

Development Stage and Trend of Chinese College Students' internet start-up

(PREAENTED)

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Abstract—The paper focuses on internet entrepreneurship by Chinese university students. By looking back on the development of internet business, the paper sums up that the development of university students' start-ups have gone through five stages, which are the budding stage, the growing stage, the diversifying and rapidly developing stage, the transitional stage and the booming stage. The paper points out the distinguishing features characteristic of each stage and several new developing trends for internet start-ups. Firstly, internet entrepreneurs become younger and more educated; secondly, the “small and beautiful” micro-enterprises has become the major force in innovation; thirdly, in terms of gender, more male students choose to start their own internet business than female students. The conclusion is that the start-ups by university students have a rosy future and the entrepreneurial activities by them will become a main driving force in creating the situation of “mass entrepreneurship and innovation”.

Keywords—internet start-up; entrepreneurship; e-commerce; university student

I . INTRODUCTION

In 2013, internet economy accounts for 3.3% of China's GDP. This proportion is higher than that of America and is ranking top in the whole world. In the meantime, the internet retail transaction volume of China also overtakes that of America to rank first in the world. In 2014, the proportion of internet economy in GDP rises up to 7%, which reflects that internet consumption has become a new engine pushing up China's GDP. As is predicted in the book “ Internet Economy--- China's new form of economic development”, internet development will embrace its turning point in the year of 2015, with internet economy constituting a leading force in national economy and the scale of intangible internet market scale gradually catching up with that of tangible traditional market. On November 20th, 2014, Premier Li Keqiang attended the first World Internet Conference and made the remarks that we should make joint efforts to create an interconnected cyberspace governed and shared by all, and we shall spare no efforts to promote popular entrepreneurship and innovation. University students act as main force in entrepreneurial activities. They now start their own business in a way quite different from ten years ago. The internet start-ups by them have exhibited distinguishing features and developing rules. By studying the history of university

students' start-ups, the paper aims at discovering their developing rules and identifying the cause for the failure of some start-ups in hope of providing some reference for the future.

In 1999, The UNESCO issued a declaration of “Higher Education in the 21st Century: Vision and Action”, which stated that “to develop students' entrepreneurship skills and spirits shall be set as one of the basic goals of higher education”. It is predicted by the international education community that in the 21st century, more than half of the technical school students and university students will embark on starting their own business. Internet economy and e-commerce, a brand-new economy form that has flourished in China in recent years, is a new point of economic growth which can effectively ease the pressure of unemployment of our country. Faced with a stark employment situation, many graduates in China turn their energy to internet, creating a lot of new professions with their innovation and vigor.

The internet start-ups by graduates serve as a strong engine of internet development and economic growth. The young full of creative ideas play a vital role in innovating technology, culture and economic pattern in one country. So entrepreneurial activities not only provide new job opportunities, stimulate passion of the young, but also drive forth economic growth. It can be predicted that in near future the internet start-up by university graduates will become an important power fueling China's economic growth.

II. DEFINITION OF INTERNET START-UP

As a new start-up form that has found rapid development only in recent years, consensus has not yet been reached by the academic circles at home or abroad on how to define the internet start-up theoretically. [1] Zhang Qing and Cao Wei defined the Internet start-up as an process of utilizing computer networks and other electronic network telecommunications equipment to hunt and grab new market opportunities and provide new products or services for the purpose of creating new value. [2] As for the author of the paper, we tend to regard internet start-up as a new employment form that is based on the internet and whose main business includes running internet stores and providing electronic commerce services.

1. Initial Funding for Scientific Research of Advanced Technical Personnel of Jiangsu University No. 15JDG003

2. Higher education teaching reform research topic of jiangsu university in 2015. NO2015JGZD006

3. 2011 Philosophy and Social Science Research Guide Project of Education Department of Jiangsu Province, No. 2011SJD630049, Social Science Fund Project of Jiangsu Province, No. 11JYD019

Characteristics of Internet Start-ups. Internet start-ups are the product of internet economy, the latter of which is a new economy based on internet and modern information technologies. The rise of internet economy is manifested by the rapid development of information technology industry and other computer-technology-based high-tech industries, and it fundamentally transforms traditional industries and economic sectors by introducing high-tech technology into these industries. Therefore, internet economy shall not be seen as a virtual economy which is completely isolated from and in opposition to traditional industries and traditional economy. It actually is an advanced pattern of economic development which is based on traditional economy and supported by modern information technology. Therefore, internet start-ups have all the features characteristic of internet economy.

- Innovative. Since it was invented, the internet is considered as “subversive to traditional industries” because of its novelty. Though there is no lack of innovation inside traditional industries, its impact can not be matched with the innovation brought by internet. In a society that changes constantly every day, innovation and creativity has become vital to the success of internet start-ups. From previous internet start-up cases, it can be found that most of the successful internet start-up projects are born out of a novel idea.
- Open. The closed traditional economy have many intermediate links, while the internet can reduce the number of intermediate links between suppliers and sellers to the greatest extent, which brings about a substantial drop in transaction costs and information loss.
- Fair. In internet economy, all that is needed to start a business is a person who has access to internet, a computer or a smart phone. This greatly reduces the threshold to start a business and gives everybody equality to engage in entrepreneurial activities.
- Integral. The high permeability of internet economy forces internet starter-ups to perform integration. The information service industry expands rapidly to the first and second industry, which blurs the boundary between three industries and speeds up their integration. This kind of industry integration determines that internet start-ups are the integration of all industries and all links.

III. DEVELOPMENT STAGES OF CHINESE COLLEGE STUDENTS’ INTERNET START-UPS

Chinese college students’ internet start-ups develop along with e-commerce and internet business. Many years ago, Internet business is nothing but a vague idea on paper to most people. It was not until 2004 that it began to attract the attention of the public and quickly grew into an important economic power. University students, as one of the groups most adaptable to new things, keep pace with this development trend and the internet start-ups by university students began to spring up like mushrooms after rain. Now it passed through five stages.

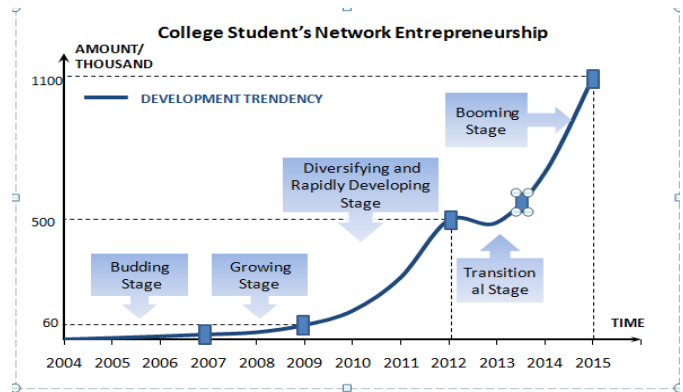


Fig.1. Five stages of college student's network entrepreneurship

- The first stage is budding stage, it lasted from the beginning of 2004 until the end of 2006 when internet business began to appear and university students started their attempt on internet business. During this stage, internet business gradually developed from fragmental and amateur e-commerce operation and management to professional and specialized e-commerce applications. Many enterprises began to employ professional e-commerce personnel and many individuals began to take e-business as their full-time job. [3] In this stage, many university students began to start their business online, most of whom are students majoring in economics and management from higher vocational college. They either open their stores independently, or join a franchise holder. They do business through Taobao and some other internet platforms. [4] Clothes and accessories, cosmetics and virtual products such as game deposit card are the top 3 products they sell. Besides, as shown in Fig 1, digital products takes up 10.34%, and education and sports products take up 9.38%. [5]

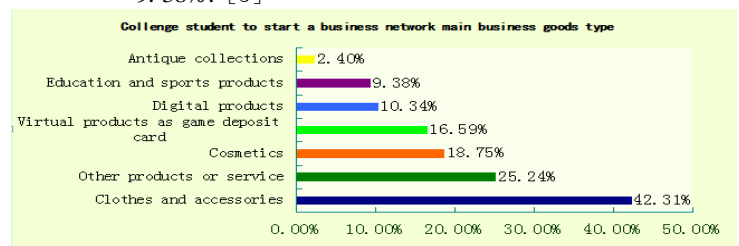


Fig2 Main Types of Commodities sold by University Students’ Internet Start-ups

Source of Data: Current status and Development Trend of University Students’ Start-ups---Report on University Students’ Start-ups

- With the rapid development of internet business, university students’ internet start-ups step into a growing stage. From 2007 to the end of 2009, internet business has undergone growth. It becomes more and more popular and is no longer a short-lived phenomenon but becomes a main trend of economy. [6] The volume of transaction executed through internet grows exponentially. The

products sold on internet become more and more diversified. The globalization and green economy also become the main theme of internet business. In the mean time, university students' internet entrepreneurial activities are expanding quickly. In February, 2009, a famous survey company, iResearch, issued "Report on Internet Purchasing Market in 2008", which showed that in 2008 about 570 thousand people started their businesses on Taobao---a C2C e-commerce platform owned by Alibaba Group, among whom 60 thousand are university students aged between 18 to 22, which takes up 12% of all the entrepreneurs on internet. With a hard employment situation, it has become the trend for graduate students to open internet stores. Many students who have accumulated some business experience through opening internet stores while leaning in the university choose this as their profession after graduation because they find this business can provide them a stable income. As shown in Fig 2, 60% internet entrepreneurs are aged between 23 to 32 years old, most of whom are college graduates. [7]

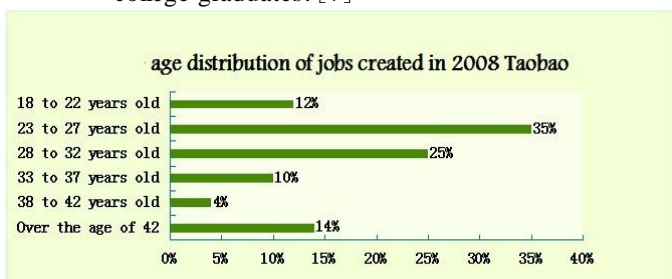


Fig 3 Age Distribution of Starter-ups on Taobao in 2008

Data source: Current status and Development Trend of University Students' Start-ups----Report on University Students' Start-ups

- From 2010 to the end of 2011, a new trend about internet business is the increased relevance to real life, and the start-ups by university students steps into a new stage of the diversifying and rapidly developing stage. [8] During this period, the internet business becomes more socialized and is gradually integrated to the main-stream economy system. In the mean time, with the rapid development of e-commerce, there is a growing demand for e-commerce services. The expansion and diversification of internet business also bring about new challenges. Recent years have witnessed the constant upgrade of consumption structure and the dramatic transformation of consumption mode brought by internet. The generations born in 1980s and 1990s have grown into the main consumption power, who have a strong appeal to individualized products and services. Therefore, since 2010, the trend of personalized consumption began to emerge. The internet and e-commerce will speed up this trend and will finally lead it to large-scale

customerization and individualized customerization. In the mean time, with the rapid development of e-commerce service business, there is a strong demand for talents in e-commerce. By the end of 2011, e-commerce service business yields a revenue of 120 billion yuan and conducts a transaction volume of up to 3000 billion. The platform service amount to 41 billion yuan, the supporting service is 55 billion yuan, and the derived business amount to 24 billion yuan. [9] Compared to traditional service industry, e-commerce service is right at the stage of rapid development and expansion.

- The university students' start-ups step into a transitional stage from 2012 to the mid - 2014. During this period, the rapid expansion of internet stores began to slow down, while the quality of start-ups is going up. The internet business intensifies and speeds up its integration with main-stream economy system. The rapid development of e-commerce business industry poses higher requirement for the quality and capability of university starter-ups, but the graduates can not meet this standard. This, for a while, damps the passion of the young to open up internet business. But the spirit soon picks up because of the great momentum of booming e-commerce business. According to statistics, during a very short period of time, a dozen of new professions targeted at services related to express mail mushrooms in internet. The increasing number of express packages and warehousing personnel is the direct evidence of this. 12 million packages are sent out from Taobao and Tianmao every day, which reflects the ability of the internet to create new employment. [10]
- In mid - 2014, the internet business develops into a new stage :the booming stage .in which the diversification and derivation of internet business becomes more and more distinct. One business may promotes the development of a chain of other businesses, such as internet marketing, customer service, art designing and it may create some employment that do not exist before, such as internet logistics, internet payment, etc. A group of new professions, such as internet store assistants, internet store decorators, Taobao store agents and game designers come into being. Therefore, the effect of internet business is radiated to all kinds of industries, such as manufacturing, processing and packaging, enlarging the overall economic scale. By 2015, the internet retail platforms represented by Taobao will have more than 500 million consumers, with a transaction volume of more than 2000 billion yuan, creating jobs for more than 30 million people directly or indirectly. A lot of new professions also thrive on these

internet business platforms. Taobao agents are one of these examples. Alimama, a platform responsible for selling and marketing products and services for Taobao sellers, now have more than 500 active cooperators. Some other new professions include professional “clickers”, who are responsible for clicking for some promotion bargains for others, internet store software analysts, who provide specialized analysis for store owners, training counselors, professional managers for internet stores. As for internet games, more and more jobs are being created. Now, we have designers who are specialized in coming up with designing ideas and setting up game rules, and game animators, This chain reaction developing mode will undoubtedly attracts more university students to undertake their own business and thus create more employment positions.

IV. Characteristics of College Students' start-ups

Taobao, which boasts the advantages of easy registration, low cost, simple operating procedures, and excellent adaptability to Chinese culture, is the internet platform that attracts most university starter-ups. According to the Taobao Employment index issued by Taobao, by April 30th 2014, 1.06 million people are employed through Taobao, among whom more than half are aged between 20 and 32. Most of them are newly graduated employees who have the potential to become the backbone of society in the future. They choose opening their own internet stores as their first step to success, and the experience accumulated in opening stores may become the solid foundation on which their future life is built. It is noteworthy that about 31.6 thousand students aged between 18 to 22 are employed through internet. They are undergraduates who are still learning in the university but they are quite possible to continue their business after graduation because of the stable income from internet business. According to the Internet Entrepreneurship Statistics and Social Security Research Project, about 100million people are employed in jobs created by internet directly. Among all the start-ups, 90 percent are stores owned by individuals, which means that the jobs created by these stores amount to 6million. According to statistics, the average age of starter-ups is 28, with male taking up 61.7%, graduates with college diploma, bachelor degree and master degree taking up 33.1%、25.5% and 1.8% respectively. With 17.8% of store owners having bachelor degrees, only 18.1% of the store employees hold bachelor degree. 66.5% of them are graduated from high schools or vocational college. The scale of internet stores is often very small, with 5 employees on average.

Fasting learning, great innovation, team-work playing and openness are the most distinct characteristics of university students' start-up. Through years of interview, the author of the paper found that most start-ups are the product of team-working playing. The main characteristics of these starter-ups lie in their quick development speed, dedication to constant innovation, small sale, effective and flexible

organization, multiplied operation modes, low investment and rapid repayment. The ability to learn quickly and constantly and the commitment to innovation and openness have make them the “gazelle” of internet .The start-ups by university students can be divided into following categories: start-ups that focus on specialized knowledge, those on integration and marketing, those on technical resources, and those risk opportunities and some on service resource. [11] Of all the capability necessary to start up an internet business, the ability to learn constantly, to lead a team, to innovate and keep up opening is of utmost importance. It is found through extensive investigation that successful internet business tend to have the following characteristics: adept in network operations; constant learning ability; top-down management mode; institutionalized operation procedures; great importance being attached to honesty; mature business experiences; open and enterprising spirits. Successful university start-ups also have these features.

E-commerce and e-commerce service are the important platforms for students to start their business. About 80% of university students choose Taobao as their start-up platform, 10% choose Yiqu, Baiduyoua, Paiai, etc., and the other 10% choose to set up their own internet sites. [12] It is found in a Report on China's Internet Employment made by China's Employment Promotion Committee that China's internet economy grows at a rate of 30%, creating direct and indirect job opportunities of more than 10 million. There is no accurate statistics on internet employment yet because the internet economy grows at such a rapid rate that is almost impossible to keep up with the latest data. What's more, by conventional rules, internet employment is usually considered as “flexible employment”, which is not counted in the entire employment statistics. Current statistics show that the e-commerce service has a market value of 246.3 billion yuan, up 72% over the same period of last year, [13] in which the e-commerce supporting industry market value amounts to 117.4 billion yuan, e-commerce service market value amounts to 68.8 billion yuan, e-commerce derived service market value amounts to 60.1 billion yuan.

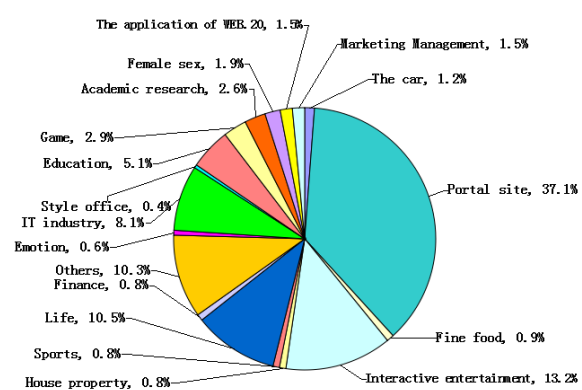


Fig 4 The field of internet business
Data Source: Report on Internet Starter-ups' Status Quo

As for the evolution pattern, team-work start-ups are the main stream and the companies usually expand gradually into a chain of business. At the initial stage, the identity of

university students changed from Internet users -netizens to internet businessman, from buyer to seller, from part-timer workers to full-time workers who register a small company. Then as the company develops, a team will be organized to run the business of the company. The opportunity-driven starter-ups will gradually grown into a formal organization driven by procedure and mechanism. Usually at this time, the important role played by e-commerce in business channel will be fully recognized and a specialized e-commerce sector will be set up. The electronic network within an enterprise will be upgraded to internet ecological system and the original internet business will develop into a chain of businesses.

Family-style or workshop-style companies have most vitality. About 80% of teams have members under 5, 13.4% with members of 5-20, 5% with members above 20. An investigation made by the author on about 20 successful internet starter-ups in the past 7 years also gave evidence to the above conclusion. It is found by the investigation that 80% internet stores are opened by spouses, brothers or sisters, 15% by classmates or good friends, only 5% by partners who find each other through other means. Here Chinese culture plays a vital role because it is a kind of kinship culture, in which family members are bonded closely by blood. To start a workshop-like business is still the most effective and vigorous start-up mode. This is because the small-scaled company is easier to operate and manage with their higher flexibility, diversified operating mode, low investment and quick repayment.

Male predominates in internet starter-ups. [14] 60.9% of starter-ups have bachelors degrees or college diplomas, among whom male takes up a percentage of 61.7%, female 38.3%. The average age is 28 years old, and the personnel aged between 20 to 30 accounts for 67%. Besides, the starter-ups with college diploma, bachelor degree and master degree take up a percentage of 33.1%, 25.5% and 1.8% respectively, which is more than half of all starter-ups if added up.^[14]

V. TREND OF UNIVERSITY STUDENTS'START-UPS

It is stated in the 35th Report on China's internet development status that by December 2014, China has 649 million netizens, among whom 31.77 million people are new blood. The penetration rate of internet is 47.9%, 2.1 % increase over that of the end of 2013. By December 2014, 48.6% Chinese netizens consider China's internet surroundings as safe or very safe; 54.5% trust the information on internet; 60.0% hold positive attitude toward sharing information on internet; 53.1% are dependent or deeply dependent on internet. All these statistics indicate that China's economy will continue with an in-depth development, internet economy will keep its growth momentum and university students's start-up embraces a rosy future.

The scale of the Internet penetration rate of Internet users Chinese

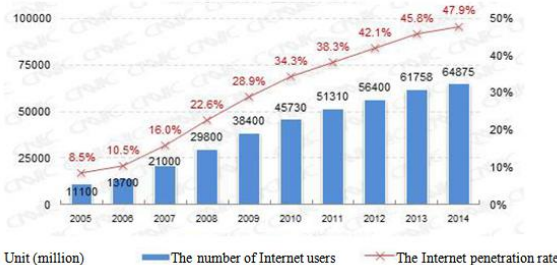


Fig. 5 Netizen scale and Internet Penetration Rate of China Data Source: Survey on China's Internet Status by CNNIC

The 90s generation start-up boom is right in the corner. The Surviving and Development Report of Internet starter-ups in 2012 suggest that until now the 80s generation are still the main power of internet starter-ups, but the 90s generation is catching their pace. In 2012, 68% starter-ups are the 80s, 16% are 90s, which, compared with that of 2011, reflects a 10% decrease in 80s while 10% increase in 90s. [15] As for diploma, bachelor degree holders still constitute the main power. According to the Internet Start-up Employment statistics and Social Security Research Project issued by China's employment promotion committee, the average age of internet starter-ups is 28 years old, and the personnel aged between 20 to 30 accounts for 67%. Besides, the starter-ups with college diploma, bachelor degree and master degree take up a percentage of 33.1%, 25.5% and 1.8% respectively, which is more than half of all starter-ups if added up.

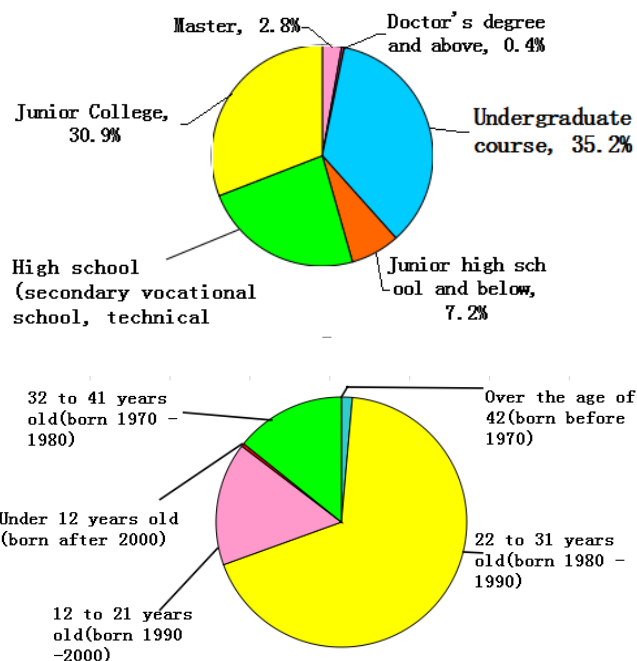


Fig. 6 Attributes about Chinese Internet Starter-ups Data Source: Report on Internet Starter-ups'Status Quo

Micro internet business is flourishing and the mobile internet era is coming. Mobile internet is a gigantic gold mining to be dig by entrepreneurs. By June 2012, China has

about 538 million netizens and 388 mobile netizens. It is the first time that mobile phone surpasses desktops to become top network terminal. With the popularity of smart phone and pad, mobile internet has become the first choice for more and more people. It is found that half of the traffic flows in more than 10% internet sites are caused via mobile internet; more than 30% entrepreneurs provide mobile phone APP for mobile netizens. It is stated in the 35th report on China's Internet Status and Development issued by CNNIC that by December 2014, there are 557 million mobile netizens in China, which has an increase of 56.72 million over the same period of last year. The number of netizens who access to networks through mobile phones has grown from 81% to 85.8%. By December 2014, the proportion of computers accessing to internet through desktops and laptops are 70.8% and 43.2% respectively. The use rate of networks by mobile phones is 85.8%, an increase of 4.8% over the same period of last year. The use rate of networks by pad is 34.8%, and that by TV is 15.6%. All the statistics indicate the approaching of a mobile internet start-up boom. In 2015, the first micro business Conference is going to be held, which offers a golden opportunity to creative and effective university starter-ups to stand out and win their future.

The internet start-ups are gradually accepted by the society and has received wide support from all walks of life. In June 3, 2009, the Education Administration of Zhejiang Province issued a new policy to incorporate university students who run internet stores well into employment statistics. University start-ups also enjoy many preferential policies related to start-up business. Xuhui, a member of CMPCC, pointed out through investigation that University starter-up are not incorporated into our country's employment statistics, so many students can not enjoy social security upon graduation. He is deeply worried that with no social security, the university students who are running internet stores are facing with risk arising from not enjoying social welfare. It is now predicted by many scholars that the policies concerning incorporating internet employees into social security system will be published in near future.

VI . CONCLUSION

- As internet economy flourishes and the state encourages and promotes internet entrepreneurship, internet entrepreneurship will become more widespread and the development of internet start-ups by university students will continue to gain speed. University students will play a vital role in creating the situation of "mass entrepreneurship and innovation".
- With the introduction of a series of preferential policies advocating innovation, the university students born in 1990s, often called the post-90s generation, will become the major force in innovation, and their business will evolve from low and preliminary stage to more advanced stage based on electronic business , electronic service business and O2O.
- Innovation and Creativity are the source of development for internet start-ups. It is necessary to create a favorable

starting-up environment which encourages bold attempts and tolerates failure. Despite foreseen difficulties, we believe that a benign entrepreneurship atmosphere will greatly promote the development of internet start-ups.

We will continue to focus on internet entrepreneurship by university students, especially by post-90s generation, and will further study a series of related elements, such as the evaluation of the performance of start-ups by university students and the risks arising from internet start-ups. In addition, we will make specialized analysis on the entrepreneurial activities by female university students, investigating their act and motivation so as to promote their growth.

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