Statistical Survey Report on the Internet Development in China

(January 2008)

China Internet Network Information Center

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Chapter One Specifications

I. Survey Background

Such information as about the size and demographic structure of the Chinese netizen, the foundamental Internet resources, the Internet access and application conditions, etc. is of extreme importance for the government and businesses to master the development in the Internet and to make decisions accordingly. So, in 1997, the competent state authority made a study and decided to have China Internet Network Information Center execute a statistical survey task jointly with other Internet institutions. To regularize and institutionalize the survey task, the China Internet Network Information Center would publish a Statistical Survey Report on the Internet Development in China in every January and July since 1998, which was highly thought of in all walks of life and was cited extensively at home and abroad. The Survey Report herein is the 21st one.

The Ministry of Information Industry and other relevant governmental administrations of China have granted energetic support to the execution of the task, and various Internet organizations, survey-supporting websites and media have also provided support to and went in cooperation with the survey by the China Internet Network Information Center, which secured the smooth execution of the survey on the Internet in China. Their support and efforts are hereby sincerely appreciated.

II. Glossary

◇ Netizen

CNNIC defines the netizen as any Chinese citizen aged 6 and above who have used the Internet in the past half a year. But in the reports from Macao, the definition remains unchanged of “Netizen” which refers to “Anyone who averages one hour and more for Internet surfing in a single week”.

◇ Mobile Netizen

It refers to any netizen who has accessed the Internet via, but not limited to, mobile phone.

◇ Rural Netizen

It refers to any netizen living in a rural area.

◇ Internet-Accessible Domestic Computers

It refers to the computers, inclusive of desktops and laptops, that can be used to access the Internet at home.

◇ IP Address

It is used to identify an internet-accessible computer, a server, or any other device on the Internet. It is a fundamental resource of the Internet, without which (existing in any form) one can not get the access to the Internet.

◇ Domain Name

Any domain name in the Report comes in English. It is a string that consists of numbers, letters and hyphen (-) and is separated with dots (.), and that is a hierarchical Internet address identifier corresponding to an IP Address. The common domain names are classified into two categories: (1) ccTLDs (such as “.cn” for China, “.us” for the United States, etc.) and (2) gTLDs (such as “.com”, “.net”, “.org”, etc.).

◇ Website

It refers to any website that uses a domain name or “www. + domain name” as the identifier of its IP Address, including the sites using the Chinese ccTLD “.cn” and the gTLDs. For instance, the domain name “cnnic.cn” only has one website, “cnnic.cn” or www.cnnic.cn”. Other names such as “whois.cnnic.cn”, “mail.cnnic.cn” are treated only as different channels of this website.

◇ Static Web Page

It refers to any web page without “?” or input parameters in its URL, which includes: *.htm, *.html, *.shtml, *.txt, *.xml, etc.

◇ Dynamic Web Page

It refers to any web page with “?” or input parameters in its URL, which includes the web pages processed at the Servers, such as ASP, PHP, PERL, CGI, etc.

◇ Updating Period of Web Page

It refers to the time difference between the last updating date and web page searching of the web page.

◇ Coverage of Survey

The statistics of Hong Kong, Macao and Taiwan are included in the Report, unless otherwise specified.

◇ Closing Date of the Survey

The closing date for the survey is December 31, 2007.

III. Methodologies

In accordance with the statistical theories and International practice and on the basis of the previous 20 statistical surveys, we have adopted such survey methods as offline sampling, online survey, automatic online searching and statistics reporting.

(I) Sample Survey through Telephone

The telephone-based sample survey focuses on the amount and structural characteristics of China's netizens, conditions of Internet access, their behavior patterns and views as well as the demographic profile of non-netizens. The target population is divided as follow:

Group A: residents with permanent residence phones

Group B: college students boarding at school

Group C: residents without residence phones are subdivided as follow:

Group C1: residents with personal handy phones (wireless local service)

Group C2: residents with mobile phones (China Mobile or China Unicom)

Group C3: residents without any mobile phone

For the personal hand phones give wireless local services without any charge on all incoming calls, and, it is impossible in the interview to tell the residence phone numbers from the personal handy phone number on the basis of their area code, the residence phone and the personal handy phone are surveyed as a whole: i.e., Group A and Group C1 can be deemed as one group in the interview. In conducting the interviews, it can be divided as follows:

Group A+C1: residents with residence phones (inclusive of personally handy phones)

Group B: college students boarding at school

Group C2: residents without any residence phone but mobile phones

Group C3: residents with neither residence phones nor mobile phones

The current survey is conducted only on Groups A+C1, B and C2, with a sampling total of 46,300. Group C3 is not included in the survey for netizens of Group C3 are small in size.

Considering that this portion of netizens will become smaller and smaller with the social and economic development, they have not been covered in the interviews.

1. Sampling Method for Group A+C1

◇ Sampling Method

The sampling method for the telephone survey is to be carried out for different strata and in two stages, which is aimed to make the samples similar to the self-weighted ones. Considering that the 21st survey will not only cover the national information but also provincial information, the stratification will be made at provincial level first. Samples will be taken separately from different strata and then be allocated among different cities within the province.

◇ Basis for the Sampling

In defining the amount of provincial sample, the basis for consideration is “the population aged 6 and above and with residence phones”. When determining the the amount of samples for the cities and prefectures within different provinces, consideration shall be given to the fact that all cities and prefectures therein will be sampled. Regression Forecasting Model is to be established on the basis of the “population and economic indicators” of a city or prefecture to estimate the number of residence phones in the city or prefecture, which number will be used as the basis for the sampling. The amount of the samples was determined as per the amount of each city’s resident phones as a percentage of the total residence phones of the whole province.

◇ Amount of the Samples

The amount of sample for different provinces is allocated as per the proprortion of the square root of the number of the netizen in a province to the square root of the number of the netizen in all provinces, as was obtained in the 19th survey. When a province has less than 600 samples, the amount will be increased to 600. With comprehensive consideration to the accuracy and cost, the final number of sample is defined as 31,802.

◇ Execution Mode

The numbers from each area’s telephone office will be arranged at random and then be dialed to make an interview over the home telephone therein. In order to increase the success rate of the interviews, the principle of convenience is adopted, whereunder the residents answering the call will be interviewed for the information about their access to the Internet, about the gender and age of their family members, and if they will access the Internet.

◇ Weighting Method

According to the basic information of the family members such as gender, age and education, weighting adjustment is made on the sampled population to reduce the sampling deviation due to the non-random call answering by the the family members.

◇ Success Rate of the Survey

According to the formula III of the American Association for Public Opinion Research (AAPOR), the success rate of the survey is 36.5%.

2. Sampling Method for Group B

◇ Sampling Method and Amount of Sample

Group B refers to college students at school. With comprehensive consideration to cost and accuracy, the effective amount of sample is set at 4000, namely 200 colleges will be sampled nationwide. 20 dormitory rooms of each school will be sampled. From each room, one person will be sampled. The sampling method is to be carried out for different strata in three stages with the aim to keep the final samples similar to the self-weighted samples. The stratification is made by the province (31) and school (2=university + junior college), totaling to 62 strata (31×2=62). The number of schools to be sampled at each stratum=proportion of the students at the stratum in the total students of the country×200.

◇ Basis for the Sampling

The ideal basis for sampling should be the number of students dwelling at school. Due to the limitation of the sampling frame, the actual basis for sampling used is the number of students at school.

◇ Execution Mode

The numbers from the selected schools' telephone offices are arranged at random and then be dialed to make interview over the dormitory phones. Considering that the persons in the same dormitory room are of high homogeneity, the principle of convenience is adopted and the student answering the call will be the interviewed.

3. Sampling Method for Group C2

◇ Sampling Method and Amount of sample

Group C2 refers to the residents aged 6 and above without residence phones but mobile phones. In order to secure the survey execution as well as take into account the cost and accuracy, the amount of sample for each province is allocated according to the proportion of the province's mobile phone cards in the total amount of the cards in the country. Where any province has less than 150 samples, it will be made up to 150 samples. The amount of sample for Group C2 is 10,498.

◇ Basis for Sampling

The ideal basis for sampling should be the "actual mobile phone subscribers without residence phones", but the particular data is not available for this basis. The actual basis for sample is the number of mobile phone cards in different provinces published by Ministry of Information Industry.

◇ Execution Mode

The numbers generated at random from the fragmented combinations of phone numbers is dialed to make out the respondent in the category of Group C2 to make up the amount of samples required for Group C2.

(II) Online Survey

The online survey focuses on the typical applications of the Internet. CNNIC conducted the online survey from December 8 to 31, 2007, with a questionnaire posted on CNNIC website and its link provided in the governmental media websites, large national ICP/ISP websites and provincial inforports for the voluntary netizens to complete the questionnaires. And the invalid questionnaires were screened out from those received copies by some technical means. Thanks to the strong support of websites and active participation of netizens, there were 73,332 copies of

questionnaire were received, of which 69,556 were valid upon validity check.

(III) Automatic Online Searching and Statistics Reporting

The automatic online searching is mainly to take such technical statistics as domain name, website, their geographic distribution and other measures. Statistics reported mainly includes total IP addresses, international outlet bandwidth, etc.

1. Total of IP Addresses

The IP address statistics by province came from the IP address databases of Asia Pacific Network Information Centre (APNIC) and China Internet Network Information Center (CNNIC). The data statistics adopts the provincial summarization of registered IP address amount with ascertained address located province from two databases. As it is dynamic address allocation, the statistical data is for reference only. Furthermore, Ministry of Information Industry, the national competent authorities of IP address, requires China's IP address allocation units (such as China Telecom and CNC) to report their owned IP address amount semiannually. In order to ensure the accuracy of IP data, CNNIC will compare the APNIC data with the above reported data before it determine the ultimate amount of IP addresses.

2. Totals of China’s Domain Names and Websites

The totals, categories and regional locations of China’s websites and domain names can be obtained by adding up the following two parts of data.

The first part of data is the amounts of domain names and websites under .CN, which CNNIC has obtained by means of automatic online searching. The second part of data is the amounts of the gTLDs and websites in China, the provision of which are facilitated by gTLD registrars in China. These data include the amounts of gTLDs and websites that have been launched under gTLDs; the amounts of gTLDs and websites calculated according to domain categories (“.COM”, “.NET” and “.ORG”); the amounts of gTLDs and websites by province where registrars are located.

3. Amount of Web Pages

Automatic Online Searching is used to search from the homepage (WWW+ domain name) of the sampled websites and capture all web page features and contexts of the website through links on web pages. The web pages and bytes of all China’s websites captured in web page searching are added up respectively to obtain the total of China’s web pages and bytes, excluding the duplicate web pages with the same content.

4. Total International Bandwidth of China

With the reporting system of telecommunication companies, the Ministry of Information Industry can get regularly the data on total international bandwidth that China’s operators hold. The data reported are included in the Statistical Survey Report on Internet Development in China.

Chapter Two Size and Demographic Structure of Netizens

Executive Summary

◇ By December 2007, the total of netizens in China had increased to 210 million, with a sharp increase of 73 million in the year of 2007, at an annual growth rate of 53.3%.

◇ The Internet is gradually diffusing among resident at different levels. Out of the new netizens in 2007, netizens aged below 18 and netizens aged above 30 showed a relatively fast increase. Netizens with the education background of secondary school and below grew relatively fast and low-income groups have started to accept the Internet increasingly. The rural groups who will access the Internet grew relatively fast.

◇ The current 16% of the Internet penetration rate in China is 3.1 percentage points lower than the average global standard of 19.1%

◇ In view of access methods, broadband netizens have reached 163 million and mobile phone netizens 50.40 million, both of which have been in a rapid growth.

◇ In view of regions, Beijing and Shanghai have a higher Internet penetration rate, being respectively 46.6% and 45.8%. In terms of increase volume, Guangdong observes the biggest increase due to the driving factor of the increasing mobile phone netizens, with an increase of 15.05 million in one year.

I. Size of Netizens

(I) Overall Size of Netizens

By December 2007, the total of netizens in China had increased to 210 million, with an increase of 40 million as compared with June 2007 and 73 million in the year of 2007, at an annual growth rate of 53.3%. Over the last year, the daily average increase was 200,000. Now, the total of netizens in China is slightly lower than the 215 million of the United State[1], ranking the second in the world.

To purchase equipments and access Internet, netizens need to have certain financial backup. The consumption level of Chinese residents is on the low side. Therefore, the financial factor has always been one of the important factors constraining the penetration of the Internet, as has been demonstrated in the findings of previous surveys on the reasons of non-netizens for not accessing the Internet. The rapid economic growth over the last few years has promoted the rapid development of the Internet. During 2004 to 2006, China's average annual GDP growth rate was more than 10%[2] and the Chinese economy has been running at a high speed. Additionally, during the period, the Chinese government encouraged to "retard investment and actuate consumption". The income level and consumption level of residents has been increasingly improved and more and more residents have started to use the Internet.

The rapidly growing rural netizens become an important part of new netizens. In 2007, the annual growth rate for the rural netizen size exceeded 100%, reaching 127.7%. The total of rural netizens reached 52.62 million. Out of the 73 million new netizens, 40%, namely 29.17 million, comes from the rural areas.

With the increasing penetration of the entertainment concept of the Internet, more and more residents felt the power of the entertainment functions of the Internet. The network music and instant communication have become the top two network applications. A huge quantity of netizens with poor education background has been attracted in a rush to the Internet due to its recreation functions.

[1] Data source for American netizens: www.internetworldstats.com
[2] Data source: 2007 China Yearbook

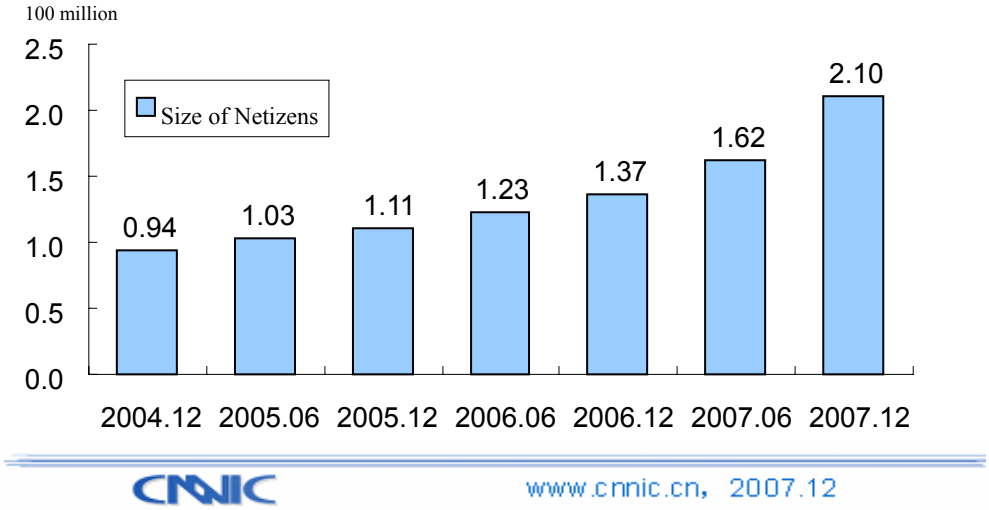

Figure 2.1 Growth of Netizens in China

According to the Innovations Diffusion Theory by Professor Rogers, US University of Mexico, innovations will normally spread in an S curve. When the penetration rate is between 10% and 20%, diffusion will speed up and will not slow down until reaching a certain quantity[3]. By December, 2006, China's Internet penetration rate was 10.5% and by December 2007, China's Internet penetration rate increased to 16%, indicating that China is now in a stage with a rapid growth of netizens.

The growth trend of American and Korean Internet netizen penetration rate complies with the theory of Diffusion of Innovations. When the Internet penetration rate is above 10%, the size and the penetration rate of the Internet grow sharply. American Internet penetration rate was 18.6% in 1998 and increased sharply to 26.2% in 1999[4]; Korean Internet penetration rate was 22.4% in 1999 and jumped to 33% in 2000, with the size of netizens increasing from 9.43 million to 13.93 million[5].

[3] Diffusion of Innovations, Everett M. Rogers, Central Compilation & Translation Press, June 2002.
[4] As per date of US Department of Commerce, 2002.
[5] 1999 data of South Korea is sourced from the National Computerization Agency (NCA) and 2000 data is sourced from Korea Network Information Center (KRNIC).

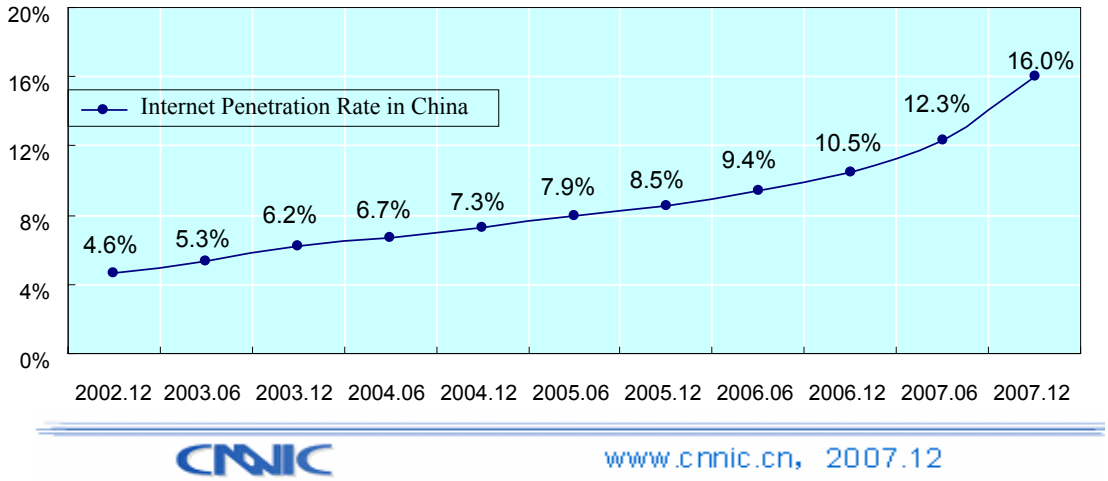

Figure 2.2 Internet Penetration Rate in China

Out of the new netizens starting to access the Internet in 2007, the netizens aged below 18 grew comparatively fast. One of the driving factors was the increasing ratio of primary and middle school students who access the Internet. Besides, the netizens aged above 30 grew comparatively fast. Thus the Internet shows a diffusing trend at different ages. The Internet is gradually penetrating among the groups with low education background. The netizens with the education background of secondary school and below grew comparatively fast. More and more low-income groups started to accept the Internet.

Although the Internet developed rapidly in China, the current 16% of Internet penetration rate is still 3.1 percentage points lower than the average global standard of 19.1% and observes a big gap with the well-developed countries in the Internet like Iceland and USA. The Internet penetration rate of neighboring countries like Japan, Korea and Russia are all higher than that of China[6].

[6] Data source: http://www.internetworldstats.com.

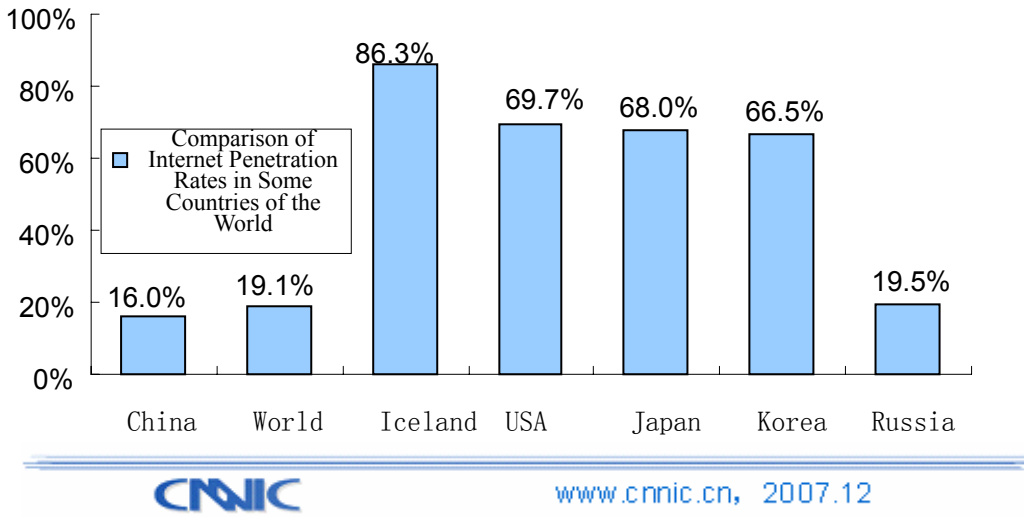

Figure 2.3: Comparison of the Internet Penetration Rates among Some Countries in the World

(II) Size of Netizens by Access Method

China's broadband netizens grew rapidly in number. By December 2007, the number of broadband netizens had reached 163 million, being 77.6% of the total netizens, with an increase of 40.94 million as compared with June 2007 and an increase of 59.38 million as compared with 104 million by December 2006. The rapid development of broadband is the basis for the rapid expansion and development of various Internet applications.

The size of dial-up netizens, i.e., facilitated with cabled narrowband, continues to decline, in the meantime the netizens of wireless narrowband with the mobile phone access are developing rapidly. Currently, 50.4 million users have also chosen to access Internet via mobile phone apart from other internet accesses, being one fourth (24%) of the total netizens. In a long-term view, mobile phones and the Internet will continue to be merged.

Table 2.1: Size of Netizens by Access Method (Multiple)

			Proportion in Total Netizens	Size (10,000 persons)
Broadband			77.8%	16,338
Narrowband	Cable narrowband		11.1%	2,338
	Wireless Narrowband		28.0%	5,880
		Inclg: mobile access	24.0%	5,040
		Inclg: other wireless accesses	5.5%	1,150

(III) Netizen Size by Province

Since Guangdong Province is populated and economically developed, plus due to the increasing size of mobile access being the driving factor, the number of new netizens in Guangdong is the biggest among the provinces, showing an increase of 15 million new netizens in one single year. Next to it are Jiangsu and Zhejiang, with an increase of 7.3 million and 5.3 million netizens respectively. In terms of growth rate, the provinces in the central part of China, like Henan, Jiangxi and Anhui, observe the highest growth rate, with the growth rates of more than 70%.

Beijing and Shanghai observe a comparatively high level in the Internet development; Beijing's Internet penetration rate has reached 46.6%, slightly higher than that of Shanghai. Almost half of the residents in Beijing are using the Internet. The Internet penetration rates of Yunnan, Guizhou and Sichuan in Southwest China are comparatively low and so are Anhui and Gansu. The Internet penetration rates of these five provinces are still below 10%.

Table 2.2 :Number of Netizens by provinces and the Internet penetration rate

		Total Netizens (10,000)	Internet penetration rate by province	Proportion of provinces in total netizens
North China	Beijing	737	46.6%	3.5%
	Tianjin	287	26.7%	1.4%
	Hebei	762	11.1%	3.6%
	Shanxi	536	15.9%	2.6%
	Inner Mongolia	322	13.4%	1.5%
Northeast China	Liaoning	783	18.3%	3.7%
	Jilin	434	15.9%	2.1%
	Heilongjiang	476	12.5%	2.3%
East China	Shanghai	830	45.8%	4.0%
	Jiangsu	1,757	23.3%	8.4%
	Zhejiang	1,509	30.3%	7.2%
	Anhui	587	9.6%	2.8%
	Fujian	866	24.3%	4.1%
	Jiangxi	511	11.8%	2.4%
	Shandong	1,256	13.5%	6.0%
Central China	Henan	956	10.2%	4.6%
	Hubei	706	12.4%	3.4%
	Hunan	690	10.9%	3.3%
	Guangdong	3,344	35.9%	15.9%
	Guangxi	560	11.9%	2.7%
	Hainan	144	17.2%	0.7%
Southwest China	Chongqing	356	12.7%	1.7%
	Sichuan	809	9.9%	3.9%
	Guizhou	224	6.0%	1.1%
	Yunnan	303	6.8%	1.4%
	Tibet	36	12.7%	0.2%

Northwest China	Shaanxi	517	13.9%	2.5%
	Gansu	219	8.4%	1.0%
	Qinghai	60	11.0%	0.3%
	Ningxia	61	10.1%	0.3%
	Xinjiang	363	17.7%	1.7%
Total		21000	16.0%	100.0%

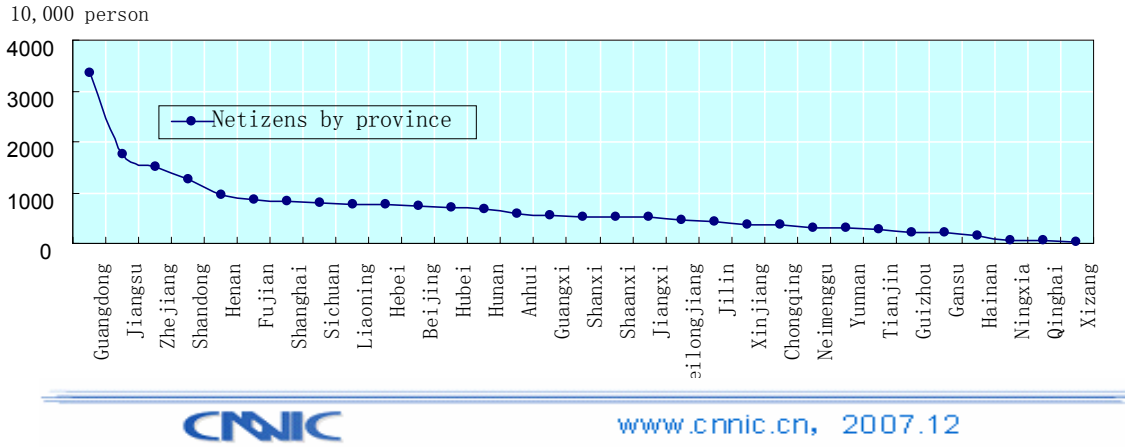

Figure 2.4: Number of Netizens by Province

II. Demographic Structure of Netizens

(I) Gender

Currently, of the netizens, the female (42.8%) is lower than the male (57.2%), as is closely related to the demographic characteristics of China. In terms of China's overall demographic characteristics, the proportion of the male and that of the female are close, but the education background of female is far inferior to that of male, while the knowledge is the necessary condition for accessing Internet. According to the data of State Statistics Bureau, by the end of 2006, of the population with education level of primary school and above in China, the ratio of male to female is 53% : 47%: the education level of male is higher than that of female. There is a difference between male and female netizen penetration rates. Currently, in China, Internet penetration rate for male is 17.7% while it is 14.1% for female.

This unbalanced development by gender is now being improved year by year. In view of the development trend since 1997, the gender gap of netizens is being narrowed.

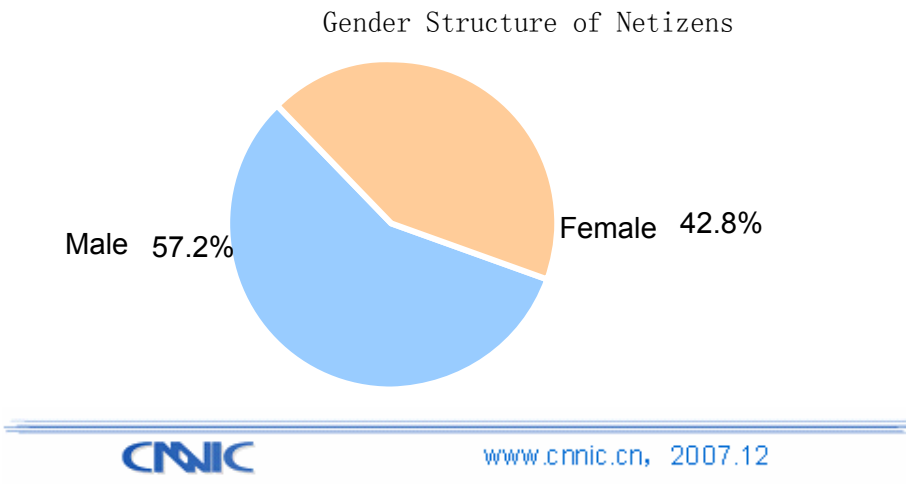

Figure 2.5: Gender Structure of Netizens

Male/female ratio for the netizens in different age brackets comes in the shape of a "fish". The difference in the number of the male and the female netizens aged below 18 is the smallest, being close to 1:1; the difference in the size of the male and the female netizens aged 18 to 35 increases with their age; the difference in the size of the male and the female netizens aged above 50 is the biggest, while the percentage of male netizens is rather high. A difference is also observed in the Internet application between male and female netizens. The gender of netizens will influence the Internet application of netizens of difference ages.

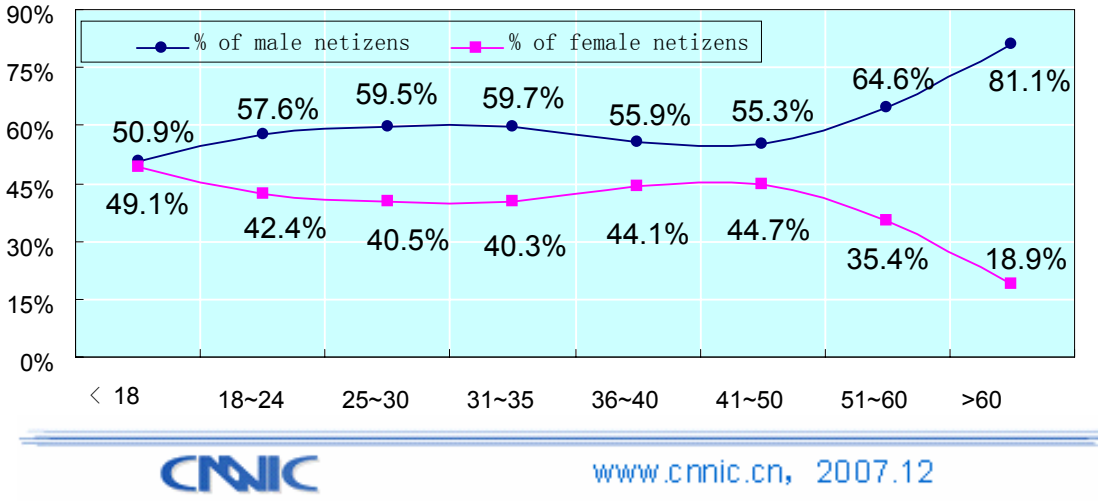

Figure 2.6 Gender Structure of the Netizens in Different Age Brackets

In view of urban and rural areas, of the rural netizens, 62.7% are male, while in the urban areas, it is somewhat balanced.

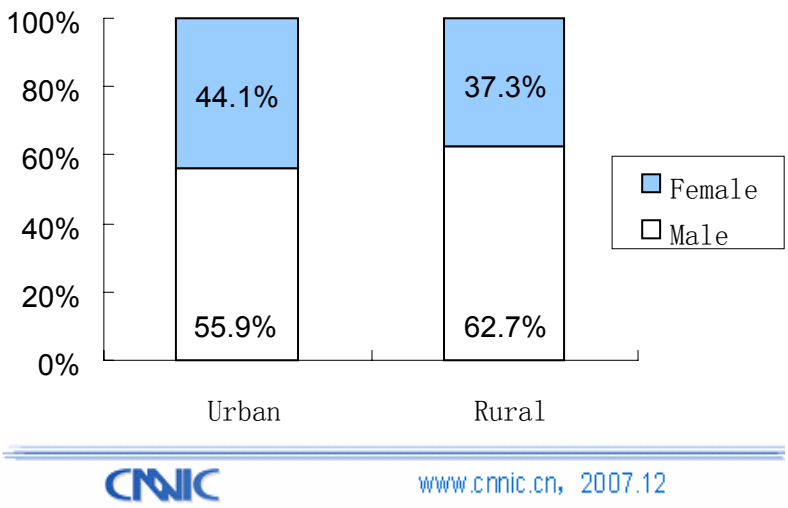

Figure 2.7 Gender Structure of Urban and Rural Netizens

(II) Age

At present, Chinese netizens are mainly youngsters. Of the total netizens, 31.8% are youth aged 18~24, where student netizens account for a heavy proportion. As a tool that can bring more convenience to residents, the society and the governments should encourage wider penetration among the public. Judging from the demographic feature of new netizens, the Internet is developing gradually in that direction,.

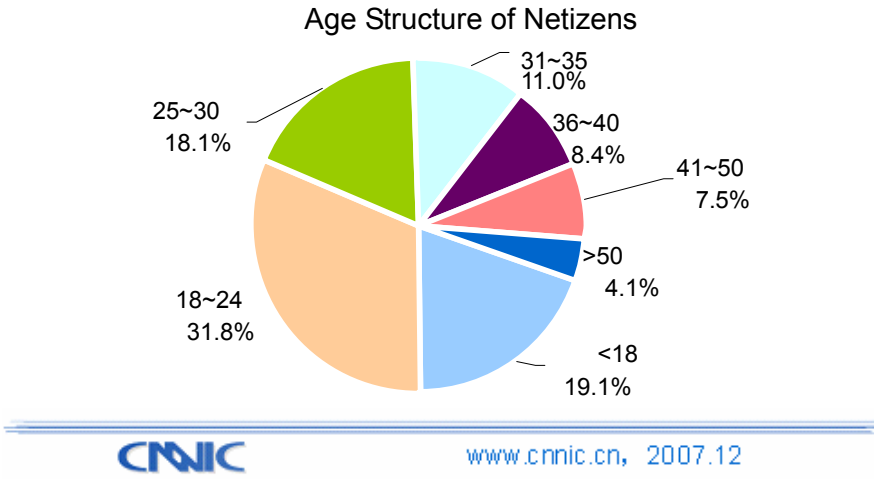

Figure 2-8 Age Structure of Netizens

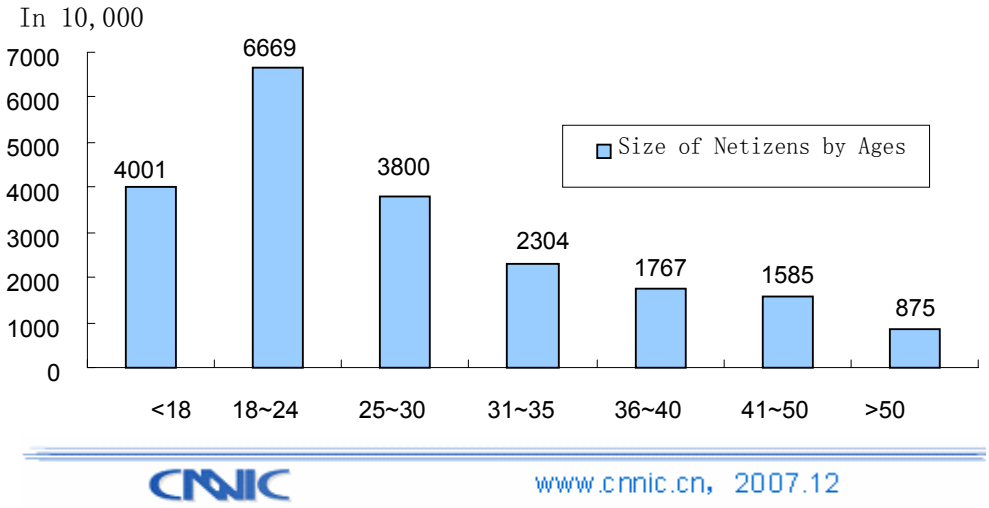

Figure 2.9 Size of the Netizens in Different Age Brackets

(III) Education

As opposed to the total population, netizens are groups with higher education background. Nevertheless, the Internet is diffusing to the groups with lower education background. Since 1999, the ratio of netizens with tertiary education has dropped from 86% to present 36.2%.

Urban and rural netizens show a big difference in terms of education level. Of the urban netizens, most have tertiary education, but of the rural netizens, most have the education level of secondary and high school.

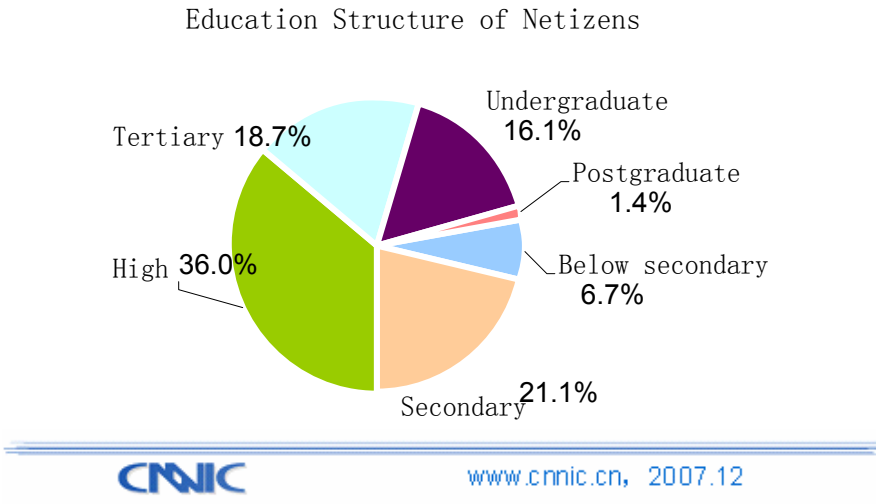

Figure 2.10 Education Structure of Netizens

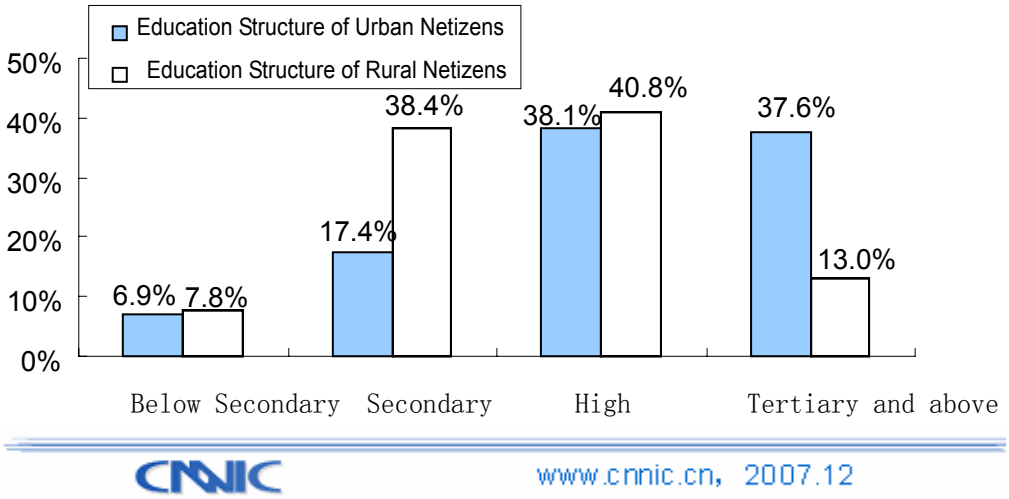

Figure 2.11 Comparison of the Education Structures of Urban and Rural Netizens

(IV) Profession and Organizational Nature

In terms of profession nature of the Netizens, students accounts for the largest group, with a percentage points of 28.8%. Of netizens with regular jobs, most netizens are working in private enterprises, being 41.8% of the total netizens.

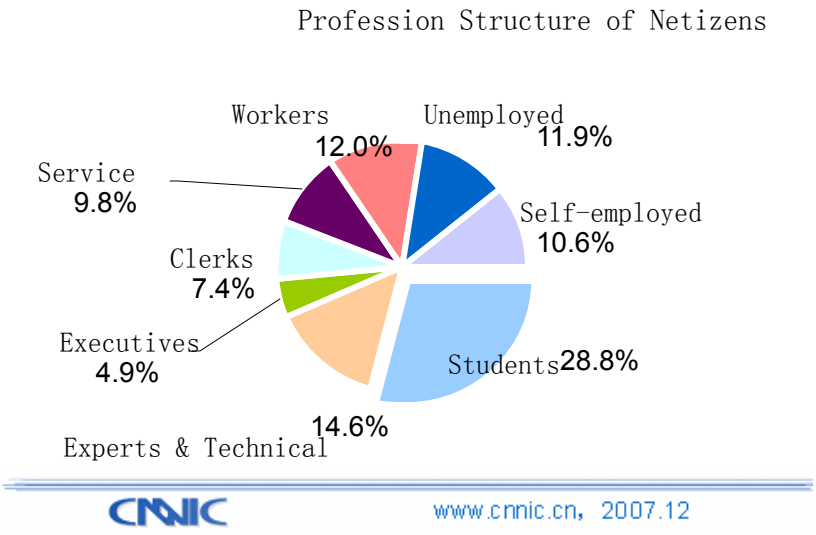

Figure 2.12 Occupational Structure of Netizens

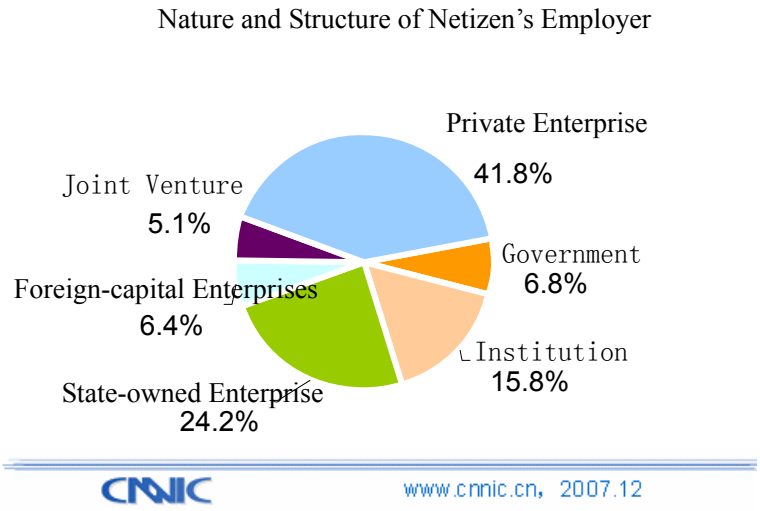

Figure 2.13 Nature and Structure of the Netizen's Employer

(V)Marital Status/Income/Place of Residence

The marital status of netizens is closely related to the age of netizens. Netizens in China are comparatively young and the unmarried netizens constitute a major proportion up to 55.1% .

As far as the income is concerned, almost 3/4 (74%) Netizens have an income of less than RMB 2,000 per month.

As far as the netizens' places of residence is concerned, most of the netizens reside in urban areas, being 74.9%. Urban netizens have reached 157 million, while the corresponding rural netizens are only 52.62 million. However, the number of rural netizens increases sharply, with an annual increase rate of 127.7%, which is far higher than the increase rate of urban netizens (38.2%).

In terms of Internet development, the gap between urban and rural areas is still great: Internet penetration rate is 27.3% for urban residents and only 7.1% for rural residents.

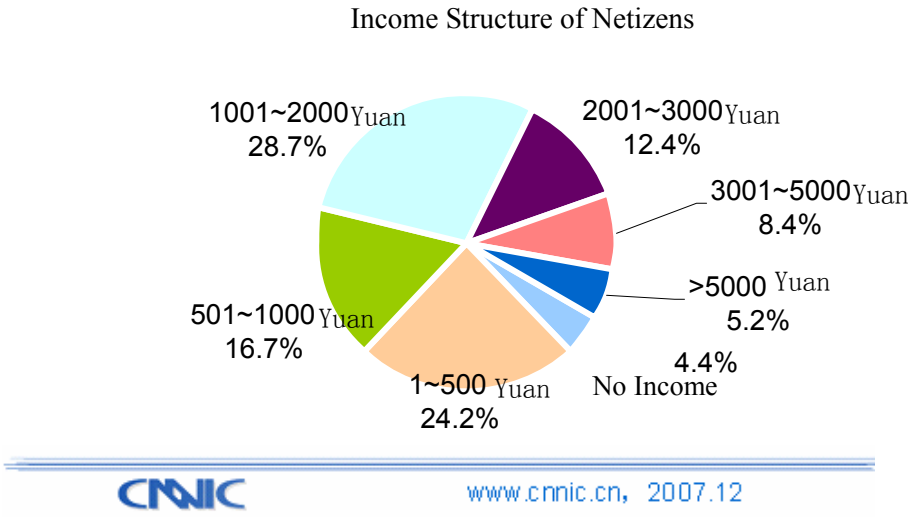

Figure 2.14: Income Structure of Netizens

Table 2.3: Growth of Urban and Rural Netizens

	Number of Urban Netizens (10,000)	Number of rural netizens (10,000)	Total Netizens (10,000)
2006.12	11,389	2,311	13,700
2007.6	12,458	3,742	16,200
2007.12	15,738	5,262	21,000

Chapter Three Fundamental Resources of the Internet

Executive Summary

- ◇ Fundamental Internet resources grow sharply, with an annual growth rate of over 38%, especially the number of domain names, websites and web pages with an annual growth rate of over 60%.
- ◇ In China, the number of IP addresses has reached 135 million, with an annual growth rate of 38%. At present, the number of IP addresses per ten thousand persons is 1,029, while the number of IP addresses per ten thousand netizens is 6,442.
- ◇ China's domain names total to 11.93 million, with a growth rate of 190.4%. The main driving factor for the growth is CN domain name. The number of CN domain names has reached 9 million, with a growthof four times bigger than in 2006.
- ◇ The number of China's websites is already 1.50 million. Of these websites, websites under .CN grew most rapidly, about 1.006 million now and accounting for 66.9% of the websites in China.
- ◇ China's web pages have reached 8.47 billion, with an annual growth rate of 89.4%, being the fastest growth in 2007 for fundamental Internet resources. Information resources on the Internet become increasingly abundant.
- ◇ In China, international outlet bandwidth of the Internet reaches 368,927Mbps, with an annual growth rate of 43.7% .

I. Overview of Fundamental Resources

In 2007, China observed a similar trend in the development of fundamental Internet resources and the development of netizens, both of which were at a stage of rapid development. IP address and domain name are the fundamental address resources of the Internet, with an annual growth rate of 38% and 190.4% respectively, as has secured the smooth development of the Internet. The number of CN domain names has grown 4 times in the year of 2007. The numbers of websites, web pages and web page bytes observed a growth rate of over 60%, indicating that the increase rate of online information resources is fast and the information resources netizens can share become more and more.

China has a large population and low per capita Internet information resources. At present, every ten thousand persons possess 11 websites and the number of websites for every ten thousand netizens is only 72. China still needs to promote energetically the development of fundamental Internet resources.

The development of Internet's regional fundamental resources is associated with the development level of the regional economy. In terms of IP address as well as domain name and website, the volumes of Beijing, Shanghai, Guangdong, Zhejiang and Jiangsu all hold the front line, being far bigger than that of other provinces. In order to elevate the development level of their respective Fundamental Internet resources as quick as possible, the provinces that lag behind will also need to focus on various aspects such as economic development.

Table 3.1 Growth of Fundamental Internet resources by quantity

	Total as of December 2007	Qty per 10,000 persons	Qty per 10,000 netizens	Total as of December 2006	Annual Growth Rate
IPv4 address (Nrs)	135,274,752	1,029	6,442	98,015,744	38.0%
domain name(Nrs)	11,931,277	91	568	4,109,020	190.4%
Including: CN domain name (Nrs)	9,001,993	68	429	1,803,393	399.2%
Website (Nrs)	1,503,800	11	72	843,000	78.4%
Web pages (Nrs)	8,471,084,566	64,444	403,385	4,472,577,939	89.4%
Web bytes (KB)	198,348,224,198	1,508,948	9,445,154	122,305,737,000	62.2%
international outlet bandwidth(Mbps)	368,927	3	18	256,696	43.7%

II. IP address

In terms of IPv4 address resources, the developed countries occupy an advantageous position, with 59.7% of IPv4 address resources located in USA. At present

China possesses 135 million IPv4, being 4% of the total IPv4 addresses in the world and ranking the third after USA and Japan.

In China, the growth of IPv4 address by quantity has always been fast. Especially since 2006, under the energetic promotion of CNNIC and other organizations, it has shown a rather rapid growth trend.

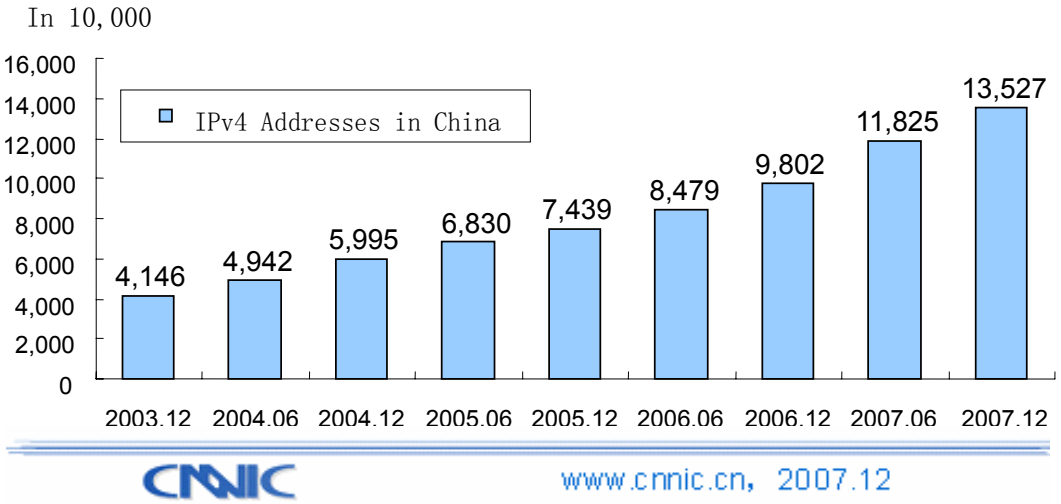

Figure 3.1 Growth of IPv4 addresses in China

So far as the surplus IPv4 addresses are concerned, it is predicted that by 2012, the global IPv4 addresses will be used up. However, at present, the Internet develops rapidly in the Asia Pacific Region, where IPv4 addresses still show a trend of rapid consumption. Before IPv6 is completely commercialized, IPv4 address is still the foundation for the development of the Internet. Therefore, to speed up the application for expansion of China's IPv4 address resources is an issue to which China has to attach importance.

As a national IP address distribution and administration organization in China, CNNIC has elevated its IP address distribution window up to /14(4B), which has become the biggest national IP address allocation center in the world. As early as at "2004 China Internet Conference", the leaders of Ministry of Information Industry proposed that the vast ISP and enterprises and institutions should undertake, through CNNIC, the integrated scale-based and professionalized IPv4 address application so as to achieve the objective of increasing the quantity of China's IP address resources and reducing the application cost of IP address resources.

At present, the developed countries in Europe and America are all actively promoting the transit from IPv4 to IPv6. In view of the long-term development of computer networks, IPv4 address observes a limitation in development: firstly, IPv4 has limited address resources, which cannot cope with the development of the Internet; secondly, USA controls most of the address resources and the development of other countries has been

seriously constrained. On the contrary, IPv6 has abundant address resources and the security has been greatly enhanced. A large number of IPv6 addresses are available for application. Therefore, the transit to IPv6 benefits the future development of the Internet in China.

However, since IPv6 has a low application rate in China, the transit to IPv6 still faces technical and commercial obstacles. CNNIC has already undertaken technical study on these problems. In view of IPv6 policy, CNNIC is actively probing and formulating the relevant assignment policies of addresses, as is extremely beneficial for the smooth transit of China's Internet in terms of IP address.

At present, IPv6 address is still in the experimental stage. As compared with IPv4, IPv6 with prominent advantages can meet infinitely the demand of Internet address resources. Mainland China has been assigned in total with 27 blocks of /32 of IPv6 address, ranking the 15th in the world. The global top five countries in terms of the amount of IPv6 addresses allocated are Germany, France, Japan, Korea and Italy

III. Domain Name

The swift growth of China's netizens has facilitated the fast development of China's domain names. At present, China's total domain names have reached 11.93 million, with a corresponding increase of 7.82 million as compared with 2006, at an annual growth rate of 190.4%. Most of these domain names are China's ccTLD or CN domain names, sharing 75.4% of China's total domain names, which is in the mainstream position in China. Next to it is COM domain name, being 20.4%.

By December 2006, in China, every ten thousand people owned 31.4 domain names and by now every ten thousand people own 91. China's development level of basic address resources for the Internet is not so high, but is improving rapidly.

Table 3.2 Domain names in China

	Number (10,000)	Ratio of total domain names
CN	900.2	75.4%
COM	243.6	20.4%
NET	39.7	3.3%
ORG	9.6	0.8%
Total	1,193.1	100.0%

CN domain name is ccTLD representing "China" on the international Internet. Increase of CN domain names and increase of its application rate are of great importance to strengthening China's Internet security and information security. Chinese government has been dedicated to the promotion of the development of China's CN domain name. At present, China's CN domain names have reached 9 million with an annual growth rate of 399.2%. Over last year, the average daily increase of CN domain names was 20,000, showing a trend of explosive growth. Compared with other countries, China's ccTLD

number is ranking the second, only next to Germany's TLD DE (11.28 million)[7].

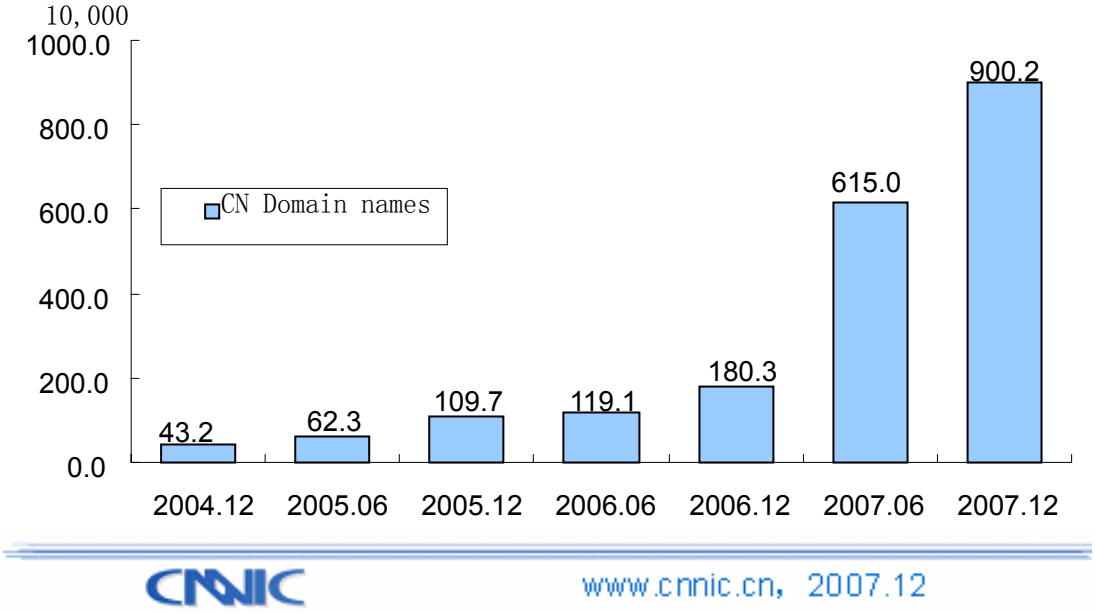

Figure 3.2: Growth of CN domain names

Of the CN domain names, the secondary domain names ended with .CN is the highest, being 63.3% of the total CN domain names, next to which is .COM.CN domain name. The growth rate of these two secondary domain names is almost the same.

Table 3.3 CN Domain Names in China

	Number (10,000)	Ratio in CN domain names
.CN	569.5	63.3%
.COM.CN	253.5	28.2%
.NET.CN	33.5	3.7%
.ADM.CN	22.0	2.4%
.ORG.CN	16.4	1.8%
.GOV.CN	3.5	0.4%
.AC.CN	1.3	0.1%
.EDU.CN	0.3	0.0%
.MIL.CN	0.0	0.0%
Total	900.2	100.0%

IV. Websites

At present, there are 1.5 million websites in China, with a corresponding increase of 650,000 as compared with 2006 and with a growth rate of 78.4%. Such factors as network application demands of Blog/personal space, growth of domain names and simplified operation of creating websites have boosted up the number of website.

[7] Data source: http://www.denic.de/en/domains/statistiken/domainentwicklung/index.html

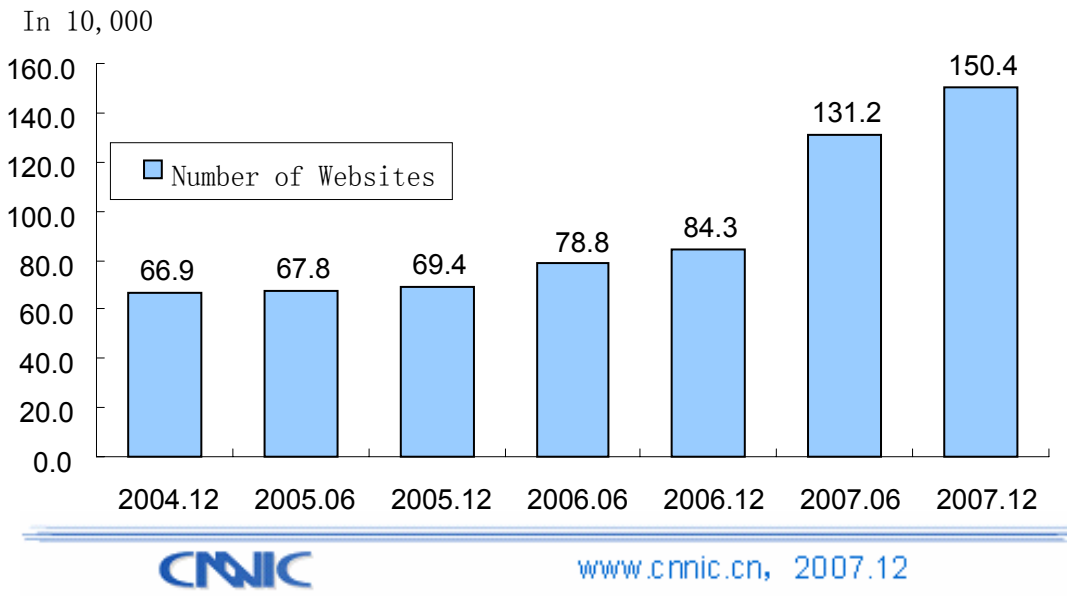

Figure 3-3: Growth of Websites in China

Not: the data excludes the website under .EDU.CN.

Of these websites, the websites with .CN domain name observed the biggest increase with the number of 1.006 million, sharing 66.9% of the total websites in China. .CN domain name has become the mainstream domain name for websites in China.

Table 3.4 Number of Websites in China

	Number (10,000)	Ratio of Total Websites
.CN	100.6	66.9%
.COM	42.7	28.4%
.NET	6.1	4.1%
.ORG	0.9	0.6%
Total	150.4	100.0%

V. Web Pages

At present, China's web pages total to 8.47 billion, with an annual growth of 89.4%. The growth rate of online information resources is extremely high. Of these web pages, the ratio of dynamic to static web pages is 0.92:1, while the percentage of Dynamic Web Pages is increasing year by year.

In view of web page volume, the total website bytes have reached 198,348GB and average bytes per web page are 23.4KB, with a slight decrease as compared with 27.3KB of 2006. As far as the web page's contents are concerned, the texts constitute the most, sharing 87.85 of the total web page, next to which are images, audio and video web pages still share a low proportion.

Table 3.5 Number of Web Pages in China

Total web pages	8,471,084,566	
Static web page	Number	4,065,690,936
	Ratio of total web pages	48.0%
Dynamic Web Page	Qty	4,405,393,630
	Ratio of total web pages	52.0%
Static/Dynamic Web Page Ratio	0.92:1	
Web length (total bytes)	198,348,224,198KB	
Average web pages per website	5,633	
Average bytes per web page	23.4KB	

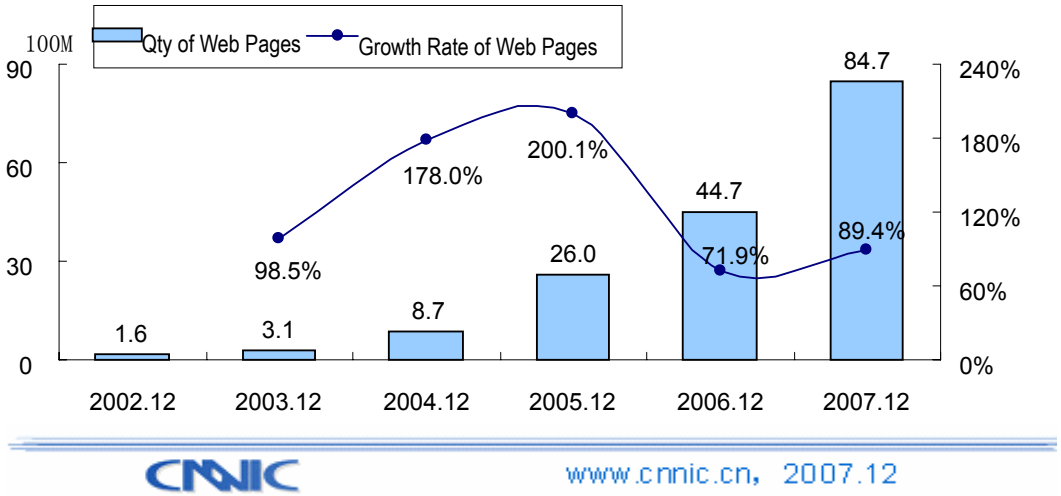

Figure 3-4 Growth of China's Web Pages

VI. International outlet bandwidth

China's international outlet bandwidth is a measure of the Internet connectivity between China and other countries and regions. In the circumstances that the netizens have more network applications and the online video services are developing rapidly, the growth of bandwidth needs to be higher than the growth of other fundamental network resources as netizens, websites and web pages before it is possible to improve the Internet connectivity for netizens.

At present, China has an international outlet bandwidth of 368,927Mbps, with an annual growth rate of 43.7% and has further enhanced the capacity with International Internet.

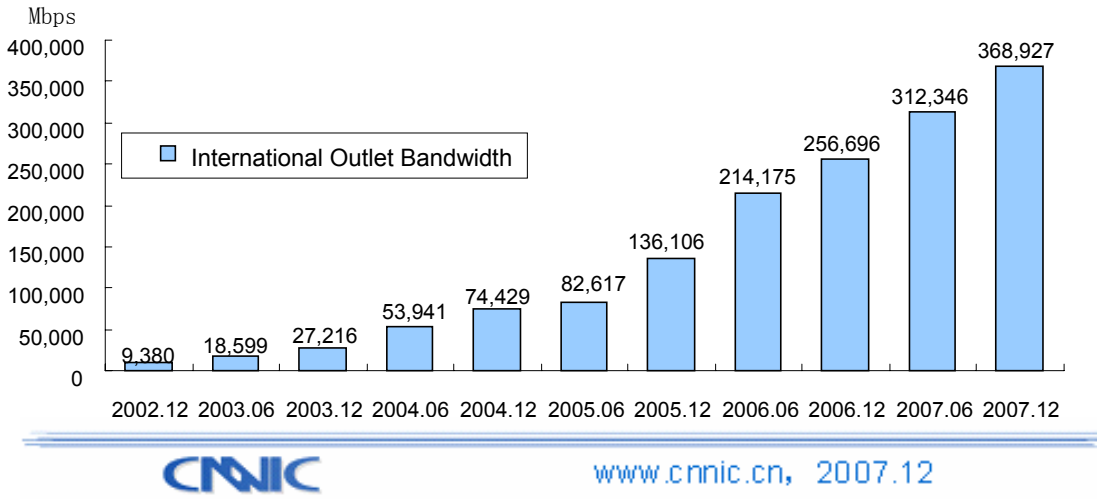

Figure 3-5 Growth of international outlet bandwidth in China

Table 3.6 International Outlet Bandwidth of Eight Backbone Networks in China

	Number of international outlet bandwidth (Mbps)
CHINANET	198,353
CHINA169	138,887
CSTNET	8,810
CERNET	9,052
CMNET	8,260
UNINET	4,319
CRNET	1,244
CIETNET	2
Total	368,927

Chapter Four Internet Access Conditions

Executive Summary

◇ At present 140 million netizens surf online at home. The size has grown by 35.7% as compared with 2006. The household conditions of Internet access are being improved.

◇ The number of Internet accessible domestic computers is 78 million. Guangdong has the most of Internet accessible computers, while Beijing and Shanghai have the majority of Internet accessible domestic computers.

◇ Currently, the average Internet access expense per family is 74.9 Yuan/month and the average annual Internet access expense is 900 Yuan/family. The average expense of a Netizen who surfs at Internet café is 51.6 Yuan/month.

◇ At present, China has in total 50.4 million mobile-phone Netizens, while the size of mobile phone netizens in Guangdong is the biggest, being 14.52 million.

◇ Of the mobile phone netizens, male netiizens are about 2/3(66.5%). Of this group, most are aged 18~24, being half of the mobile phone netizens.

◇ Of the population with the education background of high school, 83.35 million do not surf online. Of the population with the education background of secondary school, 437 million do not surf online.

◇ The biggest reason for non-netizens not to surf online is lack of computer or network knowledge, while the other two major reasons are lack of time and equipment to surf online.

I. Places of Internet Access

Home is regarded as the most convenient place to surf online, where one can at any time accesses Internet and undertakes any network activity, while suring at Internet cafe is under the constraint of business hours, and surfing in the work places has been limited to certain network activities. However, not all households are ready for the Internet.,due to the cost incurred by purchasing relevant equipments and paying the Internet fees. Only with the Internet access conditions improved gradually can more and more families access Internet.

Presently in China, 67.3% of the netizens have chosen to surf online at home: i.e., 140 million netizens surf online at home, with a corresponding increase of 35.7% as compared with 2006. Since 2002, the size of surfing at home has been expanding, and the surfing conditions have also been gradually improved.

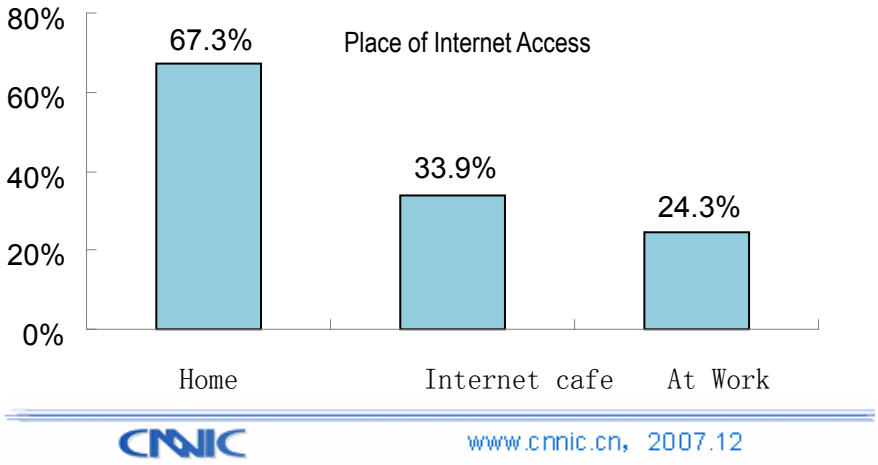

Figure 4-1 Places of Internet Access

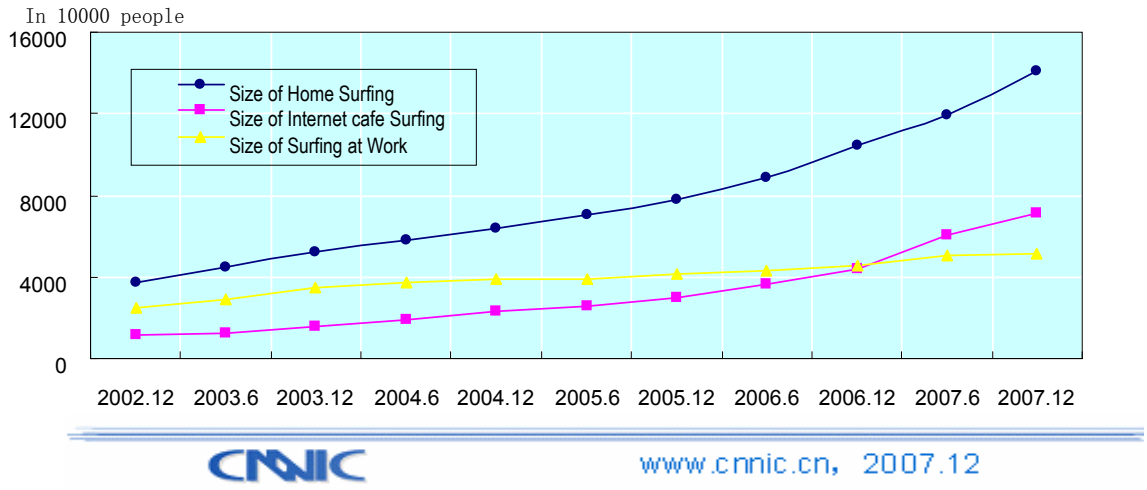

Figure 4. 2 Growth of Netizens by Places of Internet Access

Additionally, Internet cafes are important supplementary places to the home surfing. Over 1/3 (33.9%) of the netizen (71.19 netizens) choose to surf online at Internet cafes. Especially in 2007, the number of people surfing at Internet cafes observed a corresponding growth of 60.9% as compared with 2006.

With the size of surfing online at Internet cafes, the Internet cafes have become a key area of concerns for the governments and enterprises. For the governments, Internet cafes should be the position of disseminating advanced socialist cultures as well as the areas for understanding the public opinions and for control. As for the Internet enterprises, Internet cafes are the important places to promote the network games, network films, vedios and other products. Internet café groups are mostly young people with the education background of secondary and high school. Netizens with the education background of high school and below share nearly 3/4(74.8%) of the total Internet café netizens.

In addition to that, most rural netizens surf online at Internet cafes. 48% of the rural netizens choose to surf online at Internet cafes.

Table 4.1 Comparison between Internet Cafe netizens and Total Netizens by Education Level

	Internet cafe netizens by Education Level	Total Netizens by Education Level
> Secondary	2.9%	6.7%
Secondary	26.6%	21.1%
High	45.3%	36.0%
Junior college	14.4%	18.7%
Undergraduate	9.8%	16.1%
Postgraduate and above	1.0%	1.4%
Total	100.0%	100.0%

II. Surfing Equipment

As compared with June 2007, surfing with desktop computers falls slightly from 96.3% to 94%, but desktop computers still hold the leading position; and surfing with laptop computers increased by 5.6 percentage points. Over 1/4(26.7%) of netizens (56.07 million) choose to surf online with laptops.

Mobile phone access is a supplement to the computer access as well as a hot spot the industry pays attention to. In view of the absolute size, the size of mobile-phone access netizens has reached 50.40 million, with an increase of 6.1 million as compared with June 2007. In order to offset the weakness of PCs for their inconvenience to carry and high cost, more and more netizens have chosen to access with mobile phones. The

access conditions of netizens are now in gradual improvement.

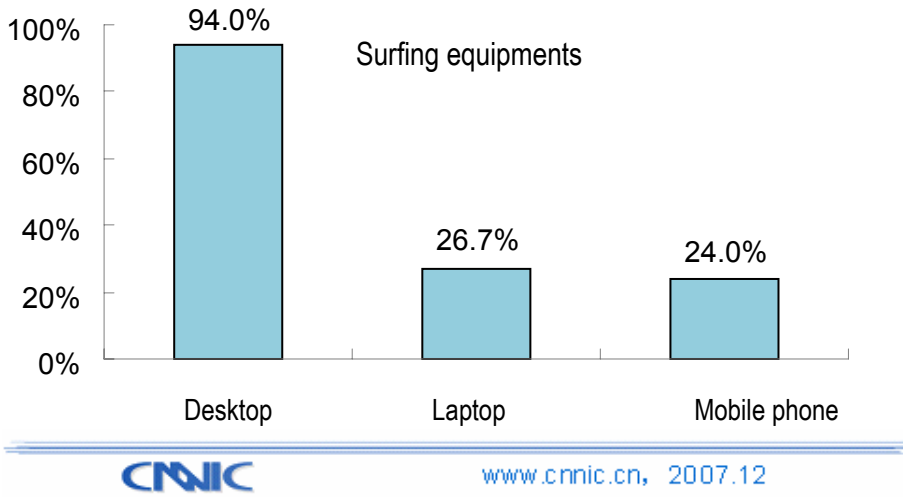

Figure 4. 3 Surfing Equipment

Home is the main place for netizens to surf online, and the number of Internet accessible domestic computers is also a major concern.

In China, the number of Internet accessible domestic computers is 78 million. At present, in China, the average possession of Internet accessible domestic computer is 20.6/100 households. On average, every 2.7 netizens have one Internet accessible domestic computer. As far as the Internet accessible domestic computers are concerned, China still observes a great space for development.

The possession of Internet accessible domestic computers is similar in different regions. Guangdong and Jiangsu have the most of Internet accessible computers, being respectively 14.01 million and 7.98 million. Beijing and Shanghai have the highest percentage of Internet accessible computers per family.

III. Internet Access Expenses

Currently, as for the families not granted free Internet access, the average cost for Internet per family is RMB 74.9 Yuan/month. Of the families with Internet access, the proportion of those spending 51~100 Yuan is the highest, being almost half (49.5%) of the total. Of which, the households who spent 50 to 60 Yuan/month hold 11.5% and 10.2% respectively.

Based on the above, it is calculated that in China, the average cost for Internet access per family per year is 900 Yuan. Since China's per capita income is not so high yet, surfing online is not yet a popularized consumption. With the surfing cost cutted further, it is foreseeable that more residents will surf online.

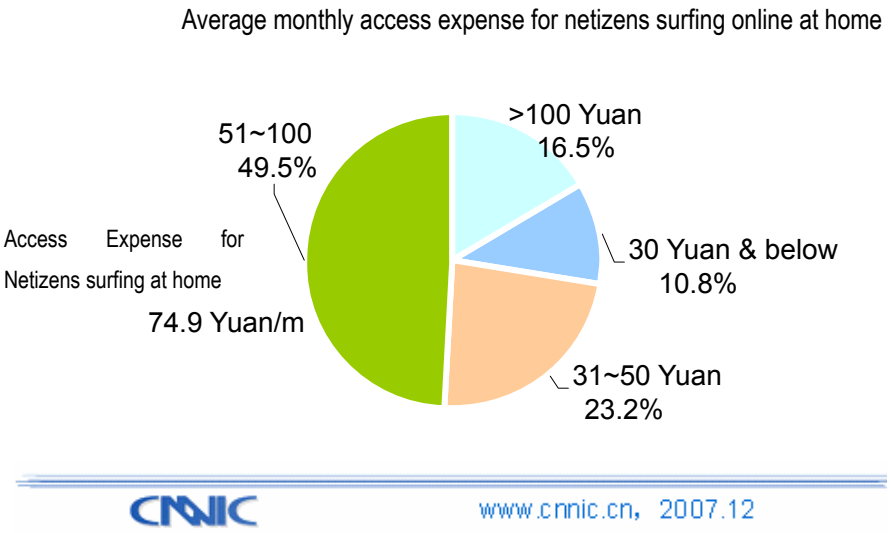

Figure 4. 4 Access Expenses for Home Surfing

Currently, the average surfing expense per Internet cafe netizens is 51.6 Yuan/month. Of Internet cafe netizens, the netizens spending less than 15 Yuan for surfing online is the majority, being exactly 1/3(33.3%) of Internet cafe netizens. Those spending more than 100 Yuan are only 12.7%. Surfing expenses in urban Internet café is higher than that in rural areas. Currently, the surfing expense at urban Internet café is 59.2 Yuan, 13.3 Yuan higher than the 45.9 Yuan in rural areas.

Internet café is a common place for surfing online for the netizens without computers or Internet access at home. The per capita monthly income of Internet cafe netizens is lower than that of the total netizens. Upon further analysis on the personal monthly income of Internet cafe netizens and their average expenses of surfing online at Internet cafe, it is observed that the higher the monthly income of Internet cafe netizens, the higher is their average expenses for surfing online at Internet café. Therefore, the monthly income of Internet cafe netizens is closely associated with the expenses of netizens to surf online at Internet cafe.

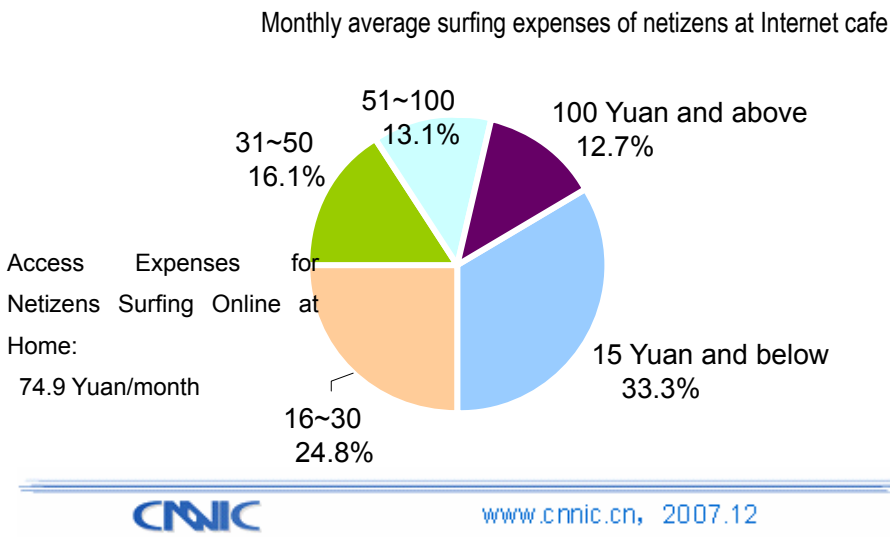

Figure 4. 5 Monthly average surfing expenses of netizens at Internet cafe

Table 4.2 Surfing Expenses of Internet cafe netizens with different income at Internet cafe

	Monthly Expenses for Internet cafe netizens surfing online at Internet cafe (Yuan)
500 Yuan and below	35.1
501~1000 Yuan	54.1
1001~2000 Yuan	62.7
2001~3000 Yuan	69.3
3001~5000 Yuan	72.5
> 5000 Yuan	97.8

IV. About the Internet Access by Mobile Phones

As a communication tool, mobile phones are becoming more and more popular. Additionally, there is no geographical limitation for accessing Internet with mobile phones. Therefore, mobile phones have become a supplement to surfing equipments for residents.

According to Monthly Statistics of Communication Industry for October 2007 published by Ministry of Information Industry[8], at present, China observes 530 million effective mobile phone cards. In recent years, the growth of valid mobile phone cards in China has always been at a rate of over 17%, with an average annual increase of 60 million cards, which is an extremely phenominal growth.

According to the survey findings of CNNIC, each mobile phone subscriber has 1.33 mobile phone cards in average: China has now 400 million mobile phone subscriber and approximately 30% of the residents have mobile phones.

[8] Data source: www.mii.gov.cn.

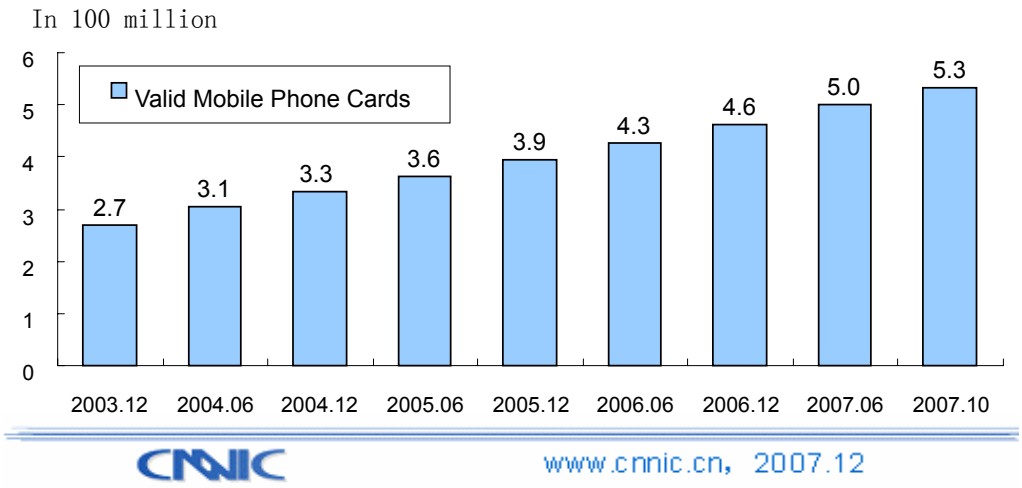

Figure 4-6 Growth of Valid Mobile Phone Cards in China

At present, out of the 400 million mobile phone subscribers in China, 50.40 million netizens have used the mobile phones to access Internet, namely 24% of netizens or 12.6% of mobile phone subscribers are mobile phone netizens, indicating that mobile phone access has become gradually popular. Since China has not yet implemented 3G by now, the access speed of mobile phones is very slow. To download a video item of the same size, the expense of mobile phone access is several times higher than that of the computer access. Low speed and high cost have hindered the development of mobile phone surfing in China. In the neighboring country, South Korea, the mobile phone access has already been well developed: over half (51.3%) of the mobile phone subscribers are using mobile phones to surf online[9]. To reach this level, China still needs to put in more efforts. If China could introduce wireless broadband and reduce the charges for mobile phone access, the Internet access conditions for residents will be further improved.

Netizens in different regions may differ in terms of surfing with mobile phones. Guangdong is a province with not only the most valid mobile phone cards, being 15% of the 530 million in China, but also the most netizens surfing with mobile phones among the 31 provinces and municipalities. In Guangdong, 43.4% of the netizens have accessed the Internet with mobile phones in the last half of year. At present, the number of mobile phone netizens has reached 14.52 million. In terms of the rate of mobile phone access as well as the size of mobile phone netizens, Guangdong is leading all other provinces and municipalities.

Next to Guangdong are Jiangsu, Zhejiang and Fujian in terms of the number of netizens surfing online with mobile phones. In view of the ratio of netizens surfing online with mobile phones, the southern regions are relatively developed, especially Guangdong and Fujian.

Table 4.3 Top 8 Provinces and Cities of Mobile Phone Netizens

	Percentage of Netizens Surfing Online with Mobile Phones	Number of Netizens Surfing online with Mobile Phones (10,000)

[9] Data source: NIDA, Survey on the Computer and Internet Usage, 2007.10.

Guangdong	43.4%	1452
Jiangsu	21.2%	373
Zhejiang	21.6%	327
Fujian	34.1%	295
Shanghai	27.5%	228
Shandong	17.7%	222
Sichuan	27.4%	222
Beijing	26.0%	192

Of the netizens surfing online with mobile phones, about 2/3(66.5%) are male. In this group, most are aged 18~24, being half of the mobile phone netizens. Fewer netizens aged 30 and above access Internet with mobile phones. These mobile phone netizens are distributed in a variety of occupations, but four major groups are college students, industry workers, technical experts and employees in service industry, being 13.8% , 12.9% , 12.8% and 11.7% respectively of the total.

Table 4.4 Comparison of mobile phone netizens and total netizens by age

	Mobile Phone Netizens	Total Netizens
<18	16.2%	19.1%
18~24	50.0%	31.8%
25~30	17.7%	18.1%
31~35	7.8%	11.0%
36~40	4.9%	8.4%
41~50	2.5%	7.5%
>50	0.9%	4.1%
Total	100.0%	100.0%

V. About Non-netizens

Learning about non-netizens is of great importance for the development of the Internet. The survey findings indicate that only through education and income-rising of the non-netizens can they be elevated to be netizens.

The demographic structure of non-netizens such as gender and age is relatively stable. Only when their education level and income standard is raised will it be possible for them to surf online. As far as their education level is concerned, about 83.35 million Chinese with the education background of high school do not surf online. The non-netizens with the education background of secondary school are 437 million. In view of the non-netizens' education level, China still observes a great potential for development of netizens. Especially of the non-netizen population with the education background of secondary school and below, many are still students, the education of which will be further improved and which will become the growth point of netizens in China.

Of 580 million people with the education level of below secondary school, excluding 107 million primary school pupils and 98 million children below school age, about 400 million or 30% of the total population have comparatively low education level. In order to

promote the Internet among these people, more effective measures shall be required.

Table 4.5 Education Structure Comparison of Non-netizens and Netizens

Education Level	Non-netizen	Netizens	Total Population	Non-netizens (10,000)	Netizen (10,000)	Total Population
Below secondary	52.9%	6.7%	45.5%	58,412	1,397	59,809
Secondary	39.6%	21.1%	36.6%	43,688	4,422	48,110
High	7.5%	36.0%	12.1%	8,335	7,570	15,905
College & above	0.0%	36.2%	5.8%	22	7,602	7,624
Total	100.0%	100.0%	100.0%	110,448	21,000	131,448

Another factor affecting the access to the Internet is the income level of residents. At present, the monthly income level of non-netizens is obviously lower than that of netizens. In some countries with developed Internet, the income of residents is no longer associated with if they can surf online. China still needs to raise the income standard of residents and reduce the internet access cost so as to improve the access conditions of netizens.

Table 4.6 Income Structure Comparison between Non-netizens and Netizens

	Personal monthly income of non-netizens	Personal monthly income of netizens
No income	12.8%	4.4%
1~500 Yuan	36.8%	24.2%
501~1000 Yuan	24.6%	16.7%
1001~2000 Yuan	18.5%	28.7%
2001~3000 Yuan	4.4%	12.4%
3001~5000 Yuan	1.8%	8.4%
>5000 Yuan	1.1%	5.2%
Total	100.0%	100.0%

The main reasons answered by the non-netizens for not accessing the Internet can be classified into four categories: (1) of non-netizens themselves: lack of knowledge of computer or network, as is not associated with the education level of non-netizens; (2) limited hardware: lack of surfing equipments or without access to the Internet, as is related to the monthly income of residents and social economic development level; (3) no interest, as is an subjective reason; (4) poor quality of the Internet keeping people away from the Internet, as is a reason of the Internet.

Lacking of computer or network knowledge is the main reason for non-netizens not to access to the Internet, which constrains 48.9% of the non-netizens. The other two major reasons are lacking of time and lacking of surfing equipment. These reasons have indicated that residents have the need to access to the Internet, but have to stay away from the Internet due to their education level and problems with the hardware facilities. The governments and the society should focus on these two aspects so that the Internet can serve the public better.

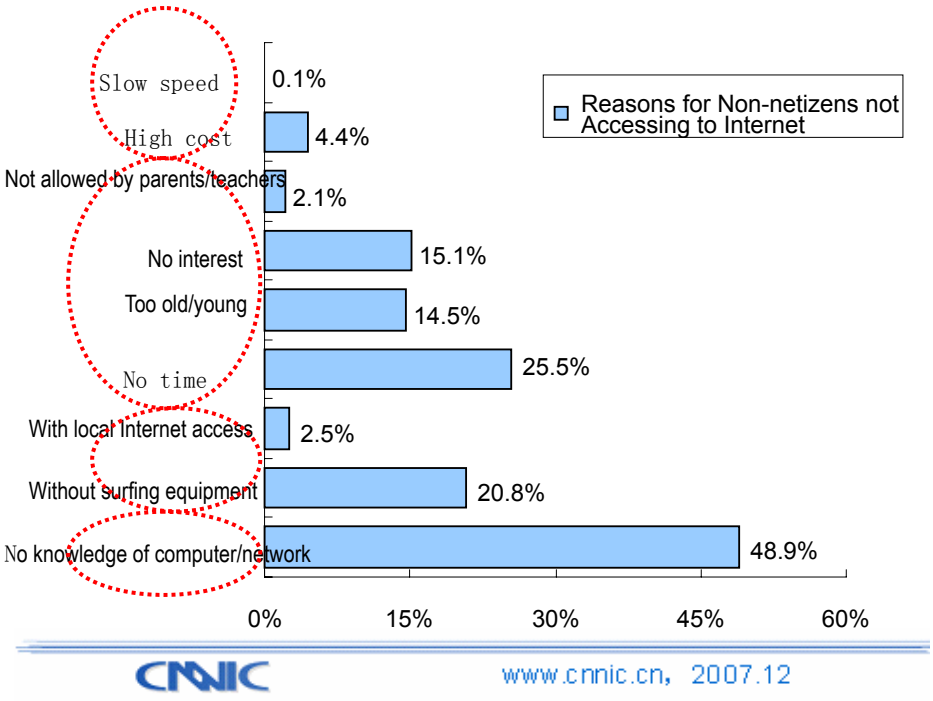

Figure 4-7: Reasons for Non-netizen's Unability to Access the Internet

As compared with June 2007, the expectation of non-netizens to access to the Internet in the coming half of a year has increased: the percentage of the reply that "access is a must in the coming half year" increases by 1 percentage point, while the percentage of the reply of "will access possibly" increases by 1.7 percentage points. The increased expectation of non-netizens indicates the overall size of netizens will go on expanding.

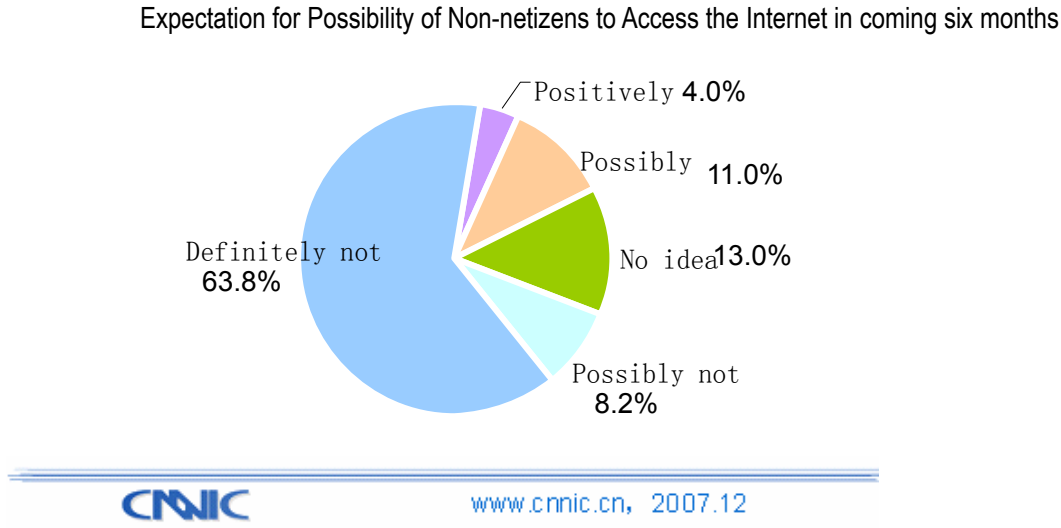

Figure 4-8 Forcast for the possibility of non-netizens to access the Internet in the coming six months

Chapter Five Network Application

Executive Summary

◇ The average online duration of netizens is 16.2 hours/week, indicating that netizens have certain dependence on the Internet. Netizens show a rather high positive appraisal over the Internet. The percentage of netizens with a view that it helps at work/in study is 93.1%. The percentage of those with views that “seem lacking something without surfing online in one day is 38.3%. The Internet has already shown an important role.

◇ The percentage of those viewing instant message is the primary purpose of the access is 39.7% and watching news ranks the second, being 20%. The two applications play an important role in terms of the main access for netizen to the Internet.

◇ The application rate of the first seven network applications are sequenced (from high to low) as: online music> instant message> online video> online news> search engine> Internet games> e-mail. The application rates of online music, online video and Internet games are comparatively high. In China, the entertainment function of the Internet plays an important role; instant message ranks the second, as is a typical characteristic of the Internet in China.

◇ Search engine, e-mail and instant message are the basic applications on the Internet. At present, the rate of those using search engines is 72.4%; the application rate of e-mail is 56.5%; the application rate of instant message is 81.4%.

◇ 25.4% of the Chinese have visited governmental websites: i.e., within half of a year, 53.34 million people have visited the websites of the central government and local governments. Of these netizens, 77.5% log on the governmental websites mainly to explore the governmental activities and news, while only 2.5% are logging on for taxation/incorporation and the rate of online consultation is only 3%.

◇ In terms of network media, 73.6% of netizens have watched online news, while the rate of the netizens believing the trueness of online news is 51.3%; the rate of updating blog/personal spaces within half of a year is 23.5%, but the rate of the netizens indicating the belief in the trueness of blog contents is only 32.6%.

◇ In China, the Internet is of strong entertainment nature. Application rate of Internet games is 59.3%. The average online duration of netizens playing Internet games is 7.3 hours/week; within half of a year, 86.6% of netizens have listened to the online music, with a downloading rate of 71.2%; rate of watching online videos is 76.9% , with a downloading rate of 40.5% .

◇ The online shopping rate is 22.1%. The higher the education level, the higher the online shopping rate is. The average amount per netizen shopping online in the last half of a year is 466 Yuan.

◇ 65.7% of the netizens have indicated that they have posted comments or uploading

contents online. Within half of a year, 35.5% of the netizens have posted or followed up the posts online; 31.8% of netizens have uploaded pictures; 17.5% of the netizens have uploaded video programs or other video contents.

I. Overview

At present, the average online duration of a netizen is 16.2 hours/week, indicating Internet plays a certain role in the life of netizens. Most netizens are those with an online duration of 1~10 hours, composing 45.1% of the total netizens, which drops slightly as compared with December 2006. The reason is that in 2007, a large number of new netizens have joined, who have a shorter online duration.

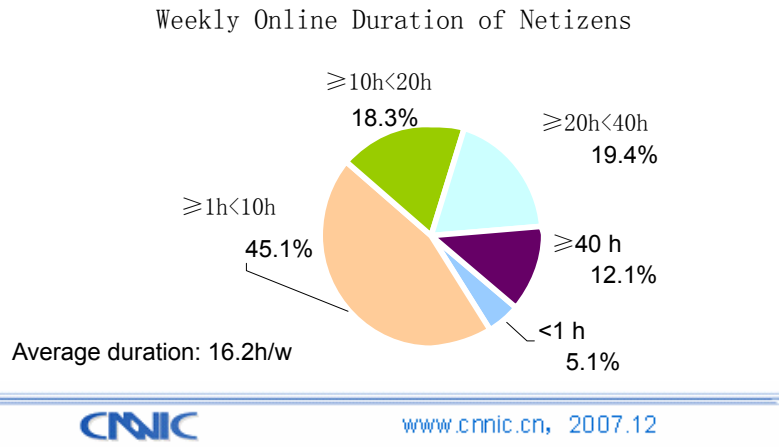

Figure 5-1: Online Duration

Netizens show a rather high positive appraisal over the Internet. The ratio of netizens with a view that it helps at work/in study is 93.1%. Especially in terms of entertainment, the ratio of those with views that it enriches the entertainment of netizens is as high as 94.2%.

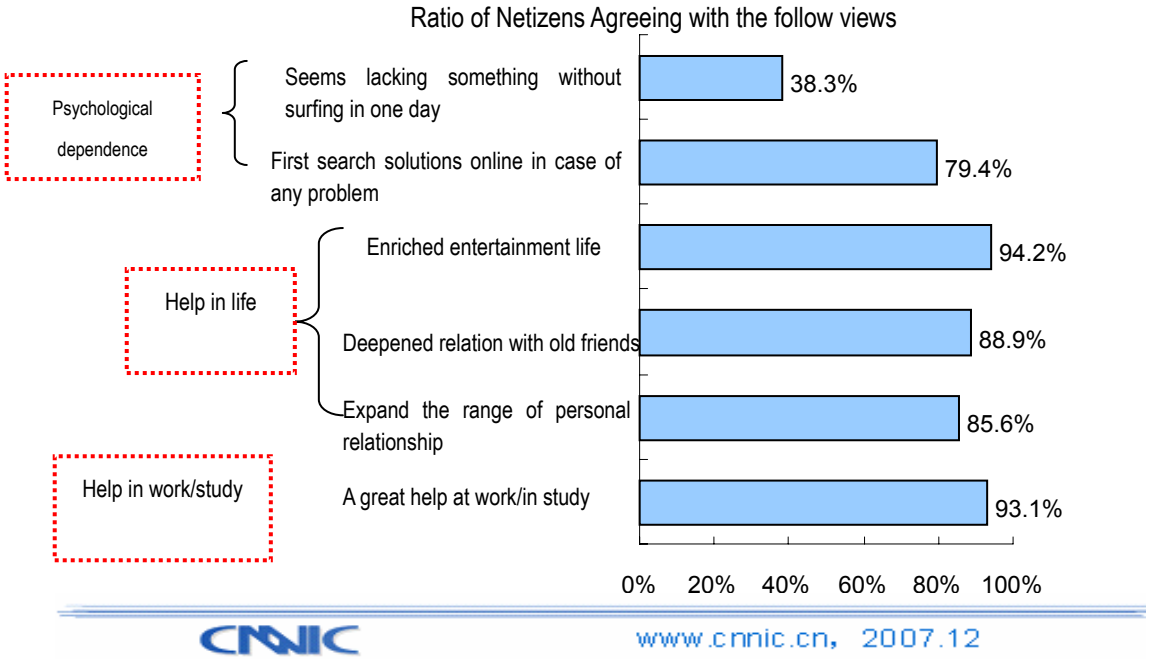

Figure 5-2: Appraisal of Netizens over Internet

The application rate of the first seven network applications are sequenced (from high to low) as: online music> instant message> online video> online news> search engine> Internet games> e-mail. Online music, online videos and Internet games indicate the entertaining role of the Internet is in the front row. As indicated in China's Internet market, the entertainment function holds a leading position. Instant message ranks the second, showing a obvious local characteristics of China's Internet; online news is still in high ranking position; the ratio for updating blog/personal spaces rises rapidly; the position of the Internet as a new media becomes more prominent.

Table 5.1 Network Application rate

Network application		Application rate	User Size (10,000)
Basic application of the Internet	Search engine	72.4%	15,204
	E-mail	56.5%	11,865
	Instant message	81.4%	17,094
E-government		25.4%	5,334
Network media	Online news	73.6%	15,456
	Update blog/personal spaces	23.5%	4,935
Digital entertainment	Internet games	59.3%	12,453
	Online music	86.6%	18,186
	Online video	76.9%	16,149
e-Commerce	Online shopping	22.1%	4,641
	Online payment	15.8%	3,318
	Online banking	19.2%	4,032
Others	Online job hunting	10.4%	2,184
	Online education	16.6%	3,486
	Online stocks/funds	18.2%	3,822

As for the "first leg of the jurney" on the Internet, i.e., the first thing a netizen will do upon surfing online, the rate for webchatting through instant message applications is 39.7%, while 20% of the netizens will watch news. Instant message tools and online news are two important "legs of jurney" for Netizens, sharing 60% together.

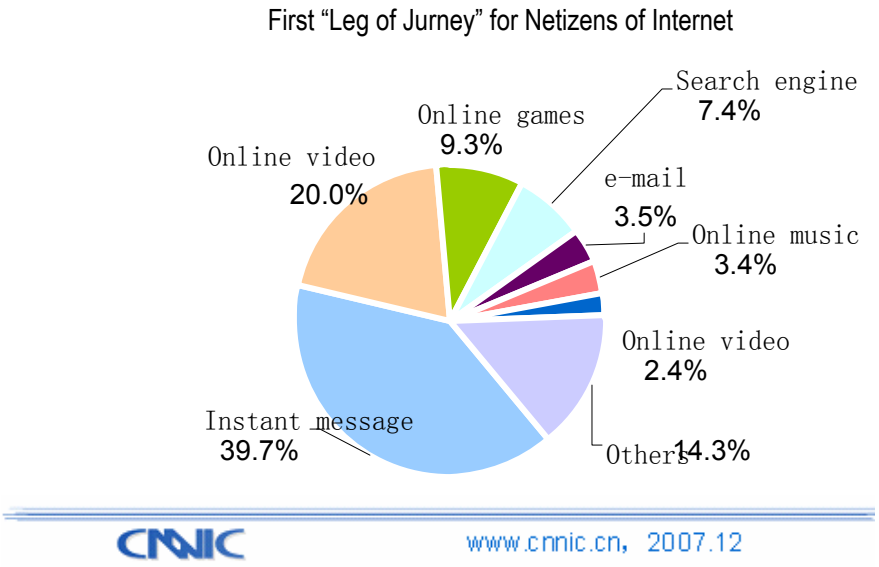

Figure 5-3: First "Leg of Journey" on the Internet

II Basic Application of the Internet

(I) Search Engine

The basic function of the Internet is to provide information. At present, there is a vast sea of information on the Internet, while search engine is a tool for netizens to search information in the sea as well as one of indispensable tools and basic application of the Internet. At present, out of 210 million netizens, 72.4% are using the search engines, i.e., 152 million netizens benefit from search engines. In half of a year, the net increase of the use of search engines is 30.86 million. In terms of the network applications, it ranks the 5th after online music, instant message, online video, and online news, being higher than e-mail.

As compared with other countries, since the entertainment function of the Internet still holds the leading position in China, the search engine application rate of the total netizens is still on the low side. In USA, the application rate of search engine is 91%[10]. In China with the rapid growth of netizens and young netizens taking up the majority, the use of search engines will continue to grow.

The search engine application rate of different netizens differs. Search engine users are strongly associated with the online surfing time of netizens: the longer of the netizens' surfing experience, the higher the application rate of search engine is. The application rate of search engines is 89.1% for netizens who started to surf online before 2000, while the application rate for new netizens joined in 2007 is only 48.7%. Since 2007 observed a large number of new netizens in China, the low search engine application rate of these new netizens has brought down the application rate for netizens. The current application

[10] Data source: www.pewinternet.org.

rate of 72.4% is slightly lower than 74.8% as of June 2007.

Besides, the application rate of search engines is also strongly associated with the education level of netizens. The higher the education level, the higher the application rate is for netizens. The application rate of search engines is 54.7% for the netizens with the education level of below secondary and increases to 97% for the netizens with the education level of postgraduate and above, almost all of which are using search engines.

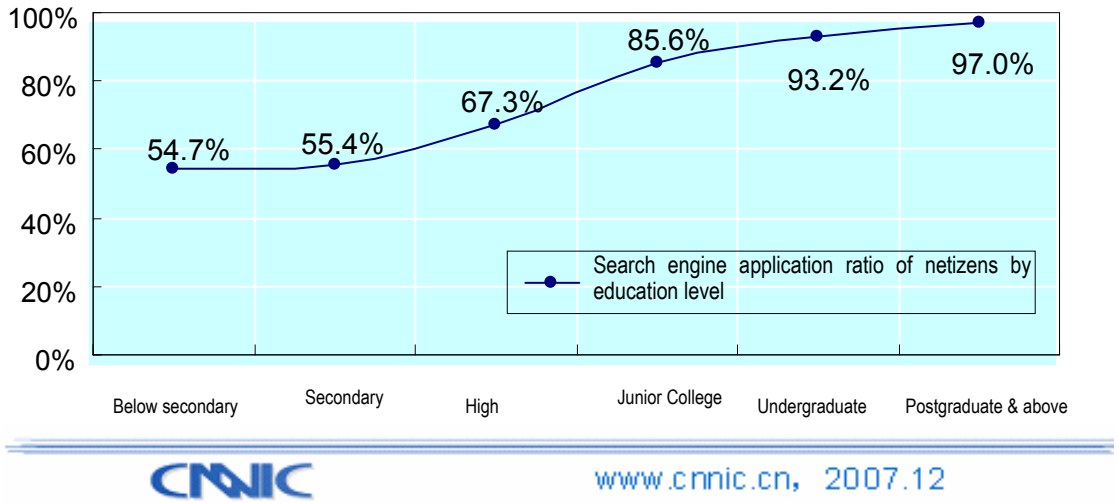

Figure 5-4: Search Engine Application Rate for Netizens by Education Level

Netizens of different regions show different application rate of search engines. The application rate of netizens in Shanghai and Beijing is the highest, being more than 80%. Of other provinces and municipalities, the application rate of search engines in the western provinces is comparatively low, especially in Tibet, Guangxi and Qinghai.

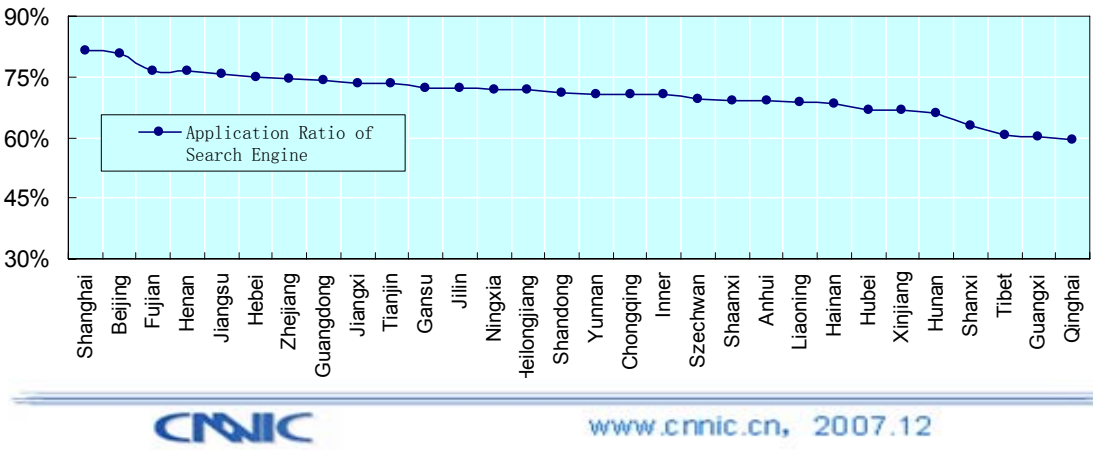

Figure 5-5: Netizen Search engine application rate of netizens by provinces

Note: since Guizhou has a small quantity of samples, the network application rate of Guizhou has not been shown, similarly hereinafter.

Out of the netizens not using the search engines, most are young people and 80%

have an education level below high school. As is known from the occupation of these netizens, students, industry workers and the unemployed are the main parts. The network activities of these people are comparatively monotonous and their application rate of other network applications is also lower than that of the search engine users. With the time passing by, out of the non-search-engine users, such potential groups as students will become the search engine users.

(II) Electronic Mails

E-mail is another basic application of the Internet and is a non-instant information delivery mode, which brings more convenience to the work and life of netizens.

As compared with other countries, the e-mail application rate in China is not high. Currently, the e-mail application rate in China is 56.5%: 119 million Chinese netizens are using e-mail. In contrast, the e-mail application rate in USA is 91%, being the first major Internet application in USA. In South Korea, the e-mail application rate has also reached 82.1%[11], also much higher than in China. The application of instant message for Chinese netizen is rather high, substituting partially the function of e-mail, as is also one of the reasons for the low e-mail application rate in China.

E-mail application rate is also closely related to the education level. The higher the education level, the higher the e-mail application rate is. E-mail application rate is only 31.1% for the netizens with the education level of secondary school and below and increases to 94.2% for the netizens with the education level of postgraduate and above. This feature will influence the use of e-mail. Of the total netizens, number of those with higher education level will increase yearly and the application scale of e-mail will also continue to increase. In terms of education level, Chinese netizens are inclining to be composed by netizens with comparatively low education level. This trend will pose impact on the application rate of e-mail. It is not yet clear if the application rate for the overall netizens will rise or fall.

In terms of occupation, the managerial staffs, employees in service industry and students are using more e-mails, while the workers on the production line and the unemployed and freelancers without fixed jobs are seldom using e-mails.

[11] Data source: www.pewinternet.org; NIDA, Survey on the Computer and Internet Usage.

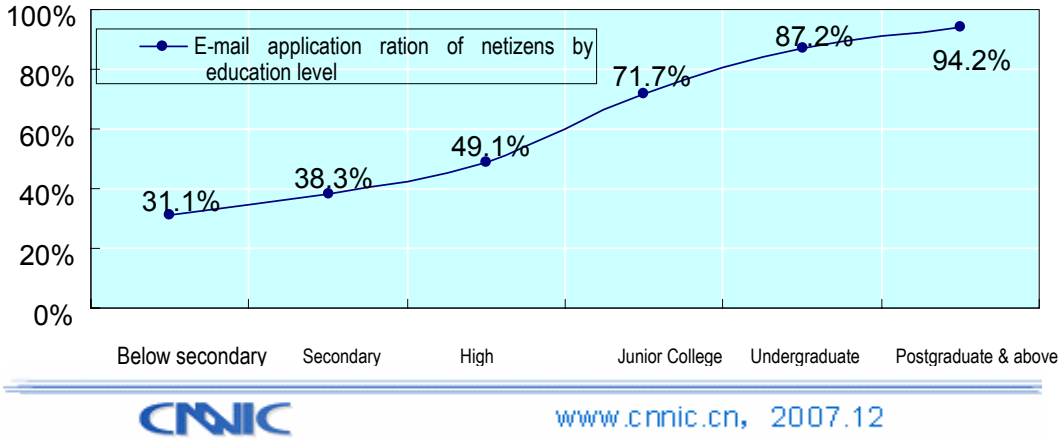

Figure 5.6 E-mail Application rate of Netizens by Education Level

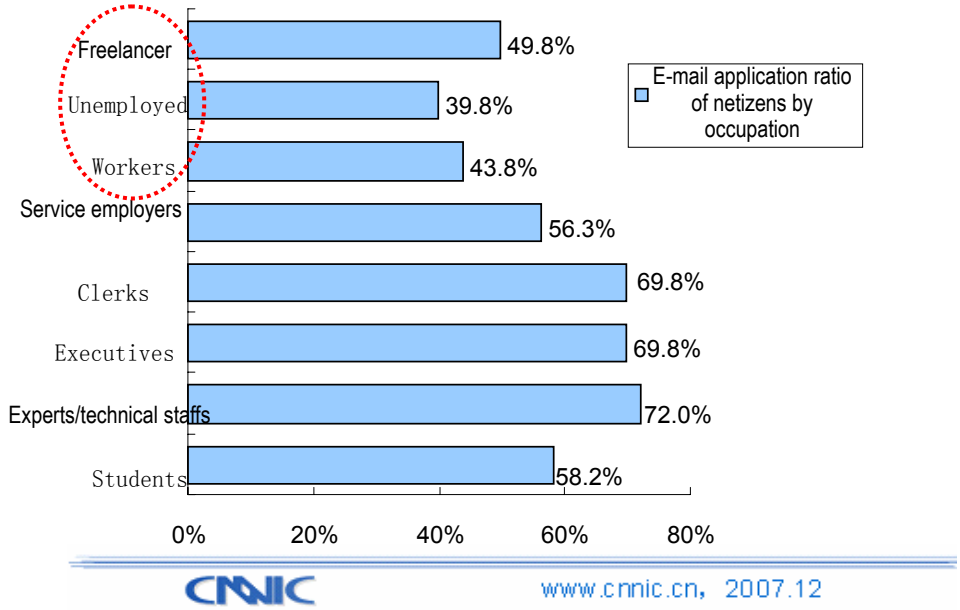

Figure 5-7: e-mail application rate of netizens by profession

(III) Instant Message

China's Internet development is of its unique characteristic. This characteristic is mainly featured as: instant message is developing explosively in China.Instant message, similar to e-mails, is also a type of instant online information communication mode, with which one can receive the reply from the opposite party at any time. At present, the instant message application rate of Chinese netizens has reached 81.4% and exceeded search engine and e-mail to become the second big network application next to online music, having 170 million users. Upon enquiring about what the netizen will do first online, 39.7% of the netizens have selected the instant message, being the item with the most netizens considering it as the first stay-point of Internet. As compared with June 2007, instant message application rate in China has increased by 11.6 percentage points.

This application rate is much higher than that of other countries. In August 2006, the

instant message application rate in the USA was only 39%. In December 2006, the instant message application rate in South Korea was also only 47.7% [12].

Young netizens are especially favoring instant message, especially those aged 18~24, of which 96.3% are using the instant message. The elder the age, the lower the instant message application rate is. Additionally, the impact of education level on instant message application rate is not obvious.

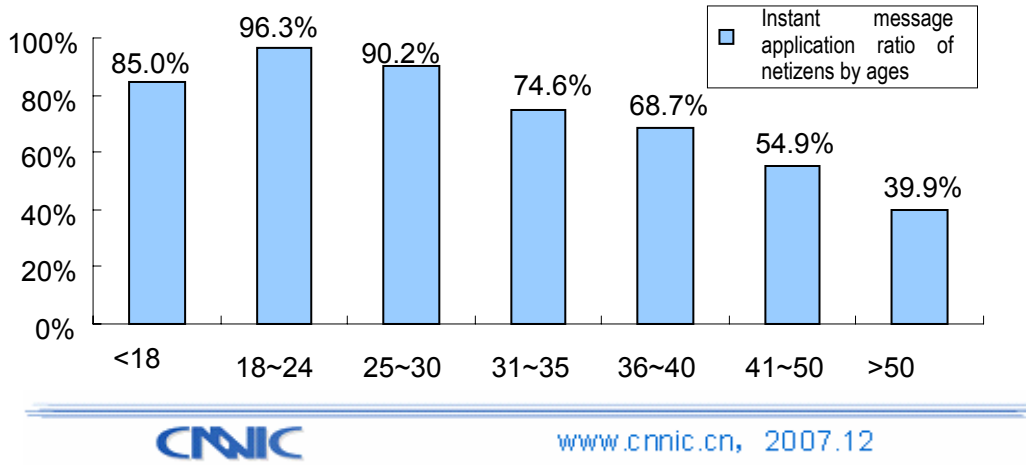

Figure 5-8: Instant message application rate of netizens by ages

In different regions, the application rates of instant message differs also. Shaanxi and Sichuan shows the highest application rate of instant message, while Beijing's application rate of instant message is the lowest among all the provinces and municipalities. Basically, the higher the regional economic development, the lower the application rate of instant message is. The reason is that the netizens in these developed regions use Internet extensively, as has decentralized the application rate of instant message.

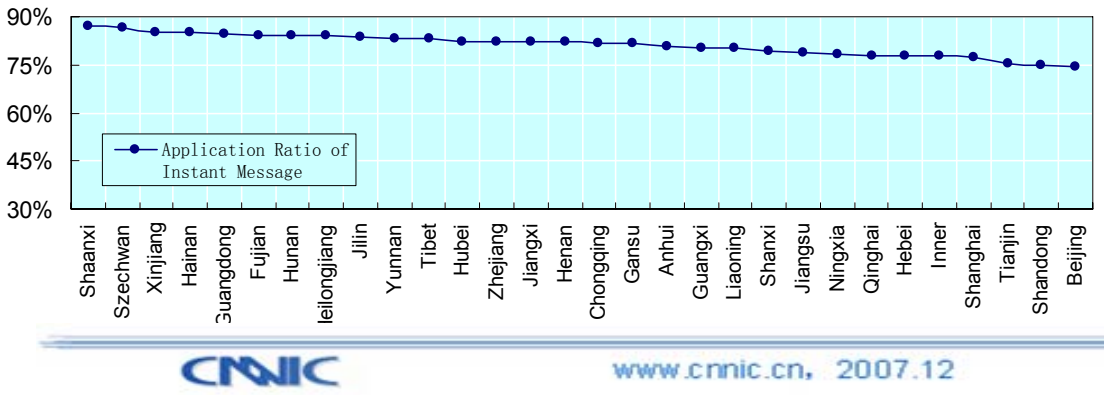

Figure 5-9: Instant message application rate of netizens by provinces

III. Governmental Websites

Influence of Internet on Chinese society is increasingly profound. More residents

[12] Data source: USA: www.pewinternet.org; South Korea: NIDA, Survey on the Computer and Internet Usage.

have started to search convenience for life through Internet. The governments have also shown special concerns for e-government and expected to promote the rapid development of e-government so that the government can serve the public better and improve the government operation efficiency. In 2006, China Information Steering Group promulgated the China National e-government Framework, proposing the development target for e-government in the "11th Five-year" period: expecting the government's gateway websites may become the major channel for publication of government information, over 50% of the administrative licensing items will be processed online and further raising the public notability and satisfaction of e-government.

By December 2007, according to survey findings of CNNIC, 25.4% of netizens have visited the governmental websites: i.e., within half of a year, 53.34 million people have visited the websites of the central government and local governments. One of the major functions for the governmental websites is to provide governmental administration information, including policy information, violation record enquiry, taxation enquiry, etc, for which almost all the citizens would have the demand to enquire, thus the 25.4% application rate of Chinese netizens is not high.

Netizens accessing the governmental websites are mostly the active groups that use also other network application more frequently, especially watching online news and post comments online. The netizens accessing the governmental websites are obviously typical to: the young people who with jobs will access the governmental websites more frequently, while the rate of the netizens aged 25~30 who access the governmental websites is the highest, of which 35.4% have accessed the governmental websites. The rate of netizens aged below 18 accessing the governmental websites is rather low.

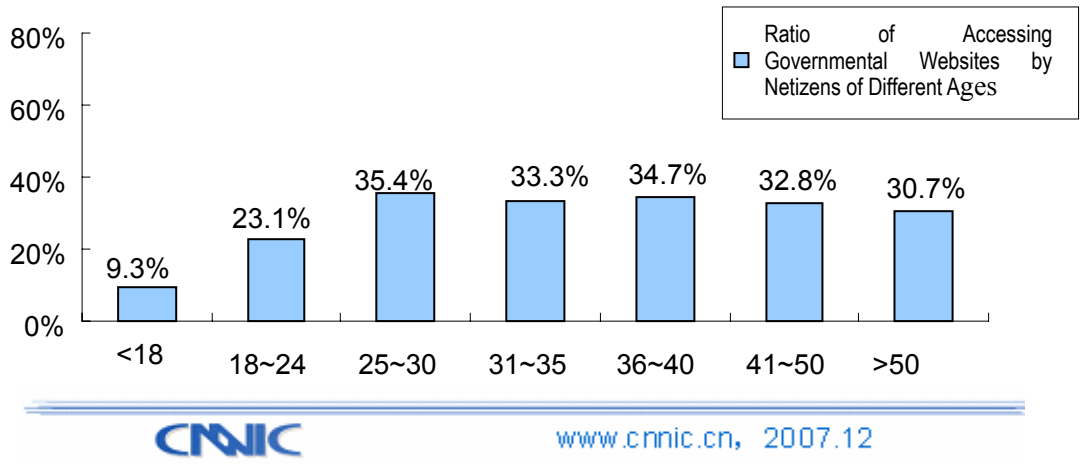

Figure 5-10: Access Rate of Governmental Websites by Netizens of Different Ages

The rate of netizens who access the governmental websites also differs with their occupations. The rate of students who access the governmental websites is comparatively low, being only 15.9% of the student netizens. Government officials and enterprise executives access the governmental websites more frequently, being 55.4%. Next are the

clerks in connection with the government, of which 40.1% have visited the governmental websites, as is also due to the nature of the netizen's employing organization. 60.5% of the netizens working in governmental organizations have visited the governmental websites, while 43.2% of the netizens working in institutions have also visited the 43.2%. The ratio for the enterprise employees to access the governmental websites is comparatively low.

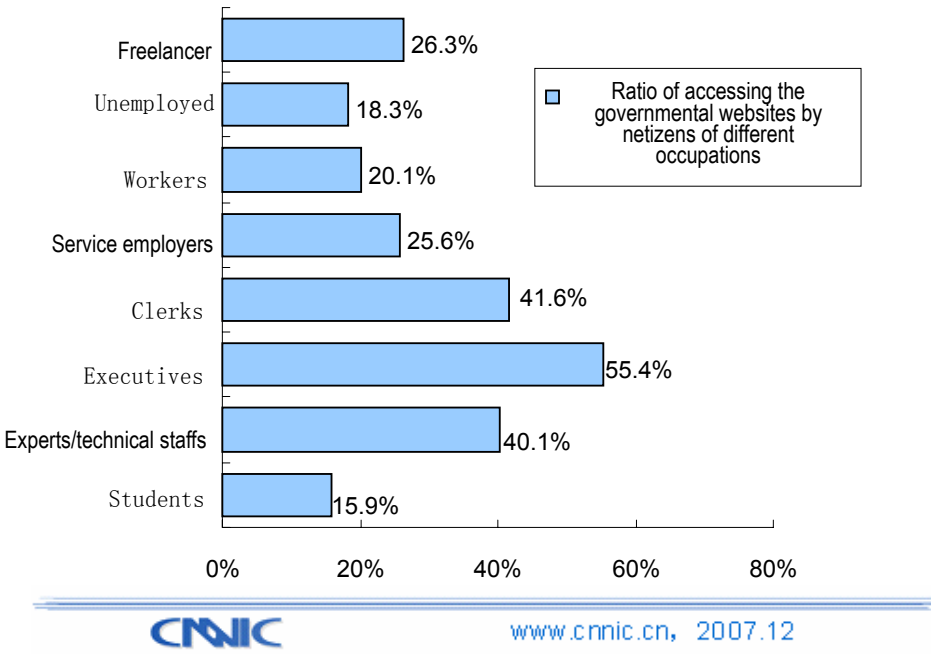

Figure 5-11: Rate of accessing the governmental websites by netizens of different occupations

In China, the economic development standard differs for different provinces and their extent of attention given to the construction of governmental websites also differs, where the rate for netizen to access the governmental websites is different. As the capital city of China, Beijing shows the highest ratio of accessing the governmental websites. Within half of a year, 34.3% of the netizens in Beijing have visited the governmental websites.

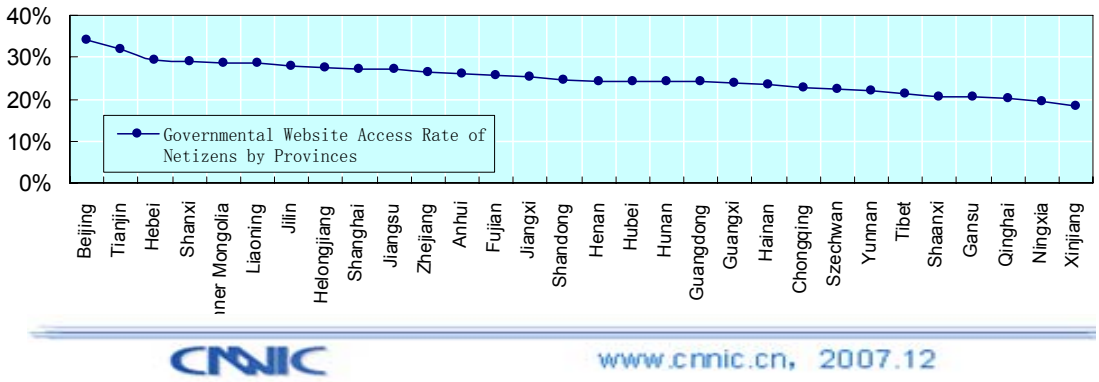

Figure 5-12 Governmental Website Access Rate of Netizens by Provinces

Access level of governmental websites includes three aspects. The basic level is the information exploring, including the policy & regulations, government notices and government news; the second is the online processing, including form downloading, online application submitting, and etc: i.e., some counter transactions have been moved onto the Internet so as to impove the processing efficiency; the third is the website interaction and exchange, including online consulting, suggestion, complaint, etc. The higher the e-government standard, the higher the application rate is in different aspects. The behavior of Chinese netizens is mainly concentrated at the first level rather than involved much in the second and third levels. At present, of the netizens accessing the governmental websites, only 2.5% process their taxation/incorporation online and only 3% are involved in the online interaction and exchange. In these two aspects, the governments need to make efforts for development.

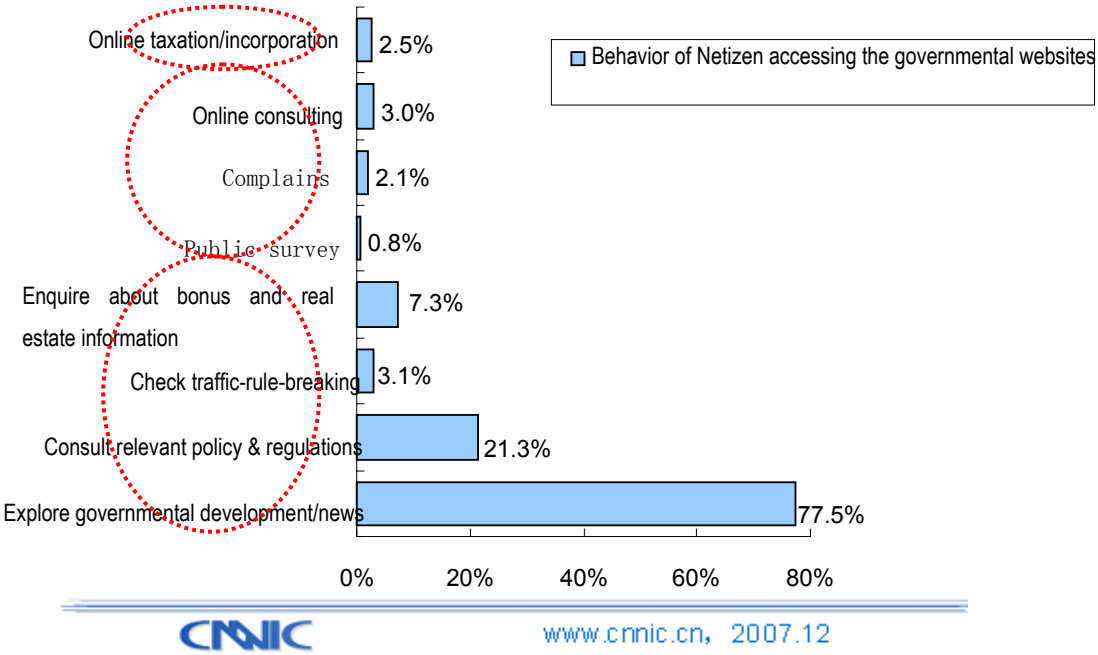

Figure 5-13: Behavior of Netizen who access the governmental websites

IV. Network Media

Online news and blog are both network media. Those specializing in online news are the major portal websites, representing the mainstream media news. The rising of blogs/personal portals represent the release of the grass roots' discourse right (i.e., common netizens). The blogs/personal gateways have become one of the sources for online news.

Online news feature instant convenience. In terms of Chinese netizens' network application, watching online news ranks the 3rd only next after online music and instant

message. Of the 210 million netizens, 73.6% have watched the news online within half a year and the audience of online news has reached 150 million. The news websites have attracted a large number of netizens. The first “leg of jurney” for 1/5 of the netizens is watching the news. The development of online news in China is not inferior to the countries with high Internet penetration rate.

As for the belief of netizens in online news, 51.3% believe in online news, which is slightly higher than those who are not believing. The rate of belief of netizens in online news is not so high. Online news has now become an important part for the life of netizens, but its authenticity is not yet so high. The government’s penetration and enhancement of supervision will be benefial to the raising of the netizen’s belief in online news.

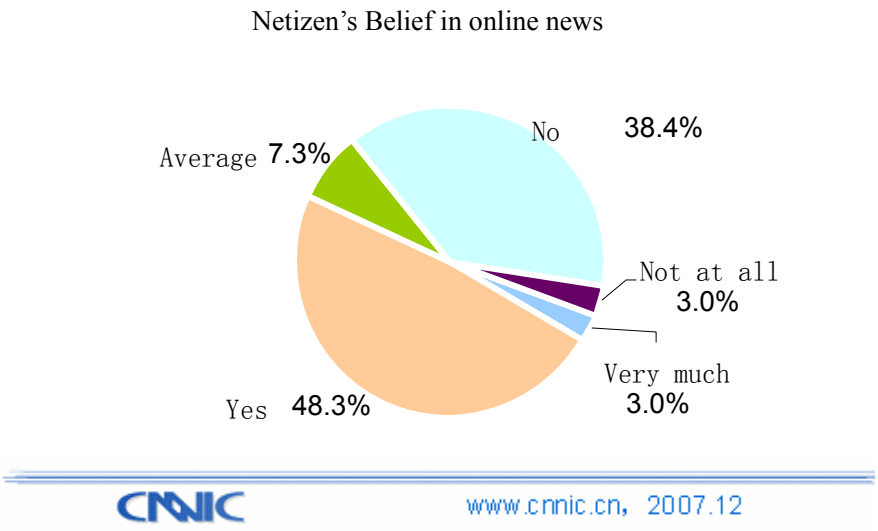

Figure 5-14: Netizen’s Belief in online news

Of the netizens who read online news, few are students and young netizens. Netizens aged 36~40 read online news more frequently and the reading ratio of these netizens have reached 87.3%. The higher the education level, the higher the rate of reading online news is. Besides, netizens working in governmental organizations read online news more frequently.

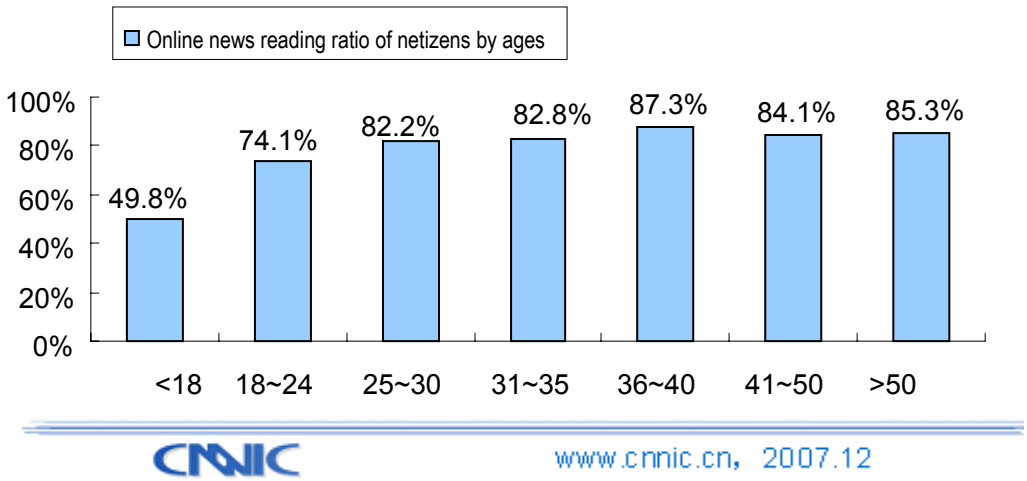

Figure 5-15: Online news reading ratio of netizens by ages

At present, almost all the major portal websites have established the special blog, and their users' blog updating rate is comparatively high. 23.5% of netizens are updating blogs/personal space, the size of which has reached 49.35 million. However, the extent of Netizen's belief in blogs/personal space is not so high. The rate is only 32.6%, being 18.76 percentage points lower than that on online news. If the real-name system is adopted for blog/personal space, the netizen's trust in blog will be raised. Regionally, Chongqing and Shanghai have higher rates for blog/personal space, which have been better developed.

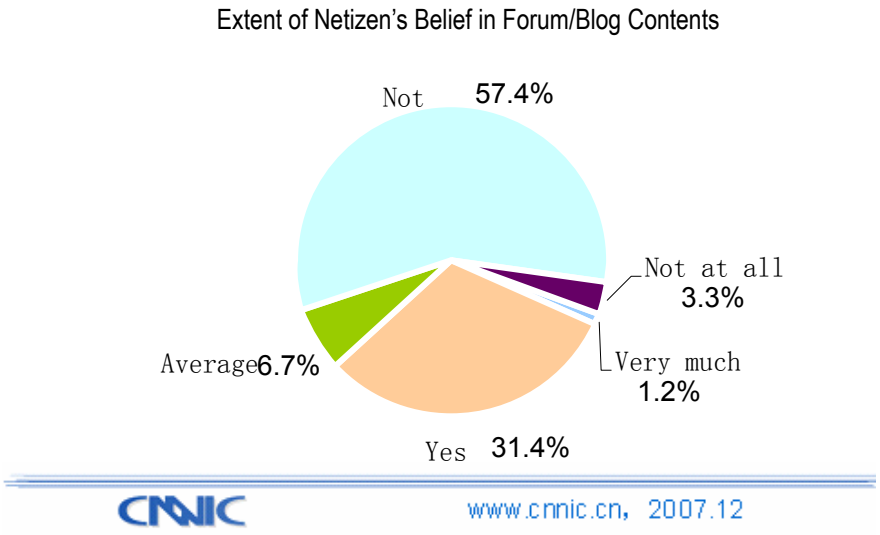

Figure 5-16: Extent of Netizen's Belief in Forum/Blog Contents

Netizens reading online news, updating blog, accessing governmental websites and posting online comments are closely associated with each other. Netizens using one of the network applications more frequently will also use other three network applications. These netizens show more concern over the politics and are more active on Internet.

V. Digital Entertainment

(I) Internet Games

The success of the Internet game companies depends on the support from a huge number of Internet game users. The first thing for 9.3% of netizens to do online is to play Internet games. While providing more choices of entertainment to netizens, Internet games have indulged many of the netizens, even their normal life affected. The governments and the industry show special concern on Internet games.

At present, 59.3% of Chinese netizens are playing Internet games, which is even higher than the e-mail application rate of 56.5% for. Internet games users have reached

120 million. The average game time for Internet games users is 7.3hours/week, while the online duration for 21.3% of Internet games users to play Internet games is more than 10 hours/week.

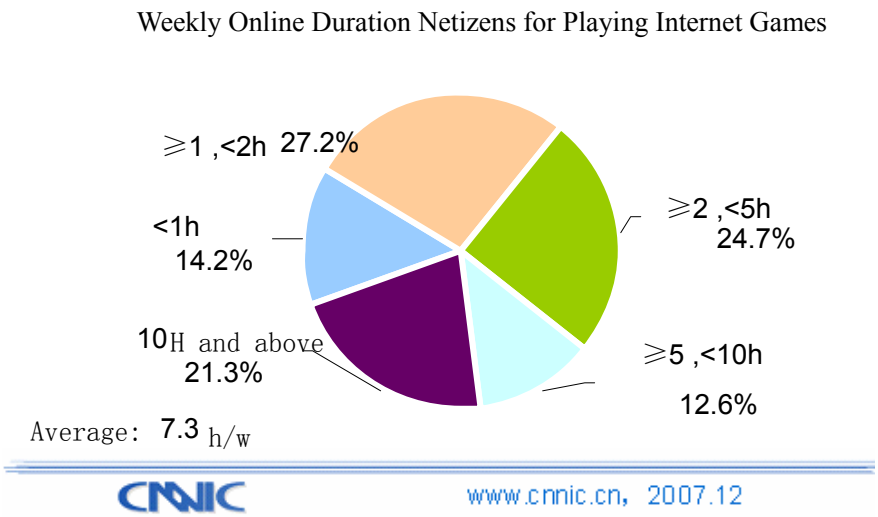

Figure 5-17: Weekly Online Duration Netizens Spend for Playing Internet Games

The rate of young people playing Internet games is surprisingly high. The younger the age of a Netizen, the higher the ratio of playing Internet games is. Of the netizens aged below 18, 73.7% have played Internet games.

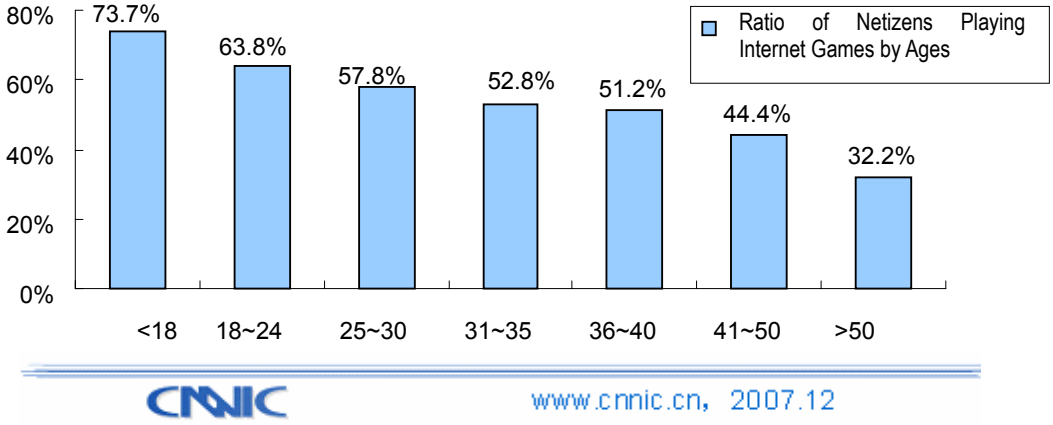

Figure 5-18: Rate of Netizens Playing Internet Games by Ages

A large number of low-income and low-education-level netizens indulge themselves in Internet games. Most are the netizens with income less than 500 Yuan per month. 68.1% of the netizens with an income of 1~500 Yuan/month play Internet games, which is higher than the rate of netizens with any other income levels: i.e., 32.2% of Internet games users are in this category of income level. Additionally, the lower the education level, the higher the ratio of playing Internet games is. 38.6% of the netizens with the education

level of postgraduate and above play Internet games, while 71% of the netizens with the education level of below secondary school play Internet games.

In general, young age, low income and low education level are the three prominent features of the Internet games users.

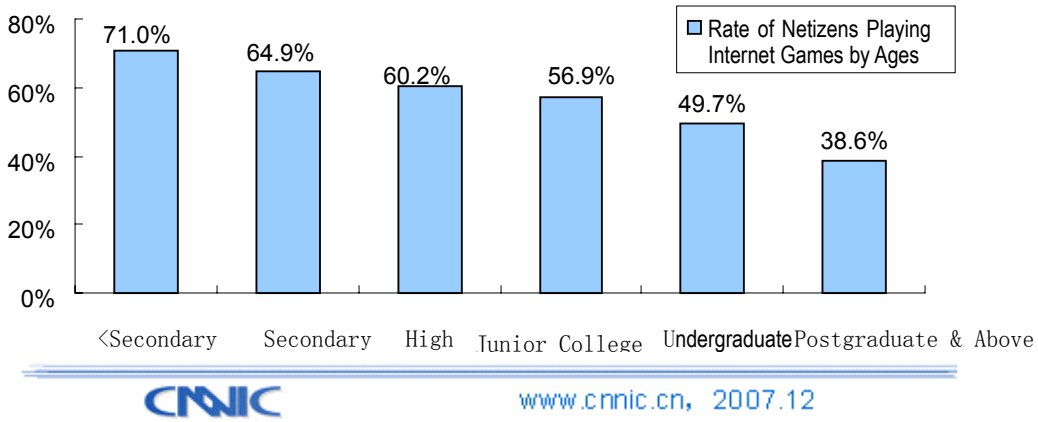

Figure 5-19: Rate of Netizens Playing Internet Games by Ages

In Chongqing and Sichuan, the rate of netizens playing Internet games is extremely high, being higher than 67% in both places: i.e., in half of a year, of every 3 netizens, 2 have played Internet games. In Beijing, the ratio of netizens playing Internet games is the lowest in China: within half of a year, 51.7% of the netizens have played Internet games.

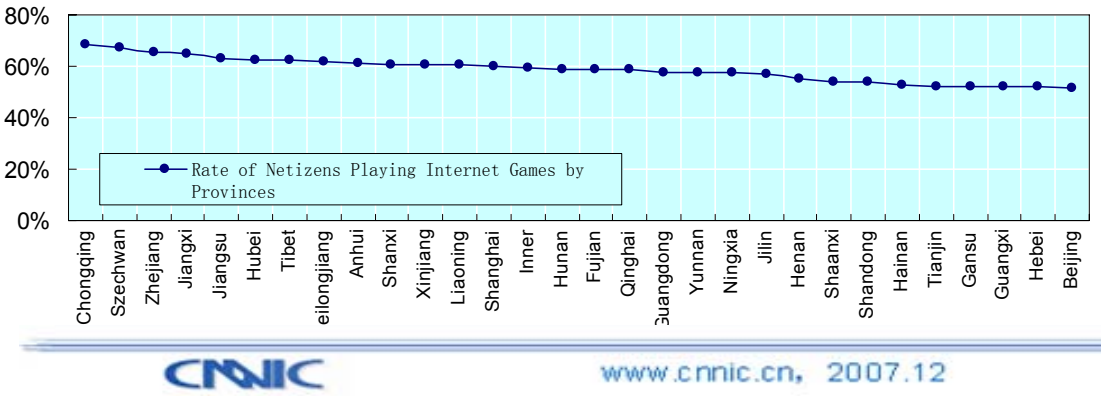

Figure 5-20: Rate of Netizens Playing Internet Games by Provinces

The problem of primary and middle school students[13] playing Internet games has always been a social hot spot. At present, the size of primary and middle school students playing Internet games has reached 36.82 million, being 17% of the total primary and middle school students and 73.1% of the primary and middle school student netizens. Their average time of playing games is 3.3 hours per week, while those playing for more than 10 hour per week are 5.5% of the primary and middle school student Internet game users.

[13] Including the students at high, secondary and primary schools.

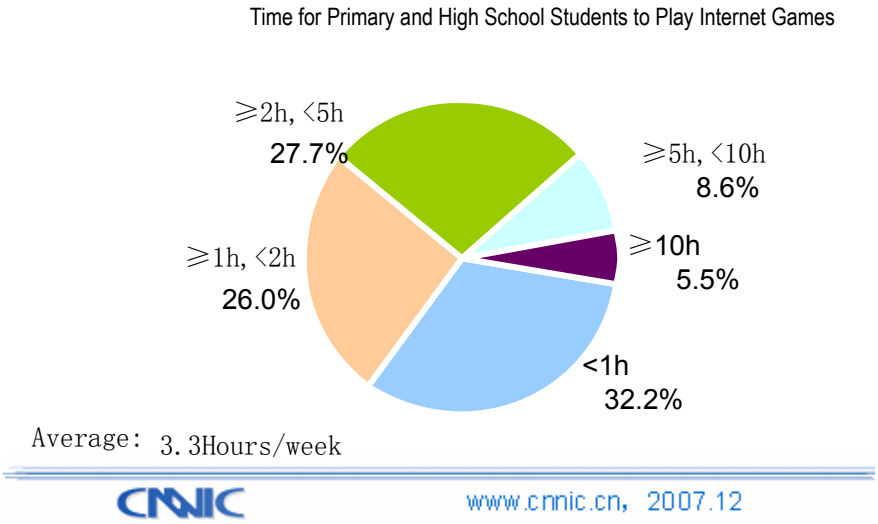

Figure 5-21: Time for Primary and High School Students to Play Internet Games

The government has been aware that the excessive indulgence in Internet games will cause an adverse impact on the minors. In this regard, the Chinese government has introduced the anti-indulgence system. In case of playing Internet games for more than one hour a day, the system will prompt a warning or reduce the game-gainings of users. In December 2007, 36.2% of the primary and middle school netizens confessed that they have been constrained by the anti-indulgence system, but the constraining effect is unknown yet.

(II) Online Music

The audience rate of online music ranks the firstop one of all the network applications in China. Within half of a year, 86.6% of the netizens have listened to online music. The network has become an important channel for music. Most of the netizens that have not listened to online music are new netizens or netizens that are too much older or younger. At present, of the 210 million netizens, 71.2% have downloaded music within half of a year.

As far as the regional distribution of online music netizens is concerned, the netizens in Hainan, Sichuan and Anhui have a higher ratio of listening to online music. The ratio for such big cities like Beijing and Shanghai is relatively not so high. In terms of music downloading rate, Beijing and Shanghai show the highest rate.

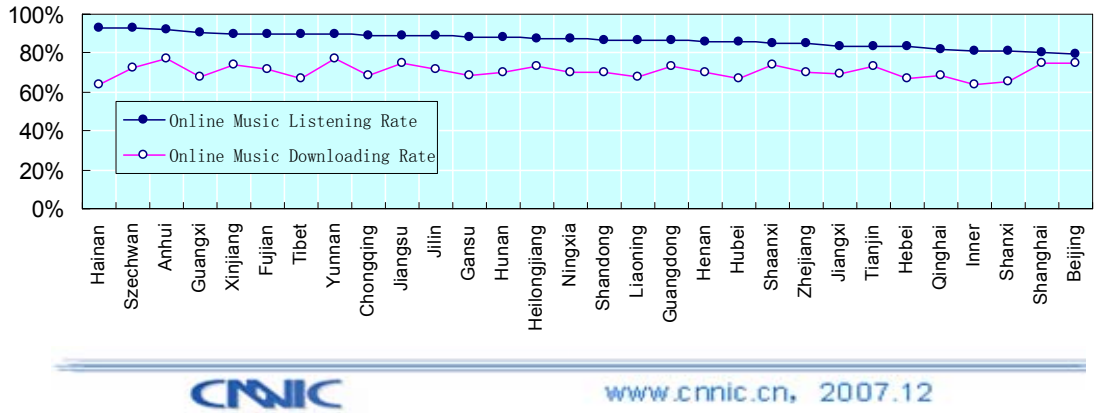

Figure 5.22 Online Music Listening Rate and Downloading Rate of Netizens by Provinces

(III) Online Video

In 2007, China's online video observed a rapid development. At present, the watching rate of online video has reached 76.9%. 160 million Chinese have watched video programs through the network. Various factors such as social development have led to the rapid development of online video. The penetration of broadband broadcasting and the rise of video websites are the driving force for the dissemination of online video.

Of the netizens with different education levels, the netizens with the education level of high school and tertiary education are most favorite online video, while the watching rate for the netizens with lower education level or higher education level is lower.

As for downloading, 40.5% of netizens interviewed have downloaded online video within half of a year. The higher the education level of netizen, the higher the online video downloading rate of netizens is. The reason is that downloading requirescertain techniques. The netizens with higher education level may master the downloading techniques better.

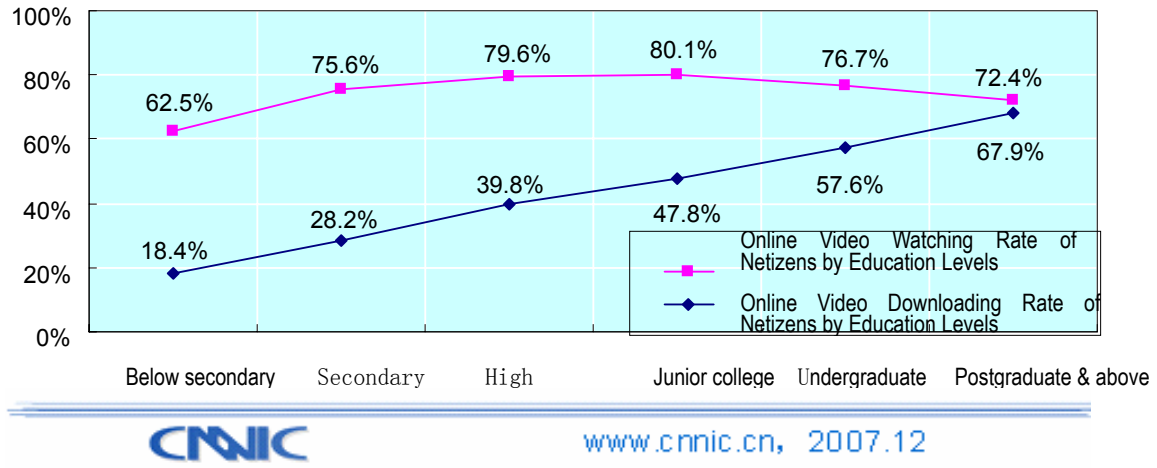

Figure 5-23 Online Video Watching Rate and Downloading rate of Netizens by

Education Levels

In different regions, the rate of watching and downloading online video is also different. The online watching rate in Beijing and Shanghai is obviously lower than other provinces and municipalities, but the downloading rate is higher than other provinces and municipalities.

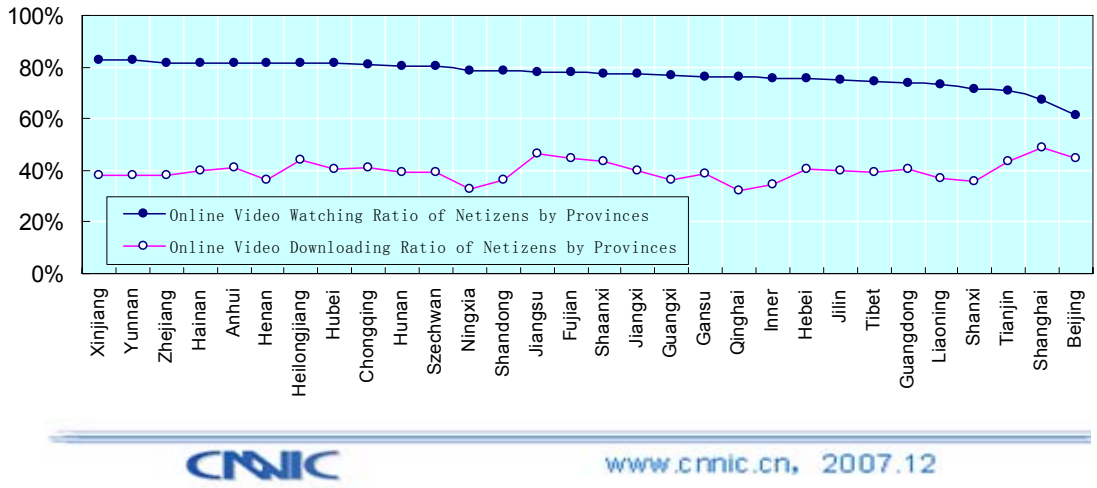

Figure 5-24 Online Video Watching rate and Downloading rate of Netizens by Provinces

VI. e-Commerce

Online shopping and online sales are an important part of the Internet as a business platform tool. Netizens and merchants can make use of the Internet platforms for their respective needs and mutual benefits. They are the network applications that should be advocated by the governments and the society. In December 2007, the online shopping rate of Chinese netizens was 22.1%, with the size of shopping reaching 46.40 million Yuan. In contrast, USA observed an online shopping rate of as high as 71%[14]in August 2006.

Netizens of online shopping are a group of high class. The higher the education level, the higher the online shopping rate is. The online shopping rate of netizens with the education level of postgraduate and above has reached 56.5%. Over 80% of the shopping groups reside in the urban areas, mostly working in the joint ventures and foreign-invested enterprises, with higher income. Additionally, the longer the history of surfing online, the higher the shopping rate is. The online shopping rate of netizens who started to surf online before 1999 is 42.4%, while the online shopping rate of new netizens joining in 2007 is only 5.7%: the online shopping rate is higher for experienced netizens.

[14]Data source: www.pewinternet.org.

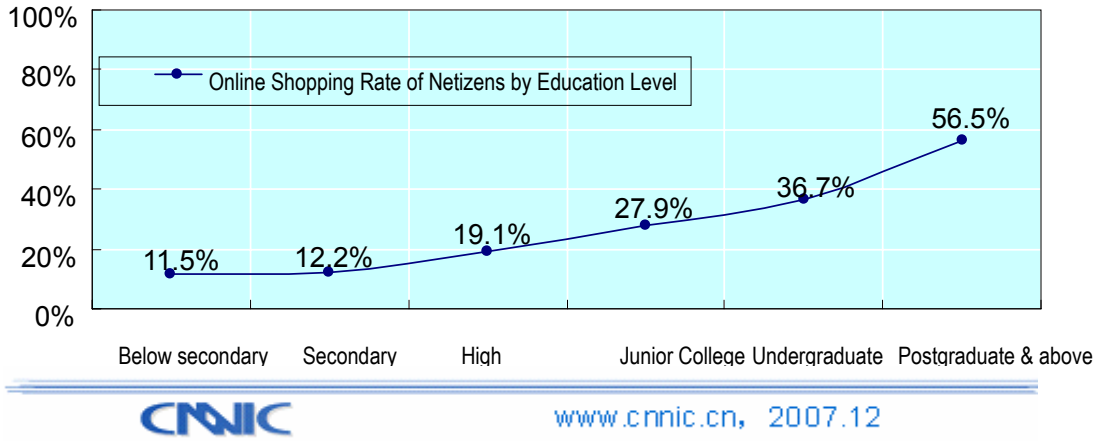

Figure 5-25: Online Shopping Rate of Netizens by Education Level

Online shopping behavior is closely related to such activities as online payment and online banking. The rate for online shoppers to use these two online financial activities is much higher than that of other netizens. The rise of online shopping may promote the rapid development of various network applications related to online payment and online banking.

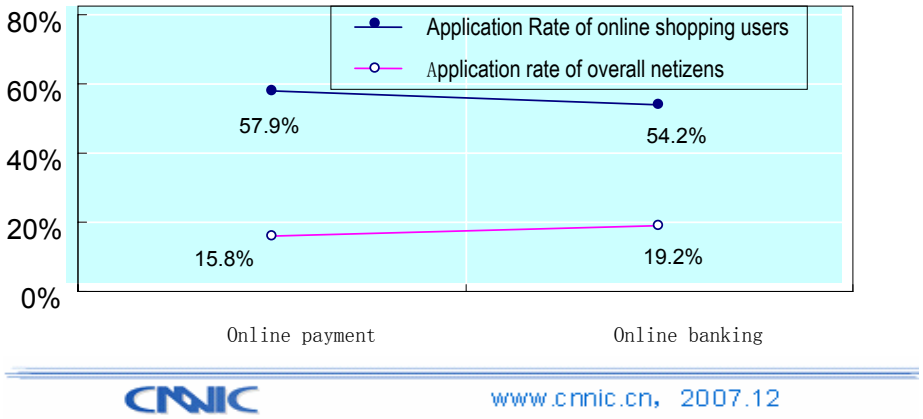

Figure 5-26: Comparison between online shopping users and overall netizens in terms of online finance application rate

The average aggregate amount of netizens involved in online shopping is 466 Yuan within half of a year, while the rate of the shopping amount exceeding 1000 Yuan is 19.1%.

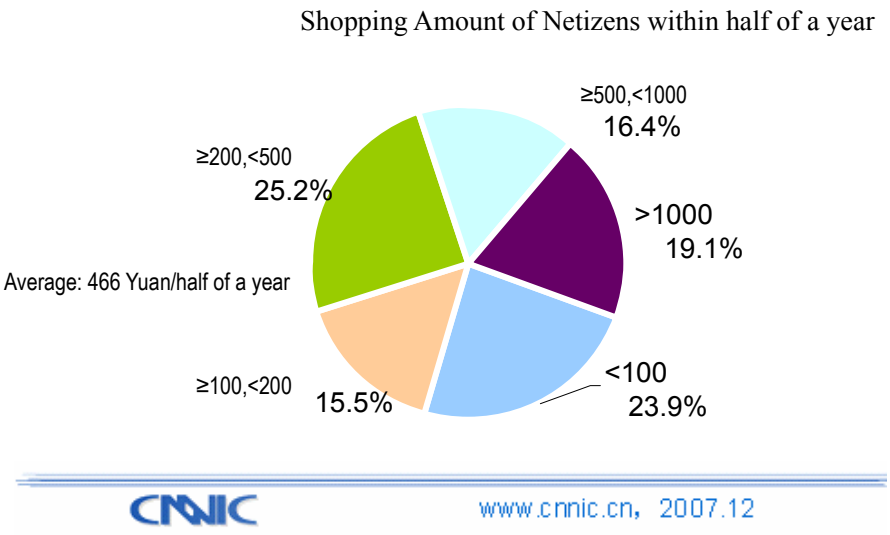

Figure 5-27: Shopping Amount of Netizens

Regionally, Shanghai and Beijing are the first echelon of online shopping, with the highest shopping rate of 41.4% and 36% respectively; Sichuan, Zhejiang and Jiangsu constitute the second echelon of online shopping, also with comparatively high shopping rate reaching 28.7%, 27.9% and 26.6% respectively. The shopping rates of other provinces are on a low side and needs to be cultivated by market activities.

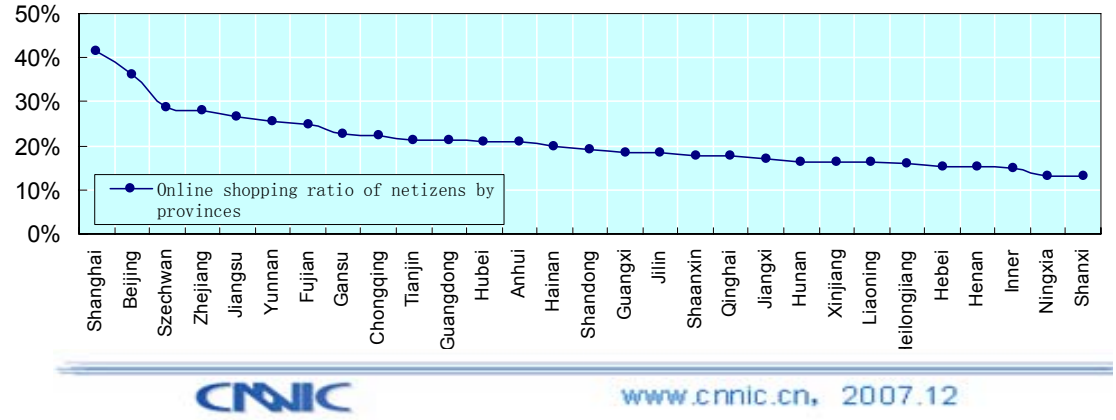

Figure 5-28: Online shopping rate of netizens by provinces

VII. Others

(I) Online Job Hunting/Online Education/Online Stock & Fund

Online job hunting and online education are one of the Internet auxiliary tools for work and study. At present, in China's Internet market, the ratio of these Internet applications is comparatively low. Possibly due to the seasonal or other reasons, the number of online job hunting and online education in December 2007 is slightly smaller than that of June 2007.

The rate of online stock and fund is basically in line with the change in China's stock and fund market, increasing successively. Rate of netizens using online stock and fund is 18.2%, with an increase of 4.1 percentage points as compared with June 2007. The number of Netizens reached 38.22 million, with an increase of 15.38 million as compared with June 2007.

Table 5.2 Application Rate of Online Job Hunting/Online Education/Online Stock/Fund

Network application	Application rate	User Size (10,000)
Online Job Hunting	10.4%	2,184
Online Education	16.6%	3,486
Online Stock/fund	18.2%	3,822

(II) User Generated Content

In recent years, the concept of Web 2.0 has been quite popular. The independent content created by netizens (i.e., User Generated Content, UGC) has become a hot spot attracting the concerns at home and abroad. According to the common view of the industry, China's Internet is now entering the age of web2.0. Its major difference with Web1.0 is that in Web2.0, individuals are not passive but positive to participate in the Internet. In addition to being an Internet user, an individual also becomes a positive disseminator, writer and producer of the Internet.

Of the 210 million netizens, 34.3% have never provided any content to the Internet, while nearly 2/3 (65.7%) of the netizens have posted or uploaded contents onto the Internet: 138 million netizens have made certain contributions to the Internet contents.

Most of the netizens are providing script contents to the Internet. Within half of a year, 35.5% of the netizens have posted or followed comments. Next is uploading pictures: 31.8% of the netizens have done it. The rate of netizens that have uploaded video programs or other video items is 17.5% .

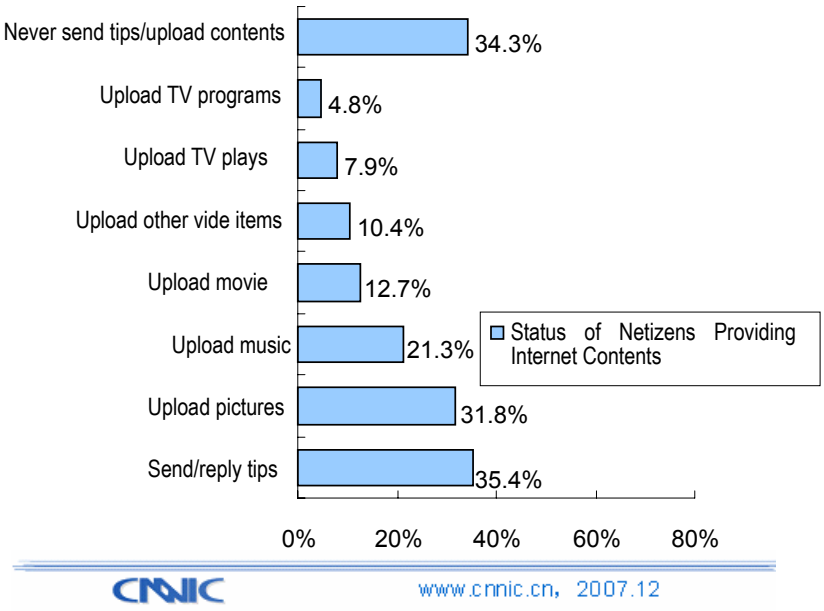

Figure 5-29: Status of Netizens Providing Internet Contents

Netizens who have contributived to the Internet contents are a group of comparatively active netizens, who are comparatively young, while the netizens aged 18~24 contributed the most to the Internet contents. Additionally, the higher the education level, the larger contribution contents to the Internet. These Netizens are mostly residing in urban areas, while the rate of netizens in Beijing and Shanghai provided most of the contents. Besides, after providing one type of Internet contents, these netizens will often provide other types of Internet contents: most of the netizens that have posted comments also upload pictures, music and video.

Chapter Six Statistical Report on Application of Internet in Macao

Appendix 1 Addendums to Fundamental Internet resources

Table A1 Number of IPv4 addresses in Mainland China, Hong Kong, Macao and Taiwan

Region	Number of addresses	Equivalent
Mainland China	135,274,752	8A+16B+33C
Taiwan	19,832,576	1A+46B+159C
Hong Kong	7,224,320	110B+60C
Macao	146,688	2B+61C

Data source: APNIC, CNNIC.

Table A2 ：IPv4 Address Assignment List

Names of Units	Number of addresses	Equivalent
China Telecom	47,157,248	2A+207B+144C
China Netcom	25,732,096	1A+136B+164C
CERNET	12,511,744	190B+234C
China Tietong Corporation	7,012,352	107B
State Information Center	4,194,304	64B
China Unicom	1,835,008	28B
China Mobile	5,931,008	90B+128C
Beijing Telecom Engineering Co., Ltd	1,135,616	17B+84C
Beijing Educaiton Information Network Service Center Co., Ltd	1,572,864	24B
Oriental Cable Network Co., Ltd	876,544	13B+96C
CECT-Chinacomm Communications Co., Ltd	487,424	7B+112C
Great Wall Broadband Network Service Co., Ltd	393,216	6B
Beijing Oriental Youchuang Network Technology Co., Ltd	393,216	6B
Beijing China Great Wall Telecommunication Techology Development Center	335,872	5B+32C
Shandong Sanlian Electronic Information Co., Ltd	327,680	5B
Jiangxi Broadcasting & TV Information Network Co., Ltd	327,680	5B
Beijing Kuancom Network Technology Co., Ltd	327,680	5B
Beijing Broadband TeleCommunications Technology Co., Ltd	491,520	7B+128C
Shenzhen Topway Video Communications Co., Ltd	294,912	4B+128C
Beijing T2CN Information Technology Co., Ltd	280,576	4B+72C
Beijing Gehua CATV Network Co., Ltd	278,528	4B+64C
FIBRLINK Communications Co., Ltd	286,720	4B+96C
Beijing Founder Broadband Network Technology Co., Ltd	401,408	6B+32C
Jinan Guangdian Jiahe Digital TV Co., Ltd	270,336	4B+32C
Beijing Times Hongyuan Communications Technology Co., Ltd	524,288	8B
Xingtong Holding Co., Ltd	262,144	4B
Guangzhou Henghui Network Communications Co., Ltd	233,472	3B+144C
China Science and Technology Network	296,960	4B+136C

Sheet Continued

Names of Units	Number of addresses	Equivalent
China Motion telecom Co., Ltd	196,608	3B
Shenzhen Yingda Communications Technology Co., Ltd	249,856	3B+208C
Shanghai Aorong Information Technology Co., Ltd	229,376	3B+128C
Shenzhen Wotong Network Development Co., Ltd	196,608	3B
Daqing Zhongji Petroleum Communication Construction Co., Ltd	176,128	2B+176C
Beijing Kuanjiewang Communications Technology Co., Ltd	163,840	2B+128C
Beijing Bitong United Network Technology Service Co., Ltd	425,984	6B+128C
263 Network Communications Co., Ltd	154,624	2B+92C
China Cable TV Network Co., Ltd	401,408	6B+32C
Huaxia Shilian Holding Co., Ltd	131,072	2B
Guangdong Cable Radio & TV Network Co., Ltd	196,608	3B
CITIC Network Co., Ltd	131,072	2B
Beijing Weishi Chuangjie Technology Development Co., Ltd	393,216	6B
Shaanxi Guangdian Network Media Co., Ltd	131,072	2B
Beijing Qiliyou data Co., Ltd	393,216	6B
Beijing New Billion Telecom Technology Co., Ltd	393,216	6B
Digitalways Information and Culture Development Co., Ltd	131,072	2B
SRIT Netech Co., Ltd	122,880	1B+224C
Epern Communications Co., Ltd	114,688	1B+192C
Zhongqi Network Communications Technology Co., Ltd	98,304	1B+128C
TianjinRuiding Digital Technology Co., Ltd	81,920	1B+64C
Tianjin Broadcasting & TV Network Co., Ltd	77,824	1B+48C
Beijing Unihub Global Network Co., Ltd	73,728	1B+32C
China Netcom Chongqing	65,536	1B
China International e-Commerce Center	65,536	1B
Sichuan Broadcasting & TV Network Co., Ltd	65,536	1B
Airway Communications Co., Ltd	65,536	1B
Tianjin Xinbei Broadband Digital Network Co., Ltd	65,536	1B
Beijing Jadebird Communications Technology Co., Ltd	65,536	1B
Guangzhou Broadcasting & TV Network Co., Ltd	327,680	5B
Beijing Huandao Communications Co., Ltd	65,536	1B
Fushan Yinghui Online Network Co., Ltd	65,536	1B
Beijing Huatian Information Technology Co., Ltd	65,536	1B
Anhui Education Department	65,536	1B
China Digitport Technology Co., Ltd	65,536	1B
Guangdong Yingxing Information Technology Co., Ltd	65,536	1B
Beijing CNLink Network Technology Co., Ltd	65,536	1B
Shenzhen Pingji Tongda Communications Technology Co., Ltd	65,536	1B
Shanghai ITM Network Technology Co., Ltd	65,536	1B
Beijing Caixuda Technology Co., Ltd	65,536	1B
Shanghai Chuanwang Communications Technology Co., Ltd	65,536	1B

Continued Sheet

Names of Units	Number of addresses	Equivalent
Shanghai Tianting Network Technology Co., Ltd	65,536	1B

Shanghai SVA Co., Ltd	65,536	1B
Subtotal	120,409,600	7A+45B+78C
Others	14,865,152	226B+211C
Total	135,274,752	8A+16B+33C

Data source: APNIC, CNNIC.

Note: 1. As China's National Internet Registry (NIR) certified by APNIC and accredited by Ministry of Information Industry, CNNIC calls together Chinese ISPs with certain scale and influence to form an IP address assignment union. Currently, CNNIC Assignment Union has 256 members all together, with a total of 38,552,576 IP addresses, as in 2.3A. Most that are listed in the above table are members of CNNIC Assignment Union;

Table A3 2. IPv4 Address Assignment List includes only the units with the number of IPv4 addresses being more than 1B.

Table A4 Numbers of IPv6 Addresses in Mainland China, Hong Kong, Macao and Taiwan

Regions	Volume of addresses
Mainland China	31 blocks of /32
Taiwan	2,310 blocks of /32
Hong Kong	10 blocks of /32
Macao	2 blocks of /32

Table A5 IPv6 Address Assignment in Mainland China

Names of Units	Addresses
CERNET	9 blocks of /32
Beijing China Great Wall Telecommunication Technology Development Center	8 blocks of /32
China Internet Information Center	1 block /32
China Tietong Corporation	1 block of /32
China International e-Commerce Center	1 block of /32
CSTNET	1 block of /32
China Mobile	1 block of /32
China Telecom	1 block of /32
China Unicom	1 block of /32
China Netcom	1 block of /32
Chongqing Broadband Networks Co., Ltd	1 block of /32
Beijing Telecom Engineering Co., Ltd	1 block of /32
Dongwan Bolu Telecom Technology Co., Ltd	1 block of /32
Beijing Hichina Zhicheng Technology Co., Ltd	1 block of /32
Beijing Software & Information Service Promotion Center	1 block of /32
China CITIC Management Information Dept	1 block of /32

Data source: APNIC, CNNIC

Note: In IPv6 Address Assignment List, /32 is the expression of addresses of IPv6, with the corresponding number of addresses being $2^{(128-32)}=2^{96}$. Similarly, the corresponding number of addresses to /48 is $2^{(128-48)}=2^{80}$.

TABLE A6 Number of IPv4 Addressees by Provinces

Province	Ratio
Beijing	19.4%
Guangdong	9.8%
Jiangsu	7.2%
Zhejiang	6.8%
Shanghai	6.4%
Shandong	4.8%
Henan	3.9%
Liaoning	3.6%
Sichuan	3.5%
Hubei	2.9%
Hebei	2.9%
Shaanxi	2.6%
Fujian	2.5%
Hunan	2.3%
Guangxi	2.2%
Tianjin	2.2%
Heilongjiang	2.1%
Anhui	2.1%
Jilin	1.9%
Chongqing	1.9%
Jiangxi	1.8%
Yunnan	1.3%
Shanxi	1.3%
Inner Mongolia	1.2%
Hainan	0.9%
Xinjiang	0.8%
Guizhou	0.7%
Gansu	0.6%
Ningxia	0.3%
Qinghai	0.2%
Tibet	0.1%
Total	100.0%

Data source: APNIC, CNNIC

Table A7 Number of domain names and number of CN domain names by provinces

Province	domain name		Including : CN domain name	
	Qty (Nrs)	Ratio of total domain names	Qty (Nrs.)	Ratio of total CN domain names
Beijing	2,098,552	17.6%	1,738,023	19.3%
Shanghai	1,860,950	15.6%	1,570,583	17.5%
Guangdong	1,421,600	11.9%	903,628	10.0%
Fujian	826,644	6.9%	557,132	6.2%
Zhejiang	807,060	6.8%	549,793	6.1%
Shandong	597,460	5.0%	463,676	5.2%
Jiangsu	577,434	4.8%	342,294	3.8%
Sichuan	458,023	3.8%	309,798	3.4%
Liaoning	280,251	2.3%	204,028	2.3%
Hunan	263,368	2.2%	215,272	2.4%
Henan	253,469	2.1%	192,587	2.1%
Hubei	234,116	2.0%	172,440	1.9%
Hebei	215,761	1.8%	150,713	1.7%
Anhui	148,827	1.2%	116,201	1.3%
Guangxi	142,096	1.2%	113,490	1.3%
Chongqing	134,508	1.1%	100,332	1.1%
Jiangxi	131,325	1.1%	107,120	1.2%
Shaanxi	117,478	1.0%	84,601	0.9%
Tianjin	113,735	1.0%	63,541	0.7%
Heilongjiang	111,905	0.9%	80,758	0.9%
Yunnan	87,790	0.7%	65,935	0.7%
Jilin	86,677	0.7%	66,709	0.7%
Shanxi	78,925	0.7%	54,181	0.6%
Guizhou	51,736	0.4%	44,429	0.5%
Inner Mongolia	48,609	0.4%	39,594	0.4%
Ningxia	44,112	0.4%	39,090	0.4%
Xinjiang	42,941	0.4%	30,867	0.3%
Hainan	38,321	0.3%	27,045	0.3%
Gansu	37,781	0.3%	29,102	0.3%
Tibet	11,224	0.1%	10,524	0.1%
Qinghai	9,537	0.1%	7,857	0.1%
Others	595,828	5.0%	547,416	6.1%
Total	11,928,043	100.0%	8,998,759	100.0%

Note: 1. the above data excludes the website data under .EDU.CN. The total is not equivalent to the total domain names and total CN domain name above.

2. Grouping by province is subject to the registration place of domain names.

Table A8 Number of Websites by Provinces

	Qty of website (Nrs)	Rate of Total Website
Beijing	273,742	18.2%
Shanghai	265,872	17.7%
Guangdong	241,473	16.1%
Jiangsu	118,936	7.9%
Zhejiang	91,509	6.1%
Fujian	73,754	4.9%
Shandong	69,562	4.6%
Liaoning	38,928	2.6%
Sichuan	35,544	2.4%
Hubei	34,990	2.3%
Hebei	28,190	1.9%
Henan	24,537	1.6%
Anhui	20,089	1.3%
Hunan	19,140	1.3%
Guangxi	14,731	1.0%
Jiangxi	14,512	1.0%
Shaanxi	12,382	0.8%
Chongqing	12,153	0.8%
Tianjin	10,841	0.7%
Heilongjiang	9,923	0.7%
Jilin	9,563	0.6%
Yunnan	8,733	0.6%
Shanxi	7,489	0.5%
Inner Mongolia	5,320	0.4%
Guizhou	4,180	0.3%
Hainan	3,953	0.3%
Gansu	3,610	0.2%
Xinjiang	3,082	0.2%
Ningxia	1,752	0.1%
Qinghai	883	0.1%
Tibet	672	0.0%
Overseas	43,755	2.9%
Total	1,503,800	100.0%

Note: 1. the above data excludes the website data under .EDU.CN.

2. Grouping by province is subject to the registration place of domain names.

Table A9 Number of Websites by type under .CN

	Qty (10,000)	Rate of websites under .CN
.CN	62.1	61.7%
.COM.CN	29.8	29.6%
.NET.CN	3.8	3.8%
.GOV.CN	1.4	1.4%
.ORG.CN	1.8	1.8%
.ADM.CN	1.8	1.8%
.AC.CN	0.1	0.1%
.MIL.CN	0.0	0.0%
Total	100.6	100.0%

Table A10 Status of Web Pages by Code

Codes of web page	Rate
Simplified Chinese	97.6%
Complex Chinese	0.4%
English	0.9%
Others	1.1%
Total	100.0%

Table A11 Status of Web Pages by Suffix

Form of web page suffix	Rate
asp	21.6%
php	19.5%
.html	16.4%
shtml	7.3%
htm	6.6%
aspx	4.3%
/	2.3%
jsp	1.5%
do	0.6%
cgi	0.5%
jhtml	0.1%
cfm	0.1%
xml	0.0%
php3	0.0%
txt	0.0%
pl	0.0%
dll	0.0%
phtml	0.0%
Other suffixes	19.1%

Total	100.0%

Table A12 Status of Web Pages by Updating Period

Updating period of web pages	Rate
Within one week	12.1%
One week to one month	17.4%
One month to three months	14.5%
Three months to six months	41.0%
Above six months	15.0%
Total	100.0%

Table A13 Status Quo of Web Pages by Multi-media

Multi-media forms of web pages	Percentage (in the multi-media web pages)
jpg	28.8%
gif	33.7%
zip	0.1%
swf	0.1%
doc	0.1%
pdf	0.1%
rm	0.0%
mid	0.0%
ram	0.0%
mp3	0.1%
Others (e.g.: ppt, mpg, etc)	37.0%
Total	100.0%

Table A14 Number of Web Pages by Province

	Total (Nrs)	Static (Nrs)	Dynamic (Nrs)	Ratio of Static & Dynamic
Beijing	1,557 ,975,176	747,118,881	810,856,295	0.92: 1
Zhejiang	906,859,403	448,390,496	458,468,907	0.98: 1
Guangdong	845,872,877	406,670,583	439,202,294	0.93: 1
Shandong	470,019,481	200,835,082	269,184,399	0.75: 1
Fujian	409,401,102	185,977,952	223,423,150	0.83: 1
Shanghai	404,721,897	212,201,456	192,520,441	1.1: 1
Liaoning	369,325,205	173,884,711	195,440,494	0.89: 1
Hunan	353,678,543	153,782,075	199,896,468	0.77: 1
Chongqing	349,474,325	170,574,456	178,899,869	0.95: 1
Tianjin	325,643,403	185,634,638	140,008,765	1.33: 1
Sichuan	309,180,236	137,818,297	171,361,939	0.8: 1
Jiangsu	294,287,246	133,585,549	160,701,697	0.83: 1
Gansu	232,380,357	130,150,904	102,229,453	1.27: 1
Henan	223,620,478	95,104,499	128,515,979	0.74: 1
Hebei	206,715,361	108,335,141	98,380,220	1.1: 1
Jiangxi	173,075,412	85,064,149	88,011,263	0.97: 1
Yunnan	170,128,307	89,541,121	80,587,186	1.11: 1
Hubei	150,737,680	66,517,408	84,220,272	0.79: 1
Shaanxi	122,923,831	46,040,733	76,883,098	0.6: 1
Qinghai	114,273,338	59,003,169	55,270,169	1.07: 1
Guangxi	109,058,092	57,123,222	51,934,870	1.1: 1
Anhui	103,389,230	51,810,490	51,578,740	1:01
Heilongjiang	58,622,542	23,224,651	35,397,891	0.66: 1
Jilin	44,862,739	20,762,869	24,099,870	0.86: 1
Hainan	43,059,169	20,834,099	22,225,070	0.94: 1
Inner Mongolia	36,871,981	11,910,215	24,961,766	0.48: 1
Xinjiang	22,015,429	9,398,703	12,616,726	0.74: 1
Guizhou	21,980,080	10,797,137	11,182,943	0.97: 1
Shanxi	20,309,739	8,155,345	12,154,394	0.67: 1
Ningxia	20,195,510	15,275,699	4,919,811	3.1: 1
Tibet	426,397	167,206	259,191	0.65: 1
China	8,471,084,566	4,065,690,936	4,405,393,630	0.92: 1

Table A15 Web Page Bytes by Province

	Total web page bytes (KB)	Average bytes per web page (KB)
Beijing	36,541,979,705	23.5
Zhejiang	22,972,643,780	25.3
Guangdong	19,275,609,277	22.8
Shandong	10,400,153,835	22.1
Shanghai	9,931,798,892	24.5
Fujian	9,237,266,109	22.6
Liaoning	8,776,313,138	23.8
Tianjin	8,653,572,880	26.6
Hunan	7,922,783,924	22.4
Chongqing	7,733,646,304	22.1
Sichuan	6,923,287,521	22.4
Gansu	6,785,317,025	29.2
Jiangsu	6,426,163,419	21.8
Henan	5,002,239,209	22.4
Hebei	4,535,157,755	21.9
Jiangxi	3,670,819,826	21.2
Yunnan	3,449,074,346	20.3
Hubei	3,352,426,031	22.2
Shaanxi	3,004,237,117	24.4
Qinghai	2,743,630,606	24
Guangxi	2,627,616,043	24.1
Anhui	2,114,618,064	20.5
Heilongjiang	1,313,049,823	22.4
Hainan	1,157,984,065	26.9
Jilin	1,014,975,564	22.6
Inner Mongolia	807,756,871	21.9
Guizhou	587,737,250	26.7
Shanxi	470,278,824	23.2
Ningxia	464,490,199	23
Xinjiang	443,738,549	20.2
Tibet	7,858,248	18.4
China	198,348,224,198	23.4

Table A16 Percentage of web pages in Terms of the Updating Period by Province

	<1 week	1 week~1 month	1 month~3 months	3 months~6 months	> 6 months
Anhui	12.3%	16.8%	14.3%	41.1%	15.6%
Beijing	12.6%	17.6%	14.7%	40.7%	14.4%
Fujian	11.8%	16.7%	14.4%	41.1%	15.9%
Gansu	14.0%	15.9%	13.2%	43.6%	13.3%
Guangdong	11.2%	17.8%	14.8%	41.0%	15.2%
Guangxi	12.2%	16.4%	14.3%	40.2%	16.9%
Guizhou	11.2%	16.2%	14.6%	39.2%	18.8%
Hainan	12.4%	17.1%	13.6%	40.7%	16.2%
Hebei	11.3%	17.9%	15.1%	40.9%	14.9%
Henan	11.7%	17.2%	15.4%	41.4%	14.5%
Heilongjiang	10.6%	16.4%	14.9%	41.4%	16.7%
Hubei	11.2%	16.8%	14.9%	42.1%	15.0%
Hunan	11.6%	17.6%	14.4%	40.7%	15.7%
Jilin	11.4%	16.8%	15.0%	40.4%	16.5%
Jiangsu	11.8%	17.1%	13.6%	41.9%	15.5%
Jiangxi	10.8%	17.3%	14.6%	40.4%	16.9%
Liaoning	12.1%	18.0%	14.9%	39.9%	15.2%
Inner Mongolia	10.3%	15.7%	15.1%	42.0%	17.0%
Ningxia	17.1%	13.8%	13.4%	47.0%	8.7%
Qinghai	13.5%	18.7%	13.7%	39.8%	14.3%
Shandong	11.7%	16.7%	14.7%	40.9%	16.1%
Shanxi	11.4%	17.9%	15.9%	41.4%	13.4%
Shaanxi	12.4%	17.6%	14.6%	41.7%	13.7%
Shanghai	12.8%	17.7%	13.6%	40.9%	15.1%
Sichuan	12.0%	18.5%	15.3%	39.7%	14.5%
Tianjin	13.6%	17.9%	13.3%	41.0%	14.3%
Tibet	9.9%	17.0%	15.0%	41.5%	16.6%
Xinjiang	11.8%	19.7%	16.2%	36.4%	15.9%
Yunnan	11.3%	17.1%	14.7%	41.9%	15.0%
Zhejiang	12.0%	17.4%	14.5%	41.0%	15.2%
Chongqing	11.8%	17.5%	14.4%	42.0%	14.3%
China	12.1%	17.4%	14.5%	41.0%	15.0%

Table A17 Rate of Web Pages In Terms of the Codes by Province

	Simplified Chinese	Complex Chinese	English	Others
Anhui	96.7%	0.1%	2.1%	1.2%
Beijing	97.6%	0.7%	0.8%	0.8%
Fujian	97.4%	0.4%	1.1%	1.1%
Gansu	98.3%	0.4%	0.8%	0.5%
Guangdong	97.2%	0.6%	0.8%	1.5%
Guangxi	96.6%	0.1%	0.7%	2.5%
Guizhou	98.9%	0.0%	0.6%	0.5%
Hainan	98.3%	0.2%	0.7%	0.8%
Hebei	97.6%	0.2%	0.8%	1.4%
Henan	98.1%	0.1%	0.7%	1.1%
Heilongjiang	96.6%	0.3%	1.0%	2.1%
Hubei	98.4%	0.2%	0.6%	0.8%
Hunan	97.4%	0.7%	0.8%	1.1%
Jilin	98.2%	0.1%	0.8%	1.0%
Jiangsu	97.9%	0.3%	0.6%	1.3%
Jiangxi	96.9%	1.0%	1.0%	1.2%
Liaoning	97.6%	0.1%	1.0%	1.4%
Inner Mongolia	98.3%	0.0%	0.7%	1.0%
Ningxia	98.0%	0.0%	0.5%	1.6%
Qinghai	97.4%	0.9%	1.1%	0.7%
Shandong	96.8%	0.3%	1.5%	1.4%
Shanxi	97.0%	0.4%	0.8%	1.8%
Shaanxi	97.6%	0.3%	1.1%	1.0%
Shanghai	97.8%	0.5%	0.7%	0.9%
Sichuan	97.6%	0.1%	0.8%	1.5%
Tianjin	97.9%	0.2%	1.1%	0.8%
Tibet	98.3%	0.7%	0.4%	0.6%
Xinjiang	97.7%	0.7%	0.6%	1.1%
Yunnan	98.4%	0.1%	0.6%	0.9%
Zhejiang	97.8%	0.2%	0.9%	1.1%
Chongqing	97.7%	0.4%	0.9%	1.0%
China	97.6%	0.4%	0.9%	1.1%

Appendix 2 Typical Internet Application

Note: all data of the subject are sources from the online survey findings. The samples are collected with the assistance of different supporting websites. According to the IP addresses of the samples answering the questions and completeness of the questions completed, the effectiveness of samples are checked. This specific network survey includes three parts, from which the netizens participating in the online survey can select the contents they are interested in for answering the questions. The final valid samples are in total 69,556. These do not necessarily represent the overall netizens in China, but are of important references.

I. Network Security

Online Security: this part of survey focuses on the security problems of netizens while using the Internet.

Table S2.1 Rate of Network Security Problems with Netizens

	Ratio
Infected with virus	90.8%
Account numbers/personal information stolen or revised	44.8%
Online hacker attacks	26.7%
Cheated by counterfeited websites	23.9%
Neither of the above encountered	2.5%
Others	1.2%

Table S2.2 Frequency of network security problems with netizens in the second half of 2007

	0	1~2	3~5	> 5
Frequency of Infection with virus	3.6%	37.0%	23.7%	35.8%
Frequency of account numbers/personal information stolen or revised	16.3%	63.2%	13.1%	7.4%
Frequency of Online hacker attacks	18.8%	47.8%	13.8%	19.6%
Frequency of being cheated by counterfeited websites	12.4%	53.7%	16.1%	17.7%

Table S2.3 Locations wherein the Netizens' Account Numbers/Passwords Get Stolen

	Rate
Internet cafe	56.5%
Home (including home of relatives and friends)	37.1%

Working place	24.7%
School	17.5%
Public area (library/airport/café, etc)	15.5%
Others	2.5%

Table S2.4 Reason for Netizens' Account Numbers or Personal Information being Stolen

	Ratio
MSN/QQ/E-mail/Netgame account numbers decoded	75.9%
Replay cheating e-mails with false and tempting information, AC/Password and other personal information deceived	23.7%
Upon visiting deceptive online banking, online securities, e-Commerce and other deceptive website, users' account number and password were provided	16.8%
Others	9.4%
No idea	5.1%

Table S2.5 Incentives for Netizens to Log In Deceptive Websites (Deceptive Imitation of Famous Websites)

	Ratio
Other website links	59.8%
Links sent by friends through MSN/QQ and other chatting tools	49.6%
Search engine links	45.1%
e-mail link	32.8%
Mobile phone SM	9.1%
Others	1.9%

Table S2.6 How Netizens Find out Network Security Problems with Computers

	Rate
Upon analyzing after the unit is in abnormal operation	77.9%
With security protection products	60.0%
Notified or prompted by colleagues, friends and classmates	13.1%
Notified or prompted by network administrators	9.7%
Others	1.1%

Table S2.7 Prime action taken by netizens when the computer is infected with virus

	Rate
Kill virus	74.0%
Reinstall the system	19.2%

Ask for assistance	3.6%
Pull out the net wire and shut down the computer	1.5%
No action	0.5%
Others	0.4%
No idea what to do	0.4%

Table S2.8 Habit of Netizens for Network Security

	Ratio
Regular virus scanning/killing	81.3%
Regular updating of virus base	77.0%
No action upon receiving any strange QQ, MSN or other instant messages	58.0%
Do not open e-mails received from strangers indiscriminately	56.9%
Scan the documents from any outside source for virus before using	44.8%
Regularly change the account password	23.3%
None of the above	2.5%

Table S2.9 How Netizens Normally Design Network Accounts and Passwords

	Rate
Combination of the above two	55.3%
Numeral+letter+symbol	27.7%
Numerals only	12.1%
Letters only	2.7%
No idea	1.3%
Symbols only	0.8%

Table S2.10 How many digits are generally used by Netizens for online account ID codes and passwords

	Percentage
>8 digits	49.8%
7~8 digits	30.3%
4~6 digits	19.3%
1~3 digits	0.6%

II. Network Downloading

Online Downloading: including the means of network downloading tools, web page links and operating system default and others to carry out the downloading. This section of the survey focuses on the habits of netizens in network downloading.

Table S2.11 Main Contents of Downloading by Netizens

	Ratio
Music	75.3%
Movie	72.1%
Materials for work and study	66.3%
Games	42.7%
Pictures	42.1%
All other tool software than anti-virus software	38.9%
Anti-virus software	37.4%
TV Programs	24.7%
Novels	23.5%
Others	0.9%

Table S2.12 Major Downloading Methods of Netizens

	Ratio
Downloading tools	78.1%
Right click “Save As”	13.4%
Click to choose the system default	8.3%
No ideas	0.2%

Table S2.13 Willingness of Netizens to Pay for Downloading Contents

	Ratio
Willing if the price is appropriate	55.4%
Unwilling	44.3%
Willing no matter how much it costs	0.4%

III. Online Video

Online video: means the video service netizens experienced through the Internet, including the online video explore (including the different applications such as video sharing, broadband movie and TV, podcasting, video search and online video: e.g., video showroom and video shopping etc), online TV (P2P stream media downloading software), online download local explore and other different network video services. This section of the survey focuses on the habits of netizens in network video.

Table S2.14 Major Methods for Netizens to Water Network Videos

	Ratio
Viewing on the web page	44.06%
With network TV software (P2P stream media downloading software)	29.91%
With multi-media player, after downloading	21.47%
No idea	4.56%

Table S2.15 Contents of Online Video

	Ratio
Movie/TV/music	79.7%
News/information	46.2%
Fun/venture/special venture	46.0%
Recreation program/drama, cross talk & etudes	40.5%
Sports	33.4%
Cartoons/games	33.1%
Original/self-made/DV show	29.9%
Finance and business	24.2%
Others	1.0%

Table S2.16 Channels for Netizens to Know about Video Websites

	Percentage
Through search engine	29.1%
By chance while browsing web pages	26.6%
Introduced or recommended by others	19.1%
Through the links of other websites	12.6%
Through advertisements (TV, outdoor, vehicle mounted, etc)	3.9%
Can't remember	3.2%
Preset in the computer	2.8%
Attached while installing other software	2.2%
Others	0.5%

Table S2.17 Netizen's Habit of Shooting or Making Programs for Themselves

	Percentage
No	81.26%
Yes	18.74%

Table S2.18 Reasons for Netizens not to browse Network Video

	Ratio
Network speed is too slow	89.7%
Content quality is not high	55.9%
Used to other methods for watching video	39.1%
No time to watch online	31.0%
I think nothing online is suitable for me	21.7%
Do not know the video can be watched online	9.3%
Others	6.8%

Appendix 3 Supporting Units of Survey

(I) Supporting websites of survey (in random sequence)

China.com	CCTV.com	Cri.cn
People.com	Youth.cn	Gmw.com
Bjradio.com.cn	Eastday.com	Antivirus-china.org.cn

(II) Survey access websites (as per sequence of survey links put on the websites)

Sina.com	163.com	Sohu.com
Ourgame.com	Cdream.com.cn	Cn.msn.com
Jrj.com	Rising.com.cn	2u.com.cn
Hc360.com	qq.com	Inhe.net
Yninfo.com	Money.hexun.com	263.net
Shangdu.com	Open V	Skype
Gx-info.gov.cn	Ppstream.com	39.net
He-nan.com	W8.com	Thtf.com
Pcpop.com	Real digital entertainment	Firefox
Ku6.com	Jsinfo.vnet.cn	Fjii.com
Westcn.com	Vnet.cn	Youku.com
IT.com.cn	Newhua.com	Hlj.net
Uusee.com	Tudou.com	Gz163.cn
Founderbn.com	Cnco.org	Funshion.com
Adobe	hh.nm.cn	56.com

(III) Supporting units for broadband survey

Beijing Communication Company IDC

(IV) Assisting Units of Survey (in random sequence)

Yodao

China Netcom

China Telecom

China Unicom

China Mobile

CERNET

China Science & Technology Network Center

China Satcom

China Tietong Corporation

China International e-Commerce Center

China Great Wall Internet Center

Beijing Hichina Zhicheng Technology Co., Ltd

China Enterprise APS Ltd

Beijing Xin Net Corp

Xiamen ZZY Network Service Co., Ltd

Xiamen Chinasource Internet Service Co., Ltd (cqhot.com)

Guangdong Times Internet Technology Co., Ltd

Xiamen Bizcn Computer & Network Co., Ltd

Xiamen 35 Internet Technology Co., Ltd

Beijing Xin Net Co., Ltd

Beijing Zhongke SFN Network Technology Co., Ltd

Beijing East Information Technology Co., Ltd

Beijing Inonets Co., Ltd

Beijing Sogou Technology Development Co., Ltd

Appendix 4 List of Figures and Tables