

The Chinese University of Hong Kong



深圳市社会科学院
SHENZHEN ACADEMY OF SOCIAL SCIENCES

Global Entrepreneurship Monitor

GEM

Hong Kong & Shenzhen 2004



工業貿易署
Trade and
Industry
Department



The Asia-Pacific Institute of Business



工商管理研究社

Booz | Allen | Hamilton

21世紀經濟報道

Global Entrepreneurship Monitor

Hong Kong and Shenzhen

2004

SUMMARY

- Surprisingly few people in Hong Kong - only 3% of the adult population - have recently started businesses. The corresponding figure for Shenzhen is much higher, around 11%. These percentages of startup activity, which GEM calls total entrepreneurship activity (TEAs) are stable from year to year
- Relative to economies in their respective income brackets, both Hong Kong and Shenzhen have low TEAs. In Hong Kong, fewer people than average start businesses to take advantage of opportunities (Opportunity TEA), while in Shenzhen, a lower than expected percentage of the population starts businesses for lack of a better job (Necessity TEA)
- The more educated and richer a person is, the greater is the chance he or she will start a business to take advantage of opportunities
- The vast majority of entrepreneurs in Hong Kong and Shenzhen start companies using standard technologies, selling existing products and services and tapping into competitive markets
- The industry composition of start-up activity in both Hong Kong and Shenzhen is the same, and similar to that of lower income countries in the rest of the world
- Hong Kong's good government policies and excellent soft and hard infrastructure provide a superior environment for business
- Hong Kong's high cost base, lack of entrepreneurial education and inadequate links between R&D and the market retard entrepreneurship
- Shenzhen's highly motivated optimistic immigrant culture and buoyant economic climate provide an excellent entrepreneurial environment
- Shenzhen's lack of educational resources and lack of social cohesion and trust inhibit entrepreneurship
- Hong Kong's attitude to entrepreneurship is paradoxical: while the values of entrepreneurship are embraced, an increasingly risk-averse population is unwilling to make the sacrifices involved in startups
- Informal investment in Hong Kong and Shenzhen is very similar
- Family ties are less important than social ties in informal investing in Hong Kong and Shenzhen
- Informal investors represent the most important source of start-up capital
- Half of informal investors invest for reasons other than making money
- In the economic climate of the Pearl River Delta, entrepreneurship can improve profitability.
- Hong Kong and Shenzhen corporate entrepreneurship are quite similar to each other, but their levels are low by international standards
- There are several distinct dimensions that together make up a company's entrepreneurial orientation. These include management flexibility, innovativeness and strategic orientation
- Hong Kong companies' management structures encourage more autonomy than Shenzhen companies and so are more entrepreneurial in that respect
- Shenzhen companies are more willing to pursue opportunities, regardless of resource constraints, and are far more focused on rapid growth than Hong Kong companies. These hallmark higher entrepreneurial are associated with lower profitability in the short term

Recommendations

In our 2002 and 2003 studies, we made recommendations which continue to be valid. These are repeated in Appendix I. The followings supplement our earlier recommendations:

- Because entrepreneurship reflects stable social and institutional features of an economy, programs to encourage entrepreneurship must be long term. Quick fix solutions are likely to fail
- Government programs can be useful for entrepreneurs and informal investors
 - In Hong Kong, practitioners should be involved more in existing Hong Kong Government programs to stimulate entrepreneurship, and more effort should be made to help young entrepreneurs
 - In Shenzhen, the government can set up service organizations for SME's enterprises and credit information systems
 - In both Hong Kong and Shenzhen business and social associations can provide information and networks for informal investment, including investing in social entrepreneurship
- Increasing corporate entrepreneurship should yield increased long term profits for both Hong Kong and Shenzhen companies, but each company must carefully assess the trade-offs for each dimension of entrepreneurial orientation
- Increased understanding of Shenzhen by Hong Kong-based businesses and Hong Kong by Shenzhen, can lead to an increase in the entrepreneurship and productivity of both cities. Complementarities of resources - land, labor and finance - and of infrastructures, logistics, social systems and information can be exploited for mutual benefit. Governments, business people, educators, social organizations and individuals can help realize this mutual benefit



ACKNOWLEDGEMENTS



Chua Bee-Leng

Director of the Center for Entrepreneurship
The Chinese University of Hong Kong

On behalf of GEM Hong Kong and Shenzhen, I would like to thank many people and organizations for their contribution and assistance in this study. With the financial support of the Trade and Industry Department of the Government of Hong Kong SAR and the SME Development Fund, The Asia Pacific Institute of Business of The Chinese University of Hong Kong (CUHK), and The Chinese Executives Club of The Hong Kong Management Association, we are able to continue to monitor entrepreneurship in the neighboring cities of Hong Kong and Shenzhen. Our sponsors have enabled us to carry out the research, and deliver our annual reports and forums over the past three years.

The GEM study has impelled us to establish the Center for Entrepreneurship, with the mission to inspire an interest in, and passion for entrepreneurship learning and action among students at CUHK. For further information, see <http://www.cuhk.edu.hk/centre/entrepreneurship/>.

We value the continuing cooperation of Professor Le Zheng and his team at the Shenzhen Academy of Social Sciences for their work in carrying out the Shenzhen study.

We wish to thank our experts, numbering among the leaders of those Hong Kong and Shenzhen business, financial, service, research and government communities whose work concerns entrepreneurship. Their thoughtful and candid assessment helped us understand the entrepreneurship environment in the twin cities. We are grateful to the 4,000 Hong Kong and Shenzhen residents who took part in the adult population survey.

In 2004, we launched studies of corporate entrepreneurship in established companies in Hong Kong and Shenzhen, and examined informal financing of new ventures. We believe that entrepreneurial activity occurs in companies with innovative new products and services targeted on both new and existing markets. Our past GEM research points us to the importance of alternative and informal financing as key resources for nascent entrepreneurs. I am personally grateful to my colleagues in the research teams of both Hong Kong and Shenzhen for unflinchingly taking on the additional work and challenges of these new studies. Professors Hugh Thomas and Daphne Yiu designed and developed the study, and Ms. Cici Cheung gave many hours to interviewing the participants. Mr. Coils Lam and Raymond Lo of The Chinese Executives Club were persistent in enlisting companies to participate in this study, the first of its kind in Hong Kong. Professor Kevin Au's enthusiasm for the Informal Financing study was contagious. These contributors' high standards of research rigor and intellectual support have been crucial for generating the value that GEM brings to policy and business leaders in the community. They persevered amidst challenges, like good entrepreneurs!

Our profound thanks go to the 50 companies in Hong Kong and Shenzhen that took part in the corporate entrepreneurship study. You allowed us to examine your company and, by permitting us to share the findings, have become essential partners in educating businesses about corporate entrepreneurial orientation.



We continue to be encouraged by the business community's interest in our work on entrepreneurship. The Hong Kong Productivity Council, The Hong Kong Venture Capital and Private Equity Association and The Hong Kong Chamber of Small and Medium Businesses have helped us convey our findings to their members. This year, we are excited that Monte Jade Science and Technology Association of Hong Kong has now become a supporting organization.

The annual forum is the highlight of the GEM study. Each year we look at key factors that affect entrepreneurial activity. We thank our expert speakers this year for their time and interest in this year's themes on Corporate Entrepreneurship and Alternative Financing for New Ventures. They are Mr. Patrick Tse, Head of Financial Service Practice, of Booz Allen Hamilton Greater China, Mr. Andreas Wentz, President and Chief Executive of Philips Electronics Asia Pacific, Mr. K. O. Chia, a respected member of the venture capital community and mentor to startup entrepreneurs, Mr. Ben Ng, Secretary-General of Monte Jade Science and Technology Association of Hong Kong, and Mr. Joshua Lau, founder of YesAsia.com.

Ms. Rosanna Lo and Mr. James Ma of the Center for Entrepreneurship at CUHK have labored long and hard to prepare the report and forum. They have lightened our load in the most crucial part of the GEM project this year. For this, we are grateful. Ms. Jenny Lam has been patient with her advice and action in bringing the forum to the media's attention.

We again thank Professor Lee Tien Sheng, Dean of the Faculty of Business Administration at CUHK, for his encouragement. We are delighted that colleagues in the greater community of CUHK are interested in GEM and value their involvement in the Center for Entrepreneurship.

Finally we congratulate the research teams in the GEM Consortium, and their supporters and interviewees, for ensuring that GEM continues to be the single largest study of entrepreneurship in the world.

Chua Bee-Leng
Director of the Center for Entrepreneurship
The Chinese University of Hong Kong

FOREWORD BY RAYMOND YOUNG

DIRECTOR-GENERAL OF TRADE AND INDUSTRY
THE GOVERNMENT OF HONG KONG SAR

I am pleased to note that The Chinese University of Hong Kong has completed the third Global Entrepreneurship Monitor (GEM) Study in collaboration with the Shenzhen Academy of Social Sciences, and with the financial support of the SME Development Fund.

Entrepreneurship is key to Hong Kong's economic prosperity. Entrepreneurs help propel economic progress by coming up with new products, services, investments and businesses that lead to job and wealth creation.

The GEM 2004 Report provides some invaluable insight into the conditions that influence entrepreneurship in Hong Kong and Shenzhen. The Report also incorporates an analysis of entrepreneurship in established companies and provides practical tips on seeking alternative financing for start-up business.

According to the World Competitiveness Yearbook 2005 just released by the International Institute for Management Development, Hong Kong ranks the second most competitive economy in the world and the most competitive economy in Asia. As recognised by the Institute, entrepreneurship is one of the key factors underpinning Hong Kong's competitiveness. The Hong Kong SAR Government will continue the efforts to maintain Hong Kong as an ideal place for doing business, and for entrepreneurs to fulfill their business vision.



Raymond Young
Director-General of Trade and Industry

FOREWORD BY LE ZHENG

DIRECTOR OF THE SHENZHEN ACADEMY OF SOCIAL SCIENCES

In our rapidly growing city, entrepreneurship has been in our past, and will continue to be for some time to come, the main theme of Shenzhen's development. In 2004, according to the data collected through GEM, around one eighth to one ninth of the population in Shenzhen has recently engaged in entrepreneurial activities. Shenzhen's index of total entrepreneurial activity (TEA) is tenth among the 35 GEM countries and regions, ranking in the upper middle range. In terms of Opportunity TEA, Shenzhen takes the eighth place in the GEM economies; and, Shenzhen has an opportunity to necessity TEA ratio of seven to one. This not only shows that Shenzhen is a hotbed of entrepreneurship in South China but also demonstrates that Shenzhen's entrepreneurial characteristics approach those of developed economies. Our high economic growth rate, open immigrant culture, relative maturity of market mechanisms, industrial linkages with international markets, and young and vibrant workforce provide excellent conditions for young entrepreneurs coming to Shenzhen.

However, with rapid economic growth and the expanding scale of the city, entrepreneurs in Shenzhen are being influenced by new factors. Short supply of land and water, rising costs of businesses, asset price rises, inadequate supply of hi-tech personnel, the weakening influence of the Hong Kong economy and the rapid growth of many cities in the interior of China all present Shenzhen's entrepreneurs with increased difficulties. This year Shenzhen's leaders have advanced the development concept of increasing efficiency and harmony in order to enhance the aggregate efficiency of the market and create a new developmental direction for Shenzhen. The government leaders also propose to foster an entrepreneurial atmosphere to nurture and encourage innovation, place high values on success, and accommodate failure. All of these are creating the hope for a better entrepreneurial environment in Shenzhen.

The entrepreneurial atmosphere of a city needs to be nurtured, monitored and improved on a continuous basis. Although the process may seem slow, our institute is simply trying, through this study, to observe noteworthy trends by analyzing the subtle changes taking place.

Le Zheng
Director of the Shenzhen
Academy of Social Sciences

TABLE OF CONTENTS

SUMMARY	II
ACKNOWLEDGEMENTS	IV
FOREWORD BY RAYMOND YOUNG	VI
FOREWORD BY LE ZHENG	VII
TABLE OF CONTENTS	VIII
TABLE OF FIGURES	X
INTRODUCTION TO GEM	1
CONCEPTUAL MODEL	2
DATA AND RESEARCH METHODOLOGY	3
Adult Population Survey	3
Expert Interviews	3
Corporate Entrepreneurship Questionnaire	3
PART I: ADULT POPULATION SURVEY FINDINGS	4
TOTAL ENTREPRENEURSHIP ACTIVITY (TEA)	4
CHARACTERISTICS OF ENTREPRENEURS	8
NATURE OF ENTREPRENEURIAL ACTIVITIES	12
PART II: EXPERT INTERVIEW FINDINGS	16
FINANCIAL SUPPORT	20
GOVERNMENT POLICIES AND PROGRAMS	22
EDUCATION AND TRAINING	23
RESEARCH AND DEVELOPMENT TRANSFER	24
COMMERCIAL AND PROFESSIONAL INFRASTRUCTURE	24
MARKET OPENNESS	26
PHYSICAL INFRASTRUCTURE	27
CULTURE AND SOCIAL NORMS	28
ECONOMIC CLIMATE	29
WORKFORCE FEATURES	30
POLITICAL, INSTITUTIONAL AND SOCIAL CONTEXT	30
PART III: INFORMAL INVESTMENT	32
INFORMAL VERSUS FORMAL INVESTMENT	32
CHARACTERISTICS OF INFORMAL INVESTORS	35
CONCLUSION	39

PART IV: CORPORATE ENTREPRENEURSHIP	40
ENTREPRENEURIAL ORIENTATION	40
DIMENSIONS OF ENTREPRENEURSHIP IN HONG KONG AND SHENZHEN	43
THE BENEFITS OF ENTREPRENEURSHIP IN DIFFERENT ENVIRONMENTS	44
DIFFERENCES IN CORPORATE ENTREPRENEURSHIP BETWEEN SHENZHEN AND HONG KONG COMPANIES	46
INTERNATIONAL BENCHMARKING	47
APPENDIX I: RECOMMENDATIONS FROM PREVIOUS YEARS' HONG KONG / HONG KONG AND SHENZHEN GEM STUDIES	48
2002 HONG KONG RECOMMENDATIONS	48
2003 HONG KONG RECOMMENDATIONS	50
2003 SHENZHEN RECOMMENDATIONS	50
APPENDIX II: GEM TEAMS AND SPONSORS	51
APPENDIX III: THE GLOBAL ENTREPRENEURSHIP MONITOR HONG KONG AND SHENZHEN FORUM	57
SCHEDULE OF FORUM	57
KEYNOTE SPEECH BY MR. ANDREAS WENTE	58
OPENING REMARK BY MR. PATRICK TSE	62
APPENDIX IV: METHODOLOGY AND MEASURES	64
POPULATION TELEPHONE SURVEY	64
EXPERT INTERVIEWS	65
CORPORATE ENTREPRENEURSHIP STUDY	67
APPENDIX V: EMPIRICAL FINDINGS IN THE ACADEMIC LITERATURE ON CORPORATE ENTREPRENEURSHIP AND PERFORMANCE	72
APPENDIX VI: GEM HONG KONG AND SHENZHEN 2004 EXPERTS	74
HONG KONG EXPERTS (2004)	74
HONG KONG EXPERTS (2003) WHO COMPLETED THE 2004 QUESTIONNAIRE	74
HONG KONG EXPERTS (2002) WHO COMPLETED THE 2004 QUESTIONNAIRE	75
HONG KONG RESPONDENTS OF CORPORATE ENTREPRENEURSHIP QUESTIONNAIRE	75
SHENZHEN EXPERTS (2004)	77
SHENZHEN RESPONDENTS OF CORPORATE ENTREPRENEURSHIP QUESTIONNAIRE	79
APPENDIX VII: GEM HONG KONG AND SHENZHEN 2004 RESEARCH TEAM	80
HONG KONG TEAM	80
SHENZHEN TEAM	82

TABLE OF FIGURES

Figure 1	Conceptual Model	2
Figure 2	Entrepreneurship by Economy	4
Figure 3	TEA as a Function of Gross Domestic Product per Capita	5
Figure 4	Necessity and Opportunity TEA	6
Figure 5	Ratio of Opportunity to Necessity TEA by Economy as a Function of GDP per Capita	7
Figure 6	Entrepreneurship by Gender	8
Figure 7	Entrepreneurship by Age	9
Figure 8	Entrepreneurship by Education	10
Figure 9	Entrepreneurship by Income	11
Figure 10	Industry Composition	12
Figure 11	Sizes of New Businesses	13
Figure 12	Products and Services Novelty	13
Figure 13	Novelty of Technology	14
Figure 14	Level of Competition	14
Figure 15	Ownership Structure	15
Figure 16	Strength Measures	17
Figure 17	Priority Index of Strengths: Hong Kong vs. Shenzhen	18
Figure 18	Priority Index of Weaknesses: Hong Kong vs. Shenzhen	19
Figure 19	Funding Issues	20
Figure 20	Experts' Opinions on Government Policies and Programs	22
Figure 21	Commercial & Professional Infrastructure	25
Figure 22	Market Openness	26
Figure 23	Physical Infrastructure	27
Figure 24	Experts' Opinions on Culture	28
Figure 25	Economic Outlook	29
Figure 26	Experts' Opinions on Workforce Features	30
Figure 27	Legal Environment Supporting Innovations	31
Figure 28	Expected Internal Rate of Return for Entrepreneurs and Informal Investors	32
Figure 29	Informal Investment & Classic Venture Capital as a percent of GDP	33
Figure 30	Annual Amount per Informal Investor vs GDP per Capita, US dollars	34
Figure 31	Size of Informal Investment in Hong Kong	35
Figure 32	Size of Informal Investment in Shenzhen	35
Figure 33	Relationships of Investors to Investees	36
Figure 34	Informal Investors' Relationships with Investees and their Expected Payback Amount (Hong Kong)	37
Figure 35	Informal Investors' Relationships with Investees and their Expected Payback Amount (Shenzhen)	37
Figure 36	Informal Investors' Expected Payback Time	38
Figure 37	Informal Investment by Industry	38
Figure 38	Entrepreneurial versus Administrative Orientation	40
Figure 39	Potential Factors of Entrepreneurship	42
Figure 40	Interaction of Environment and Entrepreneurship	45
Figure 41	Relationship between Entrepreneurial Factors and Return on Equity	45
Figure 42	Mean Ratings on Corporate Entrepreneurships: Hong Kong, Shenzhen and Sweden	47

INTRODUCTION TO GEM

The Global Entrepreneurship Monitor (GEM) is an international project that measures entrepreneurial activity annually. GEM examines the factors that contribute to an entrepreneurial environment and the links between entrepreneurship and economic growth.

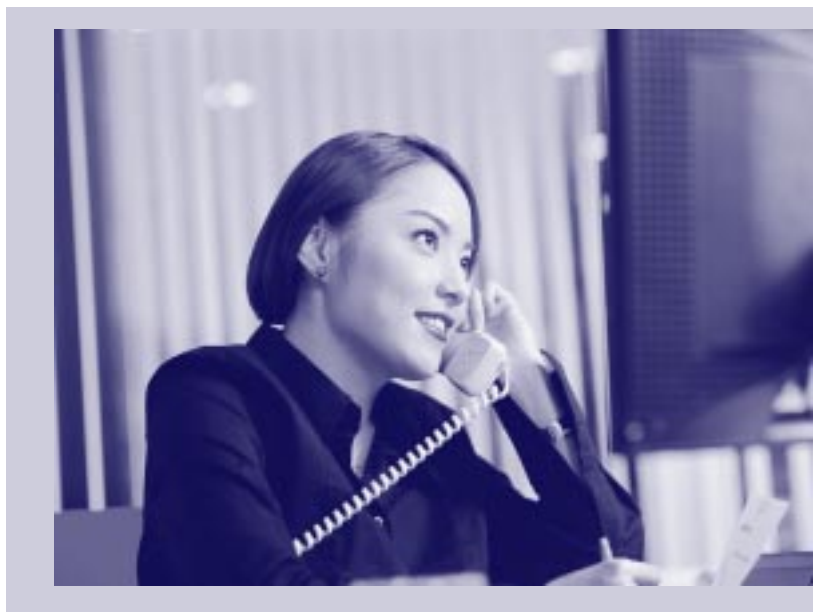
A team of scholars from each GEM economy conducts its own investigation of domestic entrepreneurship, basing its investigation on a single consistent framework. This allows the construction of a unique international database. In each year that GEM is conducted, scholars can compare entrepreneurship between economies. And because GEM keeps the methodologies consistent from year to year, GEM builds up a time series panel data set.

GEM was founded and continues to be primarily sponsored by Babson College and the London Business School. Since its launch in 1999, 43 economies have participated in one or more years of the study, with 34 economies participating in the 2004 exercise¹. See Appendix II for a table of the GEM 2004 participating teams.

GEM research is summarized annually in the *Global Entrepreneurship Monitor: Executive Report* which was published this year on 20 January, 2005 and is available on the GEM website www.gemconsortium.org. Working with both the international data and economy-specific data, each team in the 34 GEM economies also submits a written report outlining the findings specific to its economy and the policy implications of its research.

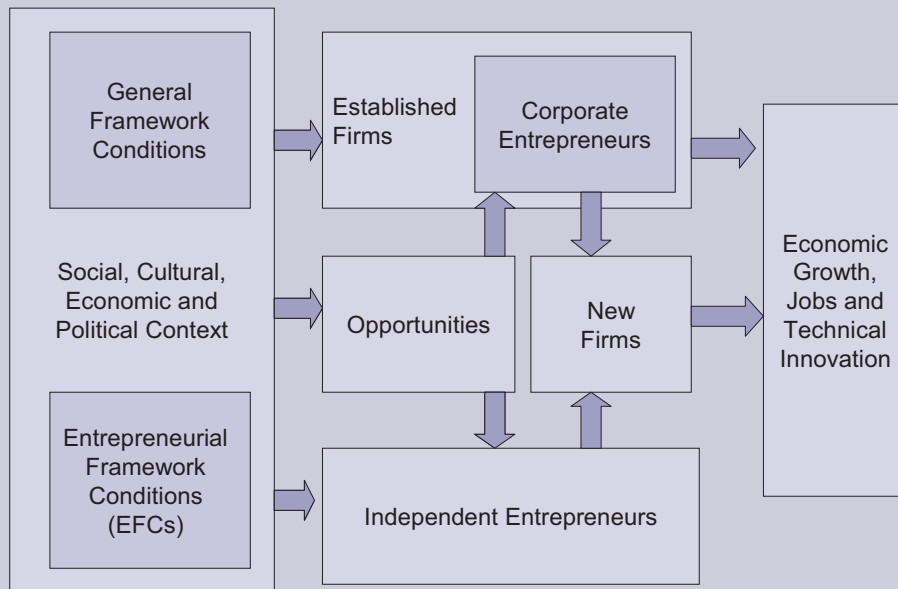
This report summarizes the findings of the GEM Hong Kong and Shenzhen team. The Chinese University of Hong Kong's Center for Entrepreneurship presented the findings at a press conference on 23 May, 2005 and a public forum held on 24 May, 2005. A schedule of the forum and excerpts from the keynote addresses are found in Appendix III.

¹ Hong Kong is one of the 34 GEM economies. Hong Kong and Shenzhen together make up one team but results reported in the Global GEM studies are for Hong Kong only.



CONCEPTUAL MODEL

Figure 1: Conceptual Model



Economic growth flows from two channels:

- Activities of established firms (the top part of Figure 1)
- Activities of independent entrepreneurs (the bottom part of Figure 1)

Established firms contribute tremendously to the economy when conducting business in traditional ways, but their influence on economic growth is, in aggregate, negative because the share of old products, processes and services declines. Those same firms, however, also pursue new value creation in delivering new products and services, increasing efficiency of delivery of existing products and services and founding new firms, which in turn create employment and progress.

The second growth channel is more important, but less researched than the first. Potential entrepreneurs, perceiving opportunities and influenced by the general context and specific Entrepreneurial Framework Conditions (EFCs), decide to go into business for themselves. By focusing on start-up activity, GEM helps researchers and policy makers understand the entrepreneurial process.

While all new firms provide some employment and economic expansion, a small proportion of new firms bring tremendous economic growth and social benefits. The Hong Kong and Shenzhen GEM team desires to understand how the EFCs impact on entrepreneurship, both that of established firms and of individuals in high-potential new ventures.

DATA AND RESEARCH METHODOLOGY

In this study we employ three main sources of data:

- Adult Population Survey
- Entrepreneurship Expert Interviews
- Corporate Entrepreneurship Questionnaire

Adult Population Survey

Teams in each of the 34 GEM economies selected randomly 1,000 to 27,000 adults, whose responses to 40 questions were used to measure the entrepreneurial behavior and attitudes of the population. In 2004, GEM sampled 147,780 adults worldwide. Our joint Hong Kong Shenzhen GEM team supervised a professional survey firm to sample adults in Hong Kong and Shenzhen. The firm successfully interviewed by telephone 2,000 adults in each city in the evenings of Fridays and weekends during the months of May and June 2004. The survey produced, together with other information, a measure of entrepreneurial activity that is called the Total Entrepreneurial Activity (TEA) Index. Because the TEA Index is computed identically for each of the GEM economies, it provides an objective basis for international comparisons. In addition to TEA, we computed two sub-indices of TEA: "Opportunity-based," and "Necessity-based". Opportunity-based TEA reflects the voluntary nature of participation (pursuit of a business opportunity for personal interest). Necessity-based TEA reflects the involuntary nature of participation (pursuit of a new business because of no other choices for work).

An entrepreneur, for the purposes of calculating the TEA indices, is a respondent in the survey who is currently participating as an equity stakeholder in either

- A business start-up where work has been done to effect the start-up but wages have been paid for less than three months or
- A new firm where the firm is less than 42 months old at the time of survey.

TEA is the percentage of the respondents in the study who met either or both of these criteria.

In addition to identifying the entrepreneurs, ascertaining their characteristics and calculating the TEA index, the adult population survey polls the random sample for informal investors who invest in business start-ups and new firms.

Expert Interviews

A second type of data was provided by wide-ranging personal interviews conducted by scholars with 20 to 70 experts in each GEM economy. Across the 34 GEM economies, over 1,300 experts were interviewed. In Hong Kong and Shenzhen we interviewed 47 experts.

Corporate Entrepreneurship Questionnaire

Entrepreneurial orientation in established firms provides economic growth through the upper channel in Figure 1. To investigate this, a questionnaire was developed in cooperation with GEM researchers from the UK and independent scholars in entrepreneurship from the United States. This was a questionnaire which we distributed to corporate leaders in 50 established companies in Hong Kong and Shenzhen. An "established company" is one that has been in business for no less than five years and has sales in excess of HK\$ 10 million. The corporate entrepreneurship questionnaire investigated the companies' activities and managerial attitudes related to internal corporate venturing.

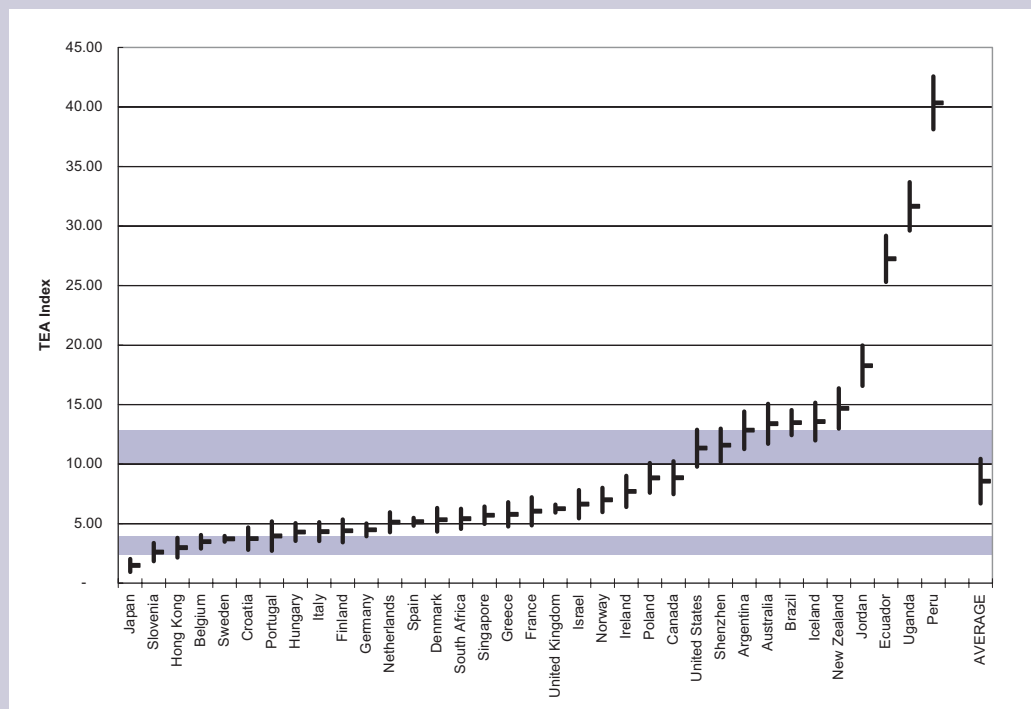
Appendix IV gives additional detail concerning our methodology.

Part I: ADULT POPULATION SURVEY FINDINGS

TOTAL ENTREPRENEURSHIP ACTIVITY (TEA)

Hong Kong has a relatively low level of entrepreneurship, while Shenzhen has a relatively high level of entrepreneurship, as measured by TEA. Figure 2 plots the TEA of various economies. Although Hong Kong clearly has a statistically higher TEA than Japan, we are unable to credibly claim that it has a different TEA from that of Slovenia, Belgium, Sweden, Croatia, Portugal, Hungary, Italy, or Finland. We can be confident, however, that it is lower than Germany and countries further to the right. Similarly, Shenzhen's higher TEA is not significantly different from that of the United States, Argentina, Australia, Brazil or Iceland.

Figure 2: Entrepreneurship by Economy



Note: 95 percent confidence interval for each data point denoted by vertical bar. Hong Kong's and Shenzhen's confidence intervals are given by shaded zones.

TEA is remarkably stable from year to year. In Hong Kong, it was 3.5 percent, 3.2 percent and 3.0 percent in 2002, 2003 and 2004 while in Shenzhen it was 10.5 percent and 11.6 percent in 2003 and 2004 respectively. Statistically speaking, the level of entrepreneurship of each of these cities has not changed since we started recording TEA². In other countries of the world studied by GEM, TEA is also remarkably persistent from year to year. This persistence suggests that

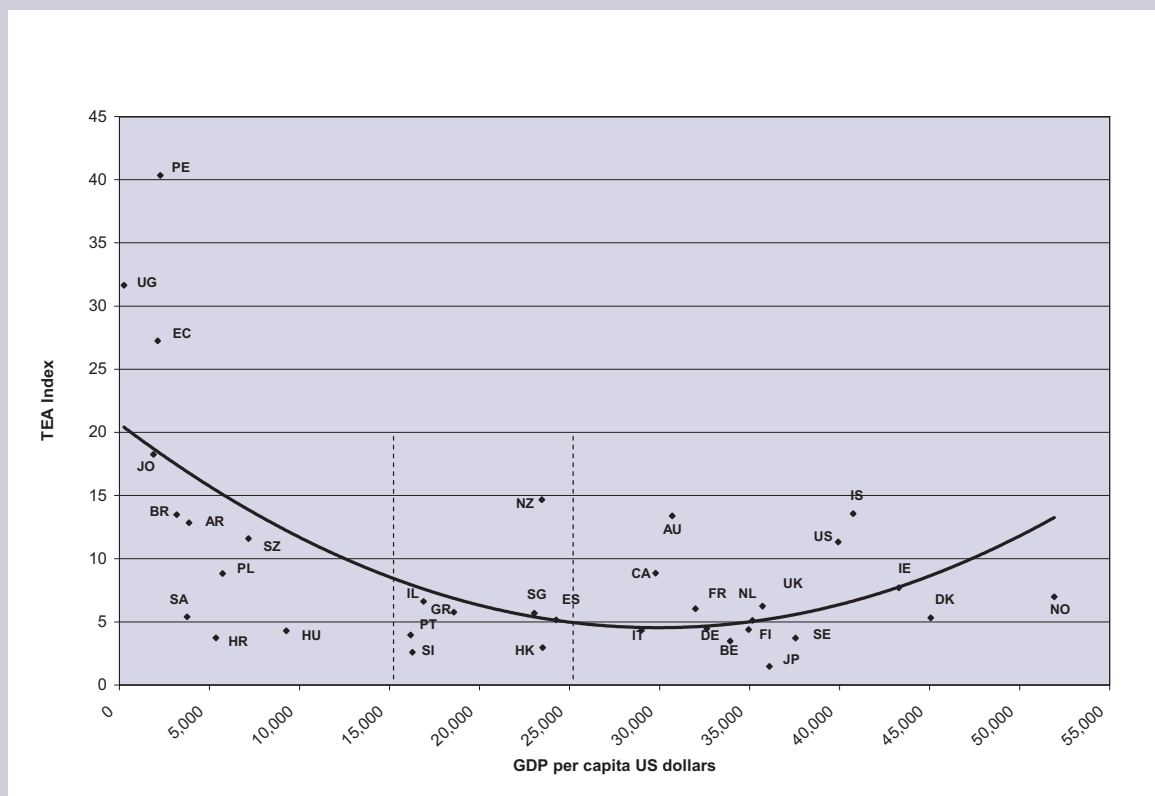
² Because TEA is measured by taking a sample of the population, not an entire census, we only know TEA's range, not its precise value. We can be 95 percent sure that the true value of TEA lies between 2.1 percent and 3.8 percent for Hong Kong and between 10.2 percent and 13.0 percent for Shenzhen in 2004. The levels recorded in previous years are within the Statistical confidence bands of 2004 in both Hong Kong and Shenzhen.

- TEA is a reliable indicator of entrepreneurship. If TEA fluctuated dramatically, the methodology would be suspect.
- Entrepreneurial activity is slow to change. The level of entrepreneurship reflects socio-cultural norms and institutions which are themselves slow to change.
- Policies to enhance entrepreneurship take time to work. Quick fix solutions are likely to fail. Furthermore, those that aim at structural change may be deemed "unsuccessful" in the short term, even if they are in fact working in the long term.

The conceptual model (Figure 1) shows how entrepreneurship drives economic growth. It should be noted that the interaction between economic development and entrepreneurship flows both ways. Levels of TEA characterize levels of economic development. High TEA scores tend to be associated with the low income economies (like Shenzhen); low TEA scores tend to be associated with many middle income economies (like Hong Kong) and relatively high TEA scores are associated with high income economies (like the US). Figure 3 plots this relationship with a parabolic trend line³. The reasons for this shape may include the lack of employment opportunities in established firms of low income countries, the ability of middle income economies to successfully utilize existing technologies, and the role of innovation brought on by entrepreneurship within the leading economies. Interestingly, both Hong Kong and Shenzhen are below the curve. Why is this so? The answer flows partly from the answer to the question, "why start a new business?"

³ Statistically, the explanatory power of this relationship is not strong. The fitted trend line is calculated using the equation: $TEA = 2 \cdot 10^{-8} \text{GDPC}^2 + 0.0011 \text{GDPC} + 20.679$, where GDPC stands for Gross Domestic Product per Capita, and the $R^2 = 0.3997$.

Figure 3: TEA as a Function of Gross Domestic Product Per Capita



Note: AR: Argentina; AU: Australia; BE: Belgium; BR: Brazil; CA: Canada; DE: Germany; DK: Denmark; EC: Ecuador; ES: Spain; FI: Finland; FR: France; GR: Greece; HK: Hong Kong; HR: Croatia (Hrvatska); HU: Hungary; IE: Ireland; IL: Israel; IS: Iceland; IT: Italy; JO: Jordan; JP: Japan; NL: Netherlands; NO: Norway; NZ: New Zealand; PE: Peru; PL: Poland; PT: Portugal; SE: Sweden; SG: Singapore; SI: Slovenia; SZ: Shenzhen; UG: Uganda; UK: United Kingdom; US: United States; ZA: South Africa

Figure 4: Necessity and Opportunity TEA

	Total TEA	Necessity TEA	Opportunity TEA	Opportunity/Necessity Ratio
Argentina	12.8	3.7	9.1	2.4
Australia	13.4	2.5	10.7	4.3
Belgium	3.5	0.2	2.9	15.3
Brazil	13.5	6.2	7.0	1.1
Canada	8.9	1.4	7.3	5.4
Croatia	3.7	1.6	2.0	1.3
Denmark	5.3	0.4	4.8	13.0
Ecuador	27.2	8.4	18.2	2.2
Finland	4.4	0.3	3.5	10.6
France	6.0	1.4	4.6	3.4
Germany	4.5	1.2	3.1	2.6
Greece	5.8	1.7	3.8	2.3
Hong Kong	3.0	1.0	2.0	2.1
Hungary	4.3	1.2	2.8	2.2
Iceland	13.6	0.7	12.0	16.7
Ireland	7.7	1.0	6.6	6.7
Israel	6.6	1.5	4.8	3.1
Italy	4.3	0.3	3.1	9.3
Japan	1.5	0.2	1.1	6.2
Jordan	18.3	2.6	14.5	5.7
Netherlands	5.1	0.7	4.3	6.3
New Zealand	14.7	2.1	12.3	5.8
Norway	7.0	0.9	5.8	6.8
Peru	40.3	13.1	26.9	2.1
Poland	8.8	3.1	5.7	1.8
Portugal	4.0	1.0	3.0	3.0
Shenzhen	11.6	1.4	10.1	7.1
Singapore	5.7	0.6	5.0	7.9
Slovenia	2.6	0.4	2.2	5.1
South Africa	5.4	2.4	2.8	1.2
Spain	5.2	0.6	4.5	7.3
Sweden	3.7	0.3	3.1	9.5
Uganda	31.6	14.4	16.5	1.2
United Kingdom	6.3	0.6	5.5	8.7
United States	11.3	1.5	9.5	6.3

There are two reasons why a person may start a new business:

1. To take advantage of a business opportunity, or
2. Because he or she has no better choices for work.

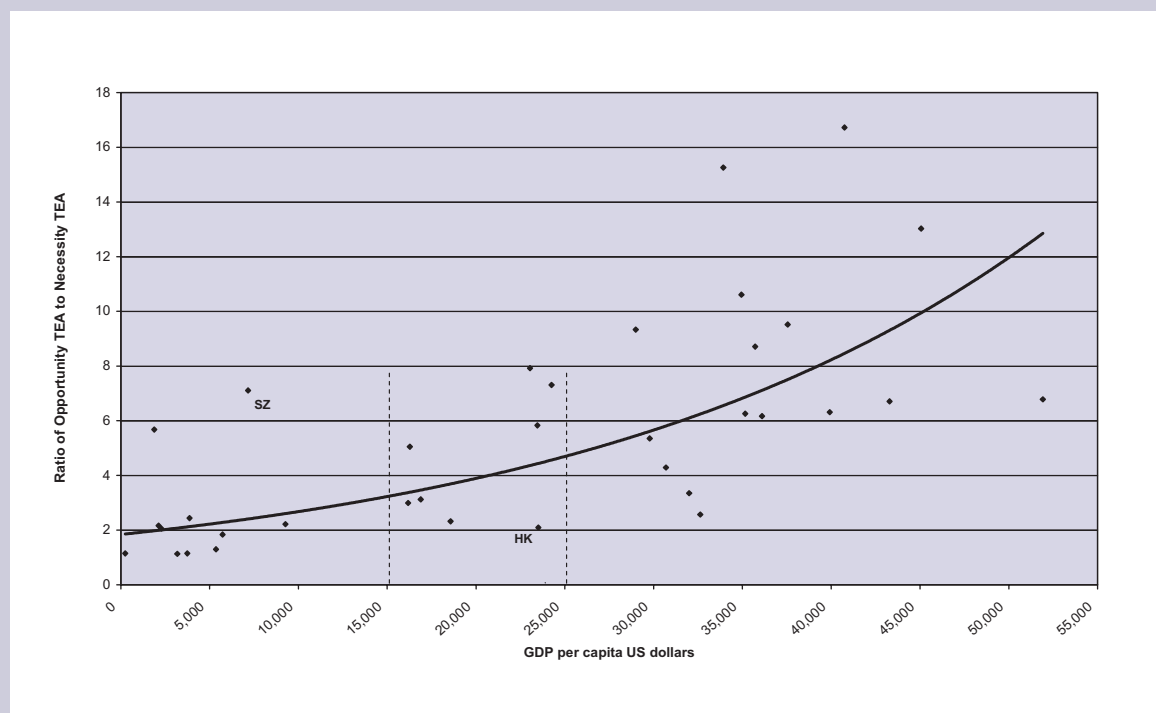
Figure 4 shows the breakdown of TEA into that percentage of respondents who started businesses to take advantage of business opportunities (Opportunity TEA) and that percentage of respondents who started businesses because they had no better choices for work (Necessity

TEA). Of course, a respondent may have started the business for both reasons. In the GEM telephone interviews, the interviewer did not tell the respondent that the response "both" was acceptable, but if the respondent responded "both" the response was accepted. Figure 4 reveals that only in the cases of Belgium, France, Italy and Japan did a substantial proportion of the entrepreneurs (i.e., over 10 percent) refuse to be categorized as either "opportunity" or "necessity" entrepreneurs.

⁴ The fitted trend line is calculated using the equation $\text{Ratio} = 1.8406 e^{0.00004 \text{GDP per Capita}}$, where GDP per Capita stands for Gross Domestic Product per Capita and $R^2 = 0.5479$.

Figure 5 plots the ratio of Opportunity TEA to Necessity TEA as a function of gross domestic product per capita⁴: the higher the income levels, the higher the proportion of Opportunity TEA. In poorer economies without social safety nets, a higher proportion of people start companies because they are forced to by adverse circumstances.

Figure 5: Ratio of Opportunity to Necessity TEA by Economy as a Function of GDP Per Capita

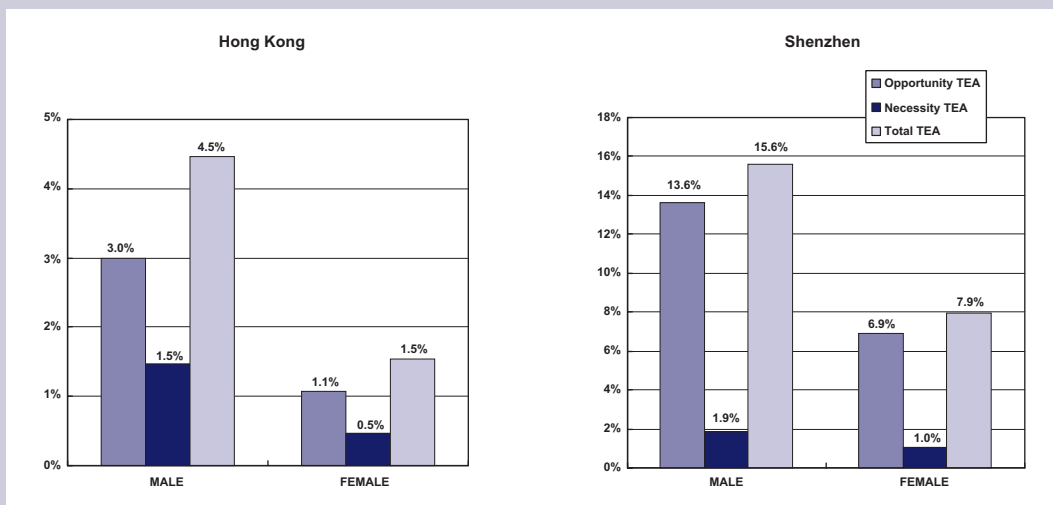


The positions of Hong Kong (well below the trend line) and Shenzhen (well above the trend line) merit comment. Hong Kong has proportionally more necessity entrepreneurship than is usual for "the average" economy in our income group. This happens because Hong Kong has a low Opportunity TEA. Hong Kong's Necessity TEA is about the same level as it is for other middle and high income economies. Low opportunity TEA is caused by high costs, low tolerance for risk, preference for working in large corporations, and the educational system that is examination-based and does not teach entrepreneurship, which we investigate in Part II of this report. In Shenzhen, the Necessity TEA is substantially below that of peer economies, because of the immigrant nature of Shenzhen society. This depresses the city's overall TEA.

CHARACTERISTICS OF ENTREPRENEURS

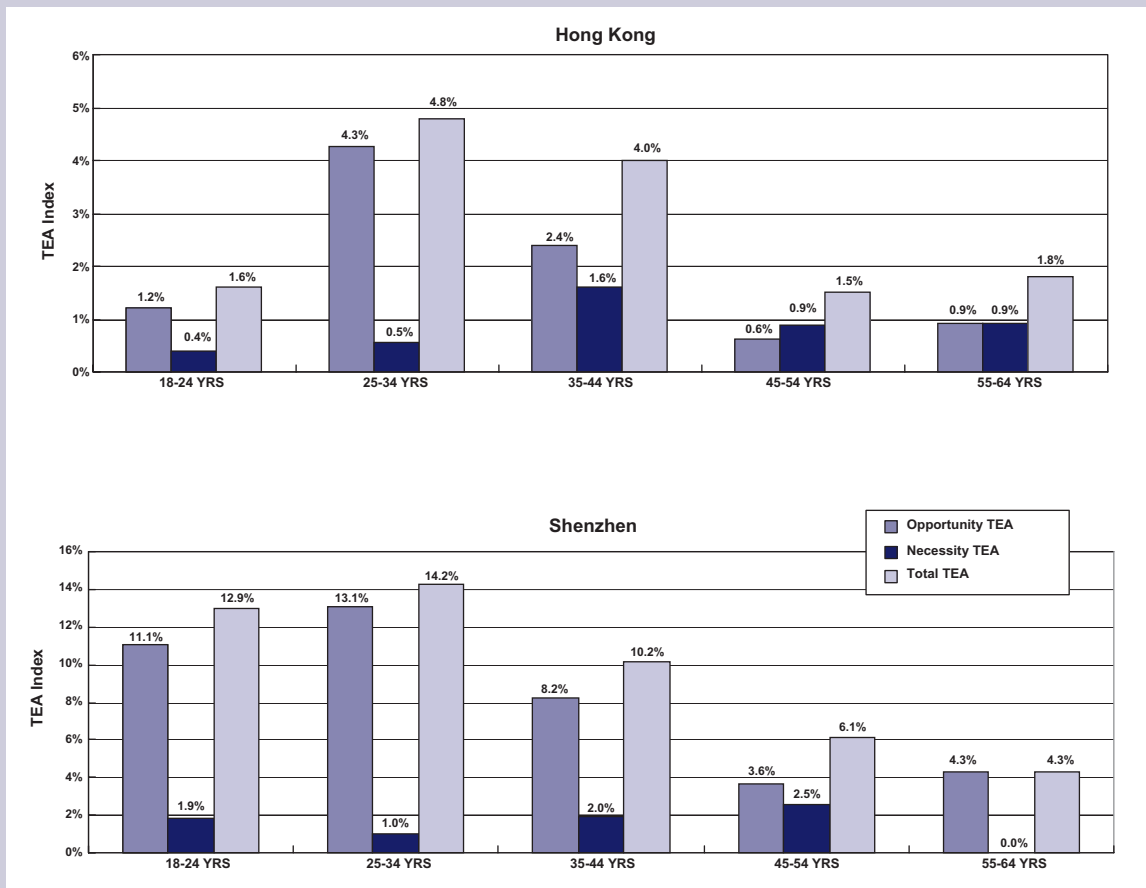
Worldwide, a man is about twice as likely to start a business as a woman. This male bias is lower among both low income economies and high income economies than among middle income economies. Hong Kong and Shenzhen conform to this trend. In Hong Kong, the proportion of men to women entrepreneurs is approximately three to one. In the case of Shenzhen, the ratio of male to female entrepreneurs is around two to one (Figure 6).

Figure 6: Entrepreneurship by Gender



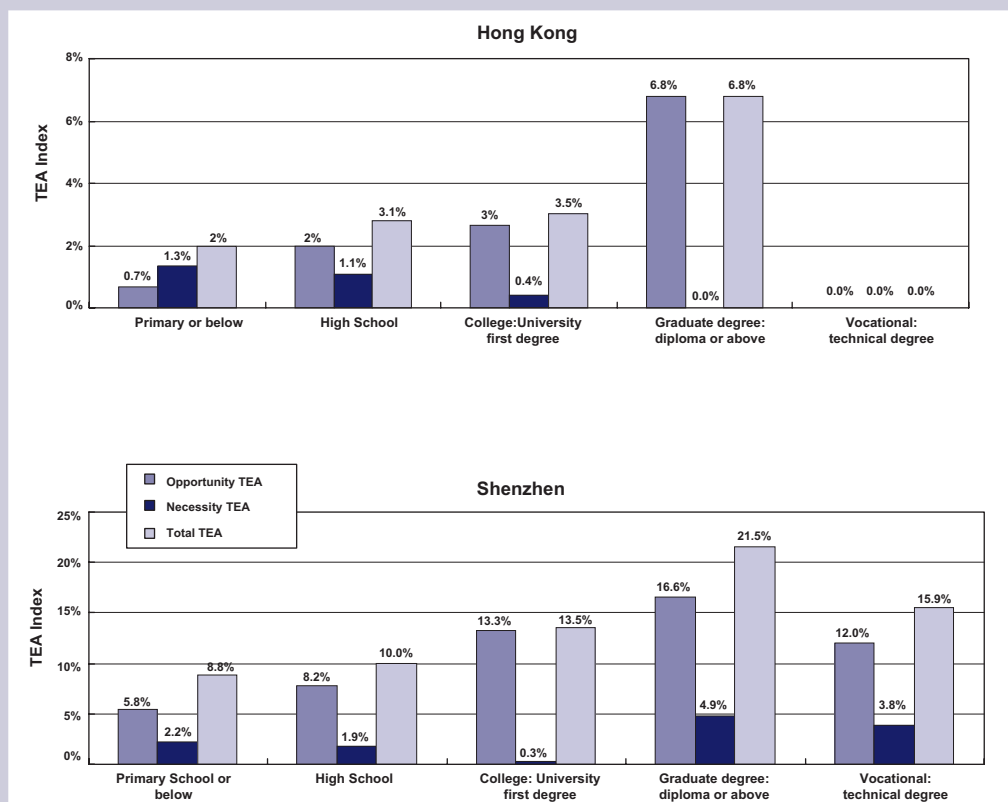
The age distribution of entrepreneurs starting their own companies (shown in Figure 7) varies little across economies. In Hong Kong, Shenzhen and the rest of the world, the 25 to 34 age bracket is the most entrepreneurial. In Shenzhen the 18 to 24 age bracket is the next most entrepreneurial. In Hong Kong, where post secondary education is more prevalent, the 35 to 44 age bracket is the second most entrepreneurial. In both Shenzhen and Hong Kong, the young are more likely to seek opportunities to start companies, but as the age group increases, the proportion of Opportunity TEA to Necessity TEA drops. In Shenzhen, however, within the oldest bracket, our sampling found no entrepreneurs who started firms out of need. This probably reflects the recent immigrant nature of the Shenzhen population, where those middle aged and elderly who are faced with poor prospects tend to return to their home provinces rather than remain in Shenzhen.

Figure 7: Entrepreneurship by Age



In both Hong Kong and Shenzhen the group with the highest entrepreneurial participation is that with a post-graduate degree, post-graduate diploma or above. Figure 8 shows that 22 percent of Shenzhen post-graduate degree/diploma holders and 7 percent of Hong Kong degree/diploma holders are now starting or have started their own firms within the last 42 months. This group is most likely to appreciate the market and technology opportunities for starting high potential companies. While this finding is consistent with last year's results in Shenzhen, it represents a radical departure from that observed in Hong Kong in 2003. Two explanations can be offered. On the one hand, statistical error may play a role. Because graduate degree holders represent such a small proportion of the population, our phone interview sampling discovers very small numbers of entrepreneurs with post-graduate degrees: in 2003, out of 2000 respondents we found no post-graduate degree entrepreneurs in Hong Kong. In 2004, we found three. On the other hand, the economy in the 42 months prior to May 2003 was at its weakest for many years. By May 2004, the economy was widely perceived to be strongly recovering. Since all of the post-graduate degree holding entrepreneurs in Hong Kong are pursuing opportunities, not starting companies because of need, it is likely that they would refrain from starting their companies until the outlook is good. A substantial difference exists between the entrepreneurship levels of vocational diploma holders in Shenzhen and Hong Kong. While the entrepreneurship of technical and vocational diploma holders in Shenzhen is a relatively high 16 percent of the population and while most of these technicians start companies to pursue opportunities, that for Hong Kong technical and vocational diploma holders is zero.

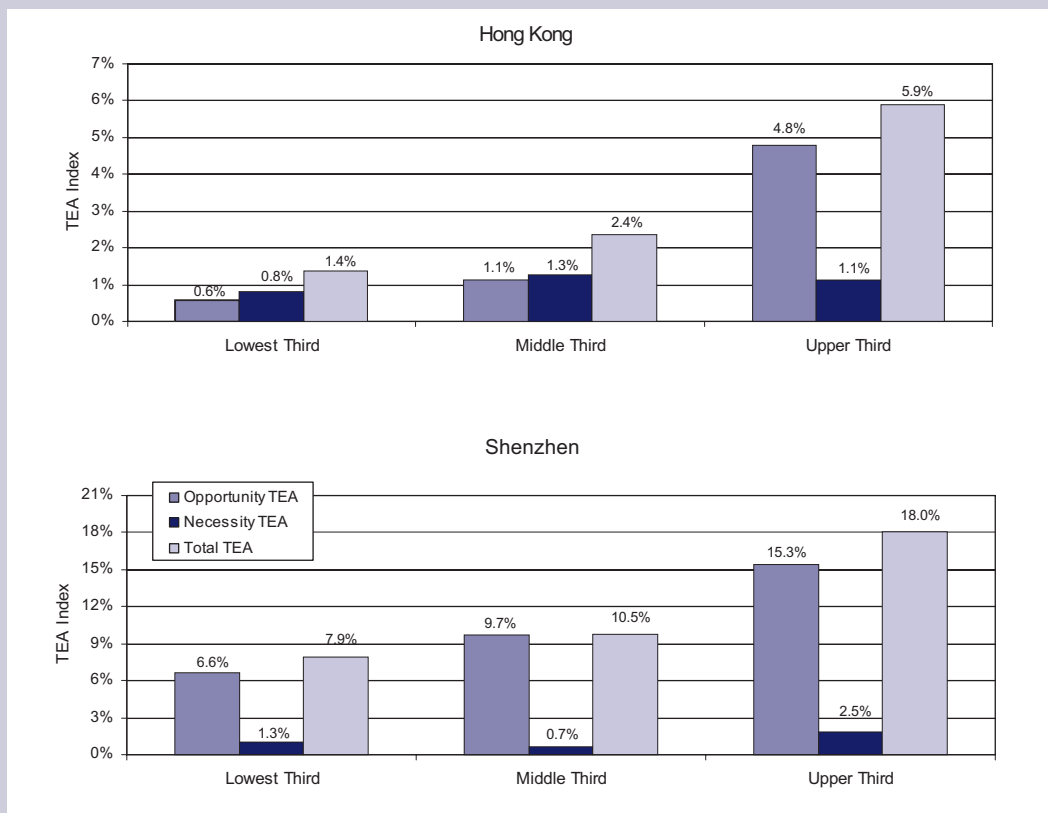
Figure 8: Entrepreneurship by Education



In both Shenzhen and Hong Kong, people with higher incomes are more likely to be entrepreneurial, and more likely to pursue opportunities rather than start businesses out of necessity. Figure 9 shows that, in Hong Kong, 6 percent of the top third of the population in terms of income started companies in the last 42 months. For that top third, opportunity orientation is almost four times as much as necessity orientation. For the bottom two thirds of Hong Kongers, the Necessity TEA actually exceeds the Opportunity TEA.

Shenzhen maintains the same distribution shape of TEA among income percentiles - the top income earners are the most entrepreneurial - but at a higher level. In Shenzhen, however, Opportunity TEA greatly exceeds Necessity TEA in all percentiles of income studied. This difference between the Hong Kong and Shenzhen population may be explained by difference in their residence status. The Shenzhen population is composed almost entirely of immigrants from other parts of China, the vast majority of whom do not have Shenzhen permanent residence status. When faced with economic hardship from lack of opportunity, they can take the option to go home. By contrast, Hong Kong's massive wave of immigration occurred two generations ago. In adversity, home is still Hong Kong.

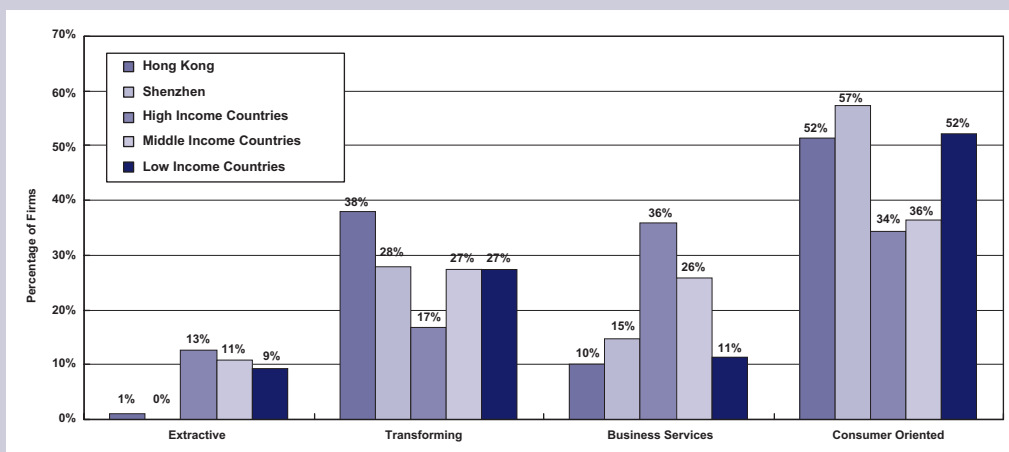
Figure 9: Entrepreneurship by Income



NATURE OF ENTREPRENEURIAL ACTIVITIES

About half of all startups worldwide provide consumer oriented services. Figure 10 shows that Hong Kong and Shenzhen share these proportions. The second most popular industry group on the list for Hong Kong and Shenzhen is transforming, i.e., manufacturing, transportation, communications, utilities, wholesale, and motor vehicle sales and services. Business services represent about 10 percent of all new businesses in Hong Kong and 15 percent in Shenzhen. As shown in the following graph, it appears that entrepreneurs in the higher income countries tend to favor more business services and less consumer-oriented and transforming industries. In case of Hong Kong and Shenzhen, the patterns of industry composition resemble the lower income countries more than the higher income countries.

Figure 10: Industry Composition



Note: Extractive: agriculture, forestry, fishing, mining and construction.

Transforming: manufacturing, transportation, communications, utilities, wholesale, and motor vehicle sales and services.

Business services: financial, insurance, real estate and other business services

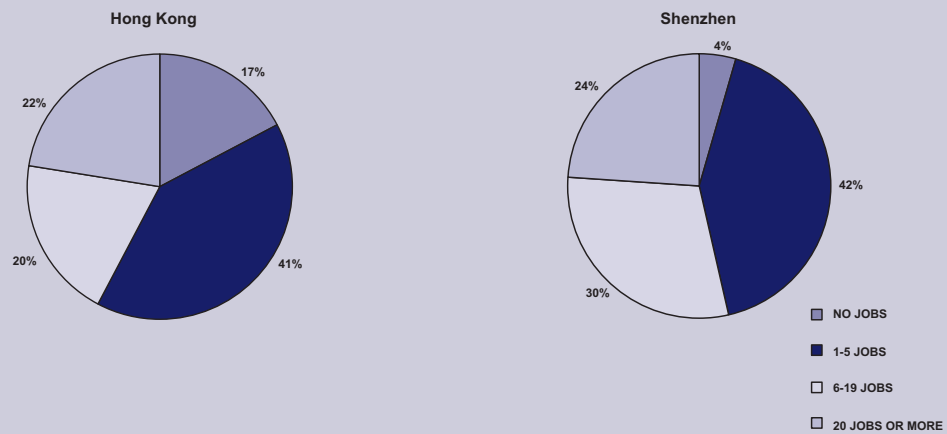
Consumer oriented: retail, hotel, restaurant, health, education, social services, and consumer services.



Most start-ups are small by definition, but, reflecting the higher labor costs in Hong Kong than in Shenzhen, Hong Kong's startups are smaller, in terms of number of employees, than Shenzhen's. Shown in Figure 11, 17 percent and 5 percent of the new businesses in Hong Kong and Shenzhen, respectively, offer no job opportunities. Hong Kong and Shenzhen have similar proportions of startups offering 1-5 jobs; the same is true in the bracket of 20 jobs or more. However, Shenzhen has 10 percent more startups with 6 to 19 jobs.

Figure 11: Sizes of New Businesses

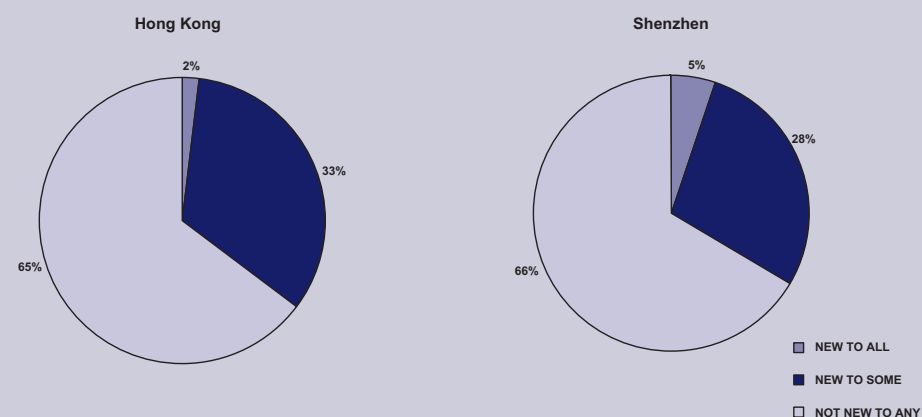
Responses to the question: Right now how many people, not counting the owners but including exclusive subcontractors, are working for this business? By exclusive subcontractors, we mean only people or firms working ONLY for this business, and not working for others as well.



Ninety-eight percent of start-ups in Hong Kong and 94 percent of startups in Shenzhen involve products and/or services that, according to the entrepreneur's assessment, are not new. The respondents answer the question, "Will all, some, or none of your potential customers consider this product or service new or unfamiliar?" Figure 12 shows that 65 percent of the respondents for Hong Kong and 66 percent for Shenzhen answered "none" and 33 percent for Hong Kong and 25 percent for Shenzhen answered "some". This apparently greater innovation of Shenzhen entrepreneurs probably reflects the less informed market of Shenzhen rather than the global novelty of the services. In general, in neither market does novelty represent a substantial component. Moreover, the statistical significance of the innovative proportion is highly questionable. The two percent of those with innovative goods or services in the population study in Hong Kong represents two observations among the 109 firms found.

Figure 12: Products and Services Novelty

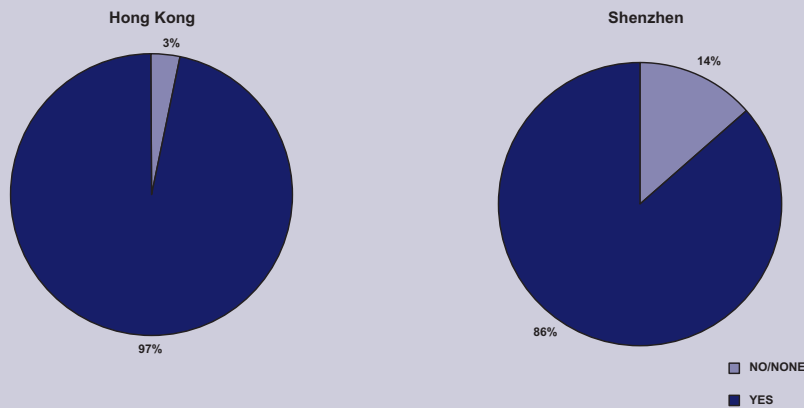
Responses to the question: will all, some, or none of your potential customers consider this product or service new and unfamiliar?



Start-ups are using mature technologies. Figure 13 shows that, when asked if the technologies or procedures required for the product or service were generally available more than a year ago, entrepreneurs overwhelmingly answered that they were. Hong Kong and Shenzhen entrepreneurs are conservative rather than innovative.

Figure 13: Novelty of Technology

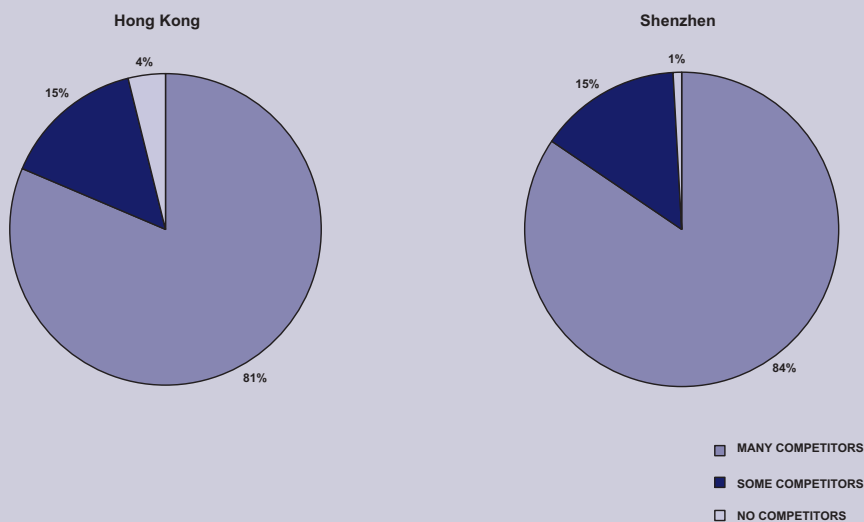
Responses to the question: Were the technologies or procedures required for this product or service generally available more than a year ago?



Regarding the expected competition of the new businesses, Hong Kong and Shenzhen are very similar in that entrepreneurs in both places enter markets that are highly competitive. As shown in Figure 14, over 80 percent of the entrepreneurs in both places enter established markets.

Figure 14: Level of Competition

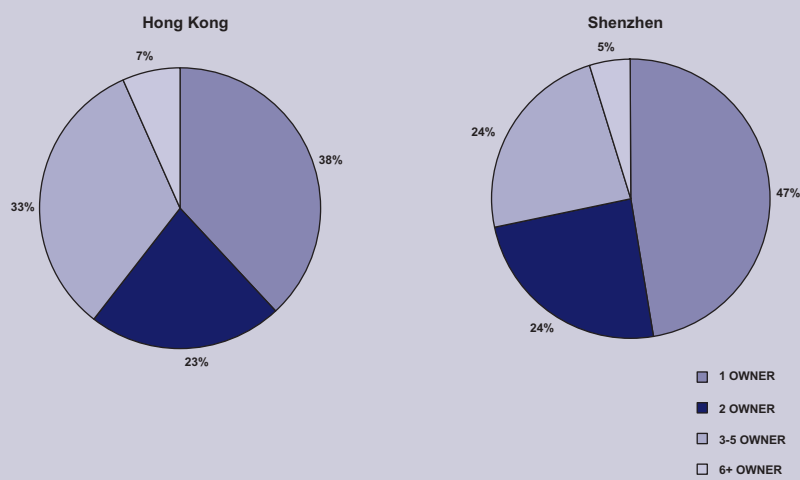
Responses to the question: Right now, are there many, few, or no other businesses offering the same products or services to your potential customers?



The comparative ownership structure of the businesses surveyed is shown in Figure 15. Sole proprietorships are preferred in both cities, although the percentage of sole proprietorship in Shenzhen is higher than that in Hong Kong.

Figure 15: Ownership Structure

Responses to the question: How many people, including yourself, will both own and manage this new business?



Part II: EXPERT INTERVIEW FINDINGS

Hong Kong is a historically entrepreneurial society with good overall government policies, access to capital, a good commercial, professional and physical infrastructure, and having the societal and institutional conditions that favor entrepreneurship. Part I, however, demonstrates that today's Hong Kong is not very entrepreneurial. As we describe below, Hong Kong's high costs, lack of entrepreneurial education, inadequate links between R&D and market application, and an increasingly risk-averse culture have led to the low levels of observed entrepreneurial activities described above.

Shenzhen, on the other hand, is a highly motivated immigrant society where a good infrastructure, buoyant economic climate, and lack of barriers to entry encourage startups. In Shenzhen, however, shortcomings of specific government policies, an inadequate educational system and, even more critical, a serious lack of social cohesion and business trust restricts entrepreneurship.

This part of the report investigates the Entrepreneurial Framework Conditions (EFCs) that give rise to the entrepreneurial levels we observe. An entrepreneurial environment has:

1. Financial Support - Debt and equity capital is available from private sources, corporations, financial institutions and markets.
2. Government Policies - General government policies (taxes, government regulations and administration) encourage new and growing firms.
3. Government Programs - The government effectively runs sufficient programs to assist new and growing firms.
4. Education and Training - Good, relevant training in starting and managing new and growing businesses is available at all levels of the education system.
5. Research and Development Transfer - Research and development leads to new commercial opportunities which can be easily accessed by new and growing firms.
6. Commercial and Professional Infrastructure - The cost, quality and accessibility of commercial, accounting, legal, information and other business services is appropriate.
7. Market Openness/Barriers to Entry - The market presents a level playing field and market entry is not impeded by lack of transparency, established business- government collusion, oligopolistic behavior and other barriers to entry.
8. Access to Physical Infrastructure - New and growing firms can access telephone, post, internet, basic utilities, roads, air/sea transportation, land, office/parking space, property, raw materials and natural resources easily.
9. Culture and Social Norms - Society encourages individual entrepreneurial actions that lead to greater dispersion in wealth and income.
10. Economic Climate - Expected economic development yields opportunities.
11. Work Force Features - The workforce possesses sufficient knowledge and skills to staff new and growing enterprises.
12. Political, Institutional and Social Context - Political, institutional and social structures engender new and growing enterprises.

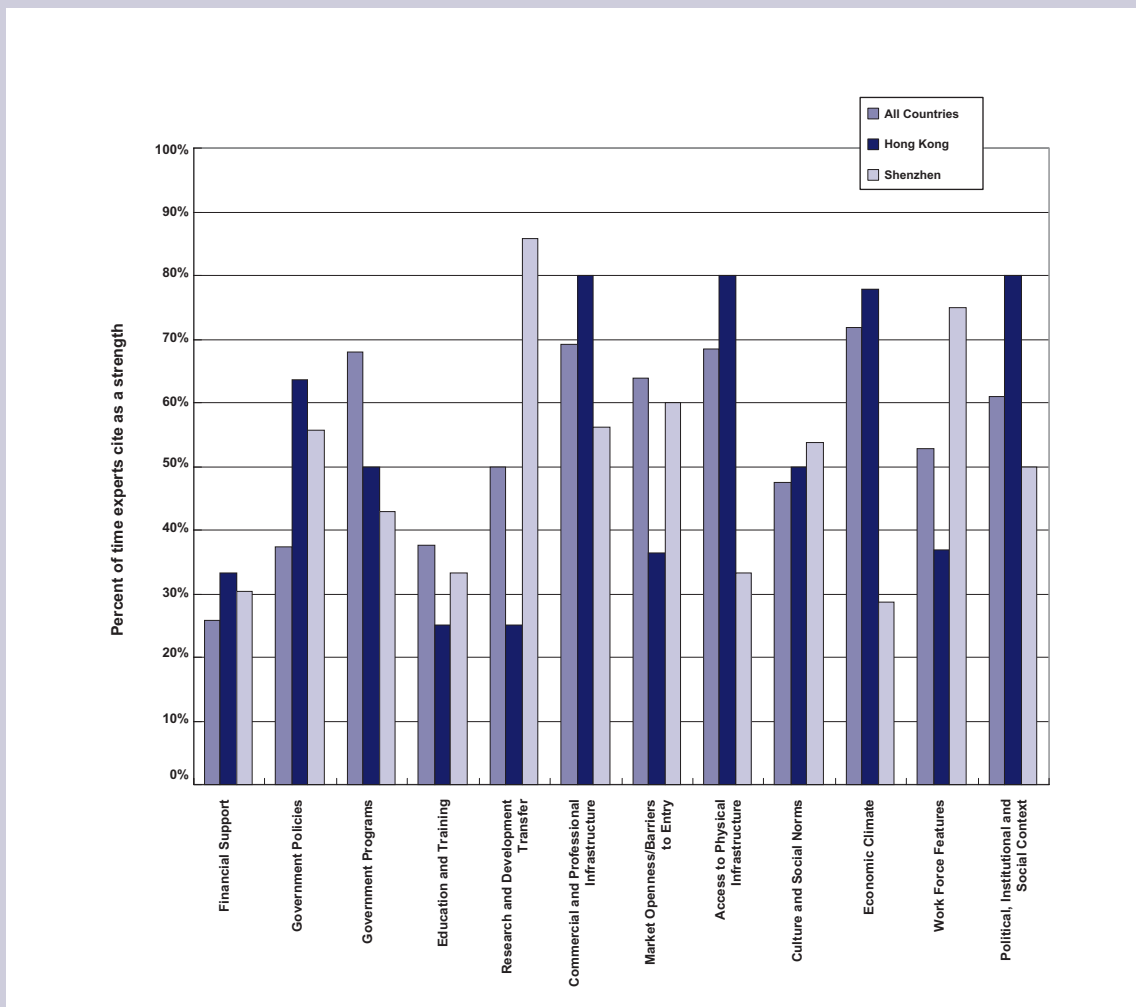
These 12 Entrepreneurial Framework Conditions (EFCs) determine the propensity for a society to engender new and growing firms⁵. In this section we investigate the EFCs in Hong Kong and Shenzhen, through the views of 47 experts from government, industry and academia in the two cities and some 1,300 experts worldwide. We asked the experts to complete a detailed questionnaire and to answer questions concerning each economy's EFC strengths and weaknesses. We analyze their responses using three approaches -

- Strength Measures
- Priority Index
- Mean Scores

⁵ GEM continues to debate the merits of various different lists of EFCs. The trade-off between generality and specificity of the EFCs has not been resolved. Last year, we focused on EFCs 1 to 9. This year we have added an additional three: factors 10 to 12.

Each expert cited three strengths and three weaknesses of their respective economies with respect to entrepreneurship. The EFC Strength Measure, summarized in Figure 16, gives the percent of the occasions each EFC was cited as a strength. Each EFC, however, is general and encompasses many factors. To provide a more detailed picture, the experts were also asked to cite specific strengths and weaknesses. The Priority Index in Figures 17 and 18 tabulates the percent of instances a specific weaknesses and strengths is cited by experts. Whereas the Strength measure and the Priority Index deal with open-ended questions, the Mean Scores tabulated in Figures 19 to 25 give experts' responses to individual multiple choice questions from the questionnaire. Details of the three approaches are given in Appendix IV.

Figure 16: Strength Measures



According to Figure 16, Hong Kong is comparatively strong in its government policies, commercial and professional infrastructure, access to physical infrastructure, economic climate, and political, institutional and social context. Hong Kong is relatively weak in education and training, research and development transfer, and market openness. The most outstanding positive features of Shenzhen are research and development transfer and work force features. The areas in which Shenzhen receives low scores are economic climate and access to physical infrastructure.

The Priority Indices summarized in Figures 17 and 18 show that Hong Kong's entrepreneurial culture, good economic health, and general government policies are key strengths. Shenzhen, similarly, is strong with regard to the prevalence of entrepreneurial culture and its government policies. A third important strength for Shenzhen is its commercial and professional infrastructures. Hong Kong experts considered that the skills and motivation of the Hong Kong people, the extent to which the population is risk-averse, and the costs faced by businesses are the three most serious limiting factors. The Shenzhen experts are concerned with the lack of trust among people (and the lack of systems to substantiate trust and creditworthiness), the lack of business funding, high tax, and poor government services.

Figure 17: Priority Index of Strengths: Hong Kong vs. Shenzhen

	Hong Kong	Priority Index		Shenzhen	Priority Index
1	Hong Kong has an entrepreneurial culture	16.7	1	Shenzhen has an entrepreneurial culture	26.1
2	Economic climate is good	13.7	2	Government policies and programs generally support entrepreneurial activities	25.6
3	Government policies generally support entrepreneurial activities	12.7	3	Commercial & Professional Infrastructure for entrepreneurial activities in Shenzhen is adequate	9.4
4	Capacity of the population for entrepreneurship is high	8.8	4	Entry barriers are low at Shenzhen	8.9
5	Entry barriers are low in Hong Kong	7.8	5	Financial support is good in Shenzhen	6.7
6	Commercial & Professional Infrastructure for entrepreneurial activities in Hong Kong is adequate	7.8	6	Human Resources for professional and general talents are adequate	6.7
7	In terms of political, institutional, and social context Hong Kong is suitable for starting businesses	6.9	7	Good information flow which enhances R&D transfer	5.0
8	Physical infrastructures in Hong Kong are highly accessible	6.9	8	Education effective	4.4
9	Hong Kong has a good financial system and capital is plentiful	4.9	9	Social context favors entrepreneurial activities	3.3
10	The population is getting more educated	3.9	10	Physical infrastructures are highly accessible	2.8
11	Government programs such as the Innovation and Technology Fund are available to help startups	2.9	11	Various factors, such as being close to Hong Kong, help create an economic climate that is good for entrepreneurial activities	1.1
12	The work force in Hong Kong is very adaptive to change	2.9			
13	Research support is available to incubate startups	2.0			
14	High population density allows highly concentrated markets to be built	2.0			
	Total	100.0		Total	100.0

Figure 18: Priority Index of Weaknesses: Hong Kong vs. Shenzhen

	Hong Kong	Priority Index		Shenzhen	Priority Index
1	Hong Kong people lack the knowledge, motivation, and skills to take on entrepreneurial activities	20.2	1	Shenzhen is not a trusting environment for businesses	23.7
2	Generally people are not willing to accept the risks of entrepreneurial activities	14.1	2	Funding businesses is difficult	19.8
3	Costs of setting up businesses in Hong Kong are too high	13.1	3	High tax and poor government services are obstacles for businesses	13.6
4	Funding is difficult for small businesses	12.1	4	Government does not provide guidance and support for businesses	9.6
5	Government policies that support entrepreneurial activities are not well executed	11.1	5	Both quantity and quality of educational institutions in Shenzhen are inadequate	8.5
6	Education in Hong Kong does not equip young people with the creativity and learning skills required to be entrepreneurs	9.1	6	Cost of setting up businesses in Shenzhen is a significant entry barrier	7.3
7	Highly qualified people prefer to work for large organizations	8.1	7	Shenzhen lacks good commercial and professional services to support businesses	5.6
8	Hong Kong doesn't have the R&D capability to engage in tech related businesses	4.0	8	Environment and physical infrastructure such as transportation network in Shenzhen are poor	4.5
9	Markets in mainland have created better opportunities for Hong Kong entrepreneurs	4.0	9	Shenzhen lacks attractiveness for professionals	4.5
10	Access to real estate at good locations presents a major problem for startups	3.0	10	Unstable human resource supply	2.3
11	Hong Kong lacks consultants to help potential entrepreneurs	1.0	11	Shenzhen lacks institutions and talents for R&D	0.6
	Total	100.0		Total	100.0

In our findings, the same EFCs are featured as both strengths and weaknesses. In fact, the same expert often cites negative and positive aspects of the same EFC. For instance, both the Hong Kong and Shenzhen experts believe that their cities have an entrepreneurial culture. Meanwhile, the same experts criticize Hong Kong people's lack of propensity to take risks and Shenzhen people's lack of trust as limiting factors. Mixed reviews of government policies and programs are also evident. To investigate these nuances, the following sections provide supplementary analysis by using Mean Scores of the responses to our expert questionnaires.

Figures 16-18 provide **relative** measures of the EFCs. Every GEM economy, regardless of wealth, is forced by our methodology to have equal numbers of strengths and weaknesses. The Mean Scores below do not have this drawback, as the scores are absolute. In the Mean Scores illustrated in Figures 19 through 27, we categorize the countries into "High Income", "Middle Income" and "Low Income". Not surprisingly, the Mean Scores of most factors are higher for high income countries than for middle and low income countries. For Hong Kong and Shenzhen, however, most of their Entrepreneurial Framework Conditions are at least comparable to, if not better than, those of the high income countries. The following sections discuss in detail expert opinions on the EFCs in both Shenzhen and Hong Kong.

FINANCIAL SUPPORT

Figure 16 shows Financial Support's relative strength to be well below 50 percent. In Hong Kong, Shenzhen and the rest of the GEM countries, more experts cite it as a weakness than as a strength. The same picture emerges from Figures 17 and 18 where it is cited higher as a weakness (ranked 2nd and 4th as a weakness in Shenzhen and Hong Kong respectively) than as a strength (ranked 5th and 9th in Shenzhen and Hong Kong, respectively). However, Figure 16 also shows that financial support is perceived to be problematic in all the GEM countries: only 26 percent of experts worldwide cite financial support in their own economies as a strength. For Hong Kong and Shenzhen, the figures are 34 percent and 30 percent respectively. Despite complaints about the funding of new and growing businesses, Hong Kong and Shenzhen are relatively well placed by international standards.

Figure 19: Funding Issues

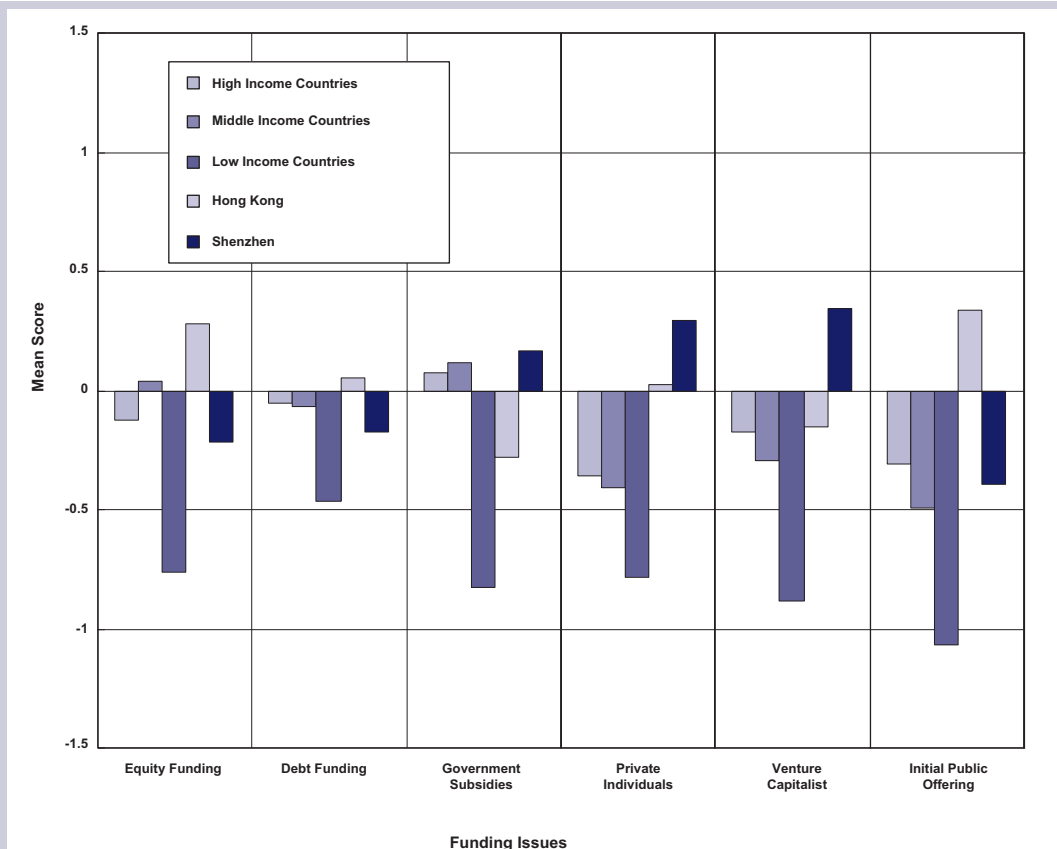


Figure 19 shows the average expert scores from the rating of the statement, "In my country, there is sufficient [type of financing] available for new and growing firms". Experts rate the statement with scores from -2 to +2 where -2 indicates completely false and +2 indicates completely true. A score of 0 indicates a neutral "neither false nor true". It is clear that, in terms of debt, equity and IPO financing, Hong Kong is perceived as slightly better than others. In both Hong Kong and Shenzhen, high savings rates and, in Shenzhen, limited formal investment vehicles result in investment capital being available from private individuals. One particularly noteworthy perception is the availability of venture capital in Shenzhen. While the level of venture capital is still low in China, Shenzhen has been the beneficiary of a substantial fraction of the capital available. This favored position contributes to the perceived abundance of venture capital among the Shenzhen experts.



Shenzhen experts have a relatively high opinion of the adequacy of government subsidies for new and growing firms. This is in sharp contrast to other low income economies' experts. In this and other respects, it is apparent that Shenzhen experts are more satisfied with their government than Hong Kong experts are.

Some Hong Kong experts recommended that the government improve the financial environment by:

- Providing government funding to new businesses, including franchises
- Establishing funds for student entrepreneurs and
- Fostering an environment that attracts angel investors (see section III).

While there was controversy concerning whether the government should substantially increase its involvement, the majority of experts who opined on this subject believe that indeed the government does have a role to play here and should play it. Two experts cited the *laissez faire* policy as a positive contributing factor to entrepreneurial activities, while one considered the non-intervention approach a detriment to entrepreneurship, especially for smaller firms. When the Hong Kong experts rendered their opinions, five of them explicitly mentioned that the government should actively participate in setting up a funding mechanism for new and growing firms, particularly those that are of small to medium size. Only one expert stated that the government should avoid market intervention.

Shenzhen experts showed more consensus in their recommendations, largely focusing on establishing new systems and streamlining existing systems to allocate capital more efficiently. They recommended the government should:

- Establish linkages between investors and entrepreneurs
- Streamline the management of government funds for new businesses
- Establish credit assessment and information systems to increase informed financing of SMEs
- Set up a second board public share market to allow venture capitalists to exit their investments through IPOs

We have paid most attention above to financial institutions, financial markets and government financing for new and growing firms. But the vast majority of funding for start-ups the world over comes from informal investment. As mentioned above, experts also point to the importance of attracting informal investment. Because of the importance of this topic, we devote Part III to discussing informal investment in Hong Kong and Shenzhen.



GOVERNMENT POLICIES AND PROGRAMS

The confidence of the Shenzhen experts with respect to their government's performance in stimulating entrepreneurship with consistent and effective programs and policies is further evidenced by Figure 20. Somewhat tempering this conclusion, however, in relative terms, while the Priority Index of Strength for Shenzhen's government policies and programs is 26.1 percent, the two weaknesses "high taxes and poor government services" and "the government does not provide guidance and support for business" have a total weakness index of 23.2 percent.

Figure 20: Experts' Opinions on Government Policies and Programs

Statement	Rating of Statement: -2 (completely false) to +2 (completely true)		
	Hong Kong	Shenzhen	GEM
Government policies (eg public procurement) consistently favor new firms	-0.71	-0.61	-0.85
Support for new and growing firms is a high priority for policy at the national government level	-0.60	0.29	-0.24
Support for new and growing firms is a high priority for policy at the local government level	-0.55	0.38	-0.29
New firms can get most of the required permits and licenses in about a week	0.85	0.00	-0.93
Amount of taxes is NOT a burden for new and growing firms	1.53	0.27	-0.50
Taxes and other government regulations are applied to new and growing firms in a predictable and consistent way	1.61	1.21	-0.22
Government policies aimed at supporting new and growing firms are effective	-0.50	0.66	-0.53
A wide range of government assistance for new and growing firms can be obtained through contact with a single agency	-0.26	-0.46	-0.73
Science parks and business incubators provide effective support for new and growing firms	-0.17	0.93	-0.13
There is an adequate number of government programs for new and growing businesses	-0.38	-0.33	-0.25
People working for government agencies are competent and effective in supporting new and growing firms	-0.23	0.31	-0.47
Almost anyone who needs help from a government program for a new or growing business can find what they need	-0.51	-0.43	-0.65
Government programs aimed at supporting new and growing firms are effective	-0.68	0.44	-0.47

Hong Kong experts also see government policies and programs as both a strength and weakness. Figure 19 shows that the SAR's third and eleventh strengths (with Priority Indices of 12.7 and 2.9 percent) are government policies and programs respectively. Yet Figure 18 also shows them as the fifth most serious weaknesses, with a Priority Index of 11.1 percent. Figure 16 confirms this ambivalence. Figure 20 shows that Experts give the government very high marks for general efficiency, consistency and low taxes. These policies, however, do not particularly aid new and growing firms, and, while specific programs are available, the effectiveness of those programs is not perceived as good. Hong Kong experts gave recommendations for:

- Relaunching the Innovation and Technology Fund
- Involving practitioners rather than bureaucrats and academics in managing resources for new and growing firms
- Bringing in more venture capitalists to give advice on the Applied Research Funds

Shenzhen experts' recommendations for government included:

- Simplify administrative procedures
- Set up service organizations for small and medium enterprises
- Improve Shenzhen's image

EDUCATION AND TRAINING

Education and training remains one of the weakest areas for Hong Kong and Shenzhen. Figure 16 shows that this factor is one of two EFCs that perform poorly in terms of relative strength in comparison to the rest of the world. Hong Kong's education and training system is perceived to perform slightly better in terms of the Priority Index. About four percent of Hong Kong experts cited the rising level of education as a strength while the comment that education does not foster creativity and entrepreneurial skills was cited 9.1 percent of the time. The difficulty in Shenzhen is more general. While Shenzhen can draw on a national talent pool, the city has inadequate educational institutions, both in quality and quantity (see Figure 18 Weakness 4). In our 2003 Hong Kong and Shenzhen Study, we devoted an entire section to discussing the education and training EFC. As little has changed in this aspect, we do not go into detail here concerning the individual survey responses. The specific points the Hong Kong experts spoke of during the interviews repeated the items emphasized last year:

- Rote learning in schools does not promote creativity and innovation
- Students learn to take tests, but do not learn the practical skills to become entrepreneurs
- English training should be improved in schools
- Entrepreneurial education is needed at all age groups

Reflecting the lack of tertiary education in Shenzhen, the recommendations of the Shenzhen experts include:

- Develop universities to attract foreign students
- Set up universities specializing in innovative science and engineering
- Establish linkages among education, research and production
- Require more university and research centers to provide technical support



RESEARCH AND DEVELOPMENT TRANSFER

Hong Kong experts continued to rate the SAR's ability to transfer scientific research and development into market products and services as a weakness. In last year's study, we devoted an entire section to this EFC and will not emphasize those aspects in this year's study. The experts see the Hong Kong science and technology base as sound but they unequivocally believe that R&D transfer in Hong Kong is ineffective, inaccessible, unaffordable, and in need of governmental support to acquire new technologies and to commercialize technology-related outputs.

The Shenzhen experts are far more satisfied with the research and development transfer situation in Shenzhen. As Figure 16 emphasizes, the relative strength of Shenzhen's R&D transfer is very high—85 percent compared to only 25 percent for Hong Kong. Shenzhen experts state that Shenzhen needs more research institutions and universities to provide support to its industries, but they believe that the R&D that does exist in Shenzhen is effectively transferred. The Shenzhen experts are also concerned about the high costs of technology and the lack of governmental effort to help acquire new technology.

The experts we consulted in Shenzhen frequently focused on the need for better government policies and programs to foster a better entrepreneurial environment. To a greater extent than the Hong Kong experts, the Shenzhen experts tended to express the belief that the government should continue to play a prominent role in the guidance of economic development.

COMMERCIAL AND PROFESSIONAL INFRASTRUCTURE

The commercial and professional infrastructure is rated by Hong Kong experts at a high 80 percent (see Figure 16). While Shenzhen's experts perceive the infrastructure to be relatively good (strength measure of 55 percent), it falls in relative terms well behind that of Hong Kong and the rest of the GEM countries (69 percent). The comment that Shenzhen's commercial and professional services were adequate earned a 9.4 percent on the priority strength index in Figure 17. Conversely, the combined value of the comments that Shenzhen lacked good commercial and professional services and that the city was unattractive for professions had a combined value of 10.1 percent.



Figure 21: Commercial & Professional Infrastructure

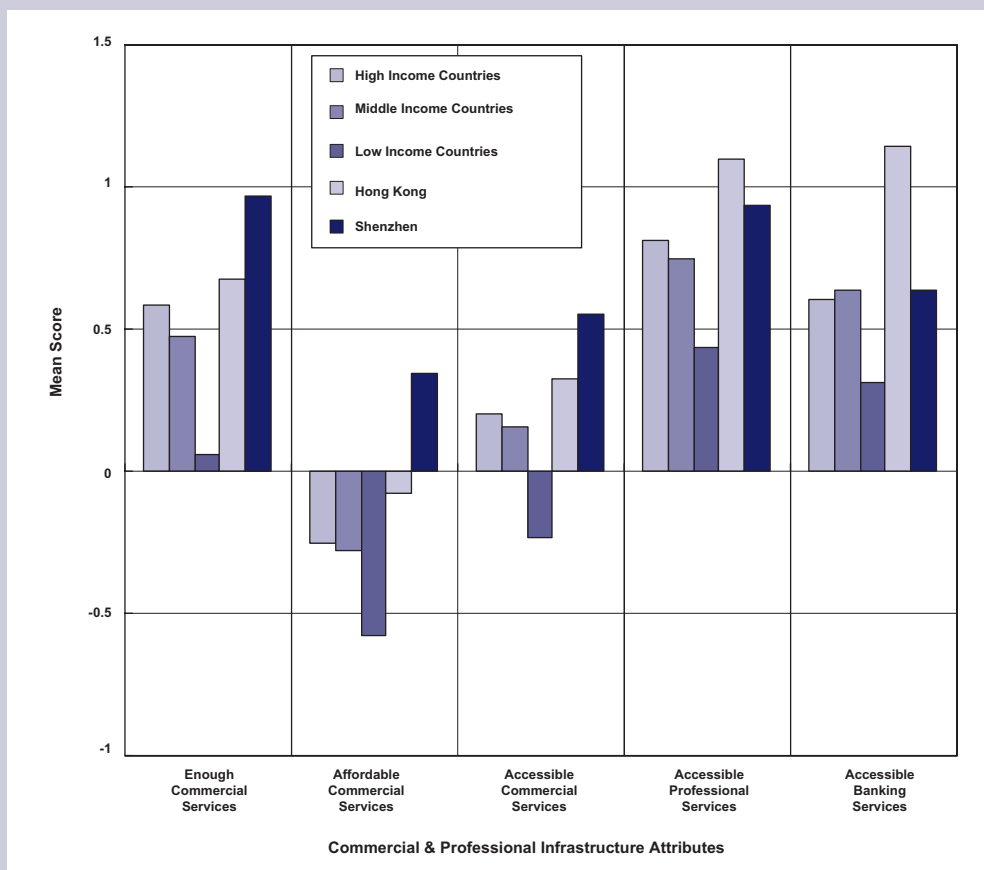


Figure 21 shows the Mean Scores for specific questions concerning the commercial and professional infrastructure of Hong Kong and Shenzhen compared to experts' opinions in high, medium and low income GEM countries. Experts in both cities rate service quantity and accessibility highly. Services are seen as expensive in Hong Kong, but affordable in Shenzhen. Hong Kong professional and banking services are highly accessible to new and growing enterprises.

During the interviews, the experts gave few comments about the commercial and professional infrastructure in both cities. One notable exception concerned Shenzhen experts' frequent reference to the lack of systems providing information about the creditworthiness of enterprises. Implementing such systems would improve the business environment.

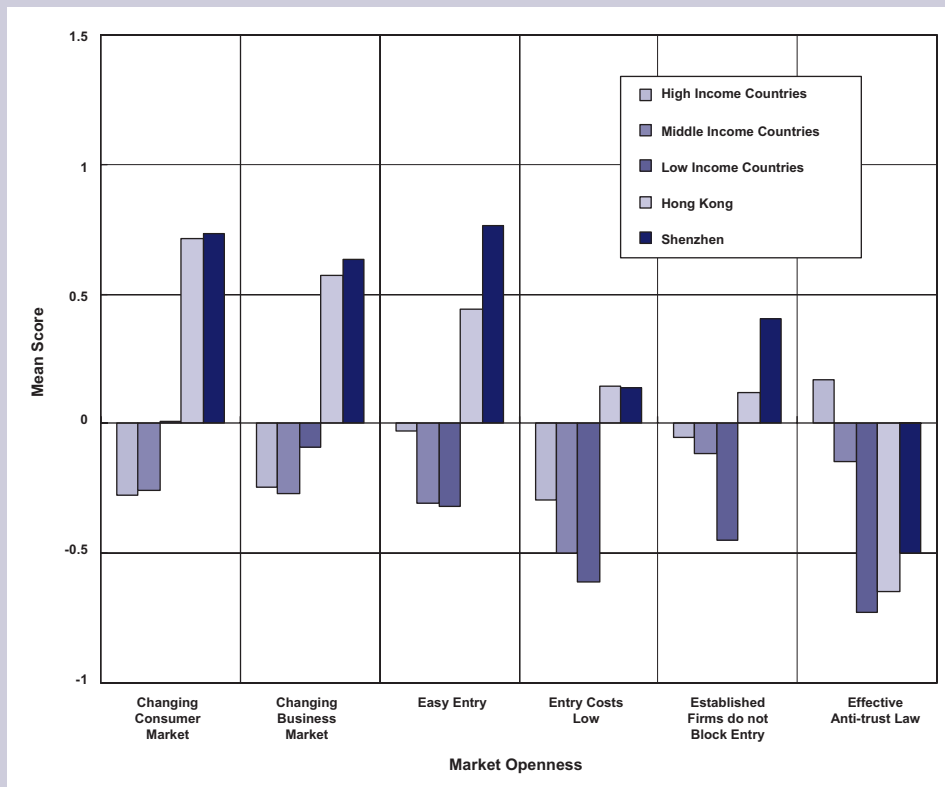


MARKET OPENNESS

Hong Kong is famous for its open market in which firms can easily set up businesses. In the rest of China, Shenzhen enjoys a similar reputation. Thus it is not surprising that both Shenzhen and Hong Kong experts rate their cities highly on most aspects of market openness as shown in Figure 22. There is one major exception: neither Hong Kong nor Shenzhen have substantial anti-trust laws.

Cost of entry is also a substantial barrier to entry. In Figure 18, business costs in Hong Kong and Shenzhen ranked third and sixth respectively on the list, and are regarded as serious impediments to entrepreneurial activities. If we regard high costs as a barrier to market entry, this cost factor is reflected in the EFC strength measure shown in Figure 16 as market openness. Although Shenzhen's high costs relative to the rest of China are noted by experts - high costs rate a priority index of 7.3 percent in Figure 18 - they are not nearly as serious a hindrance as in Hong Kong.

Figure 22: Market Openness



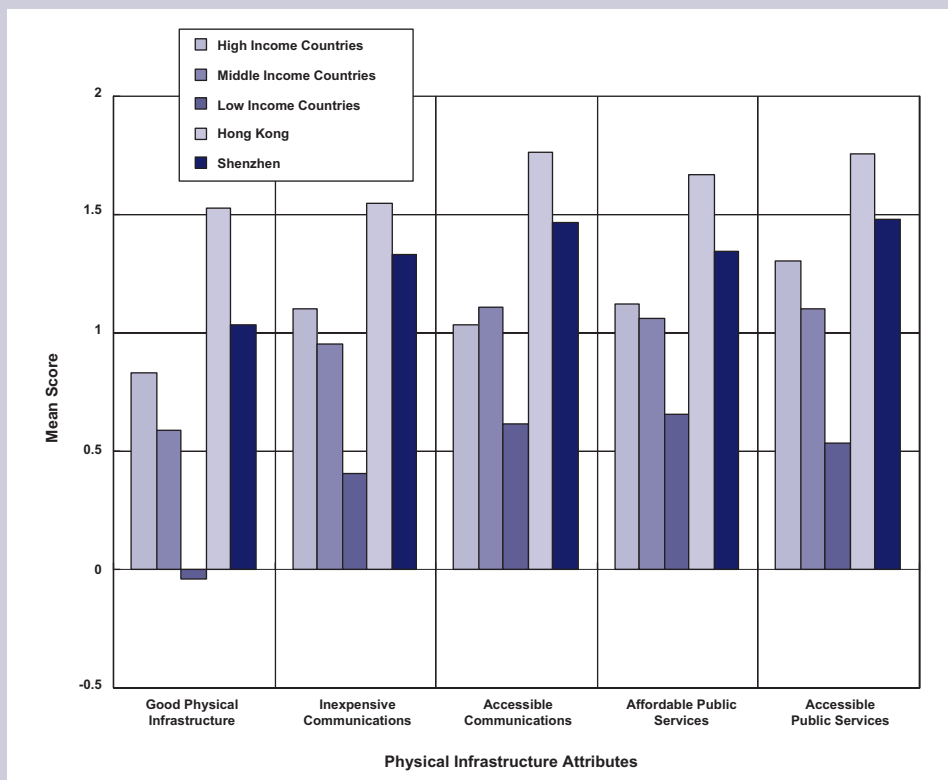
PHYSICAL INFRASTRUCTURE

Overall, experts in the GEM countries give the highest average ratings to each of their countries' physical infrastructures (Figure 23). Roads, gas, water, electricity, sewage, waste disposal, phone and internet services were generally rated well, but in Shenzhen, and, especially in Hong Kong physical infrastructure is rated most highly by their experts. Few experts, however, cited the physical infrastructures of either city as being a contributing factor to entrepreneurial activities.

Some specifically commented that physical infrastructure is a hygiene factor: poor physical infrastructures may hold back entrepreneurial activities but, by itself, good physical infrastructure does not promote entrepreneurial activities. Moreover, although the Mean Score for infrastructure in Shenzhen is high, a few experts in Shenzhen cited road inadequacy leading to traffic jams as a weakness, leading to a low score in Figure 18.

Simply put, both Hong Kong and Shenzhen have good physical infrastructures but entrepreneurs are not likely to set up businesses just because physical infrastructures are good. Indeed, good infrastructure may mean that entrepreneurs cannot find as much new opportunity in providing utility services as in other less developed countries. They may also face keen competition from large overseas companies who take the opportunities to invest and compete with them in the domestic market.

Figure 23: Physical Infrastructure



CULTURE AND SOCIAL NORMS

As shown in Figure 24, both Hong Kong's and Shenzhen's culture and society strongly support entrepreneurship. Experts consider that both cities encourage the personal qualities of entrepreneurs and hold entrepreneurial activities in high esteem. Figure 18 shows tremendous confidence in the cultural bases of entrepreneurship, with Shenzhen's experts' confidence outstripping Hong Kong's. Figure 17 shows that culture is the first-ranked strength, with Priority Indices of 16.7 and 26.1 for Hong Kong and Shenzhen, respectively. However, as shown in Figure 18, the experts repeatedly pointed out sources of weaknesses that are related to culture and social norms.

The Hong Kong experts said that the most serious problem with the Hong Kong people these days is that the youth are not willing to take risks. In addition, they doubt if the new generation possesses the kind of skills and knowledge that people from the previous generations did. Some made reference to the entrepreneurs back in the 1950s and 1960s, during which time many entrepreneurs in Hong Kong were busy setting up the manufacturing facilities that drove the city's rapid economic development. The relatively wealthy environment of modern Hong Kong, however, does not motivate youth the way poverty motivated the older generation. In Figure 18, the sum of the first, second and seventh weaknesses (lack of skills and motivation, risk aversion and preference to work for large organizations) accounts for 42.4 percent of the Priority Index of weaknesses. Some experts grouped these cultural weaknesses together with the education system (discussed above), which does not teach entrepreneurial skills and knowledge. If one accepts this grouping of EFCs, the combined Priority Index weaknesses expand to almost half of the total problem. In short, the cultural climate of Hong Kong presents a paradox.

In Shenzhen, the socio-cultural trait most associated with retarding entrepreneurship is the lack of trust, with a high 23.7 percent Priority Index. This trait is partly the reflection of a new immigrant society, without community roots. It can be addressed by the passage of time, improving public security and increasing law enforcement and information systems for credit checking.

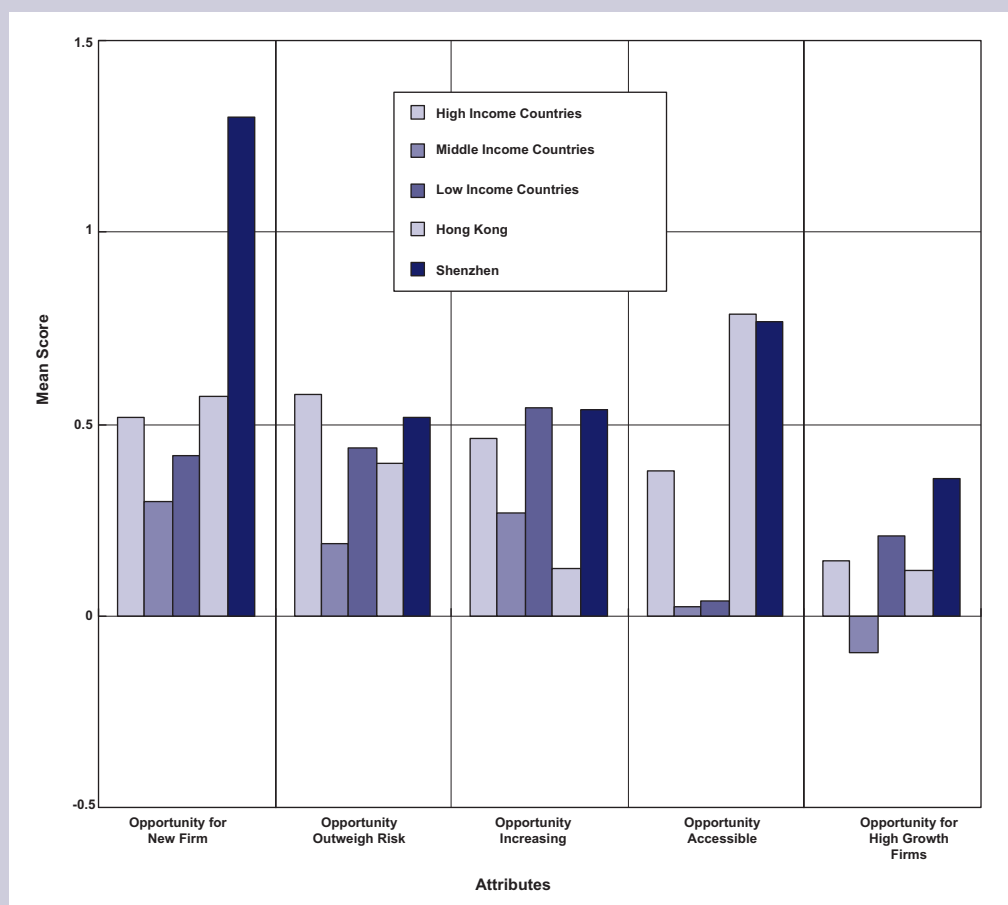
Figure 24: Experts' Opinions on Culture

Statement	Rating of Statement: -2 (completely false) to +2 (completely true)		
	Hong Kong	Shenzhen	GEM
National culture is highly supportive of individual success achieved through own personal efforts	1.78	1.70	0.01
National culture emphasizes self-sufficiency, autonomy, and personal initiative	1.38	1.63	0.04
National culture encourages entrepreneurial risk-taking	1.07	1.63	-0.35
National culture encourages creativity and innovativeness	0.62	1.60	-0.04
National culture emphasizes the responsibility that the individual (rather than the collective) has in managing his or her own life	1.07	1.33	-0.06
Creation of new ventures is considered an appropriate way to become rich	1.02	1.47	0.40
Most people consider becoming an entrepreneur as a desirable career choice	0.31	1.13	0.04
Successful entrepreneurs have a high level of status and respect	1.29	1.40	0.53
Often see stories in the public media about successful entrepreneurs	1.40	1.43	0.42
Most people think of entrepreneurs as competent, resourceful individuals	1.26	1.27	0.48

ECONOMIC CLIMATE

Figure 16 shows that the economic climate of Hong Kong is rated very well, much better than that of Shenzhen. This is paradoxical: the rate of growth of Shenzhen clearly outstrips Hong Kong's by a substantial margin. But while Hong Kong has recently emerged from several years of deflation and recession, Shenzhen is finding the extremely rapid growth of the last two decades abating somewhat. Increasing labor costs and shortages of land combine with the perception of "the special economic zone no longer being special" to temper experts' opinions about the economic climate. Figure 25 brings this into focus. Shenzhen's opportunities are still perceived as substantial, but the degree to which opportunities exceed the risks, the accessibility of opportunities, and the potential for high growth are now not much different from other economies.

Figure 25: Economic Outlook



WORKFORCE FEATURES

Figure 26 demonstrates the confidence of Shenzhen people in entrepreneurship. Experts consider that, on balance, people think creating a new or high growth business is easy. This perception is not shared by Hong Kongers; nor is it shared by high, middle or low income countries in general. Only in "ability to act quickly" do Hong Kong experts' opinions join those of Shenzhen experts in positive territory. The relative strength of the Shenzhen workforce is also reflected in Figure 16, where it is rated at 75 percent. Hong Kongers prefer to work in large organizations (Figure 18 - the seventh most important weakness with a priority score of 8.1 percent). In Shenzhen, on the other hand, the most serious shortcoming of the workforce is seen to be its instability (Figure 18 - the tenth most important weakness with a priority score of 2.3 percent).

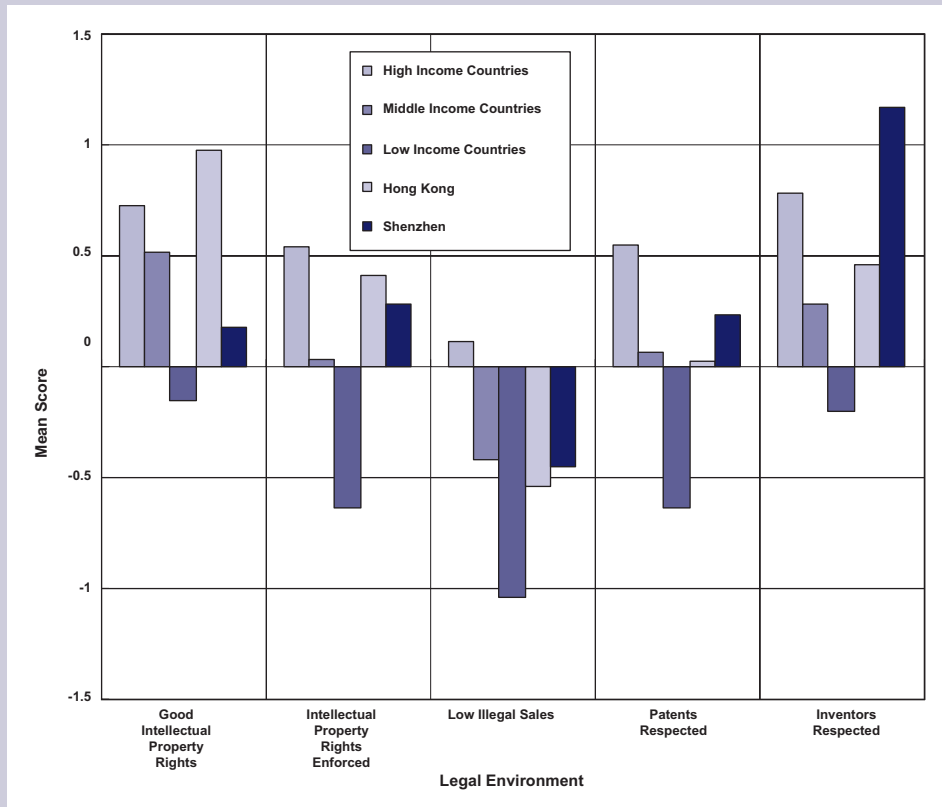
Figure 26: Experts' Opinions on Workforce Features

Statement	Rating of Statement: -2 (completely false) to 2 (completely true)		
	Hong Kong	Shenzhen	GEM
Most people believe that creating new or high growth businesses is easy	-0.45	0.31	-0.48
Many people know how to manage a small business	-0.26	0.33	-0.49
In my country, many people have experience in starting a new business	-0.31	0.59	-0.52
Many people can react quickly to good opportunities for a new business	0.57	0.86	-0.27
Many people have the ability to organize the resources required for a new business	-0.05	0.73	-0.37

POLITICAL, INSTITUTIONAL AND SOCIAL CONTEXT

The final category functions as an "other" category, for political, institutional and social characteristics – including the legal system - not covered elsewhere. Figure 27 focuses on aspects of the legal system directly related to entrepreneurship. Experts perceive that Hong Kong lags behind the highest income countries in intellectual property rights legislation and enforcements while it leads middle and low income countries. The perception of Shenzhen experts that it leads in respect of intellectual property rights enforcement and the level of respect inventors receive may come as a surprise to Hong Kongers and other non-Chinese, who often perceive China's attitude to intellectual property as an endorsement of piracy. It is explained, however, by the tremendous effort made in recent years to devise and improve a body of intellectual property rights and to take enforcement action. Turning back to the relative strength measure in Figure 16, Hong Kong's experts give this measure a high 80 percent relative strength, whereas Shenzhen experts are just as critical of Shenzhen's political, institutional and social context as they are complimentary.

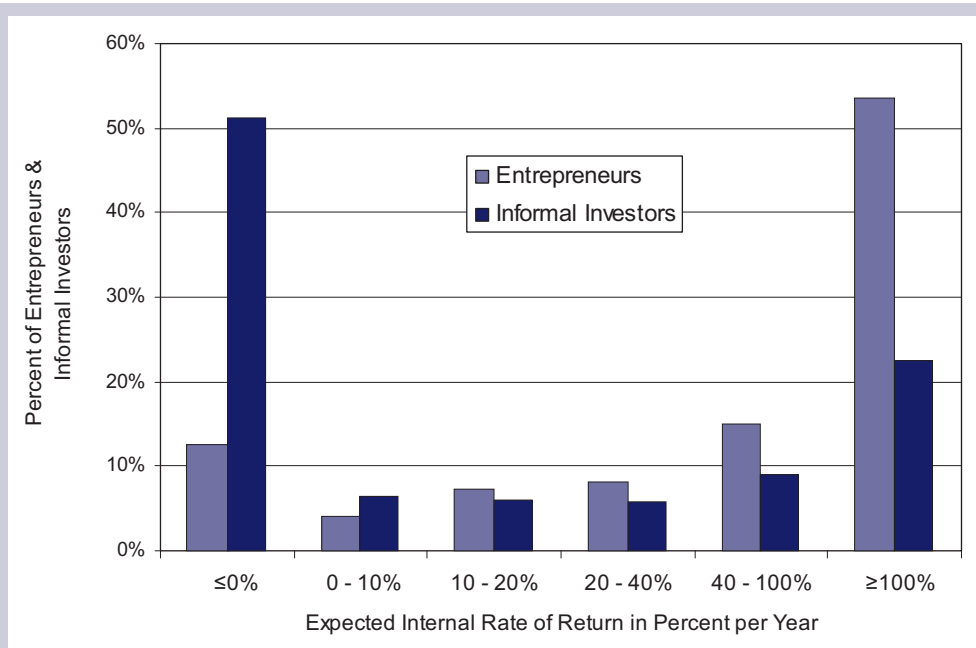
Figure 27: Legal Environment Supporting Innovations



PART III: INFORMAL INVESTMENT

Obtaining financial support is a universal requirement for entrepreneurs. Without cash, entrepreneurs cannot convert ideas into products and services. New companies with growth potential need cash to fund that growth. Informal investment is the main source of that cash. Moreover, Figure 28 shows that, throughout the world, entrepreneurs in search of cash are far more optimistic about the returns start-ups will bring than are informal investors whose cash is to be placed at risk. Resolving this misalignment of perceptions represents one of the great challenges for both entrepreneurs and investors.

Figure 28: Expected Internal Rate of Return for Entrepreneurs and Informal Investors



INFORMAL VERSUS FORMAL INVESTMENT

There are two potential sources of investment: formal and informal.

Formal investment channels include:

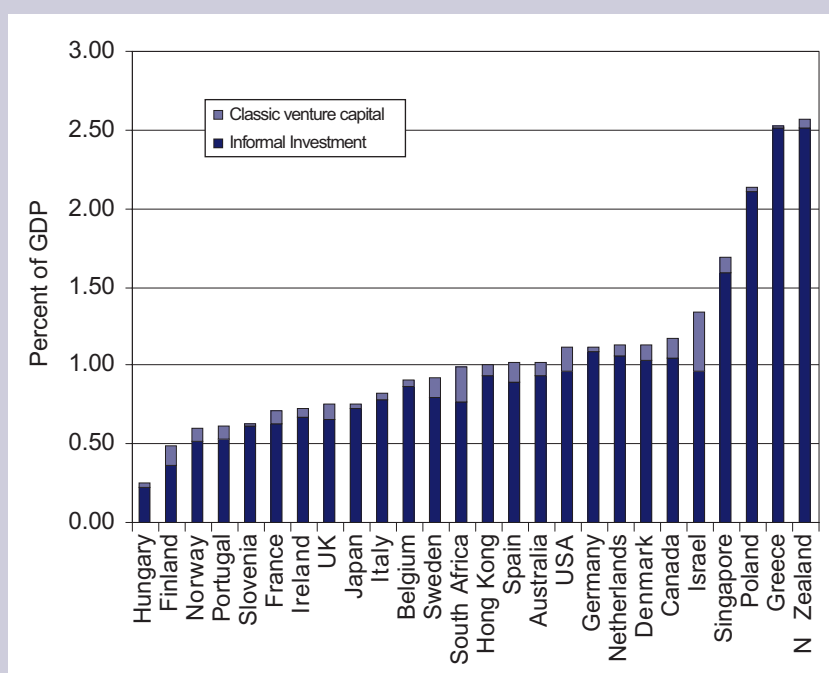
- Banks and other lenders
- Government funding programs
- Venture capital funds
- Capital markets

Banks and other creditors lend against collateral or personal guarantees, where the value of the pledged assets or the net worth of the guarantor respectively exceeds the value of the loan. Although not yet popular in Hong Kong, loans can be backed by forecasted cash flows accruing to businesses or assets. But start-ups typically do not have sufficient assets to use as collateral and their cash flows typically are not stable enough to give sufficient comfort for lenders. Hence debt capital is not generally available to startups except for financing real estate, equipment or receivables.

Government programs, as discussed in Part II of this report, are not perceived to have had a substantial impact on entrepreneurial conditions in Hong Kong, although their impact is seen as somewhat greater in Shenzhen. The Hong Kong government loan's guarantee programs for small and medium sized enterprises serves mainly to facilitate bank lending to small companies, and so does not address the need for startup and growth capital. The technopreneurial funding program of the Innovation and Technology Commission in Hong Kong and the Applied Research Fund supply only a limited amount of early stage capital for high technology companies.

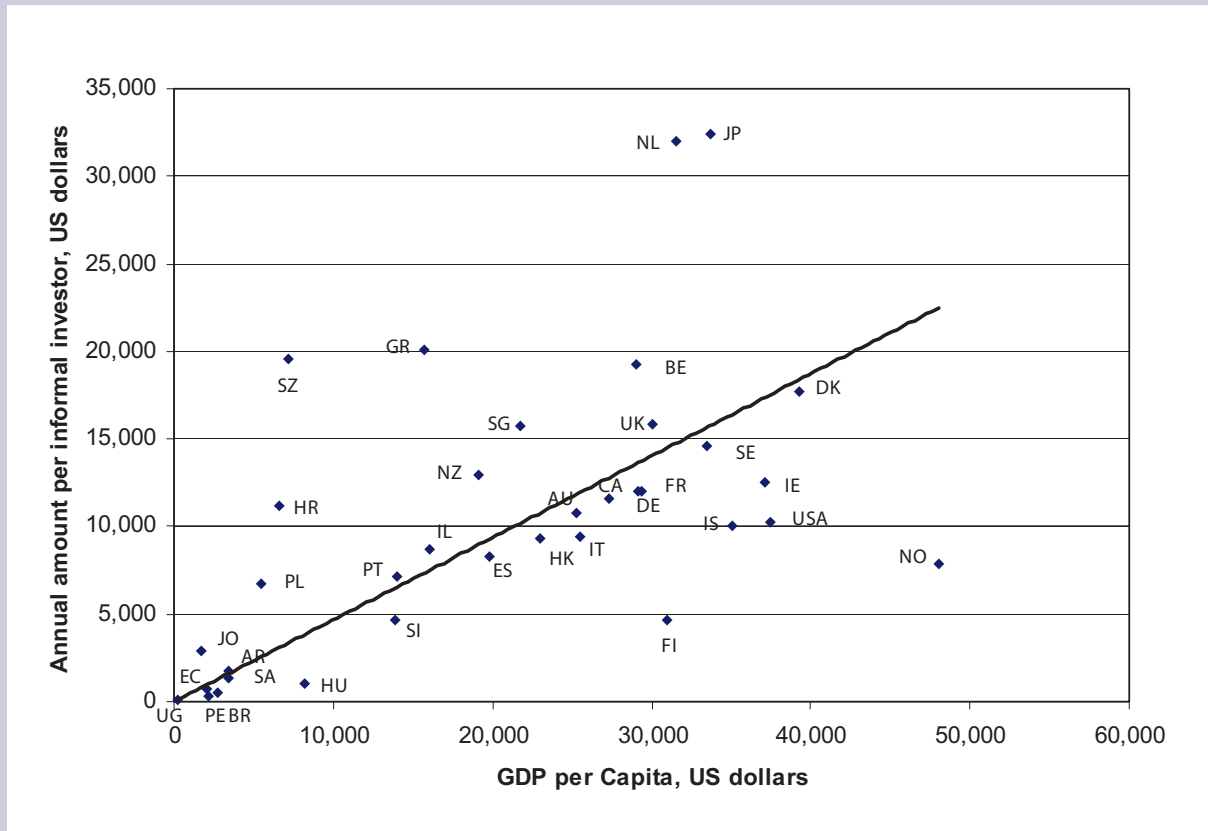
Venture capital funds receive tremendous publicity because they are the only formal investment vehicle for financing startups and early growth companies. Their ability to channel millions of dollars into new ventures raises their stature in the eyes of would-be entrepreneurs to mythical heights. The value of venture capital investment, while substantial, is not nearly as large as the value of informal capital investment. As Figure 29 shows, in Hong Kong, venture capital funding accounts for about 0.1 percent of GDP. This number is far less than the 0.9 percent of GDP accounted for by informal investors.

Figure 29: Informal Investment & Classic Venture Capital as a percent of GDP



Those ventures financed by venture capital typically involve investments of more than US\$1 million and the average Venture Capital investment is about US\$7 million; yet, as Figure 29 and Figure 30 show, most startups' initial capital is far less than that - around US\$10,000 in the US and Hong Kong and US\$20,000 in Shenzhen. Not surprisingly, then, fewer than one in a thousand startups worldwide are financed by venture capital funds. Also, in our telephone survey study, we did not uncover a single startup firm that was financed with venture capital.

Figure 30: Annual Amount per Informal Investor vs GDP per capita, US dollars



Note: AR: Argentina; AU: Australia; BE: Belgium; BR: Brazil; CA: Canada; DE: Germany; DK: Denmark; EC: Ecuador; ES: Spain; FI: Finland; FR: France; GR: Greece; HK: Hong Kong; HR: Croatia (Hrvatska); HU: Hungary; IE: Ireland; IL: Israel; IS: Iceland; IT: Italy; JO: Jordan; JP: Japan; NL: Netherlands; NO: Norway; NZ: New Zealand; PE: Peru; PL: Poland; PT: Portugal; SE: Sweden; SG: Singapore; SI: Slovenia; SZ: Shenzhen; UG: Uganda; UK: United Kingdom; US: United States; ZA: South Africa

Startups, therefore, turn to informal investors because they have no choice. Informal investors include the entrepreneur him- or herself, immediate family, friends and colleagues and angel investors. Angel investors are the most formal of the informal investors. They are wealthy individuals who enjoy investing in startup or early growth companies, and typically screen out many potential investees, selecting those who promise the greatest return. They sit on the board of directors, and offer help in strategy, finding appropriate managers, and linking with distributors and suppliers. At a later stage, they are instrumental in arranging subsequent rounds of financing.



CHARACTERISTICS OF INFORMAL INVESTORS

In Hong Kong and Shenzhen, the characteristics of informal investors are largely similar to those of the entrepreneurs. In the case of Hong Kong, they are mostly educated at high school level. Many of them belong to the 35 to 44 years-of-age group. However, in terms of gender composition, while three-quarters of entrepreneurs are male, the informal investors in Hong Kong have about the same number of males and females. These informal investors are mostly comprised of blue and white collar workers and sole proprietors. The informal investors in Shenzhen are generally more educated, with most of them having a university degree. The male to female ratio is about 2 to 1. Investors are mostly white collar workers, managers, or business owners. They mostly belong to the highest income group in society.

In terms of cash outlay, the sizes of reported informal investments in Hong Kong and Shenzhen are generally small. Figure 31 and 32 show the relative size of the investment made by informal investors in both places. The majority of the investments, 50 percent in Hong Kong and 57 percent in Shenzhen, are HK\$50,000 and RMB50,000 or below. The distributions of the investment outlays for the two places are very similar, indicating that the informal investments largely revolve around businesses that only require small amounts of capital.

Figure 31: Size of Informal Investment in Hong Kong

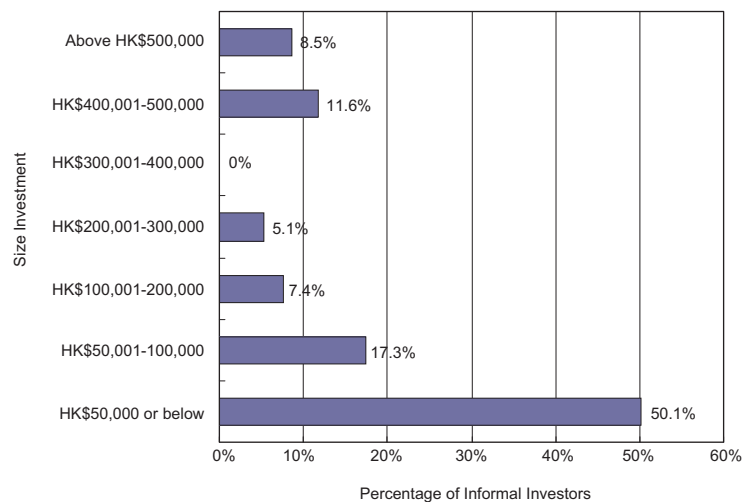
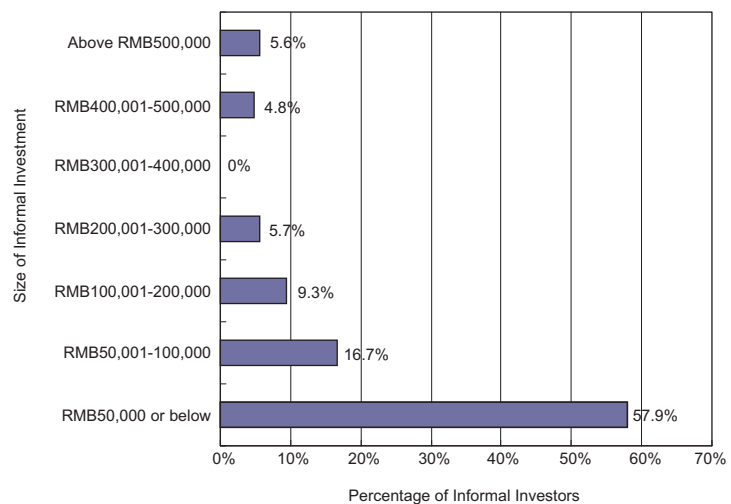


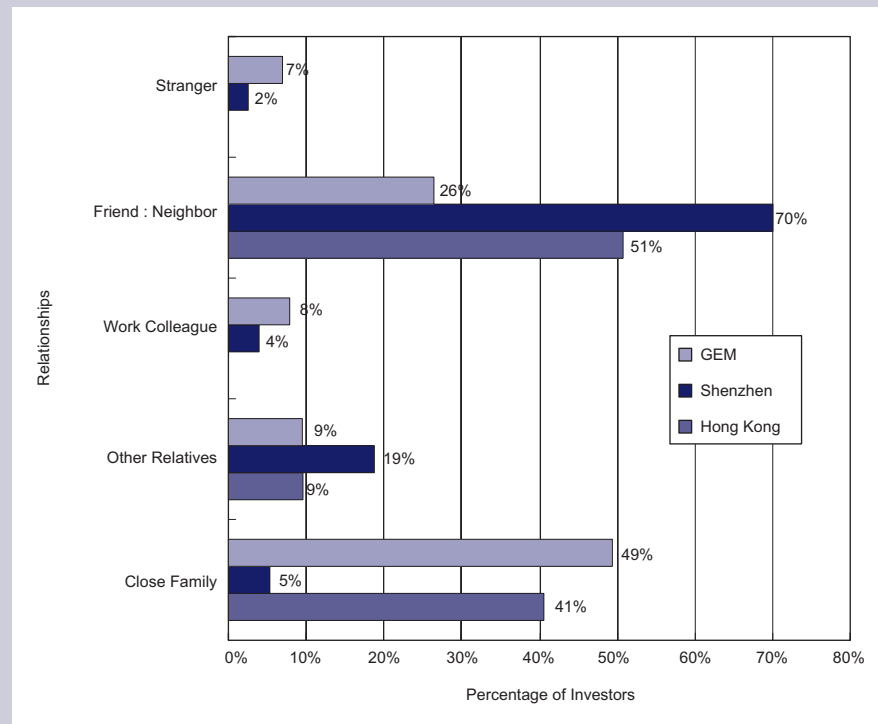
Figure 32: Size of Informal Investment in Shenzhen



Of particular interest are the relationships that these informal investors have with the investees. The Chinese family is often held up as a model for informal investing, but in Hong Kong and especially in Shenzhen, family ties are not the most important. In Hong Kong, more investors invest in the projects of friends and neighbors (51 percent) than those of family members. In Shenzhen, only 5 percent of informal investors invest in the projects of close family members. While Hong Kong and Shenzhen share many cultural traits, including family and peer relations, the low involvement of close family in business endeavors in Shenzhen may be due to the population composition of the city. As previously discussed, the population in Shenzhen consists of only 30 percent of Shenzhen permanent residents. The others are temporary residents who have flocked to Shenzhen from all over China to make their fortunes. In other GEM countries, informal investors generally invest mainly in the ventures of close family members.

Figure 33: Relationships of Investors to Investees

The responses for the question: What was your relationship with the person that received your most recent personal investment?



⁶ As Figure 34 makes clear, there is no expectation of any payback within 10 years. A portion of these investors may expect very long term payback.

The following tables contain information on the expected payoff and investors' relationship with the entrepreneurs. Interestingly, almost half of Hong Kong informal investors and just over one third of Shenzhen informal investors do not expect any returns! It appears that these investment decisions are not being made primarily for business purposes. This phenomenon is also mirrored in GEM countries in general. Overall, 34 percent of informal investors worldwide do not expect any returns⁶.

Figure 34: Informal Investors' Relationships with Investees and their Expected Payback Amount (Hong Kong)

Expected Payback amount in 10 years:	Informal Investors: Relationship to Investee			Total
	Close Family	Other Relative	Friend/ Neighbor	
None	18%	6%	24%	47%
Half of The Invested Amount	9	0	3	12
About as Much as The Invested Amount	3	0	9	12
One and Half Times The Invested Amount	3	0	9	12
Twice the Invested Amount	3	3	3	9
Five Times the Invested Amount	0	0	3	3
Don't Know	3	0	0	3
Refused	3	0	0	3
Total	41%	9%	50%	100%

Total observations: 34

Figure 35: Informal Investors' Relationships with Investees and their Expected Payback Amount (Shenzhen)

Expected payback Amount in 10 years	Informal Investors: Relationship to Investee					Total
	Close Family	Other Relative	Work Colleague	Friend/ Neighbor	Stranger	
None	1%	6%	0%	28%	2%	37%
Half of the Invested Amount	1	1	0	3	0	4
About as Much as the Invested Amount	2	1	1	9	0	13
One and Half Times the Invested Amount	0	1	1	2	0	4
Twice the invested amount	0	2	1	2	0	5
Five Times the Invested Amount	1	2	0	4	0	6
Ten Times the Invested Amount	1	2	0	2	0	4
Twenty times the Invested Amount	0	1	0	4	0	5
Don't Know	1	4	2	13	1	21
Refused	0	0	0	1	0	1
Total	6%	19%	4%	68%	3%	100%

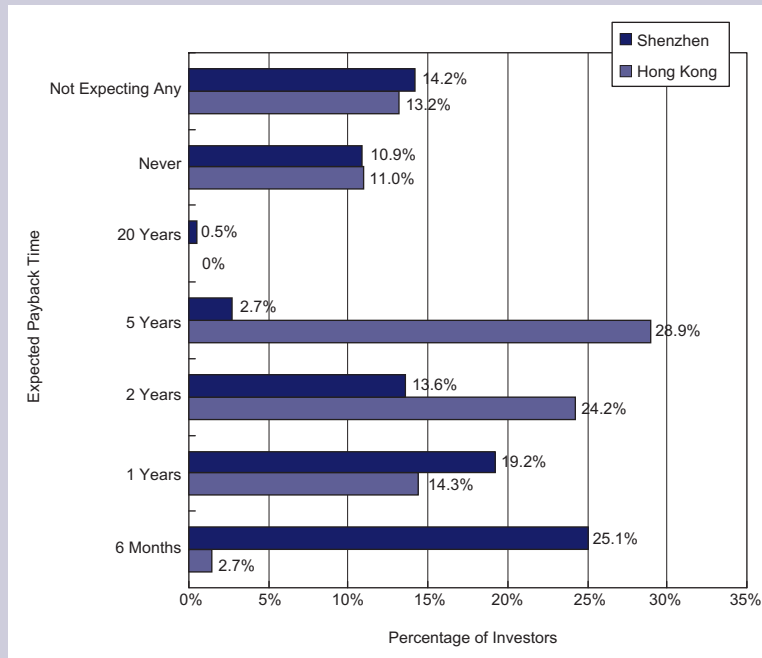
Total observations: 184

Note: The table contains responses collected by the following two questions:

- 1) What was your relationship with the person that received your most recent personal investment?
- 2) In the next ten years, what payback do you expect to get on the money you put into this start-up?

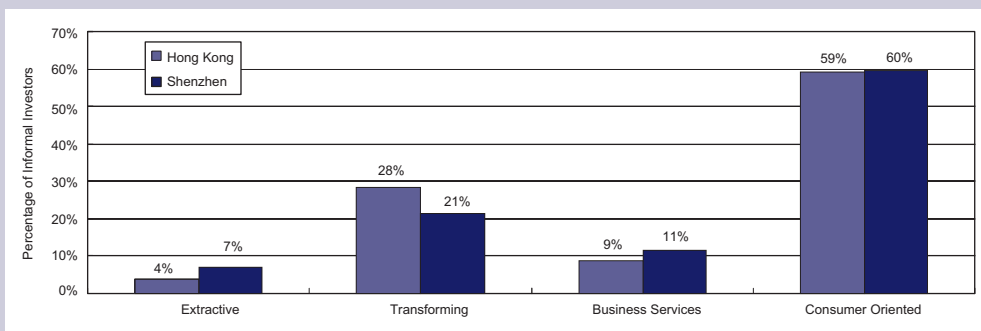
The time frames in which informal investors expect payoffs differ substantially between Hong Kong and Shenzhen. The graph below shows the comparative expected payback time of the informal investors in both places. Compared with the Hong Kong investors, the Shenzhen investors clearly expect returns from their investments in shorter periods of time, with 25 percent of them expecting payback in 6 months and the percentage of investors expecting longer payback times gradually decreasing. The Hong Kong investors display a completely opposite pattern in this regard, with about 3 percent of investors expecting returns in 6 months and the proportion of investors expecting returns in longer periods of time gradually increasing. A closer look at the data reveals that around 5 percent of the informal investors in Shenzhen expect 10 to 20 times return on their investment in 6 months. This reflects a far greater optimism within the Shenzhen community, borne of a region that has been growing at double digit rates for the last 20 years. Hong Kong, in contrast, has a population that takes pride in its realistic expectations.

Figure 36: Informal Investors' Expected Payback Time



Informal investors, not surprisingly, invest in the same types of businesses that were being started as reported in Part I above. The most popular industry belongs to the consumer oriented category. The next industry group on the list is the transforming industries. Business services and extractive industries are the least invested industries. The profile of industries in which informal investors from Hong Kong and Shenzhen are interested largely resembles that of start-up businesses generally.

Figure 37: Informal Investment by Industry



Note: Extractive: agriculture, forestry, fishing, mining and construction.
 Transforming: manufacturing, transportation, communications, utilities, wholesale, and motor vehicle sales and services.
 Business services: financial, insurance, real estate and business services.
 Consumer services: retail, hotel, restaurant, health, education, social services, and consumer services.

CONCLUSION

This section sheds light on by far the most important source of capital for start-ups - informal investors. Stimulation of informal investment is important to stimulation of entrepreneurship. Yet the small scale, the pervasiveness and the informality of this financing makes it a poor candidate for successful government intervention. The role of government here can only be indirect - through education to improve the quality of informal investment and information sharing, to improve the risk/return tradeoffs. A larger role may be played by business and social networks.

Our research reveals that family is not the main network for Hong Kong and Shenzhen informal investing. Much can be done by business associations, community associations, clubs, school alumni networks, religious groups and charitable organizations to sponsor investment networks. Women play a far more important role as investors than investees in informal investment. Hence women's groups can help. Informal investors include those who strive to maximize their wealth through the search for the most attractive investment opportunities. Their analysis of projects to select those yielding large, quick, safe returns helps allocate capital more efficiently.

Our research also reveals that a substantial proportion of informal investors do not expect to receive positive returns in the medium term. These investors have social agendas. For them, helping entrepreneurs start new ventures is a prime motivation. This motive can be harnessed by like-minded community members to increase entrepreneurship. Although they see it as important to minimize risks and losses, the benefits to society - be they reducing unemployment, helping disadvantaged members of society, reducing environmental degradation, or promoting other social causes - are at least as important.



GEM

PART IV: CORPORATE ENTREPRENEURSHIP

GEM measures entrepreneurship with TEA. Although TEA is the only internationally accepted and implemented measure of entrepreneurship, it is limited by its focus on start-ups.

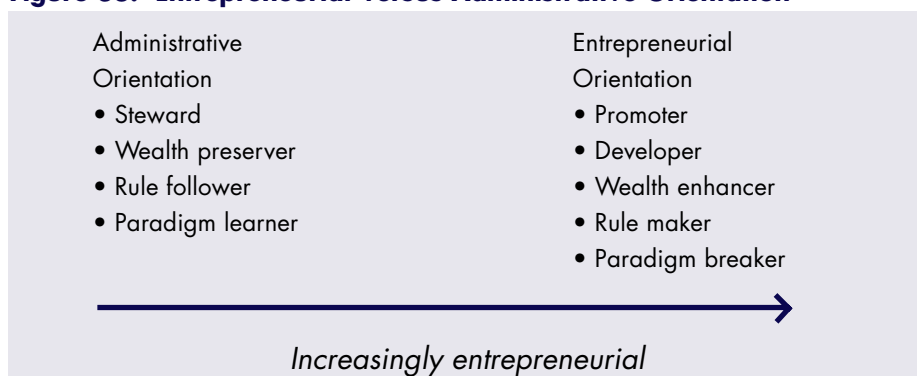
Entrepreneurship is, however, not confined to start-ups. Entrepreneurship is a state of mind that leads to action. The orientation and actions of existing companies, not just the number of new companies, determines whether or not an economy is entrepreneurial. In Part IV, we analyze the entrepreneurial orientation and actions of companies in Hong Kong and Shenzhen. Using a questionnaire drawing on the work of academic colleagues from Europe and North America, we surveyed 50 companies (31 in Hong Kong and 19 in Shenzhen) with sales of over HK\$ 10 million (10 million *Renminbi* in Shenzhen) and over five years of existence. Our results largely substantiate the findings of the TEA surveys: in most aspects of orientation and action Hong Kong companies are not very entrepreneurial, and Shenzhen companies emerge as more entrepreneurial in general than those of Hong Kong in many respects. Managerial flexibility is the only respect in which Hong Kong companies are significantly more entrepreneurial than Shenzhen companies. Our findings confirm the multidimensional nature of corporate entrepreneurship and highlight the fact that entrepreneurship is a mixed blessing for companies. It must be applied judiciously to increase profitability.

We detail these findings below.

ENTREPRENEURIAL ORIENTATION

Entrepreneurs ceaselessly seek opportunities to create value. Having found the opportunity, they structure an enterprise to create that value and, in the process, increase their own wealth. Figure 38 shows the entrepreneurial orientation as opposed to characteristics of administrative orientation. An administrator - a person with an administrative orientation - sees his or her task as managing a set of resources within an existing paradigm through application of a prescribed set of techniques. The objective is to maximize wealth accruing from the resources while reducing risk. An entrepreneur, on the other hand, is a paradigm breaker, a rule maker, a developer, and a promoter.

Figure 38: Entrepreneurial Versus Administrative Orientation



The firm exhibiting entrepreneurial orientation will be characterized by

- Pursuit of opportunities rather than control of resources
- A willingness to acquire or lease the resources to pursue opportunities when they are needed, and to sell or divest them when not needed, rather than tailoring business strategy to the resources currently in hand
- Rewarding contribution to value rather than length of service
- An orientation towards growth

Many academic researchers in management have tried to identify the different attributes of entrepreneurship. Among them are:

- Innovativeness
- Risk-taking
- Proactiveness
- Competitive aggressiveness
- Flexibility in management

While the dimensions of entrepreneurship are likely to be related, academic studies, summarized in Appendix V, confirm that some of these dimensions are indeed separate. A company may be entrepreneurial along one dimension but not along another. It can choose the dimension(s) along which to be entrepreneurial.

There is no controversy over what constitutes an entrepreneurial action. An entrepreneurial firm

- Launches innovative and improved products and services
- Enters new industries or markets
- Updates the methods by which products and services are delivered to the customer in addition to starting new companies

To explain entrepreneurial behavior in companies, we have identified four structural characteristics of firms, five entrepreneurial attributes, and three entrepreneurial actions, to account for a total of 12 possible factors of entrepreneurship. The three panels in Figure 39 outline these factors. These factors are, of course, not independent. If one factor is always found with another or if a specific factor is always associated with a certain characteristic that leads to identical action in every case, then we cannot say that these factors are independent.



Figure 39: Potential Factors of Entrepreneurship

Panel A: Attributes

Factor	Strategy for Promotion	Benefits	Drawbacks
Autonomy	Independently pursue new products, processes and services; encourage champions, set up independent project development teams	Increases employee self-motivation; releases employee creativity	Reduce intra-corporate coordination; increase number of inefficient projects
Innovativeness	Think out of the box; challenge existing modes of operation, production, marketing	Newly developed technologies, if implemented, can reduce costs and open markets	Experiments and expenditures on R&D can be wasteful or unprofitable Pro-activeness
Proactiveness	Seize market opportunities to be the first entrant into new markets	First mover can build defensible market position	Mistaken or premature entry can be costly
Competitive Aggressiveness	Battle competitors using aggressive pricing, copying successful practices and taking legal action	Reinforces market dominance and may cow competition	Can erode profit, invite retaliation and involve legal battles
Risk-taking	Act boldly in financial, operating and personal decisions to embrace uncertain plans with potentially high rewards	Successfully taken risks give high payoffs	Failure may result in substantial losses or, in serious cases, bankruptcy

Panel B: Characteristics

Factor	Strategy for Promotion	Benefits	Drawbacks
Strategic Orientation	Set strategy to pursue opportunities, rather than utilization of resources	Widens the potential activities of the business; promotes innovative thinking	Incurs high contracting costs and may waste existing resources under control
Resource Orientation	Implement staged investments; "rent rather than buy" strategies; promote good ideas in expectation that finance will be forthcoming	Reduces required investment	Reduces control of resources
Management Flexibility	Adopt a free-wheeling, informal, results-oriented management style allowing requirements of the job and personality to dictate job behavior	Focus on results lead to unity of purpose while flexibility allows obstacles to be overcome	May lead to duplicated effort, confusion of authority and disagreement over tactics
Reward Philosophy	Compensate employees not on their responsibilities, status or length of service, but on the value they add to the firm	Reduces bureaucracy and promotes a results-oriented culture	Disrupts employee harmony and stimulates performance measure manipulation
Growth Orientation	Make fast growth the primary objective of the firm	Speeds entry into new markets and confronting of the competition	Reduces control and exposes firm to losses in adverse environments
Entrepreneurial Culture	Welcome and implement the best of new ideas	Allows early entry into promising markets and use of new technologies	Focus on the new may detract from improving current products and processes

Panel C: Actions

Factor	Strategy for Promotion	Benefits	Drawbacks
Product and process innovations	Make new products; offer new services; improve ways of manufacturing and distributing existing products and services	New products and processes can create new niches to be dominated by the company	Risk of launch failure may be high
New Market Entry	Enter markets that offer promise	Entry into growing markets can renew firm growth and profitability	Shifting to markets where firm has no previous experience may lead to failure
Strategic reorientation.	Fundamentally realign business according to changes in market, competition, technology etc.	Reassessment allows fresh, profitable approaches	Changes may not bring hoped-for profits

DIMENSIONS OF ENTREPRENEURSHIP IN HONG KONG AND SHENZHEN

Academic researchers in other parts of the world have demonstrated the true independence of a limited number of factors, with the number of factors ranging from three to six (See Appendix V). Our own research shows that, among the 50 companies from which we gathered data in Hong Kong and Shenzhen, there are three statistically identifiable factors: flexibility in management, innovativeness, and strategic orientation. The details are described in Appendix IV.

An entrepreneurial management structure is a free-wheeling, informal, results-oriented management style allowing job requirements and personality to dictate job behavior rather than a tight control mechanism and emphasis on formal processes and procedures.

The second factor, unsurprisingly, is innovativeness. This includes changing the firm's product/service mix, launching many new products and/or services, taking bold and wide ranging actions in positioning products and services, and emphasizing the willingness to make major innovations.

The third factor consists of a mixture of strategic orientation and proactiveness. Companies that are characterized by this factor initiate actions rather than responding to competitors' actions, exploit the opportunities they see in the external environment and seek opportunities, rather than allowing current resources to define their strategies.

THE BENEFITS OF ENTREPRENEURSHIP IN DIFFERENT ENVIRONMENTS

From a theoretical point of view, an entrepreneurial orientation is not necessarily better than an administrative orientation. The environment will decide which orientation is appropriate for the firm. Three environmental dimensions that are important for entrepreneurship orientation are:

- Ease of contracting
- Environmental volatility
- Rate of economic growth

In order to succeed, an entrepreneur needs to marshal the resources such as land, financial capital, people, technical knowledge, market information, equipment, sourcing and distribution systems, advertising and promotional media, etc. If markets are inefficient and if making and re-negotiating contracts is expensive or prohibited, then entrepreneurs are far less effective than administrators, who work within existing constraints. Where laws or lack of information prevent resources from flowing from one entrepreneur to another, entrepreneurship will be discouraged. In a feudal or a centrally planned economy, the entrepreneur is not effective.

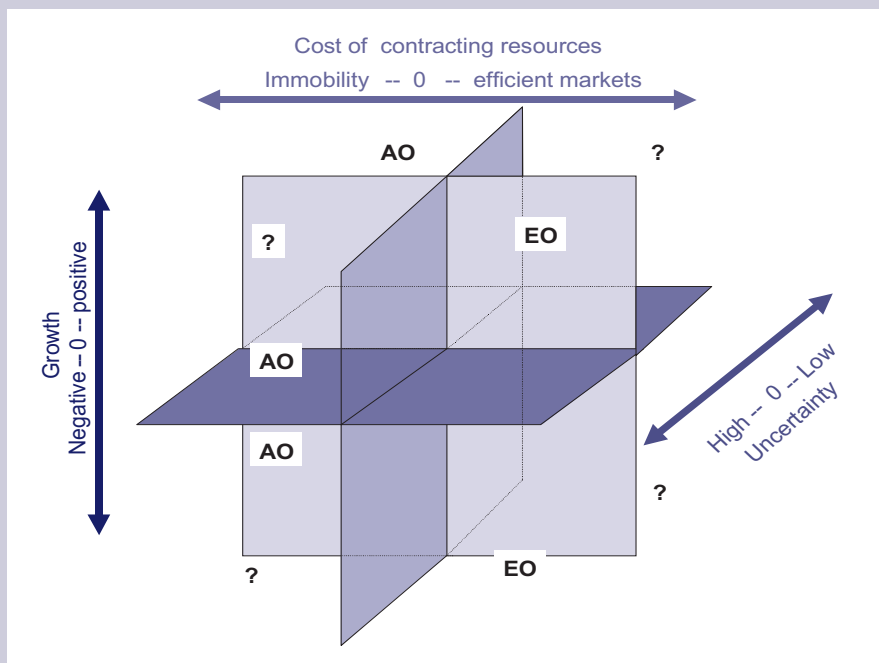
In a world of certainty, there is no need for change. If the future is highly unpredictable, companies producing goods and services in conventional ways are less likely to be effective. This results in greater opportunities for the entrepreneur. Economic growth helps established enterprises as well as new ones. Very rapid growth, however, favors the entrepreneur operating with new paradigms. While taking an administrative-orientation approach in a recession is advisable, the entrepreneurial approach is better in times of severe economic contraction and disruptive economic conditions. Figure 40 puts these three environmental dimensions together with the consequent favoring of entrepreneurial versus administrative orientation.

The Pearl River Delta in the middle of the first decade of the 21st century faces increasingly efficient markets allowing relatively low-cost re-contracting. We also face relatively high uncertainty as closer ties between the two cities and integration of the region into the global economy yield substantial opportunities and threats. These environmental conditions are conducive to an entrepreneurial orientation. However, economic growth rate, especially for Hong Kong, restricts the benefits of entrepreneurial orientation if the entrepreneur restricts his or her market only to Hong Kong itself.



GEM

Figure 40: Interaction of Environment and Entrepreneurship



Note: AO = environment favors administrative orientation; EO = environment favors entrepreneurial orientation; ? = effect of environment not clear.

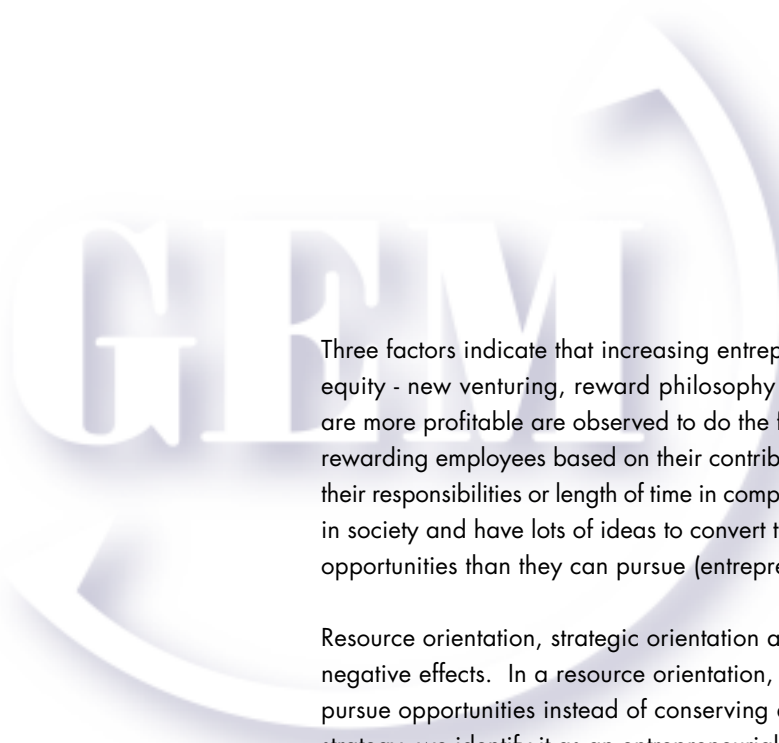
⁷ In both cases, these independent variables are perceptual, not financial indicators. Respondents were asked to compare their firm's performance with competitors and give a ranking. We attempted to collect data on corporate performance but were unable to obtain sufficiently numerous responses.

Many academic studies have demonstrated that corporate entrepreneurship is good for a firm's growth and profitability. Given the interplay of entrepreneurship with the environment and the multi-dimensional characteristics of entrepreneurship, one can legitimately ask which characteristics drive profitability. Unfortunately, this question can be answered only in a broader study where one can observe the lag between the change in entrepreneurial orientation of the firm, the changes in firm's actions and, finally, the resulting changes in profitability. In this study, we estimated the effect of levels of entrepreneurship and return on equity of the firm⁷. We report the results in Figure 41.

Figure 41: Relationship between Entrepreneurial Factors and Return on Equity

Factors	Sign of Relationship
New Venturing	+
Strategic Renewal	-
Resource Orientation	-
Management Structure	-
Reward Philosophy	+
Entrepreneurial Culture	+
Strategic Orientation	-

"Sign of relationship" gives the sign of the coefficient of the variable in an ordinary least squares regression of perceived ROE on 14 entrepreneurial factors. Table shows only coefficients significant at the 10 percent level of confidence. For full regression, see Appendix IV.



Three factors indicate that increasing entrepreneurship is associated with increasing return on equity - new venturing, reward philosophy and entrepreneurial culture. The companies that are more profitable are observed to do the following: set up more companies (new venturing), rewarding employees based on their contribution to the value of the corporation rather than for their responsibilities or length of time in company (reward philosophy), and be aware of changes in society and have lots of ideas to convert to products and services and, therefore, have more opportunities than they can pursue (entrepreneurial culture).

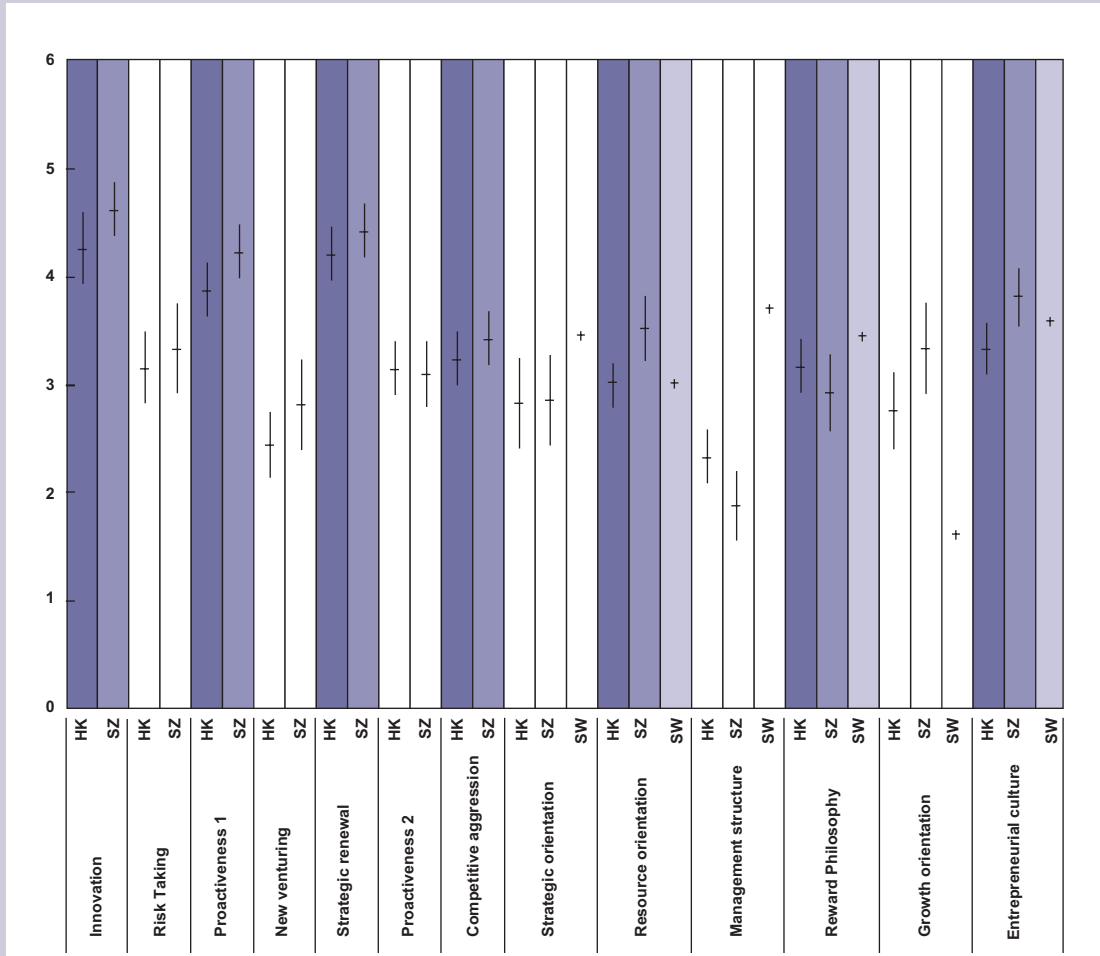
Resource orientation, strategic orientation and management structure, however, seem to have negative effects. In a resource orientation, companies prefer to acquire resources in order to pursue opportunities instead of conserving and working with existing resources. If this drives strategy, we identify it as an entrepreneurial strategic orientation. Buying resources is typically more expensive. Thus a resource/strategic orientation is consistent with deferring profits, as long as the opportunity proves profitable. One would have to analyze the company over several years, however, to determine whether such an orientation would lead to long term higher profitability.

When considering strategic renewal, it may be difficult to know whether it accounts for poor business performance. Strategic renewal includes divesting unprofitable businesses and reorganizing the company. If such divesting and reorganizing were the result of bad performance and not the cause, one would observe the negative sign.

DIFFERENCES IN CORPORATE ENTREPRENEURSHIP BETWEEN SHENZHEN AND HONG KONG COMPANIES

We tested the extent to which corporate entrepreneurship in Hong Kong companies differed from those in Shenzhen. Figure 42 shows the results. The figure shows the confidence with which the attribute is measured in a "candlestick" where the vertical bar is the confidence interval. Evidently, on most factors (10 out of 13), Shenzhen companies are more entrepreneurial than Hong Kong companies. But because of the uncertainty in our measurements, the difference is significant on only three factors. In Hong Kong companies, their management structures encourage more autonomy than in Shenzhen companies and hence they are more entrepreneurial in this regard. On the other hand, Shenzhen companies are significantly more entrepreneurial in resource orientation and growth orientation than Hong Kong companies. Shenzhen companies are more willing to pursue opportunities, regardless of resource constraints, and less likely to emphasize owning and controlling resources and utilizing existing resources only. Not surprisingly, Shenzhen companies are far more focused on rapid growth and far less focused on taking a steady and sure path than Hong Kong companies.

Figure 42: Mean Ratings on Corporate Entrepreneurship Factors: Hong Kong, Shenzhen and Sweden



Note: HK = Hong Kong; SZ = Shenzhen; SW = Sweden

INTERNATIONAL BENCHMARKING

One of our aims is to benchmark internal corporate entrepreneurship not only between the neighboring cities of Hong Kong and Shenzhen, but with other economies in the world. By discussing our tentative results above and detailing our approach in Appendix IV, we hope to further that objective. To date, we have one other country's benchmark results - Sweden's - for some of our metrics. Figure 42 shows the results of a Swedish study using six of the same dimensions.

The "candlestick" (confidence interval) for Sweden is far narrower than for Hong Kong or Shenzhen because the Swedish sample used over 1200 companies, yielding a very precise average level for each factor. Given this precision, we can state that, in terms of strategic orientation, management structure, and reward philosophy, Swedish companies are more entrepreneurial than those of Hong Kong or Shenzhen. When it comes to growth orientation, as one would expect, both Shenzhen and Hong Kong rank higher than Sweden.

Appendix I: Recommendations from Previous Years' Hong Kong / Hong Kong and Shenzhen GEM Studies

The following are the recommendations from the Global Entrepreneurship Monitor Hong Kong 2002 and the Global Entrepreneurship Monitor: Hong Kong and Shenzhen Study 2003. Copies of the studies may be viewed at [<http://www.cuhk.edu.hk/centre/entrepreneurship/>]

2002 HONG KONG RECOMMENDATIONS

1. Implement no policy change that will cause substantial increases in government spending, tax system complexity or procedures for starting a business.
2. Reduce barriers to entry that protect or are seen to protect the interests of large companies over the interests of small companies.
3. Strengthen intellectual property protection and disbursement of information concerning intellectual property protection in Hong Kong.
4. Periodically review with the objective of simplification and reduction of process time the application procedures for small businesses, especially in the provision of services.
5. Review existing programs to ensure that the interests of the entrepreneur rather than the government department are being fulfilled, reducing red tape and coordinating the programs so that entrepreneurs are referred to the correct one.
6. Do not attempt to prop up property prices.
7. Increase democracy in Hong Kong.
8. Focus on entrepreneurship in services.
9. Increase the number of border crossing points to China. Open the border 24 hours a day. Work with the Guangdong and Shenzhen governments to reciprocally recognize vehicle licenses allowing cheap, private automobile access to the PRD. Increase links throughout the PRD.
10. Neither the government nor any regulator of financial institutions should attempt to affect the portfolios of Hong Kong financial institutions (banks, other authorized institutions, insurance companies, pension funds, venture capitalists) concerning financing for start-ups.
11. Banks should reform SMEs customer policies to increase the extent to which loan pricing and monitoring of cash-flow based loans and customer counseling on financing for new ventures in Hong Kong and China can offset risks of lending.
12. Venture capitalists should be open-minded toward new technologies and ventures from Hong Kong incubators such as the Science Park.
13. Hong Kong should examine the roles played by industry organizations and governments in other countries where collaboration between universities, industry and government is successful to find an appropriate cooperation model.
14. Universities should create a better atmosphere for communication and sharing of information and research with entrepreneurs. Technologists within firms and the government, professors active in relevant areas, and entrepreneurs should meet to discuss possible innovations and how to work together to bring needed products and processes to market.

15. Tertiary institutions, especially research universities, should make their resources available to businesses (including entrepreneurs and SMEs). This can be done partly through student projects and research projects. Researchers should enhance their knowledge of and support for new companies. Universities may provide their technical assistance to SMEs and open up their libraries and labs. They could work together with governmental bodies to pool together resources and disperse meaningful innovation results. New computer-literate graduates should encourage SMEs to apply and use technology.
16. SMEs should increase their exposure to opportunities in the PRD and their understanding of business and government practice there. Programs dispensing such information should be improved. To commercialize technology, local innovators should link innovations with the needs of the large market of the PRD and other parts of China. Universities should increase research links with enterprises in the Pearl River Delta.
17. The immigration policy should be reviewed. In principle, anyone in China who possesses a tertiary education should be permitted to immigrate to Hong Kong, although rights of permanent abode should be based on years of tax-paying residence and rights to social welfare, free schooling etc. should accrue only with rights of permanent abode.
18. The government should design a simple, comprehensive unemployment insurance for Hong Kong permanent residents to be implemented after the fiscal situation improves.
19. SMEs and industry associations should take the lead in building strategic alliances among themselves.
20. Review the design of school curriculums to promote entrepreneurship. Teach students about investment, how to manage personal finances, attributes of an entrepreneurial spirit, and relationships between risk, success and rewards. Encourage and set priorities for education in the sciences, biotechnology and mathematics to promote the entrepreneurship environment for more technology-related areas. Train students for the knowledge-based and services-related businesses. Provide a balance of liberal arts and technical education - liberal arts in the early part of the education and technical training towards the end of the education program. Teach students that hard work, determination and creativity are keys to success, even in the entertainment industry, from where many youth role models are currently drawn.
21. Give students the challenge of starting business and working in businesses as part of the educational process. Increase the participation of business mentors in secondary schools and tertiary institutions, whereby people with much experience and success in running and starting businesses from any sectors become mentors to students and would-be entrepreneurs.
22. Hong Kong citizens should become more active in community building, a facet of which is interaction between entrepreneurs and other members of the community.
23. Parents and teachers should teach students that they can change the status quo, add value and improve society through their own efforts and independent thinking. They should encourage self-respect where that respect is won by diligence, purpose and respect for others. The adults of society have the responsibility to teach these cultural values and social norms.
24. Hong Kong's successful business people should provide others with the knowledge, skills and inspiration to achieve what they have in creating value for society. They must tell their own story of their steady, focused work that created their wealth. They should improve their honesty in income filing and take pride in paying taxes.
25. The media has a responsibility to educate the population by featuring stories of the everyday SME entrepreneur, working toward a goal of building a firm that creates value and has a good position in the market place. In this, the media can seek the cooperation of business people and government.

2003 HONG KONG RECOMMENDATIONS

1. To improve education and training in Hong Kong

Education and Manpower Bureau should

- Take an active role to lead and support entrepreneurship education
- Review existing entrepreneurship education programs and resources
- Speed up reform of the examination system university admissions criteria
- Have a multi-disciplinary approach to teacher education and train teachers in interactive and experiential entrepreneurial education
- Prepare youth for entrepreneurial careers

Community members, especially parents and businesspeople, can

- Push the schools and the government to prepare youth for work and successful transition into the community
- Tell schools what they want from the youth who enter the work force
- Work on non-profit bases as mentors, facilitators, and tutors in school programs

2. To Improve R&D transfer in Hong Kong

- The government should recognize that a major objective of universities is to transfer knowledge to the community
- The government should set up a single technology transfer office for all of Hong Kong university-developed intellectual property
- University professors should be encouraged to do all external practice in keeping with university reputation, including initiating contacts with industry on a personal basis
- The distance between researchers and industry should be shortened by increasing links with manufacturing bases in Shenzhen and the Pearl River Delta

2003 SHENZHEN RECOMMENDATIONS

Shenzhen's entrepreneurship should be improved by

- Reforming the government to make it more public-service oriented
- Recognizing that the main source of financing for start-ups should be market oriented. Government should release the public sector's energies
- Financing entrepreneurship with government funding only in early stage and R&D-transfer intensive activities that do not compete with the private sector
- Reducing barriers to immigration to and residency in Shenzhen
- Developing research universities and management training for entrepreneurs
- Improving protection of intellectual property
- Increasing links with Hong Kong
- Improving social security and the stability of society

APPENDIX II: GEM TEAMS AND SPONSORS

Unit	Location	Members	Financial Sponsor	
GEM Project Directors	Babson College London Business School	William D. Bygrave Michael Hay	Babson College London Business School	
GEM Project Coordinator	University of Lausanne	Pia Arenius	GEM Global Consortium Executive Transition Committee	
GEM Coordination Team	Babson College London Business School	William D. Bygrave Marcia Cole Michael Hay Stephen Hunt Neils Bosma Erkko Autio Caroline Johns Ingvild Rytter Nancy Chin	Babson College David Potter Foundation Fellow Francis Finlay Foundation Fellow	

Team	Institution	Members	Financial Sponsor	APS Vendor
Argentina	Center for Entrepreneurship, IAE Management and Business School Universidad Austral	Silvia Torres Carbonell Hector Rocha Florenca Paolini Natalia Weisz	IAE Management and Business School HSBC Private Equity Latin America Banco Galicia	MORI Argentina
Australia	Australian Graduate School of Entrepreneurship Swinburne University of Technology	Kevin Hindle Allan O'Connor	Westpac Banking Corporation	Australian Centre for Emerging Technologies and Society
Belgium	Vlerick Leuven Gent Management School, Universiteit Gent	Dirk De Clercq Sophie Manigart Hans Crijns Kathleen De Cock Bart Clarysse Frank Verzele	Vlerick Leuven Gent Management School Flemish Ministry of Economic Affairs (Steunpunt Ondernemerschap, Ondernemingen en Innovatie) Walloon Ministry of Economic Affairs	SNT Belgium
Brazil	IBQP - Instituto Brasileiro da Qualidade e Produtividade no Parana	Marcos Mueller Schlemm Simara Maria S. S. Greco Mateus Fabricio Feller Paulo Alberto Bastos Junior Rodrigo Rossi Horochovski Joana Paula Machado Nerio Aparecido Cardoso	SEBRAE - Servico Brasileiro de Apoio as Micro e Pequenas Empresas Instituto Euvaldo Lodi no Parana IEL/PR	Instituto Bonilha
Canada	HEC-Montreal University of British Columbia (UBC)	Nathaly Riverin Louis-Jacques Filion Daniel Muzyka Ilan Vertinsky Aviad Pe'er Victor Cui	HEC Montreal Chaire d'entrepreneuriat Rogers- J.A. Bombardier Developpement economique Canada pour les regions du Quebec The W. Maurice Young Entrepreneurship and Venture Capital Centre Venture Capital Center	SOM

Team	Institution	Members	Financial Sponsor	APS Vendor
Croatia	SME's Policy Centre - CEPOR, Zagreb J. J. Strossmayer University in Osijek - Faculty of Economics, Osijek	Slavica Singer Sanja Pfeifer Djula Borozan Natasia Sarlija Suncica Oberman Peterka	Ministry of Economy, Labour and Entrepreneurship SME Policy Centre - CEPOR, Zagreb Open Society Institute - Croatia, Zagreb J.J. Strossmayer University in Osijek - Faculty of Economics, Osijek	Puls, d.o.o., Zagreb
Denmark	Centre for Small Business Studies, University of Southern Denmark	Mick Hancock Torben Bager Lone Toftild Thomas Schoett Kim Klyver	Erhvervs- og Byggestyrelsen IRF - Industriens Realkredifond Syddansk Universitet Danfoss - Mads Clausens fond Vækstfonden Ernst & Young (Denmark) Boersen	IFKA
Ecuador	Escuela Superior Politecnica del Litoral - Escuela de Postgrado en Administracion de Empresas (ESPAE)	Virginia Lasio Morello Guido Caicedo Rossi Edgar Izquierdo Orellana Victor Osorio Cevallos Alicia Guerrero Montenegro Karen Delgado Arevalo Elizabeth Arteaga	Escuela Superior Politecnica del Litoral (ESPOL University) Petroleos del Pacifico (PACIFPETROL S.A.) Camara de Comercio de Guayaquil	MARKET ASOMARKET Cia. Ltda.
Finland	Helsinki University of Technology Turku School of Economics and Business Administration	Erkko Autio Pia Arenius Anne Kovalainen Marja Kansala	Ministry of Trade and Industry Tekes	Statistics Finland
France	EM Lyon	Oliver Torres Aurélien Eminet	Caisse des Depots et Consignations Observatoire des PME	AC Nielsen
Germany	University of Cologne Department of Economic and Social Geography	Rolf Sternberg Ingo Lueckgen	Kreditanstalt für Wiederaufbau (KfW) Institut für Arbeitsmarkt - und Berufsforschung (IAB)	Taylor Nelson Sofres EMNID
Greece	Foundation for Economic and Industrial Research (IOBE)	Stavros Ioanides Takis Politis	Greek Ministry of Development IOBE Sponsors	Metron Analysis
Hong Kong	The Chinese University of Hong Kong Shenzhen Academy of Social Sciences	Bee-Leng Chua David Ahlstrom Kevin Au Siu-Tong Kwok Chee-Keong Low Shige Makino Hugh Thomas Le Zheng Wang Weili Dong Ziaoyuan Huang Donghe Wang Zengjin Yin Qingxun Yuan Yicai	Trade and Industry Department, SME Development Fund, Hong Kong Government SAR The Asia Pacific Institute of Business The Chinese University of Hong Kong Chinese Executives Club, Hong Kong Management Association	Consumer Search
Hungary	University of Pécs University of Baltimore (USA)	László Szerb Zoltan Acs Judit Karoly József Ulbert Attila Varga	Ministry of Economy and Transport	Szocio-Graáf Piac-es Közvélemény-kutató Intezet
Iceland	Reykjavik University	Gudrun Mjoll Sigurdardottir Rögnvaldur Samundsson Paula Fitzsimons	Reykjavik University The Confederation of Icelandic Employers New Business Venture Fund Prime Minister's Office	Gallup - Iceland
Ireland	University College, Dublin	Colm O'Gorman Frank Roche	Enterprise Ireland Inter Trade Ireland	Lansdowne Market Research Ltd. iff

Team	Institution	Members	Financial Sponsor	APS Vendor
Israel	Tel Aviv University The Academic College of Tel-Aviv-Jaffa	Miri Lerner Anat Oren Amram Turjman	Israel Small Business Authority The Evens Foundation	The B.I. Cohen Institute for Public Opinion Research at Tel Aviv University
Italy	L. Bocconi University	Guido Corbetta Ugo Lassini Alexandra Dawson	Bocconi University	Nomesis
Japan	Keio University University of Marketing and Distribution Sciences Musashi University	Tsuneo Yahagi Takehiko Isobe Noriyuki Takahashi	Venture Enterprise Center	SSRI
Jordan	Young Entrepreneurs Association	Dina Dukhqaan Khaled Kurdi	Ministry of Planning and International Cooperation	Al Jidara Pro Group Consulting
New Zealand	New Zealand Centre for Innovation and Entrepreneurship, Unitec New Zealand	Alastair Emerson Alex Maritz Alvero Reid Anton de Waal Beth Coleman Dean Prebble Debbie Rolland Ella Henry Graedon Chittock Greg Wilson Helen Mitchell Howard Frederick Ingvild Rytter John Webster Judi Campbell Leo Dana Logan Muller Paul Woodward Peter Carswell Peter Mellalieu Pieter Nel Prue Cruickshank Qunhung Xu Ravi Bhat Shelley Eden Simon Peel Tim Boyd-White Tony Ashton Vance Walker Yunxia Zhu	Unitec New Zealand	Digipoll
Norway	Bodø Graduate School of Business	Lars Kolvereid Bjørn Willy Åmo Gry Alsos	Inovation Norway Ministry of Trade and Industry Bodø Graduate School of Business Kunnskapsparken Bodø AS, Center for Innovation and Entrepreneurship	TNS
Peru	Centro de Desarrollo Emprendedor, Escuela de Administracion de Negocios para Graduados (ESAN)	Jaime Serida Peter Yamakawa Armando Borda Oswaldo Morales	Escuela de Administración de Negocios para Graduados (ESAN) Deltron Computer Wholesalers S.A.	SAMIMP - Research International
Poland	The Bachalski Educational Foundation	Austin Campbell Krzysztof Baclawski Przemyslaw Zbierowski Maciej Koczerga Roma Szlapka	Polish Agency for Enterprise Development The Karol Adamiecki University of Economics in Katowice The Poznan University of Economics AC Nielsen Poland National Bank of Poland	AC Nielsen

Team	Institution	Members	Financial Sponsor	APS Vendor
Portugal	Faculdade de Economia da Universidade Nova de Lisboa Sociedade Portuguesa de Inovacao	Sara Medina Rita Cunha Manuel Baganha Augusto Medina Douglas Thompson Stuart Domingos	POEFDS - Programa Operacional do Emprego, Formacao e Desenvolvimento Social	MetrisGfK
Singapore	National University of Singapore	Poh Kam Wong Lena Lee Finna Wong Ho Yuen Ping	Economic Development Board of Singapore National University of Singapore Ministry of Education, Science and Sports Ministry of the Economy SmartCom Finance - Slovenian Business Daily	Joshua Research Consultants
Slovenia	Institute for Entrepreneurship and Small Business Management, Faculty of Economics and Business, University of Maribor	Miroslav Rebernik Polona Tominc Ksenja Pusnik		Gral-Iteo
South Africa	The Centre for Innovation and Entrepreneurship, Graduate School of Business, University of Cape Town	Mike Herrington Eric Wood John Orford	Liberty Life South African Breweries The Shuttleworth Foundation	AC Nielsen ZA
Spain	Basque Unit Universidad de Deusto	Iñaki Pena Mikel Navarro Francisco Olarte M ^o José Aranguren Juan José Gibaja Maria Sáiz	Eusko Ikaskuntza Diputación Foral de Gipuzkoa Diputación Foral de Bizkaia Sociedad para la Promoción y Reconversión Industrial	Opinómetro
	Universidad del Pais Vasco	Arturo Rodriguez		
	Extremadura Unit Fundacion Xavier de Salas	Ricardo Hernandez Mogollon J. Carlos Diaz Casero	Sofiex Sodiex Caja Rual de Extremadura Los Santos de Maimona Foundation Junta de Extremadura Caja Badajoz Arram Consultores	Opinómetro
	Catalonia Unit Universitat Autonoma de Barcelona	José Maria Veciana Yancy Vaillant David Urbano	Institut d'Estudis Regionals i Metropolitans de Barcelona	Opinómetro
	Andalucia Unit Universidad de Cadiz	José Ruiz Navarro José Aurelio Medina José Daniel Lorenzo Alvaro Rojas Salustiano Martinez Antonio Rafael Ramos	CENTRA (Fundacion Centro de Estudios Andaluces) UNICAJA Junta de Andalucia (Consejeria de Innovacion, Ciencia y Empresa)	Opinómetro
	Comunidad Valenciana Unit Universidad Miguel Hernández	Jose Maria Gomez Gras Ignacio Mira Jesus Martinez Antonio J. Verdu	Air Nostrum LAN, S.A.	Opinómetro

Team	Institution	Members	Financial Sponsor	APS Vendor
	Isla Canarias Unit Universidad de las Palmas de Gran Canaria	Rosa M. Batista Alicia Bolivar Esther Hormiga Alicia Correa	La Caja Insular de Ahorros de Canarias	Opinometre
	Universidad de La Laguna Castilla y Leon Unit Universidad de Leon	Mariano Nieto Antolin Constantino Garcia Ramos Roberto Fernandez Gago Sergio del Cano Rojo Noemi Huerga Castro	Centro Europeo de Empresas e Innovacion de Castilla y Leon S.A.	Opinometre
	Madrid Unit Universidad Autonoma de Madrid	Eduardo Bueno Campos Carlos Merino Lidia Villar	Fundacion General de la Universidad Autonoma de Madrid CEIM (Confederacion Empresarial de Madrid- CEOE) CAJA MADRID Nejeti	Opinometre
Sweden	National Team Unit Instituto de Empresa	Alicia Coduras Rachida Justo Ignacio de la Vega	Instituto de Empresa Confederation of Swedish	Opinometre SKOP
	ESBRI Entrepreneurship and Small Business Research Institute	Magnus Aronsson Helene Thorgrimsson	Enterprise Ministry of Industry, Employment and Communications Swedish Business Development Agency (NUTEK) Swedish Institute for Growth Policy Studies (ITPS)	
The Netherlands	EIM Business and Policy Research	Sander Wennekers Niels Bosma Jolanda Hessels Andre van Stel Roy Thurik Lorraine Uhlaner Ingrid Verheul	Dutch Ministry of Economic Affairs	Survey@
Uganda	Makerere University Business School	Thomas Walter Waswa Balunywa Peter Rosa Arthur Ssewanga Stefanie Barabas Rebecca Namatovu	European Union Bank of Uganda Makerere University Business School	MUBS
United Kingdom	London Business School	Rebecca Harding Marc Cowling Niels Billou Michael Hay Dennis Hardin	Small Business Service Barclays Bank PLC East Midlands Development Agency Yorkshire Forward Merseyside Enterprise Insight Countryside Agency British Chamber of Commerce	<i>iff</i>
	Scotland Unit University of Strathclyde	Jonathan Levie Sarah Cooper Sara Carter	Hunter Centre for Entrepreneurship	<i>iff</i>
	Wales Unit University of Glamorgan North East Wales Institute of Higher Learning	David Brooksbank Dylan Jones-Evans	Welsh Development Agency	<i>iff</i>
	Northern Ireland Unit Small Business Research Centre, Kingston University Economic Research Institute of Northern Ireland	Mark Hart Maureen O'Reilly	Invest Northern Ireland Belfast City Council Enterprise Northern Ireland	<i>iff</i>

Team	Institution	Members	Financial Sponsor	APS Vendor
United States	Babson College	Maria Minniti William D. Bygrave Marcia Cole	Babson College	Opinion Research Corp.



APPENDIX III: THE GLOBAL ENTREPRENEURSHIP MONITOR HONG KONG AND SHENZHEN FORUM

SCHEDULE OF FORUM

MAY 24 2005

J.W. MARRIOTT HOTEL, HONG KONG

<i>Time</i>	<i>Programme</i>
11:45 - 11:55	Welcome Remarks
11:55 - 12:05	Opening Remarks by Booz Allen Hamilton
12:05 - 12:20	Ceremony of the Establishment of the CUHK Center for Entrepreneurship
12:20 - 13:00	Corporate Entrepreneurship Luncheon
13:00 - 13:30	Keynote Speaker - Mr. Andreas Wentz, President & CEO, Philips Electronics, Asia Pacific "Building a culture for innovation"
13:30 - 14:00	Registration and Reception for Forum
14:00 - 14:20	Welcome & GEM Global Findings by Prof. Bee-leng Chua, Director, Center for Entrepreneurship
14:20 - 14:45	GEM HK and SZ 2004 Findings by Prof. Hugh Thomas Associate Director, Center for Entrepreneurship
14:45 - 15:00	Q&A
15:00 - 15:15	Tea Break
15:15 - 15:30	Alternative Financing for New Ventures by Prof. Kevin Au Associate Director, Center for Entrepreneurship
15:30 - 16:15	<p><u>Panel Presentations on Alternative Financing</u></p> <ul style="list-style-type: none"> • Mr. K.O. Chia, Venture Capitalist and former Executive VP, Walden International (HK) • Mr. Ben Ng, Secretary-General, Monte Jade HK & • Mr. Joshua Lau, CEO, YesAsia.com, Moderator: Prof. Siu-Tong Kwok
16:15 - 16:40	Q&A
16:40 - 16:50	Wrap Up by Prof. Siu-Tong Kwok
16:50 - 17:00	Presentation of Souvenirs & Closing Remarks

KEYNOTE SPEECH BY MR. ANDREAS WENTE

President & CEO of Philips Electronics Asia Pacific

BUILDING A CULTURE OF INNOVATION - PHILIPS' EXPERIENCE

Ladies and Gentlemen, it is my great honour to be invited here by the Faculty of Business Administration of the Chinese University of Hong Kong to address this distinguished audience.

Innovation is the lifeblood of successful business and successful economies. It is the spirit of creation and the desire for betterment, a willingness to effect change and accept risk. It is the process by which we bring something new to market.

Innovation is about leadership. It can be incremental, where we enhance an existing product or service with small but regular improvements, or breakthrough, where we change the competitive landscape and generate huge growth.

Either way, Hong Kong needs innovators if it is to develop as a leading digital city and a hub of technology and innovation in line with the Government's vision.


In Hong Kong, we have a strong entrepreneurial heritage - here we are very good at improving familiar products and services by making innovative use of what is already there. But to sustain growth for long-term prosperity, we need to do more - both as an economy and as innovative individuals within startups or established companies.

Today I would like to share with you some of what we are doing at Philips Electronics to build a strong and evolving culture of innovation.

Basically, it is this: we put ourselves in the right place, with the right people, and the right partnerships.

Innovation has long been the lifeblood of Philips. From 1891 when Gerard Philips set up the company in Eindhoven, the Netherlands to make incandescent lamps, Philips has been at the forefront of innovation and technology. We pioneered medical X-ray equipment in 1918, were involved in early experiments in television in 1925, introduced the Philips electric shaver in the late 30's, the audio Compact Cassette system in '63 and the VCR in '72; we launched the Compact Disc in 1983, and released the DVD in '97. Also Philips Electronics is well recognized for its achievements and market position in consumer electronics goods. Today we want to be recognized as the global Healthcare, Lifestyle and Technology which holds about 115,000 patent rights, 22,000 trademark registrations, and 6,000 design registrations. In 2004, Philips was first on the World Intellectual Property Organization ranking in new patents for the third consecutive year.

Opportunities for growth are to be found everywhere but we concentrate on innovating for opportunities in the overlapping areas of the Healthcare, Lifestyle and Technology clusters that are the pillars of our business. We listen to our customers to find out what they really need - and we ask questions because what they REALLY need is often what they cannot yet articulate. ...As a result, over 55% of our medical system devices sales in 2004 were realized with products



less than 2 years in their lifecycles. Medical Systems became Philips' second largest as well as one of the most profitable business. So, innovation drives both growth and profitability.

Physical proximity to our key markets — indeed, to our customers and their customers—is thus important. We are doing a lot of business here in Asia - we grew 17% in Asia Pacific last year when sales in the region of over 8 billion Euro surpassed sales in North America for the first time, accounting for one quarter of Philips' global turnover. And so we are doing a lot of R&D here too.

Over 3500 people are working for Philips in the field of research and development, representing 15% of our global R&D community. In China, including Hong Kong, we have about 1,000 R&D staff. In Singapore, we have our largest development centre outside the Netherlands, called the Philips Innovation Campus, with 1,200 people. In India, we have 1,300 engineers in our Bangalore software development centre. In Hong Kong, as in Singapore and India, we have established "design competence centres", providing industrial design services in all areas of the product creation process. On top of product design, we attach great importance to packaging, product communication, user interface, and socio-economic research.

Since we started setting up R&D centres in the region four years ago, our Asian researchers have filed over 800 patents. While this is not a huge number compared to the more than 100,000 patents Philips has filed in the past decades, I can assure you that Asia's contribution is growing disproportionately.

The recent move of some of our business units to the Hong Kong Science and Technology Park provides us with a knowledge-based and campus-like environment where high-technology enterprises and talented people can converge to promote interaction and innovation. Destined to become the cradle of scientific and technological innovation in Hong Kong, it is no surprise that it is located here, next to the Chinese University of Hong Kong - one of Hong Kong's most prestigious universities.

Sharing knowledge and sparking new ideas by bringing together people with diverse skills is a route to innovation that applies just as much to Hong Kong as a whole as it does within a small startup or a large company.

This emphasis on collaboration and partnerships is encapsulated in a method of working called Open Innovation. Over the past several years, it has revolutionized the way we structure our business at Philips. Open Innovation is based on the fact that in today's dynamic business environment it no longer makes sense for companies to do everything themselves. That is why we need to identify strong and efficient partners on the road of innovation. At Philips we team up with academic as well as with industrial partners, we join forces with industry peers on standardization, and we are active in establishing strong local networks of industries and research institutes to help technology regions to grow.

As a result, the percentage of Philips Research projects carried out in cooperation with a university or NGO rose from 47% in 2003 to 55% last year.

In short, Philips has accepted that innovation in today's environment rides on synergy with our partners. This is a radical departure from the traditional model of closed in-house innovation. It means that innovators must search for the next revolutionary idea both inside and outside the

company. It means we must be willing to share and to learn.

In China alone, Philips now has 35 companies in place - 20 joint ventures, and 15 wholly owned enterprises. The latest example is our partnership with Neusoft, which will create a global R&D and manufacturing centre for value and mid-range healthcare products. We have also forged cooperative research relationships with some of China's top universities, such as Tsinghua University and Renmin University in Beijing, Fudan University in Shanghai as well as Northeastern University in Shenyang, creating public-private partnership at a level that is quite unique.

Open Innovation has already made a great contribution to serving Chinese society through the development of distance learning. This is an important educational service in a nation of widespread and often remote communities and as such receives a great deal of support at national and regional levels in China. However, distance learning on the Mainland is currently fragmented and based on unsatisfactory, high-cost solutions.

A system developed in China to meet the specific needs of its people is changing all that. It is based on open standards and uses the Philips' personal video recorder and set-top box capabilities to allow users to record and replay interactive content at cost levels significantly below that of a PC.

Providing the required technological solution has involved the input of teams throughout Philips - Consumer Electronics provided the system-level support and testing, Semiconductors was responsible for product management and reference design creation, and the Digital Systems Labs was brought in for architecture and software integration management. Philips Research East Asia in Shanghai handled the pre-commercialization aspects of the project, including the forging of links with Chinese government departments, participation in standardization groups and significant IP generation. We also teamed up with a Chinese distance-learning company to gain expertise in program delivery and authoring.

Our launch of the DVD in 1997 - which proved to be the fastest growing home electronics product in history - is a good early example of the power of Open Innovation at work. In creating this breakthrough product we were building on the success of our Compact Disc technology - which was invented by Philips and jointly co-developed and introduced with Sony - in cooperation with several other companies, which we meet as competitors in the market place.

But there's another lesson to be learnt here; within three years, the DVD had changed from a prestigious high-end equipment to an everyday commodity. The acceleration of the innovation-to-commoditization cycle means that leaders like Philips Electronics have less time to enjoy the fruits of their innovation and that innovation must now come continuously.

This is the reason that we are working to ensure that Philips remains a company of innovators and new innovations. To keep us sharp and focused on this crucial task, we look to our newly articulated brand promise: "Sense and Simplicity", launched in September 2004. This brand promise is built on three brand pillars: "Designed around you", "Easy to experience" and "Advanced".

By this we mean that our products, services and business processes have to make good sense and are characterized by simplicity.

But why simplicity? Because the digital revolution is supposed to make our lives easier. And yet, research shows, it hasn't. About 30% of home-networking products are returned because people can't get them to work and 48% of people have put off buying a digital camera because they see them as too complicated. For many of us today, technology is not empowering but overpowering.

This is why in innovating our products and services, we strive not only to be "simply beautiful" but also "beautifully simple." In fact, we now test everything we do as a company - internally and externally - against the promise of "Sense and Simplicity".

Striving for simplicity may not be as simple as it seems as all new product launches have to be tested against the three key criteria of "Designed around you", "Easy to experience" and "Advanced". To emphasize, we set up a Simplicity Advisory Board last year to provide us with an additional outside perspective on our journey to simplicity and offer us insights into how we can better serve our customers. This board includes five external experts and partners from the worlds of healthcare, lifestyle and technology - one of whom is the award-winning, Hong Kong-based architect-designer Gary Chang.

Here again you can see how place, people and partnerships come together to help us innovate and create simplicity. And this applies just as well to us, a 160,000-person multinational, as it does to a five-person startup or a Hong Kong community striving to be a Centre of Innovation

First we have created a place where we can be close to our customers, where we can focus on our areas of expertise, where we can bring diverse people and business together to spark innovation. In a small company, this could be simply achieved with a comfortable meeting room and a dedication to talking to potential customers. In a community, it is about putting the right infrastructure in place - as Hong Kong is doing through the Science Park and Government's various tradeshows and industry-building programs.

Second, we have chosen the right people, set them concrete goals and yet communicated what we want from them in a way that gives them the freedom to choose their own path to innovation. From Hong Kong's perspective, having the right people in place will be a matter of improving entrepreneurial education and ensuring that new companies are coming into this place by having access to seed capital.

Third, we have created an environment of Open Innovation, which includes our partners in universities and the industry, expanding towards business cooperation in JVs or outsourcing partners. Business today is all about partnership - the outsourcing of non-core activities is now well accepted but R&D can no longer be the isolated, in-house endeavour that it remains in more companies.

Here in Hong Kong, the Chinese "U" is leading the way with its policy of pursuing partnership with other universities, research institutions, and industry.

Place...people...partnership. When you get it right, innovation flows and the results are spectacular.

Thank you.

OPENING REMARK BY MR. PATRICK TSE

Head of Financial Service Practice, Booz Allen Hamilton, Greater China

PERSPECTIVE ON INNOVATION AND CORPORATE ENTRENEURSHIP

Distinguished Guests, Ladies and Gentlemen:

First of all, on behalf of Booz Allen Hamilton, I would like to say a word of thanks to the Chinese University of Hong Kong for organizing today's event. The topic is both very important and timely.

Entrepreneurship is one of our Firm's key professional values and it has guided how we operate for the past 90 years. We live that entrepreneurial spirit everyday and very often, we advise our clients to do the same thing.

By entrepreneurship, we mean three things:

- 1) Creating new value for us and for our clients
- 2) Inspiring a shared vision
- 3) Creating excitement to take action

We also strongly believe that innovation is the key to growth and shareholder value.

Let me take a few minutes to share with you what we have found on innovation, from our own research and consulting work with clients around the world.

In our view, true innovation can take the form of a new product, technology, process, content or even the presentation and marketing of an existing product or service.

We recently did a survey on innovation. Senior executives from many industries including aerospace, automotive, pharmaceuticals, and telecommunications told us they wanted their innovation programs to deliver 20 to 30% improvements in product cost, quality, and time-to-market within the next two years.

But there is a vast disconnect between hope and reality: By a margin of two-to-one, executives said they are only minimally satisfied that their current innovation programs are delivering their full potential.

So, what are the key learnings from the study:

1. Spending more on innovation does not necessarily translate into more sales, profits or market share
 - Consider this: the number of new products introduced in the United States has grown by compound annual rate of 7%, to approximately 32,000 new products a year. But sales have grown only by 3%;
 - Companies like Levi's in jeans, Polaroid in core imaging and Maytag in appliances have all learned the hard way.

Profitable innovation, therefore, cannot be bought. Simply spending more usually leads to a waste of resources in increasingly marginal projects. Clearing the law of diminishing returns is at work here.

2. The solution to innovation is therefore not a focus on increased spending. Rather, it is to increase the effectiveness of that spending.

How should companies do that? We give them three pieces of advice:

1) Understand your innovation effectiveness curve: the challenge for companies is to raise the effectiveness curve, not to ride it.

It could make a significant difference. When we looked at the global consumer health care industry, we found the return on innovation investment of the best performers to be twice the industry average, and more than 10 times that of the worst performers (note : highest new product profit per dollar spent on R&D)

2) Master the entire innovation value chain.

Management must understand that innovation is not a discrete activity, but a multi-functional capability that requires several types of competences. This requires owning or sourcing 4 critical sets of capabilities:

- **Idea generations / market insights capability : Creating the ideas engine** – the ability to generate new product and technology ideas. Superior innovators create and institutionalize a direct link between strategic priorities and idea generation. They demonstrate market insights by understanding both how much novelty the market wants and will absorb, and also how the right ideas can create growth and market share. They continuously monitor customer insights for inspiration.
- **Project selection capability : Making the right bet** – this is the capability to funnel a long list of ideas into a short list of funded projects.
- **Development : Speeding up time to market** - the ability to put a development project through quickly.
- **Commercialization : Getting to the Finish Line** - the first of these is the ability to manage the supply chain to ensure that products are where they need to be when they are needed, the second is the ability to promote and market the product intelligently.

The third piece of advice is:

3) Don't try to do it all by yourself - The breadth of internal capabilities required is very wide. Very very few companies can be superior at everything.

I sincerely hope that today's discussions will spark your innovative thoughts and spur your entrepreneurial spirit.

Thank you.

APPENDIX IV: METHODOLOGY AND MEASURES

POPULATION TELEPHONE SURVEY

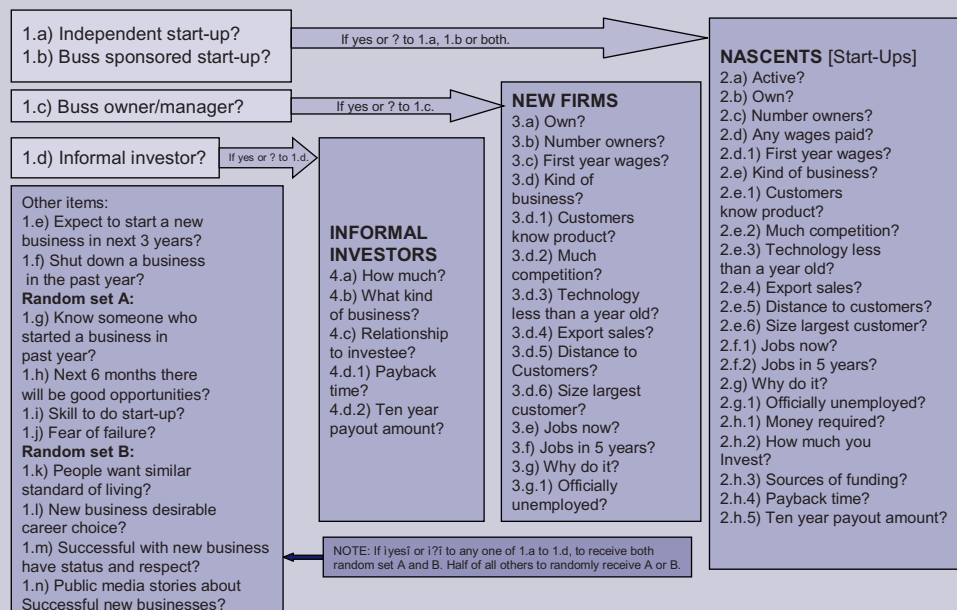
⁸ Consumer Search is a commercial service provider that specializes in collecting survey research data.

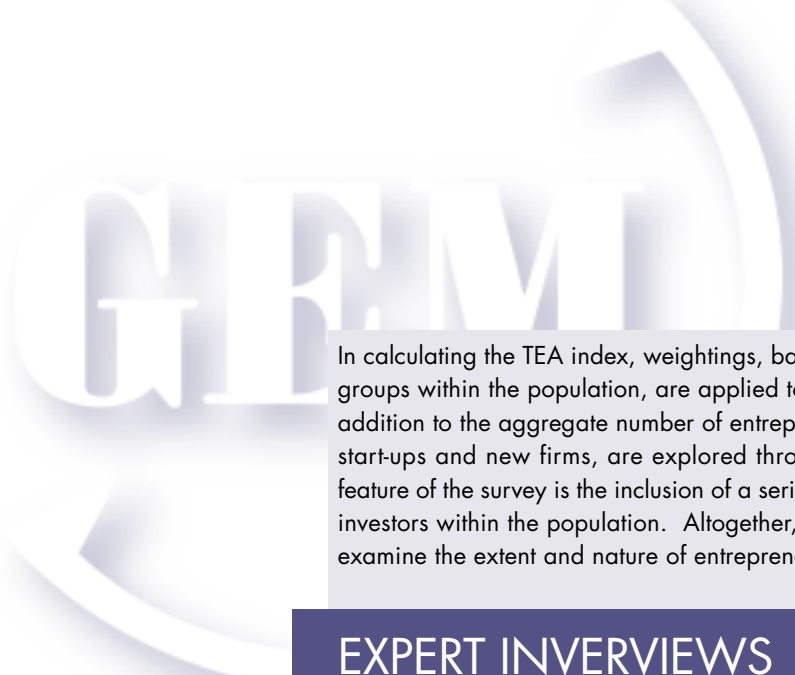
The telephone survey in 2004 was conducted by *Consumer Search*⁸, which sampled 2000 adults in Hong Kong and 2000 adults in Shenzhen by telephone interviews conducted in the evenings of Fridays and weekends during the months of May and June 2004. An entrepreneur, for the purposes of calculating the TEA indices, is a respondent in the survey currently participating in either:

- A business start-up where work has been done to effect the start-up but wages have been paid for less than three months or
- A new firm where the firm is less than 42 months old at the time of survey.

The respondent can participate in the business start-up or the new firm either privately or as a part of his employment, but in either case, the respondent must have an equity stake. The TEA index is the percentage of entrepreneurs in the sample. They are expected to reflect the proportion of individuals in the population that qualifies as entrepreneurs following the above definition.

The diagram below maps out the structure of the interviews. During the survey, the respondents are, first of all, screened using question 1 for potential qualification as entrepreneurs for this study. Subsequently, for the ones who have involved in either start-up or new firms over the past year, they are probed for the details of their engagements. TEA includes all individual, aged between 18 to 64, who are, by the above definition, entrepreneurs at the time of the study. The structure of the interview is shown in the diagram below.





In calculating the TEA index, weightings, based on the proportion of gender and different age groups within the population, are applied to the data to reflect the true population counts. In addition to the aggregate number of entrepreneurs, the characteristics of the businesses, both start-ups and new firms, are explored through separate sets of questions. Finally, another feature of the survey is the inclusion of a series of questions designed to investigate the informal investors within the population. Altogether, the adult population survey covers questions that examine the extent and nature of entrepreneurial activities in the community.

EXPERT INTERVIEWS

In selecting experts GEM applies a standardized procedure. GEM defines an expert as a person directly involved in delivering a major aspect of the economy's basic EFC (see Figure 1 above). Experts can be politicians, university professors, entrepreneurs, government officials, or other professionals in the field of entrepreneurship. They have considerable knowledge of the entrepreneurial phenomenon and have or could have contributed to policy debate. Approximately half of the GEM experts are themselves involved in running their own businesses.

We identified at least two experts for both Shenzhen and Hong Kong in each of the first nine basic EFCs. When selecting experts, we ensured that one of the experts was directly involved in delivering a major aspect of the relevant EFC. Many experts had interests and expertise in more than one EFC. We did not require any experts to restrict themselves to their own EFC in presenting their views. Instead we encouraged them to present their views on what they felt to be critical EFCs, even if they were different from the one they had been selected to represent.

Each expert was asked to complete:

- A 30-minute to one-hour face-to-face interview. The experts were asked to identify and discuss three strengths and three weaknesses of the economy in stimulating entrepreneurship. experts were also to give at least three recommendations on how to stimulate entrepreneurship.
- A structured seven-page questionnaire that investigated the status of the EFCs in his or her economy.

Each interviewer wrote up a summary of the interview. GEM subjected the summaries of the expert interviews to content analysis to capture the issues and trends. Furthermore the Joint Hong Kong Shenzhen GEM team analyzed the summaries of the interviews in detail. The seven page questionnaire was also sent to previous years' experts, who completed and returned it by mail. The Hong Kong GEM team and its Shenzhen collaborator, Shenzhen Academy of Social Sciences altogether interviewed 47 experts, 17 from Hong Kong and 30 from Shenzhen during the summer of 2004. The personal particulars of the experts are included in Appendix VI. In total, all the current of year's experts and another 25 Hong Kong experts identified in previous years completed the questionnaires that provide detailed measures on the EFCs in their respective cities.

Entrepreneurial Framework Conditions Strength Measure

In analyzing the interview scripts, three measures are used, namely, the EFC Strength Measure, Priority Index and Comparative EFC Ratings.

EFC Strength Measure is defined as:

$$\text{EFC Strength Measure} = \frac{\text{number of times cited as strength}}{\text{total number of times cited}}$$

The "total number of times cited" in the denominator is the sum of the times that the experts in the region cite the EFC as either a strength or a weakness. Since the experts were required to cite three strengths and three weaknesses each, and since all strengths and weaknesses were categorized, the EFC Strength Measure is a relative measure.

Priority Index

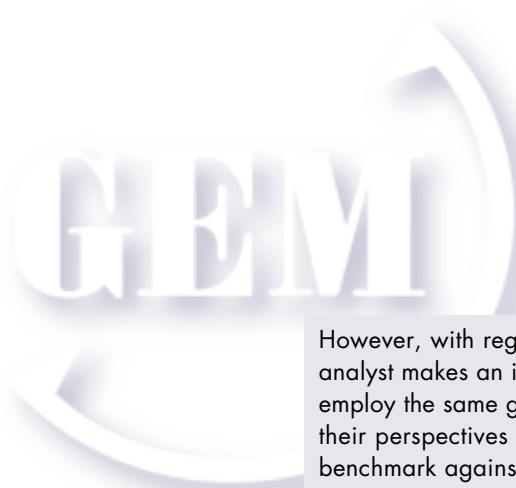
During the interviews, each expert was given the opportunity to state three prioritized contributing factors and limitations in relation to conducting entrepreneurial activities in their respective communities. The actual interview scripts were content analyzed and reduced to a list of factors that are compatible with the Entrepreneurial Framework Conditions (EFC) as listed in the conceptual framework (see figure 1). Figure 17 and Figure 18 contain the comparative strengths and weaknesses of Hong Kong and Shenzhen sorted by priority index.

The Priority Index indicates the relative importance of each of the issues that the experts mentioned. The index is computed by dividing the aggregate priority weights of each factor by the total possible weights the experts assigned. Weights of 3, 2, and 1 are assigned to factors that the experts consider of first, second and third priority. The weights of each of the factors that the experts mentioned are aggregated and divided by the overall possible weights that all experts are required to assign.

The priority index is another way to evaluate the strengths and weaknesses that the experts spoke of during the interviews. The statements in the tables are the summary of the comments that the experts offered. When the interview scripts are analyzed, attempts are made to ensure that the results are compatible with the EFCs that are used to describe the environment for entrepreneurial activities. This can help ascertain that results are comparable.

Comparative Mean EFC Ratings

The information collected using the 7-page questionnaire is presented using Comparative Mean EFC Ratings. Since the 2003 questionnaire was revised before being used in 2004, results for the two years are not directly comparable. The results of the questionnaire are presented graphically, comparing the mean ratings of each of the issues investigated among the high income countries, middle income countries, low income countries, Hong Kong and Shenzhen. As the purpose of this report is not to raise an argument on how international economies should be categorized, the classification in the report follows the approach adopted in GEM 2004 Executive Report. Since it has been shown that countries with different levels of national income do behave differently in relation to entrepreneurial activities, an attempt is made in this report to compare the entrepreneurial framework conditions following this classification.



However, with regard to the comparability of the mean scores, one must be aware that the analyst makes an implicit assumption that is likely to prove false: we assume that the experts employ the same global framework. In fact, it is highly probable that different experts place their perspectives in different contexts. For example, Shenzhen experts are more likely to benchmark against their domestic peers while Hong Kong experts are more likely to benchmark against countries in the developed world, distorting the comparability between Hong Kong and Shenzhen Comparative Mean Scores. In light of this, the readers should bear in mind the limitations of the study when interpreting the findings.

CORPORATE ENTREPRENEURSHIP STUDY

In this part of the Study, we identified respondents to the questionnaire by approaching companies that we felt would welcome the chance to participate in the survey. Approximately half of the Hong Kong companies identified were members of the Chinese Executive Committee of the Hong Kong Management Association, all of whose members were approached with the invitation to join the poll. Approximately one third of the companies approached responded positively, yielding 50 companies in our sample. In each case, we asked the chief executive and one or two other top managers to fill out the questionnaire. In 17 cases we received multiple responses of from two or three members of each company.

Questionnaire Content:

Section I, consisting of questions 1-8, were conforming questions to benchmark against the GEM telephone survey.

Section II consisting of questions 9 through 24, were taken from the work of Zahra and Coven (1995) and Zahra (1996). Respondents rated the degree to which the following descriptions were applicable to their companies (ranked from 0 to 6 as Strongly Disagree, Disagree, Somewhat Disagree, Neither agree nor disagree, Somewhat Agree, Agree and Strongly Agree). Below, we indicate the factor (not given to the respondent) which the question is trying to investigate:

Innovation

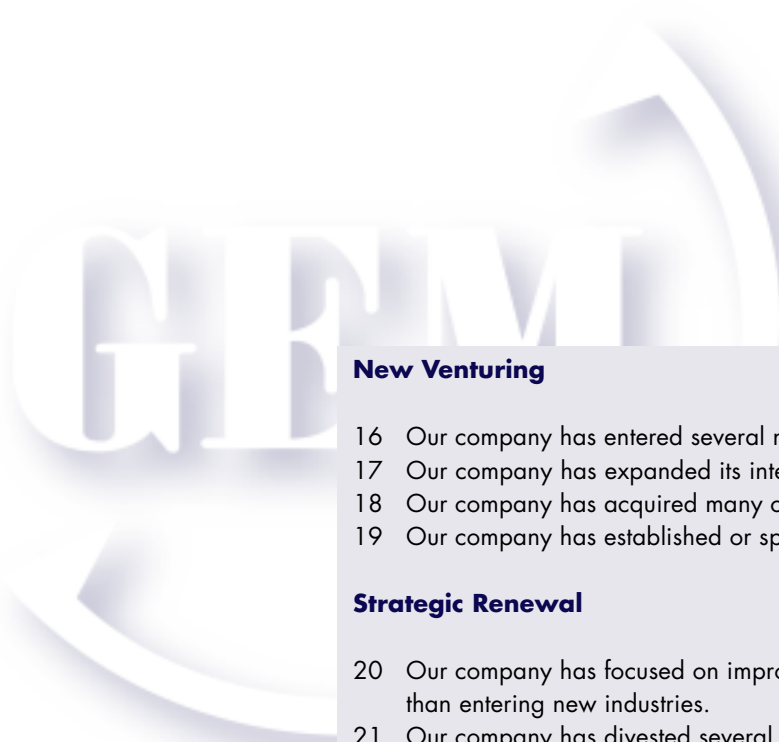
- 9 Our company has introduced many new products or services.
- 10 Our company has made many dramatic changes in the mix of its products and services.
- 11 Our company has emphasized making major innovations in its products and services.

Risk Taking

- 12 Our company has shown a strong proclivity for high-risk projects (with chances of very high returns).
- 13 Our company has emphasized taking bold, wide ranging actions in positioning itself and its products (services).

Proactiveness (1)

- 14 Our company has shown a strong commitment to research and development (R&D) technological leadership and innovation.
- 15 Our company has followed strategies that allow it to exploit opportunities in its external environment.



New Venturing

- 16 Our company has entered several new industries.
- 17 Our company has expanded its international operations significantly.
- 18 Our company has acquired many companies in very different industries.
- 19 Our company has established or sponsored several new ventures.

Strategic Renewal

- 20 Our company has focused on improving the performance of its current business rather than entering new industries.
- 21 Our company has divested several unprofitable business units.
- 22 Our company has changed the competitive approach it uses for each business unit.
- 23 Our company has initiated several programs to improve the productivity of its different business units.
- 24 Our company has reorganized operations to ensure increased coordination and communication among business units.

Section III is taken from the work of Lumpkin and Dess (2001) (questions 25-29) and Brown Davidson and Wiklund (2001) (questions 30-49). This section presented two opposing concepts, A and B. Respondents were asked to select the extent to which their company is characterized by A versus B. Respondents had to choose between Only A, Strongly A, Mainly A, A and B Equally, Mainly B, Strongly B and Only B. In all cases but questions 28, 33-36 and 45-49, B represented the entrepreneurial orientation. When we present the results in the body of this report, we subtract from 6 the value of these reverse order cases.

	A	B
	Proactiveness 2	
25	Our company typically responds to action which competitors initiate	Our company typically initiates actions which competitors then respond to
26	Our company is very seldom the first business to introduce new products/services, administrative techniques operating technologies, etc	Our company is very often the first business to introduce new products/services, administrative techniques operating technologies, etc
27	In general, top managers of our firm have a strong tendency to "follow the leader" in introducing new products or ideas	In general, top managers of our firm have a strong tendency to be a strong tendency to be ahead of other competitors in introducing new products or ideas
	Competitive Aggressiveness (28 is reversed)	
28	Our company is very aggressive and intensely competitive	Our company makes no special effort to take business from the competition
29	In dealing with its competitors, our company typically seeks to avoid competitive clashes, preferring a live and let live posture	In dealing with its competitors, our company typically adopts a very competitive "undo the competitors" posture
	Strategic Orientation	
30	As we define our strategies, our major concern is how to best utilize the resources we control	As we define our strategies, we are driven by our perception of opportunity. We are not constrained by the resources at (or not at) hand
31	We limit the opportunities we pursue on the basis of our current resources	Our fundamental task is to pursue opportunities we perceive as valuable and then to acquire the resources to exploit them

32	The resources we have significantly influence our business strategy	Opportunities control our business strategies
	Research Orientation	(entire section reversed)
33	Since we do not need resources to commence the pursuit of an opportunity, our commitment of resources may be in stages	Since our objective is to use our resources, we will usually invest heavily and rapidly in new business initiatives
34	All we need from resources is the ability to use them	We prefer to totally control and own the resources we use
35	We like to employ resources that we borrow or rent	We prefer to only use our own resources in building or expanding our new business ventures
36	In exploiting opportunities, having the idea is more important than just having the money	In exploiting opportunities, access to money is more important than just having the idea
	Management Structure (autonomy)	
37	In managing our different businesses, we prefer tight control of funds and operations by means of sophisticated control and information systems	We prefer loose, informal control. There is a dependence on informal relations
38	We strongly emphasize getting things done by following formal processes and procedures	We strongly emphasize getting things done even if it means disregarding formal procedures
39	We strongly emphasize holding to tried and true management principles and industry norms	We strongly emphasize adapting freely to changing circumstances without much concern for past practices
40	In managing our different operations, there is a strong insistence on a uniform management style throughout the firm	Managers operating styles are allowed to range freely from very formal to very informal
41	There is a strong emphasis on getting line and staff personnel to adhere closely to formal job descriptions	There is a strong tendency to let the requirements of the situation and the personality of the individual dictate proper job behavior
	Reward Philosophy	
42	Our employees are evaluated and compensated based on their responsibilities	Our employees are evaluated and compensated based on the value they add to the firm
43	Our employees are usually rewarded by promotion and annual raises	We try to compensate our employees by devising ways so they can benefit from the increased value of the firm
44	An employee's standing is based on the amount of responsibility s/he has	An employee's standing is based on the value s/he adds



	Growth Orientation	(entire section reversed)
45	It is generally known throughout the firm that growth is our top objective	Growth is not necessarily our top objective. Long term survival may be at least as important.
46	It is generally known throughout the firm that our intention is to grow as big and as fast as possible	It is generally known throughout the firm that steady and sure growth is the best way to expand
	Entrepreneurial Culture	(entire section reversed)
47	Typically, we have many more promising ideas than we have time and the resources to pursue	We find it difficult to find a sufficient number of promising ideas to utilize all of our resources
48	Changes in society-at-large often give us ideas for new products and services	Changes in society-at-large seldom lead to commercially promising ideas for our firm
49	We never experience a lack of ideas that we can convert into profitable products/services	It is difficult for our firm to find ideas that can be converted into profitable products/services

Section IV consisted of perceptual rankings of the competitiveness of the companies.

- 50 Compared to close competitors in your industry, what is the best estimation of your firm's after-tax return on sales?
- 51 Compared to close competitors in your industry, what is the best estimation of your firm's after-tax return on equity?
- 52 Compared to close competitors in your industry, what is the best estimation of your firm's sales position (i.e., total sales/total assets)?
- 53 Compared to close competitors in your industry, what is the best estimation of your firm's competitive position?

Section V consisted of company financial performance data. We were unable to obtain enough responses from this section to draw meaningful conclusions.

Analysis Conducted

Our analysis is divided into two sections, principal component analysis and question by question analysis. We use principal components or factor analysis to determine the number of independent dimensions that make up entrepreneurship. The technique relies on reducing the total number of variables - in our case, the 40 questions that we asked each of the respondents on the entrepreneurial characteristics of their firms - into a set of factors that are combinations of those 40 questions. When setting our questions, we relied on the existing literature, using questionnaires tested in the US and Europe. Although those questions were written with 12 factors in mind (one of which was defined by two different researchers in two different ways), the factors the analysis identified are not simple weighted averages of the questions in each factor but are weighted averages of combinations of factors many of which appear completely unrelated.

Comment on Factor Analysis

Although factor analysis is problematic in that (1) it assumes linearity in what are probably non-linear functions and (2) it is usually not possible to identify a specific variable with any statistically calculated orthogonal factors, we identify the factors seen as the most important (in terms of absolute value of factor loadings) as follows:

Questions	Component		
	1	2	3
37	0.842239		
28	0.732052		
38	0.668876		
30	0.505413		
10		0.847596	
9		0.709575	
13		0.702132	
11		0.5475	
25			0.851838
32			0.755214
31			0.533215

Comment on Regression Results

The following table contains the regression results discussed in conjunction with Figure 41 in part IV of the body of the report.

Corporate Entrepreneurship Components	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	11.62	2.23		5.21	0.00
Innovation	-0.65	0.41	-0.28	-1.59	0.12
New venturing	0.60	0.30	0.32	2.02	0.05
Strategic renewal	-0.90	0.38	-0.34	-2.34	0.02
Proactiveness	-0.33	0.35	-0.15	-0.96	0.34
Competitive aggression	0.12	0.35	0.05	0.34	0.74
Strategic orientation	-0.66	0.26	-0.39	-2.50	0.02
Resource orientation	-0.81	0.39	-0.29	-2.08	0.04
Management structure	-0.77	0.33	-0.31	-2.32	0.03
Reward philosophy	0.92	0.29	0.43	3.20	0.00
Growth orientation	-0.21	0.25	-0.12	-0.84	0.40
Entrepreneurial culture	0.63	0.37	0.25	1.71	0.10

APPENDIX V: EMPIRICAL FINDINGS IN THE ACADEMIC LITERATURE ON CORPORATE ENTREPRENEURSHIP AND PERFORMANCE

Study	Sample	Findings
Brown, Davidson and Wiklund (2001)	1,233 Swedish firms	Six independent dimensions of entrepreneurial orientation - strategic orientation, resource orientation, management structure, reward philosophy, growth orientation and entrepreneurial culture - exist in companies
Covin, J. G., and Slevin, D. P. (1989)	161 small US manufacturers	Small firms achieve superior performance in hostile environments by taking an entrepreneurial approach. In benign environments, however, small firms achieve superior performance with a mechanistic structure, a conservative approach, conservative financial management, short term financial profitability emphasis, improving existing products and reliance on single customers
Lumpkin and Dess (2001)	Owner-executives from 94 US firms	Proactiveness and competitive aggressiveness are factors of firm entrepreneurial orientation in addition to autonomy, innovativeness and risk-taking
Miller (1983)	52 US corporations ranging from \$2 m to \$1b. in sales	Innovation, proactiveness and risk-taking are independent entrepreneurial dimensions. In simple firms, leaders' personalities dominate and centralized decision making correlates with entrepreneurship. In planning-oriented firms, entrepreneurship increases with the specificity of plans. In organic firms, entrepreneurship increases as decentralization increases
Rauch, Wiklund, Lumpkin and Frese (2005)	Aggregate analysis of 42 samples from 39 different studies	Entrepreneurship and performance are positively correlated with higher correlations for smaller businesses. Innovativeness, proactiveness and autonomy are more strongly associated with good performance than is competitive aggressiveness.
Zahra (1996)	127 US Fortune 500 companies	Executive stock ownership and long-term institutional investor stock ownership is positively correlated with entrepreneurship
Zahra and Covin (1995)	108 US companies from SMEs to fortune 500 over seven years	The positive effect of corporate entrepreneurship on corporate financial performance, while small at the beginning, increases over time. An entrepreneurial orientation is particularly effective in a hostile environment.

References

Brown, Terrence E., Davidsson, Per and Wiklund, Johan (2001). "An operationalization of Stevenson's conceptualization of entrepreneurship as opportunity based firm behavior" *Strategic Management Journal* 22(10), 953-68.

Covin, J. G., and Slevin, D. P. (1989). "Strategic management of small firms in hostile and benign environments" *Strategic Management Journal* 10:1, 75-87.

Lumpkin, G. T., & Dess, G. G. (2001). "Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle" *Journal of Business Venturing*, 16, 429-451.

Miller, Danny (1983). "The Correlates of Entrepreneurship in Three Types of Firms" *Management Science*, 29:7, 770-791.

Rauch, Andreas, Wiklund, Johan, Lumpkin, Tom, Frese, M. (2005). "Entrepreneurial Orientation And Business Performance: A Meta-Analysis" (submitted to *Strategic Management Journal*)

Zahra, S. A. (1996). "Governance, ownership, and corporate entrepreneurship: The moderating impact of industry technological opportunities" *Academy of Management Journal*, 39(6), 1713-1735.

Zahra, S. A., and Covin, J. G. (1995). "Contextual influences on the corporate entrepreneurship performance relationship: A longitudinal analysis" *Journal of Business Venturing*, 10(3), 43-58.

APPENDIX VI: GEM HONG KONG AND SHENZHEN 2004 EXPERTS

1. HONG KONG EXPERTS (2004)

Louis Bowen
Venture Capitalist, Managing Director
ACL Holdings

Gabriel Yu
Chairman
IT Ventures Group

Chung-Kai Sin
Legislative Councillor (IT)
Hong Kong Information Technology Federation

Johnny Ng
CEO
Titanium Group

Jacqueline Cheng
Co-Founder
Hong Kong Education City

Reuben Mondejar
Associate Professor
Dept of Management
City University of Hong Kong

Wing-Yan Pong
Principal
HKMA David Li Kwok Po College

Charles Kao
CEO
Transtech Services Ltd.

Yat Siu
Founder and CEO
Outblaze Ltd.

Richard Tsang
Founder
Strategic Financial Relations Ltd

Kenneth Wong
Founder
Bossible
Hong Kong

Brenda Cheung
Founder
Bonny Food-Serve Concept

Shui-Chuen Lam, Roland
Founder
CIL Hong Kong

Roy Chung
Managing Director
Techtronics Inc.

Michael Ying
Chairman
Esprit Holdings Ltd.

Kit Szeto
Founder
Red Muse Entertainment Limited

Diane Wilcoxson
Partner
Wilcoxson & Associates

2. HONG KONG EXPERTS (2003) WHO COMPLETED THE 2004 EXPERT QUESTIONNAIRE

Adrian Li
General Manager & Head of Corporate Banking
Division
Bank of East Asia Ltd.

Conrad Wong
Vice Presiden
Yau Lee Group Ltd.

Duncan W. Pesco
Deputy Commissioner for Commission
Tourism Commission

Paul Morris
President
HK Institute of Education

Angela Ng
Program Director (Former)
LiveWIRE Hong Kong

Tony R. Eastham
President, CEO
RandD Corporation Limited
Hong Kong University of Science and Technology

Gino Yu
Director
Multi-media Innovation Centre
HK Polytechnic University

Venus Lee
Managing Director and Founder
e-crusade

Maura Fallon
President
Fallon International Ltd.

David C.W. Hui
Chairman
A-Fontane Group Limited

Lui Tai Lok
Professor
Department of Sociology
The Chinese University of Hong Kong

3. HONG KONG EXPERTS (2002) WHO COMPLETED THE 2004 EXPERT QUESTIONNAIRE

Roger Marshall
Managing Director
Persimmon Capital Ltd.

Julie Cheng
CEO
Infoislive

K. O. Chia
Managing Director
Walden International

Patrick Yeung
Managing Director
Asian Capital (Corporate Finance) Ltd

Sterry Chong
Director, General Manager
Wah Gar Group

Anna Lai
Deputy Executive Director
Trade Development Council

Peggy Chan
Chairman & CEO
Excel Technology International Holdings Ltd.

James Thompson
Chairman
Crown Worldwide Holdings Ltd.

Vincent Li
General Manager,
Enterprise Enhancement Services
HK Productivity Council

Felix Chan
President
The Hong Kong Chamber of Small and Medium
Business Ltd.

S. S. Kwong
Executive Director
Employee Retraining Board

Eddy Chan
Regional Vice-President
FedEx, China & Mid Pacific Region

Kenneth Young
Pro-Vice Chancellor
The Chinese University of Hong Kong

Ho Shut Kan
Executive Director
Kerry Properties Ltd.

4. HONG KONG RESPONDENTS OF CORPORATE ENTREPRENEURSHIP QUESTIONNAIRE

K. L. Lee
Executive Director
Esquel Enterprises Limited

Mandy Kwan
Manager
Chi Shing Machinery Co., Ltd.

Joanna Ying
Deputy Managing Director
Esquel Enterprises Limited

Chu Ngan Li
Purchasing Officer
Chung Tai Roller Shutters Company Limited

Teresa Yang
Chief Operating Officer
Esquel Enterprises Limited

Kevin Chiu
Project Manager
Artwell Design & Printing Company Ltd.

Alex Chan
Project Manager
Artwell Design & Printing Company Ltd.

Tom Mehrmann
CEO
Ocean Park Corporation

Paul Pei
Director of Sales and Marketing
Ocean Park Corporation

Natthias Li
Deputy General Manager
Ocean Park Corporation

Andrew Brandler
Group Managing Director
CLP Holdings

Peter P W Fu
Group Executive Director & CFO
CLP Holdings

Betty Yuen
Managing Director
CLP Holdings

Frances Wong
Manager
Conex Services (HK) Ltd.

Daniel Or
Consultant
Conex Services (HK) Ltd.

Wong Wai Ho
Associate Director
Hong Kong Newton Group

Catherine Chan
Business Director
Informative Professional Development Center

Choi Seung Yong
Managing Director
Maxon Electronics Hong Kong Ltd.

Burnice Chan
Manager
Solomon Systech Limited

Yvonne Chan
Corporate Communications Manager
Solomon Systech Limited

Peter Cheung
Senior Planning and Customer Service Manager
Solomon Systech Limited

Henry Liu
HR Manager
Shinryo (HK) Ltd.

Ge Rui
Executive Manager
Mantex Supplier Co. Ltd.

Lam Tai Wah
Sales Manager
Mantex Supplier Co. Ltd.

Cheng Lee Kit
Managing Director
Luen Sing Sec. Ltd.

Cheng Yog Chee Aupie
Finance Manager
Luen Sing Sec. Ltd.

Eva Lam
Director, Finance and Company Secretary
Hong Kong CSL Limited

Hubert Ng
CEO
Hong Kong CSL Limited

Mike Robey
COO
Hong Kong CSL Limited

Tong Kai Sung
Assistant Sales Manager
Megga Bags & Accessories Ltd.

Peng Yu-cheng
General Manager
Sun Sang Kong Yuen Shoe Factory Co. Ltd.

Peng Hua-sheng
Overseas Business Manager
Sun Sang Kong Yuen Shoe Factory Co. Ltd.

Pang Yuk Bo
Chief Sales Manager
Sun Sang Kong Yuen Shoe Factory Co. Ltd.

N. Valiente
CFO
SCMP Group

Christine Li
Financial Controller
SCMP Group

Yuen Yiu Chuen
Managing Director
Wai Yan Co. Ltd.

Jason Chong
Director, Deputy General Manager
Wah Gar Group

Wong Yat Yuk
Director (production)
Wah Gar Group

Stanley Pun
Director
Wah Gar Group

Chow Kwok Siu
Managing Director
Kong Nam Technology Co. Ltd.

Clarence Chan
Group Controller
Techtronic Industries Co. Ltd.

Frank Chan
Group Executive Director
Techtronic Industries Co. Ltd.

Chan Yiu Wah
Group Executive Director
Techtronic Industries Co. Ltd.

Lau Shun Mei
Managing Director
Shun Hing Lighting Co. Ltd.

Ida Tang
Director
CEC International Holdings Ltd.

Colin Ho, Josh Ho, Calvin Kwan and
Patrick Yu
CEC International Holdings Ltd.

Jennifer Fu
Assistant to Chairman
CEC International Holdings Ltd.

Mickey Chen
Marketing Manager
Bebe Toys & Accessories Mfty Ltd.

Fang Zhao-zong
General Manager
Wai Kong Fire Engineering Co. Ltd.

Lin Shun-zhong
Chairman
Guangzhou Xin Feng Food Industries Co. Ltd.

Leung Man Kuen
Administrative & Accounting Manager
Guangzhou Xin Feng Food Industries Co. Ltd.

S.K. Ho
Group Administrator
BALtrans Logistics (Hong Kong) Ltd

Tse San Yip
Managing Director
Sun-Tech International Group Ltd.

Allen Chan
General Manager
Handsome Industrial Co., Ltd.

Connie Fok
Secretary to General Manager
Handsome Industrial Co., Ltd.

Yeung Man Tat
Planning Manager
The Hong Kong and China Gas Co.

Lai Kam To
Planning Manager
The Hong Kong and China Gas Co.

Wang Wei Jin
Director/General Manager
The Hong Kong and China Gas Co.

5. SHENZHEN EXPERTS (2004)

Che Han-shu
General Manager
Shenzhen Feng Huang Zhi Ye Real Estate Co. Ltd.

Chen Xin
Associate Director
Sha He Industry Holding Ltd.

Dou Zhiming
Head of the Management Department
Shenzhen Polytechnic

Gao Xiao-bing
General Manager
Zhong Guo (Shenzhen) Gao Xin Ji Shu Chan Ye Tou
Zi / Sino (Shenzhen) High Technology Industry
Investment Co. Ltd.

Guan Yichun General Manager Shenzhen Xiandao Information Consulting Corporation Limited	Sailing Ling Fu Attorney, Partner of China Commercial Law Co. Ltd. (Guang Dong)
Guo Jian Vice President of Rainbow Venture Capital Holdings Co., Ltd.	Shen Ning-yao Senior Consultant, Professor Shen Gang Chan Xue Yan Base
Guo Liang, Ph.D. Shenzhen Science & Technology Bureau	Wang Lizong Chief Secretary of Chamber of Commerce of Private Enterprisers Shenzhen
Hou Shi-tao Deputy Secretary Science and Technology Bureau of Shenzhen	Wang Qiang Associate Professor Tsinghua University Graduate School
Hu Weimin President and General Manager Shenzhen Dibo Investment Management Corporation Limited	Wang Yong-ming Deputy Secretary Science and Technology Bureau of Shenzhen
Huang Weihua Science and Technology Bureau of Shenzhen	Xiong Donghong General Manager, Department of Trading Notary and Dept. of Investment Bank CHPTE
Jiang Zhen-hua Associate Professor Shenzhen Polytechnic	Yang Lixun Research Fellow Shenzhen Academy of Social Sciences
Kong Li General Manager Shenzhen Luwei Science & Technology Corporation Limited	Zha Zhenxiang Professor Shenzhen Vocational & Technical College
Li Gaoping General Manager Shenzhen Madison Advertisement Co. Ltd.	Zhang Bo Executive Director Shenzhen Inspiration Planning Co. Ltd.
Li Hao Director Shenzhen Dong Fang Yu Zhi Guang Technology Co. Ltd.	Zheng Mingqiang General Manager MKD Co. Limited
Li Ru-jiang Director Shenzhen Dong Jin Technology Co. Ltd.	Zhou Zhanhong President Shenzhen Yungong Investment Corporation Limited
Li Zhaohui Associate Research Fellow Shenzhen Academy of Social Sciences	Zhu Jian Associate General Manager China (Shenzhen) Hi-tech Investment Co. Ltd.
Lo Ning-sheng Chairman Shenzhen Shi Ji Jing Wei Data System Co. Ltd.	Zou Shou-chang, Ph.D. China Technology Research Institute

6. SHENZHEN RESPONDENTS OF CORPORATE ENTREPRENEURSHIP QUESTIONNAIRE

Chang Ying-jie
Office Manager
Shenzhen Hao Ning Da Dian Neng Yi Biao
Manufacturing Co. Ltd.

Chen Jin-ming
Exhibition Director
Hua Gang International Exhibition Hong Kong Co. Ltd.

Zhang Shuang-wen
Project Manager
Hua Gang International Exhibition Hong Kong Co. Ltd.

Han Ge Le Candies

Qin Li-yan
Deputy Director
An Xing Paper (Shenzhen) Co. Ltd.

Xu Juan
Company Secretary
Shenzhen Nan Lian Food Co. Ltd.

Ming Wei
Enterprise Administrative Manager
San He International Group Co. Ltd.

Zhu Qi-jiang
Managing Director
Jie Yong Jia Electronics (Shenzhen) Co. Ltd.

Ai Yan
Manager
Li Gao Dao Mu (Shenzhen) Co. Ltd.

Cui Da-he
Deputy Director
Long Bi Industrial Development District (Shenzhen)
Co. Ltd.

Yang Zi-ran
General Manager
Guo Qiao Enterprise (Shenzhen) Co. Ltd.

Yao Zu-long
Managing Director
Shenzhen Qin Liang Enterprise Co. Ltd.

Wu Suyu
Sales Director
Shenzhen Qin Liang Enterprise Co. Ltd.

Zhou Ya-hui
General Manager
Shenzhen Qin Liang Enterprise Co. Ltd.

Li Bin-lan
Sales Director
Xin Yi Jia Supermarket Co. Ltd.

Zan Yun-long
Legal Representative
Xin Yi Jia Supermarket Co. Ltd.

Tan Zhen-e
Merchandising Manager
Xin Yi Jia Supermarket Co. Ltd.

Chen Xiao-zhao
Guo Bi Ran Planning Co.

Deng Qiu
Deputy General Manager
Zhan Hong Medicine

Li Chen
Deputy General Manager
Zhan Hong Medicine

Yao Xi-hong
Marketing Manager
Shenzhen Yi Chang Ming Enterprise Co. Ltd.

Zheng Tian-jiao
Managing Director
Shenzhen Yi Chang Ming Enterprise Co. Ltd.

Gao Shu-ying
Managing Director/General Manager
Shenzhen Zhong Biao Pei Tao Shi Chang Co. Ltd.

Liu Dong-ying
Finance
Shenzhen Zhong Biao Pei Tao Shi Chang Co. Ltd.

Chen Qin
Deputy General Manager
Cheng Shi Li Ren Co. Ltd.

Chen Gang
General Manager
Cheng Shi Li Ren Co. Ltd.

Tang Wei-ling
Deputy General Manager
Finance Director
Shenzhen Alfred Air Conditioner Co. Ltd.

Zong Chun-ling
Deputy General Manager
Marketing Director
Shenzhen Alfred Air Conditioner Co. Ltd.

APPENDIX VII: GEM HONG KONG AND SHENZHEN 2004 RESEARCH TEAM

Hong Kong Team



David Ahlstrom is Associate Professor in the Department of Management of The Chinese University of Hong Kong. He worked in the computer field for seven years before getting a PhD from New York University. He teaches primarily in the area of strategic management and management of technology. His research interests include how technologies emerge and are assessed, venture capital and entrepreneurship, and management in Greater China.



Kevin Au is Associate Professor in the Department of Management of The Chinese University of Hong Kong. He was trained in both social psychology and business, and specializes in human resource management and research methodology. He is active in academic research and business consulting. His consulting experience includes projects with the Hong Kong government and business corporations such as MTRC, AIA, and Oracle.



Bee-Leng Chua is Director of the Center for Entrepreneurship and teaches at the Department of Management of The Chinese University of Hong Kong. She teaches in the MBA and undergraduate programs on management principles, human resource management, entrepreneurship, and organizational behavior. Current research interests are in the area of career decisions, entrepreneurship, micro-credit enterprises, and pro-social behavior in the community and workplace.



Siu-tong Kwok is Professor of History and former Dean of Faculty of Arts and Dean of Students at The Chinese University of Hong Kong. He has pioneered new approaches to comparative history by promoting cross-cultural studies, cultural migration analysis, cultural environment in urban planning, creative industries and strategic management development. He has published 17 books and over 70 academic papers. He is advisor and visiting scholar to over 10 Mainland Chinese Universities and research institutions, a member of the Antiquities Advisory Board of the HKSAR Government and a member of the Governing Board of Shatin Hospital.



Chee-keong Low is Associate Professor of Corporate Law and Director of the Centre for Accounting Disclosure and Corporate Governance. His research interests are company and securities law with a recent focus on the issues pertaining to corporate governance and regulatory framework on which he has published in numerous international academic journals.



Shige Makino is Professor of Management at The Chinese University of Hong Kong. His current research interests include strategies for international expansion of Asian enterprises, inter-organizational imitation, and management of international strategic alliances.



Hugh Thomas is Associate Professor of Finance at The Chinese University of Hong Kong. He is an active academic researcher and pedagogical case writer in banking and financial institutions management, international finance and securitization. Prior to obtaining his PhD in International Business and Finance from New York University, he acquired six years of banking and consulting experience.



GEM

Shenzhen Team



Dong Xiaoyuan is an Associate Professor at the Shenzhen Academy of Social Science. Dr. Dong worked for the planning department of the Chinese Government before he received a doctorate degree from Beijing University. At present, he focuses on the study of macroeconomics and quantitative economics. He engages in consultation for the government.



Huang Donghe is Associate Secretary at the Shenzhen Futian General Chamber of Commerce. Before he received his master's degree in economics from Xiamen University, Mr. Huang had four years of industrial experience. He was the first to propose the "Shen Shang" concept, and he used it as a starting point to investigate the dynamics of business transactions in Shenzhen. He is the founder of the Shenzhen Business Club.



Le Zheng is the Director of the Shenzhen Academy of Social Science. Director Le worked in academia for more than 13 years before he received his doctorate from Central China Normal University. He specializes in city culture research. At present, his major focus includes strategic development of Shenzhen, regional development of the Pearl River Delta and research on the metropolitan region of Shenzhen and Hong Kong.



Wang Weili is an Associate Professor at the Shenzhen Academy of Social Science. Professor Wang worked in academia for more than six years before he received his doctorate degree from Fudan University. His major interest is Western thinking and modern Chinese city culture. At present, he focuses on the strategic development of city culture, cultural property development of the Pearl River Delta, and the influence of population mobility on the entrepreneurial culture in Shenzhen.



Yin Qingxun MBA is a member of the Modern Logistics Industry Consultation Commission of Shenzhen Municipality and the Deputy General Manger and Director of China AVIC Logistics Co., Ltd. Director Yin is involved in research works and projects organized by national associations, enterprises and the regional government, and provides consultancy to the regional government, companies and institutions. At present, he is focused on research into supply chain management, the application of supply chain technology, and the trading industry.



Yuan Yicai is an Associate Research Fellow at the Shenzhen Academy of Social Sciences. Dr. Yuan's major research interests are developmental economics and economics for the public sector. He has been involved in research institutes as a researcher for a long period of time, focusing on economic theory, practical economical issues and government policy consultancies. Dr. Yuan's current interests include economic issues relating to real estate development, public administration and related economic theories.

Wang Zengjin is an Associate Research Fellow at the Shenzhen Academy of Social Sciences.



Supporting Organisations:

