	15.3	-65.00%
The Destitute (below Rs 16,000)	33	23.4	12.8	-61.00%
TOTAL	164.8	180.7	199.2	21.00%

Source: NCAER

The top two tiers (the Consuming Class and The Rich) constitute viable target segments for aspiration and lifestyle goods. As expected, ownership patterns of goods and durables and penetration levels of various classes of goods differ considerably with income. Additionally, there are lifestyle differences within the same income level between urban and rural populations.

Age demographics

Unlike developing countries that grapple with the problem of an aging population, more than 70% of India's population is below the age of 40, and more than 47% below the age of 20. This age distribution is of significance to various consumer product marketers, and explains the resilience and size of the consumer market for impulse products and leisure-related expenditure in general. The size and growth of this economically active and young population may be instrumental to India's economic development over the next two decades.

Rural Markets

The rural markets are an important feature of India's consumer markets. Three-quarters of India's population lives in rural areas. This rural population accounts for a third of the national income. Geographically, the rural population is scattered across India over approximately a million villages and small towns. There are approximately 3.8 million retail outlets in rural India, averaging 5.8 outlets per village. This market is becoming an important factor in the market development strategies of local and multinational companies.

F. Education and Source Organizations

(Sources: The Economist Country Intelligence Unit, Media Lab Asia)

Literacy rates have climbed over the last decade, and now stand at about 60% for adults. The gap between male and female literacy has narrowed over the years. Male literacy rates are about 75% as compared to 55% for women. However, there are significant variations in these figures across states. The state of Kerala, for instance, has an impressive literacy rate of 91% as compared to about 48% for the state of Bihar.

Although rates of enrollment in primary schools, secondary schools and higher education in general has risen impressively since independence, the drop-out rates are fairly high especially in primary and secondary schools. Numerous initiatives funded by multi-lateral institutions have failed to make a lasting impact on the primary and secondary education in rural areas. Nonetheless, the rate of enrolment in higher education for males and females is one of the highest among low-income developing countries.

In absolute terms, India has a large number of universities and institutes for higher education. There are approximately 225 universities with about 8000 affiliated colleges and polytechnics. College enrollment has steadily increased in single digit percentages through the nineties. However, with a few exceptions, admission is strongly skewed on the basis of caste, religion and political influence. In some regions, widespread cheating continually plagues examinations. There is however a large and growing segment of well-educated and professionally trained Indians. The benefits of competitive labor costs have

made India a favorite destination in the global market for the recruitment of software professionals.

Over the last 7 years or so, higher education institutions specializing in engineering, technology and management have grown progressively aware of entrepreneurship and the need to incorporate this in the curriculum. The growth spurt in the technology sector in the 90s, and the success of several Indian entrepreneurs in North America was instrumental in changing the attitude of the educated middle-class towards entrepreneurship. Educational institutions were quick to pick on this and introduce entrepreneurship as a theme in their curricular offerings. Thus far, this has largely been witnessed in the premier educational institutions such as the Indian Institutes of Technology, BITS (Pilani), the Indian Institutes of Management (IIMs) and a few others. However, none of these organizations qualify to be deemed a genuine source organization for entrepreneurship, although their graduates are repeatedly credited with individual laurels in their professions. There has been no attempt thus far to create an organization that provides a natural feed of entrepreneurship, innovation and development into the surrounding environment. One would hope that these institutes evolve into being such change agents in the years to come.

The only candidate source organization appears to be MediaLab Asia (www.medialabasia.org). "The role of Media Lab Asia is to facilitate the invention, refinement, and dissemination of innovations that benefit the greatest number possible of the world's neediest people. Media Lab Asia's declared intent is to

work with industry, NGOs, and governments, to bring these innovations to every village in Asia.

Implications for Entrepreneurship

A Pessimist's View

Over the last several decades, India has endured numerous wars, religious and communal tension, assassinations, separatist movements, religious fundamentalism, corporate mis-governance, a closed economy, inadequate infrastructure and countless other financial, political, economic and social mishaps. Political rivalries and populist policies have bankrupted some states.

India's legal system comprises of complex and archaic legislation, inefficient and tortuous implementation, and opposition to foreign lawyers and some measure of corruption. Courts face a mounting backlog of cases; the Government being a significant contributor. Intellectual property protection and enforcement are notoriously weak, enforcement of business contracts and employment agreements and provisions such as non-solicitation and non-compete agreements are very lax.

The financial system is heavily regulated and its reputation is patchy at best due to bureaucratic inefficiencies and corruptions. Black markets flourish for foreign exchange. In spite of a declared intent to open up the economy, red tape and institutionalized corruption can cause very lengthy delays even in critical industries such as power and telecommunications. Access to capital is particularly difficult for early stage entrepreneurs. The Venture Capital industry is

still in a nascent stage. According to the Global Entrepreneurship Monitor 2001 Executive Report, "Growth is hampered due to the scarcity and high cost of working capital. Financial Institutions do not appreciate the specific nature of entrepreneurs' needs."

Physical infrastructure in the country is weak and slow to improve. This has severely hampered the growth of sectors that rely on logistics, transportation and telecommunications for core businesses. According to the Global Entrepreneurship Monitor 2001 Executive Report, "the physical infrastructure in the country is inadequate, as is the supply of professional and commercial processes."

Source organizations are relatively few in number and even fewer in terms of real empirical data on innovation and new venture formation.

Traditionally, entrepreneurship and organization building has been the province of industrial families such as the Birlas, Tatas, and others. Several of these industrial houses date back to pre-independence India and until recently had a stranglehold on scalable industrial activity. Until very recently, the educated middle-class had little appetite for entrepreneurship. Their norms demanded a stable and comfortable professional career with established local and multi-national organizations. To a large extent, this continues to be the outlook of the average Indian and there is general aversion to financial and professional risk.

Entrepreneurship, in itself, is a relatively new phenomenon and is largely seen in the light of the recent boom in the technology sector. Thus there is no institutional scaffolding available for entrepreneurship. Most efforts essentially limp through the process and the system with a high mortality rate.

The Writer's View

Significantly enough, with the exception of one major balance-of-payments crisis and one currency devaluation exercise India has managed to dodge the impact of global maelstroms such as the Asia crisis and the current economic downturn. India's biggest strength in the face of all the extremities referred to above has been its resilient secular and democratic structure. Since independence, every Indian government has been democratically elected. Moreover there are tremendous regional variations. Cities like Bangalore and Hyderabad have become magnets for multi-nationals as well as technology entrepreneurs. These states have witnessed phenomenal growth rates over the last decade or so with the aid of progressive governments. India as a whole continues to show impressive GDP growth rates (real and projected) in the world.

In general, India's institutional characteristics test the mettle of entrepreneurs and place numerous hurdles in their way. However these hurdles do not deter entrepreneurs, they merely alter the risk/reward equation. They call for greater effort (in relation to developed countries) and greater focus on risk management. There is strong anecdotal and empirical evidence to support the claim that

entrepreneurship yields very generous rewards both for the individual and the nation.

Several Indian firms, such as Infosys, Wipro, Reliance Group, are listed as ADRs (American Depository Receipts) on American stock exchanges. These are billion dollar profitable and ethical organizations built from scratch by everyday Indians without any institutional or industrial pedigree. The list includes both “new economy” new ventures as well as traditional industrial houses. Some of the newer firms such as Infosys have achieved their entire growth over the last 25 years or so. India’s largest industrial group today is The Reliance Group, which is approximately thirty years old and owns only traditional (old economy) interests such as textiles. These companies have created hundreds of thousands of jobs over the years. Clearly, for the tenacious entrepreneur the financial sector is robust and functional enough to support the growth of new ventures. The examples above are testimony to the maturity of the sector and its offerings for new ventures. Cross-border risks such as currency risks are an inevitable part of international transactions and deserve continuous attention. Over the last decade or so, a nascent venture Capital industry has begun to grow in fits and starts. The financial discipline and acumen of their western counterparts is beginning to appear.

While software continues to be a growth sector, there are other areas such as Process Outsourcing, Clinical Trials and Bio-informatics that are poised for spectacular growth. The common theme in all emerging and just-emerged growth

areas is labor arbitrage. Due to the large supply of an educated and English-speaking workforce, India offers a tremendous cost advantage to developed nations willing to outsource their operations across organizational and geographic boundaries. This is a near unassailable macroeconomic advantage that will continue to fuel new venture development for years to come.

India's middle class is growing steadily in both size and purchasing power. More interestingly, over the last five years or so, the middle class has shown an increasing propensity to spend. This is a significant reversal in behavioral patterns. This is especially evident in industries such as retail, automobiles, real estate and travel pointing to a growing, wealthier and more sophisticated middle class.

The daunting and labyrinthine legal framework notwithstanding, there are no insurmountable barriers to the incorporation and preliminary growth of an enterprise. Basic and advanced legal expertise is readily available to a keen entrepreneur as is specialized assistance in navigating the legal system in an ethical if smart manner. There are Indian companies offering competitive products on the global stage in knowledge intensive industries sensitive to intellectual property such as software and pharmaceuticals. The complex legal structure also affords protection to employers in that litigation by aggrieved employees can take several years to resolve and is therefore rarely considered a viable course of action. This has created a culture of mutual trust and cooperation.

Entrepreneurship has come to be accepted as a viable professional path over the last decade. Although this is attributable to the boom in the technology sector, it is the writer's view that this culture is vibrant and sustainable among the educated middle-classes. Emerging growth areas such as Business Process outsourcing, Biotechnology, Bio-informatics and Clinical trials outsourcing that require minimal capital outlay are breeding a new generation of opportunity-based entrepreneurs. The writer further believes that this generation of entrepreneurs, as a result of western influence, is more tolerant of failure.

Formal education in entrepreneurship is being introduced into the curriculum at several management institutions, as is education in several practical aspects of economics, commerce and law. Technical institutes have started partnering with source organizations such as MIT's Media Lab to help trigger innovation and new venture development. MediaLab Asia was set up with funding from the Indian government, and aims to combine the creativity of entrepreneurs with the technical know-how of universities. Like other source organizations, Media Lab Asia will rely on robust processes to bridge the gap between innovation and new venture development. The writer is already aware of new venture initiatives in Media Lab Asia that require assistance with inception and organization creation.

Conclusion

India, despite all its limitations, is poised for steady overall growth and spectacular growth in individual sectors that play to its natural strengths. This represents vast entrepreneurial potential for a generation of Indians who are

provided the necessary assistance to tread the entrepreneurial process. The existence of organizations that can play the role of change agents may well be the difference between successes and squandered potential for these entrepreneurs and for the nation as a whole.

3. Entrepreneurship and the Entrepreneurial Process

If no one ever took risks, Michelangelo would have painted the Sistine floor.

Neil Simon (1922-)

In general terms, entrepreneurship usually connotes the creation of a new enterprise by one or more individuals for profit. Implicit in the concept of successful entrepreneurship, are the assumption of risk by the individuals, well-defined organizational and business objectives, and collective as well as individual profit motives. Entrepreneurship spans a broad spectrum ranging from “necessity based entrepreneurship” aimed at subsistence to “opportunity-based and high growth entrepreneurship” aimed at generating significant value. The latter category is a trigger for employment creation and acceleration of economic growth and forms the focus of this study.

Traditional literature on entrepreneurship offers three different ways to analyze and study entrepreneurship. Entrepreneurship can be viewed in terms of (1) Individual personality traits of entrepreneurs (2) The environment that supports entrepreneurship and facilitating factors or (3) The entrepreneurship process and its various stages.

In general terms, successful entrepreneurship is associated with the creation of value in the form of goods and services for one or more constituencies, employment for the citizens of the country concerned and a generally positive impact in terms of economic and social development. However, due to the risks and obstacles in the process, most new ventures do not make it from one stage

of the process to the next. This high mortality rate of new ventures in every stage of the process makes the process-based view of entrepreneurship (# (3) above) most comprehensive and relevant since it provides insight into the assistance required by new ventures at each stage.

Several organizational forms and business models have emerged over the years to help facilitate the entrepreneurship process – the difference in these various alternatives stems from specific differences in the objectives pursued, the type and amount of return sought, and the metrics used to measure these returns. In essence, the motives for engaging in entrepreneurship may vary significantly from one constituency to another. Thus, entrepreneurship means different things to different people.

This chapter discusses the different types of returns sought by various organization forms, the different approaches to studying entrepreneurship and the various stages in the entrepreneurship process. This provides a foundation for a comparative evaluation of the most prominent business models both in terms of objectives and investment criteria in the Indian context, in the following chapter.

Social, Financial and Economic Returns

In very broad terms there are three categories of returns – economic, financial and social. They are not mutually exclusive; in particular, economic and financial returns are closely linked.

Economic value is created when there is a financial return on an investment.

Examples of economic value creation may be seen in the activities of most for

profit corporations. Measures of economic value creation have been refined over centuries, resulting in a host of econometrics, including return on investment, debt/equity ratios, price/earnings ratio and numerous others. These measures form the basis for analyzing much of modern economic activity.¹

It is important and possible to make a distinction between financial and economic return. It is the writer's opinion that the simplest measures of financial return are attributes of financial performance such as revenue and net income. Indirect measures include various financial ratios and others. Measures of economic value return include jobs created (as represented by employee and contractor headcount), consumer purchasing power (as represented by employee payroll expenses) and others. It is thus possible to generate positive economic return while generating negative financial return. The converse is not normally possible. *Social value is created when resources, inputs, processes or policies are combined to generate improvements in the lives of individuals or society as a whole. It is in this arena that most nonprofits justify their existence, and unfortunately it is at this level that one has the most difficulty measuring the true value created.¹*

Social returns are thus generally generated when a venture furthers the economic, social or financial interests of a community or section of society without necessarily generating economic or financial return for the venture as a whole. Typically, social returns should be expected at the expense of financial returns (to a greater or lesser degree).

Usually, a firm chooses (wittingly or unwittingly) to pursue atleast one of these returns. More accurately, a firm may choose to satisfy itself with some measure of performance on one or more of these three scales. In reality, a firm probably achieves some measure of performance (positive or negative) on all three scales, whether the firm chooses to be cognizant of its performance on all three scales in another matter. It is the writer's opinion that there are implicit trade-offs in the pursuit of more than one return. For example greater financial return is likely to be extracted only at the expense of social or economic return.

As a preface to a discussion of the business models, the different approaches to studying entrepreneurship and the various stages in the entrepreneurship process are presented below.

Different Approaches for Analyzing Entrepreneurship

There is a wealth of literature now available on entrepreneurship. Early work by Joseph Schumpeter suggested that entrepreneurship was an important driver of innovation and economic development. Research by economists however tended to focus on the *economic function of the entrepreneur rather than the process by which new firms emerge*.⁷ Formal research in the discipline of Entrepreneurship subsequently began to develop.

As stated earlier there are three different approaches to the study of entrepreneurship. The three different approaches study entrepreneurship in terms of:

- (1) Individual personality traits
- (2) Facilitating factors and the environment

(3) The entrepreneurial process

Individual Personality traits (also called The Trait Approach)

This entailed studying entrepreneurship in terms of personality traits that drove individuals to entrepreneurship. McClelland (1961) characterized entrepreneurs fundamentally by their need to achieve. Other studies have suggested attributes such as desire *for independence, perseverance, conviction and self-confidence*.⁷ Gilder's research (1984) discussed traits such as the *ability to learn, tenacity in the face of failure and frustration, and ability to achieve success by breaking with old patterns of behavior*.⁷

Facilitating Factors and the Environment

This entailed the study of entrepreneurship in terms of the attributes of the environment that were necessary to foster entrepreneurship. This approach formed the basis for studies such as the Global Entrepreneurship Monitor India Report (2001) and includes factors such as *Government Policies, Cultural and Social norms, Financial Support, Commercial and Professional Infrastructure, Access to Physical Infrastructure, Education and Training, Research and Development Transfer, Government Programs, Lack of Competitiveness, Networking, Barriers to Entry and Corruption*.⁸

The Entrepreneurial Process

Subsequently, research focus began to shift from individual traits to the process of new venture creation. This process was seen to be fairly intricate in that it involved interplay of a range of *social, cultural, and economic factors* (Gartner 1988, Shapero 1984, Buarne, 1992).⁷ Gibb and Ritchie (1982) provided insight

into the anatomy of a new venture creation process. They proposed that the following typical stages - *identification of an idea, validation, access to and organization of resources, negotiation, birth and survival.*⁷ They further theorized that success of a new venture was determined by a combination of: *the idea itself, availability and obtaining of resources, the abilities of the entrepreneur and his/her associates, and their level of motivation and commitment.*⁷

Stages in the Entrepreneurial Process

There is now considerable literature available on the stages of a typical entrepreneurial venture. Regardless of the stage and setting for entrepreneurship (as defined by country, sector, scale, etc), all ventures tread a typical evolutionary path. A summary treatment of this subject is provided below to establish context for the rest of the discussion.

The principal stages in new venture creation are:

1. **Idea generation**

This entails creating the idea and vision for the new venture

2. **Organization Creation and Capitalization**

This entails preliminary capitalization of the company (funding through debt and/or equity capital) and the creation of an organization form with atleast a skeletal team.

3. **Organization Development**

This is the most critical stage in the successful evolution of a new venture and entails the:

- Substantive definition of the firm's agenda.

- Creation of a management team.
- Articulation and demonstration of the firm's culture.
- Executing every aspect of a profitable strategy to deliver a product to the market.
- Reaching a milestone such as a revenue/profit target and/or a public offering.

Triggers in the Entrepreneurial Process

Entrepreneurial ventures almost always have origins in individuals or groups of individuals. It is rare to find successful entrepreneurship mechanisms institutionalized to the extent that they function without the spark provided by individuals. It is necessary to gain basic awareness of the motives for entrepreneurship in an individual or groups of individuals. This is discussed further by Morris, Zahra and Schindehutte.

... much less is understood regarding exactly what leads an person or group of individuals to "make the leap" and pursue a particular entrepreneurial activity (Pinchot, 1985). ...we refer to these initiating events or circumstances as triggering events.²

Focusing for the movement on the start-up context, there would seem to be any number of possible triggers that pressure or encourage an entrepreneur to act.

Examples include:

*Survival
Job dissatisfaction
Lay-off or retrenchment
Divorce
Death of family member*

*Fresh start
Opportunity knocks
Curiosity
Desire to improve one's lot
Windfall*

Deliberate Search
Boredom

Invitation
Legal Requirement²

A classification of entrepreneurship proposed by the Global Entrepreneurship Monitor (GEM), is one that categorizes entrepreneurship as either necessity-based or opportunity-based. The GEM report indicates that the entrepreneurship in India (as in several developing countries) is predominantly necessity-based. Researchers such as Baumol (1997) have also proposed classifications such as *imitative* entrepreneurship wherein *an entrepreneur capitalizes on an opportunity identified by another person.*⁷

However, it is the writer's opinion that if entrepreneurship in India over the last fifteen years is scrutinized (specifically in emergent growth sectors such as the software), the data may support the conclusion that most new ventures are opportunity-based and involve highly educated entrepreneurs from the upper middle class sections. This bears significance, not so much because of the change in causality but more because it may represent the beginning of a change in the Indian psyche as it relates to entrepreneurship.

4. Alternative Business Models

One doesn't discover new lands without consenting to lose sight of the shore for a very long time.

Andre Gide (1869-1951)
French writer

In the Indian context, there is a candidate list of viable business models that may be pursued by an organization seeking to accelerate entrepreneurship and economic growth. The four most relevant business models are described and compared in this section of the thesis. In order to better understand the distinction between different business models and their respective charters, some hypothetical 'new venture canonicals' are presented. The discussion and comparison of the business models below are based partly on acknowledged fact, and significantly on the individual opinion of the writer.

Venture Philanthropist

Venture Philanthropy is the charitable (philanthropic) application of investment principles and dynamics. *It is an approach to philanthropy that emphasizes capacity building of organizations and the belief that grants to nonprofit groups really represent a form of investment in an entity. All financial assistance is accompanied by active interest in the use of funds. Thus Venture Philanthropists look for ways to be appropriately engaged in supporting the work of the nonprofit beyond simply providing funding. Opportunities supported by venture philanthropists are usually revenue-generating ventures that create jobs or training opportunities for very low-income individuals, while simultaneously operating with reference to the financial bottom-line.*³

The dominant yardstick for success is the “social return” generated by the venture. There are varying degrees of rigor applied to the measurement of the return depending on the venture philanthropist, but essentially the only material consideration in venture philanthropy is the impact of the new venture on the well-being of conspicuously disadvantaged segments of a population. Although there is cognizance of the financial bottomline and this cognizance is reflected in the rigor with which the enterprise is managed, any financial returns at the firm level and economic returns at the macroeconomic level would be by-products that are largely incidental to the main cause. Exhibit 2 shows a sample Social Return on Investment (Social ROI) calculation.⁴

Venture Philanthropists largely assume the form of Foundations, targeted Philanthropic Funds, multi-lateral institutions, private donors or some combination of all the above. The primary recipients of funds from Venture Philanthropists tend to be NGOs and various non-profit development organizations.

Examples of Venture Philanthropists are The Roberts Enterprise Development Fund (www.redf.com) and Ashoka (www.ashoka.org).

Traditional Venture Capitalist

In their most generic form, Venture Capital firms invest their shareholders money (venture capital) in risky but potentially very profitable ventures. Variations of this model include Angel Investors, Venture Funds, Private Equity firms, Incubators, private Investors, and a few others- however the underlying business theme is always tied to the deployment of financial and human capital in entrepreneurial

opportunities that provide the most attractive combination of risk and financial return. Inevitably, successful ventures assisted by venture capital generate economic return (creation of jobs, output for the economy) and sometimes even social returns (development of a community). However success is measured on the financial return scale only, the other returns are incidental to the cause.

*Venture Capitalists work by raising money from their investors, pooling it into a fund and then making investments in companies from that fund in order to sell that interest for a profit. Each Venture Capital fund is typically promoted to its investors on the basis of an investment strategy, specifying the industries, stage of company (i.e. entrepreneurial venture) in which the investment is made, size of investment, geographic location and the like.*⁵ Venture Capitalists typically work to a time horizon that is reflected in their investment preferences and investment terms. As the investments assume liquidity, the proceeds of the liquidation are distributed back to the investors. The difference between what was invested and what is distributed comprises the financial return for the investor in the Venture Capital fund.

Examples of Traditional Venture Capitalists abound. Kleiner, Perkins, Caufield and Byers (www.kpcb.com), and Battery Ventures (www.battery.com) are typical blue chip Venture Capital firms based in the United States. The View Group (www.viewgroup.com) is an international private equity firm with investment interests in the Indo-U.S. corridor.

Developmental Venture Capitalist

This is a variation of Venture Capital wherein capital is deployed in business

ventures that, in addition to financial returns on investment, achieve the social and/or economic development of hitherto disadvantaged regions/or communities. The social and economic aspects of developments are typically measured using metrics such as improvement in the standard of living, provision of sustainable employment, improvement in health, sanitation, human rights and such. More recently, an enabler in these ventures has been the innovative use of low cost technology. It should be stressed that even though capital is deployed in such ventures with quasi-karmic motives, financial return is by far the dominant theme. In essence Developmental (or Social) Entrepreneurs apply entrepreneurial skills and principles to address critical issues facing society in a sustainable and commercially viable manner. Individuals, who engage in such enterprise, ostensibly draw upon the tenets of both the for-profit and non-profit worlds. Prahlad and Hammond detail the growing benefits of developmental entrepreneurship in emerging markets such as India – *Markets at the bottom of the economic pyramid are fundamentally new sources of growth for multinationals. And because these markets are in the earliest stages, growth can be extremely rapid. Businesses can gain three important advantages by serving the poor – a new source of revenue to growth, greater efficiency, and access to innovation*⁶ (see Exhibit 3).

The essential dynamics of investing and distribution of returns remain unchanged relative to the traditional Venture Capitalist described above. In summary, a Developmental Venture Capitalist may be viewed as a traditional Venture Capitalist with specialized investment criteria.

There are numerous Developmental Venture Capitalists and Venture Funds all over the world. Sustainable Business.com is a portal that provides a partial list of Developmental Venture Capitalists (<http://www.sustainablebusiness.com>). Other specific examples are Aavishkaar, India (www.aavishkaar.org), a micro venture capital fund and Adena, a U.S. based developmental venture capital fund.

Change Agent

This category is relatively new in conception and the definition offered here represents the individual opinion of the author and is not acknowledged fact.

Change Agents are entities with a one-point agenda – to accelerate new venture creation with the overarching objective of triggering economic development by catalyzing the entrepreneurship process described above. Enabling agents achieve their objective by doing one or more of the following:

- Accelerating the overall entrepreneurship process in an eco-system.
- Improving the success rate of new ventures in the eco-system.
- Increasing the throughput of new venture flow through the process.

All the above maneuvers serve, both individually and in cumulation, to increase the amount of entrepreneurial and therefore economic development activity in the country concerned. Change Agents achieve the above by identifying entrepreneurs and entrepreneurial opportunities of potential, and then providing vigorous assistance with organizational creation and growth. Agents may be viewed as mentors of the highest pedigree who can mitigate the risks that would otherwise be associated with new venture creation and development. Pending

the completion of a comparative analysis of the business models above, the following questions about a Change Agent's role remain unanswered:

- Should Change Agents perform this function on a non-profit basis and without any financial incentives or financial participation?
- As a default strategy, should Change Agents focus their efforts and assistance on opportunities that exclusively pursue a financial return?

These questions will be revisited later.

Two concrete examples of Change Agents are Endeavor (www.endeavor.org), an entrepreneurship accelerator and Development Space, a marketplace for developmental projects (www.developmentspace.org).

New Venture Canonicals

Cursory analysis of the above models suggests that all the four models occupy different points on the same spectrum of new venture development. To make this taxonomy more defensible and understandable, a canonical view of organizational (or new venture) performance should be formulated and studied. Consider some typical attributes of a functional company. These attributes also serve as selection criteria for investment opportunities for the business models described above.

Projected Life

This refers to the estimated life of the company from inception until a substantive milestone such as an acquisition, merger, bankruptcy and so on. In conjunction with the parameters listed below, this provides a cumulative reading of the impact of the venture in terms of output (revenue), value added (profitability), employment (headcount), and so on.

Revenue

This refers to the annual gross sales figure in U.S. dollars.

Headcount

This refers to the number of employees on the company's payroll. In some cases, this may be adjusted to include contractors and other personnel engaged on a near full-time basis.

Profitability

This refers to the Net income of the company after interest and taxes in U.S. dollars. In conjunction with revenue, this provides a clear litmus reading of the commercial viability of the organization.

Average Salary

This is the mean employee compensation at the firm.

Location

This denotes whether the geographical setting for the venture is rural, urban, sem-urban, etc. and provides some sense for the social and developmental impact on the surrounding region.

Education Level

This denotes the literacy level of the employee base and helps calibrate the skills level of the organization as well as the developmental impact on the local population.

Industry

This denotes the industry that the new venture belongs to, and is a good litmus indicator of the risk and return anticipated by the investor.

Consider now, a few hypothetical canonicals that represent instances of the attributes described above. Each dataset maps to the prescribed agenda for one of the business models above.

The “Traditional Venture Capitalist” Canonical

Venture 1	
Projected Life	<i>5 years</i>
Revenue	<i>\$5 million</i>
Headcount	<i>25</i>
Profitability	<i>50%</i>
Average Salary	<i>\$50,000</i>
Income Group	<i>Upper Middle</i>
Location	<i>Urban</i>
Education Level	<i>Graduate</i>
Industry	<i>Software</i>

This represents a stereotypical technology venture that is highly profitable by absolute standards. The high per-capita revenue and per-capita net income make it an attractive investment prospect for a Traditional Venture Capitalist. It is arguable that the venture, being located in an urban metropolis and employing highly educated middle-class youth, does little by way of social development.

This would preclude participation by a Venture Philanthropist and perhaps even a Developmental Entrepreneur.

The “Developmental Venture Capitalist” Canonical

Venture 2	
Projected Life	<i>5 years</i>
Revenue	<i>\$5 million</i>
Headcount	<i>65</i>
Profitability	<i>20%</i>
Average Salary	<i>\$30,000</i>
Income Group	<i>Lower Middle</i>
Location	<i>Rural</i>
Education Level	<i>Undergraduate</i>
Industry	<i>Wireless</i>

This is a variation of the first dataset with a few significant differences, which dramatically change the eligibility of this investment prospect from the viewpoint of a Generic Venture Capitalist and a Developmental Venture Capitalist. The venture entails the innovative use of wireless technologies in a rural area and concurrently serves to improve the living standards of some segment of the rural population. Additionally, the expanded employee base of undergraduates is largely drawn from the lower income group and thus provides upward economic and social mobility. The fact that this is achieved with a reasonable financial rate of return places this venture in the cross hairs of a Developmental Venture capitalist.

The “Venture Philanthropist” Canonical

Venture 3	
Projected Life	<i>3 years</i>
Revenue	<i>\$5 million</i>
Headcount	<i>200</i>
Profitability	<i>2%</i>
Average Salary	<i>\$5,000</i>
Income Group	<i>Poverty</i>
Location	<i>Rural</i>
Education Level	<i>Illiterate</i>
Industry	<i>Agriculture</i>

This is a highly labor-intensive, agrarian venture with a largely illiterate employee base and veers towards the philanthropic end of the spectrum. The projected life of the organization is much shorter. Yet from a social and community development standpoint, this organization provides a compelling benefit – concrete employment for 200 citizens who are at the bottom of the economic pyramid. That there is a token element of commercial viability enhances the

legitimacy of the enterprise. These attributes almost instantly disqualify the venture from candidature for interest from anyone chasing a financial return. The social benefits make it a flagship venture for a venture philanthropist.

Comparative Evaluation and Recommendation

The analysis in the preceding section highlights the different venture selection criteria demanded by different business models. Although the examples depicted were fairly straightforward in demonstrating the eligibility of the ventures for investment by different types of investors, in practice it is more than likely that selection criteria do not clearly promote or eliminate an opportunity. For instance a profitability of 25% and location in a semi-rural area may place the venture on the fringes of consideration by both generic and developmental venture capitalists. Similarly, trade-offs between net income and employee literacy, between employee productivity and headcount may blur the lines for venture Philanthropists and Developmental Investors. A trickier task would be to decide which ingredients or combination of ingredients hold the most potential for altering the economic future of a nation. For instance, in the larger scheme of things is it better to make a relentless push for the bottomline instead of providing succor to a displaced labor force in a rural area? What is the larger scheme of things anyway? If indeed one type of return (say financial return) is pursued, should it be pursued to the exclusion of other returns?

The following thoughts emerge from the discussion above:

- Entrepreneurship and investment in entrepreneurial ventures mean different things to different constituencies with respect to objectives, the

definition of success, the metrics for success, and the measurement of these metrics.

- There is inherent subjectivity in determining which forms of entrepreneurship provide a fillip to economic development.

Although there are numerous granular differences between the business models, the most significant one (for purposes of this thesis) relates to the (mis) match between a particular business model's charter and the stated goal of triggering economic development through entrepreneurship.

Venture Philanthropists, Traditional Venture Capitalists and Developmental Venture Capitalists by virtue of their investment criteria and objectives, have an inherent bias towards some new venture category or the other. This bias leads them to place certain new venture opportunities outside their sphere of interest even if these ventures, in absolute terms, hold the potential to deliver economic value to the nation. Change Agents (in this writer's conception), on the other hand, have an overarching focus on the commercial and economic value generated by the enterprise and are generally not constrained by the type (and magnitude) of return generated, geographical or industrial focus, and other such elimination criteria. Thus, all three canonicals discussed earlier may be of interest to a Change Agent. This is significant because the investment bias in the other models may create a very high opportunity cost in terms of forfeited development for the economy.

Another manifestation of the above problem merits mention. Most Venture Philanthropists and Venture Capitalists are eventually capacity constrained with

respect to the size of their portfolio. This relates to some combination of their personnel headcount, fund size and portfolio allocation. Thus, ostensibly, at the margin there is a 'zero-sum' investment game wherein faced with two investment opportunities of approximately equal merit they have to pick one at the expense of the other. The dynamics and protocol in the industry do not necessarily suggest the redirection of the rejected opportunity to another investor and one may conservatively assume a new venture casualty under these circumstances.

A Change Agent, with an inherently holistic and panoramic charter, would be well positioned to aid the development of these otherwise forfeited ventures.

Lastly, the range of vision of traditional venture capitalists and venture philanthropists rarely goes beyond the returns expected of a specific opportunity or a portfolio of opportunities. An important aspect of creating a groundswell of entrepreneurship in a developing country is the need to combat numerous prevalent social, cultural and psychological mores. This is done most effectively by demonstrating and showcasing the efforts of role model entrepreneurs. This will eventually begin to change the psyche of the people with respect to entrepreneurship. Venture capitalist and venture philanthropists would find it impractical to do justice to such an objective whereas Change Agents with their broad agenda would be well-positioned to address it.

It is, therefore, the writer's view that the most effective way to pursue the eventual goal of economic development in a developing country is to function as a Change Agent. A Change Agent can help accelerate the entrepreneurship process by identifying and supporting new ventures with a primary focus on

sustainable, scalable and profitable growth. Thus a Change Agent would qualify and assist prospects of interest to both Traditional and Development Venture Capitalists and with equal vigor support all such prospects through the entrepreneurship process. In specific operational terms, a Change Agent would:

- Identify new venture opportunities (in various stages) that require assistance in moving through the entrepreneurship value chain i.e. in moving through the stages of entrepreneurship listed above.
- Use a rigorous screening process to select the ventures with greatest commercial and ethical longevity.
- Provide extensive assistance to these selected ventures to help them move through the entrepreneurial process. Depending on which stage the venture is in, this assistance can encompass several areas such as business plan preparation, strategy formulation, funding, risk management, etc. This assistance will entail mentoring the entrepreneurs on practical issues such as those listed above and will stop short of participation in any financing, investing and operational activities of the venture.
- Instill general values of entrepreneurial mentoring and service in the selected entrepreneurs with a view to creating a recursive and infectious culture of national and economic awareness and service.
- Create role models for entrepreneurship who would serve to eliminate social, cultural and psychological biases against entrepreneurship.

A Change Agent organization is conceived as comprising of a nucleus of dedicated personnel and an extended, networked community of volunteers that in its eventual form would include entrepreneurs, academicians, industrialists, professional investors, lawyers and possibly bureaucrats.

Pending the completion of the business plan in the following chapter, it is assumed for now that a Change Agent would operate on a cash-flow positive but non-profit basis, and that by default the Change Agent would support new venture opportunities that pursue financial returns. As stated earlier, a prominent and successful example of a Change Agent is Endeavor. The proposed change agent in India is hereafter referred to as ***Catapult, Inc.***

Although the preceding section recommends the Change Agent model as a basis for creating an entrepreneurship accelerator in India, and also specifically suggests Endeavor as a useful benchmark, further scrutiny of the Indian environment shows the following:

- There are already numerous entrepreneurship advocacy organizations in India, the most prominent one being the TIE – the Association of Indus Entrepreneurs. Although the effectiveness of these organizations in terms of catalyzing entrepreneurship is debatable (in this writer's opinion), they enjoy tremendous clout, visibility and mind share and are unlikely to be collaborators with another organization that professes a similar agenda.

- India has a large pool of educated and skilled managers and technologists who are competent at organization building but lack the vision and innovation to conceive and create new ventures.
- In spite of a surfeit of technical and managerial talent, the resistance to the risks of new venture creation remain fundamentally high.

The Endeavor model is essentially 'top-down', program-oriented and demand driven in that it relies on a good supply and groundswell of able and aspiring entrepreneurs. The model searches for an intersection of good people and good ideas. In the writer's opinion, this model has the following lacunae:

- It does not have the processes to mix and match good people (without good ideas) with good ideas (without good people)
- It does not have the wherewithal to compensate for an acute shortfall of good ideas and an oversupply of good people (which is the case in India). This results in a high "opportunity cost of entrepreneurship".
- In essence, the Endeavor model fails to harness and deploy entrepreneurial talent unless it is accompanied by ideas i.e. it does not address the dichotomy between "organization building skills" and "vision" – it looks for a unison of both capabilities. Furthermore, the model fails to create a supply of new venture ideas and concepts to attract idle organization builders.

Recommended Model for a Change Agent in India

The Indian environment calls for entrepreneurship acceleration through the creation of new venture ideas and scalable micro-ventures that attract

organization builders. This is a 'supply-driven' approach that aims to reduce the opportunity cost of organization builders who are starved of viable new venture ideas.

The salient aspects of this business model are as follows:

- Catapult would be a 'non-profit' with a supply-side focus on creation of micro-ventures that can scale into large organizations
- New venture creation would be accompanied by financial participation with clearly defined guidelines. The financial participation would be structured as debt and/or equity with a view to creating a revenue stream for a maximum of three years.
- Catapult, in addition to a skeleton management team, would employ 'micro entrepreneurs in residence' who would occupy management positions in the micro-ventures until the termination of Catapult's involvement and revenue stream from the micro-venture. Thus the 'micro-entrepreneurs in residence' would be a floating population of entrepreneurs who would nurture micro-ventures by turn through the first three years or so of their existence. This approach would use the inherent skills and strengths of the entrepreneurship team to create new ideas and micro-ventures that can then attract the abundant talent available.

Thus, the benefits of this business model are the following:

- It offers the potential to harness individual traits and talents effectively (i.e organization building, vision) with minimal opportunity cost
- It lowers cultural and psychological barriers to entry

- It creates a greater groundswell of new venture activity and economic development
- It avoid any explicit or implicit conflict of agendas with popular advocacy organizations like TIE

The success of this proposed business model however hinges on the sustained ability to conceive and create viable micro-ventures. Therefore, in order to support the claims above, the following chapter focuses on the presentation of a business plan for the first Catapult micro-venture.

It should be noted that, in keeping with the nature and time frame for Catapult's proposed financial participation in a micro-venture, the business plan is strictly intended to establish the viability of the micro-venture, and not the scalability of the micro-venture. Thus, the scope and rigor of the business plan should be viewed in this light.

5. Business Plan

This section details a business plan for the first proposed Catapult micro-venture, “Hands-on, Minds-on”. “Hands-on, Minds-on” is conceived to be a children’s educational center for exploration in Math, Science and Technology based in Bangalore, India.

Vision

To inculcate the spirit of the plucky scientist and inventor in the Indian child by providing cost-effective access to world-class “hands-on” educational materials that aid a child’s exploration and understanding in the areas of Math, Science and Technology.

Mission

“Hands-on, Minds-on” intends to be a children’s after-school educational center designed to:

- Complement traditional, pedantic instruction in Indian schools.
- Provide materials and infrastructure for a range of hands-on educational activities for children in the age group (7 years to 12 years) in the areas of Math, Science and Technology.
- Provide cost-effective access to otherwise inaccessible, world-class educational materials for middle and lower income group families

The “Hands-on, Minds-on” center is initially envisaged to offer the following programs for children:

- ‘Learning by Doing’ workshops.

This would comprise of:

- Structured and free-format, age-appropriate, individual and group construction activities using 'shrink-wrapped' educational materials from a variety of vendors such as Lego, K'nex, Mechanix, and others (see Exhibit 4-A).
- Structured workshops using 'shrink-wrapped' or custom educational materials from source organizations such as Media Lab and others
- Guidance by trained specialists in such activities.

- 'Reading and Research'

This would entail the provision of assisted reading and literary research facilities using a substantive collection of literary artifacts. (see Exhibit 1 for specimen exhibits)

- 'Digital Publishing'

This section will:

- Allow children to express their creativity and celebrate their learning by publishing commentaries about –
 - The artifacts they create in the "Learning by Doing" section or
 - A topic they have researched in the "Reading and Research" section or
 - A combination of the two
- Provide children with the opportunity to be introduced to LOGO programming to be used to make presentations of their work.

- Provide a holistic awareness and working knowledge of digital technologies in general

The case for Hands-on, Minds-on

A classroom functioning around the “Learning by doing” principle is still a rarity in India. While schools and classrooms in the developed world are being transformed to accommodate learner-centered “learning by doing” activities, students in the traditional Indian classroom rarely enjoy the privilege of even seeing a simple machine at work during a class that deals with the subject.

One could argue that huge class sizes and constrained resources make this a difficult philosophy to practice. The truth is that very little effort is made to bring basic Math and Science principles home to students.

In developed countries, most children in the elementary-middle school years have access to, and love to play and construct with LEGO and K'nex at home and in school (given a chance). (LEGO is perhaps more widely available).

These vendors now have a presence in schools as well with educational materials accompanied by Teachers' Guides that provide students the opportunity to design and build models that encourage open-ended exploring, and structured investigation and problem-solving, within the framework of the Math, Science and Technology curriculum. The LEGO programmable brick that emerged out of the Lifelong Kindergarten group at the MIT Media Lab, has brought the world of robotics into the classroom through the LEGO Mindstorm kits. At their current prices in developed countries, all these materials are prohibitively expensive for most Indian schools.

Also missing from the lives of most Indian children is the enrichment and stimulation provided by well-stocked Public Libraries and Science and Children's Museums because such facilities simply do not exist. There is a wealth of knowledge children can glean from books (such as encyclopedias) that complement the traditional textbook content with real-life stories, pictures, examples and the history of inventions and the principles behind them.

Access to such materials gives kids a chance to research and know more about topics that spark their curiosity and interest.

Through a "shared user model", "Hands-on, Minds-on" will bring all these elements together for middle and lower income groups in an affordable, after-school setting.

Thus, the educational case for "Hands-on, Minds-on" lies in the following:

- Historically India schools with their large class sizes and constrained resources have adhered to "unidirectional didactic teaching".
- Educational activity centers, museums, well-stocked libraries are a rarity.

The business case for "Hands-on, Minds-on" lies in 2 simple facts:

- The Indian middle class has a relentless focus on children's education and a sustainable willingness to spend on it.
- A "multi-user" subscription model in a collaborative setting dramatically reduces the access and usage cost for consumers.

Target Audience and Consumer Profile

This is targeted at middle-class Indian families with:

- An annual household income of (> RS 50,000 or > \$1000)
- School going children in the age group (7 – 12 years).
- Children in conventional (non-progressive) Indian schools that stress on unidirectional didactic teaching

The entry point pricing for a subscriber is approximately RS 800 per month (\$16 per month) with no stipulated subscription period.

Market Size

It is roughly estimated that there are about 3 million middle-class households.

Launch

A pilot center launch is targeted in Bangalore for Q1 2004 with a site capacity of 25 participants. Subsequently, **“Hands-on, Minds-on”** will be scaled up in Bangalore and then rolled out (possibly franchised) in other Indian metros.

Infrastructure

“Hands-on, Minds-on” will be housed in on leased premises with the necessary infrastructure required to offer the services listed above. The pilot will be carried out in Bangalore in approximately 2500 sq.ft of leased space.

Customer Segments and Revenue model

Initially, the principal revenue streams will comprise of :

- Membership subscriptions targeted at individual customers
- Custom and standardized workshops for schools
- Corporate subscriptions for employees

Capacity and Revenue Model

The “*Hands-on, Minds-on*” center is intended to be operational during after-school hours on weekdays and all day on weekends. As such a total of 168 revenue generating hours will be targeted every calendar month. A trained staff of 3 instructors will be employed to conduct and supervise the activities of the center.

The center’s structured activities will be designed to require a minimum of 2 hours and a maximum of 6 hours of participation per week from each participant. The minimum monthly subscription commitment from each participant would be 10 hours.

The center is designed to bear a capacity of 25 participants in every revenue generating hour.

The targeted revenue per participant hour is \$2.00. Cumulative revenue per month assuming 168 revenue generating hours and 25 participants per revenue generating hour will be approximately \$8400 per month. EXHIBIT 4-B details the capacity utilization and revenue model for the proposed “*Hands-on, Minds-on*” center. EXHIBIT 4-C details the anticipated revenue stream, estimated operating expenses, start-up capital, capital expenditure and a cumulative forecast for the first 13 months of operation.

Alliances

“*Hands-on, Minds-on*” will form partnerships with three different types of organizations. The alliance categories and their principal benefits are described below:

1. **Vendors and Content Providers** (Toy vendors such as Lego, K'nex/Mahindra Intertrade, Mechanix; Publishers such as Dorling Kindersley, Scholastic, Britannica)

Principal Benefits:

- Reliable supply of high-quality educational material to *Hands-on, Minds-on*
- Additionally, channel partners would gain access to modest real-time consumer data, and a possible test bed for concept and new product testing.

2. **Source Organizations** (such as Media Lab, IIT Kanpur, others)

Principal Benefits:

- Ready access to mentoring and expertise in formulation and delivery of offerings, development of alternatives, general thought leadership in educational technologies.
- Additionally, *Hands-on, Minds-on* could serve as a site for testing pilot products and conducting workshops for emerging hands-on educational materials and technologies.

3. **Educational Institutions** (Bangalore area Schools)

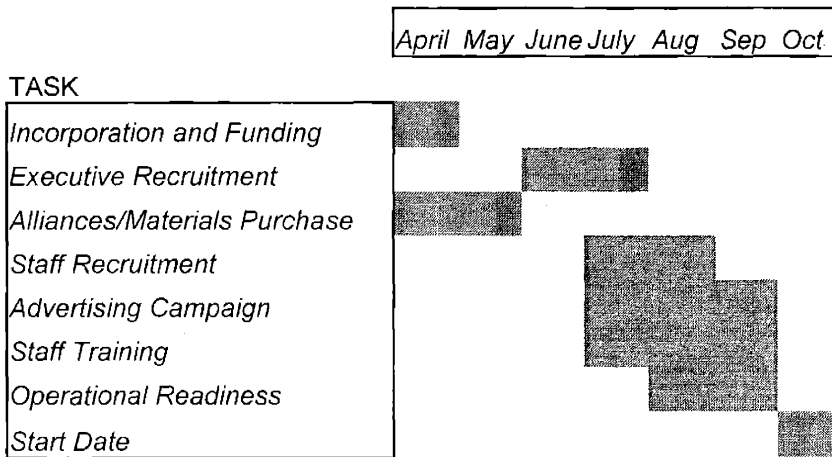
Principal Benefits:

- Access to information about school curricula, student profiles and formulation of metrics for measuring learning at the center.

- Collaboration with the teaching community on enriching the activities at Hands-on Minds-on as well as the teaching and learning process in schools.

High Level Project Plan

A summary timeline for the launch of the new venture is shown below:



Organizational form

“Hands-on, Minds-on” will be incorporated in the U.S. as a ‘S’ corporation with a wholly owned subsidiary in India. This provides a scalable form that can support expansion to other developing countries. Furthermore, the creation of a U.S. holding company facilitates the creation of alliances with vendors who offer copyrighted and patented educational material.

Management Team

The management team would initially comprise of Shivram Venkatasubramaniam and Shuchi Grover. Additional members of the executive team will be recruited from both the U.S. academic community and from the Indian corporate and

educational community. Every attempt should be made to procure the ongoing stewardship of the Lifelong Kindergarten group in MIT's Media Lab.

Shivram Venkatasubramaniam is an accomplished entrepreneur with an excellent track record in new venture creation and business experience in Asia, Europe and North America. Most recently, Shivram founded and grew a U.S. based software company without external funding to several million dollars in revenue, and executed a successful exit strategy. Shivram has graduate degrees from the Indian Institute of Management, Case Western Reserve University and MIT's Sloan School of Management.

Shuchi Grover is a successful entrepreneur with experience in all aspects of new venture creation. Shuchi has extensive experience in the application of technology to education. In addition to numerous projects in the U.S., Shuchi has also conducted studies for the Indian Government. Shuchi has graduate degrees from Case Western Reserve University and the Harvard Graduate School of Education.

Risks

The marketing and advertising strategy has very little room for error. The slightest misstep in positioning "Hands-on, Minds-on" could have alienate the target audience. The success of the subscriber model is predicated completely on the activities being perceived (with the utmost clarity) as educational activities in an after-school setting. Any misstep with regard to this in the advertising and marketing strategy will result in this being perceived as falling outside the boundary of acceptable educational expenses by the target audience.

School administrators and teachers, due to their dominant role in the lives of target subscribers, play a strong role in influencing the opinions and spending pattern of subscribers. This represents a single point of failure in the whole enterprise in that any alienation of this community could rapidly erode the subscriber base.

The continued success of the model will depend on sustaining the quality of the educational material as well as the instruction. The quality of the educational material is dependent on the vendors while the quality of the instruction depends on a robust recruitment, training and retention strategy. The slightest deterioration in instruction would result in a very quick and negative impact on customer acquisition and retention.

End Notes

- ¹ Source: "Investment Philanthropy, Concepts of Value and Defining SROI" – White Paper from The Roberts Enterprise Development Fund (parts of this discussion are taken from narrative presented in "The Nature of Returns," (Harvard Business School Working Paper, SEI Series #17).
- ² Source: *Morris, Zahra, and Schindehutte*, "Understanding Factors that trigger entrepreneurial behavior in established companies" from *Gary D. Libecap (Edited by), Entrepreneurship and Economic Growth in the American Economy - Advances in the Study of Entrepreneurship, Innovation and Economic Growth, Volume 12.*
- ³ *Cliff Conneighton*, Chapter titled "Venture Capital" from *Venture Management Handbook - An Entrepreneur's Practical Guide to Stock, Finance and Contacts.*
- ⁴ Source: The Roberts Enterprise Development Fund General Information and Resources (http://www.redf.org/links_general.htm)
- ⁵ Source: *Cliff Conneighton*, Chapter titled "Venture Capital" from *Venture Management Handbook - An Entrepreneur's Practical Guide to Stock, Finance and Contacts.*
- ⁶ Source: *C.K. Prahalad and Allen Hammond*, "Serving the world's poor, profitably" *Harvard Business Review* September 2002
- ⁷ Source: "Different Approaches to Understanding Entrepreneurship" from *Kantis, Ishida, Komori*, *Entrepreneurship in Emerging Economies: The Creation and Development of New Firms in Latin America and East Asia*, The Inter-American Development Bank.
- ⁸ Source: *Mathew Manimala, Srinivas Prakhya, Malathi V. Gopal, Joseph Shields*, *Global Entrepreneurship Monitor India Report 2001*, Indian Institute of Management, Bangalore, NS Raghavan Centre for Entrepreneurial Learning
- ⁹ Source: *Rick Locke*, "Can Entrepreneurship be Taught? : Reflections from the MIT Experience"

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9. *Mathew Manimala, Srinivas Prakhya, Malathi V. Gopal, Joseph Shields*, *Global Entrepreneurship Monitor India Report 2001*, Indian Institute of Management, Bangalore, NS Raghavan Centre for Entrepreneurial Learning.
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(http://www.redf.org/links_general.htm)

14. *T.N. Srinivasan*, Eight lectures on India's Economic Reforms, Oxford University Press.
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EXHIBIT – 1 India Political Map

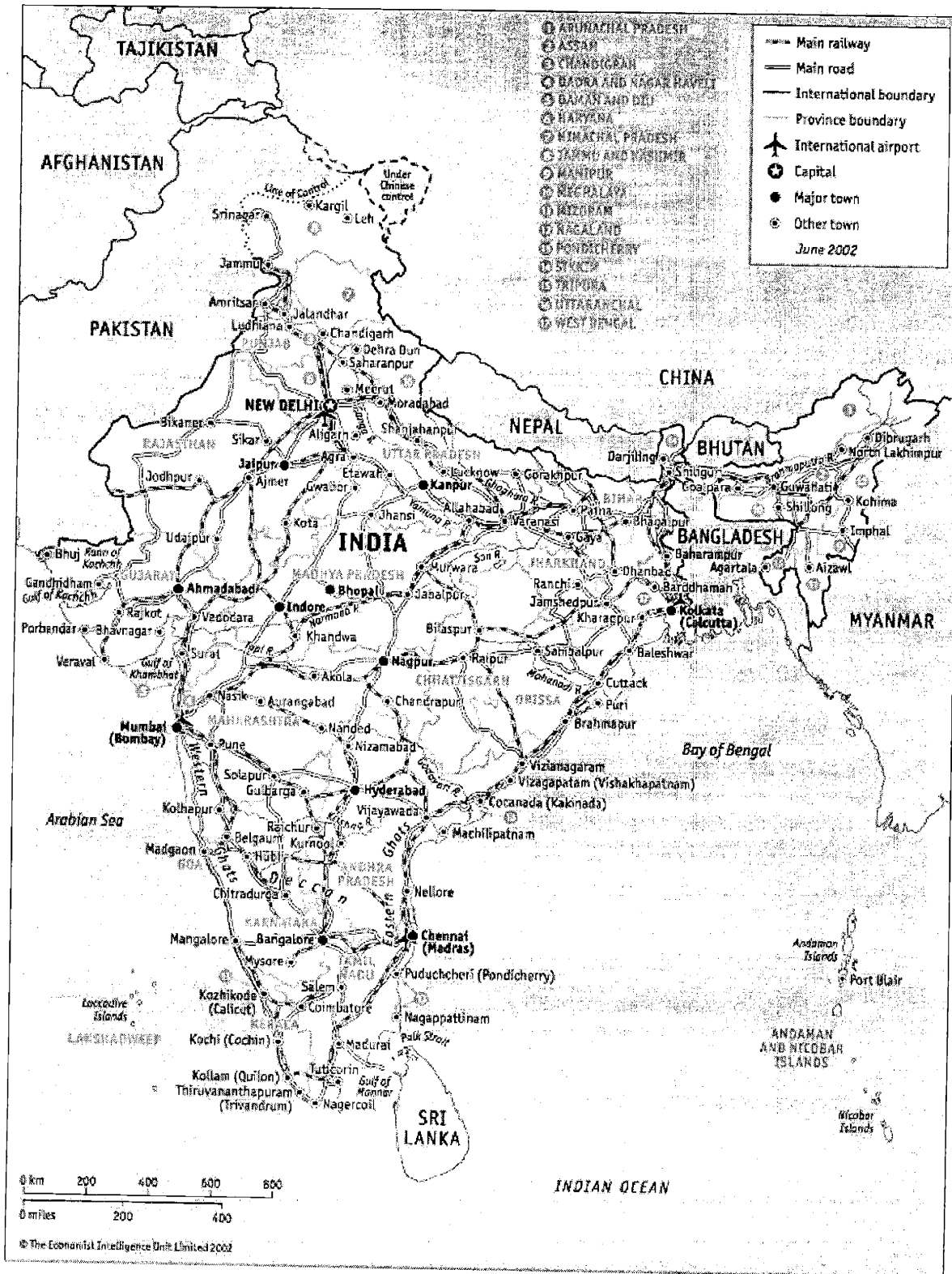


EXHIBIT-2

<p>Enterprise ABC Agency XYZ</p>
<p>Inputs -- Social Impact</p>
<p>Guidelines</p> <ul style="list-style-type: none"> - The "Projected # of Target Employees" should include the total number of target employees -- regardless of whether they are full time or part time. - The "Change in Annual Income" should reflect the average difference between each target employee's income at the time of hire, to his or her income one year later. - When calculating "Criminal Convictions Savings", consider the following: <ul style="list-style-type: none"> - The cost of conviction is the weighted average cost of carrying out the sentence (probation or incarceration) -- other costs are excluded. - Consider the following in the "Calculation of Average Social Cost Savings Per Employee" table: <ul style="list-style-type: none"> - The "Total decrease" in annual visits or annual costs reflects the sum of usage for all target employees. These values are not averages. - Cost savings values should be relevant for your geographic area and the time period of your analysis. - The "# of Target Employees Responding" provides the basis for averaging the cost savings. - See the appendix of the SROI Methodology Paper for more information on specific sources of cost savings data.

Projected Number of Target Employees

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Terminal Period
# of Target Employees	78	82	82	82	82	82	82	82	82	82	82

Change in Annual Income \$ 12,097

Calculating Criminal Conviction Savings

1) Calculation of Cost of Conviction

Sentence	Average Yearly Cost	X	% of People	=	Cost of Conviction
Incarceration	\$ 21,243	X	69%	=	\$ 14,658
Parolee	\$ 2,182	X	31%	=	\$ 676
					\$ 15,334

Cost of Conviction \$ 15,334

EXHIBIT-2

Reduction in Expected Criminal Convictions

Expected Repeat Convictions		Recidivism Rate		First Time Convictions		Reduction in Expected Convictions	
# of Employees w/Conviction at Baseline	X	Actual Number of Repeat Convictions	÷	Cost Savings for Criminal Convictions	=	Cost Savings for Criminal Convictions	=
7	X	2	÷	1,328	=	1.73	=
		67.6%					

Average Per Person Cost Savings for Criminal Convictions

Reduction in Expected Criminal Convictions	÷	# Target Employees Responding to Question	X	Cost of Conviction	=	Cost Savings for Criminal Convictions
1.73	÷	20	X	\$ 15,334	=	\$ 1,328

Calculation of Average Social Cost Savings Per Employee

	Total decrease (increase) in annual visits	X	Cost Per Visit/Use	=	Total decrease (increase) in annual cost	÷	# of Target Employees Responding to Question	=	Average Cost Savings per Target Employee
Public Assistance Programs*									
TANF	NA		NA	=	\$ -	÷	20	=	\$0.00
General Assistance	NA		NA	=	\$ 300	÷	20	=	\$15.00
Food Stamps	NA		NA	=	\$ 3,362	÷	20	=	\$168.10
SSI	NA		NA	=	\$ 5,004	÷	20	=	\$250.20
Social Service Programs									
Food Banks	1,050	X	\$ 26	=	\$ 27,300	÷	20	=	1,365.00
Case Management	980	X	\$ 41	=	\$ 40,180	÷	17	=	2,363.53
Community Clinics	34	X	\$ 86	=	\$ 2,924	÷	20	=	146.20
Mental Health Treatment	222	X	\$ 176	=	\$ 39,072	÷	20	=	1,953.60
Housing Services (shelter, trans housing, grp home)	1,650	X	\$ 62	=	\$ 102,300	÷	20	=	5,115.00
Emergency Room	2	X	\$ 211	=	\$ 422	÷	18	=	23.44
Legal Services	4	X	\$ 1,029	=	\$ 4,116	÷	18	=	228.67
Substance Abuse Trmt.	2	X	\$ 8,060	=	\$ 16,120	÷	20	=	806.00
MediCal (includes employee and dependents)	10	X	\$ 3,762	=	\$ 37,620	÷	20	=	1,881.00
Criminal Conviction Savings (see below)									1,327.93
Average Social Cost Savings Per Employee									\$15,643.67

EXHIBIT 3 – The World Pyramid

Most companies target consumers at the upper tiers of the economic pyramid, completely overlooking the business potential at its base. But though they may each be earning the equivalent of less than \$2000 year, the people at the bottom of the pyramid make up a colossal market – 4 billion strong – the vast majority of the world's population.

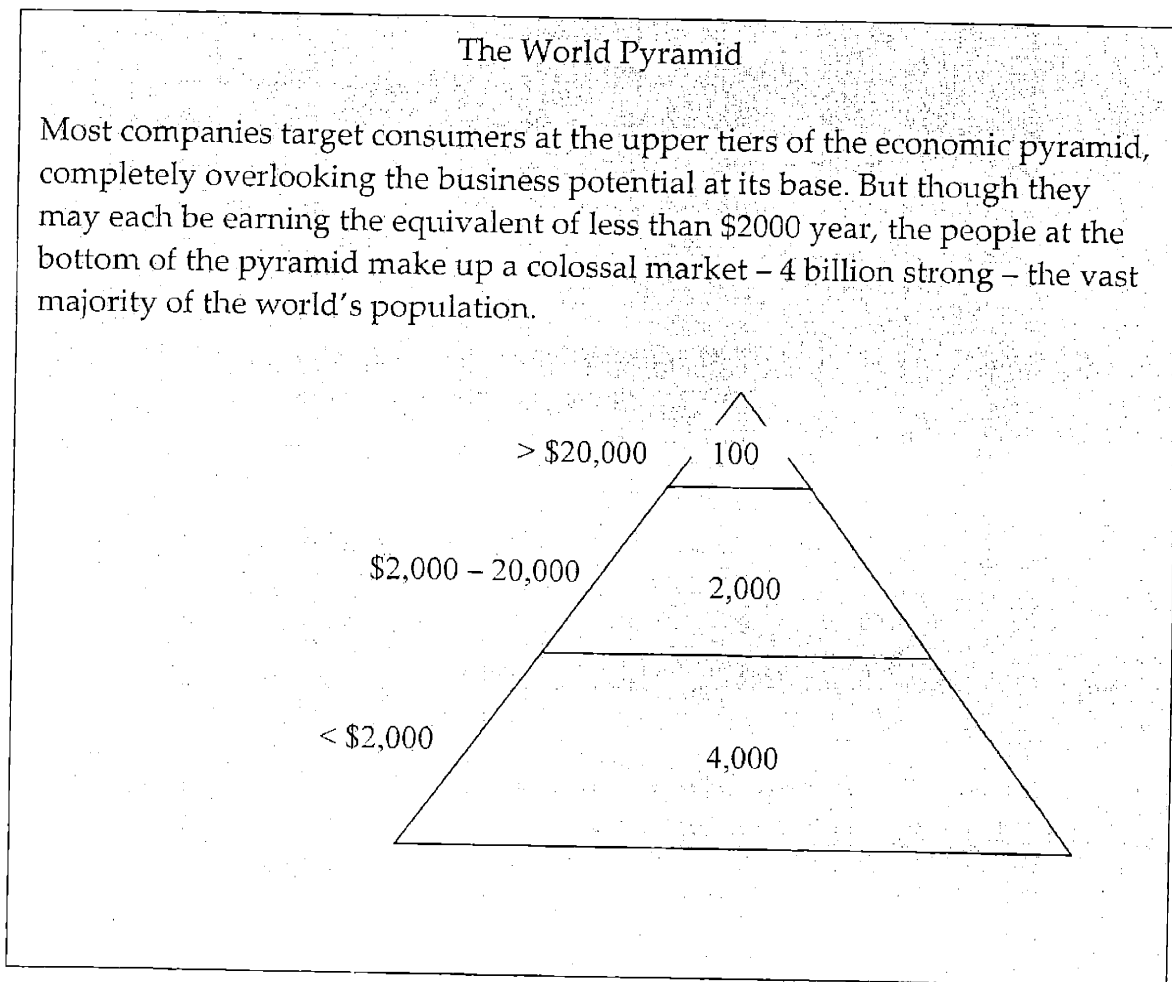


EXHIBIT 4-A

PRELIMINARY LIST OF EDUCATIONAL MATERIAL	
CATEGORY	PRICE
HANDS-ON MATERIALS	
ROBOTICS	
Mindstorm Starter System	\$1,000
MECHANISMS	
Motorized Simple Machine Technology Pack	\$540
Science and Math for Technology	\$22
Wheels and Axles/Gears classroom pack	\$337
Levers/Pulleys Classroom pack	\$337
Early Simple Machines set	\$99
Making Magnificent Machines	\$25
ENERGY	
Introduction to Air Power class pack	\$350
Electronic Building Block Set	\$60
DA Camera Pak	\$195
DA Camera Expendbles Pak	\$140
STRUCTURES	
Early Structures set	\$76
Concept Guide: Bridges, Towers and other structures	\$18
Bridges	\$10
EARLY LEARNING	
Early Simple machines Set	\$98
Early Structures Set	\$76
BOOKS	
Children's dictionary of occupations	\$100
Science and Math for Technology	\$22
Electricity and Magnestism	\$16
Science Fair project: Energy	\$10
Awesome Experiments in Electricity and Magnestism	\$8
Usborne: Photography	\$9
Awesome Experiments in light and sound	\$8
Amazing building	\$17
Do your ears pop in space	\$16
Math Projects Series: Building Kites	\$12
Usborne: Machines	\$7
Creative Projects with Lego Mindstorms Book and CD-Rom	\$30
Usborne: Science Encyclopedia	\$15
Usborne:Robotics	\$8
Contruct a catapult	\$27

BOOKS (Continued)	
Creative Engineering with Lego constructions	\$30
The new way things work (book and CD-rom)	\$85
Gizmos and gadgets	\$13
Young Inventors at work	\$14
How to be an inventor	\$11
Eyewitness: Invention	\$19
Eyewitness: Car/Boat/Train/Flying machine	\$76
Wind at Work	\$15
Wind Energy Basics	\$20
Encyclopedia Britannica	\$550
DK Eyewitness Series	\$479
TOTAL	\$5,000
OTHER MATERIAL	\$5,000
TOTAL OUTLAY	\$10,000

EXHIBIT 4-B

REVENUE MODEL

Revenue generating hours per day (weekday)	0						
Revenue generating hours per day (weekend)	10						
Weekday days per month	22						
Weekend days per month	8						
Estimated number of instructors per revenue generating hour	3						
Revenue generating hours per month (weekdays)	88						
Revenue generating hours per month (weekend)	80						
Total Revenue Generating Hours per month	168						
Targeted Participant Capacity per revenue generating hour	25						
Targeted revenue generating participant hours per month	4200						
Targeted Revenue per participant hour	\$2						
TOTAL SUBSCRIPTION REVENUE	\$8,400						
OTHER REVENUE (from M17)	\$0						
TOTAL TARGETED REVENUE PER MONTH	\$8,400						
<u>ALTERNATIVE SCENARIOS</u>							
Total participant hours per month	4200	4200	4200	4200	4200	4200	4200
Average number of hours per subscriber per month	8	12	16	20	24	28	6
Average number of subscribers per month	525	350	262.5	210	175	150	700
Monthly expenditure per subscriber (in \$)	\$16.00	\$24.00	\$32.00	\$40.00	\$48.00	\$56.00	\$12.00
Monthly expenditure per subscriber (in Indian Rupees)	800.00	1,200.00	1,600.00	2,000.00	2,400.00	2,800.00	600.00

NOTE:

- (1) It is assumed that consumer subscriptions represent the only revenue stream during the pilot phase
- (2) It is assumed that the instructor headcount and site capacity remain static for the first year of operation

EXHIBIT 4-C

	MONTHLY	ANNUAL
REVENUE (from Sheet 1)	\$8,400	\$100,800
ESTIMATED OPERATING EXPENSES		
Wages and Salaries (weekdays)	\$500	\$6,000
Wages and Salaries (weekend)	\$800	\$9,600
Other compensation	\$500	\$6,000
Executive Compensation	\$2,000	\$24,000
Utilities	\$500	\$6,000
Rent and fixtures	\$500	\$6,000
Insurance	\$105	\$1,260
Legal	\$105	\$1,260
Accounting	\$105	\$1,260
Travel	\$150	\$1,800
Advertising	\$400	\$4,800
Sales and Marketing	\$400	\$4,800
New materials/replacements	\$375	\$4,500
Miscellaneous	\$300	\$3,600
TOTAL OPERATING EXPENSES	\$6,240	\$74,880
NET INCOME	\$2,160	\$25,920

13 MONTH FORECAST STARTING August 2003

Month	2003 July 1	2003 August 2	2003 Sep 3	2003 Oct 4	2003 Nov 5	2003 Dec 6	2004 Jan 7	2004 Feb 8	2004 March 9	2004 April 10	2004 May 11	2004 June 12	2004 July 13
Revenue	\$0	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400
Expenses	\$6,598	\$6,240	\$6,240	\$6,240	\$6,240	\$6,240	\$6,240	\$6,240	\$6,240	\$6,240	\$6,240	\$6,240	\$6,240
Net Income	-\$6,598	\$2,160	\$2,160	\$2,160	\$2,160	\$2,160	\$2,160	\$2,160	\$2,160	\$2,160	\$2,160	\$2,160	\$2,160
Cumulative NI	-\$6,598	-\$4,438	-\$2,278	-\$118	\$2,042	\$4,202	\$6,362	\$8,522	\$10,682	\$12,842	\$15,002	\$17,162	\$19,322

CAPITAL EXPENDITURE IN YEAR-1	
Educational Material	\$5,000
Other	\$5,000
TOTAL CAPITAL EXPENDITURE	\$10,000
START-UP CAPITAL	
Capital Expenditure	\$10,000
Buffer	\$10,000
3 months operating expenses	\$24,960
Other	\$2,400
TOTAL CAPITAL REQUIRED	\$47,360

NOTE:

- (1) Recurring monthly capital expenditures on acquisition of new materials have been expensed
- (2) Legal and other expenses at the outset have been factored into the monthly estimates, and the 3 month expense float included in the estimate of start-up capital
- (3) Initial Capital expenditure of \$15000 on new materials have not been expensed
- (4) Up-front collection of subscription fees should result in positive cash flow from Month-2 if the center operates at capacity